THE ARCHITECTS' JOURNAL

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TELEGRAPHIC ADDRESS: BUILDABLE, PARL., LONDON

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 21, 1927. NUMBER 1705: VOLUME 66

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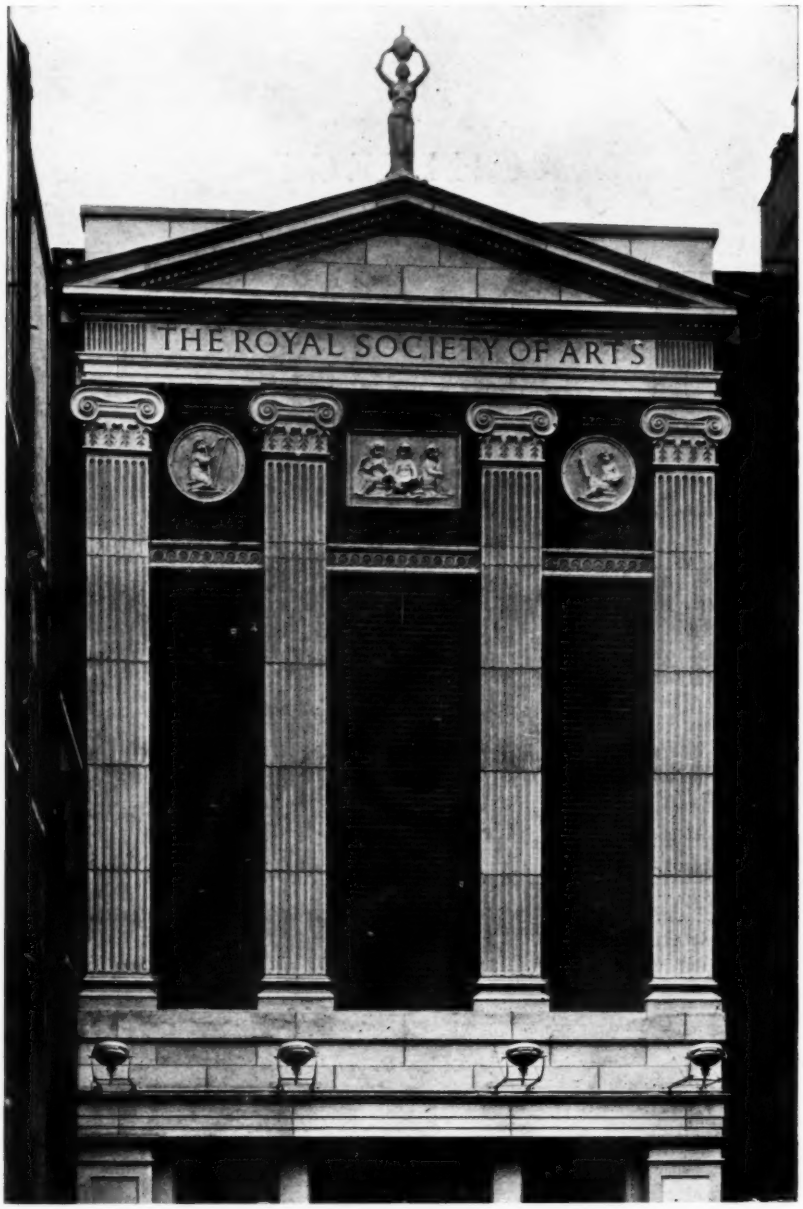

Architects interested in the development of true white Portland cement concrete as an artistic decorative medium of real value to the profession, should pause a moment when in the vicinity of the Strand and walk into Durham House Street. The refaced rear wall of the Adelphi premises of the Royal Society of Arts is well worth a visit. The above illustration shows the upper portion of the building. The wall surface, the columns, the pediment, the three figure panels "Music," "Painting" and "Education" and the surmounting figure, are given their colour content by "Atlas White" Portland cement—strong, sound, permanent concrete made from a high-grade true Portland cement of pure white, mixed with an aggregate of coarse white silica sand. I promptly and willingly supply complete specifications for similar elevations.

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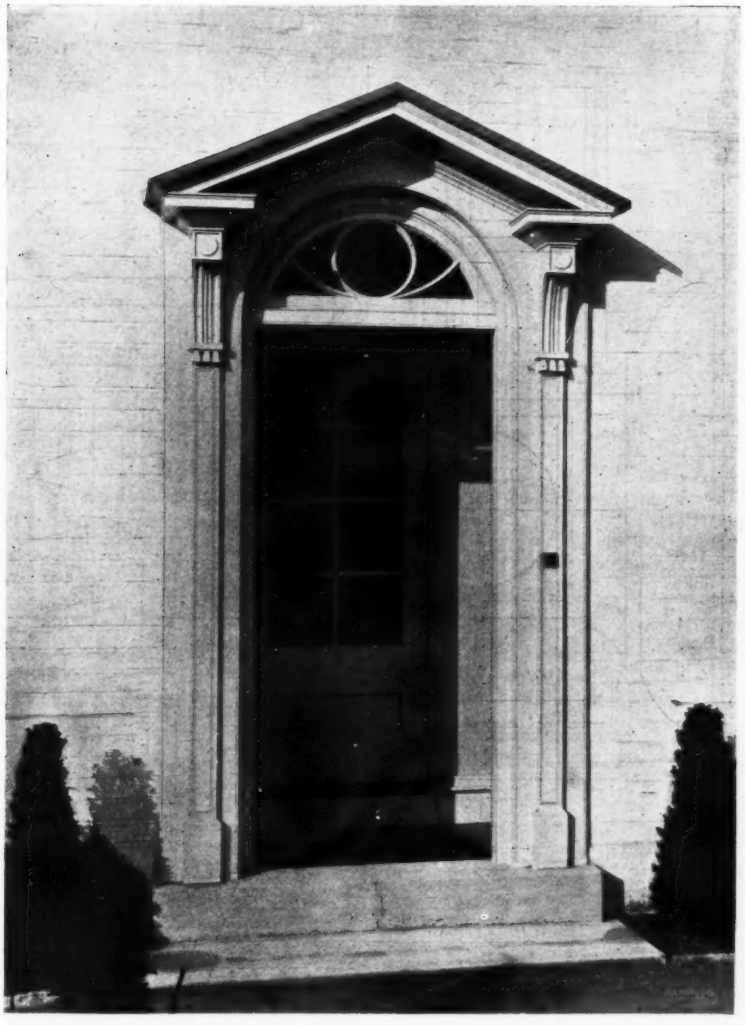


[*A working drawing of this doorway appears on the following page*]

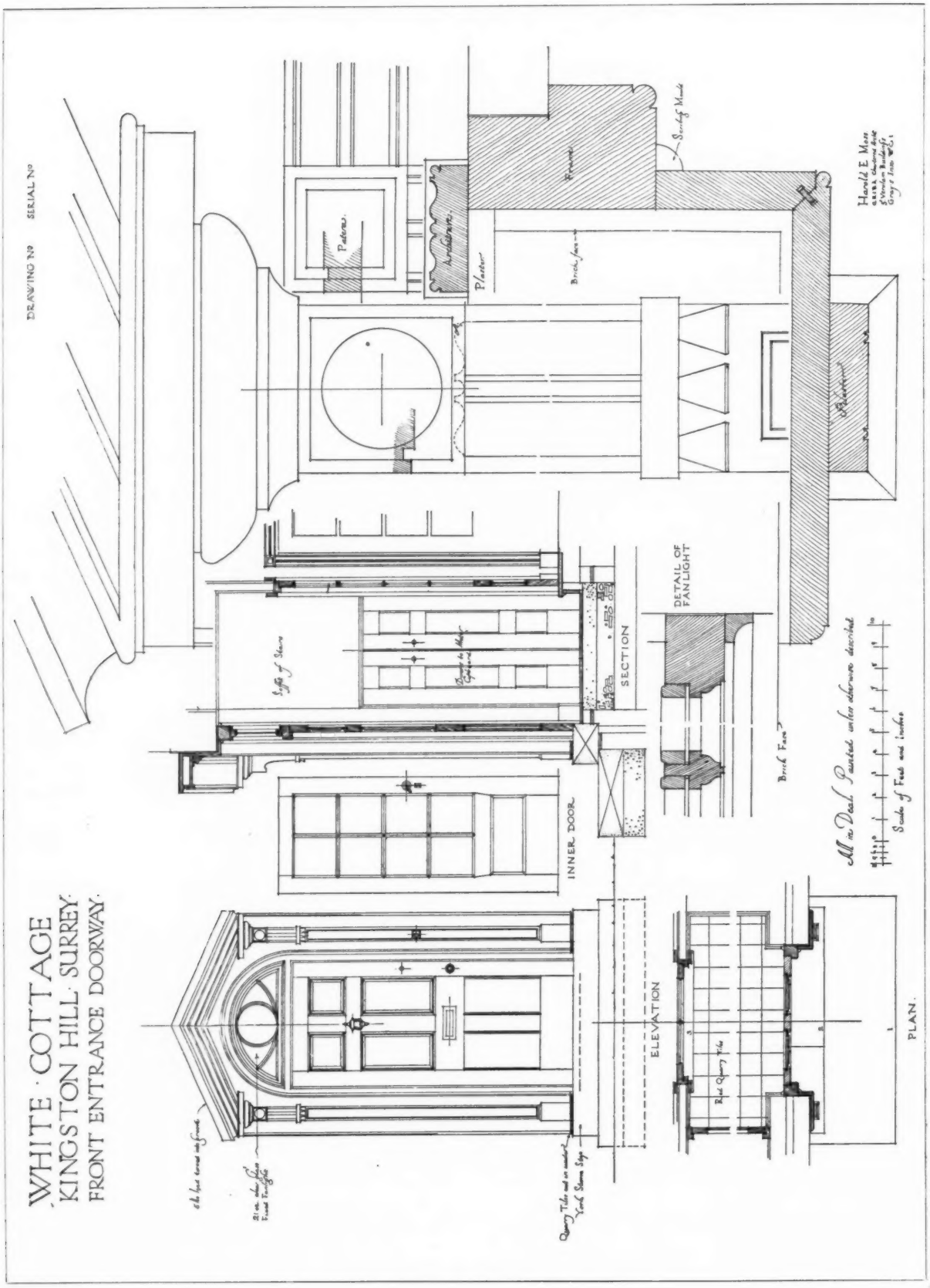
FRONT ENTRANCE DOORWAY AT WHITE COTTAGE, KINGSTON HILL, SURREY

[*BY HAROLD E. MOSS*]

THE WEEK'S DETAIL

[BY HAROLD E. MOSS]

This doorway is one of a series carried out in connection with a group of houses built as a speculation on the top of Kingston Hill. As there was very little money available for embellishment or refinement, what could be spared was allocated to the front doorways as the focal point of each house. The details were standardized, and each doorway was built up of the same sections; but a great deal of variety was obtained, each house having its own type. They were all carried out in deal, painted. The motive of all these doorways was a modified type of the eighteenth-century manner, with the details treated in such a way as to bring them into keeping with a rather later type of work, with possibly something in common with the colonial manner.



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

THE ARCHITECTS' JOURNAL

Wednesday, September 21, 1927

A PLAGUE OF 1927

A SIMPLE soul lately came up from the country and was unfortunate in his choice of an hotel, and it was, presumably, to relieve his feelings, rather than to gather information, that he wrote a letter to one of the morning papers asking where he might find a quiet one. He particularized the nightly sounds that disturbed him as cluckings and knockings in the water pipes, incidental to the " h. and c." laid on in every bedroom; the click of billiard balls till the small hours of the morning; and the invasion of jazz upon his dreams from a gramophone in the lounge. We have heard of the knocking in water pipes in modern hotels, and also of sleepers disturbed by the loud sucking of air through the trap of their lavatory basin when the man next door empties his, but both these nuisances are incidences of bad plumbing. Late billiards and jazz have no such excuse of being defects in a system; they are part of one, and open up a question which is getting increasingly near the surface of general protest, namely—Noise. We have stopped street cries; we have stopped taxi whistles; we have empowered local authorities to take disciplinary measures against those who make a public nuisance of private gramophones and loud-speakers. It is not necessary for neurologists to write learned warnings of the serious effects on health caused by noise, nor to remind us that, in spite of the above-mentioned action in mitigation of the nuisance, it still grows upon us.

Two salient facts stand out, namely, that we in London are not more heartless in raising and meek in submitting to unnecessary din than are the inhabitants of foreign cities. Visitors to America at once notice the bell-ringing, whistling, yowling, and every kind of din that fills the streets; and Americans visiting London comment upon the quiet that rules in ours. Paris and Brussels are made, to many persons who go there, almost unendurable by the shrill and continuous squawking of motor-horns; the motor driver in those cities keeps one hand on his hooter and uses it as though he were a fire-escape called to the rescue. Many French trams have a loud bell which is harnessed to the machinery and sounds continuously while the vehicle is in motion. The other salient fact is that love and endurance of noise is a mark of low intelligence. It is characteristically the class of people who find pleasure in being one of a crowd who love noise—the people who, at the seaside, infest one small stretch of beach, and leave the fresh, clean, untrampled and unsullied strand stretching a desert on either side. It is these kinds of people, too, who occasion and, apparently, enjoy, litter and dirt; just as they do tin trumpets, and gramophones that sound like dog fights. Has anyone ever remarked the popularity of Tchaikovsky's " 1812 " overture? It has now worn that popularity threadbare—as " Ta-ra-ra-Boom-de-ay " did twenty years ago—in all music-halls of such standing as to occasionally stage a band. This overture is, musically, far beyond the understanding of the simple taste of such audiences. Why, then, is it greeted with delighted applause? The explanation lies in its blatancy and the pure din of pealing bells and booming cannons with which it concludes. On the other side of the picture we observe that men and women conspicuous for intellectual qualities are always lonely, lovers of seclusion and of quiet, and, if not themselves orderly, respecters of public orderliness. You may measure —and measure accurately—the social obscurity of any golf club round London by viewing the extent to which ball wrappings, torn cards, and cigarette cartons are thrown about the course, and the distance at which your ears acquaint you of the position of the smoke-room. Promiscuous gregariousness, noise, and untidiness are the attributes of the human animal at his lowest development; and of these three the greatest is noise.

Sound, however, becomes noise mainly by its quality. It is true that all sound out of place may rank as noise, just as things out of place may rank as dirt; but if the quality of the sounds which torment us as noise are made agreeable, and unnecessary sounds are eliminated, none but a neurotic will be likely to be troubled by them. Who is worried by the tick of a grandfather clock or of the humble " wag-on-the-wall " ? Who does not regret the passing of the muffin bell coming up the London street on a damp, misty November afternoon? We would draw the line at " coal," which is always raucous, but the old cry of the fish hawkers at Hastings and Dover could not leave such pleasant memories with those who remember them if they had been an annoyance. In 1917 Mitcham lavender was being sold in the neighbourhood of Trafalgar Square by a hawker who sang the old musical cry. In Lisbon, where water is still peddled from mule-back, the age-long Roman cry " aqua " is a sheer beauty in life, and the many curious cries and pipings by which hawkers of all kinds make known their presence and the nature of their wares casts a fragrance upon the life of the city. We cannot cure at once the beast-like love of row which belongs apparently to our basic natures, but we can insist that sounds shall be necessary and that when necessary they shall be beautiful. There is very little to complain of, for instance, in the low trumpet note of some motor-cars—a sound which fulfils the whole purpose of the nerve-racking " quack, quack " which invades churches and picture galleries on the Continent, and is too frequently persistent in our streets.

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

NEWS AND TOPICS

THE JOHN WOOD BI-CENTENARY—CONTROL OF DESIGN—PLANNING THE HOUSE—DECIMUS BURTON AT ST. LEONARDS-ON-SEA—LE QUARTIER ST. MERRI—GILDING THE LILY.

THIS year is the bi-centenary of John Wood's replanning of the City of Bath. An interesting suggestion to commemorate this is, so I am told, now under the consideration of the civic authorities, and all architects knowing the services to town-planning rendered by Wood will hope that it materializes. It is hoped, in the late autumn, to arrange for an exhibition of old prints and plans. If any reader of THE ARCHITECTS' JOURNAL has in his possession some original drawing by Wood, I suggest that he should communicate with Mr. John Hatton, Director of the Baths, at Bath. Mr. A. J. Taylor, F.R.I.B.A., the architect to the Bath Corporation, is also interested in the proposal. Probably a tour to the most interesting examples of Wood's work in the City will be arranged and the inevitable civic banquet will take place. Bath at present is being watched by the architectural world owing to the famous Bath clause for the control of design. The commemoration proposed will be generally welcomed, and heartily supported by all who recognize that John Wood's work at Bath marks an epoch in the history of civic architecture.

* * *

In order to try and prevent ugly bungalows being built in picturesque districts, I hear that an interesting recommendation will be made in the forthcoming report of the planning of the region around Bath and Bristol, now being prepared by Professor Patrick Abercrombie. It will be suggested that where a local surveyor is considering plans for a cottage or bungalow that he thinks will be unsightly if erected, he should consult the Regional Planning Committee before giving approval. This procedure has been adopted by the Rye Rural District Council by a resolution passed this summer. It is too early yet to know how far such action is preventing unsightly buildings being erected in one of the most beautiful parts of Sussex, and obviously the legal significance of such construction is somewhat dubious. The reference, however, to a committee selected is likely in the majority of cases to be effective. It is becoming more and more clear that the exercise of control of design will have to be on a regional basis, because individual rural district councils are unable to afford to pay for the necessary expert supervision. But such a body as the proposed South-East Sussex Joint Planning Committee could well afford to pay for expert help, and in an even stronger position will be the districts around Bath and Bristol.

* * *

Today (September 21) members of the Garden Cities and Town Planning Association are concluding a tour in Scotland, and are visiting the "New Town" of Edinburgh as laid out by Craig in 1767. The party were at Newcastle during the week-end, where they had opportunities of seeing the housing estates at Fenham Nurseries, and elsewhere, while on Monday they were at Glasgow, where a conference was opened by Mr. B. S. Townroe on Regional Planning Developments in Scotland. I have several times referred here previously to these useful tours. The presence in the city of experts from outside who are not afraid to speak out their minds plainly, has considerable local influence. A similar conference, held at Oxford in the early autumn of 1925, did much to preserve St. Aldates from suburban disfigurement, such as was advocated by a section of the City Council. Earlier this year the Association was at Southampton and Winchester, and the success of its visit has no doubt encouraged the Town Planning Institute to take the same route next month. Civic authorities in every case are proving very ready to welcome these town-planners. At Glasgow and Edinburgh, for example, they are being entertained to lunch by the respective housing committees, and they are being welcomed by the Lord Provost of Glasgow and the Lord Mayor of Newcastle. It is to be hoped that one result of this visit to Scotland will be increased activity in town planning and regional planning, for the Scots are very behindhand in this matter. Only a few weeks ago was the Regional Planning Advisory Council for Scotland formed, but I am glad to hear that this has already enlisted the support of some forty local authorities up and down the country, and that the Scottish Board of Health is proving to be very sympathetic towards the new movement. Probably next month the practical work of surveying Scotland will be begun.

* * *

Long before the war it was acknowledged upon the Continent, and admitted by the sincerest form of flattery in America, that English architects were pre-eminent in the design of houses; and since the war that distinctive capacity has been concentrated, in a remarkable degree, upon the design of small houses. It might, in fact, almost be said that, like the game of draughts, the problems presented by the small house have been almost exhausted: the periodical public competitions for small houses display the architects of England vainly squeezing the same oranges as those from which they long ago extracted the fruitful juices. For this reason it astonishes me to observe the practical inefficiency of many—I could almost say the majority—of the plans comprised in the designs published in various journals as representative of the best current work. I do not speak of plans of housing schemes—these are usually masterly—but of the small house which forms the home of the upper middle classes, the house with two or three reception rooms and three to six bedrooms. I pass over the circumstance that these houses are generally compacted of frills and affectations of one kind or another, which do not reflect the facts of modern life, but rather the gloss cast upon life by the cinema and the salesman. All I am here concerned with is the application of elementary gumption to the planning of houses. As an instance of what I refer to, I will describe a plan which was lately published to signalize the gifts of an architect whose name stands high in this particular field of house design.

* * *

The house I refer to is of ample proportions, and costly in construction and in the materials used: there was evidently no restriction of cost, and the effect of the house, if striking, is tasteful and scholarly. There is no question of its architectural sugariness; in fact it comes perilously near to being "sweetly pretty." Observe then, that the front door admits you directly to a small hall with the door of a w.c. set majestically in the middle of one wall; and on the axis of a window opposite, opening directly into it, another door opens into a roomy servery which has no

direct light or ventilation. There are two steps up at the door to the dining-room from this servery, and two steps up from the hall to a passage 3 ft. 3 in. wide and 13 ft. long, leading to the chief room at the door of which are two steps down. The door to the cupboard under the stairs opens into the chief room and is 4 ft. from the breast of the fireplace; the larder intrudes into the rectangle of a combined kitchen-scullery, where the servants will have to sit and have their meals among the dirty plates, for there is no maids' room, and their w.c. is outside. The stairs are a species of glorified rat run. They open into the 3 ft. 3 in. passage and land by winders through an opening on to the first-floor passage, 3 ft. 3 in. wide and 30 ft. long, which has no direct light or ventilation except through the 3-ft. opening to the stairs which is at the extreme end of the passage. Only one bedroom has a fireplace, and none have lavatory basins. One bedroom, 9 ft. by 10 ft., has a chimney shaft 2 ft. 3 in. wide, standing out 4 ft. or more from near the middle of one wall. A private bathroom, over the chief sitting-room, has the bath and lavatory fittings fixed at the back and 10 ft. from the outside wall. The w.c. fitting is kept 5 ft. from the outside wall by the slope of the roof under which it harbours. A house should indeed be "sweetly pretty" where such sacrifices are required to make it so, but I am of opinion that no degree of preciousness or prettiness justifies the extravagance, botching, discomfort and inconveniences I have described. The reputation of an architect must indeed stand high if it is to protect him from charges of incompetency when he builds in such manner as this.

* * *

When, for my sins, I was doomed to scan a list of the designs of buildings by Decimus Burton, I saw no mention of his architectural adventures at St. Leonards-on-Sea. This omission struck me as passing strange, seeing that Decimus was the son of the man who made St. Leonards, converting a barren waste of derelict foreshore into a seaside resort that was regarded as a model of architectural propriety. Surely it must have been son Decimus who gave it that character. Most of the pseudo-Classical buildings that still distinguish the St. Leonards sea-front beyond all other marinas and grand parades in the kingdom, bear the unmistakable stamp of the deft hand of Decimus, and they confirm my notion that he might have been a much better architect if he had been less eager to "get rich quick." Now to the real point of this paragraph. I used to wonder whether, when St. Leonards was built, Decimus was old enough to assist his father architecturally. Doubt has now been dispelled by the inscription, which I have just read for the first time, on a panel in the amorphous monolith that marks the boundary between the twin towns of plebeian Hastings and aristocratic St. Leonards. That inscription I took the trouble to copy while sauntering along the Marina last week. Here we have a faithful copy of it: "This stone, erected in 1898, marks the eastern boundary at this point of the town of St. Leonard, founded by the late James Burton, Esq., 1828." Now, Decimus having been born in the year 1800, it follows that when St. Leonards was founded he was twenty-eight years old—fully of an age to sit up and amuse himself with drawing-board and tee-square. This landmark stands on the spot where once stood a characteristic Decimus Burton arch; and I am glad to suppose that "he who removeth his neighbour's landmark" escapes the full force of the curse by erecting an effective substitute.

A curious corner of old Paris, the Quartier St. Merri, is about to be demolished, as it is said that the mortality from tuberculosis in this district has reached 132 per thousand in place of the average fifty per thousand. Whatever may be the necessity from the point of view of public health to pull down the property, many architects will regret the disappearance of some of the most interesting old buildings of Paris. This quarter derives its name from an old chapel to St. Peter, built in the seventh century. Several old houses, notably those in the rue des Etuves, were built over five hundred years ago. There is one well-known house, No. 4, where Valentine Conrart, Counsellor and Secretary to King Louis XIV, lived in 1629. There, every week at that time, there was a gathering of men of letters, and from these meetings the French Academy owed its formation in 1634. Another house a little farther along the street is believed to have been built by an architect of Henri IV, and above the door is a black marble tablet bearing this inscription:

> Dieu tient le cœur des rois en ses mains de clémence
> Soit chrétien, soit payen, leur pouvoir vient d'en haut,
> Et nul mortel ne peut (c'est un faire le faut)
> Dispenser leurs sujets du joug d'obéissance.

* * *

Riding last week through a considerable stretch of Kent and Sussex scenery, I was dismayed to see so many oast-houses and so few hop-fields. This unnatural disparity was explained to me by a garrulous native of those parts. Hops, he averred, are going out of cultivation because they are no longer regarded as indispensable to the brewing of beer, which nowadays, according to my informant, consists mostly of "chemical muck." Howbeit, I should be exceedingly sorry if for any reason the oast-houses were to become as obsolete as windmills, the one being as symbolical of food as the other is of drink. And I doubt not that many besides myself have sometimes regarded the hop-kiln as a passably beautiful adornment of the English landscape. Its conical tower is often an excellent example of circular roofing, and I indulge a whimsical fancy that it bears a certain degree of secular affinity to the church steeple. Certainly the oast-house bears a rather unorthodox vane; but equally fickle are the winds that blow upon both.

* * *

"The stone of the Banqueting Hall in Whitehall is being cleaned and, where necessary, repaired. . . In those parts from which the grime has been already removed the architectural features of the hall . . . . are fully revealed, and when the cleansing is finished the building will be restored to its original beauty." This from one of our leading daily papers. It has long been a conviction of mine that whereas the architect wants his buildings to weather and mellow, the layman appreciates only the two extremes of decrepit antiquity and harsh newness; the gentle toning down which is effected by the atmosphere is lost upon all except the mind trained to such subtleties. So the man in the street can look on unmoved and watch the cleaning of the Banqueting Hall—he probably approves highly, in fact, and looks forward to seeing the stone clean and "as good as new"; and it is left to the architect to bemoan the labour which shall undo the work of four hundred years of London smoke. With the Banqueting Hall "restored to its original beauty" I shall have only St. Margaret's Church tower with its rich blacks and clean whites to delight me when I pass through Westminster.

ASTRAGAL

TOWARDS A NEW ARCHITECTURE

[BY HAROLD TOMLINSON]

THE publication of a translation into English of Le Corbusier's *Vers une Architecture* is something of an event, and the wonder is that it has not been done before. That thirteen editions should have appeared in France without an English translation having been undertaken is evidence of either a lack of initiative on the part of our publishers, or an appreciation by them of an almost incredible apathy towards architecture by the English reading public.

The dictum of M. Auguste Perret, quoted by Mr. Bartle Cox in his article on the work of the Perret Brothers, is worthy of repetition here. Speaking in 1925 at the Université des Annales, M. Perret said: "Architects speak a dead language, hence public indifference. If architects continue to speak this dead language, there is another—that of engineers—which will replace it, for the living language will be understood." M. Perret, it was stated, "is as strongly opposed to designs by mere engineers as he is to those by mere architects," and Mr. Etchells, the present translator, testifies to Le Corbusier's acceptance of this creed. What was true of France in 1925 is true of England now, and those who were so fortunate as to hear Mr. Howard Robertson's paper on "Modern French Architecture," read to the Institute in the spring of the present year, will realize how great are the changes that have been taking place in French architecture during the last few years.

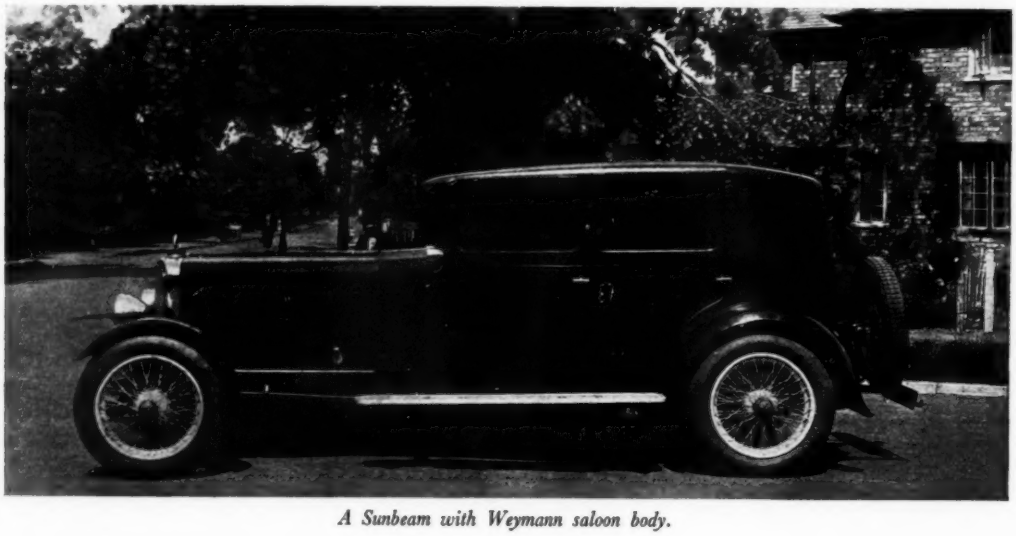
Many valuable lessons may be learned from the translation, and one does not need to admire Le Corbusier's executed buildings to learn them. It is the divorce of *structure* from *architecture* (as if one were not an essential part of the other) that makes one fearful of attempts to introduce specialization at the present transitional stage of architectural education in this country.

Of mass production Le Corbusier has much to say, and all is to the point. The machine-made article and mass-production methods have come to stay. A small minority still bleats for a return to the adze and chisel, but the majority is only too anxious to take advantage of the inexpensive and efficient products of modern machinery. It is foolish to pretend that the worst work of a bad "craftsman designer" is preferable to the machine-made article designed by a good artist. Incipient failures are the stepping-stones to success, and to revisualize the improvement shown, during the last five years, in the design of the machine-made door alone is to appreciate what can be done. Even the expert will admit that a dowelled door, made by well-designed machinery, is stronger than the work of any but the most exceptional craftsman. Most mass-production firms have realized that unless their wares are well designed they are severely handicapped, and architects are being forced by their clients to select, rather than to design, the smaller and less elastic units of their buildings.

On the architect, therefore, devolves the new duty of ensuring by his selection that only the fittest survive. "The history of architecture unfolds itself slowly across the centuries as a modification of structure and ornament, but in the last fifty years steel and concrete have brought new conquests, which are the index of a greater capacity for construction, and of an architecture in which the old codes have been overturned. If we challenge the past, we shall learn that 'styles' no longer exist for us, that a style belonging to our own period has come about; and there has been a revolution."

It will be interesting to watch the effects of the translation on our schools of architecture. Of late, even in this country, students have begun to show their dislike for the dreary routine of the "Orders," and are suspicious of the threadbare statement by their teachers that "The Orders are the only means of learning proportion." It is not unnaturally suspected that "The Orders are all we know" would be nearer the truth. "Why," says the student, "when you have a perfectly good building, cover it up with that muck?" And, if progress lies in the teaching of the master by the pupil, this is not a bad sign.

Mr. Etchells has written a brilliant introduction to his



A Sunbeam with Weymann saloon body.

A Gloster Grebe II. single-seat fighter.

translation, though why he has changed the title to towards a *new* architecture, is not clear. Le Corbusier, one believed, made a plea for *an* architecture, meaning that the present thoughtless copying of forms of forgotten significance is not architecture at all. In other respects the work of the translator is admirable, and his own writing well merits its inclusion in the book. " It is inevitable that the engineer, preoccupied with function and aiming at an immediate response to new demands, should produce new and strange forms, often startling at first, bizarre, and disagreeable. Some of these forms are not worth constant repetition and soon disappear into the limbo of forgotten things. Others stand the test of use and standardization, become friendly to us, and take their place as part of our general equipment." He illustrates the entrance gate to a new lock at Liverpool, and one sees at once that it is a fine thing, and this because an element of conscious design—" making it look right," as well as a desire for the utmost efficiency—has entered into its conception.

In a century of development the steam locomotive has almost attained its ultimate limit of efficiency, and during this period it has also reached a high level of design. No doubt the electrical locomotive, which is ugly enough today, will be beautiful in the end, for it, too, will be designed by men who will not accept past models for beauty any more than they will for efficiency. To build, as we sometimes do today, warped copies of Elizabethan houses, whose original ideal was the straight line, and to stuff the result with " every modern convenience," is as ridiculous as it would be to attempt to build our modern locomotives in the guise of the " Rocket."

Le Corbusier finds lessons for us in ships, airplanes, and motor-cars. Of the " Aquitania " . . . " A seaside villa, conceived as are these liners, would be more appropriate than those we see with their heavy tiled roofs. But perhaps it might be claimed that this is not a ' maritime ' style . . . Architects please note: the value of a ' long gallery ' or promenade—satisfying and interesting volume; unity in aterials; a fine grouping of the constructional elements, sanely exhibited and rationally assembled." Everybody acknowledges the truth of these statements. It is not sentiment alone which makes most " ordinary people " love the clean lines of the steamship, and loathe its vulgar state-room and interior, even if, when architect designed, it is made " just like home."

In the chapter on airplanes he disproves the statement that " the construction must be shown," and argues that whereas the intense selection of the late war quickly produced a rapid solution of a problem (flight) clearly expressed, architecture fails today because " We do not know how to build in a modern way—materials, systems of construction, THE CONCEPTION OF THE DWELLING, all are lacking. . . . Engineers have been busy . . . architects have been asleep." The force of the illustrations is not what it might have been. The airplanes are those of the first edition, and what appeared to be a clean design then looks like a museum specimen now, and one is surprised to see a statement, made by a Frenchman, that Ader's " Avion " did not leave the ground. The " Manual of the Dwelling," which ends the chapter, carried out for feminine clients, might make any young architect rich, even if it did not make him famous.

Automobiles have progressed, too, and the 1921 Delage (p. 135) compares as unfavourably with, say, a Sunbeam of today as the 1907 Humber, also illustrated, does with the Delage. The streamline form is generally accepted as a shape of beauty, and as it is modified by the necessities of structure, so we accept its changing form. Sometimes the best compromise which we can effect is recognized as ugly, and time is the final test; time, too, will be the test of M. Le Corbusier's teaching.

With regard to the format of the volume, for the present writer the Garamond type and the " art " pages are an insufferable combination. One wishes that a saving had been effected by printing the line blocks and reading matter on a cheaper and more suitable paper. If the translation has a wide sale, perhaps the publisher will consider the issue of a flimsy, similar in character to the paper-backed French edition; and at a price more easily within the reach of the people for whom it would be most valuable. Is it too much to ask, also, that the illustrations be brought up to date?

Towards a New Architecture. By Le Corbusier. Translated by Frederick Etchells. John Rodker. 25s.

D

SIGNS, NUMBERS, AND NAMES: i

[BY V. M. CHRISTY]

SINCE the time when people first had settled habitations it has been necessary to have some means of identifying the dwelling of a particular man, or the place where he carries on his trade. The Romans distinguished private houses by a "sign," and trade establishments, probably by some representation of tools. Sometimes they used coloured inscriptions or painted signs, but more usually terra-cotta reliefs were let into the pilasters flanking the shop entrance. In England in the Middle Ages signs were indispensable in towns of any size in cases where some external mark or peculiarity of position was insufficient clue to the identity of a building. The inn sign has survived in England when trade signs and house signs have either disappeared or greatly changed. From very ancient times the inn has had special distinction. So early as the reign of Richard II publicans were compelled by law to display a sign, while for other buildings it was optional. Similar laws operated in France and elsewhere at a rather later date. The majority of English tradesmen availed themselves of the option mainly for advertising purposes.

By the seventeenth century the display of signs on buildings other than inns was something of a privilege. Charles I granted to the inhabitants of London the right to "expose and hang in and over the streets, and ways, and alleys . . . signs and posts of signs . . . for the better finding out such citizens' dwellings, shops, arts, or occupations." London was already large enough for the "finding out" of a particular building to be no easy task, and such distinctions as "The Stone House" no longer sufficed. Charles II ordained that "no signboard shall hang across, but that the sign shall be fixed against the balcony or some convenient part of the side of the house." The sign in some form was indispensable as an identification mark, though it need not occupy an inconvenient and obtrusive position.

Houses rebuilt after the Fire often had the sign let into the front of the house beneath the first-floor windows. Such signs, some of which survive, and of which that in Warwick Lane is an example, were of a different nature from the former hanging-signs on the one hand, and from the modern ephemeral poster and crude applied lettering or electric sign on the other. The carved inset sign might be an integral, almost a structural part of the building. This and its allied forms are sometimes employed with satisfactory effect upon modern office and shop buildings designed for some special purpose. Liberty's two new buildings, for example, are themselves gigantic signs, and one of them has a subsidiary signboard hanging from it. The enormous frieze in Regent Street is a horizontal signboard of more stupendous dimensions than any against which protests were raised in the seventeenth century; but it does not hang across the road, but is "fixed . . . . against the house." It is itself part of the architectural scheme, instead of being an applied "sign" marring the effect of the building as such. The tendency to rebuild whenever a building changes hands regardless, it would seem, of its qualities or condition, makes increasingly possible the practice of letting the building itself partake of the nature of a trade sign, when the whole is occupied by one business.

Alongside of this there must still be some provision for the identification of the smaller shops and business premises, including those consisting perhaps of one floor or part of a floor. The only possible means of doing this appears to be by detachable lettering or by the small sign projecting on a bracket from the wall or fascia. Such signs are seen in hundreds in London streets. They are the often degenerate descendants of the old hanging trade and house sign. Occasionally one sees a sign of this kind in a modern form reproducing the good qualities of the old, and giving a touch of interest to an otherwise commonplace front. For example, there are well-lettered signs with trim ironwork surrounds, or the various ways of producing distinction and dignity by a novel form of brass plate. Again, one encounters perhaps the unmistakable book-sign on a small but interesting scale, or some adaptation of the

Pestle and mortar: a new version of an old apothecary's sign.

Red and green oil-jars are still to be seen in considerable numbers.

pictorial sign. On the whole, however, far too little attention is given to these inevitable features of our streets, which, if more generally of good and interesting design and quality, might add considerably to, instead of so sadly detracting from, the dignity of our buildings.

A couple of centuries ago the strangeness of some of the devices adopted on painted or moulded signs, and the mistakes liable to arise through unskilful presentation, led to the supplementing of the pictorial sign by explanatory lettering. Gradually the sign-painter, sometimes a clever painter of coaches and sedan chairs, gave place to the sign-writer, and ere long the curse of letters began to take effect, and its blight began to overspread buildings of all kinds. With cheap paper and printing came the ephemeral paper poster which can be so easily plastered on to walls and windows. A connecting link between the modelled or carved or painted sign and the coloured poster may be found in the application of polychromatic decoration to the walls of a house or shop. Some Swiss houses are still distinguished by this means. A writer describing pictorial scenes painted on to houses says they express " l'honneur de la travail, la beauté du geste quotidien." Perhaps it is because the " geste quotidien " of our towns today lacks beauty that attempts to distinguish buildings by colour decoration have not met with marked success. The French *marchand de couleurs* often paints on his façade striking panels of colour, like samples of his wares, although even this is not quite on the definitely pictorial lines of the Swiss houses described. The writer quoted above remarks that the old sign was generally the work of an artist, whether architect, painter, or metal-worker. On the other hand, the sign of today is " essentiellement mobile . . . L'œuvre d'un quelconque peintre pour un quelconque commerce ou industrie." The science of advertising is over-ready to outpace the art. The old type of trade sign has too often found itself worsted in the fight with vulgar lettering. Beneath the alphabetical flood there flows still a little cross-current of tentative revival in new forms. But progress on these lines depends on the control of the more vociferous methods which threaten to foul the springs of experiment.

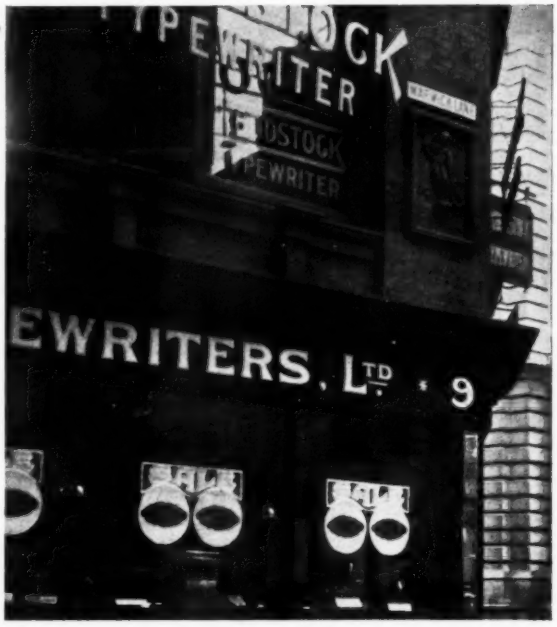
The older signs fell into two categories. First, there were those indicating a particular trade, no matter where it was carried on. This kind of sign originated in exposed wares, or tools, of which the umbrella and the sweep's brush respectively are examples. Secondly, came those which were really house signs, and had no particular reference to goods or tools. Public-house signs are the most familiar survivals of this group. A few examples of trade signs, old and new, may be cited. Most common among the older signs still in use are the oilman's jars. Often one sees a set of these simple but decorative symbols freshly-painted, as though in timely protest against an over-lettered age, even when lettering is itself called in aid to supply the name of the tradesman. Recent versions of old signs are a pestle and mortar and a giant pipe, while the padlock or key of the locksmith, and the gloved hand are both of ancient origin and still retain their plain meaning. The spectacle sign, one of the most decorative, as well as the simplest, can still be found, sometimes unmarred by the vulgar malpractices which too often make it an eyesore today. Occasionally the eyepieces display inoffensively and ingeniously the street number or the name of the optician. As a rule, it must be noted, the sign today, except in conjunction with lettering, is less useful as a means of identifying a building than for its advertising qualities. Even with this end in view much might be done to redeem our streets and buildings from the curse of letters, with their often hideous clamour, if it were more generally realized how decorative and practical may be the symbols of trades, not

A watchmaker's sign in the old style, and other projecting signs in the new.

necessarily on a large scale, but on the lines of the gilded *pain* of the French baker, and the twisted roll of his Danish confrère, or the simple circlet wreath of the florist, and the hanging symbols of the tobacconist. Curiously enough, the only common sign of the kind in England, and often decorative on a dull building, is that of the three balls. If kept within reasonable limits signs can give a sparkling trimming to a street, and give distinctive stress to a building.

The sign habit is deeply rooted. The postman who was overheard directing an errant errand boy with the words: "John Smith's? Yes, the shop next to that signboard," was at one with his far-off forefathers. To most people a house with a green gate is easier to identify than one with a number.

In Paris, so early as 1512, a few newly-built houses were marked with numbers, but the time was not then ripe for the change, and the practice did not spread. In London some small attempt was made in the same direction, for it was written of Prescott Street, Goodman's Fields, in 1705, that "instead of signs the houses are distinguished by numbers, as in the staircases in the Inns of Court and Chancery." But numbering was not adopted in London, except as a rather eccentric experiment, until nearly a century later. At the present time the numbering of buildings rests with the local authority, who intimate to those concerned the number by which the property is officially known, but there is no obligation for a building to bear any distinguishing mark.



A seventeenth-century modelled sign survives in company with modern methods of identification.

Some modern signs with lettering and lettered signboards. In one case lettering replaces the barber's pole.

To be of real use, numbering must be consistent: it should also be neither offensive to the eye nor disfiguring to the building. It need not necessarily be altogether uniform, either in character or position, but there is, in some streets, a freedom which verges on anarchy. To identify buildings by number presupposes some orderly relation of one building to another. It is useless, for instance, to number cottages which have grown up one after another at various times and in positions perhaps a mile or more apart. An isolated cottage bearing the figure "8" in white paint has a proud distinction, but distinctive rather as a name than as a number. Certain premises in large towns sometimes arrogate to themselves as a name the distinguishing number which marks them as one among many buildings. Numbers properly express membership of a community; names lend individuality, give scope for self-expression, but this may too easily develop into individualism, tending to swamp the community spirit of the street or the group. Some new residences in a section of a long main thoroughfare acknowledge their position in the sequence by a simple number on their gates, but express their individuality as separate units by also writing the number in words—thus naming the house, for example, "Three Nine Three." In rural districts a name is generally more satisfactory as a means of identification than a number can be. Moreover, it is often possible to preserve in the name of a house some fragment of local history, or something of topographical interest, which might otherwise be lost. Perhaps a field name, already attached to the site, may be used, or the record preserved of some incident of local history or legend. Albert Terrace, Jubilee Villas, and Coronation Cottages have a value of their own as marking dates. The primitive method of applying the possessive personal name to a house or shop is common in country places, and is much more reasonable there than numbering.

[To be continued]

GLASGOW UNIVERSITY ZOOLOGY BUILDING

[BY VERNER O. REES]

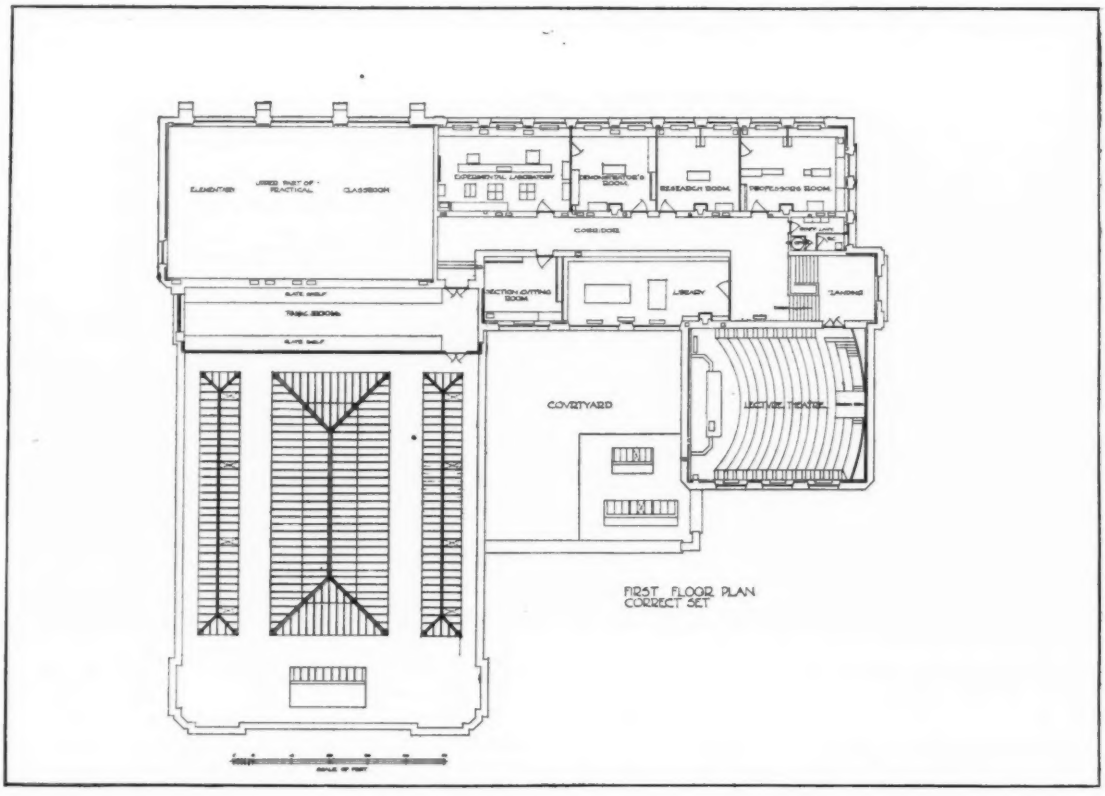
ARCHITECTS are being required to conform more and more to the exact requirements of the scientists. The latter say that different rooms have different purposes, and that these purposes require that windows and other parts should fulfil certain necessities. They are finding reasons for dictating shape and disposition in plan and expression in elevation. Incidentally, in addition to their personal interest in buildings as places in which they have to work, their eternal curiosity is prompting them to investigate building materials; as a consequence the list of possible materials at the command of the present-day architect is continuously growing. This general necessity—to have to design more closely to exact use—is having an excellent influence. In the hands of an imaginative and solidly-grounded architect unusual difficulties honestly met will lead to interesting building.

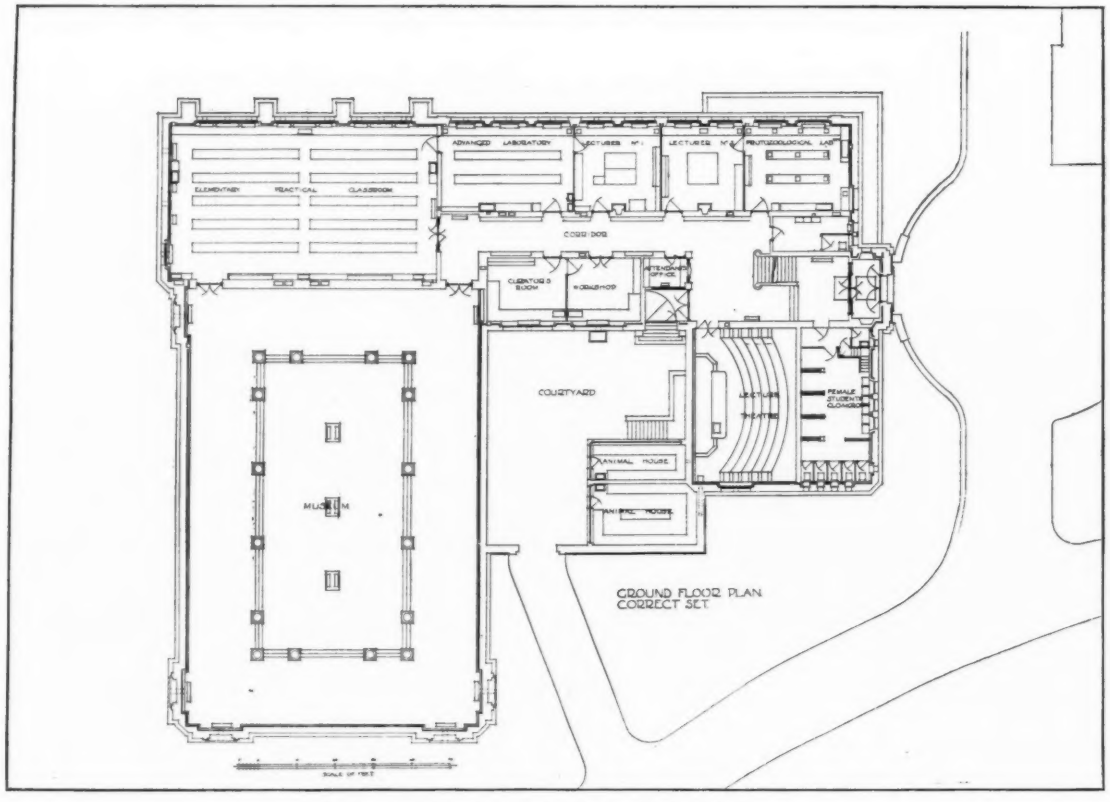
Some of the features of the new building for the Department of Zoology for the Glasgow University, recently erected from the designs of Messrs. Burnet, Son and Dick, well illustrate this point, as it is hoped to show later. The plan is of a straightforward kind, designed without attempt at axiality. It looks smaller than it really is, owing to the rather large scale and absence of small rooms. The laboratories are ranged on the N. or N.E. side on two floors, the end elementary classroom going through two floors in height. They make a combined length of 178 ft., which is a goodly dimension. They are 22 ft. wide, and are served by a corridor 9 ft. wide.

South of the large classroom is a museum, about 122 ft. by 75 ft., top-lighted only. Special provision had to be made so that direct rays of the sun should not reach any of the exhibits. This is effected by an "egg-box" arrangement in the ceiling, that is by a system of open wood grilles about 15 in. square and 27 in. deep, apparently above the laylight. Considering the handsome way in which the museum is designed, its approach from the corridor by a double door in the corner seems somewhat poor; one would expect a more ample and obvious approach. The stair is of a kind that is not often seen with wide and generous landings. In this case they may be explained partly by the fact that approach to the lecture theatre is from the landing, 17 ft. by 14 ft., over the entrance lobby.

The lecture theatre, which is about 40 ft. wide by 45 ft. long, is lighted by stepped windows, and seems convenient, except that it would have gained if more room could have been contrived for the entrance and exit, which are rather tightly jammed in the corners. It is fitted with dark blinds so that it can be used for lantern or cinema work from the projector room at the back. The blinds are electrically driven by a small motor in the basement, with special gear adjustments owing to the different heights of the windows.

Glasgow University Zoology Building. By John Burnet, Son and Dick. The west front.





Glasgow University Zoology Building. By John Burnet, Son and Dick. The ground- and first-floor plans.

Glasgow University Zoology Building. By John Burnet, Son and Dick. Above, a view from the south-west. Below, the north front.

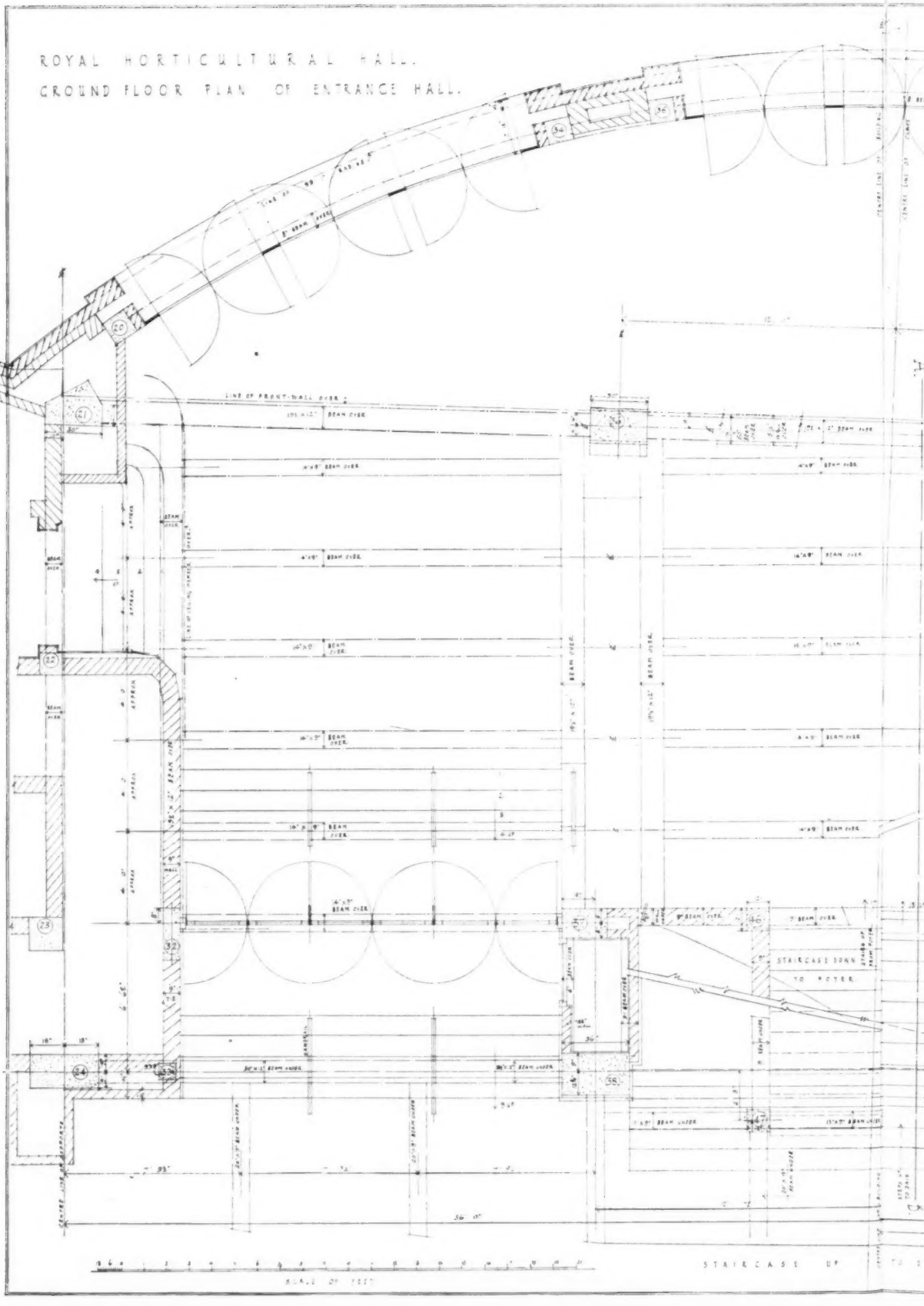
Referring to the elevations, the long northerly front is frankly asymmetrical. A range of nine windows, two floors high, are held in a kind of framework or order very suitably simplified. Then come the three large windows of the big elementary laboratory, combined with roof light over, and divided by big masonry buttresses. These are well held in at the end by a blank wall of rusticated masonry, with a kind of terminal on the corner. It looks a very practical solution of what must have been a perplexing difficulty for the architects. It is probably the most interesting feature of the building; though it does not look quite as if it were built at the same time as the rest, which is more stylistic, with corner and with pediment over the entrance projection. It is a little hard to realize what purpose is served by the roof, though this may be to bring the building into harmony with those surrounding it. One wishes that the ventilating turret were more in the practical vein of the classroom windows. A small but noticeable detail on the elevations are the numerous air-inlets, which suggest that they might have been worked into a pattern or frame in some way as part of the architecture.

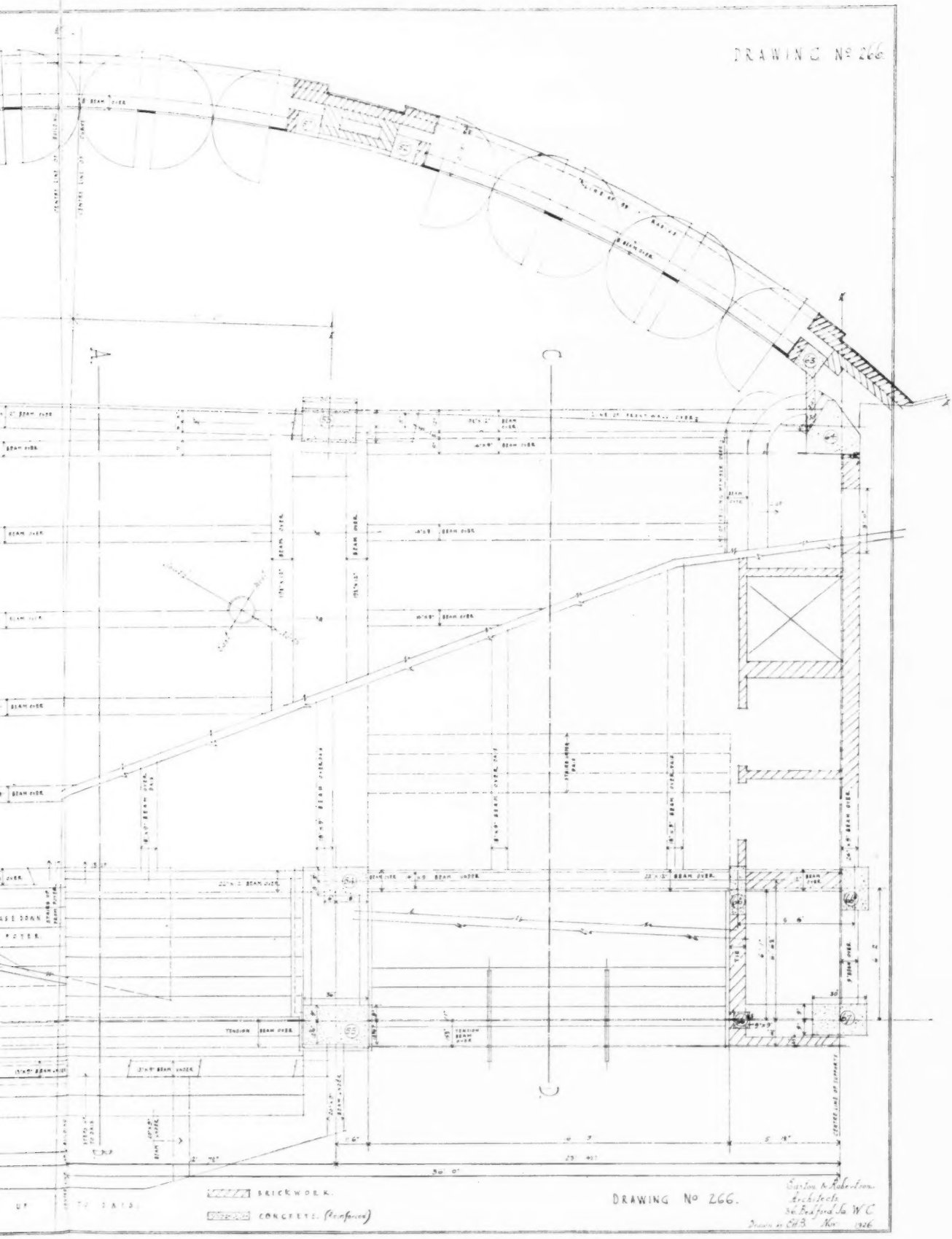
The illustration given of the large classroom with the tall windows shows a room that seems perfectly designed for its purpose, and it is so, with an air of largeness and dignity. It should be well appreciated by those who will work in it. The long horizontal tables serve as an excellent foil to the vertical piers and window divisions. The lower part of the walls in this as in the other classrooms are finished with Keene's cement and the upper part and the ceilings with "Sirapite" plaster. The floors are finished with $3 \times 1\frac{1}{8}$ in. quarter-cut pitch pine, with a pitch pine cove at the junction with the walls. The fittings detailed after many consultations with the departmental professor are of yellow pine with teak tops, and are equipped with electric power plugs, gas and water taps.

Glasgow University Zoology Building. By John Burnet, Son and Dick. The entrance hall and staircase.

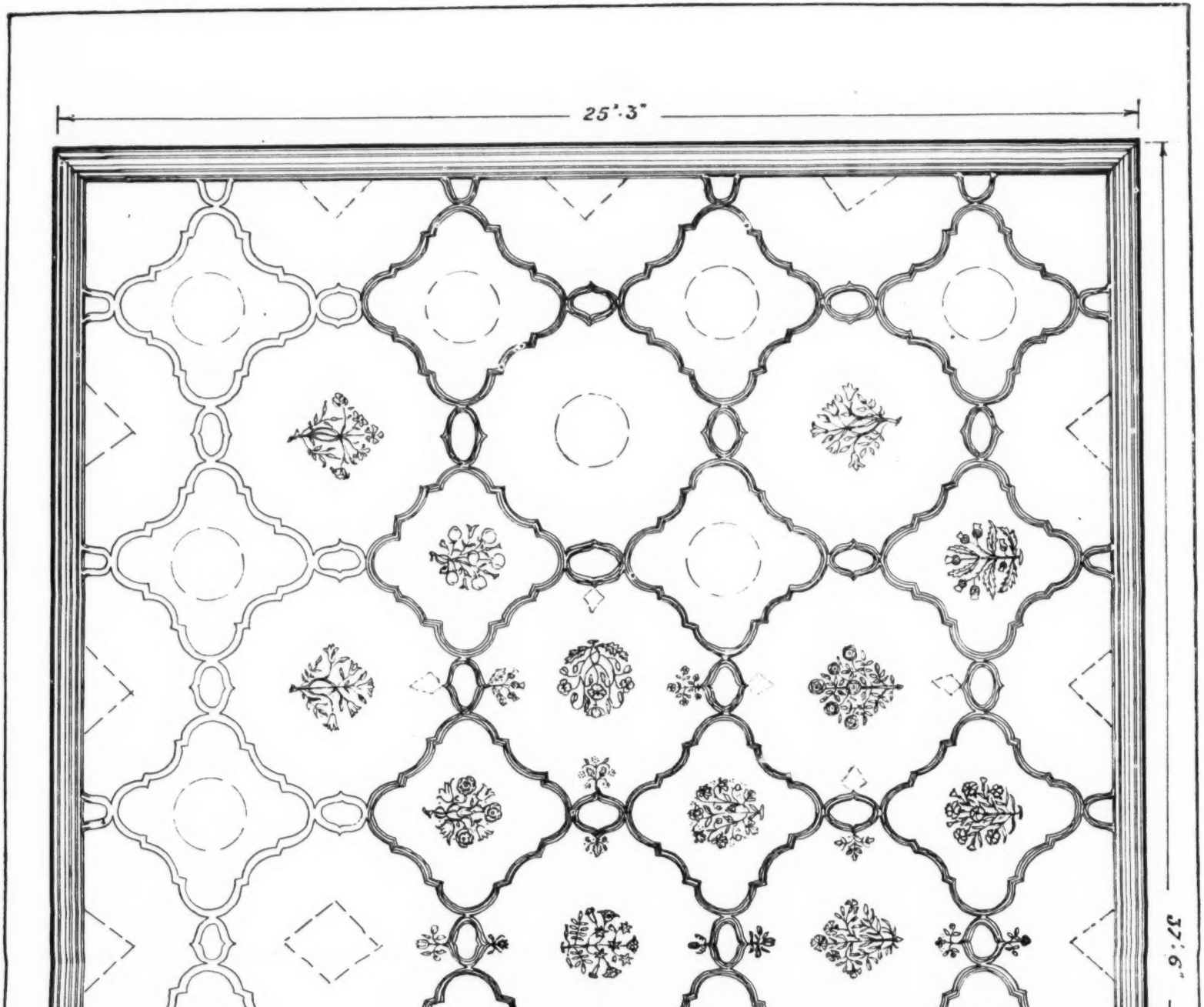
The view of the staircase shows how well the difficult junctions of terrazzo, tile, and plaster have been studied. The treads are rounded up into the string, and the latter are brought down into very satisfying circular stops, with the bottom step working round them on either side. The general air is that of neatness, breadth, and solidity.

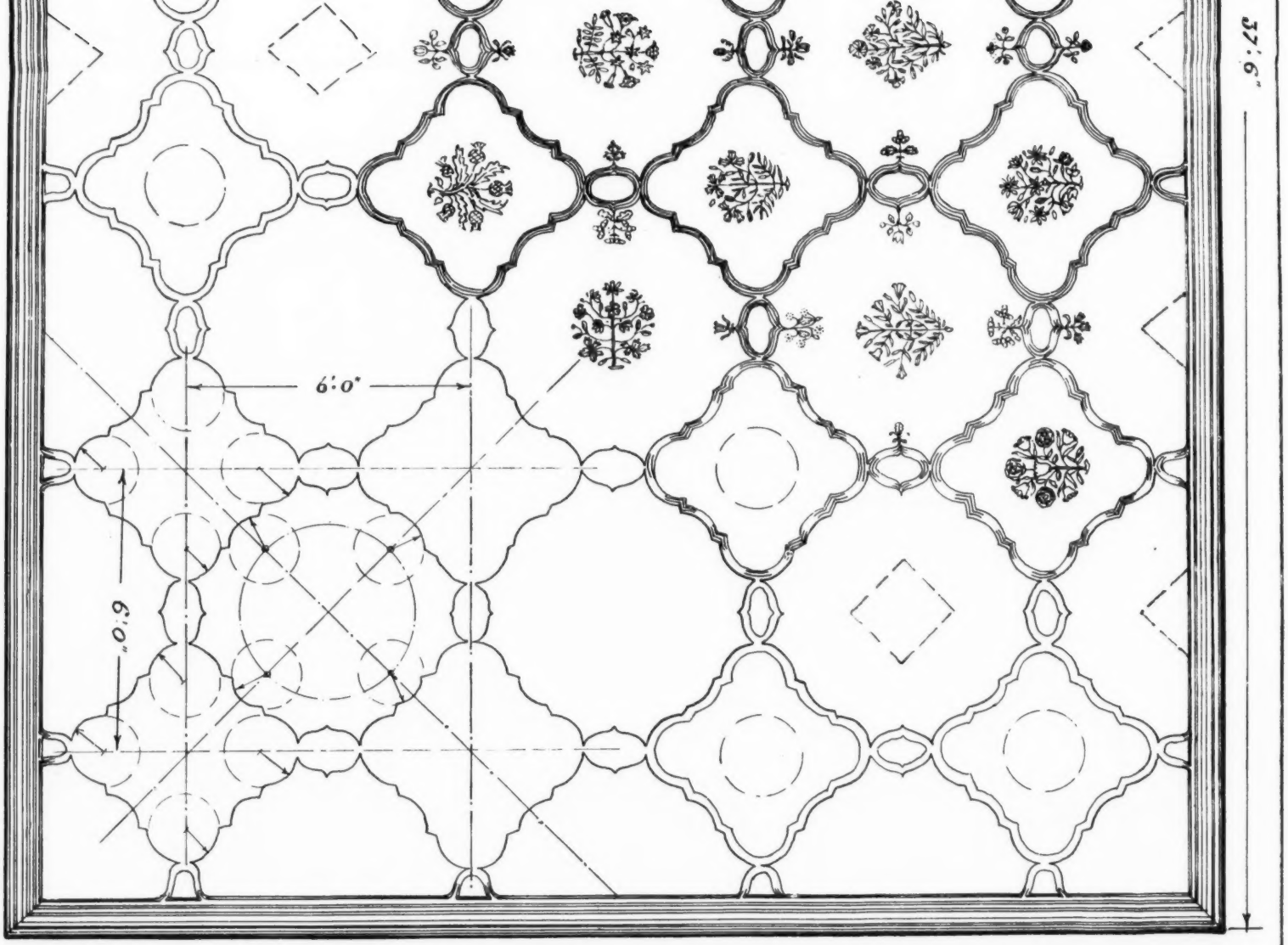
The architects are to be complimented in the production of a soundly-constructed building of unusual interest, and in having met exceptional problems with resource and skill, and the university authorities may be complimented on the possession of a building so admirably fitted to its purpose.


ROYAL HORTICULTURAL HALL.
GROUND FLOOR PLAN OF ENTRANCE HALL.
STAIRCASE DOWN TO POTER
STAIRCASE UP



THE ROYAL HORTICULTURAL HALL, WESTMINSTER. BY EASTON AND ROBERTSON. GROUND-FLOOR PLAN OF ENTRANCE HALL.

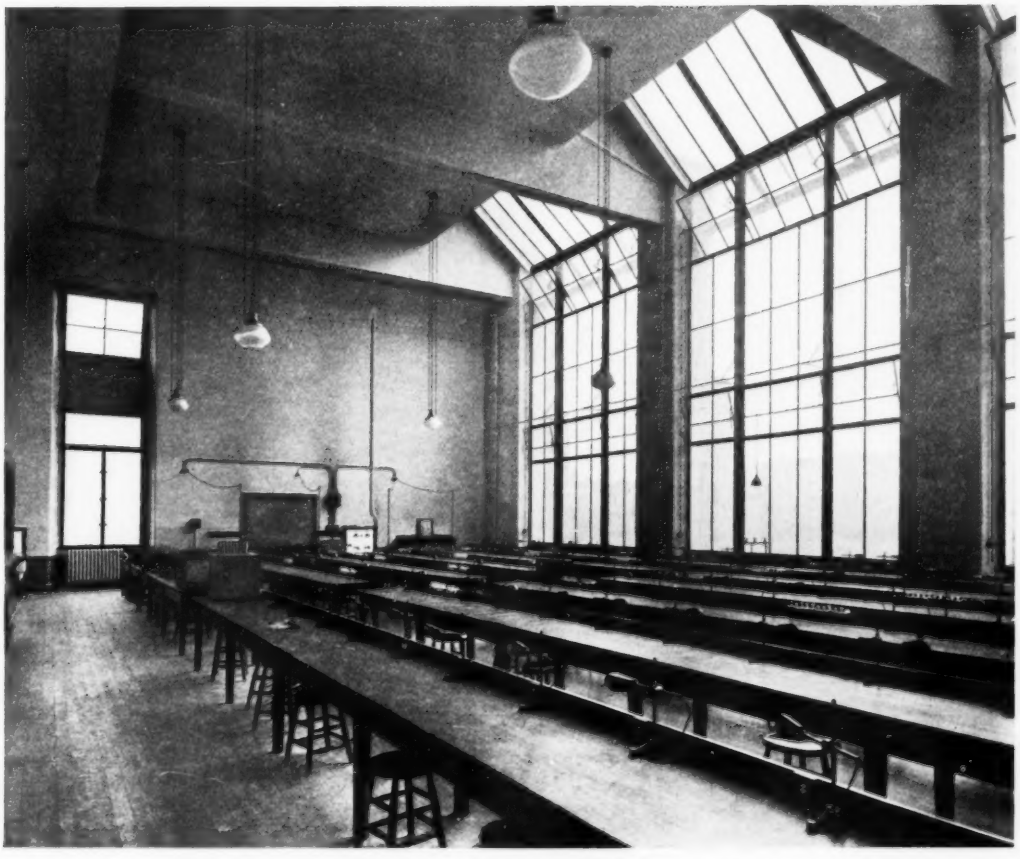

25'-3"
37'-6"



Plan of Ceiling.

Scale 12 0 1 2 3 4 5 6 7 8 9 10. Feet.

FOUR MODERN PLASTERWORK DESIGNS. I. A RIBBED CEILING WITH ENRICHED CENTRES. BY GEORGE P. BANKART. PLATES 2, 3, AND 4 OF THIS SERIES WILL APPEAR DURING THIS MONTH AND OCTOBER.



Glasgow University Zoology Building. By John Burnet, Son and Dick. Above, the museum. Below, the elementary laboratory.

CHURCH HEATING

[BY WILLIAM W. WOOD]

PERHAPS no other building requires such a nice adjustment of temperature, humidity, and air circulation, combined with so many natural difficulties, as a traditional congregational parish church. Basically the "standard" edifice comprises a nave, with clerestory, terminating in a chancel at a slightly higher level, having a large east window above the reredos. On either side of the nave are aisles roofed at a lower level. The organ chamber and clergy vestry are both, frequently, on the south side of the chancel, whilst the crypt under the altar is used as the choir vestry. Alternatively the organ may be on the north side, leaving room for both vestries on the south side, and the crypt then makes an excellent boiler-room. At the west end of the nave is a large door, and another at the west end on the south side of the south aisle.

The difficulties which at once present themselves are:—

1: The coldest part of the building, where the greatest number of air changes will take place owing to the constant opening and closing of the west and south doors, is farthest from the source of heat.

2: The great height of the nave, added to which is the large glass area of the clerestory windows, creates a considerable tendency to downdraughts.

3: The draughts due to movement of air caused by the organ bellows.

4: The levels rising towards, instead of from the boiler.

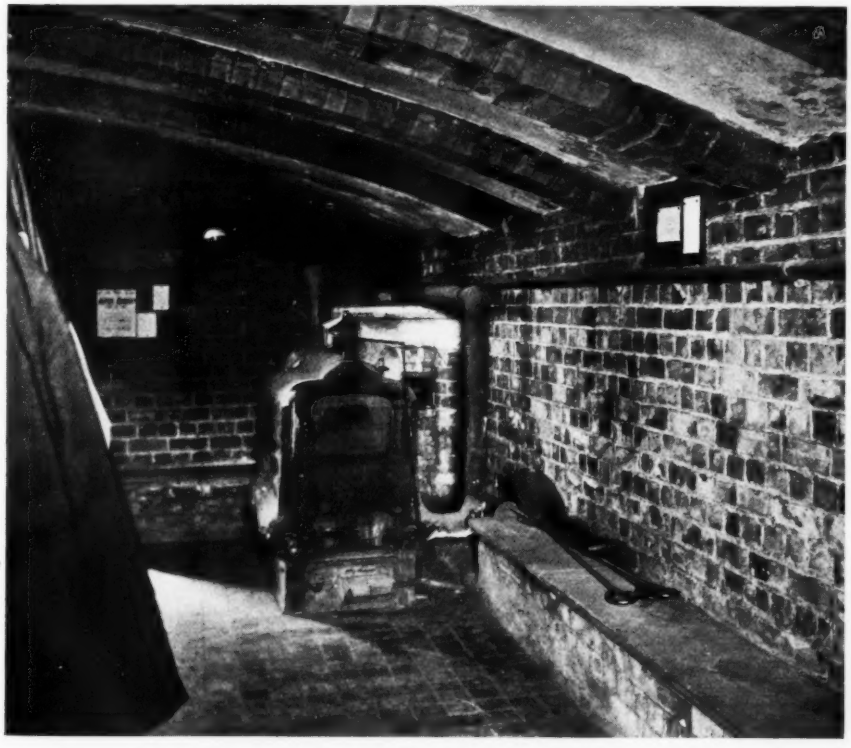
5: Cost.

Many existing churches have the most primitive methods of warming, and when a fund is inaugurated to instal a system of central heating, the primary consideration, from the point of view of the clergy and the parochial church council, is one of cost. Consequently, it may be out of the question, or æsthetically impossible, to arrange a boiler-house at the west end, but this trouble does not present itself in such an acute manner with new projects, and, therefore, in these cases difficulties numbers one and four can be thus overcome.

Before going on to suggest methods of meeting the other obstacles, it would be as well to consider for a moment the requirements. The clergy, choir, and congregation must be kept warm and awake. This means an average temperature of 60° to 65° F., giving the individual member of the congregation the opportunity of sitting in, or discarding his overcoat, according to his personal requirements of warmth, but allowing the average person to sit in comfort without an overcoat. In addition, the air must be kept moving and at the proper degree of humidity, otherwise drowsiness will result. An elaborate system of ventilation is not called for, but an adequate number of air changes, say, 1½ per hour should be made possible—and this greatly increases the required amount of heating surface and, consequently, the cost.

The Church of St. John the Baptist, Spalding.
The nave, showing radiators on screen wall.

A case in point, which contained all five difficulties, was the Church of St. John Baptist, Spalding, the central heating installation of which I was the architect. This church was originally warmed by means of three coke-fired stoves sunk below floor level, one in the nave and one in each aisle. Their separate flues converged to a common flue, warmed by a pilot stove in the choir.



The Church of St. John the Baptist, Spalding. The boiler in the crypt.

The clergy vestry and crypt each had small coke stoves also, making a total of six fires to be kept burning. It was decided to instal a central heating system, on the low-pressure hot water principle, after various other methods had been discussed and discarded. All the small stoves were removed. The new boiler was put in the crypt; by insulating it, the crypt was adequately but not unpleasantly warmed, and continued to be used as the choir vestry. The boiler smoke outlet was made to enter the vertical common flue, and other old flues connected therewith were sealed off.

To prevent downdraught, a flow main was taken along each side of the nave just above a string moulding and immediately below the clerestory windows, to warm the upper air. The sheer symmetry of the arrangement made the pipes inconspicuous. They were then taken down in their respective western angles, and at once fed radiators on each side of the doors—care being taken to have a radiator near the font. The returns ran alongside each external (aisle) wall, the southern one dipping past the entrance and being vented through a radiator placed to the east of, and at right angles to, the door. The returns had to rise at the chancel step: this they did abruptly, and an open vent was taken from each to the ridge of the chancel roof, to be above the level of the water in the feed-tank located in the tower. Owing to the difference in level between the nave and chancel roofs there is always a good deal of downdraught near the arch. Consequently, wall radiators were clipped to the choir side of the stone screen. The warming of the chancel itself presented considerable difficulty, finally overcome by fixing wall radiators to the slope of the window sills high above the organ on one side and the choir on the other.

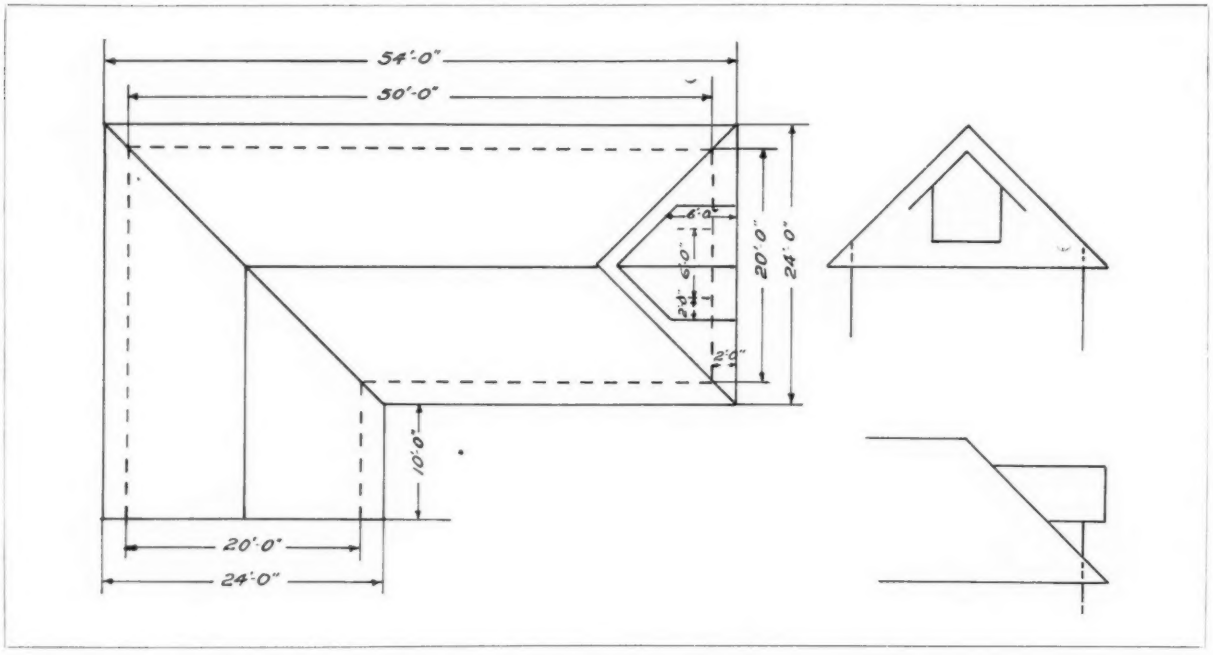
Each radiator in the body of the church was provided with a control valve of the lock shield type, to prevent mischievous boys tampering with them. The radiators at high level in the chancel were controlled by two valves, one for each side, fixed at floor level behind the screen. The old pits in the nave and aisles were filled in and tiles were laid to match the existing. Sections of the gratings were re-used as inspection covers over the main pipes at the three underground junctions. The pipes and radiators were painted to match their immediate surroundings, and with a minimum of cutting and trench work the whole installation was merged into the building and lost to view. The total cost, including all fees, etc., was the modest sum of £341. The heating engineers were Messrs. Mackallen Heating Co., Ltd., of London, and the cutting away and making good was done by Mr. W. Bennett, builder, of Spalding.

MEASURING, ESTIMATING, AND COSTING

[BY T. SUMNER SMITH]

ii: AMERICAN AND ENGLISH MEASURING SYSTEMS

THE examination and comparison of American and English methods of measuring may help towards devising and formulating a system that may be applicable in both countries. In America bills of quantities are not supplied to contractors for the purpose of tendering, as they are in England, the quantities required being prepared by the individual contractors tendering. These quantities differ but little from the bills of quantities that are supplied to contractors here. The main difference, so far as slating is concerned, is that of the method of computing the area, and that "cuttings" are ignored in America. We shall not, at the moment, develop the matter further beyond this



point. The interest at this stage centres around the method of computing the area.

The American method of computing the area of a roof from the plan is by multiplying the plan area of the roof by the factor for rise in inches per foot. This factor is none other than that of the secant of the angle of the slope with the horizontal. The slope is always a ratio to the total rise in feet to the total span in feet. Hence, the method is purely scientific; and the Americans have reduced it to a system in that they have factors for every likely rise in inches per foot of span.

An example of the American method of measuring and computing the area of the roof, as shown on the accompanying sketch, is given below. The illustration is from page 406 of *Estimating Building Costs and Appraising Buildings*, by Frank E. Barnes, C.E. Elevations to the gable, which contains the dormer, have been added to the illustration so as to obtain the length of slopes in measuring by the English method.

Example: Slated roof, as sketch, with a rise of 12 in. per ft. (one-half pitch, or 45 degrees). Hence—

Plan area = 54 ft. by 24 ft. + 10 ft. by 24 ft.	=	1,536
Dormer overhangs = 2 ft. by 6 ft. + (2·2 ft. by 6 ft.)	=	36
Total plan area in square feet	=	1,572
Factor for 12 in. rise	=	1·414
		2,222·808

Approximately, 2,223 superficial feet.

Very simple! And absolutely correct! The total by the English method is slightly in excess, owing to the work being measured in inches and not in decimals. For instance, the nearest measurement in inches along the slope of the roof is 204 in., or 17 ft., but mathematically 16·98 ft. And the same applies in obtaining the lengths along the slopes for the overhangs to the dormer.

The quantities by the English method of measuring, are:—

2/54.0		
17.0		
	1,836.0	main roof
2/10.0		
17.0		
	340.0	prog. gable
2/ 2.0		
4.3		
	17.0	overhangs
2/ 6.0		dormer
2.9	33.0	
	2,226.0	slating

2/21.0		
	42.0	
2/2/9.0	36.0	
	78.0	single bevel cutting to valleys
2/17.0		
	34.0	
2/ 7.0		
	14.0	
	48.0	verges
		and

2/10.0		
	20.0	dormer
2/30.0		
	60.0	main roof
2/22.0	44.0	
	124.0	single cutting to top edge
54.0		
34.0		
10.0		
30.0		
24.0		
10.0		dormer 2/5.0
	162.0	eaves course
3/2/21.0		
	126.0	single bevel cutting to hips

	48.0	pointing to verges
10.0		
	10.0	ridges
30.0	30.0	
22.0		
	22.0	hips
3/21.0	63.0	
	125.0	ridge and hip tiles

No. 1. Solid three-way piece for extra cost over do.
No. 1. Solid hip piece do. for do.
No. 3. Hip irons and screws.

That sets out briefly the measurements, and their total are the totals which would appear in the bills of quantities together with their descriptions.

With the exceptions of ridge and hip tiles, solid three-way pieces, solid hip piece, and hip irons and screws, we have six other measurements, namely: single cutting to top edge, eaves course, single cutting to hips, single cutting to valleys, verges, and pointing to verges, which are ignored in measuring in America. Americans base their price seemingly upon the area only; in this case, 22 squares 23 ft. superficial. Beyond the statement in Mr. Frank E. Barnes's book that a "slater and a helper will lay one square of average-sized slate in plain work in 2·8 hours," we are left in doubt as to how they deal with such items we have enumerated above.

Anyhow, analysis, after the manner we have given, would be a necessity in pricing the area of slating. It will be noted that the time approximates to that which we gave, but we cannot say whether the time includes fixing battens. The price appears to have increased 100 per cent. since 1914. Besides the extra time occasioned by these additional items, there will be an increase in materials as a consequence. Thus, in order that they may be priced, they require to be analysed: the amount of materials ascertained and the labour (time) computed.

In the ordinary course of things, the analysis of an item is left to the estimator. We say—deliberately—that this is not the proper course, and need not be the case. In fact, the analysis can be done in a much simpler and better method than that usually adopted by the estimator, without departing from the

standard method of measurement. We suggest that the quantity surveyor—as his title implies—should supply the quantities, and his mode of measuring could be merely a means towards that end. That, we say, should be the object of measuring, and the true function of the quantity surveyor.

The analysis of materials remains constant for all time. For example, 170 Countess slates (sizes 20 in. by 10 in.) will cover one square of roofing; therefore, it would be but a waste of time to work it out again. As with slates so with other things. The quantity surveyor is as competent as the estimator to analyse these items, and if it was the business of the quantity surveyor to do so, as it ought to be, then it would reduce the cost of building. Just in the same way that the preparation of one set of bills of quantities by the surveyor saves the time of all the contractors tendering, so would the analysis of the items by the surveyor save the time of all the contractors tendering, and thus reduce establishment charges to that extent, with a consequent reduction in the cost of building. The time saved by the contractor or his estimator might be devoted to costing. This should not be an added charge to the cost of building, owing to the fact that a system of costing would replace his cumbersome and inefficient method of prime-costs. Pricing and costing, amongst other things, are the proper functions of an estimator.

[*To be continued*]

LITERATURE

THE PROTECTION OF ANCIENT BUILDINGS

THE past fifty years have seen the gradual spread of the idea of conservation of ancient buildings as opposed to the so-called "Restoration," that generally meant the destruction of genuine old work and its replacement by modern sham antique designed in accordance with the archæological whim of the architect.

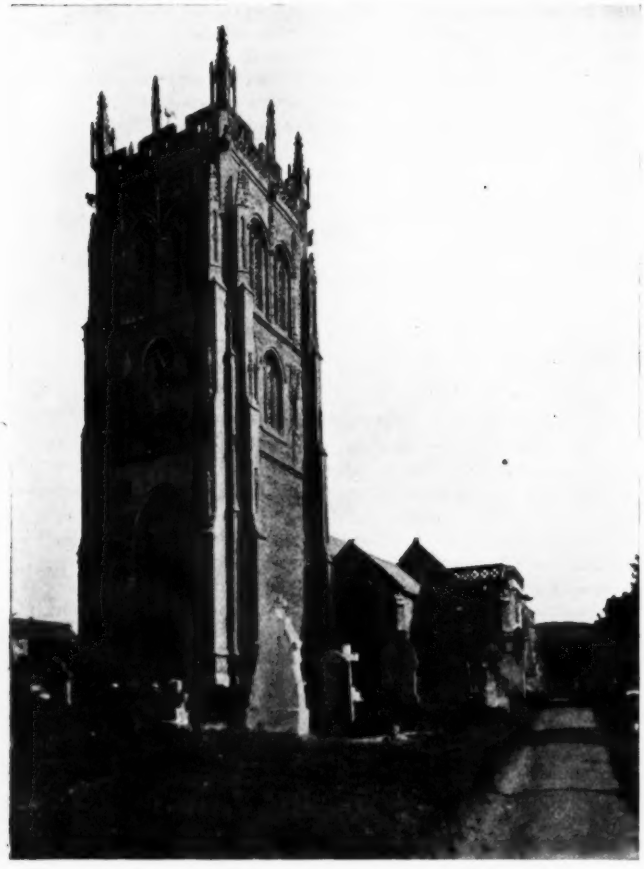
Even before the foundation of the Society for the Protection of Ancient Buildings some specially enlightened persons were in advance of the bad tradition of the time, and at the present day there still remain many who need the encouragement or deserve the protests of the Society. Mr. J. F. Green, speaking at the jubilee meeting at the Mansion House, declared that "it is still necessary to make protests . . . against this abominable outrage which it is proposed to perpetrate at Norwich in putting up that ridiculous mock Norman lady chapel at the east end of that glorious cathedral." "I have known that cathedral," he continued, "loved it, and reverenced it for more than sixty years, and it fills me with shame and disgust to think that men, and men presumably of taste, eminent architects, should be prepared at this time of day to perpetrate such an absurdity as putting this imitation Norman chapel at the end. I do hope that there will be a very strong public protest against this action of the Dean and Chapter of Norwich." His wholeminded intolerance of sham is, in fact, worthy of the days of William Morris and his band of pioneers, and his vigorous expression of his views is particularly valuable in this period of easy-going and rather apathetic toleration.

One cannot labour too hard in the interests of the historic monuments of our land, which are attacked not only by the natural forces of decay, but also by the unthinking activities of "progressive" people who cannot be content to leave well alone, or who lack the special training necessary to enable them to execute, or even to be interested in, merely inconspicuous works of repair.

The ancient monument stands in continual danger between the extremes of indifference and of fussy interference. The lover of the picturesque may encourage the destruction of priceless monuments by allowing ivy and other growths to thrust their stones out of position, and the "restorer" still shows, as at Norwich Cathedral, his anxiety to use the existing work as a foil to his own ingenuity in imitative design.

Perhaps the least satisfactory part of the valuable report of the Society for the Protection of Ancient Buildings is the lack of any scheme for the education of architects and archæologists in the actual processes of survey and analysis of the structural condition

Upton-on-Severn old Church, now becoming ruinous. [*From the* Annual Report of the Society for the Protection of Ancient Buildings.]



Kingston Church Tower, Taunton. [*From the* Annual Report of the Society for the Protection of Ancient Buildings.]

of decaying monuments, for it is only by means of very definite training that these aspects of the art of the practical conservator can become familiar to more than a few exceptional men.

Whether the reader of the report will be content to accept the methods adopted in individual repairs illustrated in the book is also somewhat open to question, for though the illustration showing the parapet of Kingston Church, Taunton, after repair represents a far more satisfactory state than that shown in the preceding photograph, the use of exposed metal stays and of crude buttresses of reinforced concrete is not in accordance with the best tradition of inconspicuous repair. The description in the text of these works includes the statement that " the perished surface of the masonry has been cleaned of loose particles and dressed with specially prepared limewash to arrest the decay," and it will be interesting to see how long this process will prove effective.

In the case of another pair of illustrations, which show Ashfield Hall, Much Wenlock, before and after restoration, the reader will be horrified to note the change from beautiful grey to spic and span newly-stained half-timber work and the substitution of a new tile roof lacking in texture for the old slab roof that was delightfully full of it. But here the text sides with the reader and points out the harm done to the building by re-roofing it, and explains that " This is a case in which the Society would have recommended the re-use of the old roofing material made out with new of the same sort."

For the sake of the busy folk who have to read in a hurry, the fact that the second illustration was put in as a " horrid example " might have been mentioned below the picture. Both photographs, by the way, are admirably suited to their respective purposes, and the posing of the second to include a greater length of the iron railings increases the dismal effect, even though the railings were actually in existence before the latest restoration, and a small portion of them is shown in the first picture.

But the shortcomings of various repairers and restorers are relative rather than absolute, as is seen when even the photograph of Ashfield Hall after restoration is compared with a monument that is suffering complete neglect or which is being demolished to make room for modern improvements.

The comments of the late Mr. Somers Clarke upon the proposal to reconstruct the venerable mosque of Amru (Omar) at Cairo show how dangerous to an ancient monument may be enthusiasm misdirected towards spurious " restoration."

" Competitors from all over the world have been invited by the Egyptian Government to submit schemes for the reconstruction of the mosque of Amru as it was ' at the period of time, and in the style thereof, when the building was at the pinnacle of glory.' " " As no man knows when this happy moment arrived," wrote Mr. Clarke, " the work will be in fact a work setting forth the taste and fancy of the architects of today."

One feature of the report which will be of interest to readers who have followed the theory and practice of the conservation of ancient buildings during recent years is the growing tendency for conservators to appreciate and to speak well of one another's efforts. The tradition of hostility and obstruction maintained by the Society during its early days is gradually giving place to a spirit of co-operation as other bodies interested in the upkeep of old buildings prove themselves worthy of regard.

Mention is made in the pages of the report, and in the report of speeches at the Mansion House meeting, of the good work performed by H.M. Office of Works under the chief inspector of ancient buildings, Mr. Peers. This is a welcome and a well-deserved tribute, and, more than that, it is something of a triumph for the Office of Works which pushed on with reasoned and carefully-devised concealed measures of repair notwithstanding the bitter criticisms from members of the Society for the Protection of Ancient Buildings at the time when the reinforcement of the dangerously leaning walls of Rievaulx Abbey was in progress. The criticism and the appreciation were both sincere, and the change from the one to the other has been brought about by the obvious success of the operations.

WILLIAM HARVEY

The Society for the Protection of Ancient Buildings: Fiftieth Annual Report of the Committee and the Jubilee Meeting at the Mansion House, April 1927. A. W. Powys, Secretary, 20 Buckingham Street, Adelphi, London, W.C.2. Price 2s.

THE SUBSTANCE OF ARCHITECTURE

This book, which is obviously the fruit of many years' meditation, is an important contribution to the literature of art. At a time when there are being published so many expensively illustrated architectural books, of which the letterpress, to put it as nicely as possible, is insignificant, one is glad to come across a treatise compact of thought from beginning to end, and written with a dignity and charm of style which make it pleasant for the reader to follow a long-sustained argument. Mr. Butler addresses himself ostensibly to that increasing public which has an intelligent interest in architecture, but while he is careful to write in such a manner that people quite ignorant of the technicalities of building may understand him, this is not an elementary primer, but one which can be studied with very great profit by architects.

For the convenience of his readers, Mr. Butler appends at the end of the volume a summary of his argument, which itself may be summarized still more briefly in the following terms: Architecture as an occupation is described as the arrangement of the lines of a building on paper and in fact. The two elements in building are the æsthetic and the practical, and these two must combine before architecture can result. Beauty he defines as æsthetic value in the appearance of objects. Though assumed to be subjective the æsthetic value is due to a particular quality in the appearance of things which have always been considered beautiful. This quality

is one of harmonious unity, and it is most strongly apparent when there is a great number of balanced opposite masses and of balanced movements in conflicting directions, all related intricately in a unity of effect. He draws a distinction between the vitality factor and the stability factor in a design, yet the look of harmony in works of art is rarely quite plain. There are within the unity points of emphasis which give it significance. Architectural forms as instruments for the display of significance may be classified according to their practical nature and origin, and the æsthetic element consists of an appearance of beauty with a certain definite significance. With this should be fused the practical element. The right proportion, however, of these two elements present in the design of a building is determined by its position in the general scale of utility.

What particularly strikes one in reading this book is the wide range of Mr. Butler's architectural learning and his judicial spirit, which enables him to appreciate the essential qualities of all the European styles. It is necessary to emphasize the word "European," because no attempt is here made to relate the significant achievement of Chinese and Japanese architecture to the general stream of architectural development. Mr. Butler has, however, chosen a wealth of examples quite sufficient to enable him to expound his thesis with great clarity, and in its general outlines it is one to which most people must give their assent. In his discussion of the æsthetic element in building, Mr. Butler makes the important point that every building has its dominant aspect, and the appearance of a building which is highly complex when we begin to consider various points of view from which it may be envisaged must always be related to this dominant aspect. Sometimes this latter is a view of the interior, as in the case of Sta. Sophia or Westminster Hall, and at other times a view of the exterior. St. Paul's obviously looks vast from Ludgate Hill, where we see the great dome towering over the twin cupolas. "Who, for instance," says Mr. Butler, "standing near the railing of St. James's Park and looking at the Horse Guards from the west, is not so entirely satisfied by the appearance of the building that he is totally indifferent to the possible charm of its interior?" And with malicious humour he recommends the spectator to turn towards the north. "The hope will then instantly enter his mind that the dominant aspect of the Admiralty is internal!" The author points out that the dominant aspect of a building should be the one which presents itself from the point of view frequented by the greatest number of people.

It would be impossible in a short space to follow Mr. Butler in his illuminating analysis of the relationship of architecture to painting and to music, or in his discourse on "vitality" and "stability" in building. He tells us that "the strength of harmonious unity in the appearance of a building depends both on the weight and number of balanced opposite masses and on the force and number of balanced movements in conflicting directions."

The author criticizes several buildings by this standard, and one cannot help agreeing with the conclusions at which he arrives. The only question, however, which occurs to the mind of the reader is that a more direct analysis of the formal qualities of a building might give similar results without dealing with such imponderables as "movements" and "rhythms" in architecture.

Employed by so exact a thinker as Mr. Butler, the application of this criterion leads to solid results because he has in his mind a conception of architectural harmony as it exists in forms which which are *static*, but it is perhaps doubtful whether a student would ever learn to design well by juggling with the strengths and directions of "movement," using this term not in its mechanical, but in its much vaguer æsthetic sense. We have heard so much of the wonderful "dynamic" qualities of certain "modernist" designs, which pinned down and coldly analysed as "things at rest" (for that is what they really are) reveal nothing but a discord.

But Mr. Butler himself finds it necessary to supplement this criterion by one which has a more direct concern with the formal unity of a building. When discussing the Loggia Bernarda at Vicenza he points out that "For an effect of unity you cannot have an unresolved duality," and he attributes an essential part of the building's beauty to the dominance of one wall over the other. To explain our objection to duality, however, we need not talk about "strengths and directions of movement." We reject duality in works of art because it expresses the idea of division and is thus the exact opposite of unity.

Mr. Butler has much to say about the relation of "building" to "architecture," and he does full justice to the importance of the "utilitarian" element in design. In fact, one of the outstanding qualities in his book is the ripe worldly wisdom which saves him from all fanaticisms and unphilosophical exaggerations of the importance attaching to particular aspects of his subject. He would give to each building its appropriate beauty and significance while making it do its workaday task in the modern world. This is a book to read and to read again.

A. T. E.

The Substance of Architecture. By A. S. G. Butler. Constable. Price 12s.

LAW REPORTS

INJUNCTION: RIGHT TO BRING ACTION

Salisbury and Fordingbridge Drainage Board v. *Southern Tanning Co. (1920), Ltd. King's Bench Division. Before Mr. Justice Salter*

This matter was tried before his lordship and a jury at the Winchester assizes, and legal arguments were now heard on certain points raised, one of which was whether the plaintiffs were a competent body to bring the action, having regard to its constitution.

The plaintiffs are the drainage authority for the district, which embraces that part of the River Avon on which was situate a mill owned by the defendants, and they sought an injunction against the defendants to restrain them from raising a weir near their Downton mill, the result of which would be, it was alleged, to prevent the proper drainage of the lands adjoining. This the defendants denied, and set up a counterclaim for damages for alleged trespass, saying the plaintiffs had removed a board on the top of the weir. The jury found that the present depth of water had not been enjoyed by the defendants or their predecessors as a right without interruption from 1905 to 1925, that the defendants had increased the depth of the water, and that such increase injured the meadows.

Long legal arguments ensued upon the legal points raised, and the defendants succeeded on legal issues.

His lordship, in the course of his judgment, said the plaintiff Board was constituted in 1923, under the Acts of 1861 and 1918. The mill was not being used for its original purpose of a corn mill, but to provide electric light. The Land-Drainage Act of 1861 provided two methods by which the Board might deal with the removal of an obstruction to the drainage of the district. One was the actual removal of obstruction themselves, and the other a judicial decision and order. Under the first there was to be no interference with mills, except upon an order made by two justices in petty sessions. The Board therefore had no power to interfere with any such mill as this except after the decision of justices. In his opinion the Act of 1861 gave no powers to the Board forcibly to remove a portion of the weir. The defendants' counterclaim for trespass therefore succeeded and judgment would be entered for them for the agreed amount of £10 with costs.

His lordship said with regard to the point whether the Board was an authority competent to bring the action for an injunction, the plaintiffs sought to put themselves on the same footing as riparian owners. He held the Board had no proprietary rights with the weir banks or meadows which had been injured. He could find no reported case in which an action had been brought by Commissioners of Sewers without previous proceedings to get an order for removal of obstructions. In his opinion plaintiffs had neither alleged nor proved cause of action upon any part of the relief claimed, and he accordingly entered judgment also for the defendants on this part of the case.

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.

ARCHITECTURAL EDUCATION

Autumn draws nigh, and the architectural schools have begun to issue revised prospectuses ready for the time when the students' fancy will flash from open-air sketching and measuring to the sterner, but no less interesting, work of the classroom. Liverpool University was the first to send us their prospectus—noticed in these pages a few weeks ago—and this is now followed by those of the Manchester Municipal College of Technology and the Glasgow School of Architecture.

At Manchester the professor of architecture is Mr. Archibald C. Dickie, M.A., F.S.A., A.R.I.B.A. The full-time courses extend over three years. In the evening school the intermediate course extends over two years and the advanced over three. The subjects taught during these two courses are building construction, mathematics, geometry, mechanics, principles of structural design, sanitary engineering, quantity surveying, æsthetic properties of building materials, architectural practice, and quantity surveying. The courses prepare students for the examinations of the R.I.B.A.

The Glasgow School of Architecture is under the superintendence of a joint-committee on architecture, representative of the Royal Technical College and the School of Art. The resources of both institutions have been fully utilized. For the purposes of the degree of B.SC. in architecture the curriculum comprising the courses for the degree is recognized by the University of Glasgow, to which the Royal Technical College is affiliated by ordinance of the Privy Council. The co-relation of office pupilage with the courses of study is provided for, and the council of the Glasgow Institute of Architects has expressed its concurrence in, and has issued to the members a recommendation in favour of, the alternative schemes of study outlined, under which attendance at the school of architecture is combined with the serving of an office pupilage. The following courses are provided: 1: Degree course (day classes); 2: diploma course (day and evening classes); 3: certificate course (evening classes). The degree of B.SC. in architecture and the diploma of the Glasgow School of Architecture exempt from the Associateship examinations, except as regards professional practice. The certificate of the Glasgow School of Architecture with full preliminary qualification exempts from the intermediate examinations of the R.I.B.A. Mr. T. Harold Hughes F.R.I.B.A., F.S.I., A.R.C.A. (Arch. Lond.), is director of architectural studies and professor of architecture.

We have also received from the Northampton Polytechnic Institute the prospectuses of their engineering day college and their evening classes in civil and mechanical and electrical engineering. The principal of the Institute is Mr. S. C. Laws, M.A., M.SC.

ANNOUNCEMENTS

Mr. Herbert Palser, L.R.I.B.A., has commenced practice at The Estate Office, Sandy Lane, Cobham, Surrey, at which address he would be pleased to receive trade catalogues.

TRADE NOTES

Messrs. W. H. Gaze and Sons, Ltd., have secured a contract for an extensive building for the Archives Department of the Anglo-South American Bank, Ltd., at Broom Hall, Broom Road, Teddington. Mr. W. T. Walker, F.R.I.B.A., is the architect.

Messrs. P. C. Richardson & Co. (Middlesbrough), Ltd., chimney builders and steeplejacks, have received the order to provide all materials and erect—including excavations and reinforced concrete foundations—a huge brick chimney, 363 ft. high by 19 ft. 6 in. internal diameter at the top, for the Branston Artificial Silk Co., Ltd., at Burton-on-Trent. Messrs. Richardson & Co. are also building a brick chimney at Wolverhampton, 365 ft. high by 18 ft. 8 in. internal diameter at the top.

Those of our readers who own motor-cars or wireless sets should be interested in the Tungstone accumulator. It is claimed, in a booklet, *Battery Troubles Solved*, just issued by the Tungstone Accumulator Company, Ltd., that approximately 95 per cent. of the total weight of the plates used in the cell is made of pure lead and pure lead oxide paste. Thus the firm claim successfully to have overcome sulphuration troubles, and by this and other special features of the accumulator to have entirely eliminated first charging risks, internal resistance and heat, to have prevented acid spraying or sweating and other troubles, and to have secured, among other advantages, an accumulator with a strong spark for car-starting, great engine power at low speeds and under load, unrestricted accessibility, reduced maintenance costs, and one with all parts replaceable.

GLASGOW UNIVERSITY ZOOLOGY BUILDING

Following is a list of the contractors for the Glasgow University Zoology Building, illustrated on pages 383-387 : Alexander Muir and Sons, mason work; John Cochrane, joinery; Redpath, Brown, & Co., steelwork; Stuart's Granolithic Co., floors and roofs; Henry Hope and Sons, steel casements; A. Mackenzie Ross, slating; George Rome & Co., plasterwork; Robert Brown and Son, tiling; Diespeker Ltd., terrazzo work; Jas. Symington & Co., plumbing; W. Meikle and Sons, glazing; Arthur Allan and Ure, electric lighting; Ashwell and Nesbit, heating and ventilating; C. T. Bowie Fisher & Co., painting.

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

22974. Cocking, W. C. Reinforced-concrete construction. September 1.
23135. Finnell System Inc. Floor-treating machines. September 2.
22929. Giles, T. W. Concrete beam. September 1.
23007. Mulhern, G. Chimney pots, &c. September 1.
22847. Stevens, W. Safes, &c. August 31.

SPECIFICATIONS PUBLISHED

276425. Reens, M. S. Means for limiting the warping of woodwork, such as doors, panels, partitions, and the like, and for straightening such articles when warped.
276506. Haslam, J. B. Sprinkler-head for fire extinguishing.
276538. Janin, A. Pavements.
276578. Porter, O. W. L. Domestic fire grates.
276597. Thompson, C. H. Manufacture of bricks, tiles, and other moulded articles made from sand and lime.

ABSTRACT PUBLISHED

274291. Glover, C. W., and Smith, H. F. Floors.

READERS' QUERIES

LIME-WASHING OAK

A. M. writes: "Please explain the treatment and proportions for lime-washing oak for external half-timbering on a house. Should this be treated before fixing?"

Lumps of "hot" or quicklime are taken and slaked in a pail with just enough boiling water to turn them to thick lime putty, and the putty is spread with a trowel upon the surface of the oak. The lime is scraped off when dry, leaving the colour of the oak far more mellow than before the application. No special proportions can be laid down, as one piece of lime slakes more easily than another. There is no harm in treating the timbers before fixing, and to get uniformity on both faces and exposed edges of the timbers it is probably necessary to do so.

A BRICK-BUILT INCINERATOR

R. H. writes: "I wish to design and construct a brick incinerator to burn approximately 600 7-bushel sacks of shavings and chips from a mill and joiners' shop, per six-day week, with occasionally some additional sacks of office papers. The greatest number of sacks per day would not be more than 150. Please tell me: a: size of furnace chamber; b: arrangement of firebars and baffles, if any; c: size and length of flue; d: details of chimney shaft."

The design and construction of incinerators is generally entrusted to a specialist firm experienced in this class of work. The heat generated by the combustion of the chips may be utilized in heating water needed on the works.

The shavings and chips from the mill and joiners' shops, with a small quantity of office papers, etc., added, would be very free-burning material, and would give a great temperature. For this reason the furnace must be strongly constructed, and have a firebrick arch top not less than 9 in. thick and firebrick walls of not less than the same thickness. Feeding-doors should be arranged near the top of the chamber, and clinkering-doors over the bars, the same being of very heavy cast-iron construction to resist the temperature. In order to prevent sparks and dust escaping from the chimney it is advisable to arrange the furnace in the form of a double cell with a combustion chamber in the middle. One company holds a patent for an arrangement of this kind consisting of two furnaces, each 6 ft. × 3 ft. on the bars and having a combustion chamber between, into which the gases pass through pigeon-holed walls of firebrick. This combustion chamber is arranged in the form of a dust catcher, the products of combustion having to swirl downwards and then up again, thus parting with the greater portion of the flying chips and sparks by gravity and centrifugal force.

A flue leads from the combustion chamber to a specially-designed water tube boiler, which provides hot water for heating some portion of the premises, such as, for instance, the timber-drying sheds, and which will also yield a large quantity of hot water for ablutions, etc. A similar boiler can be arranged to supply steam if and when required. Beyond the boiler is a chimney, which can be constructed in brickwork, arranged at a sufficient height to give the necessary draught.

The height of the furnace chamber above the bars is about 5 ft., and the chimney requires to have a diameter of 2 ft. or thereabouts. A by-pass flue and damper are arranged so as to enable the production of hot water or steam to be regulated. Cleaning-doors are provided in the flues, etc. The flue leading from the furnace to the boiler is from 4 ft. to 6 ft. long, and 2 ft. 3 in. wide by 2 ft. 3 in. high. We recommend a height of chimney shaft of about 30 ft. for a plant of this kind, and consider that forced draught is not necessary.

The whole of the brickwork should be in firebrick set in fireclay, with very fine joints, the arch bricks being specially made.

It is usual to form the feeding-doors on one side of the furnace and the clinkering-doors on the other, the feeding platform being some 2 ft. or 3 ft. above the level of the clinkering platform which facilitates the labour of charging.

SEPTIC TANK

V. writes: "A septic tank is to be made for a house. The septic tank is a brick pit, the inlet pipe being turned down about 4 ft. so that the inlet is below the level of the water in the tank. Immediately joining the tank is an intercepting chamber with fresh-air inlet. The effluent runs away from the tank through the open joints of the tank wall and soaks away through gravelly soil. The sanitary authority who allow of the soak-away cesspool say that this construction is simply a soakaway cesspool. My contention is that the tank acts as a septic tank whether the effluent escapes through the surrounding brickwork or is carried away by the pipe outlet. I should be glad to know if this is not so."

The sanitary authority is right, and the correspondent is mistaken in supposing that the action of a soakaway cesspool is as efficient as that of a well-designed septic tank. The danger of making a tank with open joints (a soakaway cesspool) is that the water escapes too quickly and at too low a level to deodorize the solids and to permit them to liquefy speedily. The tank fills with a most obnoxious heap of solid refuse and gives off continual fumes of a highly unpleasant character. The escaping moisture is poisonous and may percolate through the subsoil at too *low a level* to be purified by aeration or by absorption by the roots of plants and trees and by bacterial action. It is only the *upper* layers of the soil that are provided with these agents of purification in sufficient numbers for dealing with the continual flow of sewage.

There is also a practical objection that the leaking holes may either become irregularly stopped up and permit of concentrated flow from one part of the tank in a more or less unmanageable way, or they may allow of earth and water percolating into the tank in wet weather and filling up the space that has been provided for the sewage. The idea of the septic tank installation is to purify the sewage by a process of aeration on a filter bed before its discharge into the subsoil, and the effluent is still further treated by being passed through a humus tank or by means of the *upper layers* of the surrounding cultivated ground. The apparatus needed for these processes is somewhat more costly to install, but no poisonous liquids are allowed to escape far below ground where they will contaminate sources of drinking water before purification by natural agencies has been completed. To make sure of adequate distribution of liquid on the filter bed it is necessary to draw off the liquid from the septic tank by means of a bent pipe from above the layer of sludge and below the layer of scum, and simple holes in the side of the tank will not permit of this decantation process. The soakaway cesspool is cheap in first cost, but requires to be emptied of solids—a process that is always offensive in smell and which involves expense in the long run. W. H.

M. L. writes: "Outside my garden fence, between my land and the road, runs a strip of grass about 10 ft. wide, such as one usually sees in country districts. I should be glad if you could give me some idea as to whose property this bank is, and to whom belong the trees which are growing on it. The main electric cable is laid in the bank and also, I think, the water and gas mains. If the trees are my property I should naturally be required to remove any branches which overhang the road, or constitute a public danger in any other way. Also am I entitled to level the bank and so improve the appearance of the approach to my house—or should I first get the approval of the local authority?"

It is difficult to surmise what your exact facts are with reference to your inquiries. It would be well to consult a surveyor who has a practice in the district. But the probability is that some local authority has acquired, by Act of Parliament, easements over the strip. It would be unwise to attempt levelling before permission has been obtained, but if overhanging branches of trees constitute a public danger moderate lopping should be done. LEX

The Editor welcomes readers' inquiries on all matters connected, directly or indirectly, with architectural practice. These inquiries are dealt with by a board of experts, to which additions are constantly being made as, and when, need arises. No charge is made to readers for this expert service. Diagrams must be clearly and legibly drawn out and lettered in black ink. Querists must enclose name and address. — Ed. A. J.

THE WEEK'S BUILDING NEWS

The HASTINGS Corporation has obtained sanction to a loan of £34,500 for various street improvements.

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The HASTINGS Education Committee is to prepare a scheme for the conversion of premises in Mann Street into a technical school.

*

The Ministry of Health has approved the proposal of the STRETFORD U.D.C. for the erection of baths at Trafford Park, but asked for a list of tenders and details of the filtration plant before coming to a final decision.

*

Plans passed by the TORQUAY Corporation: Additions, pavilion, Petitor Road, for Torquay Golf Club; bungalow, Isaacs Hill, for Mr. W. J. Werry; substation, Sherwell Lane, for Corporation Electricity Committee.

*

The EXETER Corporation is in negotiation with various local authorities regarding the provision in Exeter of a joint orthopædic hospital.

*

The borough engineer of TORQUAY has prepared preliminary plans for the provision of a building to serve the purpose of a rendezvous for visitors and residents in the Princess Gardens, and it is proposed to invite architects to submit designs.

*

The managers of the Micklegate Bar Schools, YORK, have, to meet the requirements of the Board of Education, prepared revised plans for alterations.

*

The MARKET HARBOROUGH U.D.C. has approved plans prepared by the county surveyor for the erection of a new bridge across the river at Northampton Road.

*

Plans passed by the YORK Corporation: Additions, Haxby Road, for Messrs. Rowntree & Co., Ltd.; additions, 1 St. Mary's, for Mr. H. Marshall; additions, 8 Castlegate, for Ebor Building Society; additions, 56 Clarence Street, for Messrs. Mallory, Ltd.; additions, Bishophill, for Messrs. Cooke, Troughton and Simms.

*

Plans passed by the MARKET HARBOROUGH U.D.C.: Petrol stores, Hearth Street, for Messrs. H. Monk and Sons; alterations, 63 Coventry Road, for Mr. J. M. Jones; house, Shrewsbury Avenue, for Mr. H. Cheaney.

*

The Post Office authorities have promised to build a new post office at SLEAFORD.

*

The SHOREDITCH Borough Council has passed plans for the partial reconstruction of the Standard Cinema, Goldsmith's Row.

The OXFORD Corporation Property Committee is to consider the purchase of the property belonging to Merton College in Printers Yard in order that it will be available for a full development of the St. Aldates—Queen Street corner, when the leases of the adjoining Corporation properties fall in.

*

The Ministry of Health has approved the proposal of the BRADFORD Corporation to erect by direct labour 200 houses on the Shirley Manor estate.

*

The WAKEFIELD Corporation has voted £9,840 for the erection by direct labour of twenty houses on the Snapethorpe estate.

*

The WAKEFIELD Corporation has asked the city engineer to prepare plans for the erection of a police station, fire station, and firemen's houses on the Westgate improvement area.

*

The BRADFORD Corporation has approved the plans of the city architect for the provision of accommodation on the Westwood estate for 120 male and 120 female patients, with possibilities for an extension to accommodate 160 additional patients.

*

The Board of Education has approved the plans of the BRADFORD Education Committee for the erection of a secondary school for girls on the Bolling Hall estate.

*

The BRADFORD Education Committee has asked the city architect to prepare plans for the erection of a two-storied elementary school on the Swain House estate.

*

Plans passed by the DUDLEY Corporation: Ten houses, Oakham Road, for Mr. C. P. Blewitt; extensions, bakery, Tower Street, for Messrs. T. Woodhouse and Sons; extensions to shops, Market Place, for Messrs. Foster Bros.; three shops, Cradley Road, Netherton, for Bournehills and Withymoor Colliery Co.; football-stands, Dudley Wood Road, for Cradley Heath Football Club; store-room, High Street, for Messrs. A. Preedy and Sons.

*

The borough engineer of BARNSLEY has prepared revised plans for the erection of an abattoir, the cost being estimated at £30,000. He has also prepared plans for the erection of accommodation for the hide and skin companies. The estimated cost is £3,500.

*

The CITY OF LONDON Corporation is to invite tenders for the erection of a block of shops and flats, containing twenty-four tenements, at New Street, Middlesex Street.

The BOMBAY Corporation has asked the municipal commissioner to report as to the advisability of enlarging the municipal market at Elphinstone Road.

*

Plans passed by the CARLISLE Corporation: Eight houses, London Road, for Messrs. Benwell and Slack, architects; workshop, Port Road, for Mr. H. Foxall, architect; joiner's shop, Dalston Road, for Mr. H. E. Ayris, architect; eight houses, Bedford Road, for Messrs. J. Laing and Sons, Ltd.; receiving-room, Carlisle Steam Laundry, Warwick Road, for Mr. S. W. B. Jack, architect; additions, premises in Richardson Street, for Messrs. Ferguson Bros., Ltd.; shop and offices, 15 London Road, for Mr. J. Millar; two houses, Dalston Road, for Mr. G. Armstrong, architect; two houses, Upperby Road, for Mr. H. Hodgkinson, architect.

*

The borough engineer of BIRKENHEAD has prepared plans for the erection of nineteen houses on vacant plots in Laird Street and Hoylake Road at a cost of about £10,000.

*

The borough engineer of BIRKENHEAD has prepared schemes for the redevelopment of the sites of premises in Fox Street, and these have been referred to the Housing Committee.

*

The BIRKENHEAD Corporation Estates Committee is now considering the preliminary report from Messrs. T. H. Mawson and Sons, the town planning consultants, in reference to the development of the Arrowe Park and Woodchurch estates.

*

The BIRKENHEAD Board of Guardians is to carry out improvements and additions at the Poor Law premises in Church Road.

*

The DUDLEY Corporation has passed plans submitted by the Provincial Cinematograph Theatres, Ltd., Regent Street, London, for the erection of a cinema at the rear of 171-175 High Street.

*

The STAFFORD Corporation has in view the acquisition of land for the erection of another 200 houses.

*

Plans passed by the OTLEY U.D.C.: Extensions, warehouse, Chevin Leather Works, for Messrs. J. S. Smith, Ltd.; alterations to property in Boroughgate, for Mr. R. Jackson; types of semi-detached houses, Bradford Road, for Messrs. O'Brien and Richmond; additions, Primitive Methodist Sunday Schools, Station Road, for Trustees.

*

The BURTON-ON-TRENT Corporation has purchased land at Winshill for housing purposes.

The LEEDS Corporation is considering a lay-out plan in connection with the extensions at Leeds University, showing a diversion of University Road.

*

The WEYMOUTH Corporation has abandoned a scheme for the erection of houses on a site at Westham and decided to obtain another site for the purpose.

*

The WEYMOUTH Corporation is to proceed with the clearance of properties in the Crescent Street and Queen Street areas.

*

Mr. J. Ashurst, the borough engineer of OLDHAM, has prepared a scheme for the erection of 500 houses on the Limeside estate. The cost is estimated at £261,000.

*

The borough engineer of OLDHAM has prepared a plan of the proposed lay-out of the Smethurst unhealthy area.

*

Mr. Frederick A. Walters is to erect an elementary school in BECKENHAM Hill.

*

The LEWISHAM B.C. has sold a site on the Grove Park housing estate to the L.C.C. for the erection of an elementary school.

*

The LEWISHAM B.C. is to prepare plans for reconstructing the tuberculosis dispensary at Catford Hill, and for providing on the adjoining site a central child welfare clinic.

*

Plans passed by the LEWISHAM B.C.: Seven houses, Brockley Park, for Mr. F. G. Barnes; twenty houses, Hengrave Road, for Messrs. Wm. Wilmot, Ltd.; additions, 299-303 Hither Green Lane, for Messrs. G. J. Stanford & Co., Ltd.; eighteen houses, Chudleigh Road, for Messrs. J. W. Heath and Sons; five houses, Honor Oak Park, for Messrs. Middletons (Builders), Ltd.; eleven shops, Bromley Road, for Mr. A. Frampton; twenty-six houses, Newquay Road, for Mr. T. A. Boughton; four houses, Lowther Hill, for Mr. H. Mansbridge; eight houses, Chinbrook Road, for Messrs. H. Dawson and Son.

*

The Royal Arsenal Co-operative Society is to erect premises on the site of 67-71 High Street, LEWISHAM.

*

The LEWISHAM B.C. has passed plans for 325 houses to be erected on the Downham estate by the L.C.C.

*

The L.C.C. has selected sites on the Downham estate, LEWISHAM, for the erection of two more elementary schools, provision being made for buildings to accommodate in the first instance 756 children, and capable of enlargement to accommodate 1,002 each.

*

Plan passed by the BLYTH Corporation: Alterations, Blyth and Tyne Hotel, for Messrs. Haswell and Son.

The WOKING U.D.C. has obtained sanction to purchase a housing site in Courtenay Road.

*

The Middlesex Education Committee is now to proceed with the provision of new schools at HAMPTON HILL.

*

Plans passed by the HAMPTON U.D.C.: Workshops, Oldfield Road, for Messrs. Hall and Hall; two houses, Courtlands Avenue, for Messrs. H. Smith & Co.; five houses, Queen's Road, for Messrs. A. and W. Dunton.

*

The Ministry of Health has sanctioned the purchase by the HAMPTON U.D.C. of a housing site in Malvern Road.

*

The Middlesex C.C. has prepared a plan showing the approximate position of the proposed new bridge at HAMPTON COURT.

*

Plans passed by the OLDHAM Corporation: Building in yard, 17 Turland Road, for Mr. Whitney; steel cover over stand, Sheepfoot Lane, for Oldham Athletic Football Club, Ltd.; alterations, Brookside Hotel, Lees Road, for Rochdale and Manor Brewery, Ltd.; extensions, rope walk, Shaw Street, for Oldham Rope and Twine Co., Ltd.

*

Messrs. Greaves, Atter and Beaumont are in negotiation with the WAKEFIELD Corporation regarding the development of Woodthorpe Park estate.

*

Plans passed by the WAKEFIELD Corporation: Six houses, Milnthorpe Crescent, for Mr. W. H. Watson; joiner's workshop, Ings Road, for Messrs. Massie and Holdsworth; extensions, sheds, Pincheon Street, for Wakefield and District Farmers, Ltd.

*

The BRADFORD Corporation proposes to discuss with Sir Alan Cobham the question of the establishment of a municipal aerodrome.

*

The City of BRADFORD Co-operative Society, Ltd., is to reconstruct their premises at 955-959 Thornton Road, Fairweather Green, Bradford.

*

Messrs. Wm. Whitaker & Co., Ltd., are to reconstruct the Blue Lion Hotel, Manchester Road, BRADFORD.

*

In connection with the central area improvement the city engineer of BRADFORD reports that the cost of the buildings will be £210,000, and sanction for a loan of this amount is to be sought.

*

The BRADFORD Corporation has now arranged with the Ministry of Transport regarding the basis of grants for the scheme to cost £71,000 for widening Harrogate Road.

The BRADFORD Corporation Water Committee recommends seeking powers to extend the branch aqueduct between the Nidd aqueduct to the outlet of the Upper Barton reservoir, and to acquire lands at Oxenhope, Chelker, and Holden which form part of the watersheds of the undertaking.

*

The city architect of BRADFORD is to prepare plans for an additional twelve houses, of brick and roughcast construction, on the Thornton estate.

*

Plans passed by the BRADFORD Corporation: Eight houses, Ashbourne Gardens, for Messrs. H. Sugden, Son & Co.; four houses, Harrogate Road, for Mr. A. Dickinson; ten houses, Moore Avenue, for Messrs. Briggs and Hellewell; sixteen houses, Victoria Avenue, for Mr. A. Dickinson; four houses, Lingwood Road, for Messrs. Dickinson and McLean.

*

The BRADFORD Corporation has obtained sanction to borrow £50,000 for the acquisition of land for purposes of the White Abbey area improvement scheme.

*

Mr. Robert Hughes has purchased from the Corporation various sites on the Tranmere Hall, BIRKENHEAD, estate for the erection of dwelling-houses.

*

The BIRKENHEAD Corporation has purchased land at Central Station for £9,600, and the borough engineer is to prepare proposals for utilizing the site for public purposes.

*

Plans passed by the BIRKENHEAD Corporation: Twenty-one houses, Prenton Road East; alterations, business premises, 64-68 Watson Street; dairy, 135 Norman Street.

*

Plans passed by the ISLINGTON B.C.: Workshop and store, Duncan Street; milk-bottling depot, Regina Road; one-story shops, 308 to 314 Hornsey Road.

*

The BIRKENHEAD and District Co-operative Society, Ltd., has purchased land on the Bidston estate for the erection of one shop and nine houses.

*

The BARNSLEY Corporation Markets Committee has asked the borough engineer to visit Letchworth abattoirs before proceeding with the proposal for the erection of abattoirs on the Bunkers Hill site.

*

The BARNSLEY Corporation is considering proposals for the provision of further accommodation for mental defectives.

*

The BARNSLEY Education Committee has received sanction to a loan for the erection of two additional classrooms at Monk Bretton elementary school.

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. Wales & M.	1 8	1 3½
	S. and E. Glamorganshire			
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, tested 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 sail, 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.	

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.

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 18*s.* 0*d.* per square.
FIXING lead soakers, per dozen . £0 0 10
STRIPPING old slates and stacking for re-use, and clearing away surplus and rubbish, per square . . 0 10 0
LABOUR only in laying slates, but including nails, per square . . 1 0 0
See "Sundries for Asbestos Tiling."

CARPENTER AND JOINER

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

Timber, average prices at Docks, London Standard

Scandinavian, etc. (equal to 2nds):	
7 × 3, per std.	£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

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 segmental 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, 1⅛ 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, 1⅛ 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 1⅛ in. and risers 1 in., tongued and grooved including fir carriages, per ft. sup.	0	2	6
DEAL wall strings, 1⅛ 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

*

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.	£21	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

*

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.*

*

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	6
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

*

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. ¾ in., per yd.	0	2	4
DO. vertical, per yd.	0	2	7
RENDER, on brickwork, 1 to 3, per yd.	0	2	7
RENDER in Portland and set in fine stuff, per yd.	0	3	3
RENDER, float, and set, trowelled, per yd.	0	2	9
RENDER and set in Sirapite, per yd.	0	2	5
DO. in Thistle plaster, per yd.	0	2	5
EXTRA, if on but not including lathing, any of foregoing, per yd.	0	0	5
EXTRA, if on ceilings, per yd.	0	0	5
ANGLES, rounded Keene's on Portland, per ft. lin.	0	0	6
PLAIN CORNICES, in plaster, per inch girth, including dubbing out, etc., per ft. lin.	0	0	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	6¾
DO. ¼ *in., per ft.*	0	0	6¾
Linseed oil putty, per cwt.	0	15	0

*

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

*

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 ¼ 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.			⅜ 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	3½	3	2	5	4	3	6½	5½	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	45	4	—	5½	5	—	6	—	—	—	—	—