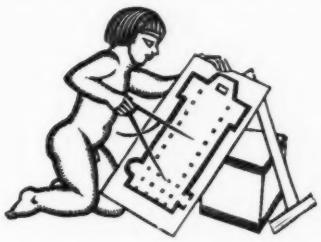
THE

ARCHITECTS'



JOURNAL

THE ARCHITECTS' JOURNAL
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It is the Editor's ambitious plan to do reasonable justice in the 1927 New Year Issue to one of the biggest architectural schemes of the twentieth century. This is the Regent Street Quadrant and Piccadilly Circus, designed by Sir Reginald Blomfield, R.A. Such a record is sure to be welcomed everywhere, more particularly in view of the artistic eminence of this part of the street. A number of the more important buildings included in the scheme will be illustrated and described in the fullest detail.

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CHRISTIAN BARMAN, *Editor*

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

RENDERINGS OF ARCHITECTURE

Selected and annotated by Dr. Tancred Borenius

1: Jan Vermeer van Delft (1632-1675)
View of Delft.

In the work of Jan Vermeer van Delft—the rarest and the most sought-after of the great Dutch masters of the seventeenth century—this picture occupies a place by itself, being a unique essay on his part as a topographical painter. The artist's native city is here seen from the Rotterdam Canal. On the extreme right is the turreted Rotterdam Gate, and a little farther on towards the left the Schiedam Gate united with the former by a bridge under which the canal enters the city. In the distance rise two tall church spires: on the right that of the Nieuwe Kerk, and on the left that of the Oude Kerk. Accurate though the picture is as a portrait of the city, nothing could be farther than this from mere topographical dryness: as a marvel of colour and atmosphere, and as a consummate rhythmic composition, this picture is one of the greatest triumphs of the Dutch school.—[The Hague, Mauritshuis.]

THE ARCHITECTS' JOURNAL

Wednesday, December 29th, 1926

THE EARLY TRIBULATIONS

As the second series of the articles by "Karshish" on "Tribulations of Early Practice" draws to its close we are led to believe, from expressions that have reached us from various quarters, that they have been appreciated not only by the tyro, to whose assistance they were especially dedicated, but also to the well-established practitioner. And the reason is not far to seek. "Karshish" is an astute observer of men; he has, moreover, a keen sense of humour, a pleasant wit, and, rarest of all amongst architects, a literary style, which is at once racy and subtle. We should be hard put to it to direct any young inquirer to a more lucid and succinct description of the manifold duties and responsibilities which await him, when once he crosses the threshold of the architectural profession, than these articles afford. And in suggesting a line of conduct, too, which must steer that always difficult course between aloofness and intimacy on the building battlefield, his advice could surely not be bettered. But few battles are won if the staff work is inefficient, and so it behoves the architect from the very outset of his career to build up an orderly system of office routine, and here, too, "Karshish" has many wise words.

In the practice of architecture the architect is brought into innumerable human relationships, most of which are in the highest degree interesting. And it is this aspect that "Karshish" has so inimitably emphasized. Unlike the doctor and the lawyer, the architect's professional contacts with his fellows deal with an aspect of life that is joyous rather than harrowing or sordid. His professional encounters with men are neither at their entrance into this world nor at their departure from it, neither are they at those junctures where the skeins of life have become sorely tangled. Building is, for the most part, a stimulating and a thrilling adventure, and even the director of a great company operating in five continents, has been known to react not unlike a schoolboy on pocketing his first watch at the prospect of a sumptuous new headquarters. As for the prospective house builder, and to him most architects look for their living, he wellnigh lives in a state of ecstasy during the nine or twelve months that his house is in the making. And the men, too, on the other contracting side, are engaged upon a creative work in which, despite post-war discontents and upheavals, they take a certain measure of delight. For among the older men, at least, there still lingers a memory of high standards of workmanship to which they are willing enough to return if they are given the opportunity and a little encouragement. Indeed, a word of appreciation on the job for some bit of work well performed is as a pebble thrown into the pond in that it may stir the placid waters of apathy.

But to look upon client, architect, builder, and operatives as a happy band of brothers bound by bonds of mutual trust and admiration in a joyous labour of love would be a vision whose outlines would not survive even the erection of a single subsidy cottage. Yet the architect can do more than any other member of the party to bring about this beatific state. "Karshish," in his first series of articles, dealt with the qualities which go to the making of the architect: tact, diplomacy, and infinite patience are certainly amongst them. In this respect the architect again has an advantage over his professional brethren. To administer the law is not invariably to achieve equity, neither is the advocate inevitably concerned with the discovery of truth. And even the doctor may be compelled to practise deceit, either with the hypochondriacal old lady or with the patient whose days are numbered. But the architect requires for the proper conduct of his affairs all the seven virtues and more besides, and never—well, hardly ever—need he stray from the path of truth.

And so it would appear that, taken all round, the architect is one of the happiest and most fortunate of men, for his contact with his fellows leads him in pleasant places, and he is not compelled to risk future welfare for present success. Moreover, he must be an all-round man. In popular fiction the possession of an artistic temperament is an excuse for the most outrageous conduct and a total disregard for the conventionalities of civilized life and an inability—or refusal—to grasp its practical details. The architect needs to keep his artistic temperament in its place, and neither it nor he are the worse for that. Furthermore, success is more likely to come to him if he subscribe to the conventionalities, and can make himself pleasant over the teacups.

As for a grasp of practical details, he must, of course, fairly bristle with them, and he must know the routine of a nursery, if his client is a married man, as well as he knows the processes of curing bacon if his client is a butcher and his job is to design him a bacon factory.

Yet, like all mankind, he will have his tribulations, particularly in the days of his early practice; but if he is a wise man he will have read "Karshish," for, indeed, to be forewarned is to be forearmed.

NEWS AND TOPICS

NOTTINGHAM UNIVERSITY—THE IRON HOUSES—THE LIFE OF A SKYSCRAPER.

EARLY in the New Year the new university buildings at Highfields Park, Nottingham, will reach a definite stage towards their completion, for the Great Tower, which is a central feature of the university, will then be finished. This stands on a terrace above a lake. It is 130 ft. high, and can be seen from a distance of nearly twenty miles. Of special interest is a method of building that has been adopted by Sir Jesse Boot, a Nottingham citizen who is the munificent donor of both the site and the buildings. All the building work is being carried out by direct labour employed by Sir Jesse Boot under the capable direction of his local representative, Mr. Cawley. Despite adverse criticism as to the wisdom of this method, I am told that the cost so far has fully justified the course adopted. Subject to cost, the preference has been given to local labour and special contract firms. Before any work has been started the cost has been calculated, and so far the estimates have been extremely accurate. Mr. P. Morley Horder is the architect. I visited the partly-completed buildings recently and was impressed by the attention given to practical requirements, chastened by the care for proportions that is necessary to prevent any feeling of pure utilitarianism or unseemliness.

* * *

More and more evidence is accumulating to show how ill-advised are the Government to expend nearly £1,000,000 of public money upon 2,000 steel houses in Scotland. I have just been given some of the latest information with regard to the progress of this experiment, rashly adopted by Sir John Gilmour in face of technical warnings. Of the 2,000 houses to be built by the State in Scotland, 1,086 have been completed by the building contractors, 906 are under construction, and eight have not yet been begun. Sir John has not yet given the public a clear answer as to the cost of these steel houses. According to one reply that he gave recently in the House of Commons to Lady Astor, the average inclusive contract price of the Weir bungalows built is £440, and of the Atholl house, £525. But a few days later he stated that the price works out at approximately £415 each for the Weir and Cowieson houses, and £431 for the Atholl house. Sir John Gilmour was careful to add that these prices did not include the cost of land, sewers, or fencing, nor did they include the cost of roads, transport, or administrative charges. It is understood that there have been various complaints made of many minor defects in the Weir bungalows, such as downdraught, defective hot-water supply, rain driving in, and leaks. Last month twenty chimneys of Weir houses that were newly erected at Robroyston, but fortunately were not occupied, blew down in a gale. Experts who have investigated some of these houses tell me that in their opinion they expect that when the inside surfaces of the steel plates that form the external walls of the steel houses are examined, it will be found that the timber studding has seriously suffered from damp.

Visitors to the new mining villages in Kent during the holidays have been interested in the method of construction adopted by the Dorman Long Housing Co., Ltd., and in the lay-out of Professor Abercrombie. One village that is being rapidly built for the accommodation of colliers in the new Kent coalfields is laid out on garden city lines. The houses are made of walls consisting of 3 in. of poured concrete, 1 in. of compressed cork, 2 in. of breeze, and ½ in. of plaster. The whole is built solidly about a steel frame without any air space in between. In order to show that houses built on this system are not by any means stereotyped, no less than eight different types have been adopted in those now under construction. I heard that Dr. Stradling of the Building Research Station, and his chief architect, Mr. Barnett, have been down specially to see this new form of construction, which has been considerably improved during the past twelve months.

* * *

Skyscrapers reach senility early, according to an estimate said to have been made by various experts at a recent convention of the American Institute of Steel Construction, which places their expectation of useful life at only twenty-seven years from birth. This, it may be remembered, cuts down by three years an estimate made earlier this year by Mr. Harvey W. Corbett, former president of the American Institute of Architects. If the estimate of twenty-seven years is accurate, the Woolworth and Equitable buildings, completed in 1915, would be in ruins by 1942, and the flat-iron building in 1929. Prophets of destruction, however—so plentiful this year!—have emphasized that their estimates are based on economic life and not structural life.

* * *

"The physical life of a New York modern skyscraper," said Mr. Frank W. Skinner, a New York constructional engineer, who is inclined to argue about these estimates, "is practically limitless: they could last for hundreds of years." And he believes that the economic life of the towering structures of the city will last considerably longer than some of the estimates recently made. In his estimation the "life-line" of the buildings indicates a long and happy career for most of the skyscrapers. "I believe that only an unlooked-for geographical change would out-date the present larger structures," he said.

* * *

But in addition to Mr. Corbett, who laid down a law of thirty years for the famous high buildings last June, numerous other individuals and organizations have snapped their fingers at the "eternal" quality of such edifices as the Woolworth building. Planners of a "bigger and better" New York of the future, in which such buildings as the Woolworth structure will be mere stepping-stones, are inclined to believe that the thirty-year prophets are right. If so, the work of tearing down the minor buildings to make room for the major may come within the lifetime of most inhabitants of greater New York. And much fun seems to be promised in the sheer spectacle of taking apart such a building as the Woolworth. Nobody can predict how this would be done, and, meanwhile, occupants are sitting tight.

ASTRAGAL

THE NATURE OF ELASTICITY

[BY CHRISTIAN BARMAN]

SOME time ago it became necessary for me to form a more or less accurate picture of the meaning of elasticity in structures. I found the various handbooks on dynamics very difficult to understand, and being no mathematician, being, in fact, conscious of remembering nothing at all of whatever I may have learnt about the matter in my schooldays, I had to construct the picture afresh in ordinary human language. It has occurred to me that the result may possibly be of some little value to those whose knowledge of dynamical science is as restricted as my own.

I began by imagining the material—brick, wood, or whatever it might be—made up of its constituent particles. Its integrity depends on two things: two conditions must be fulfilled by the particles if the larger whole is to remain intact. They must not, in the first instance, let go of one another, or the larger piece will be *shattered*. But they may still cling together and yet move past one another, shift their position with regard to one another. If they do this the piece will not be shattered, it will become *distorted*. Shattering or distortion, both are the product of the self-same force, the force that tries to destroy the material. But we may reasonably distinguish two separate kinds of strength whereby these accidents are averted.

First, the molecules resist *movement*, they struggle to avoid a change of place. This tendency towards immobility is productive of a quality in the material which physicists have called elasticity. Now we are not here examining the relation between elasticity and permanence, and we must content ourselves with glancing at the effect of this property as manifested here and now. This effect is clear. Elasticity has nothing to do with hardness or softness. It is often confused with hardness, but it is by no means the same thing. Let us imagine two substances, one hard and one soft, and watch the particles as they are affected by the pressure of a similar load. The particles of the soft substance will shift considerably: they will run a long way. Those of the hard substance will oppose a more vigorous resistance and will be moved to a much smaller distance. Their resistance may be more vigorous, but is it more effective than that of the others? Remove the load, and both groups of particles race back to assume the place they originally took up. The pieces look as though nothing has happened to them. They are indeed equally elastic, their strength is the same; but the particles of the one are animated by the strength of the tortoise, the other by the strength of the hare. The one relies on force, the other on agility. The one, in other words, is rigid, the other yielding.

Elasticity, therefore, has assumed a dual guise, but it has always been essentially the same kind of strength. Its purpose has been to oppose, not the momentary motion of the particles, but their lasting *displacement*. At one time it allows the motion to take place in a greater measure than at another. Its intensity of action may be high or low, but at all times it watches that the motion shall not inflict permanent injury. Let us suppose that it has failed to do so. We may again take up our piece of lead flattened with a hammer. It still possesses strength: it still has some measure of rigidity. But whatever elasticity it once possessed has gone out of it. Its particles have not only moved past one another: they have become permanently displaced. The next thing that will happen is their *separation*. The piece of lead will be fractured. Now there is still a kind of strength labouring to avert this final catastrophe. One kind of strength has gone: the strength that repairs whatever injury has for a while been inflicted, the living, restorative kind, the recuperative kind, of strength. Has not a famous scientist given his treatise on elasticity the title of *De Potentia Restitutiva*? The active part of the strength is gone, but there is still a passive kind that remains. The particles have shifted, and shifted irremediably, but they still adhere together. Elasticity has gone: *cohesion* remains at its post.

Let us see how the combination of these two qualities affect a material. Glass, for example, is broken before it can be distorted, that is to say, its cohesion breaks down before its elasticity has been visibly overcome. Such substances are called brittle. In lead the elasticity is destroyed long before the cohesion threatens to fail; once the lead has been distorted you still have a great amount of cohesion to overcome before you can bring about a fracture. Lead, therefore, is said to be ductile. Clearly the characteristics of lead and glass are the two characteristics which a building material must before all else eschew. It must not be what we call brittle, that is to say, its cohesion must not be more vulnerable than its elasticity. Elasticity can take care of itself, but cohesion is only fit to constitute the rearguard in this battle against disintegration. It must not be made to bear the brunt of the attack, for it cannot repair such damage as it may suffer: every inch it yields brings its dissolution nearer than it was before. But neither must the material be ductile. It must be amply provided with recuperative power. Once it has become irremediably distorted it is useless.

We have already seen that this recuperative power may vary considerably in intensity. Two materials may possess exactly the same measure of it, and yet the one may be rigid, the other flexible. The interesting thing to note is that the expenditure of strength required for each of these modes of behaviour may be highly unequal. Far greater strength is required to resist a live load than to yield. Let me cite a more conspicuous illustration to make this statement clear. If an express train dashes into a vertical face of rock there will be no yielding whatsoever: a firm resistance is opposed to its movement. Consequently the shock sustained by the obstacle will be equal to the force with which the train speeds forward. Imagine, on the other hand, such a train meeting with an obstacle that presents no resistance whatsoever. Such an obstacle (we are calling it an obstacle though it has done nothing to deserve the name) may be an utter vacuum. It may also be represented by another express train preceding the other by a few yards and going at precisely the same speed. In this example the obstacle yields so much that there is no shock at all: there is not even a contact. If, however, the first train is, at the moment when the second one appears, going at *half* the speed, it will after a little while be overtaken. There will be a shock this time, but it will not be of the same intensity as that wherewith the train hurled itself against the cliff. The rear of the first train will sustain an impact only half as severe as that suffered by the motionless mass of rock The reason is that the first train yielded.

It is for the same reason that a piece of lead or india-

rubber struck with a hammer will suffer less injury than a piece of glass similarly struck. Again, everybody knows that in walking across a plank one is much safer if the plank yields under the foot than if it does not. The same is not true of a motionless load placed upon the plank: it is the moving load that makes all the difference, it is to this that the protective motion must answer. The moving load becomes less dangerous if the plank gives way; the attack loses a proportion of its force by this compliant behaviour. But the plank must not only yield: it must also spring back when the person walking across it has gone. The piece of lead is still as whole as the indiarubber when it has been struck, but the indiarubber has sprung back and bears no trace of the hammer-blow. The lead, on the other hand, is somewhat flattened, and bids fair to remain flattened. Both lead and indiarubber were less *rigid* than the piece of glass, and to this they largely owe the fact that they remain whole. The impact did not shatter them. But the rubber possesses a great advantage over the lead in that it was also *elastic*. This is the quality whose importance is so great that all books on dynamics begin by describing it. Unfortunately, they plunge into figures and symbols long before the untrained mind has had time to realize the meaning of the term.

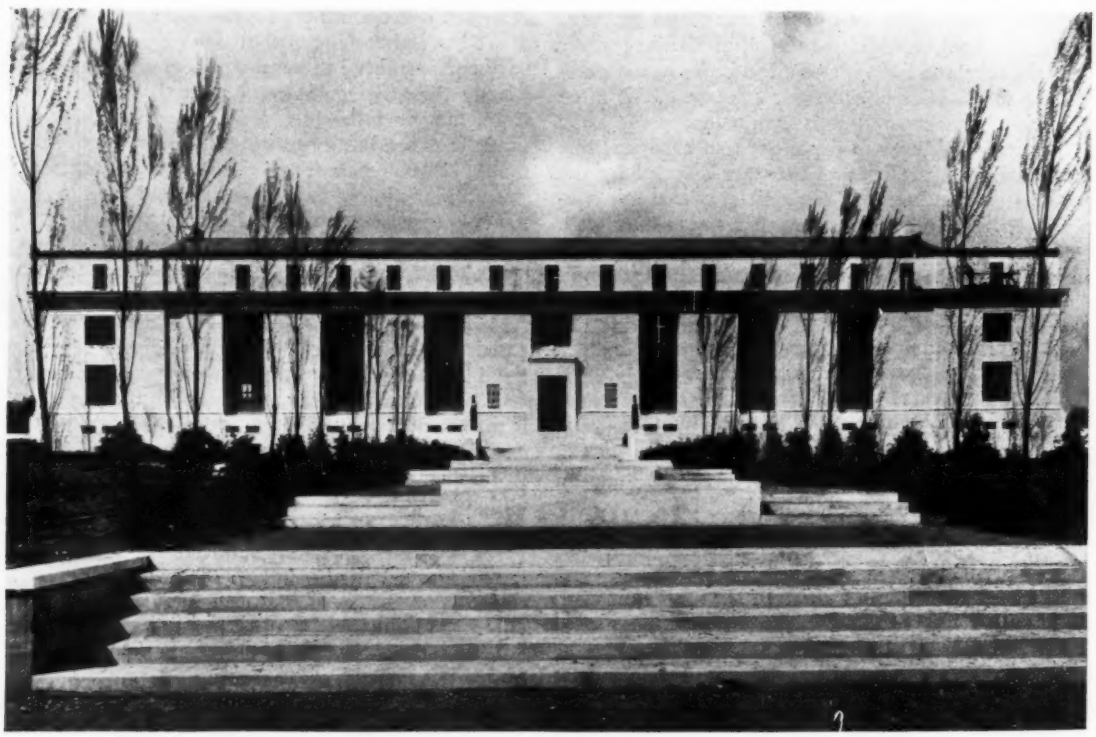
BERTRAM GROSVENOR GOODHUE.—ii

[BY KINETON PARKES]

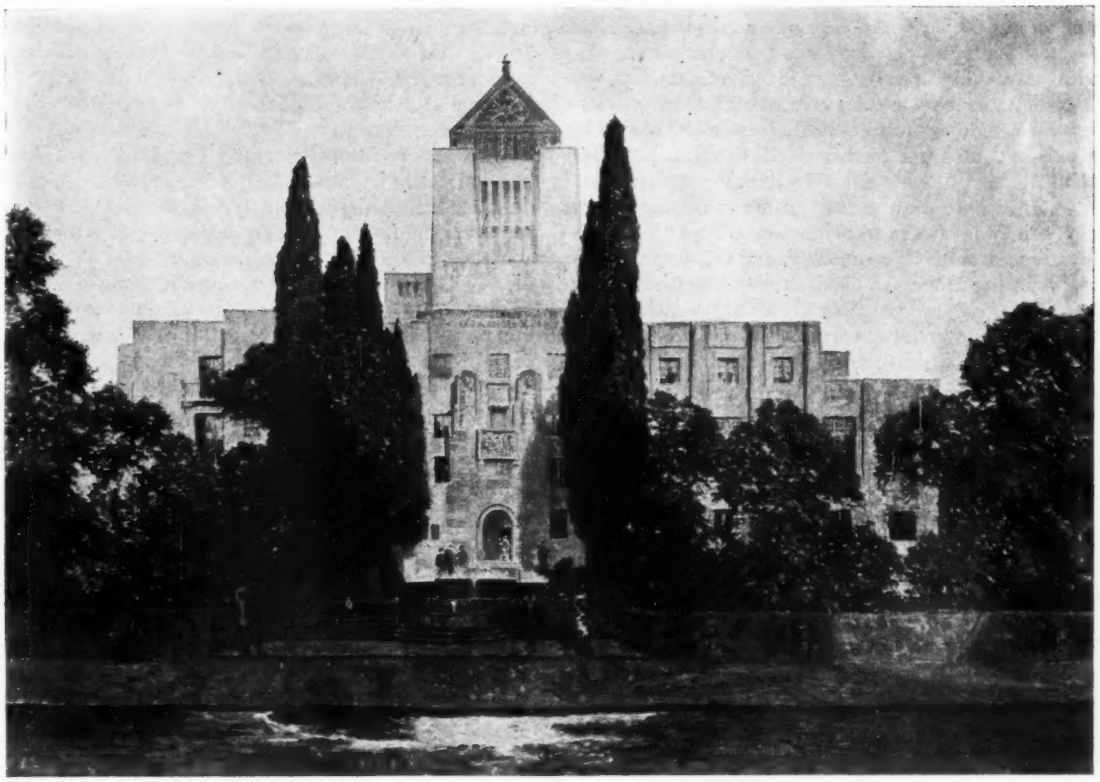
A CURIOUS blend of styles and an interesting constructive ability is disclosed in the Church of St. Bartholomew in New York, and in St. Mark's, Mont Kisco, a delightful example of a rich, yet unostentatious, country church. There are many other ecclesiastical structures in different cities which always denote a logical application of means to ends, artistically and financially, and in the last respect Goodhue always gave the highest value for the funds available; stretching points in favour of an increase in artistry compatible with purpose, affording, whenever he was able, abundance without redundance.

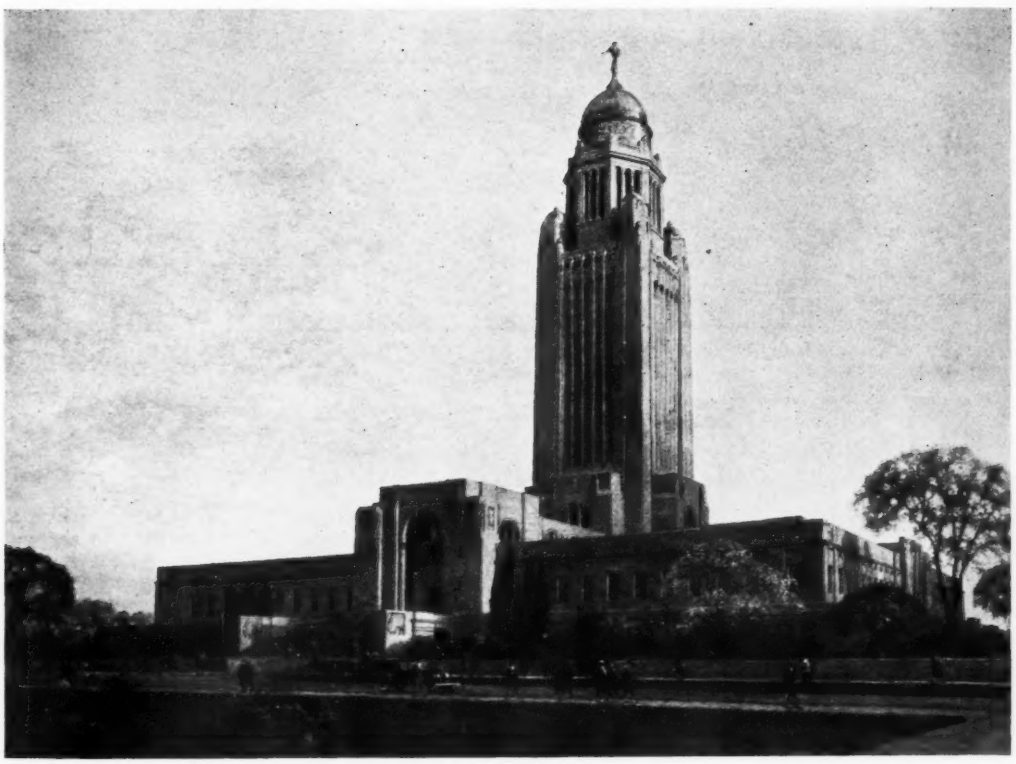
Goodhue was not only influenced by the Gothic and neo-Gothic, his work was determined by the old masters and shaped by the new. His Gothic was at the mercy of its modern practitioners, but he managed to survive as one of the two or three great masters of Gothic in the twentieth century. It was to his advantage that he came to realize that medieval Gothic is now an impossibility; Gothic nowadays has got to be modern Gothic. He did not always remember the origination of the Gothic cathedral, and consequently adopted and adapted certain excrescences of later periods as part of his planning schemes. In more than one of his Gothic works the groupings of minor and even superfluous erections around the main structure serve to discount the majesty of the design. He certainly had the grand manner in structural design, and practised in his earlier years the manipulation of the minutest details of ornament, as witness his many exquisite pencil drawings. He was not only an architectural draughtsman of genius, but a cultured exponent of scholastic ornament.

He was not deflected by all the airs that blow, but he was sensitive to a really strong gale. As the confirmed Gothicist



The National Academy of Sciences, Washington. By Bertram Grosvenor Goodhue.





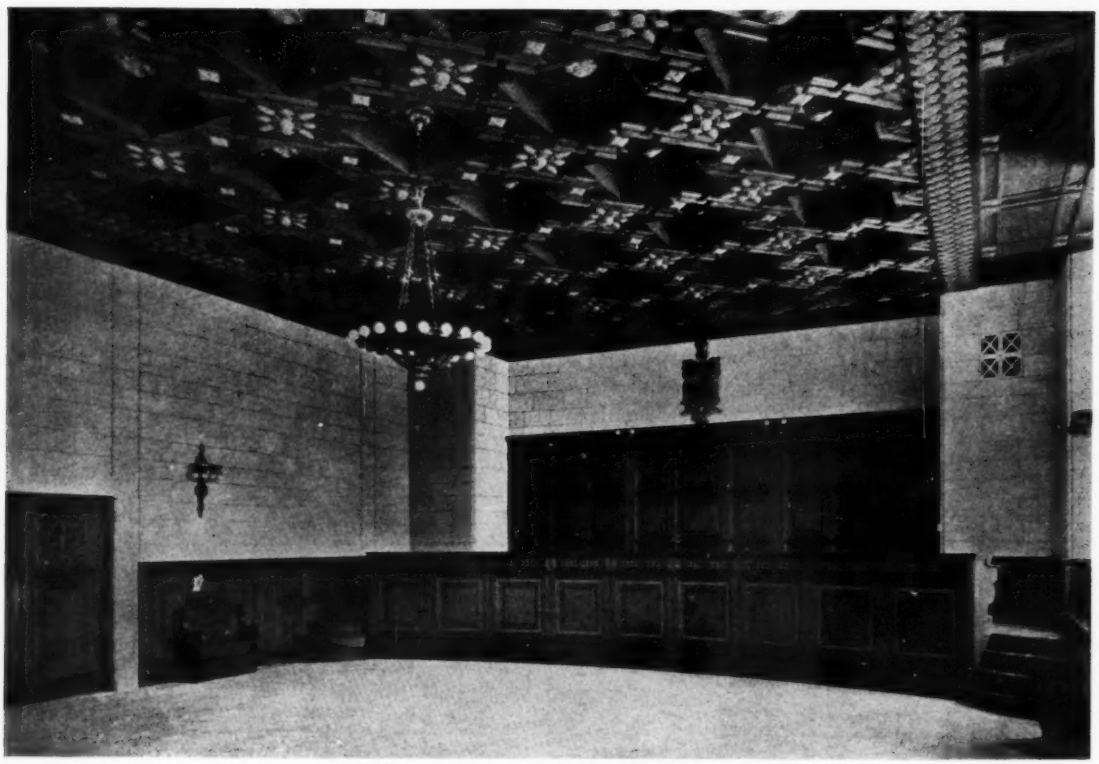
Above, drawing for library, Los Angeles, California. By Bertram Grosvenor Goodhue.
Below, drawing for Nebraska State Capitol. By Bertram Grosvenor Goodhue.

in his earlier years he was not above submitting to the influence of others, and his personal admiration for Sir Giles Gilbert Scott and his unbounded delight in Liverpool Cathedral caused him to reconsider his own Gothicism, and even to re-design such works as were possible. He was not, however, consistently a Gothicist. He went to Mexico in his early twenties, and from then onwards he did a good deal of work in the Spanish-colonial style, both in California and Cuba. A little more than twenty years ago he went round the world—he was always travelling—and became very interested in the architecture of Persia, and this was reflected principally in the Nebraska Capitol, and in certain houses with gardens of a very charming character. Always, from his earliest years, a greedy prosecutor of research and avid observer, he assimilated the cream of his adventures, and gradually evolved a style of his own, which was strictly speaking Classic, but not neo-Classic. There is no touch of the Renaissance about Goodhue's work, and nothing really of the Parthenon type; but few pediments or columns, which he did not care for, especially exterior ones. As he grew older he abandoned general detail work, and instead emphasized mass composition with the detail concentrated.

When Goodhue got away from cathedrals, churches, and colleges his tendency to individualism became more pronounced. While he never forgot precedent and the results of his travels and researches, he forged ahead in fancy. In his domestic architecture, in business buildings, and in great projects, such as the national and state erections with which he was called on to deal, his spirit had its flight. In all such things his eyes were fixed not only on the possibilities of the present, but on those also of the future. Four works must suffice to give indications of what many more elaborated. There is the distinctly Baroque California State building for the Panama-California Exposition at San Diego; a striking and luscious combination of highly-decorated tower, dome, and façade. At the other extreme, the severe semi-Classical, with a South American flavour, National Academy of Sciences at Washington. There is the great imaginative Nebraska State Capitol, with its tower soaring from the solid and impressive buildings forming its base; a wonderful conception this, surpassed only by the modernism of the skyscraper design for the proposed eighty-story office building to house the combined activities of the Protestant denominations in the United States. This was designed for erection on the right of the Madison Square Garden, and in its sheer verticality is as fine a creation in its imaginative power as is ever likely to emerge from contemporary architecture.

The building that perhaps shows most clearly the transition period from the earlier work—although it is Spanish in the main—to the sure, individual style which he was projecting for the future, is the Los Angeles Library. This was commenced in 1925 from the third set of designs of the architect, which was a very different proposition from its predecessors.

Bertram Grosvenor Goodhue built or designed three great cathedrals, twenty to thirty churches and chapels; many libraries, academies, colleges and museums; several national and state buildings, and numbers of houses and city erections. He was a water-colour artist of no mean power; a draughtsman of the highest order; a student as well as an originator. He had a reverence for the past which fortified him in his reverence for the future, for he possessed vision. He was an enormous and indefatigable worker, and this faculty was a contributory cause of his lamentably early death while engaged on the Nebraska State Capitol in 1924.



The Supreme Court, Nebraska State Capitol, Lincoln, Nebraska. By Bertram Grosvenor Goodhue.

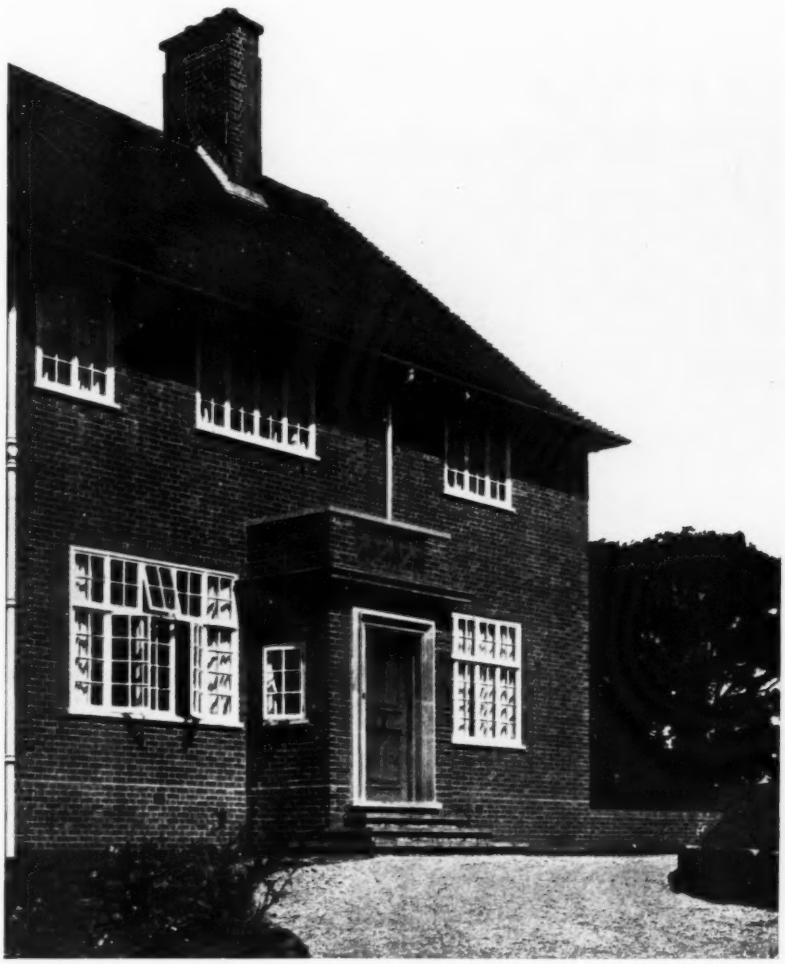
CURRENT
ARCHITECTURE
SECTION

SURREY HOUSES BY MR. GUY DAWBER

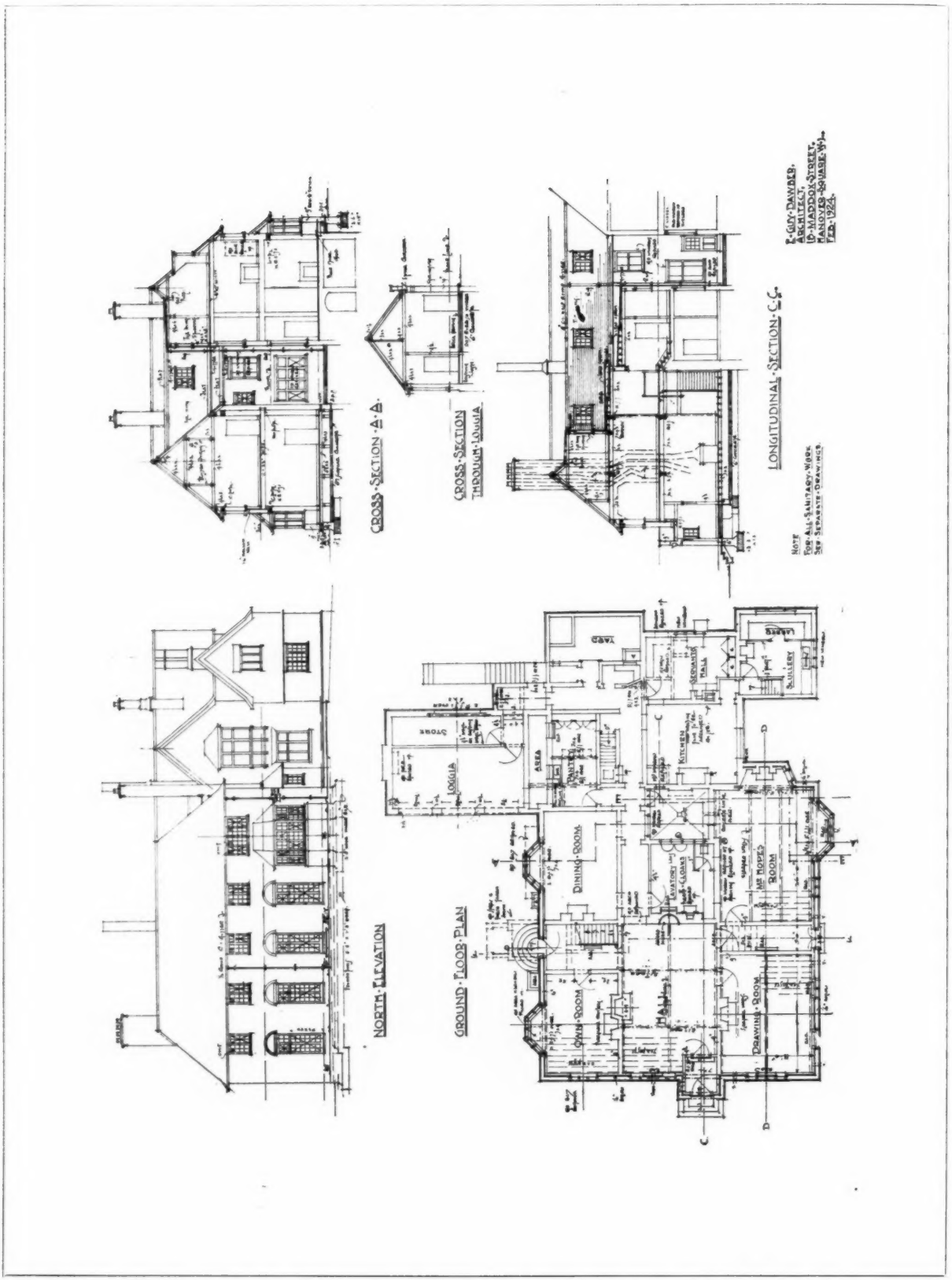
[BY H. C. HUGHES]

ONE has got so accustomed to connecting Mr. Guy Dawber's name with charming stone-built, stone-roofed houses in the Gloucestershire part of the Cotswold Hills, deliciously revitalizing that constant stone tradition which was founded so securely when Cotswold wool was sold throughout Europe, that it comes as something of a shock to find him building in the solemn, warm, brick-and-tile tradition of the Home Counties. But Mr. Dawber was not made Vice-President of the Council for the Preservation of Rural England for nothing. His has always been the comely, gentlemanly art, that never thrusts itself on the notice, but is conformable everywhere to the best of its associates. Lately, in public thought reflected in the Press, there has been much talk of the necessity for the right materials to be used in every building. I know a Surrey district where the speculative builders translate their little villa plans into the language of mottled brick and multi - coloured tile, of oak frame and leaded casement; and none would dare to build, even to the most satisfactory design, in plaster or in pantile, for fear of rousing the public opinion of the place. That public opinion sees the material made right for the place by the efforts of careful architects. It is blind to the poverty - stricken design of the little square houses, whose roofs end pyramidally, only half disguised by timbered gables. But in these houses before us design and material are in harmony. Simply and comely living is the picture to which these houses are a frame. "Harrowlands," near Dorking, is an addition—or rather, almost a reconstruction—of a house built in that phase of the revived Jacobean, with which our fathers loved to dot the Surrey woods.

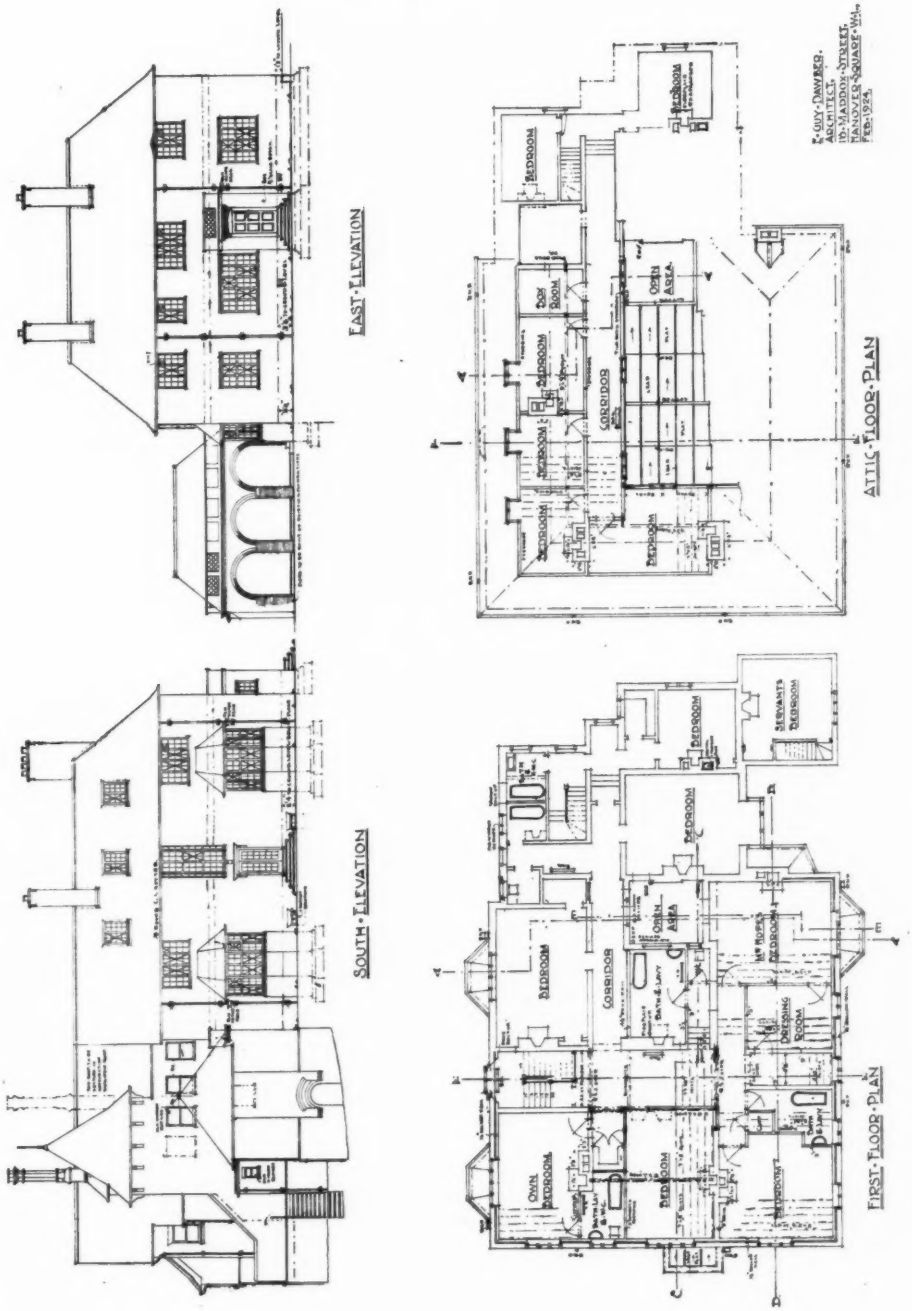
It was a style of tile-hung gables, adorned with barge boards, of big windows of heavy and uncomely shapes, which within shed a sombre light on dark-patterned stuffs and embossed walls—in architecture pompous, but scarce ever free. Here it has been relegated to the kitchen quarters, and the living-rooms are of the new model. What a much more human model it is !—of clean surfaces, of many-paned windows opening wide for light and air, of light walls and unbroken ceilings, where just so much of the Georgian tradition is retained as will not thrust itself too much upon one, but gives that feeling of cultured quietness that was bred in the country parsonages and village houses of the eighteenth century. The scale which, in the Victorian house, had not forgotten the tradition of the castle, is now more homely and suitable to general living. There is nothing of the palace here; but neither is there the small tenement of the newer rich. The rooms are wide and comfortable. The squareness of the plan, which the earlier builder would have broken up into pyramid - capped towers and timbered gables, is here covered with a flat, so that from



"Harrowlands," Dorking. By E. Guy Dawber. The new entrance front.



"Harrowlands," Dorking, Surrey. By E. Guy Dawber.



"Harrowlands," Dorking, Surrey. By E. Guy Dawber.

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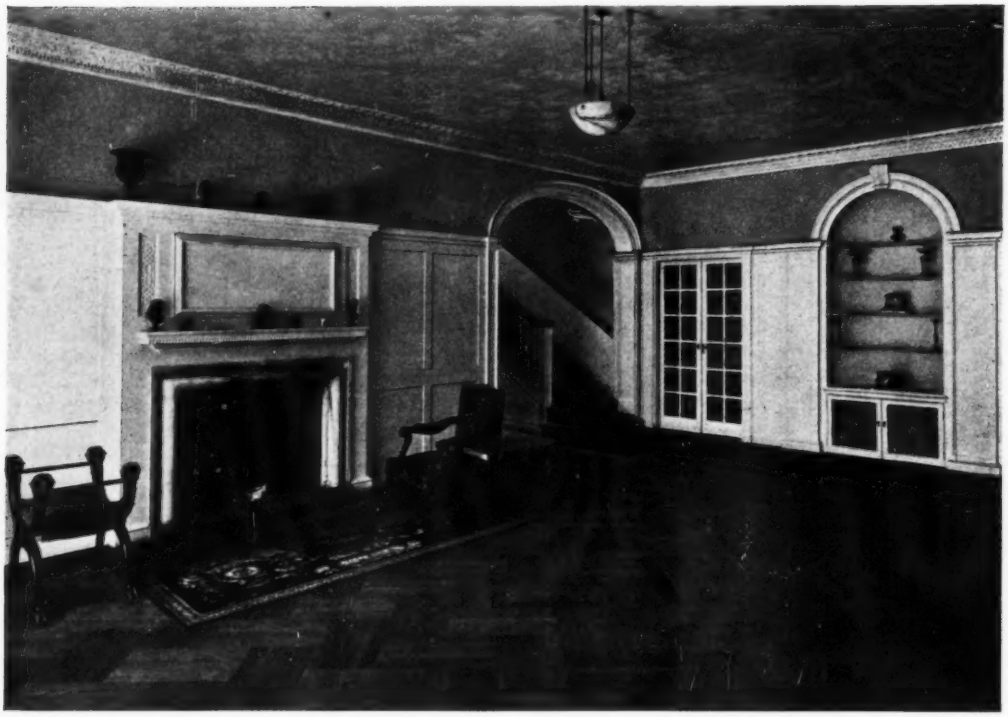
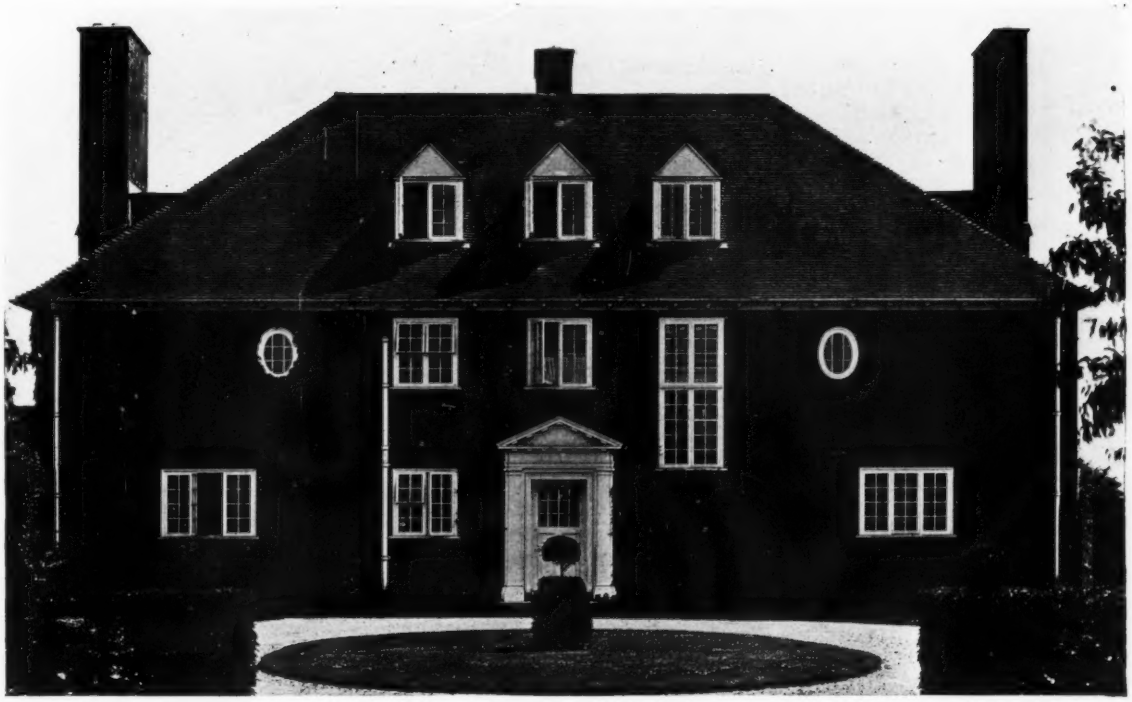
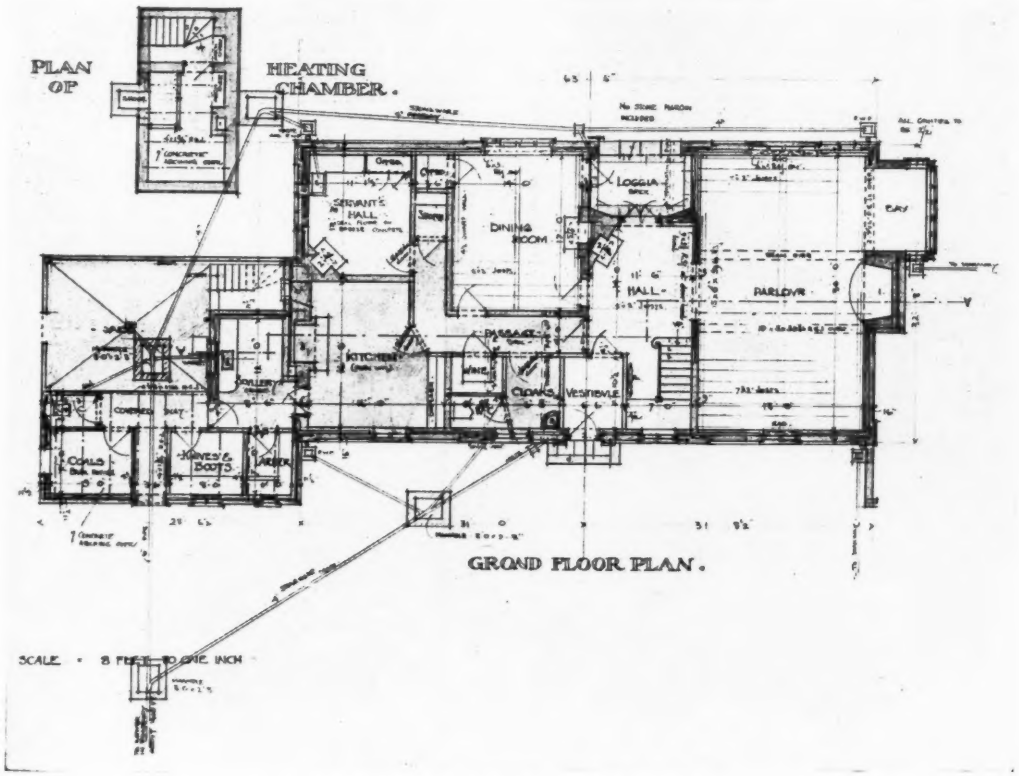


"Harrowlands," Dorking. By E. Guy Dawber. Above, the new entrance hall. Below, the new loggia and garden elevation on the south side.



all sides the roof lines suggest an oblong plan; and this flat comfortably encloses a number of bedrooms. The masking by a large block of an existing building often leads to complicated problems of drainage. Here they are cleverly dealt with by the retention of an open area, which serves the bathrooms and cloakrooms.

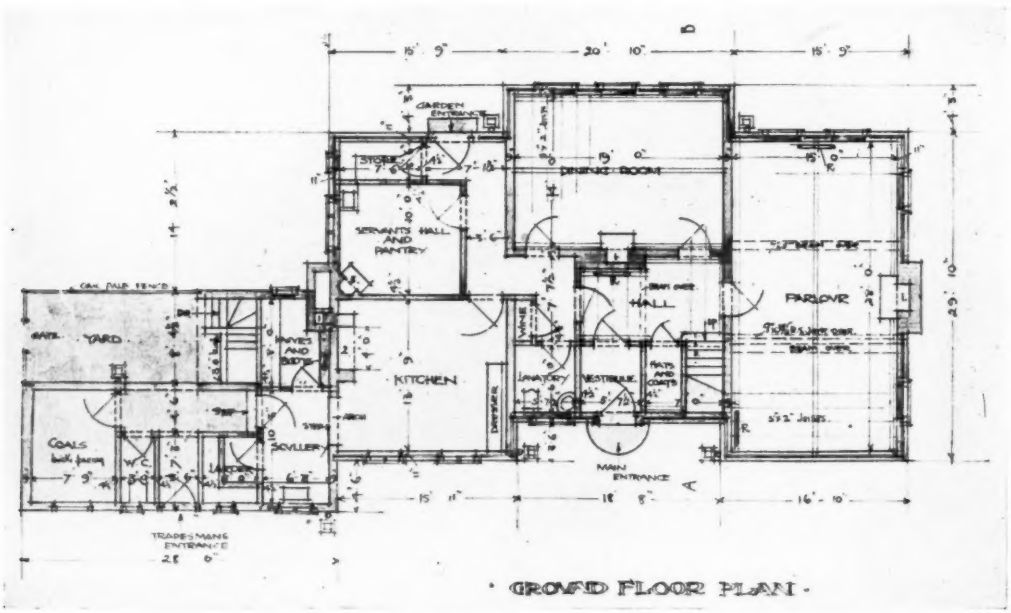


"Copt Hill Court," Kingswood, Surrey. By E. Guy Dawber. Above, the entrance front and forecourt. Below, the ground-floor plan.

"Copt Hill Court" has an unusual plan. An admirably spacious parlour, with an almost detached bay window, opens from the hall, and so has access to the loggia or to the entrance. The front is stern, but Mr. Dawber will not be bound by mere considerations of symmetry, but dominates them. It is a pity that the creeper hides the second closed "œil de bœuf," and so covers up this gentle concession to the symmetrical.

"Villans Wyk," at Headley, is also a simple and conformable plan. The garage is of that fine shape and dominant simplicity which makes us hope that, however little the personal predilection of the assessor in a big competition may sway his verdict, many of the competitors for the *Daily Mail* prize will have studied and worked in this simple and sufficient technique of brick and tile and good white paint; for even standard houses conformable to this tradition would be a blessing to a harassed countryside.

[For list of contractors see page 817.]



"Villans Wyk," Headley, Surrey. By E. Guy Dawber. Above, the garage. Below, the ground-floor plan of the house.

TRIBULATIONS OF EARLY PRACTICE: ii

[BY KARSHISH]

X: CHARGES

MUCH has been spoken of in these articles which finds no place in textbooks, yet all will be of no avail if our architect is not able to pay his way and make a living at his profession. How this is to be done may, at the outset, perplex him: to contemplate two or three small jobs; reflect on the time and labour they will involve; estimate the outgoings incidental to them and calculate the value of the fees that will accrue in respect of them, will be likely to give him much cry and very little wool. Therefore he should banish such introspections, and tackle his job in the blind faith, which will be surely justified, that if he can keep himself employed the money will come in by one channel or another; but when the time comes to make them the question of his charges will cause him some anxiety, and it is the purpose of this article to present the problem in its various aspects; reply to some of the questions to which our architect will have to find the answer, and display the subject in such a way as to give him confidence in his discretion. I am unaware that an attempt has ever before been made to do anything of the sort: everyone has had to find his own way guided only by the Official Scale of Charges; and not a few have, in that attempt, gone astray. Thus one architect, who charged too much in the first account he rendered to a client, lost, with the cheque he promptly received, the influential connection upon which he had counted on setting up; while another was told privately by his first employer—but only after all was paid and the last receipt stamp duly licked and cancelled—" The only criticism I have to make is that you do not charge enough."

Our architect, when he first addresses himself to the matter, may have an idea that, because all accredited architects alike conform to the official scale, and are debarred from charging less than the fees therein fixed, while the public may refuse to pay more, therefore all architects receive the same pay for the same work. It is true that the official scale, based on established custom, fixes a commission of six per cent. on the cost of the works as the basis of an architect's charges, but is it to be imagined that if Mr. Peter Squiffer of 23, Sheep Street, Puddinghole, is appointed architect of the New County Cricket Pavilion, his charges will be the same as those made by Sir Babbington Swingtail, R.A., of Pall Mall, W.1? Certainly not! Squiffer's bill might amount to £217 4s. 7d., which sum includes 5d. for a sandwich and a cup of coffee at Clapham Junction, and Swingtail's, five hundred guineas exactly. Squiffer has probably charged five per cent.—being only vaguely aware of the existence of the R.I.B.A.—and his rival six per cent., with ten per cent. on all fittings and craftsmen's work; forty guineas for survey and preliminaries; twenty guineas, twice over, for attending meetings of the Club Committee; twenty-five guineas for a perspective sketch; fifteen guineas for a plan of the drains to hang in the coal hole; and the travelling expenses of a merchant prince. Squiffer, on the other hand, has lumped all these specific services in his commission, and has besides undertaken, for nothing, work which Swingtail would require a Clerk of Works to relieve him of. He has run after trams with a hand-bag in order to catch trains in which he has travelled third class; has fed on cocoa and buns; and has put up at small temperance hotels where they keep, in the commercial room, a clothes-basket filled with carpet slippers so that visitors may enjoy all the comforts of a home. It is not to be supposed that Swingtail could sustain his claims in a Court of Law, he may be far too lofty a person ever, under any circumstances, to sue for fees; and no one would dream of questioning the great man's charges—they would be ashamed to do it. Squiffer, on the other hand, might go bristling into Court to recover the change out of a ten-pound note—one sees such cases reported in the technical press—and it is likely enough that the same committee which would pay Swingtail his five hundred guineas without demur, might feel it their duty to knock fifteen shillings off Squiffer's two-seventeen four-and-sevenpence. The reason for this anomaly is perfectly simple: it is the way the world wags; that is all. It is life. Squiffer may be a poor cringing wretch; Swingtail a mighty snob preying on lesser snobs.

The characters appearing in these articles are entirely imaginary, and are not intended to bear any resemblance to real persons, whether living or dead.

These two imaginary cases are intended to represent extremes. Squiffer is not the sort of person to whom this writing is addressed; Swingtail is not held up as representing the goal of any architect's ambitions: the point here insisted on is that there is no absolute uniformity in the charges of different architects, and each individual must settle the matter for himself. How, then, is our architect to do this?

In order for him to " make a living," it is clear that an architect's charges must cover his expenses, and enable him, at the least, to keep up appearances on the social plane in which he moves. Those two considerations act and re-act, one upon the other. Our architect will naturally, in the first instance, look for work from those in the same station of life as himself; and if he chances to be one of the well-born, highly educated or wealthy, it will be necessary for him to have a handsomely appointed office—as architects view such things—in a good position in London: he would be lost to his world in the provinces or in the suburbs. It will also be incumbent on him to belong to good clubs and mingle with persons of expensive habits. Thus, both his professional expenses, and the private expenditure which " earning a living " represents for him, will be high. On the other hand, he will be entitled to decide that among the expensive tastes of his acquaintances is the taste for expensive architects, and in drawing up his charges he will see that that taste is fully satisfied. Thus, it will be seen, is a high scale of charges justified by the circumstances which make those high charges necessary. If, however, our architect springs from the professional class, whose members, if well-educated, are usually neither highly connected nor wealthy, he will be able to carry on with a less expensive office and lower living costs, and so reduce his charges to a scale which will recommend him to those from whom he looks for employment; while if he belongs to the middle, rather than the upper middle, class, the suburbs or the provinces will give him the same adjustment of ways and means on a plane where professional and private expenses are less, and customary charges lower. It will be seen, therefore, that, broadly speaking, the charges which will fairly remunerate our architect will bear a constant ratio to his office expenses if, as we will assume, his office is efficiently organized. What, then, ought that ratio to be?

There are architects' offices in America, where senior draughtsmen, designers, and " checkers " are paid at the rate of £1,000 a year, or more; where the wages bill may, quite ordinarily, amount to £200 a day; and where the value of works on hand runs into millions, which yet yield very small profits to the principals; and there are architects here, and in America, who, doing special work by special means, work practically single-handed and gain very large profits. We are here, however, concerned with an ordinary English private practice, and whether it be small or of medium proportions, averaging one year with another, our architect should expect to find that it will cost him one pound to earn two; that is to say, of every three pounds received by him by way of fees and expenses, two pounds will go to his private account. He may safely regulate his charges to establish and maintain that ratio. He is not likely with the greatest care and economy, to do much better, and, if he does, he should make sure that his charges are not too high. If, however, the proportion of his expenses to profits is higher than this figure, he may be sure, either that his methods of work are extravagant, or that he is not charging adequately. It must be remembered, however, that some work, for one reason or another, is unprofitable, and other, for various reasons, overpaid; and our architect also must use care in apportioning expenses to earnings so that the balance he strikes at the end of each year truly represents the facts.

Our architect, guided by this one-to-two principle, has still to decide how the charges necessary to sustain it are to be made, for as expenses are not a constant of the cost of the works, but are determined by the external circumstances, already described, neither are charges constant to the value of the works. The account, then, should show a number of details, but it should not leave the client unaware of what he is paying for. The account should show a small number of comprehensive and inclusive items. In addition to the main item stating the amount of the commission on the cost of the works, some or all of the following may appear.

Survey and preliminaries. Designing mantelpieces and furniture. Any specific services outside the building work, such as negotiating boundaries, or rights of waterway. Commission on the value of materials supplied by the owner—if any—cannot be objected to, and charges may properly be made for extra copies of plans, and for plans recording the actual run of drains, and of water, electric light, heating and gas services. A charge may also be made for alterations in the design involving the preparation of drawings in substitution of others previously made, but any such charge should refer only to important variations ordered by the building owner. Small items for which extra charges are allowable are better grouped in one descriptive item which will fully support the charge made; but all such charges give an impression of extracting the last possible halfpenny. Disbursements should not be included in expenses, but stated separately with dates and particulars and receipts. Lastly, there is the item for expenses.

As regards all these items the nature and circumstances of the work and the standing of the client must be borne in mind. This is more particularly the case with expenses, and we may therefore confine our attention to that subject.

Our architect is never to make any profit out of the expenses he charges. If he is put up by friends, or dines with them or is carried in their motors, he is not to charge for the hotel, restaurant or railway fares which he would otherwise have incurred; and if he has two or more works going on in the same locality he is not to charge two or more sets of railway journeys, hotels, and incidentals, but divide his expenses fairly, and with discretion, among his employers, explaining that it has not been necessary for him always to make special journeys when visiting the site. There is no doubt that it is a great temptation to make a profit on expenses, for the client is asked to pay no more than he would expect, and no more than the services rendered justify. I do not know whether, or to what extent, architects are in the habit of making a profit of this kind; but as there can be no doubt that some of them do so my ignorance is itself a condemnation of the custom, for it is due to those who follow the practice doing so secretly, conscious of sharp practice. I can only say that I could at once name a dozen architects from among my friends and acquaintances whom I know, without doubt or question, would never designedly profit to the extent of one shilling in such a way.

In the ordinary course an architect would charge for such comfort in travelling, meals, and accommodation as he is accustomed to; he will not indulge himself in extravagance or luxuries, nor will he so consider his client as to endure discomforts or unnecessary fatigue; but that standard must be modified to suit special cases. If he were carrying out important work for a company or a wealthy man it would be wrong for him to travel third class, or to put up at second-rate hotels; in the former case he will place himself on the footing of junior officials of the company, and suggest to the builder that he is not the professional adviser of the board of directors, but an underling, doing what he is told by them. The directors also, would feel that they had over-estimated his height and standing in his profession. The same order of reasons apply also in the case of a wealthy client: our architect should in no case admit an inferiority to those who employ him, except only that formal obeisance due to rank. He is not a servant, but an independent adviser, and if his employer travels first class and has a bottle of wine at dinner, he should, to the extent of discontinuing any idea that he belongs to an inferior state of life, do the same. His employer will not be pleased to see him travelling in the same carriage with his butler, or dining in the same coffee-room as his valet. On the other hand, our architect must temper the mind to the closely shorn. If he is altering a church, or adding to a small house, he must not charge expenses on a high scale. It would be arrogant for him to travel first-class and steep himself in a vast lunch when our Archdeacon, whose parsonage he is reconditioning, travels third, and more decently recruits himself at one o'clock with a glass of milk and a bun.

Our architect should use care to see that his charges can be logically justified; and if an item is questioned he should justify it completely.

SOCIETIES AND INSTITUTIONS

The Royal Society of British Sculptors

The gold medal " for distinguished services to sculpture " was unanimously awarded to Mr. Alfred Gilbert at a general meeting of the Royal Society of British Sculptors. This medal, upon the lines of that of the R.I.B.A. and those of the other great professions, was founded a few years ago, and is the highest distinction which British sculptors can award. The first holder was the late Sir Hamo Thornycroft.

The Replanning of Birmingham

Lecturing at Birmingham University, Mr. William Haywood, F.R.I.B.A., said that now the central area of Birmingham was to be replanned, they had an opportunity of making the heart of the city worthy of the great community it represented. The greater part of the area in question he said was public property, and was for that reason in no danger of exploitation by private individuals. The design chosen in the forthcoming competition would be carried out in sections from time to time as occasion arose. Assuming a design chosen in the competition and the area planned and, remembering that the town outside a half-mile radius of the Town Hall was already planned in its main essentials by the comprehensive arterial road scheme put forward by the Public Works Department in 1917, they had an outline of the complete city plan of the future, save for an intervening area between these two sections, which was to remain more or less unconsidered, because it was in private ownership, and liable to exploitation. One of the chief merits of the new centre was that it provided more open space in the heart of the city. It should be made as large as possible, and be followed by many similar open spaces, neighbourhood centres, and children's playgrounds, for use where suburban facilities are not accessible.

Professor Laurie on Stone Decay

Professor A. P. Laurie, lecturing at the Royal Academy, London, on " Recent Researches on the Preservation of Ancient Buildings and Stone Decay," said that experiments had confirmed the conclusion that such materials as brick, stone, and mortar when drying out must be regarded as being included in the conditions investigated by Professor Guye (*Arch. des Sciences*, May-August, 1925). The result of the experiments showed that the surface of a wall having been soaked by the rain and then drying out, the surface which was evaporating more rapidly drew water from the more slowly evaporating surfaces, so that if the brick or stone was evaporating more rapidly than the mortar, water would be drawn from the mortar containing salts in solution which would crystallize out and break up the stone or brick, but if the mortar was evaporating more rapidly than the stone or brick, water would be drawn from the stone or brick to the mortar causing the concentration of salts to take place, principally in the mortar instead of in the stone or brick. The practical results had been to show in the first place the importance of being very careful with the repointing of old buildings, as if the mortar was too dense the decay of the brick or stone would be stimulated, and in the second place to show how these old buildings ought to be treated, by first raking out the mortar joints, then treating with a suitable preservative, so as to reduce the rate of evaporation from the stone or brick surface, and then repointing.

SOANE'S BANK OF ENGLAND

iii: THE CONSOLS OFFICE

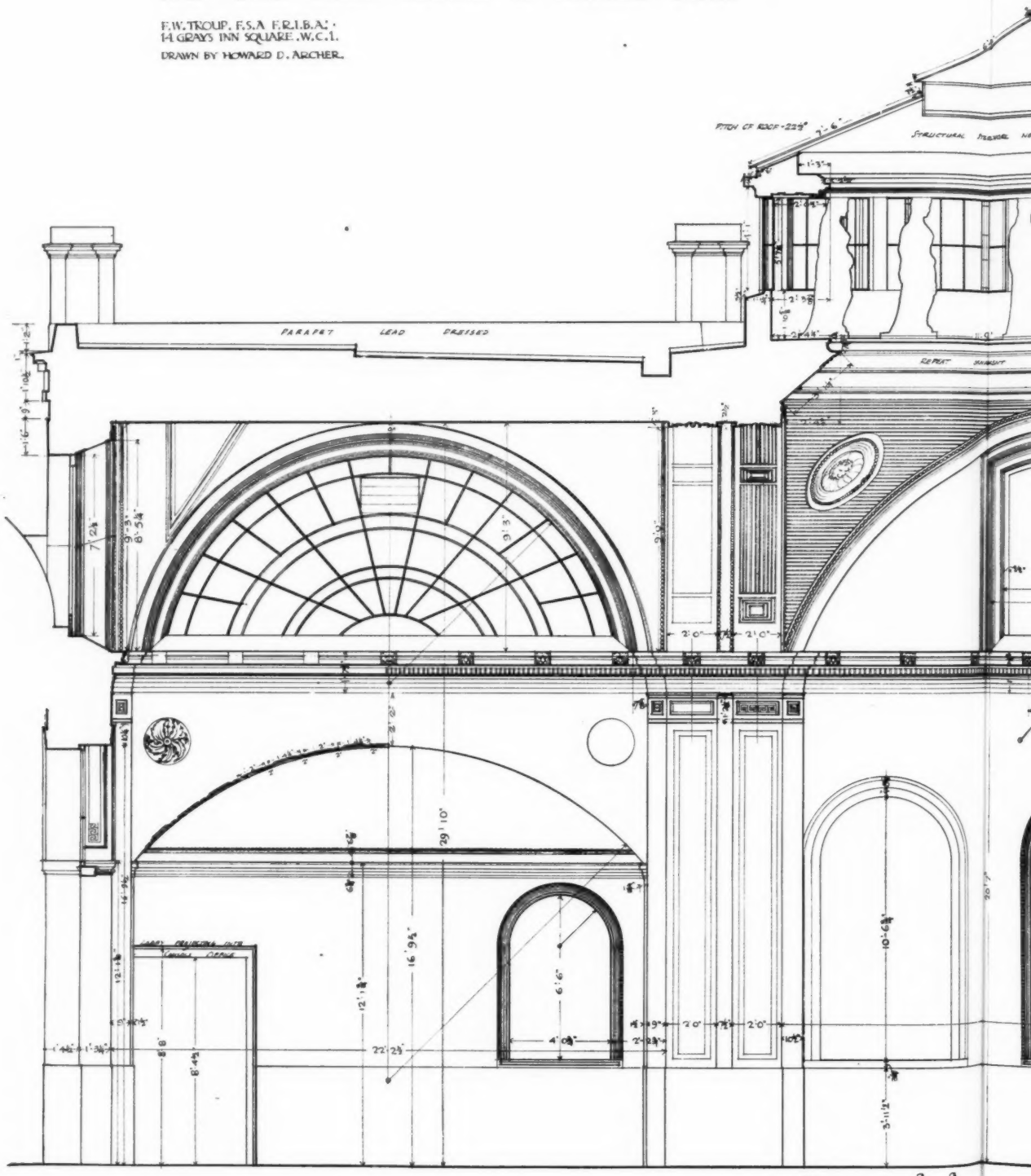
b : Long Section

The greater height of this hall, which caused it to rise above its neighbours, permitted the introduction of windows at all four ends of the main vaults. With this increase of illumination Soane was able to apply relief decoration with a much more lavish hand, retaining, at the same time, sufficient plain wall surface for the purpose of reflection. A characteristic ornament was the "ball and bar," which was cast separately in plaster and attached, with the minimum of contact, to arches and walls. The plain "ovolo" surmounting the main cornice was without the usual crowning fillet which is associated with this member.—[H. ROOKSBY STEELE.]

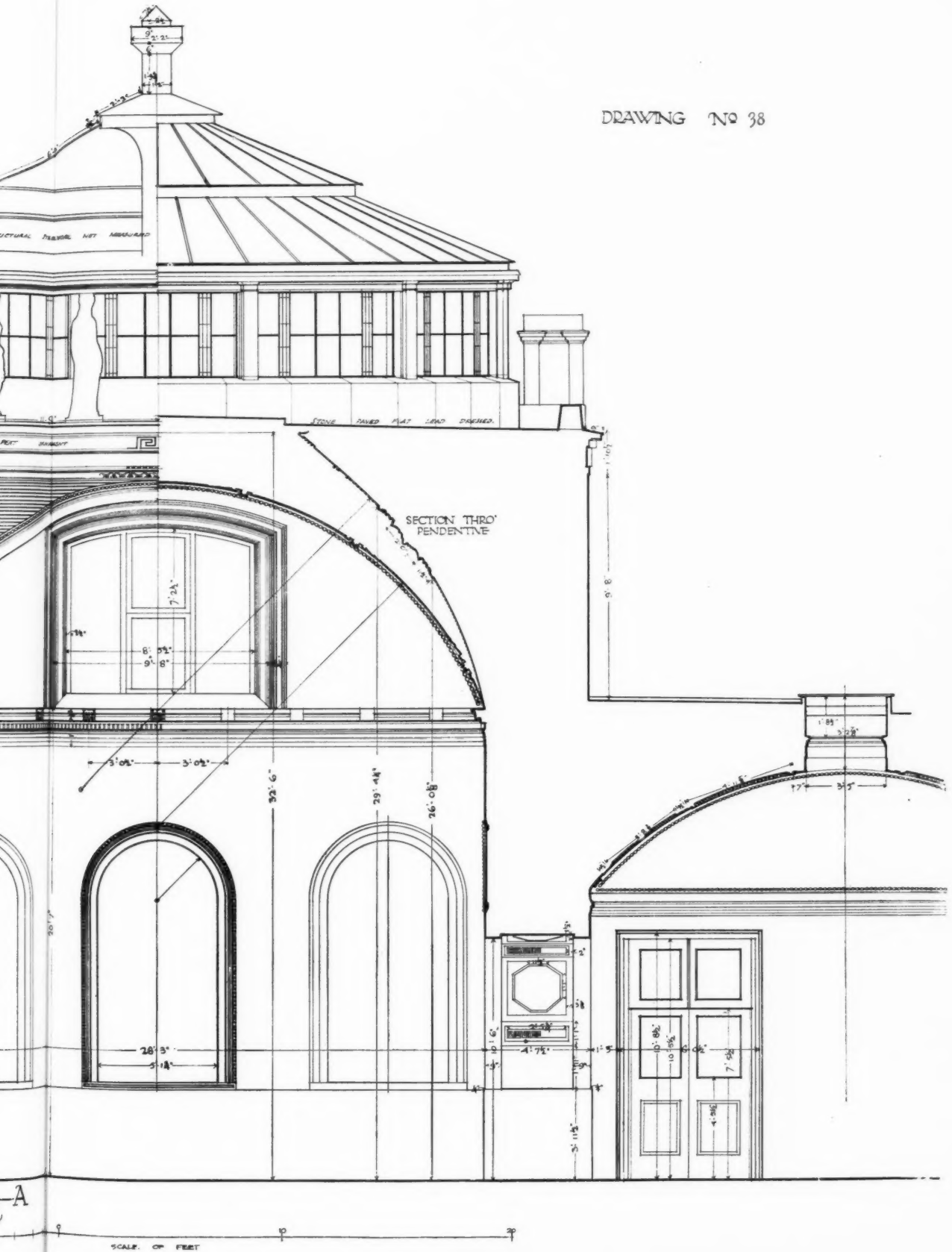
THE BANK OF ENGLAND

HALF INCH SCALE SECTION OF CONSOLS OFFICE

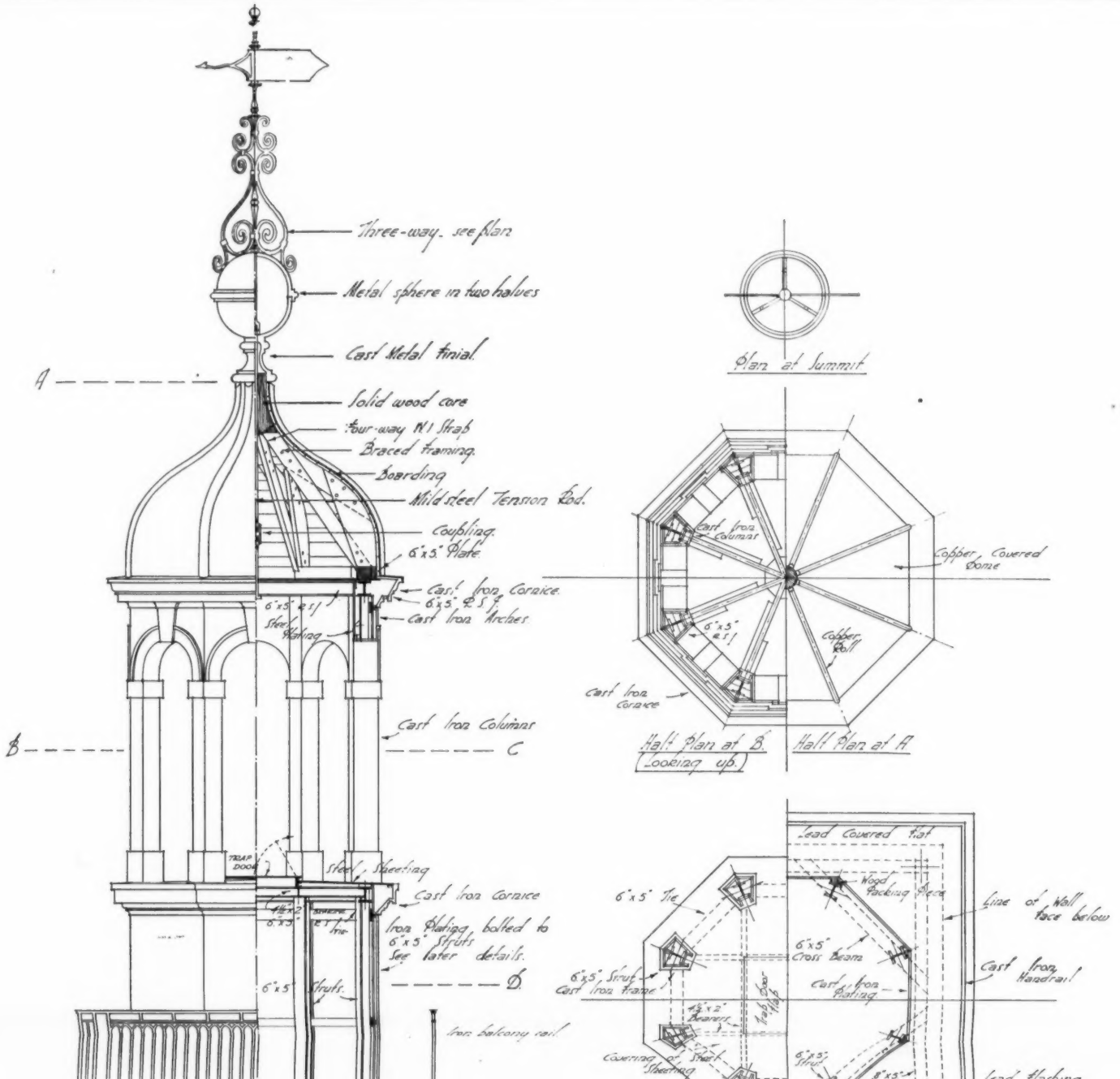
F.W. TROUP, F.S.A. F.R.I.B.A.
14 GRAYS INN SQUARE. W.C.1.
DRAWN BY HOWARD D. ARCHER.

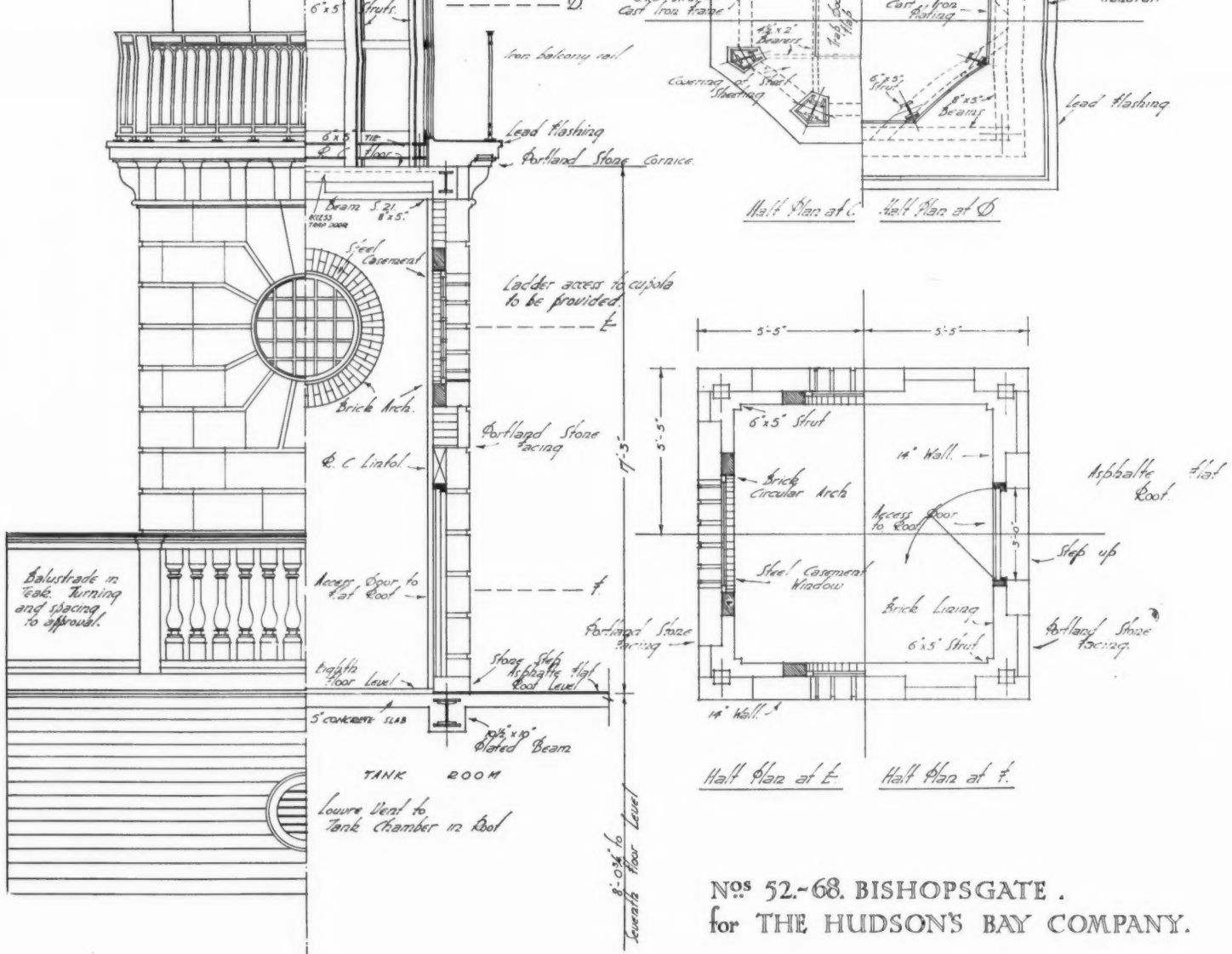


SECTION A–A
(SEE DRAWING No. 37)



SOANE'S BANK OF ENGLAND. MEASURED DRAWINGS OF THE INTERIORS. (*iii*) THE CONSOLS OFFICE. (*b*) LONG SECTION


Three-way. see plan
Metal sphere in two halves
Cast Metal finial
A
Solid wood core
Four-way N.1 Strab
Braced framing
Boarding
Mild steel Tension Rod.
Coupling
6"x5" Plate
Cast Iron Cornice
6"x5" ℄ S.F.
Cast Iron Arches
6"x5" ℄ S.F.
Steel Plating
Cast Iron Columns
B
C
TRAP DOOR
Steel Sheeting
Cast Iron Cornice
Iron Plating bolted to 6"x5" Struts
See later details.
D
6"x5" Struts
Iron balcony rail
Plan at Summit
Cast Iron Column
Copper Covered Dome
6"x5" ℄ S.F.
Copper Roll
Cast Iron Cornice
Half plan at B. Looking up.
Half Plan at A
Lead Covered Flat
6"x5" Tie
Wood Packing Piece
Line of Wall face below
6"x5" Cross Beams
6"x5" Strut
Cast Iron Frame
Cast Iron Handrail
Cast Iron Plating
4½"x2" Bearers
Tab Door
Covering of Steel Sheeting
6"x5" Struts
8"x5"
Lead Flashing



Nos 52.-68. BISHOPSGATE.
for THE HUDSON'S BAY COMPANY.

HALF-INCH DETAIL.

See also Drawings Nos 16. 17. & 18.

Drawing No 252/143/
Date made April 1926
issued

Note: This drawing to be read in conjunction with Drg No 17

Mewès & Davis
Architects,
22 Conduit Street W.

THE HUDSON BAY COMPANY'S BUILDING, BISHOPSGATE. BY MEWÈS AND DAVIS.

PRESENT-DAY BUILDING CONSTRUCTION: v

[BY WILLIAM HARVEY]

PLUMBING: ii: THE PLUMBER IN DOMESTIC ARCHITECTURE

ALTHOUGH the plumber's craft includes much that is ornamental in the casting of garden cisterns and crested and crocketed coverings for wooden spires, it is in connection with the sanitary appliances of the home that the name of the plumber is chiefly associated in modern architecture. And this humbly utilitarian branch of plumbing is too frequently lacking in all respect for appearances. Pipes are run in any convenient direction across and down the internal and external faces of the walls with reckless disregard for architectural proportion, colour, or form. Any line that is reasonably efficient and economical is likely to be adopted, so long as it satisfies the requirements of the sanitary authority. In a great many cases the plumbing is looked upon with dislike by the architect, and is hardly planned except as an afterthought, when the inspector insists on yet another vent-pipe with anti-syphonage that sprawls miserably across the fair face of his design, or slopes away up the delightfully textured roof. That these unpleasant features should not be allowed to inflict their company upon a decent work of architecture ought to be obvious, and two ways present themselves by which the sanitation and the artistic design of the house may be made to come to an understanding with one another.

The first is to suppress all ugly pipes and thread them into purposely-made ducts in the brickwork, and the other is to design and re-design the sketch plans of the house until the lines and colours of the pipes take their places in the scheme as satisfactory artistic units. This second method is the only one available in very inexpensive cottage property, and there it is worth while to consider the positions of the exposed pipes and design the optional features of the house in accordance with them. This side of present-day building is a sort of no-man's-land in which the plumber as a craftsman and the sanitary authority as designer generally combine to produce the most devastating results, and architects and architectural students, and those who train the young plumber for his work, might see to it that discords are not so freely created with misplaced sanitary plumbing in the future as in the past. Already the plumber is taught one half, the practical utilitarian side of design, but his artistic outlook is confined to the shapes of cast ears for pipes and to making a neat job of the practical joint-making. At Gledstone Hall, Yorkshire, now being erected to the designs of Sir Edwin Lutyens and Mr. Richard Jaques, associated architects, the duct system and hidden plumbing are installed.

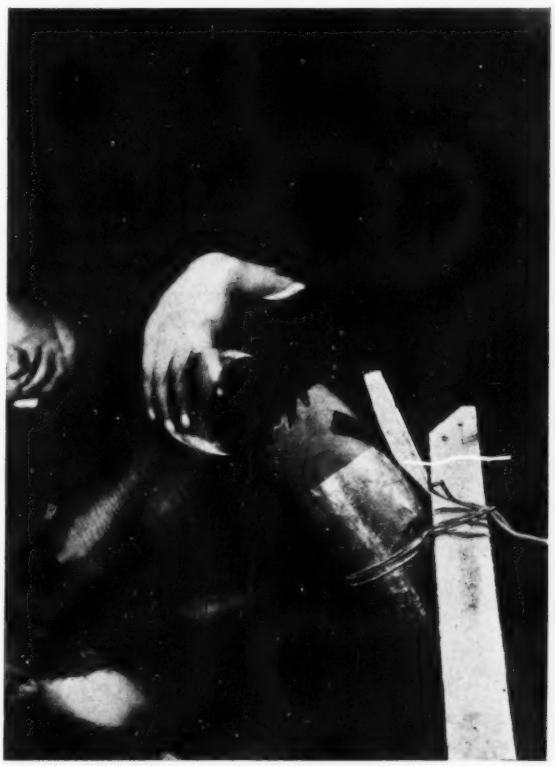


Figure one. Joining a brass thimble to a lead soil-pipe by means of a wiped joint. The folded "moleskin" cloth, smeared with tallow, is being used to "wipe" the solder into position and to remove the excess.

Figure one shows the concluding stage in the wiping on of a brass thimble to a large lead soil-pipe which will shortly take its place in one of the wall ducts. The photograph was taken by flashlight just as the last stroke of the wiping-cloth removed the excess of solder on the joint and left it fair and smooth. The way in which the pipe is temporarily fixed up so that the part to be wiped is approximately level may be seen in the illustration. Two pieces of wood, and the pipe itself, have been lashed together with tie-strings into the form of a tripod. The lead has been coated with "soil," and the part to be covered with the wiped joint has been scraped, and the thimble inserted at the end. The darker patch of "soil" near the wiped joint happens to have melted with the heat of the blow-lamp held in the plumber's right hand when its flame was directed towards the solder to melt or soften it during the wiping process. The appearance of a pipe that is to be hidden in a duct may not seem very important, and in any case, the "soil" can be scraped off if it has run a little in the heating.

Misplaced art in plumbing is to be seen in figure two, where the plumber in a small house actually went to the trouble to paint the soil margins over with a slick and shiny japan when he learned that it was intended to take a photograph of him and his work. The mess he made is not even yet cleaned up, for, on attempting to paint his pipes the same light colour as the wall in order to disguise, as far as possible, their unpleasant appearance, the old soil and the japan spread a sickly mark of grease through the coats of oil paint. The illustration indicates the modern use of lead branches upon galvanized iron pipes. The lead branches are purposely given a curved shape, so that any expansion and contraction to which they may be subjected may not be brought to bear entirely on the joints, and so make them crack and leak. The nature of these, probably useful, deviations from the straight line is often left to the plumber's discretion and, as he may or may not be an artist in curvilinear compositions, the results come as something of a surprise, and as the wandering lines of the pipes are unlikely to be in artistic agreement with anything else in the room, the plan of hiding pipes in ducts is often considered the best way out of the difficulty, where economy of first cost is not an object.

Figure two also shows the blow-lamp in use in soldering in the overflow to a lead bath tray. The blow-lamp flame has

Left, figure two. Plumber at work in a small house soldering in the brass grid to the waste from a bath-tray. The modern use of galvanized iron pipes with lead branches is also illustrated. Right, figure three. Packing the crack of the joint between a brass collar and the stoneware outlet with a ring of twisted newspaper to prevent the cement oozing into the bore of the pipe and obstructing the flow.

been made use of to heat the copper-bit which is seen propped up on a brick, and flame and bit are used alternately until the joint at the edge of the pipe is sound, and the brass grating firmly soldered in position. The casual way in which the antisyphonage pipe has been omitted from the lavatory trap in the hope that its absence would not matter, is possibly an exceptional instance of hand-to-mouth methods in carrying out a plumbing job piece-meal. An antisyphonage pipe was added at a later stage.

A process in the making of a joint between the outlet of the glazed stoneware pedestal closet and the brass collar or "liner" is shown in figure three. The brass collar has been joined to the lead branch pipe with a wiped joint much in the same way as is illustrated in figure one. This part of the work was performed at the bench in comparative comfort, and the brass thimble at the other end of the branch was also provided and fixed to the branch before it was threaded into position through the wall and joined to the cast-iron soil-pipe outside the building. After the branch pipe had been fixed firmly into the junction of the soil-pipe and run with blue lead and caulked, the outlet of the closet pan was once more tried in position, and the plumber was photographed in the act of packing the bottom of the joint between the stoneware and the brass with a wisp of twisted newspaper. The object of the packing is to prevent the cement, of which the joint will be composed, from oozing through into the bore of the pipe. Newspaper is chosen instead of a wisp of tow because if any part of it protrudes into the bore of the pipe it will be softened and washed away by the flow of water when the trap is flushed, whereas tow would have tenacity enough to retain a growing mass of solid material which might, in time, block the pipe, and would impede the flow in any case. The newspaper is forced down to the crack of the joint, and is tamped into it after the closet pan has been securely screwed to the wooden floor and cannot shift away from the joint. The last turn of the screw, by the way, is given after the paper collar is in position, so that it is gripped as tightly as possible before the cement joint is made.

Different builders have their own opinions as to the best mixture of Portland cement to use for jointing pipes. Neat cement is often used, but a mixture of two of cement to one of sharp, washed sand is sometimes advocated as being less liable to shrink and crack. Cement and sand one to one is probably as dilute a mixture as it is worth while to try, since the cost of material is trifling compared to the cost of labour on such a fiddling job and the risk of a leak is dearly bought by a saving of a few pence.

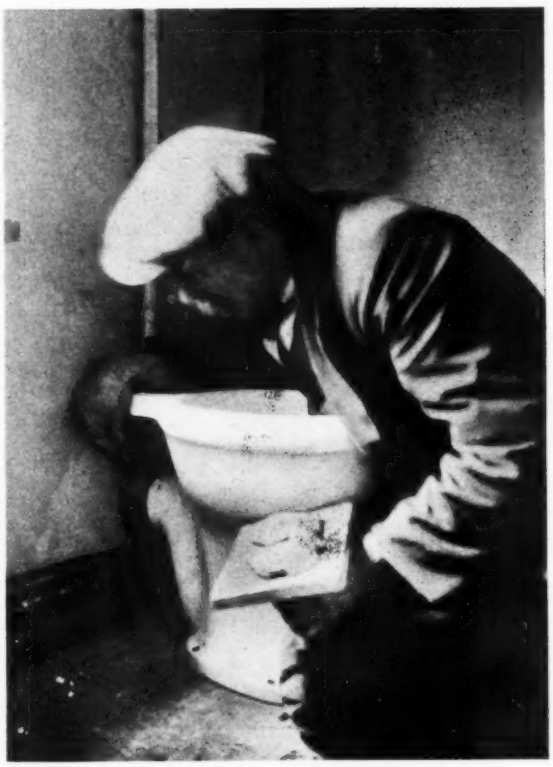
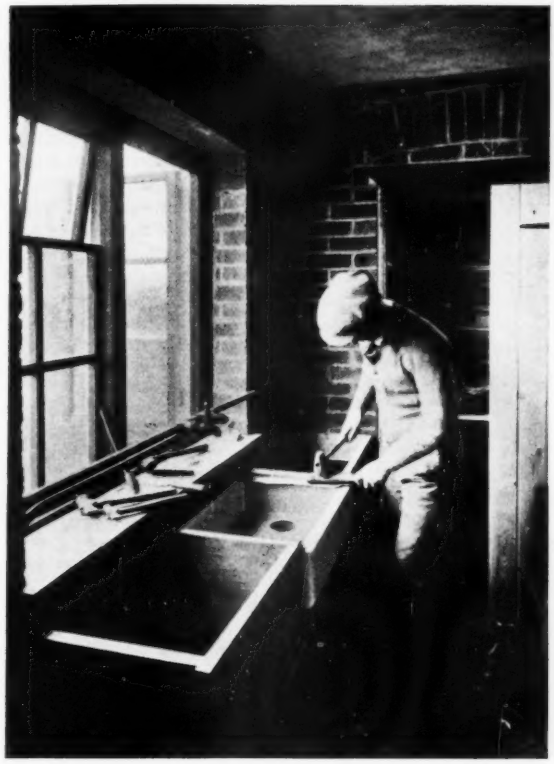


Figure four. The bricklayer finishes off the cement joint around the stoneware outlet and the brass socket on the collar.

Figure four, the photograph of the bricklayer finishing off the cement joint, was taken several days after that showing the plumber putting in the paper collar, and the more time that can be given for the building to settle and the floors to shrink before the joint is finally fixed, the less chance is there of the closet settling afterwards and cracking free from the brass collar. This is a frequent cause of leakage, or even of fracture of the outlet from the pedestal, for the movements which take place in the building in response to its settling down in the subsoil and upon the green joints of its own walls are far too powerful to be resisted by a brittle cement joint, though a bent lead branch pipe may easily yield a little to them if it is free to do so.

A problem to the solution of which plumber and joiner both contribute is illustrated in figure five. The sink has been provided



Left, figure five. Preventing the accumulation of greasy splashes in the crack between a sink and the adjoining cupboard. The strip of lead is close copper-nailed on the wood and dressed over the stoneware. Right, figure six. Plumber at work in an internal area at Gledstone Hall. Bossing-up an internal break from a piece of sheet lead.

with a fixed cupboard on one side, and a fixed teak washtub on the other. The splashings of greasy water from the sink would find their way down the cracks between the sink and these fixtures unless the cracks are bridged over or stopped up with some impervious material. Shrinkage of the wooden sides of the cupboard and the washtub must be anticipated in dry weather between such times as they are purposely wetted, and a mere stopping up of the cracks with red or white lead would hardly meet the case for very long. A strip of blue (metallic) lead is, therefore, dressed over the edge of the sink and on to the wood, where it is fixed into position by close copper nailing. The wooden sides are kept high enough above the sides of the sink to allow a finger and the corner of the house-flannel to be drawn along the surface of the lead and beneath the underside of the projecting edge of the teak draining-board. This projecting edge is throated to cast the drips on to the lower part of the leaded surface, which the plumber is seen in the illustration in the act of dressing into position. In the example shown, the draining-board above the washtub is removable, which fact facilitates its cleaning, though the other draining-board will be fixed and finger room will be important.

How practical conditions and artistic considerations are mixed up in architectural design could hardly be more clearly expressed than by reference to the sink and its draining-boards. The sink must be fixed at a convenient height for working, and the window-board (or the range of quarry tiles which are its modern equivalent), must be high enough to pass the draining-boards, so that this homely detail establishes the position of a window sill level and may affect the whole proportion of the house.

A plumber at work on the lead flashings of Gledstone Hall forms the subject of figure six. He is bossing-up an internal break out of a piece of sheet lead with the help of a bossing-stick and bossing mallet. A dresser for smoothing out the marks of the blows is lying on the planks, but, being end on to the camera, does not show its shape to advantage. The conditions of work in the cold and the snow are not allowed to interfere with the quality of the finished product, and the bossing of the turned-up side has been carried out with as great precision as if it had been executed on the bench in a warm workshop. The slightly rounded angle between the bottom of the sheet and the upturned side is carefully preserved until the last, when the angle can be dressed to a more acute form if this proves necessary in the interests of close fitting. The novice, impatient to obtain precise results in the shortest possible time, too often cuts in the arrises with excessive vigour and runs the risk of a crack, whereas the old hand is content to wait until every part is approximately in its correct place before completely finishing any particular detail. The plumbing in this instance will be severely tested, for it is required to keep the interior areas of a hidden attic protected from the rain. All the water that falls in the areas and on the roofs that drain towards them has to pass in pipes to the outside of the house again, and among other precautions adopted, the snow-boards on the flat at the bottom of the area are designed to keep the flat in good order and to maintain a clear run towards the outlets.

RURAL ENGLAND

Following is the final list of societies which have accepted the invitation of the President of the R.I.B.A. to form the Council for the Preservation of Rural England: R.I.B.A., Town Planning Institute, County Councils' Association, National Federation of Women's Institutes, Rural Advisory Committee of the National Council of Social Service, Garden Cities and Town Planning Association, Rural District Councils' Association, Scapa Society, Commons and Footpaths Preservation Society, National Housing and Town Planning Council, Surveyors' Institution, Society for the Protection of Ancient Buildings, Central Chamber of Agriculture, Country Gentlemen's Association, Ltd., Royal Society of Arts, Architecture Club.

THE COMPETITORS' CLUB

"CLAUDITE JAM RIVOS"

DURING the year now approaching its end has appeared week by week a column dealing with various aspects of competition practice. In these columns have been reviewed in one way or another the relations between promoter and assessor, assessor and competitor, promoters and competitors, or the three in conjunction. Our own methods and those of other countries have been compared, and while the general conclusion has been that English procedure is reasonably well adapted to national requirements, there are yet points on which we should take advantage of the ideas developed elsewhere. Doubtless these will gradually penetrate into our methods in so far as they prove advantageous, for we see as time goes on an increasing interchange of ideas between the nations that are leading the way in the arts and sciences.

The present age is one of experiment; with Italy at one pole and Russia at the other, all the national groups are feeling their way to some form of social organization that it is hoped may be sound and permanent. England as always, is suspicious of experiments, whether political or artistic, and might well adopt as her national motto that of the statesman who advised us to "Wait and see." Naturally, it is easy to recognize that this course has its disadvantages as well as its advantages, but it seems an appropriate one to apply to the criticisms and suggestions of the past year that have found a place in these columns on the subject of competitions, and the time now seems to have come in which to pause for a while, merely keeping watch on the general trend of progress, and noting developments as they appear.

The summaries of conditions in the case of important competitions will, of course, remain a permanent feature, and these will be reviewed in due course, while if at any time the conditions themselves call for comment this will be forthcoming. The activity of the R.I.B.A. in ensuring that such conditions protect the competitor against unfair dealing renders it superfluous for others to study them from this point of view, but it is obviously impracticable for that body to extend its investigations into the technical soundness of the requirements set forth, and it is here that conditions are liable to fail. Before any scheme is visualized an impression may be formed that this or that arrangement is inevitable, and there is a danger of this impression being crystallized into a compulsory condition. This has happened too often, and has been the undoing of so many competitions that it is still imperative to keep a careful watch, and to lose no opportunity of emphasizing that instructions to competitors should, as far as possible, "be of a suggestive character."

In the series of articles now closing, our readers will have noted that there has been nothing to suggest discouragement with the present position of competition practice. We cannot claim that it is invariably perfect, nothing is, but assuredly progress has been made, and the standard of design acceptable, compares favourably with the standard attained in important works, while it is, as it should be, infinitely superior to that of buildings in general. Despite every effort there is still a vast amount of unnecessary work demanded from competitors, but until some assessor is able to find a brilliant design, illustrated in sketch form, to which to give his award, this is bound to continue, as competitors dare not take the risk of ignoring polished draughtsmanship.

In this country the control of competitors is, at the present time, more definitely in the hands of the architectural profession than it is anywhere else, and it will be our own fault if we do not direct it aright; what we want we can have if we are sufficiently determined to obtain it. Promoters can only obtain competitive designs of any value if they secure the goodwill of architects; and the architects have formulated their requirements, thus theirs becomes the responsibility if a competition goes wrong. The danger point is now the assessor, who may at times fail to realize his responsibilities either through inexperience or unsuitability of temperament. Though this may often create difficulties during the conduct of the competition it is much more rare to find it resulting in a fundamentally unjust decision, and in the future we may hope for yet greater reliability in decisions.

It cannot yet be claimed that all the possibilities of the competition system have been completely explored. There are a number of different methods of arrangement and organization, some being suited to one class of subject and some to another: there is still too great a tendency to apply these indiscriminately, according to the notions of the promoters or the assessor. Experience is sure to bring about the employment of the systems appropriate to particular cases, and it is for our profession to study the problems so that they may be able to make their contribution towards revising and regularizing competitive practice so that it shall operate as definitely in the interest of architecture as in that of the architect.

SENESCHAL

COMPETITION CALENDAR

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

January 3. Academy, Perth. Open to Architects practising in Scotland. Assessor, Mr. James D. Cairns. Premiums: £100 and £50. Particulars from Mr. R. Martin Bates, Education Offices, Perth. Deposit £1 1s.

January 8. Town Hall Extensions and Public Library Building, Manchester. Assessors, Messrs. T. R. Milburn, Robert Atkinson, and Ralph Knott. Particulars from Mr. P. M. Heath, Town Clerk. Deposit £1 1s.

January 15. Designs for complete modern furniture for *a*, a double bedroom, *b*, a drawing-room, *c*, sitting hall, *d*, dining-room. Assessors, the Countess of Oxford and Asquith, the Lady Islington, Sir Frank Baines, C.V.O., C.B.E., F.R.I.B.A. (Director of H.M. Office of Works), Messrs. H. Clifford Smith, F.S.A. (Department of Woodwork, Victoria and Albert Museum), F. V. Burridge, O.B.E., R.E., A.R.C.A. (Principal of the Central School of Arts and Crafts), P. Morley Horder, F.S.A., Philip Tilden, Percy A. Wells (Principal of the Cabinet Department, Shoreditch Technical College), Holbrook Jackson (Editorial Director, The National Trade Press, Ltd.), and Captain Edward W. Gregory (Editor, *The Furnishing Trades' Organizer*). For the preliminary adjudication there are 200 guineas in prizes, and for the final, 300 guineas. Particulars from the Editor, *The Furnishing Trades' Organizer*, Regent House, Kingsway, London, W.C.2.

January 25. Conference Hall, for League of Nations, Geneva. 100,000 Swiss francs to be divided among architects submitting best plans. Sir John Burnet, R.A., British representative on jury of assessors.

June 30. Designs for the planning of the Civic Centre, Birmingham Assessor, Mr. H. V. Lanchester, F.R.I.B.A. Premium of £1,000 to the design placed first, and a further sum not exceeding £1,000 divided between the authors of other approved designs. Particulars from Mr. Herbert H. Humphries, M.INST.C.E., City Engineer and Surveyor. Deposit £1 1s.

No date. Incorporated Architects in Scotland: 1: Rowand Anderson Medal and £100; City Art Gallery and Museum; 2: Rutland Prize (£50) for Study of Materials and Construction; 3: Prize (£10 to £15) for 3rd-year Students in Scotland; 4: Maintenance Scholarship. £50 per annum for 3 years. Particulars from Secretary of the Incorporation, 15 Rutland Square, Edinburgh.

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

No date. Town Hall and Library, Leith. Assessor, Sir George Washington Browne, R.S.A. Particulars from the City Chambers, Edinburgh.

ANNOUNCEMENTS

Messrs. Fitt and Prior-Hale, architects, have moved to 3 John Street, Bedford Row.

Messrs. Gunton and Gunton, architects and surveyors, have taken into partnership Mr. Thomas A. Moodie, A.R.I.B.A., who has been their chief assistant for many years. On December 11 the firm moved to new offices at Empire House, St. Martin's-le-Grand, E.C.1. Telephone Nos.: City 2676-7-8.

CORRESPONDENCE

CONCRETE HAS COME TO STAY

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—You are, Mr. Editor, to be congratulated upon your special number on concrete buildings. The illustrations you have gathered together certainly show that concrete structures are at last being designed with some sense of proportion and some imagination, and it is possible that means may be found of dealing with the surface of the concrete which results in concrete buildings looking so miserable when they have had a taste of the weather. Should this happen it may be that the æsthetic objection to the use of concrete will have entirely disappeared. But there is another objection, and a still more serious one, for it is a consequence of what is supposed to be one of the virtues of concrete.

A few years ago, while on a holiday in the North, I came across a beautiful landscape that was entirely spoilt by a concrete water tower. On inquiry I found it was no longer used. I asked why, being an eyesore, it was allowed to remain? The reply I got was that it would cost more to pull it down than it did to build it up. Hearing this gave me a shock. It became evident that concrete had "come to stay" in a sense I had not before understood. The countryside is to-day, perhaps, being ruined by bungalows and other cheap-jack erections. But we can get some comfort from the reflection that they have not come to stay. No such comfort, however, can we find should a concrete monstrosity go up. I can see that a time will come when the country will be covered by derelict concrete structures, and it appears to me that the value of land in towns will be affected by the use of concrete when people awaken to the fact that the use of concrete adds enormously to the cost of rebuilding.

ARTHUR J. PENTY

THE DEFENCE UNION

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—I have read with much interest Mr. Birnstingl's article on the proposal to form a Defence Union. I am not in any way interested in the architectural profession, but I have intimate acquaintance with the great value bestowed upon their respective professions by the Medical Defence Union, The Law Society, and other achievements of similar character.

The value of the Defence Union proposed is of great importance and benefit to every practitioner, whether he may ever need to call for help or not. The mere existence of such a society is an ever-present shield against the attacks of blackmailers, or of persons who through ignorance form erroneous conclusions as to work done, or views given, by the professional man.

I could give many instances of protection afforded in various professions, but every man must have heard of, or personally know of, cases which point to the value of combination.

AMICUS

SHAMS

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—It would have been interesting to see Mr. Belloc face squarely the question of shams in his article "On the External Effect of Concrete." His stone fruits and flowers, and garlands, and statues are not shams, and nobody objects to them as shams, whether they are of stone, brick, plaster, concrete or iron, although some materials are more suitable, and some methods of production give a more beautiful and satisfying result than others. The object of a sham is to deceive, and nobody in a normal state would for an instant think that real fruit or flowers were hanging on a building, or real human beings perched on it in scanty or antiquated attire. But the lining of a concrete face to simulate the beds and joints of stone is another matter; it is an imitation, and its object is deception.

Mr. Belloc sees no reason whatever why man building in concrete should not imitate upon its surface the forms and details of stone. Then he probably would admit no reason why man should not imitate every other material until our houses become a sham, a dishonest shell in which to teach our children honesty; and our architectural currency thoroughly debased and valueless. That is what the 300 books and 3,000 lectures were driving at. This tricking out of concrete to imitate stone is only a sign that we do not yet know how to use the new material; it has possibilities for surface ornament that we have not yet begun to discover; we have only scratched the surface so far—with a wire brush.

SEYMOUR GARDENER

AUTHORITY AND LIBERTY IN ARCHITECTURE

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—In his letter of December 15 Mr. Arthur J. Penty complains that there is nothing in either of my articles that suggests that I have understood him or reflected on anything he said. I must confess that those articles were not devoted to a detailed commentary upon Mr. Penty's chapters on "Authority and Liberty in Architecture," for it appeared to me to be more desirable to draw attention to the things which he did not say rather than to what he actually said, for reading through his chapters I discovered that in his analysis of the condition of modern architecture the considerations which he omitted were a hundred times more important than those which he thought it worth while to mention. Moreover, had I once embarked upon a detailed examination of his statements concerning the history of architecture during the last one hundred years I should have found myself at variance with him upon nearly every point, and instead of being able to deal with first principles I should have been compelled to devote my articles to repudiating a hundred and one statements which, although to Mr. Penty they appear as facts, strike me as being the purest fiction. I found it a much more agreeable task, therefore, to set down some of my own views with regard to the Gothic revival and other matters he discussed, than to enter into a personal dispute with Mr. Penty over such questions as whether Mr. Norman Shaw ever designed houses in the Georgian style, whether the old Regent Street was as Mr. Penty describes it "vulgar and uninspiring," or whether the Arts and Crafts movement exercised a rejuvenating effect upon architecture.

Mr. Penty accuses me of being a partisan of the Classic style. But your readers will perhaps remember that in my two articles which followed Mr. Penty's chapters on "Authority and Liberty in Architecture," I was careful to point out that my objection to the work of the Gothic revival was not on the ground that the buildings were Gothic, but because they were vulgar, and I pointed out that when these same practitioners who vulgarized the Gothic style became apostates from it and designed in what they considered to be the Classic manner, they carried their vulgarity with them. This vulgarity I further contended was due to the philosophy which they had imbibed from the great leaders of the Gothic revival, a philosophy which ignored the æsthetic principle of manners. It was because for the first time in history this principle had been repudiated by the leaders of architectural thought that the towns of England were spoilt by the addition of innumerable buildings of the "hooligan" type. The standard which I apply to architecture is the civic standard, and if a building flagrantly defies this standard it is equally reprehensible, whether its style be Gothic or Greek, and if I have to choose between Gothic buildings which conform to it, such as the medieval colleges of Oxford and Cambridge, for instance, and the ill-mannered domestic Classic of Mr. Norman Shaw, I unhesitatingly prefer the former.

The real difference between Mr. Penty and myself is that while to me the civic aspect of architecture is supremely important, he has as yet scarcely begun to take any interest in it at all.

Otherwise, he would not give his blessing to the skyscraper commercial buildings in America. It almost looks as if Mr. Penty is prepared to forgive a building even the deadly offence of being designed in the Classic style if it only but arrogantly overbear its neighbours, destroy the outline of a city, and by misusing the architectural symbols of Church or State, corrupt them utterly.

I need mention only one instance in support of my argument: that it was the Gothic revivalists who began the assault on civic architecture. Mr. Penty must be aware that there is in Holborn a building called the " Prudential Assurance," which has several spires and is doing its very best to look like a cathedral. Some years after this was built, when in the superficial qualities of style the fashion of architecture was changed, there appeared in the same street the Pearl Assurance building, replete with columns and all the paraphernalia of Classic decoration. It is not, however, this latter which causes us most offence, but the big dome by means of which this commercial building arrogates to itself the position of a town hall. Very reprehensible indeed, but surely we are right in saying that it was the " Prudential " which set the example. As I habitually apply to architecture, of whatever style it happens to be, this uniform civic standard it is idle for Mr. Penty to try to identify me with some Neo-Grecian clique, yet in his letter he tells us that his objection is entirely to " that pedantic academic self-satisfied approach to architecture which imagines itself to be Greek." If there is such a pedantic, academic approach to architecture I am at one with Mr. Penty in condemning it, but I maintain that a method of criticism by which there is applied to buildings a common social standard of manners, such as quite ordinary people habitually acknowledge is neither pedantic nor academic.

Mr. Penty says that his objection to the academic point of view is parallel to his objection to the rationalist who assumes that the whole universe can be explained in terms of reason—" philosohers of to-day," he proceeds, " make no such attempt, they recognize that reason is not fundamental, that at the back of every reason is to be found an emotion or instinct, and therefore take their stand upon instinct rather than reason. Mr. Edwards does not appear to be aware of the position at which modern thought has arrived. On the contrary, like the old rationalists, he assumes that logic is truth, and distrusts his emotion, for he values architecture not in relation to its emotional or æsthetic content, but in relation to its logic." Alas, I am only too painfully familiar with this drawing-room philosophy, which exalts instinct and emotion at the expense of intellect ! Our modern pragmatists belittle the intellect in order to make themselves popular with the crowd. Mr. Penty, by his use of the expression " emotional *or* æsthetic content," as if these epithets were almost synonymous shows himself to be unaware that the æsthetic element in a building is capable of being illumined by the processes of argument. Yet this application of intellect to æsthetics is the principal activity of æsthetic philosophers. Intellect, however, does not exclude emotion, as Mr. Penty suggests. In repudiating manners the Gothic revivalists emptied architecture of the most important element in its æsthetic content, an element which can be described as both rational and emotional.

A. TRYSTAN EDWARDS

SKYSCRAPERS

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—" Astragal's " note in your last issue commenting on Mr. Alfred C. Bossom's apology for skyscrapers seems to me to misstate the facts. These were given not a great many months ago by Mr. Raymond Unwin in an address delivered at the R.I.B.A. At certain times of the day certain streets in Chicago are crowded with foot passengers from wall to wall, so that no wheeled traffic can be allowed, and at all times private motors are forbidden the central parts of the city, and are accommodated in vast parking places half a mile away. I write from memory, but the congestion in parts of central New York was recently described to me by an architect resident in that city, and was similar to the above account of the state of affairs in Chicago. The national health—particularly the increase of phthisis and failure of eyesight—is the occasion of grave concern to the authorities, Mr. Unwin tells us; and both are attributed to the congestion and deficient light and air attendant on skyscrapered existence.

H. B. CRESWELL

PLATE-GLASS

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—It is probably dangerous to join in a discussion between two such protagonists as Messrs. Penty and Howard Robertson, but there is in Mr. Robertson's letter in your issue for December 8 a challenge to the revival of a very ancient controversy, which may not be familiar to most of your younger readers. " Why should we not use plate-glass ? " and I suppose it follows " in big sheets." It is one of those things which agitated most architects in the nineties, and filled a good many correspondence columns. It is not altogether easy to answer, logically. Many things in architecture are not. As in other arts, these are things we feel, sometimes we can tell exactly why we feel them, sometimes partially, sometimes hardly at all.

Partly it is in domestic buildings a question of (1) scale; (2) partly of association; (3) partly a preference for certain textures. In the latter I include the breaking up of reflections. (1) In the matter of scale a comparative example. Plate-glass is to sash-barred windows what 3 in. bricks with a ruled joint is to 2 in. bricks with a wide struck joint; (2) association. Buildings, in the times when they built with a big B, always had sash-bars or lead lights, and generally they had crown glass. The human animal in this country at least is a conservative one; he or she likes things of the sixteenth, seventeenth, and eighteenth centuries, and doesn't like things of the 1860's; (3) texture or surface. There is something unnatural in a mechanically perfectly smooth surface. In perhaps a hundred years, when we have become Robots, we shall come to like mechanically perfect surfaces; at present we don't, neither in our bricks or stone, our wood or tiles, in the flat or in the round, in small or in big, but in the latter much less. There is even a fourth ingredient in domestic work—it is not pleasant to feel in a house that you are sitting in the street, and from the outside there is the " suggestion " that there is some protection for the inhabitants by the bars or cams.

Coming now to the larger public, or office, or shop, building. The larger the wall-space in proportion to the window, or the solid to the void, the easier it is to get a pleasing proportion. Bars have a tendency to carry the wall across the void, especially if they are light in colour and the walls are also light. In nearly all town buildings more light is required than the most desirable proportion of solid to void would admit, therefore it is an advantage to have something which increases the apparent preponderance.

A building with black holes where the windows are going to be must be of very accurate proportions to be in the least pleasing. Try it on any well accredited elevation and compare with the fenestration as designed. To fill these holes with a shiny substance which in the upper story reflects great masses of sky is a test which no building at present designed has been able to survive artistically.

Mr. Robertson thinks that " the New School " is going to do it. I wish them luck, personally I think that is a wrong track. I don't say that existing systems of fenestration are the last word; there are all sorts of possibilities—of pierced screen, and even translucent materials such as alabaster or glass of similar substance and rougher texture, but plate-glass is a regrettable necessity in shops, where, if limited in size and adequately surrounded, it is not too bad, but in any other capacity I have visions reminding me of glazed bird-cages. H. FALKNER

DEPARTMENTAL ARCHITECTS

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—I have noticed that, in recent Press criticisms the heads of the architectural departments in Government and local government offices, in railway offices, and in large commercial firms,

continue to receive entire praise for the many works of distinction designed in their respective departments. I think it but fair that any reference made should be to the effect that the work has been designed under the direction of the chief engineer or architect. Indeed, some departments are so vast in extent that in many cases the whole of the designing is the work of assistant architects alone. While it is necessary that the chief engineer or architect should be recognized, it is equally desirable that his assistants should be recognized as architects by virtue of their special training, and not, as in one Government department, as mere architectural assistants. This is not a case of distinction without difference, as others in the same department are known as first-, second-, and third-class assistant architects. Would these men ever have entered the profession if they thought they could never hope for anything better? I think not.

MEMBER OF A.A.S.T.A.

[THE ARCHITECTS' JOURNAL invariably publishes the names of such assistant architects provided no objection is raised by the department.—Editor A.J.]

THE NEW DELHI

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—The note in a recent issue of your JOURNAL on the New Delhi deals most ably with the impression given by the character of the present Government buildings. It is a good sign that articles of this kind should be published. In this instance it gives an idea of the notable work of Sir Edwin Lutyens and Sir Herbert Baker, and tells us how the æsthetic problems in the Far East have been developing. We ought not, however, to lose sight of the endeavours made by the late Lord Curzon during his Vice-Royalty to put the architectural styles in India on right lines. These hardly seem to be followed in the Delhi buildings, which might make one wonder whether they really belong to Renaissance or to Mogul architecture. The Doric columns, with an Indian chujja on the top and the imitated Indian tracery in between, and some of the other details seem to me to confuse the mind in the same manner as do Renaissance details in Gothic buildings. The conception is not definitely Renaissance or Indian, and seems to be similar in its effect to the designs used unconsciously, and with no definite meaning, in the early English and Dutch settlements at Surat, Ahmedabad, and Cambay. In the early settlements a great deal could also have been done to persuade the master builder to provide beautiful tiles, and to revive and improve the local technique. The traditional and hereditary industries would, I am sure, have responded at Delhi had more freedom been given. The trouble seems to have been that even hereditary craftsmen, who knew how to produce, distribute, and apply the materials to ensure the desired effect, had to work as an accessory of a machine, and not as the inventor of the real mechanism.

L. M. CHITALE

TRADE NOTES

Messrs. Rhodes' Chains, Ltd., have sent us a copy of a new illustrated leaflet, entitled *Sash Hanging to Perfection*. Its production, we are informed, was due largely to suggestions from many architects for a concise standard formula for hanging double-hung sashes with pulleys and chains. Rhodes' chains have met the situation by dealing with first of all three specifications for sashes, weighing up to 112 lb., and, secondly, a specification in respect to housing schemes and the like. The "Standard" pulley and chain are for housing schemes where sliding sashes are adopted up to 30 lb. weight, and the "Universal" pulleys and chains for general specifications where sliding sashes are adopted up to 30 lb., 70 lb., and 100 lb. weight. The firm's pulleys and chains have been adopted and fitted with every satisfaction to H.M. Government, municipal and office buildings, metropolitan police stations, trust dwellings, railways, hotels, schools, shops, and private houses. Further leaflets are in course of preparation dealing with additional subjects, any and all of which may be obtained at the head office of the company, 26 Charing Cross Road, London, W.C.2.

Much interest has been aroused in building and municipal engineering circles in the new and important concession which has been secured by the Ragusa Asphalte Paving Company, Ltd. This firm has been successful in acquiring the concession for Great Britain and Northern Ireland, the Irish Free State, and the British Dominions and Colonies of the Montrottier Seyssel Asphalte Mines, situated in Bassin de Seyssel, Haute Savoie, France. Among the best known in the whole of the Seyssel Basin, these mines yield an exceedingly fine grade of rock asphalt, known as Montrottier, which has been used extensively in this country for over thirty years. Another speciality from the same district for which the firm are sole concessionaires is Gardebois Seyssel asphalt. The mines from which this is obtained adjoin the Montrotter Mines and form part of the same natural deposits. An area of approximately 6,400 acres is covered by the two mines, and the visible supply of high-grade rock is, according to a recent geological survey, sufficient to ensure an unlimited output for many years to come.

In a new list on Ruston loco boilers, just issued, Messrs. Ruston and Hornsby, Ltd., of Lincoln, bring before steam users their exceptional facilities for manufacturing boilers of the loco-multitubular type, and point out some of the chief features in the construction of the Ruston boiler. The Ruston boiler design has been directed by two cardinal principles, the first being to allow ample strength for the working pressure, and the second to provide ample proportions in heating surface and internal capacity. The result is claimed to be that the boilers easily provide the evaporation for which they are sold without heavy firing. The plates are of the best Siemens-Martin mild steel, varied in strength and ductility to suit the part of the boiler for which they are used, the practice of Messrs. Ruston and Hornsby in this respect being in accordance with the requirements of the Admiralty, Board of Trade, and leading insurance companies. The firebox top is of special construction. The smaller sizes are stayed with steel girders well bedded to the flanged plates at each end of the firebox, so that the stress comes on the stiff vertical plates and not on the less rigid shell. In the larger sizes the firebox roof is stayed to the outer shell with the Ruston radial stay, which provides support with freedom for expansion and contraction in the firebox, while every facility for cleaning is provided. A copy of the list can be obtained from Messrs. Ruston and Hornsby, Ltd.

SURREY HOUSES. BY MR. GUY DAWBER

Following are the names of the contractors and sub-contractors for the houses illustrated on pages 803 to 808.

Villans Wyk, Headley. General contractors: James Smith and Sons, Norwood, for the house; Musselwhite and Son, Basingstoke, for the garage. Sub-contractors: J. Mercer, Ashford, tiles; Dent and Hellyer, central heating, plumbing and sanitary fittings; Teale Fireplace Co., grates; V. G. Middleton & Co., electric wiring; Ramsey & Co., and J. M. Pirie and Co., door and window furniture.

Copt Hill Court, Kingswood. General contractors: Chapman, Lawry and Puttick, Grayshott. Sub-contractors: Dent and Hellyer, central heating, plumbing and sanitary fittings; Bratt Colbran & Co., grates; V. G. Middleton & Co., electric wiring.

Harrowlands, Dorking. General contractors: Musselwhite and Son, Basingstoke. Sub-contractors: S. and E. Collier, Reading; Ames and Finnis, tiles; Bassant Bros., parquet flooring; Dent and Hellyer, central heating, plumbing and sanitary fittings; Bratt Colbran & Co., grates; Waring, Withers and Chadwick, electric wiring, electric light fixtures, and electric heating; J. M. Pirie & Co., door and window furniture; James Alford and Sons, decorations in principal rooms. Doulting stone was used in the building.

LAW REPORTS

ARCHITECT'S DILAPIDATION REPORT

Evans and Jenkins v. *Musk. King's Bench Division. Before Justices Salter and MacKinnon*

This was a motion by the plaintiffs to remit a report to an arbitrator, and arose out of a dispute between the parties as to a dilapidation award.

Mr. Hawke, K.C., for the plaintiffs, said the motion was to remit an award on a claim for damages. Plaintiffs, or their predecessors in title, granted as from March, 1906, a lease of a number of houses in Totterdown Street, Tooting, and the lease expired last March. Defendant had taken an assignment of the lease, and a notice of dilapidations was given in October, 1925, and it required a great many things to be done to the premises. In February, 1926, plaintiffs issued their writ in which they claimed damages. The action was referred by Master Jelf to an architect, asking him to report as to the sum required to put the premises into such repair as would comply with the notice of dilapidations. The referee reported in March that he had surveyed the premises, had perused the lease and the repairing covenants, and had given "due regard to the age and use of the buildings," and said that the sum required to put the premises into such repair as would comply with the notice of dilapidations was £715. It was pointed out that that was not what the referee was to report on, he was asked to report on the sum required to put the premises in a state to comply with the dilapidations. Master Jelf took the view that the referee had not done what he was asked. The matter went back to the referee, and he struck out from his report "and have given due regard to the age and use of the buildings," and said that made no difference. Counsel said that left the matter in an unsatisfactory position, and the plaintiffs asked that some other person should be asked to report. When the referee stated he had valued the repairs, and had done it having regard to the age and use of the buildings, if it meant having regard "now" to the age and use of the buildings, the referee was wrong, and under these circumstances he asked that the report should again go back to the referee or arbitrator for further consideration.

The motion was dismissed, with costs, the Court not calling upon Mr. Blanco White for the respondent.

Mr. Justice Salter said the parties agreed that an independent professional man should be appointed to report on the question of liability, and Master Jelf appointed Mr. Ernest Herbert, a professional gentleman whose competence was not in question, and Mr. Herbert made a report. An objection was made to the report based on the ground that the words had been inserted in it: "And have given due regard to the age and use of the buildings in question." It was suggested that the words indicated or might be supposed to indicate that Mr. Herbert had misapplied the law. Master Jelf ordered Mr. Herbert to make an amended report, and his amended report was his former one, striking out the words as quoted. He also added: "The words ruled out in red are to be omitted, but this does not alter in any way the figures quoted." His lordship saw no grounds on which the Court should remit the report to Mr. Herbert or any other referee, or for assuming or suspecting that the law had been misapplied by Mr. Herbert.

Mr. Justice MacKinnon concurred.

STREET ILLUMINATED SIGNS: RIGHTS OF FIXTURE

Gifford and another v. *Dent. Chancery Division. Before Mr. Justice Romer*

Mr. Justice Romer delivered a judgment in this case which is of great interest to those who are tenants over business premises, and have, or are desirous of having, illuminated signs. The plaintiffs were Mr. Sidney Gifford and Mr. F. W. Humphries, lessees of part of the premises at 95 Wigmore Street, against their subtenant, Mr. R. H. Dent, who was the tenant of a front room on the second floor of the premises, for an injunction restraining him from permitting to remain erected and fixed to the front wall of the premises an illuminated advertisement or sign bearing the device, "95, Deaf Ears, Ardente, Acoustique," or any other advertisement or sign, and for a mandatory injunction to the defendant to remove the sign.

Mr. Farwell, K.C., argued the case for the plaintiffs, and Sir Thomas Hughes, K.C., for the defendant.

His lordship, in giving judgment, said that he had to decide the question according to the strict rights of the parties, although in view of the fact that the sign did not, having regard to its situation, really cause any damage or annoyance to anyone, he would have gladly let the defendant retain his sign if he could have done so. The plaintiffs were the tenants of a shop on the ground floor and the whole of the basement. The basement extended beyond the front of the house. Above the basement there was a stone covering, which was somewhat higher than the adjoining pavement of Wigmore Street, and which was situated between the shop front and the pavement. In his view the effect of that was to demise to the plaintiffs the stone covering of the basement over the projecting part of the basement. That demise to the plaintiffs of the stone forecourt necessarily involved the demise to them of the whole of the space above that forecourt.

The illuminated sign in question was erected by the defendant, who was the tenant of the second floor overlooking Wigmore Street, and it was of a very substantial character, being 20 ft. in height and projecting about 4 ft. 8 in. from the wall of the premises. The plaintiffs complained that the sign was erected in breach of a covenant "not to allow any placard, posters or advertisements whatsoever (other than plates or other similar announcements)" unless approved in manner therein mentioned "to be erected placed or fixed in or upon any part of the said premises."

In his lordship's view, that sign could not be regarded as a "plate or other similar announcement" within the terms of the covenant. It was an object of enormous size, projecting from the wall, whereas a plate would be, as a rule, flush with the wall. The sign was one of the posters or advertisements prohibited by the covenant. The plaintiffs had put forward as an alternative claim, that the sign was a trespass upon the plaintiffs' forecourt. If his lordship was right in his conclusion that the plaintiffs were the tenants of the forecourt, and, accordingly, tenants of the space above the forecourt, then the projection was clearly a trespass upon the plaintiffs' property. In these circumstances he had, with great reluctance, come to the conclusion that he had no alternative but to order the defendant to remove the sign.

The order was suspended for three months pending an appeal.

ACQUISITION OF LAND ACT: MOTION AGAINST THE CROWN

Hutton and others v. *The Secretary of State for War. Chancery Division. Before Mr. Justice Tomlin*

This case, which came before the Court on a motion by the plaintiffs, who were the trustees and tenants for life of an estate near Richmond, Yorkshire, to restrain the Secretary of State for War, until trial of the action or further order, from taking or continuing any proceedings before an official arbitrator under the Acquisition of Land (Assessment of Compensation) Act, 1919, for the assessment of the compensation or purchase to be paid for the compulsory acquisition by the defendant of some 2,460 acres of moorland belonging to the said estate, and also to restrain the defendant, his subordinates, servants, or agents from trespassing upon and damaging the said lands.

His lordship, in giving judgment, said in order to grant the plaintiffs the relief they asked it would be necessary for the Court to be satisfied that the plaintiffs had made out a *prima facie* case. But, apart altogether from the merits of the case, he had to consider the preliminary point raised by the Attorney-General (that the action would not lie, and that the only remedy was by petition of right) and only if he was satisfied that the preliminary point was not well founded should he be justified in granting any relief on this application; for the preliminary point, if well founded, struck at the whole basis of the action.

In his opinion the argument that an action would lie against a Crown official, as such, when a wrong had been done which purported to be an exercise of a statutory authority, entirely failed. It was sufficient for the present purposes for him to say that, *prima facie*, this action would not lie, and, that being so, he dismissed the motion.

THE WEEK'S BUILDING NEWS

Bathing Pool for Hythe

The Hythe Council, Kent, is considering the construction of a bathing pool.

Epping Housing Loan

The Epping Urban District Council has agreed to apply for a further loan of £15,000 for housing advances.

Housing at Stanley

The Stanley Urban District Council is to erect seventy-two houses on the South Stanley housing estate.

Seventy-eight More Houses for Margate

The Margate Town Council has decided to erect seventy-eight more houses on the Dane Valley estate, at a cost of £42,892.

North Circular Road Scheme

The Middlesex County Council is to carry on with another section of the North Circular Road at a cost of £100,000.

Improvements to a Hastings Road

The Hastings Town Council is considering the reconstruction and widening of Seddlescombe Road, at a cost of £30,000.

A New Library for Westminster

The erection of the new library buildings of the Westminster City Council in Orange Street, S.W., is to cost £44,999.

Housing at Hawick

The Hawick Town Council has resolved to proceed with the erection of other fifty houses on the Shorterdykes site, to complete the lay-out there.

£45,000,000 Skyscraper for New York

Plans have been prepared for the construction in New York of an office building of 100 stories, which will rise to a height of 1,008 ft. above the street level.

Houses Approved for Swanage

The Ministry of Health has approved the scheme for the erection of thirty houses at Leigh Park, Swanage, for the Swanage Urban District Council.

A Model Village for Oxford

The Oxford City Council in committee has considered the proposal not to build on the South Parks, but to accept a site near Marston for a model garden village.

Housing at Nottingham

One hundred and eighty houses are to be erected on the Lenton Abbey estate, acquired by the Corporation of the City of Nottingham.

A Central School for Royton

The Board of Education has informed the Crompton and Royton Education Committee that the erection of the new central school at Royton has been finally approved.

Knaresborough Housing

The Ministry of Health has promised a subsidy in respect of fifty houses to be erected in the Knaresborough Urban Council's district by private enterprise.

Housing at Littlehampton

Sanction to a loan of £10,000 has been received from the Ministry of Health for the purpose of advances under the Small Dwellings Acquisition Acts for the Littlehampton Urban Council.

Development of Land at Middlesbrough

The borough engineer of the Middlesbrough Corporation Sanitary Committee, reporting on the development of 80 acres of land behind Park Road South for building purposes, said that it will provide 1,145 building sites for the Middlesbrough owners.

Extension of Plymouth Baths

At a meeting of the Hoe and Parks Committee of Plymouth Town Council the Town Clerk reported the receipt of the Ministry of Health's sanction to borrow £14,450 for the provision of additional accommodation at Tinside bathing-place.

Remodelling of Preston Park

Captain B. Maclaren, superintendent of Brighton parks and gardens, has drawn up an attractive plan for remodelling Preston Park, Brighton's biggest recreation ground. The work will cost about £50,000. A feature of the scheme is the construction of a 6-acre lake, surrounded by artistic terraces, landing stages, etc.

Another Church for Beehive

The Beehive district of Ilford, which is having a place of worship built by the Church of England, is now to have erected a Congregational Church. The site, which was acquired some time ago, is situated in Woodford Avenue (Woodford Spur), about 100 yards from the junction of that road with Eastern Avenue and Cranbrook Road.

£11,000,000 Canal Scheme

At a meeting recently held at Doncaster in connection with the projected ship canal from Sheffield, or from Doncaster, to the sea, it was decided to seek the services of an engineer to advise on the best line for waterway possibilities, combining navigation and drainage in one waterway. It is estimated the scheme will cost £11,000,000.

Grammar School for Kennington

Archbishop Tenison's grammar school at Kennington Oval, which is to take the place of the present school in Leicester Square, will be erected at a cost not exceeding £53,350. The Education Committee of the London County Council state that the governors are prepared to contribute £40,000 to the cost.

Development of a Dudley Estate

The Dudley Town Council has decided to enlist the services of an expert to prepare plans for the development of the Priory estate of 521 acres, which they bought for £77,500. It is suggested that the Council should erect on the site 2,000 houses, a technical college, an isolation hospital, a maternity hospital, an open-air school, and an open-air swimming bath.

Improvements at Bradford

The Bradford City Council is to be asked to approve the expenditure of nearly £200,000 on various large schemes, including £20,000 for the extensions of electricity mains, £75,000 for housing grants made by the Corporation, £10,800 for part of the Bradford Moor housing scheme, and £14,610 for the erection of ten combined shops and houses on the Odsal housing site.

L.C.C. Housing Expenditure

A proposal to spend a further £1,241,981 in building 2,137 houses on the Becontree estate and in developing another section of 173 acres will shortly come before the L.C.C. About 21 acres will be reserved for industrial purposes, and 8½ acres as sites for shops, a church, and a school. A further 23 acres will be utilized by the local authority as an open space.

Edinburgh Improvements

A sub-committee of the Lord Provost's Committee of the Edinburgh Town Council has approved generally a scheme for the construction of a culvert from the Portobello power station to the sea and a pier to form a superstructure to the culvert. It is also proposed to construct a bathing pond. The total estimated outlay involved is £100,000.

Housing at Dukinfield

The Dukinfield Town Council has authorized the erection of 178 municipal houses on land acquired from the Dukinfield estate in Clarendon Fields. They will be erected in three different types, seventy-eight containing two living-rooms, two bedrooms, and bathroom; eighty containing two living-rooms, three bedrooms, and bathroom; and twenty containing two living-rooms, four bedrooms, and bathroom.

Police Dwellings for Brixton

The Police Committee has been given authority to erect dwellings for married constables on the site of the now disused Freemen's Orphan School at Brixton at an estimated cost of £177,000, to be raised by loan under the City's Various Powers Act. There will be seven blocks of flats with four, five or six rooms each, accommodating 150 families. The site is 4½ acres in extent, and there will be ample provision for open spaces for the recreation of the occupants.

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
A₃	Addlestone	S. Counties	1 6½	1 2
A	Adlington	N.W. Counties	1 8	1 3½
A	Airdrie ..	Scotland	•1 8	1 3½
C₁	Aldeburgh	E. Counties	1 4	1 0½
A	Altrincham	N.W. Counties	1 8	1 3½
B₂	Appleby ..	N.W. Counties	1 4½	1 0½
A	Ashton-under-Lyne	N.W. Counties	1 8	1 3½
A₃	Atherstone	Mid. Counties	1 6½	1 2
B₃	Aylesbury ..	S. Counties	1 4½	1 0½
B₃	BANBURY	S. Counties	1 4½	1 0½
B₂	Bangor ..	N.W. Counties	1 5	1 1
A	BarnardCastle	N.E. Coast	1 8	1 3½
A	Barnsley ..	Yorkshire	1 8	1 3½
B₁	Barnstaple	S.W. Counties	1 5½	1 1½
A	Barrow ..	N.W. Counties	1 8	1 3½
A	Barry ..	S. Wales & M.	1 8	1 3½
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
A₃	Bewdley ..	Mid. Counties	1 6½	1 2
B₃	Bicester ..	Mid. Counties	1 4½	1 0½
A	Birkenhead	N.W. Counties	†1 9	1 3½
A	Birmingham	Mid. Counties	1 8	1 3½
A	Bishop Auckland	N.E. Coast	1 8	1 3½
A	Blackburn	N.W. Counties	1 8	1 3½
A	Blackpool	N.W. Counties	1 8	1 3½
A	Blyth ..	N.E. Coast	1 8	1 3½
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
A	Bradford ..	Yorkshire	1 8	1 3½
A₂	Brentwood	E. Counties	1 6½	1 2
A	Bridgend ..	S. Wales & M.	1 8	1 3½
B₂	Bridgwater	S.W. Counties	1 5	1 1
A₁	Bridlington	Yorkshire	1 7½	1 2½
A	Brighouse	Yorkshire	1 8	1 3½
B₁	Brighton ..	S. Counties	1 6	1 1½
A	Bristol ..	S.W. Counties	1 8	1 3½
B₂	Brixham ..	S.W. Counties	1 4½	1 0½
A₃	Bromsgrove	Mid. Counties	1 6½	1 2
C	Bromyard ..	Mid. Counties	1 4	1 0½
A	Burnley ..	N.W. Counties	1 8	1 3½
A	Burslem ..	Mid. Counties	1 8	1 3½
A₃	Burton-on-Trent	Mid. Counties	1 7	1 2½
A	Bury ..	N.W. Counties	1 8	1 3½
A₃	Buxton ..	N.W. Counties	1 6½	1 2
B	CAMBRIDGE	E. Counties	1 6	1 1½
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
B	Cheltenham	S.W. Counties	1 6	1 1½
A	Chester ..	N.W. Counties	1 8	1 3½
A	Chesterfield	Mid. Counties	‡1 8	1 3½
B₃	Chichester	S. Counties	1 4½	1 0½
A	Chorley ..	N.W. Counties	1 8	1 3½
B₂	Cirencester	S. Counties	1 5	1 1
A	Clitheroe ..	N.W. Counties	1 8	1 3½
A	Clydebank	Scotland	1 8	1 3½
A	Coalville ..	Mid. Counties	1 8	1 3½
B₁	Colchester ..	E. Counties	1 5½	1 1½
A	Colne ..	N.W. Counties	1 8	1 3½
B₁	Colwyn Bay	N.W. Counties	1 5½	1 1½
A	Consett ..	N.E. Coast	1 8	1 3½
B₁	Conway ..	N.W. Counties	1 5½	1 1½
A	Coventry ..	Mid. Counties	1 8	1 3½
A₃	Crewe ..	N.W. Counties	1 6½	1 2
A₃	Cumberland	.....	1 6½	1 2
A	DARLINGTON	N.E. Coast	1 8	1 3½
A	Darwen ..	N.W. Counties	1 8	1 3½
B₃	Deal ..	S. Counties	1 4½	1 0½
B₁	Denbigh ..	N.W. Counties	1 5½	1 1½
A	Derby ..	Mid. Counties	1 8	1 3½
A	Dewsbury	Yorkshire	1 8	1 3½
B	Didcot ..	S. Counties	1 6	1 1½
A	Doncaster	Yorkshire	1 8	1 3½
C₁	Dorchester	S.W. Counties	1 4	1 0½
A₃	Driffield ..	Yorks	1 6½	1 2
A₃	Droitwich	Mid. Counties	1 6½	1 2
A₃	Dudley ..	Mid. Counties	† 7	1 2½
A	Dundee ..	Scotland	1 8	1 3½
A	Durham ..	N.E. Coast	1 8	1 3½
B₁	EAST-BOURNE	S. Counties	1 6	1 1½
A	Ebbw Vale	S. Wales & M.	1 8	1 3½
A	Edinburgh	Scotland	1 8	1 3½
A	E. Glamorganshire & Monmouthshire	S. Wales & M.	1 8	1 3½
B	Exeter ..	S.W. Counties	§1 7	1 2½
B₂	Exmouth ..	S.W. Counties	1 5	1 1
B	FELIXSTOWE	E. Counties	1 6	1 1½
A₃	Filey ..	Yorks	1 6½	1 2
A	Fleetwood ..	N.W. Counties	1 8	1 3½
B₃	Folkestone	S. Counties	1 4½	1 0½
A	Frodsham	N.W. Counties	1 8	1 3½
B₃	Frome ..	S.W. Counties	1 4½	1 0½
A	GATESHEAD	N.E. Coast	1 8	1 3½
B₁	Gillingham	S. Counties	1 5½	1 1½
B	Gloucester	S.W. Counties	1 6	1 1½
A₂	Goole ..	Yorkshire	1 7	1 2½
B₁	Gosport ..	S. Counties	1 5½	1 1½
A₂	Grantham	Mid. Counties	1 6½	1 2
A₂	Gravesend	S. Counties	1 7	1 2½
A	Greenock ..	Scotland	•1 8	1 3½
A	Grimsby ..	Yorkshire	1 8	1 3½
B₁	Guildford ..	S. Counties	1 5½	1 1½
A	HALIFAX ..	Yorkshire	1 8	1 3½
A₁	Hanley ..	Mid. Counties	1 7½	1 2½
A	Harrogate ..	Yorkshire	1 8	1 3½
A	Hartlepools	N.E. Coast	1 8	1 3½
B₂	Harwich ..	E. Counties	1 5	1 1
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
B₂	Kendal ..	N.W. Counties	1 5	1 1
B₂	Keswick ..	N.W. Counties	1 5	1 1
B	Kettering ..	Mid. Counties	1 6	1 1½
A₃	Kidderminster	Mid. Counties	1 6½	1 2
B₂	King's Lynn	E. Counties	1 5	1 1
A₁	LANCASTER	N.W. Counties	1 7½	1 2
A₃	Leamington	Mid. Counties	1 6½	1 2½
A	Leeds ..	Yorkshire	1 8	1 3½
A	Leek ..	Mid. Counties	1 8	1 3½
A	Leicester ..	Mid. Counties	1 8	1 3½
A	Leigh ..	N.W. Counties	1 8	1 3½
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 6	1 1½
A	Llanelly ..	S. Wales & M.	1 8	1 3½
	London (12 miles radius)		1 9½	1 4½
	Do. (12-15 miles radius)		1 9	1 4
A	Long Eaton	Mid. Counties	1 8	1 3½
A	Loughborough	Mid. Counties	1 8	1 3½
B	Luton ..	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 8	1 3½
A₁	MACCLESFIELD	N.W. Counties	1 7½	1 2½
B	Maidstone	S. Counties	1 5½	1 1½
A₃	Malvern ..	Mid. Counties	1 6½	1 2
A	Manchester	N.W. Counties	1 8	1 3½
A	Mansfield ..	Mid. Counties	1 8	1 3½
B₂	Margate ..	S. Counties	1 4½	1 0½
A₃	Matlock ..	Mid. Counties	1 6½	1 2
A	Merthyr ..	S. Wales & M.	1 8	1 3½
A	Middlesbrough	N.E. Coast	1 8	1 3½
A₃	Middlewich	N.W. Counties	1 6½	1 2
A	Monmouth	S. Wales & M.	1 8	1 3½
A₁	S. and E. Glamorganshire Morecambe	N.W. Counties	1 7½	1 2½
A₃	NANTWICH	N.W. Counties	1 6½	1 2
A	Neath ..	S. Wales & M.	1 8	1 3½
A	Nelson ..	N.W. Counties	1 8	1 3½
A	Newcastle	N.E. Coast	1 8	1 3½
A	Newport ..	S. Wales & M.	1 8	1 3½
A	Normanton	Yorkshire	1 8	1 3½
A₂	Northampton	Mid. Counties	1 7	1 2½
A	North Staffs.	Mid. Counties	1 8	1 3½
A	North Shields	N.E. Coast	1 8	1 3½
B	Norwich ..	E. Counties	1 6	1 1½
A	Nottingham	Mid. Counties	1 8	1 3½
A	Nuneaton ..	Mid. Counties	1 8	1 3½
B	OAKHAM ..	Mid. Counties	1 5½	1 1½
A	Oldham ..	N.W. Counties	1 8	1 3½
A₃	Oswestry ..	Mid. Counties	1 6½	1 2
B	Oxford ..	S. Counties	1 6	1 1½
A	PAISLEY ..	Scotland	•1 8	1 3½
C	Pembroke	S. Wales & M.	1 4½	1 0½
A	Perth ..	Scotland	•1 8	1 3
A₃	Peterborough	Mid. Counties	1 6½	1 2
A	Plymouth	S.W. Counties	¶1 8	1 3½
A	Pontefract	Yorkshire	1 8	1 3½
A	Pontypridd	S. Wales & M.	1 8	1 3½
B	Portsmouth	S. Counties	1 6	1 1½
A	Preston ..	N.W. Counties	1 8	1 3½
A	QUEENSFERRY	N.W. Counties	1 8	1 3½
B	READING ..	S. Counties	1 6	1 1½
B	Reigate ..	S. Counties	1 5½	1 1½
A₃	Retford ..	Mid. Counties	1 6½	1 2
A	Rhondda Valley	S. Wales & M.	1 8	1 3½
A₃	Ripon ..	Yorkshire	1 6½	1 2
A	Rochdale ..	N.W. Counties	1 8	1 3½
B	Rochester ..	S. Counties	1 5½	1 1½
A₁	Ruabon ..	N.W. Counties	1 7½	1 2½
A₂	Rugby ..	Mid. Counties	1 8	1 3½
A₃	Rugeley ..	Mid. Counties	1 6½	1 2
A	Runcorn ..	N.W. Counties	1 8	1 3½
A₃	ST. ALBANS	E. Counties	1 6½	1 2
A	St. Helens	N.W. Counties	1 8	1 3½
A₁	Scarborough	Yorkshire	1 7½	1 2½
A	Scunthorpe	Mid. Counties	1 8	1 3½
A	Sheffield ..	Yorkshire	1 8	1 3½
A	Shipley ..	Yorkshire	1 8	1 3½
A₃	Shrewsbury	Mid. Counties	1 6½	1 2
A₂	Skipton ..	Yorkshire	1 7	1 2½
B	Slough ..	S. Counties	1 5½	1 1½
A₃	Solihull ..	Mid. Counties	1 7	1 2½
B	South'pton	S. Counties	1 6	1 1½
B₁	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport	N.W. Counties	1 8	1 3½
A	S. Shields ..	N.E. Coast	1 8	1 3½
A₂	Stafford ..	Mid. Counties	1 7	1 2½
A	Stockport ..	N.W. Counties	1 8	1 3½
A	Stockton-on-Tees	N.E. Coast	1 8	1 3½
A	Stoke-on-Trent	Mid. Counties	1 8	1 3½
B	Stroud ..	S.W. Counties	1 5½	1 1½
A	Sunderland	N.E. Coast	1 8	1 3½
A	Swansea ..	S. Wales & M.	1 8	1 3½
B	Swindon ..	S.W. Counties	1 6	1 1½
A₁	TAMWORTH	N.W. Counties	1 7½	1 2½
B₁	Taunton ..	S.W. Counties	1 5½	1 1½
A	Teeside Dist.	N.E. Counties	1 8	1 3½
A	Todmorden	Yorkshire	1 8	1 3½
A₂	Torquay ..	S.W. Counties	1 7	1 2½
B₁	Tunbridge Wells	S. Counties	1 5½	1 1½
A	Tunstall ..	Mid. Counties	1 8	1 3½
A	Tyne District	N.E. Coast	1 8	1 3½
A	WAKEFIELD	Yorkshire	1 8	1 3½
A₂	Walsall ..	Mid. Counties	1 7	1 2½
A	Warrington	N.W. Counties	1 8	1 3½
A₃	Warwick ..	Mid. Counties	1 6½	1 2
B	Wellingborough	Mid. Counties	1 6	1 1½
A	West Bromwich	Mid. Counties	1 8	1 3½
B	Weston-s-Mare	S.W. Counties	1 6	1 1½
A₃	Whitby ..	Yorkshire	1 6½	1 2
A	Widnes ..	N.W. Counties	1 8	1 3½
A	Wigan ..	N.W. Counties	1 8	1 3½
B₂	Winchester	S. Counties	1 5	1 1
B	Windsor ..	S. Counties	1 6	1 1½
A	Wolverhampton	Mid. Counties	1 8	1 3½
A₃	Worcester	Mid. Counties	1 6½	1 2
A	Worksop ..	Yorkshire	1 8	1 3½
A₁	Wrexham ..	N.W. Counties	1 7½	1 2½
B	Wycombe	S. Counties	1 6	1 1½
B₂	YARMOUTH	E. Counties	1 5½	1 1½
B₂	Yeovil ..	S.W. Counties	1 5	1 1
A	York ..	Yorkshire	1 8	1 3½

• Plasterers, 1s. 9d.
† Carpenters and Painters, 1s. 8½d.
‡ Plumbers, 1s. 9d.
§ Painters, 1s. 6d.
‖ Carpenters and Plasterers, 1s. 8½d.
¶ Painters, 1s. 7d.

PRICES CURRENT

EXCAVATOR AND CONCRETOR

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

Broken brick or stone, 2 in., per yd.	£0	11	6
Thames ballast, per yd.	0	13	0
Pit gravel, per yd.	0	18	0
Pit sand, per yd.	0	14	6
Washed sand	0	15	6

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

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

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

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

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

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

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

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

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

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

DRAINER

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

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

STONEWARE DRAINS, jointed in cement, tested pipes, 4 in., per ft. . . 0 4 3
DO. 6 in., per ft. 0 5 0
DO. 9 in., per ft. 0 7 9

CAST-IRON DRAINS, jointed in lead, 4 in., per ft.	0	9	0
DO. 6 in., per ft.	0	11	0

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

BRICKLAYER

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

London stocks, per M.	£4	15	0
Flettons, per M.	2	18	0
Staffordshire blue, per M.	9	10	0
Firebricks, 2½ in., per M.	11	3	0
Glazed salt, white, and ivory stretchers, per M.	23	0	0
DO. *headers, per M.*	23	10	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.

FACINGS, FAIR, per ft. sup. extra	£0	0	2
DO. Red Rubbers, gauged and set in putty, per ft. extra	0	4	6
DO. salt, white or ivory glazed, per ft. sup. extra	0	5	6
TUCK POINTING, per ft. sup. extra	0	0	10
WEATHER POINTING, per ft. sup. extra	0	0	3
GRANOLITHIC PAVING, 1 in., per yd. sup.	0	5	0
DO. 1½ in., per yd. sup.	0	6	0
DO. 2 in., per yd. sup.	0	7	0
BITUMINOUS DAMP COURSE, ex rolls, per ft. sup.	0	0	7
ASPHALT (MASTIC) DAMP COURSE, ½ in., per yd. sup.	0	8	0
DO. vertical, per yd. sup.	0	11	0
SLATE DAMP COURSE, per ft. sup.	0	0	10
ASPHALT ROOFING (MASTIC) in two thicknesses, ¾ in., per yd.	0	8	6
DO. SKIRTING, 6 in.	0	0	11
BREEZE PARTITION BLOCKS, set in Cement, 1½ in. per yd. sup.	0	5	3
DO. DO. 3 in..	0	6	6

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

MASON

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

Portland Stone:			
Whitbed, per ft. cube	£0	4	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. sup.	0	6	6
York templates sawn, per ft. cube	0	6	9
Slate shelves, rubbed, 1 in., per ft. sup.	0	2	6

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

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

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

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

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

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

SLATER AND TILER

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

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

Slates, 1st quality, per M:			
Portmadoc Ladies	£14	0	0
Countess	27	0	0
Duchess	32	0	0
Clips, lead, per lb.	0	0	4
Clips, copper, per lb.	0	2	0
Nails, compo, per cwt.	1	6	0
Nails, copper, per lb.	0	1	10
Cement and sand, see "Excavator," etc., above.			
Hand-made tiles, per M.	£5	18	0
Machine-made tiles, per M.	5	8	0
Westmorland slates, large, per ton	9	0	0
DO. *Peggies, per ton*	7	5	0

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

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

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

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

See "Sundries for Asbestos Tiling."

CARPENTER AND JOINER

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

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

7 × 3, per std.	£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	2	0
Mahogany, per ft. sup. of 1 in.	0	2	0
DO. *Cuba, per ft. sup. of 1 in.*	0	3	0
Teak, per ft. sup. of 1 in.	0	3	0
DO., *ft. cube*	0	15	0
FIR fixed in wall plates, lintels, sleepers, etc., per ft. cube	0	5	9
DO. framed in floors, roofs, etc., per ft. cube	0	6	3
DO., framed in trusses, etc., including ironwork, per ft. cube	0	7	3

PITCH PINE, add 33⅓ per cent.

FIXING only boarding in floors, roofs, etc., per sq.	0	13	6
SARKING FELT laid, 1-ply, per yd.	0	1	6
DO., 3-ply, per yd.	0	1	9
CENTERING for concrete, etc., including horsing and striking, per sq.	3	10	0
SLATE BATTENING, per sq.	0	18	6

PRICES CURRENT; *continued.*

CARPENTER AND JOINER: *continued.*

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

PLUMBER

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

Lead, milled sheet, per cwt.	£2	4	6
DO. *drawn pipes, per cwt.*	2	6	0
DO. *soil pipe, per cwt.*	2	8	0
DO. *scrap, per cwt.*	1	9	6
Copper, sheet, per lb.	0	1	0
Solder, plumber's, per lb.	0	1	2
DO. *fine, per lb.*	0	1	5
Cast-iron pipes, etc.:			
L.C.C. soil, 3 in., per yd.	0	4	1
DO. *4 in. per yd.*	0	5	0
R.W.P., 2½ in., per yd.	0	2	0
DO. *3 in., per yd.*	0	2	5
DO. *4 in., per yd.*	0	3	3
Gutter, 4 in. H.R., per yd.	0	1	5
DO. *4 in. O.G., per yd.*	0	1	9
MILLED LEAD and labour in gutters, flashings, etc.	3	12	6
LEAD PIPE, fixed, including running joints, bends, and tacks, ½ in., per ft.	0	2	1
DO. ¾ in., per ft.	0	2	5
DO. 1 in., per ft.	0	3	3
DO. 1¼ in., per ft.	0	4	6
LEAD WASTE OR SOIL, fixed as above, complete, 2½ in., per ft.	0	6	0
DO. 3 in., per ft.	0	7	0
DO. 4 in., per ft.	0	9	9
CAST-IRON R.W. PIPE, at 24 lb. per length, jointed in red lead, 2½ in., per ft.	0	2	5
DO. 3 in., per ft.	0	2	10
DO. 4 in., per ft.	0	3	3
CAST-IRON H.R. GUTTER, fixed, with all clips, etc., 4 in., per ft.	0	2	7
DO. O.G., 4 in., per ft.	0	2	10
CAST-IRON SOIL PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft.	0	7	0
DO. 3 in., per ft.	0	6	0
Fixing only:			
W.C. PANS and all joints, P. or S., and including joints to water waste preventers, each	2	5	0
BATHS only, with all joints	1	18	0
LAVATORY BASINS only, with all joints, on brackets, each	1	10	0

PLASTERER

PLASTERER, 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.	0	18	0
Sand and cement see "Excavator," etc., above.			
Lime putty, per cwt.	£0	2	9
Hair mortar, per yd.	1	7	0
Fine stuff, per yd.	1	14	0
Sawn laths, per bdl.	0	2	9
Keene's cement, per ton	5	15	0
Sirapite, per ton	3	10	0
DO. *fine, per ton*	3	18	0
Plaster, per ton	3	0	0
DO. *per ton*	3	12	6
DO. *fine, per ton*	5	12	0
Thistle plaster, per ton	£3	9	0
Lath nails, per lb.	0	0	4
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	5
WHITE glazed tiling set in Portland and jointed in Parian, per yd., from	1	11	6
FIBROUS PLASTER SLABS, per yd.	0	1	10

GLAZIER

GLAZIER, 1*s.* 8½*d. per hour.*

Glass: 4ths in crates:			
Clear, 21 oz.	£0	0	6
DO. *26 oz.*	0	0	7½
Cathedral white, per ft.	0	0	6½
Polished plate, British ¼ in., up to 2 ft. sup.	0	2	0
DO. *3 ft. sup.*	0	2	6
DO. *7 ft. sup.*	0	3	6
DO. *25 ft. sup.*	0	4	0
DO. *100 ft. sup.*	0	4	6
Rough plate, ¼ in.	0	0	6
DO. *¼ in., per ft.*	0	0	6½
Linseed oil putty, per cwt.	0	16	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.			

DECORATOR

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

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

SMITH

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

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

SUNDRIES

Fibre or wood pulp boardings, according to quality and quantity. The measured work price is on the same basis . . . per ft. sup.	£0	0	2½
FIBRE BOARDINGS, including cutting and waste, fixed on, but not including studs or grounds, per ft. sup. . . . from 3*d.* to	0	0	6
Plaster board, per yd. sup. . from	0	1	7
PLASTER BOARD, fixed as last, per yd. sup. . . . . from	0	2	8
Asbestos sheeting, 5/32 in., grey flat, per yd. sup.	0	2	3
DO. *corrugated, per yd. sup.*	0	3	3
ASBESTOS SHEETING, fixed as last, flat, per yd. sup.	0	4	0
DO. corrugated, per yd. sup.	0	5	0
ASBESTOS slating or tiling on, but not including battens, or boards, plain "diamond" per square, grey	2	15	0
DO., red	3	0	0
Asbestos cement slates or tiles, 5/32 in. punched per M., grey	16	0	0
DO. *red*	18	0	0
ASBESTOS COMPOSITION FLOORING: Laid in two coats, average ¾ in. thick, in plain colour, per yd. sup.	0	7	0
DO. ½ in. thick, suitable for domestic work, unpolished, per yd.	0	6	6
Metal casements for wood frames, domestic sizes, per ft. sup.	0	1	6
DO. *in metal frames, per ft. sup.*	0	1	9
HANGING only metal casement in, but not including wood frames, each	0	2	10
BUILDING in metal casement frames, per ft. sup.	0	0	7
Waterproofing compounds for cement. Add about 75 per cent. to 100 per cent. to the cost of cement used.			
Plywood:			
3 m/m alder, per ft. sup.	0	0	2
4½ m/m amer. white, per ft. sup.	0	0	3½
⅜ m/m figured ash, per ft. sup.	0	0	5
4½ m/m 3rd quality, composite birch, per ft. sup.	0	0	1½

5 6
1 2

1 7
1 10
2 4
9 0

3 0

1 2

0 11

hour;
s. 9½*d.*
OURER

10 0

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0 0
1 10
1 1
18 0

10 0

10 0
0 0

0 0

0 0

5 0

2 0

0 2½

0 6
1 7

2 8

2 3
3 3

4 0
5 0

15 0
0 0

0 0
0 0

7 0

6 6

1 6
1 9

2 10

0 7

0 2
0 3½
0 5

0 1½