Wednesday, November 18, 1925. Vol. LXII. No. 1611.

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal."

FROM AN ARCHITECT'S NOTEBOOK.

ST. PETER'S, ROME.

In this church one learns how Art as well as Nature can set aside every standard of measurement.

GOETHE.

9 Queen Anne's Gate. Westminster.

San Sebastian : Lago Maggiore

(From a Pencil Drawing by Arthur Welford.)

THE

ARCHITECTS' JOURNAL

9 Queen Anne's Gate, Westminster.

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The Protection of Amenities

THE news that the Department of Ancient Monuments has scheduled the famous Devil's Dyke, near Brighton, for protection under the Ancient Monuments Act, and has thus presumably rescued the site from the depredations of the speculative builder, will lose much of its value unless it leads us to consider how far such protection meets a number of various, but kindred, needs. The beauty of the site apparently was not sufficient to secure official protection; the official chance came because there happens to be a prehistoric earthwork on the spot. It is, of course, to such voluntary bodies as the National Trust, and the Commons and Footpaths Preservation Society, that public feeling turns when it is seeking protection for our open spaces. When we come to our towns, there is the Society for the Protection of Ancient Buildings, the affectionately regarded Anti-scrape, because, in the words of a familiar passage, "The only influence which can in any wise *there* take the place of the woods and fields, is the power of ancient Architecture." But though the work of all these admirable societies has borne fruit, though (in addition to the number of landscapes and buildings that they have saved for posterity) some public opinion has been created by their example, yet in our hearts we know them all to be defenders of lost causes, leaders of forlorn hopes. The reasons why this is so are worth a moment's consideration.

Let us, I beg, not fall into the error of supposing that they are weak because they are not official bodies. It would be a sad day for the objects that they have in view should they become shackled by official responsibility. Their vitality resides in the fact that they do voluntarily from love a work that never will be done satisfactorily otherwise. The Devil's Dyke is being saved on the initiative of the voluntary societies. The Department of Ancient Monuments was not the first to move in this matter. The department is itself a monument to the voluntary activity of men. Its function is the secondary one of lending weight to their endeavours. The two bodies are necessary to each other, because the crux of the matter is that the law gives no protection to amenities. In other words, wherever Amœnitas and Commercium come into conflict, the law is on the side of commerce. Law is defined to be the science of rights, and neither the beauty of nature nor the beauty of architecture has any legal right to protection in England.

In an industrial society, industry necessarily pulls all the strings; and thus, to check its usurpation, we find it necessary to establish a number of voluntary bodies, because the law, which is the expression of the public conscience, naturally puts the interests and convenience of industry first. The steps by which the doom of some urban site is dictated are insidious, and are worth noting. Let us note what has been happening to Kensington Square.

Well known to everyone, it seemed safely tucked away at the end of Young Street, the narrow thoroughfare by which it is joined to High Street, Kensington. Of course, the southern front of that main road attracted shops, and the most prosperous of these have been continually extending and amalgamating, both horizontally and vertically. The latter movement has brought them nearer and nearer to Kensington Square, and already, I understand, they have purchased the gardens, and possibly some of the houses, on the northern or nearer side to them. The shops cannot be blamed for that; but the interesting thing is that there has been nothing to say nay to them, or to lift up the policeman's hand of law to indicate "Thus far shall ye come and no farther." There have been rumours that when some of the inhabitants inquired what remedy they had against the spoiling of their square, they were told, in effect, that they had none, because the character of the district was changing! It is the change of which complaint is made, but the law says, in effect, that the change is its own justification! The position has its Gilbertian side, has it not? There is no legal protection for amenities. If there were such protection, it would have made itself felt before the coming danger became threatening.

That is the point. I suppose that it would have worked something as follows: About twenty-five years ago Kensington Square would have been scheduled as a square of historic and architectural interest. The effect of this would have been that, before the big shops encroached so far, a line between the square and the High Street would have been drawn, south of which no shops would have been permitted. Then, tradesmen of the locality would have known that they could never extend beyond that line of demarcation; and, if they had known this before they desired thus to extend, their plans and their desires would have been made accordingly. It is some such principle as this which needs to be established. As things are, the cry is raised, as a rule, only when it is too late to stop the mischief.

As a step in this direction, I once suggested that the Society for the Protection of Ancient Buildings should be supplemented by another body, the object of which should be to protect any building of architectural or historic interest that is *less* than one hundred years old. As things are, the constitution of the Anti-scrape limits its activities to ancient buildings, and the work of such recent architects as Philip Webb has no protector. If the Anti-scrape also could interpret its charter to include *all* buildings *older* than one hundred years, any particular building would pass automatically from the care of one society to that of the other. What we really need, however, is a schedule not only of Ancient Monuments but of Amenities; for this ordinarily repulsive term includes, from its looseness, such pleasant squares, walks, and blind alleys as are found in Knightsbridge and on Campden Hill, places no less worth preserving than their prouder kinsmen, but difficult to

define by a word less elusive than themselves. The public opinion that has been created on behalf of noble buildings could be created also on behalf of pleasant ways, and by the same method. This done, the legal protection of amenities might become at last possible.

OSBERT BURDETT.

A Long Way Home

An amusing story which throws a vivid sidelight on the structural aspect of railway engineering was told by Sir John Aspinall in the twelfth Thomas Hawksley lecture delivered before the Institution of Mechanical Engineers on Friday last. Some time ago the Great Western Railway and the London and North Eastern exchanged locomotives for trial on their respective lines. It was necessary for the North Eastern locomotive to go from King's Cross to Paddington, a journey which most of us would gladly undertake to do in twenty minutes in a taxicab. Yet this particular locomotive could only be conveyed thither by way of—Sheffield! The story, preposterous though it may seem, is obviously true. Each one of the communicating routes nearer home proved (Sir John told us) impracticable for one reason or another. In one the gauge was wrong; in another the tunnels would not admit of the passage of the engine, and along several of the others the bridges were not sufficiently strong to carry the weight. This latter weakness constitutes one of the most difficult problems in modern railway development. The average speeds have not increased for some years, but the length of trains has done so, and is still increasing, though the strength of couplings places a definite boundary to any possible increase in the future. And greater loads mean, of course, larger engines, though here also the strictly limited width makes it impossible to proceed beyond a certain bulk. What all this means for the bridges is obvious, and as the changes continue, bridge after bridge has to be strengthened or rebuilt quite irrespective of wear and tear.

The Deepdene Chestnuts

Will it be possible to save the Deepdene chestnut avenue from destruction? As it is one of the chief glories of Dorking, that delectable little town which has all the charms of a typical Surrey village, strenuous efforts are being made to save it, but whether or not they will be successful depends on town-planning exigencies. Of course, the "Village Blacksmith" complex, which is a legacy from Longfellow—"Under a spreading chestnut tree the village smithy stands"—and many other endearing associations, invest a chestnut grove with a romantic and wellnigh sacred character. But sentimental regrets will probably not be allowed to interfere with the higher amenity of wider and safer roads, and it is to be feared that motor traffic will show as little mercy to the Deepdene chestnuts as it has shown the village blacksmith. It is a typical instance of the ruthless march of events and conflict of incompatible interests. But it is all very pitiful.

"Mr. Punch" and the Plumber

The celebrated plumber joke has now reached its zenith. "Mr. Punch" has invested it with a halo. It seems that the new Lord Mayor of London is a member of the Worshipful Company of Plumbers, and "Mr. Punch," to whom any sort of a plumber is always provocative of mirth, has risen nobly to the occasion. Now, be it known to all men that the standing gibe against the plumber relates to his alleged propensity to go back to fetch his tools. So behold in "Punch" a picture of the Lord Mayor's show standing idle in the background, while a "close-up" presents an imposing figure of the Lord Mayor setting out entirely unattended and on foot for the Law Courts. To maintain inviolate one of the most cherished traditions of the craft, he is going forth alone to inform the expectant law officers of the Crown that before he can tackle the job they want him to do he must go back and fetch his State coach and procession. It is an exquisite piece of fooling; and having reached this grand climax, the venerable jest should now be afforded such a rest as remains for an overworked alderman who, having passed the chair, is considered to be past his prime. Joking apart, we congratulate the Plumbers' Company not only on having as a member of its guild London's chief citizen, but more especially on the splendid work it has done for many a year in promoting the technical education of the much-maligned plumber, who, becoming thereby one of the most useful of citizens, should no longer be the butt of sorry jests.

Dr. Raymond Unwin's R.I.B.A. Paper

In his thoughtful and closely reasoned paper on "The Architect and His City," read to the R.I.B.A. last Monday, Dr. Raymond Unwin advanced an eloquent plea for closer co-operation between diverse minds, and co-ordination of differing talents. He believes that the drifting apart of the artist and the practical person is at the root of industrial distress. He suggested that, as architects, we may help to secure co-operation among those who take part in city building; and he held that "the ignoring of art, of design, too often means sacrificing the only supremely important considerations to a few petty practical details; as when all that makes a place worth living in is destroyed for the practical advantage of crowding a few more people into it!" The practical and the artistic are two aspects of one purpose. He urged that the young architect should study the life of the home, and work outwards from that centre towards wider communal and artistic interests. Altogether it was a most philosophical paper, tending to a reasonable and reassuring optimism, timely and tonic.

Pennethorne's Caustic Critic

Our veteran contemporary the "Saturday Review" has just issued a number celebrating the seventieth year of its militant existence. It is without prejudice, political or other, that we join the general chorus of congratulation. In the course of its threescore years and ten of Berserker activity it must perforce have made many enemies as well as hosts of friends. From the first it has maintained a reputation for caustic criticism, much of it mere affectation and studied pose. When it condescended to notice architecture, which seventy years ago it was the fashion to belittle and malign, this is the sort of thing one would expect to find in the dear old "Saturday": "Describe the building we really cannot; for our architectural vocabulary does not contain terms to define its monstrosities. The general effect combines the workhouse, the jail, and the Manchester mill. The style is meant to be Tudor, with every larger feature and every detail of that style misapplied and distorted." This philippic was fulminated seventy years ago against Pennethorne's Public Record Office in Fetter Lane. To its opening sentence we give unhesitating assent; it carries conviction. "The rest is all but leather or prunello." It is to be hoped that Pennethorne had a sufficiently robust sense of humour to take the "Saturday's" diatribe in a Pickwickian sense. It should be remembered, however, that the Record Office was not completed until some years after the death of Pennethorne, and that its principal frontage—that to Chancery Lane—is by another hand. Whether or not that architect—Sir John Taylor, was it not?—winced under a similar castigation boots not to inquire.

AN ARCHITECTURAL MAGAZINE ROOM.

[*"The Architects' Journal" and "The Architectural Review" have always made it their business to provide their readers with examples of the best contemporary architecture of foreign countries. It is impossible, however, to do more than make a small selection among the most distinguished; and the proprietors of these papers will be delighted if readers who are interested will spend a few minutes now and then at the magazine room at 9 Queen Anne's Gate. The most important Continental and American periodicals may there be read in quiet and restful surroundings.*]

Sir Edwin Lutyens on America

"IS it true," I began at once (deeply concerned in the issue at stake)—"is it true that you have succumbed to American architecture?"

"Well, no," replied Sir Edwin, gazing thoughtfully out of the window, "it is not, though I should scarcely have called it impossible. I am not converted, but I am delighted with what I have seen. Some of the things I saw were magnificent."

"For example?"

"The twelve-foot cylinder of solid steel performing the function of a door in the Federal Reserve Bank. A most impressive sight. In every point, of course, the bank buildings are remarkable—from the vast hypostyle halls, beside which our cathedrals seem confined and poverty-stricken, to the great indicator board on which a red light flashes out for every door that opens in the building."

"Did you," I asked, "find Americans as new and exciting in their architecture as they were in their protective machinery?"

"No, hardly that. Architecturally there are the new high buildings whose forms have been evolved out of the zoning regulations. I suppose that is really the chief invention they have made in the formal domain. Yes, the recessed stages, the superimposed blocks, most beautifully proportioned, always fascinating, are something new, and seem full of all kinds of possibilities of proportion and arrangement."

"You did not find these new buildings as much hampered by their regulations as ours are said to be by our own Building Acts?"

"Well, the tyranny of the angle is less onerous than that of the fixed height limit, besides being infinitely more logical. We must have light and air (unless we are going to make our own light and air, of course, and deny ourselves the natural products altogether), and the opposite owner's claim to light and air is a more reasonable one than the fire brigade's claim to regulate the height of our buildings by the squirting power of their pumps. Of course, the zoning regulations present their own special dangers."

"You mean," I ventured, as Sir Edwin anxiously held the stem of a small pipe to his eye, "that if a building is too high people are unable to get down? Queues for the lifts, the staircase choked, and so on—in case of fire——"

"Not at all; they can get down all right," he said, "but they can't get out. You see, to try to empty a skyscraper into a New York street is like trying to empty a magnum of champagne into a liqueur glass. You can do it, ultimately, provided you fill the glass a hundred times in succession. You can empty the Woolworth building provided you fill and clear the street a hundred times in succession, and not otherwise. The result is that it takes an hour and a half to empty the Woolworth building. When there are ten high buildings on each side of the Woolworth building it will take a day. When New York is full of high buildings it will take a month."

"A month to do what?" I inquired, groping vaguely after a truth which had already given a sensible blow to my intelligence.

"To empty the high buildings into the bottom of the narrow drains between them." Sir Edwin was pulling vigorously at an unlit pipe.

"You want a match," I remarked, plunging my hand into one pocket after another. "Imagine a fire in one of those buildings——"

"No, thanks, I've got plenty. You see, the fire brigade and their pumps are not such bad guides after all. But the diminution of the buildings, you said? The zoning laws? Of course, the zoning laws restrict the height of a building on a small site; you can see that by drawing a simple triangle. If the angle is constant the height will increase proportionately as the base. But the zoning law is eliminating the small site. People won't build on small sites if the dimensions of these sites are made to fix the limit of permissible height. The result is that building sites will grow larger and larger, and the buildings higher and higher, until——"

"The tower of Babel," I suggested, aghast.

"No, that's where you're wrong. Remember that the earth's surface is curved and that, given a large enough site, the zoning law angles normal to the curve will produce parallel and even——"

"And even outward-sloping lines!" I cried. "But that's hardly likely to happen."

"Hardly, as you say. But even with a building such as those now being evolved, a building diminishing towards the top, the capacity of the street is not, I think, being sufficiently kept in mind."

"You are aware, of course, that our opponents of the high building in this country are making this very question their chief argument against its adoption?"

"Yes, but the matter is really much simpler than we are often led to consider. It is not necessary, for instance, to make a census of vehicles, and to study their movement through the streets. It's not a matter of movement at all, but of space. A certain cubic content is discharged upon a plane surface; there you have the whole problem in a nutshell."

"But the zoning laws are," I hinted, "improving things, not worsening them?"

"Undoubtedly they are, but they are also stimulating the growth of high buildings. The vertical skyscraper presented so many drawbacks that this growth was for a time severely impeded. The zoning laws have removed this impediment. And the new high buildings are fine, a fact which must be recognized. They are something entirely characteristic, original, spontaneous, call it what you will—a real contribution to the world's architecture."

"Was it your experience that the Americans had become aware of this fact?"

"Yes, I saw two undoubted signs of such a feeling. The first was the enthusiasm with which 'zoned' high buildings are put up in places where there is not the smallest justification for them. In New York they are a natural development; they are at home there; the struggle to increase the capacity of a small island is something that you understand. In other cities these high buildings are an affectation: there's no point in them. Their only purpose is to impress, and few desires, human or architectural, could be more distinctly vulgar—vulgar in the manner of Beauvais, which so very nearly fell."

"Yes," I muttered, "we know something about that ambition here in London. But what is the second sign?"

"The second sign is the unbearable flood of light that is nightly poured over these buildings. No doubt they are very fine, no doubt they deserve to be seen, but that is not an adequate reason for surrounding each several building with an army of floodlights, for dashing up against it a Niagara of electric rays. I am not sentimental, but I simply couldn't stand it. I refused to look. I know it is wonderful, but I wouldn't look. Not, mind you, that I thought the sight stupid, fatiguing, bewildering, humiliating, or anything of that kind. But I am convinced that buildings, if they are to do themselves justice, *must* have a proper night's rest."

"By day, though, you liked them?"

"Yes—nearly as much as I liked that twelve-foot steel door. *That* was amazing."

CHRISTIAN BARMAN.

Architectural Style—15

Ornament—*continued*

By A. TRYSTAN EDWARDS, M.A., A.R.I.B.A.

WHILE an ornament based upon some natural form of plant or animal borrows from the latter a measure of organic unity, it must add thereto a characteristic of its own, a quality which indicates that it takes cognizance of the position allotted to it in its architectural setting. For that reason a leaf reproduced without being conventionalized at all, as on the capital depicted in Fig. LXIX A, though truly organic *in itself*, does not contribute to an organic ornament. These ivy leaves are natural in their wild state, but they are not natural on a capital. Even here, however, they have indeed submitted themselves to the restraint of being grouped round the bell of the capital, but this is not sufficient, because the forms of the leaves themselves are

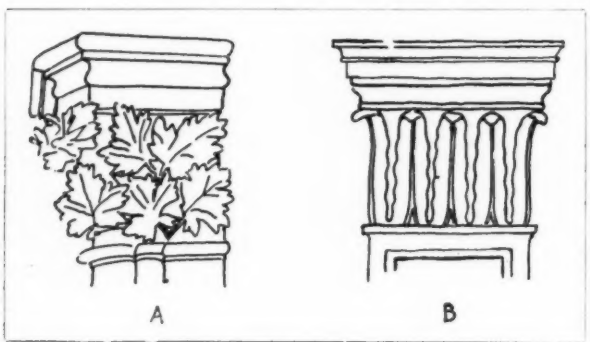


FIGURE LXIX.

not *inflected* to show that they have left the environment in which they originated, and are now subordinate to a composition having rules of its own. In LXIX B, this desirable inflection has taken place, with the result that the leaves, while submitting themselves to a disciplinary code, have yet attained a new vitality. They do not grow from the soil like that, but from the head of a pilaster they come out quite charmingly, as to the manner born. The reason of this is that their verticality accords with numerous other vertical lines in the architectural composition, while as a group they are conscious of their place and punctuated on all sides. Laterally the group is closed by the turn of the outside leaves, which incidentally give character to the silhouette by providing a prominent inflection to the drum of the capital. At its upper boundary it is marked by the row of curls at the apices of the leaves, while at the bottom it is doubly accentuated by the rounded off ends of the decorative spaces between the leaves and the spreading central veins. The downward inflection of each leaf is borrowed direct from Nature, but the important thing to notice is that the leaves are so arranged that their own inflection inflects the capital as well. But in example A the leaves, while possessed of their own organic unity, churlishly keep it to themselves, and forbear to lend even a suggestion of this precious attribute to the architectural form with which they are associated. Here the group is not punctuated on top, bottom, or at the sides; it is without inflection; and apparently not content with that the artist has quite gratuitously given us an unresolved duality as well, for he has arranged his leaves in two equal rows. It is noteworthy that in this instance the mouldings of the capital itself, which punctuate it top and bottom, and contain within themselves several significant inflections, have more vitality than the petrified ivy. The latter, through being "natural," is, in this place, unnatural. I have criticized these two examples at length because they show very clearly the application of the grammar of design to the type of ornament which is derived from the forms of animate Nature. The grammar is implicit in Nature, but is not the unintelligent slave of Nature, for it includes within its scope such creations of men as can be described as works of art. In so far as these, after their own kind, attain to an organic quality, they are also natural.

In the foregoing argument the respective styles of the two capitals were not contrasted. It would be possible to find Greek and Roman capitals which exhibit a false "naturalism." While in many Gothic capitals, such as the early English type, for instance, the foliage is exquisitely conventionalized. Mediæval building abounds in examples of good ornament derived from the forms of animate Nature. But it is perhaps true to say that the ivy and the oak do not provide so authentic an architectural inspiration as do the acanthus, the lotus, and the palm.

Fig. LXX shows how the notion of the capital was originally derived from the flower. In the Egyptian temples, for purposes of worship, there stood architectural imitations of upright plants which needed to be just strong enough to support a sham sky with a pictorial representation of stars. The abacus was at first made as inconspicuous as possible, and was, in fact, almost invisible from below. If we ask "Who taught the Egyptians how to punctuate their columns?" the answer is that the plants gave them this useful instruction in the elements of design. In example B the burden of the ceiling is light, and can be carried on the topmost petals of an open flower cast in an architectural mould. Later, when the burden became heavier, the petals tended to close and assume a form of greater structural competence, while the abacus becomes more prominent as in LXX A. Example C is a charming extravagance, a design representing a column having a

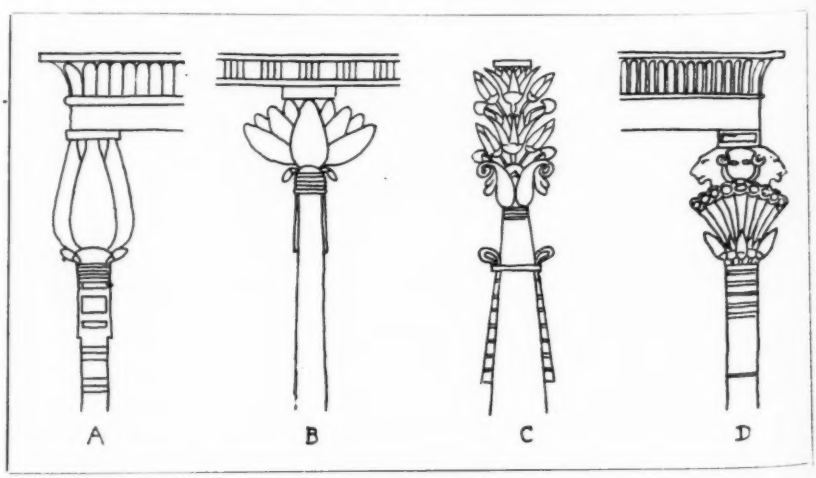


FIGURE LXX

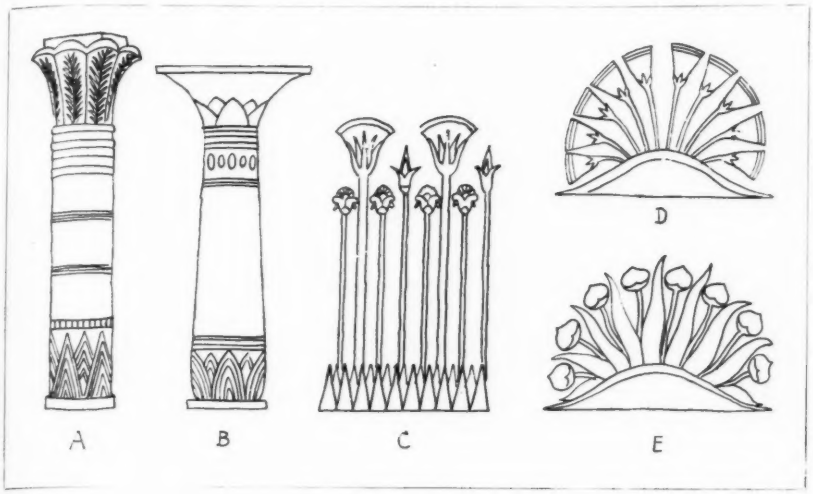


FIGURE LXXI.

purely decorative significance, while in D the column is doubly punctuated by a flower and the heads of sheep as well, the artist having gone to both animal and vegetable kingdoms for his inspiration. The design is whimsical enough, but it has beauty. Figs. LXXI A and B depict further developments of the capital, which still, however, reveal clearly its origin in the example of plant forms. In A it is noteworthy that the small leaves at the foot of the trunk (shown more realistically in B) have become conventionalized to make a rectilinear geometrical pattern which punctuates the base of the column. In all these Egyptian examples the plant-forms are made conscious of their architectural purpose, and become symmetrical and upright, as in A, B, and C, or group themselves in formal arrangements as in D and E. In C there is an element of crudity because the three types of flower at different levels are insufficiently united.

We are often told that capitals and cornices have a utilitarian origin, and that this kind of ornament grew from structure. It is true, of course, that the top of a column may need some preparation for the placing of its load, either a spreading-out or else a tightening of its fibres, while in the case of a cornice the "dripstone" moulding has its uses. The idea, however, that in the English climate, or any other climate, a cornice with or without a dripstone is going to protect a wall surface from rain is unworthy of serious consideration. As rain is often accompanied by wind which drives the moisture against the wall in almost an horizontal direction, it is difficult to see how a cornice can keep dry more than two or three feet of vertical expanse of wallage. And few capitals really increase the structural efficacy of a column. The capital is logically justified by the æsthetic principle of punctuation, and there is really no need to appeal to history to find authoritative support for its use. This appeal to the history of art is a weak concession. Whether in the past it was ever structurally convenient to expand or contract an upright post at its upper or lower extremities is utterly irrelevant to architectural design, and if to-day it is structurally convenient to have columns of concrete or other material of even section and without an articulated capital or base, that fact is also irrelevant. There are numerous occasions when the punctuation of an upright member in a design is an æsthetic requirement, and if this punctuation is not born of structural need, we must supplement the plain structural form by elaborating its extremities. In many cases it will be found that this elaboration will take the form of *ornament*.

Figs. LXX and LXXI show that there at least the punctuation of the column was not determined by the nature of its load, but was directly inspired by the example of animate Nature. And it was but natural that the spreading form of the capital should be echoed in the spreading form of the cornice which punctuates a whole façade and in fact a whole building. That the cornice has traditionally a purely æsthetic purpose is amply proved by the fact that it is just as often employed below the summit of the façade as at the summit itself. The cornice may be surmounted by a parapet or attic storey, or it may be used to mark off and punctuate the lower division of a façade. Little sister to the cornice is the string-course, in association with one or more mouldings, and the cornice is also united by degrees of affinity to the architraves round windows, and to a most numerous family of mouldings and groups of mouldings which serve to punctuate and inflect various parts of a building.

The column itself has a constructional use in so far as it is necessary to support an entablature or an expanse of wall surface. This utilitarian function, however, could be performed without introducing those refinements by which the column, as in the Classic Order, enters into an intimate æsthetic relationship not only with neighbouring columns but with the whole rectangular area which a group of columns and its entablature may comprise. An exposition of the Classic Order would require a book to itself, but it may be affirmed here that the Order, although on occasions it may be put to an obvious constructional use, has a formal significance of its own, and has been found of extraordinary value by innumerable architects who have striven to endow their buildings with an organic quality.

In a previous chapter an example was shown of the manner in which the Order can give the necessary *scale* to a particular part of a façade. When the Order is employed to aid the composition of a wall surface, it is capable of a significant inflection whereby the columns are transformed into pilasters. Certain architectural critics will tell us that in such an instance the Order has ceased to be "functional," and has become purely decorative, and that it is wrong to use a structural or functional form for a decorative purpose. But these are misleading statements. Their authors use the words "structural" and "functional" as if they were synonymous, whereas the idea of "function" includes that of "structure" and much else besides. We are entitled to say that the pilaster has an æsthetic function, and is of course to that extent "functional." Such critics would have us believe that what is not structural is not "functional," and thus they show themselves to be unaware of the existence of an æsthetic function apart from the structural. The Order has indeed a decorative function in so far as the gracious ornament that may be associated with it is an ornament not only to the Order but to the building as a whole. But the Order itself is more than ornament. It may endow a building with a spiritual content it did not before possess, for it may inflect certain parts, imparting to these a greater emphasis and importance than other parts; it may, by the differentiation between columns standing free, engaged columns and pilasters, express a whole hierarchy of values which may confer the appropriate character not only to the several parts of the same structure but to structures of various types and degrees of social status. The Order, if intelligently used, is an instrument for the introduction of innumerable inflections in the forms of architecture, and no other instrument of design has yet been found to equal it in this respect. And the peculiar thing is that the buildings which wear the Order give additional significance to those which do not. People who call the Order decoration do not disparage the Order, but rather exalt the meaning of decoration.

There is a sense in which an architectural feature, originally self-sufficient and comprising elements of general

composition, may by virtue of its peculiar use and situation constitute an ornament.

Where a building is very large, as for instance a sky-scraper, its façade may be surmounted by an attic story characterized by a row of columns, or perhaps by a row of arches. The Order or the arcade would here be merely a punctuating feature, and even when reduced to its plainest terms would still be decorative, for it would be chosen not for its constructional use, but for the quality whereby it contributes to a pattern. *(To be continued.)*

Practical Architectural Modelling—3

By EDWARD W. HOBBS

THE preceding article of this series described the construction of a simple form of model made by folding up a strip of appropriately shaped card. This system, while admirable for small models, is not satisfactory for larger sizes, particularly when maximum accuracy is desired. A better plan is to construct the model on the built-up system. By this method, each separate wall-face, as well as the other parts of the building, are modelled with separately prepared pieces of card.

These have to be very accurately set out and equally accurately cut to shape, and built up piece by piece. With such a form of construction it is obviously necessary either to make a mitred joint at all corners, or to allow for the thickness of the card itself. In many cases the latter is the better plan; as, for instance, when placing the end wall on to the front and back walls. In this case it is generally most convenient to make the end wall smaller by the thickness of the card comprising the front and back walls. Alternatively, the joints can be mitred, either by the assistance of an ordinary bevel print-trimmer or by sandpapering the edge of the card to an angle of 45 deg. If this method is adopted, the best plan is to shape a piece of hardwood so that one of its ends is bevelled to 45 deg. Fasten a fence or guide along one edge at right-angles to the bevelled end, and lay the card on the block with one edge against the fence. Take another small smooth piece of wood and face one of its sides with fine sandpaper, securing this with glue or seccotine. This is then used for sandpapering the edge of the card, employing the bevelled surface of the first block as a guide for obtaining the required angle.

Whichever method is adopted, it is desirable to reinforce the corners of the building with an applied strip of card, which must be glued to one of the walls to exactly the thickness of the wall card from the outer edge. See Fig. 1,

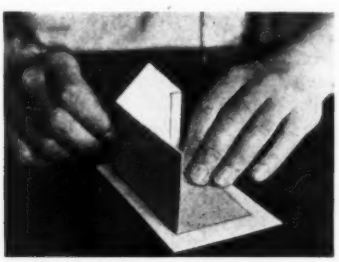


FIGURE ONE.—ERECTING WALLS BY THE BUILT-UP METHOD.

which is an elementary example showing the system to be adopted when making a built-up model. The steps in this case are: (1) to prepare a card base, using first a lower portion to which is secured a stout card of the exact shape and dimensions of the inside of the walls; (2) then to prepare the reinforcing strips as previously mentioned, and fasten them in place. Commence erecting the walls after this has been properly done, and after drawing the outlines of windows or other features.

Then take one end, and one face-wall, apply adhesive to the lower and inner edges, and also to the corner joint faces. Press them firmly into place in the lower angle of the base.

FIGURE TWO.—BUILDING A WALL FOR A PORCH.

Then hold the jointed corners between the finger and thumb (as shown in Fig. 1) for a few moments, until the adhesive has set, and allow it to dry thoroughly before going on further with this work. Glance at the joint occasionally to see that the faces are making perfect contact, and if necessary hold them temporarily with little strips of wood, weights, or in any convenient manner. If seccotine or some similar adhesive is used, it will be found that the merest trace will suffice to effect a good joint; and if the parts be left for a few moments until the adhesive has reached a tacky state, the joints are almost always perfect, and set in a very few minutes.

Proceed to erect the remaining walls in this way, then prepare separate pieces of card for the roof and other details, sticking these in place as described in previous articles. Usually, with a built-up model, a good deal more detail is expected than is represented on the average folded model, and this can be modelled in a very realistic manner from separate pieces of card. In the space available in this series, it is obviously impracticable to give specific instructions for every possible architectural detail. The principles are, however, applicable to most features, which it will be found by analysis can be modelled substantially in one of two ways.

All those parts which are more or less rectangular can be built up with laminæ of card pierced where necessary to represent window openings and the like. Features that are circular in section or are curved can be modelled either by rolling up the card to form a tubular structure or can be fashioned with plastic wood, plaster, or the like. In the case of details modelled to a comparatively large scale, say ¼ in. to ½ in. to a foot, the building-up work is generally most satisfactorily carried out with laminæ of card. The example shown in Fig. 2 will serve to illustrate the method.

The pieces here illustrated form part of a ½-in. scale model of an entrance porch, shown in later stages of construction in Figs. 3, 4 and 5. In this case, three separate pieces of card are necessary to form the side wall of the porch (illustrated in Fig. 2). The first piece to prepare is the centre portion, which is pierced at its upper part to represent an open lattice panel. Its outside dimensions are those of the wall itself, and its lower portion is left plain. This card is then faced on each side with another card, which is cut out in such a way that the remaining portions represent the corner posts, the middle upright, the cross-bar, plate and sill at the top and bottom respectively. Both pieces are alike, and after they have been cut to shape and cleaned up they are fastened in place with adhesive. For this sort of thing a paste known as photo-mountant is quite satisfactory, and is rather cleaner in working than seccotine. Whatever adhesive is used, take care that it does not exude from the edges; but should it do so, wipe away every trace immediately. Gum will also be found to be appropriate.

In the actual construction of the porch under consideration, the lower panels were filled in with vertical timbers, overlapping to give a moulded effect, and this is represented on the model by applying thin strips of card about half the thickness of those representing the framework, and of course to the appropriate scale width. These are simply stuck in their places, as is also clearly shown in Fig. 2. Both sides are treated in the same way, and as soon as the whole structure is complete the joints are cleaned up perfectly flat and square on a sandpaper-block.

This block is merely a piece of hardwood with a smooth flat surface, and may conveniently measure about 6 in. square. To its surface is stuck a piece of new medium-grade sandpaper, about No. 1 or 1½. The surfaces to be cleaned up are then dealt with by holding the part in a vertical position and at about the middle of its length. Press lightly and gently downwards, and move the part backwards and forwards over the sandpaper-block, taking the greatest care not to allow it to rock or roll. Treated in this way, a perfectly smooth, straight, and square edge is quickly worked up.

If the cutting has been accurate, there will be very little material to remove—practically nothing more than a small trace to clean the surface; but, if thought fit, the outer edges may be left a trifle full, and cleaned down to their exact size. This system of using the sandpaper-block for truing-up purposes can be applied to almost all the separate portions of a built-up model, and if employed in a common-sense way adds considerably to the manipulative control of this method of architectural modelling.

The front and other parts of the porch are built up in the same way, set up on the baseboard as previously described, and are in many cases applied in addition to a suitable background, such, for instance, as that shown in Fig. 4, which may be painted to represent the brickwork, or the part of the building for which the porch is intended. The example in Fig. 4 shows the possibilities of cardboard for representing the intended mode of construction, which, in this instance, shows the ridge-board and rafters in place.

These are simply strips of card of correct scale dimensions, and are shaped at their ends and elsewhere in exactly the same way as the actual rafters would be. They are fixed in position as before, with a trace of adhesive, and when complete give a very good idea of the intended mode of construction. This class of detail model has a definite educative value to those who may wish to investigate the most appropriate methods of constructing some particular part of a building. There is no great difficulty in keeping the model accurate, and when completed it should in fact be a faithful representation of the original.

This mode of construction with rafters, and so forth, is not limited to small erections such as porches, but can be applied to larger models should it be desired to put so much work into them. Customary practice on roof-work, when the model is only required to represent the exterior appearance of the building and it is not considered necessary to spend the time and trouble involved in minutely detailed work, is to represent the roof by separate sheets of card, faced where desirable with thin slips of card shaped to represent the particular form of roof-covering, as, for example, pantiles, patent tiles, and the like.

Considerable detail is, however, definitely advisable if a model is being prepared for some contemplated alterations to existing buildings, particularly those of an historical character, such as a charming old-world house. In such a case, suppose it was intended to add a dormer, or make some structural alteration which would necessitate cutting some of the original timbering. It is often found in practice that to do so with a minimum of risk of disturbance to the existing building calls for a complete knowledge of the whereabouts and proportions of the original timbers. If these be ascertained by inspection and measurements, the building can then be accurately modelled, or that part which is under consideration, while the rest of the building can be modelled on somewhat simpler lines.

For example, the roof-covering can be shown on the model as partially stripped, thus revealing the rafters and internal timbering, and then it is easy to determine the details for the new work, and to represent them on the model by separate parts, thus making clear to the owner and others interested exactly what is proposed to be done and the resulting effects thereof, both from the structural point of view and also that of appearance. Furthermore, the model if accurately made can be preserved as a memorial of the building before the alterations were effected.

When the roof is built up of its separate components, the problem of covering it so that it will have a realistic appearance and at the same time not be out of keeping with constructional practice is often a matter of considerable anxiety to the novice. Its treatment will usually be determined by a consideration of the characteristic appearance of the original work. Very often it will be found that when the roof is covered with ordinary plain tiles the most notable lines are the horizontal lines separating the tiles. These are never perfectly horizontal, nor are they absolutely even, and if they were modelled by ruled ink-lines the effect would be too hard and mechanical. This difficulty is overcome, however, by cutting thin card (about No. 2 ply) into strips of suitable width and length. The width may conveniently be twice the scale-width of the visible portion

FIGURE THREE.—SANDPAPER-BLOCK IN USE TO LEVEL THE EDGES OF A BUILT-UP PIECE.

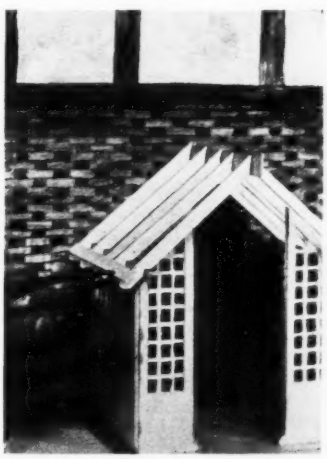


FIGURE FOUR.—SETTING THE EAVES COURSE FOR A TILED ROOF.

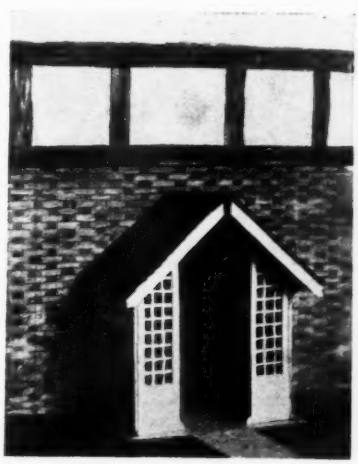


FIGURE FIVE.—THE PORCH AS IT SHOULD APPEAR WHEN FINISHED.

D

of any individual tile. The length may be appropriate to the full length of the roof-surface under consideration.

In the instance of the porch illustrated in Figs. 4 and 5 this method of forming the roof was adopted with good effect. The procedure is to prepare a sufficient number of strips and to commence the tiling in the ordinary way from the eaves—if desired, commencing with an eaves-course slightly narrower than the others. This strip is merely fastened in place with adhesive, and is best applied with tweezers as shown in Fig. 4. The remaining strips are then stuck in place, making the distance between the strips appropriate to the scale of the model and that of the tiles. The strips are continued until the ridge is reached. Both sides are dealt with in the same way, and the work is finished by the addition of the ridge tile. This can be made from a strip of card of appropriate length (damped and moulded) by bending the card.

When any card is to be damped for moulding, the best plan is to take a piece of blotting-paper, saturate it with water, lay the card upon it, and leave it until the card is quite limp. It can then be moulded by resting it upon a sheet of dry blotting-paper, and, in the case of the ridge tile, stroking it from end to end with a round-ended modelling tool. This is simply a round piece of hardwood shaped conveniently to form a handle at its inner end, the outer end necked and rounded. If gentle pressure is brought to bear on the card it will speedily assume the desired semicircular form. It should then be laid on a piece of wood to dry, and to prevent it distorting the sides can be temporarily supported by placing strips of wood against it, holding them in place with a couple of pins or with batten weights so that the ridge-tile lies in the trough thus formed.

When the card is dry and hard it will be found to retain its shape in a much better manner than if it were simply rounded off without damping. It may seem tedious to take so much trouble in the shaping of this part or others of similar character, but it will be found worth while when the piece is fixed in position, as, unless it is damped before moulding, the card will be found to be very springy and difficult to keep in place without exerting considerable pressure upon it, which will have the effect of distorting the roof. The ridge is applied and secured in place with adhesive in the usual way.

The verges may be finished with a bargeboard, moulding, or in any appropriate manner according to the plans. Any small apertures between the tiles and elsewhere, that would in actual building practice be rendered with cement, are best filled in with a little plastic wood, which can be worked in with the blade of a pocket-knife. The plastic wood adheres to the knife, and the latter should be dipped in water from time to time. Should any of the wood still remain on the knife-blade it should be immediately removed, and the simplest and quickest way is to keep an oilstone handy and just rub the blade of the knife on it as requisite. It is necessary that the knife-blade, or whatever implement is being used in connection with the plastic wood, should be kept clean and bright and free from adhering matter.

When the roof has been covered in this way it is finished by painting; and further to represent the tiles little vertical lines can be drawn on at the appropriate scale distances, and arranged appropriately to represent the correct coursing and arrangement of the tiles. The mode of shaping recommended for the ridge is also applicable for the making of patent tiles and the like, but if there are many of them to be prepared, it is best to make a hardwood mould of the desired shape, and press the damped card into it. Pantiles can be made in this way quite easily, and can be made in strips and cut off to scale length after the card has dried.

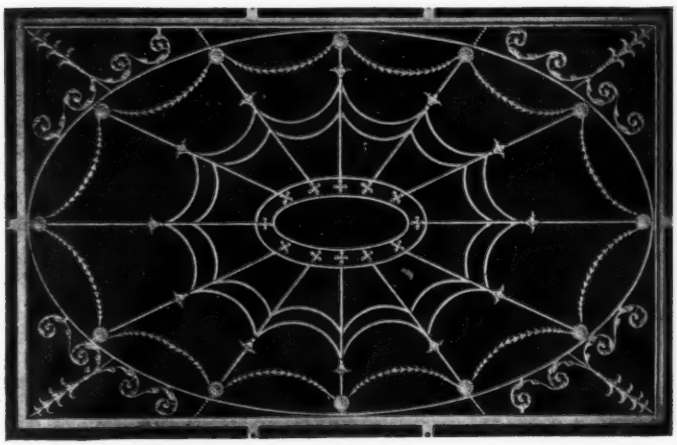
An example of circular work is given in Fig. 6, which shows the preliminary work in the modelling of a chimney-stack. Exactly the same methods can be adopted for modelling columns, or any other parts of essentially circular character. In this case a sheet of comparatively thin card, say No. 2 ply, is set out in the usual way, and cut to the desired degree of taper, if any, but instead of setting out only one pattern of correct size for the desired column, chimney-shaft, or the like, two or three sections are set out, so that the card is sufficiently large to be rolled up to form two or three superposed layers.

In this instance the card is slightly damped, and while damp the faces that will come in contact are coated with photo-mountant or other good paste. The card is then rolled up to the required size, and may either be rolled on to a shaped wooden core, or a few rings of card or thin wood can be prepared and slipped over the outside of the tube, which is then extended with the fingers until it fits nicely within the rings. Cotton is then lightly wound around the outside, and the whole set aside to dry.

The base can be built up from separate pieces, but to a more or less rectangular shape, or as required, according to the details of the particular part under consideration. The stringcourse and ornamental work at the top of the chimney-stack, or the cap for many columns, can usually be built up very satisfactorily with rings of card of appropriate scale size which are stuck to the outside of the tube as shown in Fig. 6. The space between the rings is then filled in with plastic wood, which, when hard, can be modelled with carving tools or a sharp penknife to represent the original. When the whole is quite dry and hard the joint along the length of the shaft can be very carefully skived or thinned off with a very sharp knife, and rendered invisible by careful sandpapering, after which other details are added as desired, and the whole painted and finished in the usual way.

(To be continued.)

FIGURE SIX.—PRELIMINARY STAGES IN MODELLING A CHIMNEY-STACK OR COLUMN.



METAL GRILLE ON BALL-ROOM STAIRCASE.

"The Hill," Hampstead

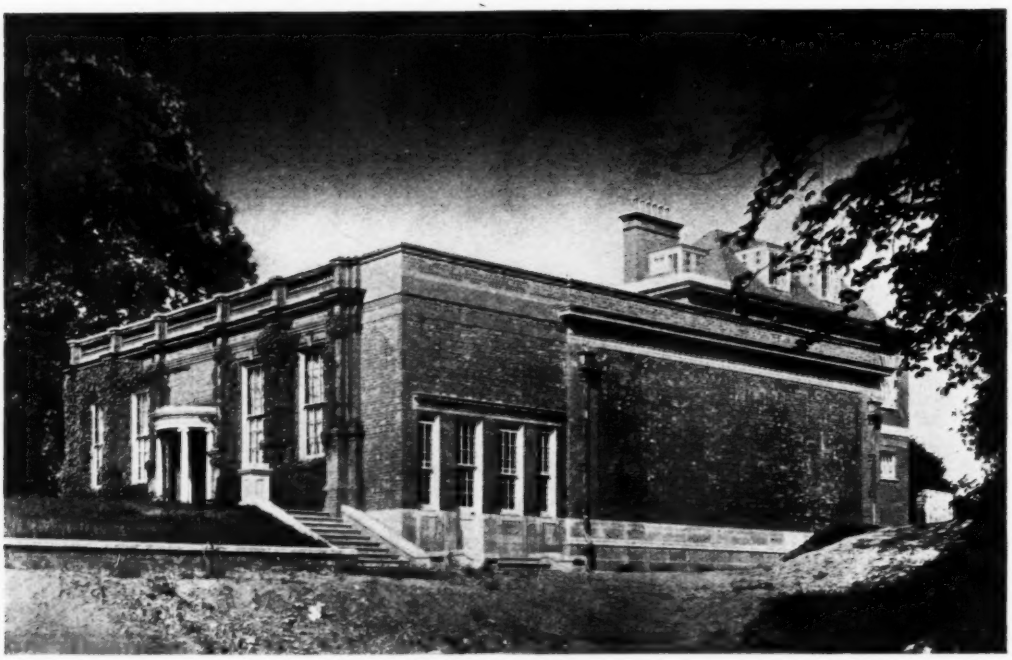
T. H. MAWSON and SONS, in conjunction with LESLIE MANSFIELD, F.R.I.B.A., Architects

THIS house may be fairly described as the product of an orderly development. Once a comparatively small Victorian dwelling, it has been enlarged and extended by the addition of several important new features—notably a north music-room wing, and a corresponding addition comprising the new Stuart Room, and a china gallery—until little of the original form remains.

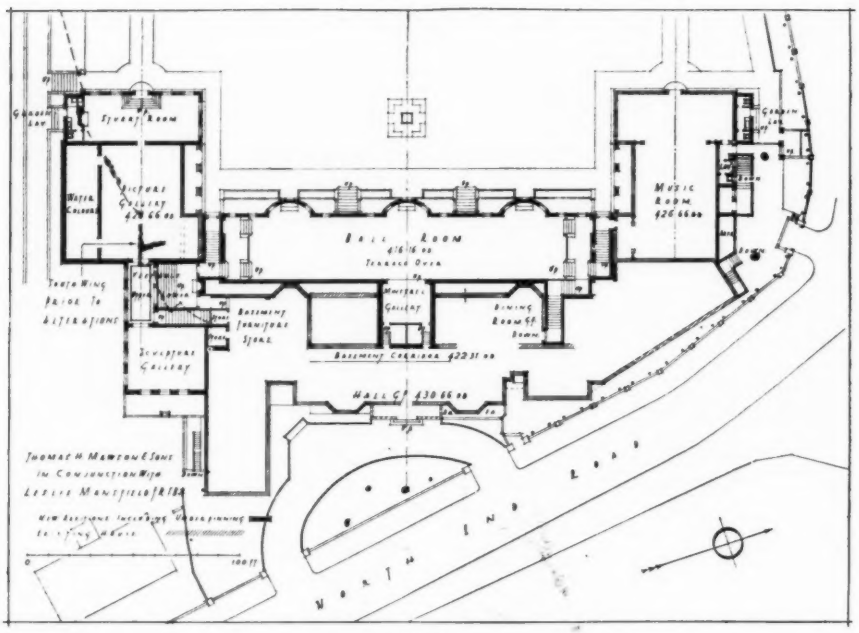
The final phase of development was the formation of the ball-room, which was intended to connect the north music-room wing with the south Stuart Room wing. This ball-room was to be situated under the veranda, which was removed and subsequently replaced in order that the garden elevation should remain unaltered. This ball-room, with its spring floor, its 23-ft. span of Kleine roof supported by a cantilever construction off the walls, its semi-elliptical ceiling, and its great length, suggested adaptability to many uses. Originally it was to be a water-colour gallery, and used occasionally for holding meetings (hence the platforms at each end). It could be darkened in a moment for a kinematograph display. It could be approached from the garden through doors at each end, and guests dining in the house

MARBLE CAP USED IN VESTIBULE.

PILASTER USED IN VESTIBULE.



THE EXTERIOR, FROM THE PERGOLAS.



PLAN.

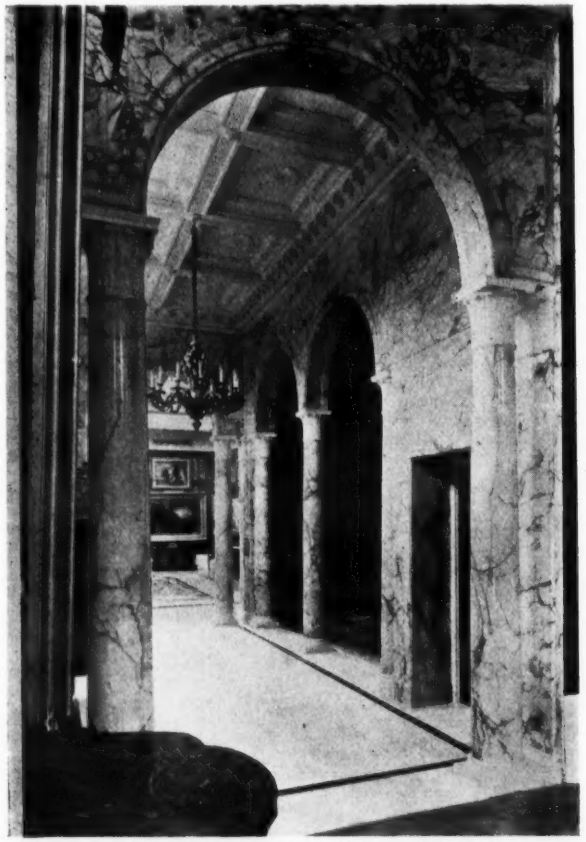
"THE HILL," HAMPSTEAD.

T. H. MAWSON AND SONS, IN CONJUNCTION WITH LESLIE MANSFIELD, F.R.I.B.A., ARCHITECTS.

"The Hill," Hampstead

T. H. Mawson and Sons, in conjunction with Leslie Mansfield, F.R.I.B.A., Architects

Lower Vestibule with Door to Ball-room.



THE VESTIBULE, FROM THE SCULPTURE GALLERY.

MARBLE VESTIBULE, FROM PICTURE GALLERY.

"THE HILL," HAMPSTEAD.

T. H MAWSON AND SONS, IN CONJUNCTION WITH LESLIE MANSFIELD, F.R.I.B.A., ARCHITECTS.

A DOORWAY IN GAUGED BRICKWORK.

DOORS FROM VESTIBULE TO STAIRCASE LEADING UP TO HOUSE.

"THE HILL," HAMPSTEAD.

T. H. MAWSON AND SONS, IN CONJUNCTION WITH LESLIE MANSFIELD, F.R.I.B.A., ARCHITECTS.

OIL-PAINTING GALLERY.

had direct access from the dining-room. The ball-room floor was 7 ft. below the basement, and 5 ft. below the ground-level. Yet it was light in daytime. It had three fireplaces, each with a marble chimneypiece in a circular recess forming a convenient resting-place for the dancers. Its walls were scumbled in golden brown, and its floor was laid in "Austrian wainscot." The walls were hung with Aubusson, Gobelins, and other tapestry. Acquisition of an adjoining property having been accomplished, the south Stuart Room wing was almost entirely demolished, and on an extended site were built picture and sculpture galleries, to balance the north music-room wing. The lighting installation in the oil-painting gallery was arranged for the avoidance of reflections. The vestibule connecting ball-room, picture galleries, and house formed the focal point in the scheme, and was adorned with Pavonazza marble of rare quality. This vestibule formed an ante-room between the picture and sculpture galleries.

Arranged in the lower basement and the mezzanine were the new heating plant, transformer-room, cylinder-room, fuel storage, and boiler-rooms. Access ducts for the easy inspection of all mains were arranged under the existing house, and a "sanctum," with open-air office for summer use, and having direct communication with the private suite, was formed over the vestibule and sculpture gallery; the book-room and the old sanctum being adapted for the use of secretaries, while the roof-space above provided more bedrooms for servants.

Every wall in this gallery has direct lighting. Electric plugs for picture-lighting were arranged at the proper height, with switches controlling them concealed in cupboards. To economize space doors slide into the walls.

The floor of the old Stuart Room was lowered some 3 ft. to give a level going through the rooms, and the old Italian doors, which happened so conveniently to fit the entrance to the ball-room and the basement, were fitted with synchronizing gear.

The architect for the alterations was Mr. Leslie Mansfield, F.R.I.B.A., in conjunction with Messrs. T. H. Mawson and Sons.

Waterloo Bridge

The London County Council, at their last meeting, discussed the subject of Waterloo Bridge on a report made to them by their Improvements Committee upon the conference of societies urging the preservation of the bridge, and the report received from Sir Edwin Lutyens, R.A. The Council came to no decision.

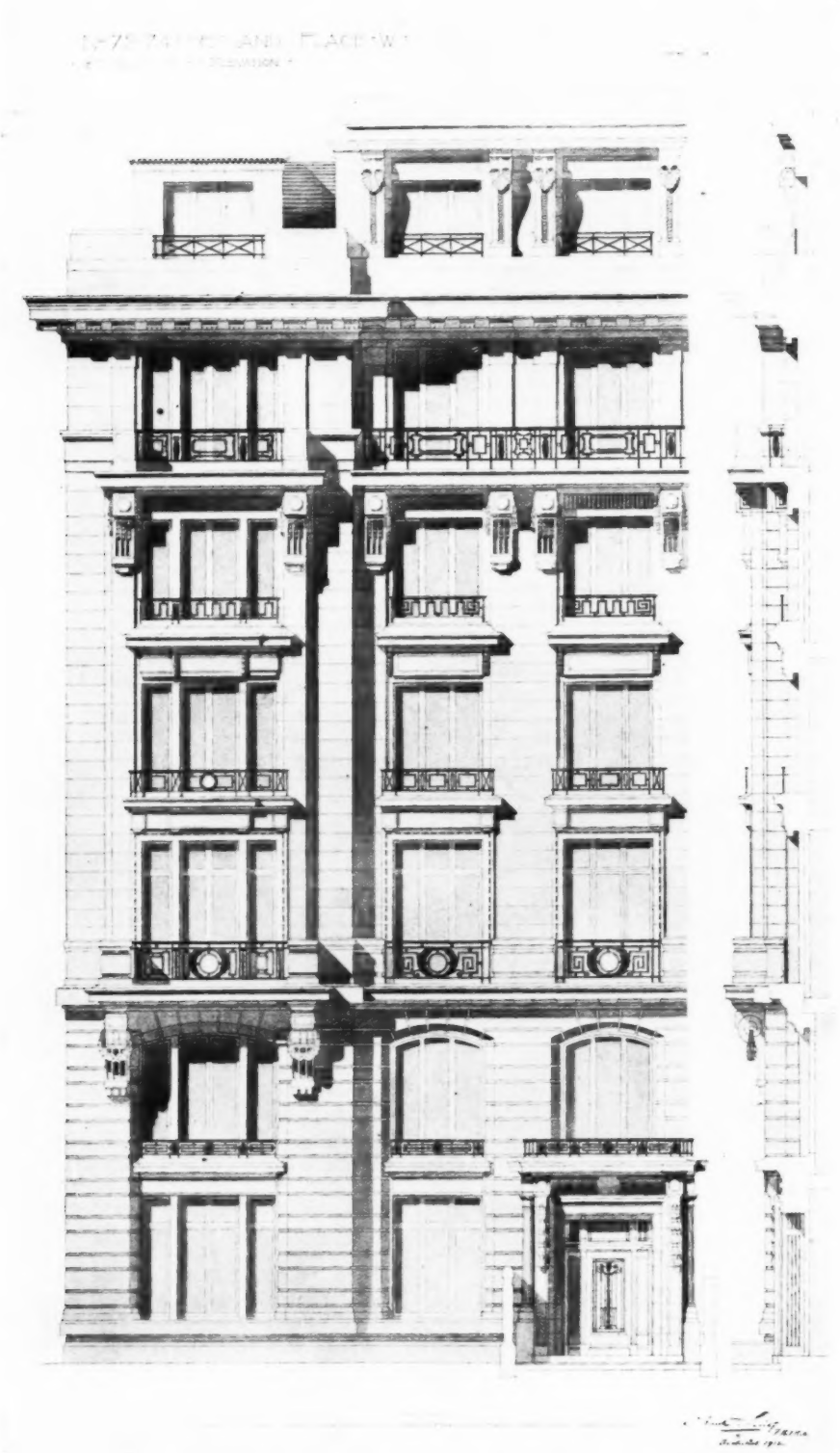
During the discussion, Mr. H. Morrison said that at the outset there was a substantially unanimous feeling that Waterloo Bridge would have to come down, and ever since then the columns of the newspapers had been filled with letters from architects and others in opposition to that course. The Council seemed to have wobbled all over the place as a consequence. Let the Council take up its own responsibility, he said. It was ridiculous to say there was not a British architect who could produce anything to equal the present bridge. The present was a favourable moment for the committee to make up its mind, but he could see no hope of its doing so unless the Council compelled it and thereby avoided becoming the laughing-stock of London.

Mr. C. A. G. Manning said he did not believe that pulling down the bridge would be an unpopular action. What the people wanted was that the Council should do its work. Sooner or later the Council must decide to take the bridge down. Moreover, the experts had not told them how to save it. What they needed was a good traffic bridge. He hoped that the Council would say that the committee should come to a decision forthwith.

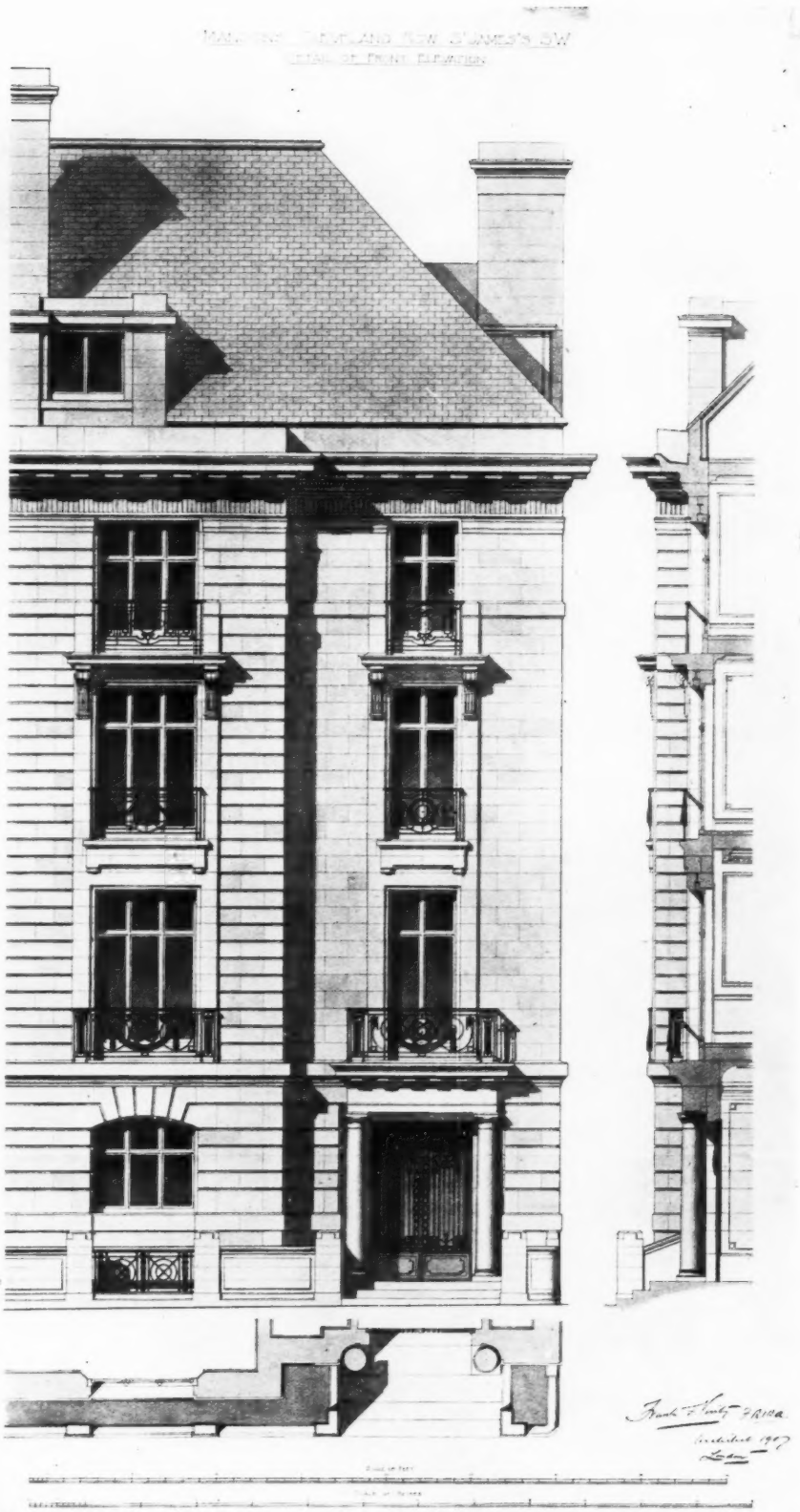
Mr. E. G. Culpin did not think the Council was making itself ridiculous by hearing the evidence of all parties calmly, and going out of its way to get the best possible opinions before coming to its judgment. Because the architects were opposed to the destruction of the bridge it did not follow they could not build a new one of a suitable character. He hoped the Bridges Sub-committee would take their courage in their hands and pursue such course as they thought best to solve the problem, and not be scared into premature action.

Some Residential Flat Details

Frank T. Verity, F.R.I.B.A., Architect



IN PORTLAND PLACE, LONDON: A DETAIL OF THE FACADE.



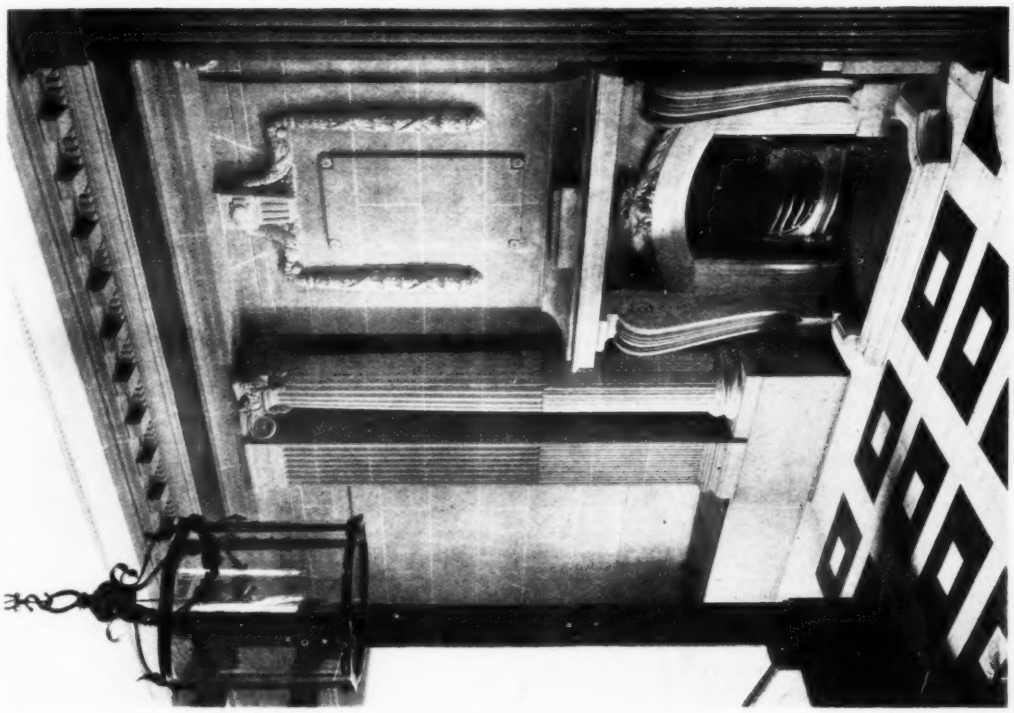
IN CLEVELAND ROW, LONDON: A DETAIL OF THE FRONT ELEVATION.

THE ENTRANCE VESTIBULE.

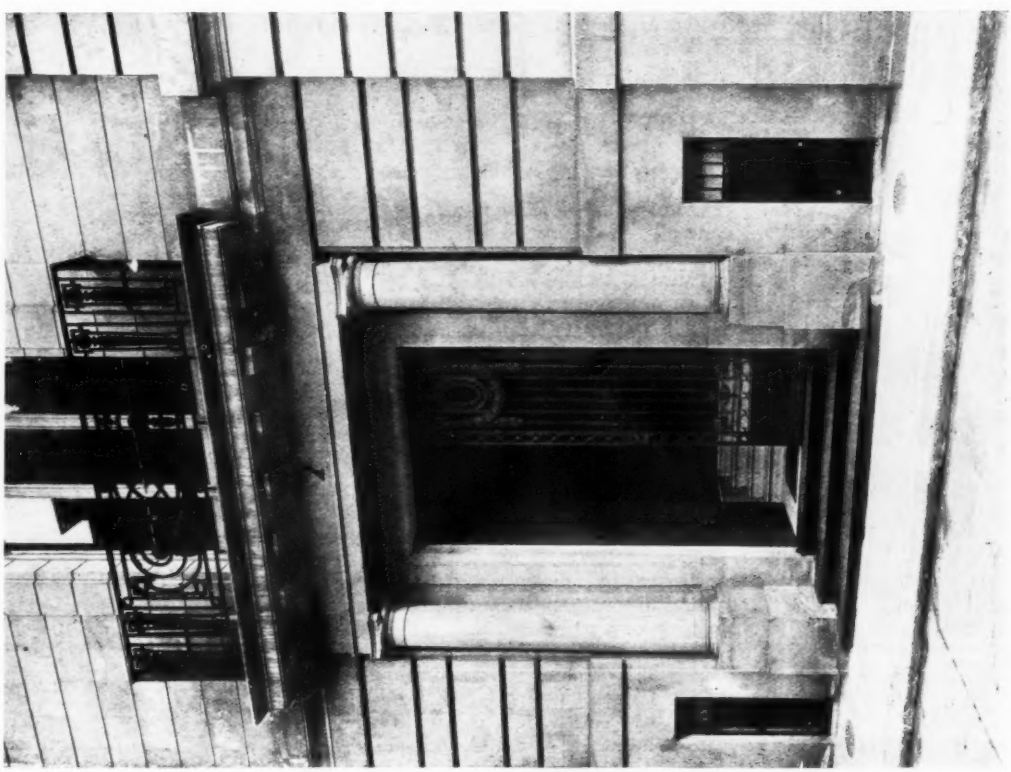
THE ENTRANCE DOORWAY.

IN BERKELEY SQUARE, LONDON, W.

IN CLEVELAND ROW, LONDON



DETAIL OF FIREPLACE IN ENTRANCE HALL.



DETAIL OF ENTRANCE DOORWAY.

Some Papers of the Society of Mural Decorators and Painters in Tempera

THE resolution of this Society, made June 11, 1912, to enlarge the scope of its interest and include other forms of mural decoration, is doubtless in recognition of the growing unsuitability of fresco to meet the changed conditions of modern life, by which our buildings are subject to alteration and modification; for in the event of demolition or reconstruction the preservation of the painting is attended by the tedious and laborious process of stripping the plaster off the walls. Thus the practice, almost universally adopted by contemporary British and Continental decorators alike, is to paint on primed canvas, which is joined to the wall by a specially prepared putty (malaphlage), the oily nature of which has the double virtue of resisting the damp and protecting the painting itself. In this way a decoration can not only be taken down if necessary, but constructed in sections in the studio of the artist.

However, in dealing first with the question of fresco, we find the foremost consideration to be that of the nature of the cement or plaster on which the work is executed; secondly, the effects of chemical reaction in the relationship of the cement and pigment; and lastly, those produced on the completed work by atmospheric conditions: which brings us into problems relating to the nature of pigments themselves, and the medium in which they are locked or bound.

In considering first the plasters and cements, we find lime to be their primary basis and of essential importance. Mr. John D. Batten, the editor of this excellent little compilation, has provided a sound and practical article on the subject of lime-putty, the various methods of slaking the raw lime, together with a record of his experiments in the application of this, with the pigment, to walls. It is, however, unfortunate his experiments were not carried out in the smoky environs of the city, and thus fail to produce any conclusive results helpful toward meeting our present-day conditions. A number of valuable articles relative to him are provided also by the late Sir George Beilby.

The technique of fresco is based upon the action and character of lime upon pigment, the essential nature of the lime acting as the binder, and thus making the colour in application one with the plaster itself. On the other hand, the chemical combination being destructive to all vegetable colour, limits the selection to mineral pigment, and even with this apparently safe medium we are again faced with subsequent blackening from sulphides, with which the atmosphere of modern cities is especially charged. This problem we find dealt with in an excellent article by Mr. W. Bruton, M.A., F.C.S., in "Potters' Colours available for Fresco and Tempera Painting," which colours, being formed of natural mineral and earths, and having to resist furnace-heat and the powerful reactions of glaze, can be safely used; although, even then, knowledge of chemical reaction of the pigments themselves upon one another is necessary for ultimate success.

The quotations by Mr. M. Lanchester from the recipes collected in the fifteenth century by a certain Frenchman, Gehan le Beyne, deals very competently with the nature and character of pigments employed by mural decorators of this period, and emphasizes the suitability of earth-colours for the first "lay in." The use of these can be studied to advantage, and cannot be over-estimated for providing a safe ground-work, as the "earths" remain unchanged, and are also cheap, while the more wayward and expensive pigments are applied as a glaze to add translucency and richness of effect. It is well known that some of the most fugitive colours applied this way with a suitable binder become permanent and enduring, a fact ably demonstrated by Mr. W. Holman Hunt in his valuable talk to the Society in November, 1907, illustrated by reference to the oil painting of the "Gentlemen of Verona," which, although employing the use of iodine scarlet, one of the most fugitive colours, retained its original freshness fifty years after. The technique of the Pre-Raphaelites is one of the soundest of recent years.

In coming to the subject of pigments, mediums, and binders, Mr. P. Tudor Hart has contributed a most illuminating and thoroughly technical article. Mr. A. F. Suten's discussion on resin is extremely entertaining. We are sure, after reading the first three pages, of distinguishing between amber, copal, damman, sandarach, and mastic, and relieved to discover towards the end an allusion to their relative importance in the manufacture of varnish, for it is by this very preparation that a good many pigments stand or fall. We know only too well the "yellowing" of the Old Masters is chiefly caused by the darkening of the varnish in which the actual pigment is helplessly locked rather than through the actual decomposition of the pigment itself. More reference might have been made also to the "cracking" and "bloom" from which so many pictures suffer through the varnish.

Mr. M. Lanchester has also contributed an appreciation of water-wax medium, while encaustic treatment of tempera is most efficiently discussed by Mr. Noel Heaton. The suitability of this wax-medium for modern conditions cannot be exaggerated, for when properly treated it presents, when finished, a hard luminous surface, impervious to condensation and impregnation with dirt. Special reference is made by Mr. J. D. Crace to the unsuitability for smoky cities of any method leaving an absorbent surface, and among others the very valuable suggestion relative to the pictorial aspect of the mural decoration, that it "implies beautifying that which is painted," not "inserting a beautiful or suitable painting," which, indeed, involves us in questions of the establishment of harmonious relations between the decoration and its surroundings—the secret of successful mural painting. And perhaps the æsthetics of mural decoration will be dealt with more fully in subsequent papers of the Society.

We cannot pass without allusion the excellent contributions by Mr. Theodore Fyfe and Mr. Noel Heaton on Knossos, and those by Mrs. Christian J. Herringham and Mrs. Sargent Florence respectively dealing with the Adjanta caves and the Old School, Oakholm, while another excellent article has been contributed by Father Paulinus, O.S.B., on the Bueron Artists.

In view of the increasing use of canvas for mural decoration, much could have been added in regard to the nature of primings, the consistency of which must provide for that necessary flexibility essential to meet the demands of "rolling," a process adopted in applying the finished painting to the walls of the building; also with the question of the quality of the canvas itself; and if any criticism were offered on the laudable efforts of the Society it would be that these are too largely occupied with problems of the past, with too little application to modern requirements, and we should like to see among the members more of our notable working mural decorators, both here and abroad, who could demonstrate their experiences.

Finally, the letter to the President of the Royal Academy, in 1922, referring to the danger of unskilful tampering with the nation's art treasures, and contending that no private and confidential relationship should subsist between any custodian of such and the experts by whose skill the pictures are cleaned and repaired, calls for urgent response.

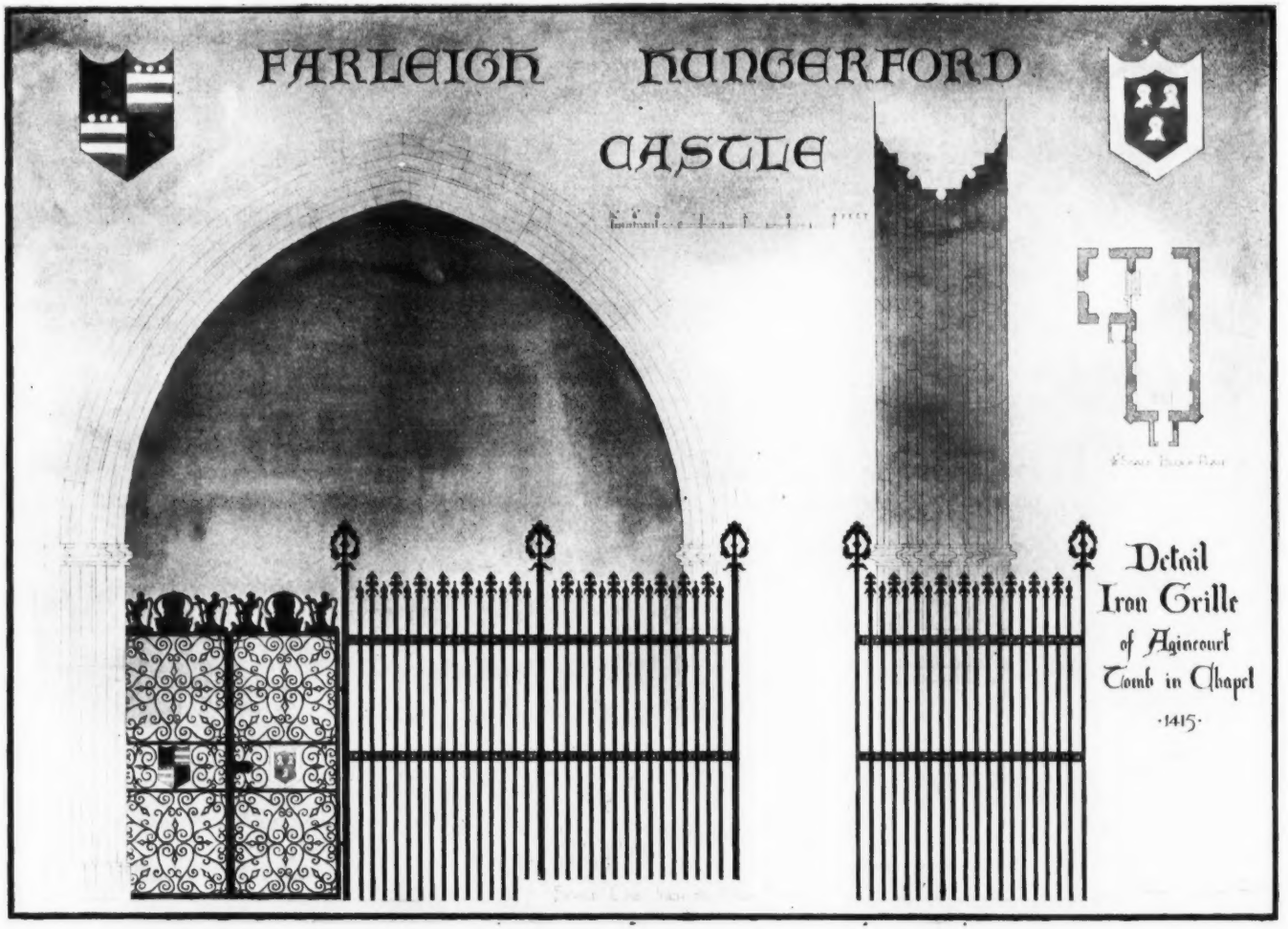
The ideals and aims of this Society not only deserve great consideration, but should be shared by all who have the cause of good craftsmanship at heart, and the desire to preserve some dignity and beauty in our common everyday surroundings.

St. Mary's Church, Highweek, Newton Abbot : The Altar Screen

Sedding and Wheatley, Architects. R. Pinwell, Carver

Measured Drawing. 106.—Iron Grille in Chapel of Farleigh Hungerford Castle

Measured and Drawn by Terence W. Snailum



A specimen of 15th-century ironwork.

Surveying a Factory Site

3—Plotting

By WILLIAM W. WOOD

WITH the chain and the dumpy level the information required concerning the mythical site of our mythical factory has been obtained, and it now becomes necessary to set all this down on paper in an intelligible manner.

Take the longest dimensions—ABC and AJH in Article No. 1—add sufficient to each not to cramp matters, decide on the most useful and convenient scale to which to plot the survey, and then get a piece of paper large enough to take it. This *dictum* may appear obvious and unnecessary, but it is very annoying to find that the last point is just half an inch off the sheet!

Many considerations bear upon the orientation of the site on the paper, but if, as is often the case, the top of the paper is to be true north, set up the north point and indicate the magnetic north (see *ante*) west thereof. The angle formed by the base-line and the magnetic north was determined at the outset of the survey by means of the prismatic compass, and for the present purpose this can be shown with sufficient accuracy with the protractor.

For the moment, take the total length of each line from the field-book and disregard offsets. Tick off the length of the base-line—refer to Fig. 5, Article No. 1—ABC, and letter the stations. With centre C and radius CD describe an arc in the neighbourhood of D; then, with centre B and radius BD describe an arc cutting CD in D. This, save for checking, establishes D. Again using B as the centre, and with radius BE, describe an arc. With D as centre and radius DE, the intersection gives E. Setting the point of the compass at C, using the radius given in the field-book as CE, the pencil-point should cut the intersection of BE–DE. If it does not, there is something wrong. I have taken the triangulation lines in this order, as it is the order in which they would probably appear in the field-book. When plotting, a beam compass will be found better than an ordinary compass with an extension bar.

The process is continued until the whole skeleton of the survey is plotted. With the knowledge that the main triangulation lines are correct, one can begin offsetting. A flat section scale is to be preferred, fully divided, double-figured to enable one to read from either end. The scale is laid along the line in question, the chain distances being read on it, and the offset distances pricked off from an offset scale—a short length of scale fully divided right up to the end—which is run along and at right angles to the main scale. The various points are then connected up. Boundaries, hedges, roads, fences, gates, trees, high ground, hollows, etc., are indicated by their several conventional signs, and the plotting of the chain survey is complete, except for lettering up. It is advisable to describe a small circle round each station, and the whole should be inked in. Never work on the original—always keep it intact as a record of the site before building operations began.

It is desirable to reduce the levels in the field, on completion, whilst there is yet time to rectify any errors. By reference to Fig. 13 we find the backsight taken on the bench mark read ·43 of a foot. Now, we know the height of the bench mark to be 593·26 ft. above Ordnance Datum, so that the collimation height, or height of the line of sight—sometimes called the height of instrument—must be 593·26+·43=593·69; this is entered in the column headed "Collimation Height." The first move in the process of reduction has been made. We now know the height of an imaginary line which we are able to swing round, look along, and see what figure it strikes on the staff. The figure read is the difference in level between the collimation height and the height of the ground at that particular point. Therefore, if the reading—5·34 in our case—is deducted from the collimation height—593·69—the answer — 588·35—is the height of the ground, and consequently is shown in the "Reduced Level" column. Then the level was moved but the staff was not (only turned round), so that a new collimation height has to be established before any more reduced levels can be determined. This is why a backsight is taken on to the staff, and the reading—6·40—added to the last reduced level—588·35—giving the collimation height—594·75. Subtracting foresights and intermediate sights from the last collimation height, and adding backsights to the last reduced level, the procedure is continued until we reach the return reading on to the B.M. Normally the line of sight is above the level of the ground on which the staff is standing, and therefore the reading is a plus reading, i.e. the height of the instrument above Ordnance Datum is the height of the ground at that point plus the reading. The plus sign is of course omitted and taken for granted. When the line of sight drops below the ground-level or level of the B.M., on which the staff is standing, the figure read represents the number of feet the collimation height is below ground or B.M. level, and is therefore entered as a minus quantity. As, however, it is the ground-

Figure 13.—LEVELS TAKEN ON BLEAK HOUSE FARM, WILTS.—19 OCTOBER, 1925.
JOHN JONES WITH WILLIAM BROWN AND HERBERT MORRIS.
Instrument Constant 1·0 ft.

No.	Remarks.	Line.	Back Sight.	Inter-sight.	Fore-sight.	Colli-mation Height.	Reduced Level.	Stadia. Upper Reading.	Stadia. Lower Reading.	Distance.	Between.
1.	B.M. on angle of farm buildings.	E B.M.	·43			593·69	593·26				
2.	Inst. over E	E d_3			5·34		588·35	5·12	5·56	45′ 0″	E & 2
	,, ,, d_3	d_3 E	6·40			594·75		6·02	6·78	77′ 0″	d_3 & 2
3.	,, ,, d_3	d_3 d_2		6·385			588·365				
4.	,, ,, d_3	d_3 d_1			1·005		593·745				
	,, ,, D	D d_1	5·845			599·59					
5.	,, ,, D	D C			6·71		592·88				
	,, astride line ..	C B	2·925			595·805		2·45	3·39	95′ 0″	Inst & C
6.	,, ,, ,, ..	C B			6·765		589·04	6·26	7·28	103′ 0″	Inst. & 6
	,, over B	B 6	3·21			592·25		2·76	3·67	92′ 0″	B & 6
7.	,, ,, B	B 7		3·94			588·31	3·625	4·26	64′ 6″	B & 7
8.	,, ,, B	B B.M.			−1·01		593·26				
										70′ 0″	E & 7
			18·81		19·82						
					1·01						
					18·81						

level we wish to determine in each case, we deduct—somewhat paradoxically, it would appear at first sight—the plus readings from, and add the minus readings to, the collimation height. This explains why the reading 1·01 is preceded by a minus sign, and yet is added to 592·25. The answer, 593·26, will be seen to be the same as the B.M., and, consequently, we know there has been no error made in taking the readings. A quick way of checking the levels before reduction, and the calculations after reduction, is to add together the backsights and the foresights; the sums should be equal. Any minus quantities should not be added in, but should be deducted from the totals of their respective columns.

The determination of distances is simple. Take the first example: 5·12 from 5·56 leaves ·44; multiply by 100=44, add the constant 1=45. The others are all arrived at in the same way.

Any student sufficiently interested in the subject would find it a good exercise to work out the book shown in Fig. 5 in the issue dated November 4, 1925, and compare his result with Fig. 13.

The levels being reduced and the distances determined, the former are now indicated on the survey. From this information sections can be set up showing the undulation of the site in any direction. Obviously, the easiest sections to set up will be along the course taken by the level and staff. A datum line is drawn across the paper; this is given a convenient number—585 would be a good one in our case—and the distances are marked off along it, and the reduced levels plotted vertically above it. Suppose, however, we required the levels along line BD. The level of B and of D is known, so also is the level of any point along ED and BC. If sections are taken between points on these lines, say, every 40 ft., and the level noted at the point where the section crosses line BD, we shall soon know the lie of the ground between the ends of the line in question.

Correspondence

Registration and Chief Assistants

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—I have read with interest the letters of "Equity" and "Back Door." The latter is not quite correct in his assertion to benefit by the work and financial support of others. There are enthusiastic members of the profession who only ask that their cases should be considered, and if given the opportunity could prove their qualifications, and who, if accepted, would also prove their worth to the Institute.

Apart from the first paragraph, "Back Door's" letter contains excellent suggestions, and many will eagerly watch what action the Institute intends to take, especially in view of the fact that another association has already been formed.

It would undoubtedly simplify the position of the Institute regarding chief assistants if the assistance of the Architectural Associations of the large cities was obtained, as there are, no doubt, many members of these associations holding the views expressed by "Equity" and "Back Door."

WATCHER.

The Unemployment Problem—One Way to Help

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—Some little time ago you were good enough to publish a letter which drew attention to a phase of the unemployment problem, the remedy for which lies entirely in the hands of the public.

At this period of the year there is invariably distress in the painting trade, and at the present time there are approximately ten thousand painters unemployed. This state of affairs arises solely from the habit which the public has acquired, of putting in hand decorative work at one time of the year only.

When spring arrives, there will be acute competition for the services of painters who are now walking the streets, solely because of a habit of mind on the part of the average housewife.

There is no sound reason why painting work cannot be done in the winter months. We submit that there are many very good reasons why it should, among them the following:

(a) The householder who puts work in hand in the slack season gets the best men, and hence the best work.

(b) The master decorator has time to give individual attention and supervision, which is not possible during the "rush" season.

(c) The state of business must inevitably have an effect upon estimates, to the advantage of the householder who places work in the winter.

(d) It is bad business to pay (as we all must) to support men on the "dole" when there is work in plenty for them to do, and it is only a matter of a rearrangement of dates and a little forethought to keep them busy. This point should appeal with especial force to public bodies.

It will be noted that we make no appeal on philanthropic grounds. Interior decorative work in winter is sound business, and our object is to get the public to see it. The fact that it also relieves the distress of a body of citizens is incidental.

WILL MELLOR, Employers' Secretary,
J. A. GIBSON, Operatives' Secretary,
National Painters' and Decorators' Joint Council.

Card Indexing Information for Specifications

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—I remember reading at some time or other of an idea from America of filing or card indexing information for specifications. Could you tell me if this is a general practice and, if so, the main principles of the system? Would the file consist of notes or the actual clauses to be used, etc., etc.?

BRIAN E. ROBERTS.

Architects' Plans and Speculative Builders

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—The reply to the query of "H.H." in your last issue is somewhat misleading. While it is true that it is an actionable wrong to steal or copy drawings, there is nothing in the English Law to prevent the measurement and reproduction of a completed building. We have obtained payment for the unauthorized use of a design, but, as our solicitor advised us, only because the plan—not the actual building—was copied.

GIBB AND SMITH.

Law Reports

Housing Acts—Corporation and the Subsidy

Application for Relief by the Croydon Corporation.

King's Bench Division. Before Justices Sankey and Salter.

This case raised a point as to which of two persons should have the subsidy of £100 in respect of a house at 7 Howard Gardens, Croydon. The Corporation did not dispute that somebody was entitled to the money, but left two persons, Mr. England and Mr. Manser, to fight it out as to who should have the subsidy. A master in chambers had decided that Mr. Manser should have the subsidy, and Mr. England now appealed against that decision. The house was built by Mr. Manser, and Mr. England contracted to buy it. The point was that at the time the sum became payable, although Mr. England had paid £50 as deposit on the purchase of the house, he had not completed the purchase, the time for completion of the purchase having in fact passed. The Corporation would not pay the £100 unless the owner signed an agreement not to enlarge or reconstruct the house without the Corporation's sanction for five years, and to use it only as a private dwelling, and Mr. England signed that document.

The Court held that Mr. England's appeal failed, and they dismissed it with costs, affirming the order of the master.

Mr. Justice Sankey, in giving judgment, said the Act seemed to prompt people to build houses rather than to buy them. In fact, the records of the Corporation said that Mr. Manser had qualified for the £100 assistance in respect of each of twenty-two houses he was erecting. Then came the condition or undertaking to be signed by the owner, without which the Corporation would not pay the subsidy. Mr. Manser agreed to sell one of the houses to Mr. England. Mr. Manser was the man who accepted the offer of the Corporation, he was the man who built the houses, and it was he who received from the borough engineer the habitation certificate on completion. His lordship thought Mr. Manser was clearly the legal owner at the time of the completion of the building, but did the £100 go with the house and to the person who bought it? He thought not. He thought that as the Act was to encourage building it was meant for the builder. He could well see that for some purposes Mr. England could be said to be the owner, and for others that Mr. Manser held that position, but here the Court held that Mr. Manser was the owner for the purposes of the Act who should receive the £100.

Mr. Justice Salter agreed.

Restrictions on Tenancy

Vernon v. *Nuthall.*

Chancery Division. Before Mr. Justice Russell.

This action raised a question of construction of covenants relating to the use of houses at Lancaster Gate, and in view of his lordship's decision, is of importance in districts where residences are being converted from private use to commercial enterprises.

Mr. R. Reeve, K.C., for the plaintiff, Sir John H. Vernon, Bart., of 109 Lancaster Gate, said the action was brought against Mrs. Mary M. Nuthall, of 100 and 101 Lancaster Gate, for an injunction to restrain her from using those premises otherwise than as a private dwelling-house, or a private hotel according to the methods of the most respectable private family hotels in the best residential districts of the West End, and without display of notification of business or advertisement other than the name of her hotel displayed in "neat and inoffensive lettering." This was a covenant imposed on a large number of houses in the vicinity. The defendant had erected a notice-board across the premises, bearing the words "Tudor Hotel," and his case was that this constituted a breach of the covenant which required the tenant to protect the amenities of the neighbourhood.

Mr. Bennett, K.C., for the defendant, contended that there had been no breach, as the sign complained of was not otherwise than in "neat and inoffensive lettering."

His lordship held that there had been no breach of covenant by the defendant, and dismissed the action with costs. His lordship pointed out that the letters on the sign measured 2 ft. 6 in. in height, and were attached to frameworks 30 ft. 7 in. long. There was no evidence which justified him in suggesting that the lettering was not neat and inoffensive. It was the simplest possible form of lettering, and its size did not seem to be too great considering the altitude of the sign complained of.

Covenant to Repair—Definition by a Judge

Foster v. *Dale.*

King's Bench Division. Before Mr. Justice Finlay.

The plaintiff, Mr. S. J. S. Foster, of Jesmond Avenue, Wembley, sought possession of a house in the same avenue from Mr. A. J. Dale, on the ground of breach of covenant under a lease, which the defendant denied.

The defendant held the house under a lease dated October 20, 1914, for a term of ninety-nine years, at a rent of £5 15s. The lease had become vested in the defendant, and the reversion was vested in the plaintiff, and it contained general and specific covenants to repair. The house was inspected in October, 1923, and afterwards notice was served on the defendant of alleged breaches of the covenant.

After hearing a mass of evidence, his lordship gave judgment for the plaintiff with costs, defendant to have a relief against forfeiture on doing the work within a reasonable time and paying the costs. He was satisfied on the evidence, said his lordship, that at the date on which the notice of repair was served, all the things specified could be properly required to be done except repairing a wall with waterproof solution. The house was built of red brick of a very porous character, and the bricks absorbed wet, with the result that the house was apt to be damp, and he could not hold that it was the duty of a tenant under an ordinary covenant of the sort to remedy a defect in bricks by reason of the character of the bricks. That seemed a defect in the house as a house, and it was not a reasonable repair to alter the character of the bricks. The landlord was not entitled to require the tenant to put waterproof solution on the bricks. But he (his lordship) held that the other repairs were proper and reasonable, and he was satisfied that some of them had not been properly carried out, and that the notice had not been satisfactorily complied with.

For the defence, Mr. Ernest G. Page, architect, of Gray's Inn Place, W.C.2, gave evidence.

List of Competitions Open

Date of Delivery.	COMPETITION.
Dec. 31	The Argentine Government offer prizes of 10,000, 5,000, 4,000, 3,000, and 2,000 Argentine gold pesos for the best architectural designs for a National Institute for the Blind. Apply Enquiry Room, Department of Overseas Trade, 35 Old Queen Street, Westminster, S.W.1.
Jan. 1, 1926	New buildings for Liverpool College on a site at Mossley Hill. Assessor, Sir Giles Gilbert Scott, R.A. Premiums, £500, £300, and £200. Conditions and plan of site can be obtained from Mr. J. H. Lintern, secretary, Liverpool College, Sefton Park Road, Liverpool, on payment of a deposit of £2 2s.
Jan. 14	By the generosity of Mr. Willard Reed Messenger, of New York, engineer, an International competition is to be inaugurated to promote and facilitate the construction of houses for the smaller middle classes and intellectual workers. Mr. Messenger is offering a first prize of 500 dollars, a second prize of 300 dollars, and a third prize of 200 dollars. The competition is to be held under the auspices of the International Federation of Building and Public Works (whose headquarters are in Paris), and which has recently held its International Congress, when forty-two countries were represented. Certain rules regulating the competition have been formulated, and the jury will be composed of eleven members, representing various nationalities. Competitors will be required to send in sketches, descriptive particulars of any new processes of construction proposed, and of schemes intended to reduce costs. Apply Director-General of the International Federation, 17 Avenue Carnot, Paris.
Jan. 30	Erection of a new art gallery and museum within the borough of Birkenhead. Competitors must have been resident or have had an office within twenty miles of the Birkenhead Town Hall during the whole period subsequent to January 1, 1923. Premiums £250, £175, and £100. Assessor, Sir Robert Lorimer, A.R.A., R.S.A., F.R.I.B.A. Conditions of competition, together with a copy of the site plan, particulars of the subsoil, etc., of the site, and photographs, can be obtained on application to Mr. E. W. Tame, Town Clerk, with deposit of £2 2s.
March 31	Australian War Memorial, Canberra. Open to Architects of Australian birth. Apply High Commissioner, Australia House, Strand, London.
July 12	The following architectural competitions have been organized in connection with the Royal National Eisteddfod of Wales, to be held at Swansea next year: Design for a National Parliament House for Wales, prize £100 (no age limit). Design for a street façade to a large stores; prize £25, given by the South Wales Institute of Architects, Western Branch (competitors not to be over 21 years of age on January 1, 1926). Set of Measured Drawings of Architecture; prize £25, given by Mr. Ernest E. Morgan, A.R.I.B.A., Borough Architect, Swansea (no age limit). Entry forms can be obtained from Mr. W. Talog Williams, the general secretary, 24 Goat Street, Swansea, to whom they are to be sent between May 1 and 10, 1926. Drawings to Mr. Ernest E. Morgan, A.R.I.B.A., 3 Prospect Place, Swansea, not earlier than July 5, 1926, and not later than 5 p.m. on July 12, 1926. Mr. Arthur Keen, F.R.I.B.A., is the assessor.
No date.	Conference Hall, for League of Nations, Geneva. 100,000 Swiss francs to be divided among architects submitting best plans. Apply R.I.B.A., 9 Conduit Street.

Societies and Institutions

Reconstitution of the Board of Architectural Education.

IN 1920 the Council of the R.I.B.A. decided on the reconstitution of the Board of Architectural Education as soon as the necessary powers had been granted by the Privy Council. A new Charter having come into operation this year, the matter was at once taken into consideration, and the new constitution of the Board has now been approved by the Council. It has been decided to make the Board fully representative, and bring it into touch with other bodies having interests allied to or bound up with those of architectural education, to enlarge its scope, and to enable it to discharge its proper functions as the central authority, under the Council of the R.I.B.A., advising on architectural education throughout the Kingdom and in the Dominions. With this object in view the Board is to be reconstituted, and is to have under it three committees, with executive powers in all routine matters, viz. schools, examinations, and prizes and scholarships committees, the Board itself, subject to confirmation by the Council, dealing with matters of general principle and policy. The committees, being formed of representatives with great experience in the matters with which they will have to deal, and having power to act, greater efficiency and expedition are to be expected. Besides the committees there will be a small board of moderators who will deal with the standard of the examinations and testimonies of study and the setting and marking of the actual examination papers. A small visiting board will perform similar functions in connection with the schools, and by periodical visits will be able to keep the Schools Committee in touch with all the schools recognized by the R.I.B.A., and ensure that a uniform standard is maintained. The inclusion of R.I.B.A. members not specially concerned with education both on the Board and on the committees will make for breadth of view in the Board, and for a wider knowledge of the Board's work in the Institute at large. By these means co-ordination is to be expected, and the advice and assistance of the State and other educational authorities will be of great value, and will enable the Board to discharge its duties with greater weight and efficiency, as will be seen from the proposed constitution which follows, the lists being subject, of course, to acceptance from the bodies concerned. The Chairman of the Board is Mr. Maurice E. Webb, F.R.I.B.A., D.S.O., M.C., while Mr. Walter Cave, F.R.I.B.A., and Mr. Henry M. Fletcher, M.A., F.R.I.B.A., are vice-chairmen, and Mr. L. Sylvester Sullivan, F.R.I.B.A., is hon. secretary.

1. *Constitution of the Board of Architectural Education.*

One representative from each school of architecture recognized for exemption from the Final Examination (at present seven, omitting McGill University and Sydney University).

Six representatives of the governing bodies of the Universities, including Oxford, Cambridge, and London, and three others to be nominated by the Standing Committee of Vice-Chancellors and Principals of the Universities of Great Britain and Ireland.

The Director of Education, School of Architecture, The Architectural Association.

Schools of architecture recognized for exemption only from the Intermediate Examination—one representative for every two schools by invitation (at present eight, including the Northern Polytechnic and the R.W.A. School of Architecture, Bristol, but excluding the Bombay School of Art and the University of Toronto).

Polytechnics teaching Architecture, Technical Schools teaching Architecture, Art Schools teaching Architecture } to be nominated by the Society of Art Masters.

H.M. Board of Education.

The Director of Education, The London County Council.

The Headmasters' Conference.

The Association of Architects, Surveyors, and Technical Assistants.

The Institute of Builders.

The Master of the Art Workers' Guild.

The Royal Society of Arts.

The Incorporation of Architects in Scotland.

The Royal Institute of the Architects of Ireland.

The British School at Rome, Faculty of Architecture.

The Royal Academy School of Architecture.

The President of the Town Planning Institute.

The President, R.I.B.A.

The Hon. Secretary, R.I.B.A.

The Chairman of the Allied Societies' Conference.

The President of the Architectural Association.

Thirteen R.I.B.A. Members, excluding the Officers of the Board, to be appointed by the Council on the recommendation of the Board of Architectural Education (one-third, excluding the Officers of the Board, to retire every year).

2. *Schools Committee.*

One representative from each School of Architecture recognized for exemption from the Final Examination (at present seven, omitting McGill University and Sydney University).

One representative from each School of Architecture recognized for exemption only from the Intermediate Examination (at present eight, including the Northern Polytechnic and the R.W.A. School of Architecture, Bristol, but excluding the Bombay School of Art and the University of Toronto).

R.I.B.A. Members.

H.M. Board of Education Inspector.

The Director of Education, The London County Council.

Polytechnics, Technical Schools, and Art Schools teaching Architecture.

R.I.B.A. Visiting Board.

3. *Prizes and Scholarships Committee.*

A Vice-Chairman of the Board (Chairman).

R.I.B.A. Members.

Schools of Architecture.

R.I.B.A. and other Prize Winners.

The Director of Education, The London County Council.

H.M. Board of Education.

British School at Rome, Faculty of Architecture.

4. *Examinations Committee.*

A Vice-Chairman of the Board (Chairman).

The Board of Moderators.

R.I.B.A. Examiners (Intermediate Examination and Final Examination).

The Registration Committee.

R.I.B.A. Statutory Examiners.

R.I.B.A. Town Planning Examiners.

R.I.B.A. External Examiners.

R.I.B.A. Members.

The Association of Architects, Surveyors, and Technical Assistants.

5. *Board of Moderators.*

R.I.B.A. Members (Ex-Examiners).

6. *R.I.B.A. Visiting Board.*

The Chairman of the Board, Chairman of the Visiting Board.

A Vice-Chairman of the Board.

The Hon. Secretary of the Board.

A Teaching Member.

7. *Problems in Design and Testimonies of Study.*

A panel of twelve Examiners will be set up to deal with problems in Design and Testimonies of Study.

R.I.B.A. Council Meeting.

Following are notes from the minutes of the last meeting of the Council of the R.I.B.A. :

Waterloo Bridge.—It was decided to send to the London County Council the letters received from the president of the American Institute of Architects and the Franco-British Union of Architects on the subject of the preservation of the bridge.

Cambridge School of Architecture.—Six drawings of a terminal railway station by the late J. M. Whitelaw (Soane Medallist, 1913) were presented to the Cambridge School of Architecture.

The Board of Architectural Education.—A comprehensive scheme for the reconstitution and enlargement of the Board of Architectural Education was approved by the Council, and will be brought into operation forthwith.

R.I.B.A. Examinations.—On the recommendation of the Board of Architectural Education it was decided : (1) To require students entering courses recognized by the R.I.B.A. to become registered as Probationers immediately upon entering such courses; (2) to urge upon students the extreme importance of availing themselves, when they become eligible, of

exemption from the R.I.B.A. intermediate examination and subsequent registration as Students R.I.B.A.; (3) to urge students eligible for exemption from the R.I.B.A. final examination to sit for the R.I.B.A. examination in professional practice, and thus qualify themselves under the usual conditions for candidature as Associates R.I.B.A.

R.I.B.A. Visiting Board.—The reports of the Visiting Board on the following schools were accepted by the Council: (1) School of Architecture, Birmingham; (2) School of Architecture, University of Sheffield; (3) School of Architecture, Armstrong College, Newcastle-upon-Tyne; (4) School of Architecture, Leeds School of Art.

"The Architect and His Work."—A pamphlet entitled "The Architect and His Work," prepared by the Practice Standing Committee, is to be published forthwith.

Qualified Architects and Housing Schemes.—Steps are to be taken to call the attention of the Minister of Health to the failure of local authorities to employ qualified architects in connection with their housing schemes, and to urge him to take steps to ensure that in future only qualified architects are employed on this work.

Restrictions on Tendering.—The Council decided to advise members of the R.I.B.A. that where any contractor or firm of contractors invited by them to tender, acting under the rules of any branch of the National Federation of Building Trades Employers, informs them that his tender is conditional on certain action being taken by the architect in respect to inviting any other contractor or firm of contractors to tender, the architect should convey the information to his clients and act upon the instructions he receives.

The Architects' Benevolent Society.—A grant of £100 was made to the Architects' Benevolent Society.

The British Waterworks Association.—Mr. H. D. Searles-Wood, F.R.I.B.A., and Mr. P. M. Fraser, F.R.I.B.A., were reappointed to represent the R.I.B.A. on the Standing Committee on Water Regulations.

The British Engineering Standards Association.—The following were appointed to represent the R.I.B.A.: Sectional Committee, on vitrified ware pipes—Mr. D. R. Tucker; Sub-Committee, on cast-iron, half-round, O.G., and other moulded gutters—Mr. C. F. Skipper, Mr. Max Clarke; Sectional Committee, on sand-lime bricks—Mr. T. Wallis, Mr. H. D. Searles-Wood; Sub-Committee, materials and manufacture—Mr. T. Wallis, Mr. H. D. Searles-Wood.

Membership of the R.I.B.A.—The resignations of the following members were accepted with regret: Messrs. F. S. Baker, F.R.I.B.A., V. A. Lawson, L.R.I.B.A. The following were reinstated as members of the R.I.B.A.: Mr. W. S. R. Bloomfield as Associate; Mr. R. T. Tilley as Licentiate.

St. Peter's and the Popes.

A history of the building of the world-famous architectural group, St. Peter's Cathedral and the Vatican, was given in a lecture by Sir Banister Fletcher at the Central School of Arts and Crafts. "On the return of the Popes from Avignon they found Rome a city of ruins," thus Sir Banister described the state of things which made Rome ripe for the activities of the Renaissance. Only one Gothic church had been built, and the basilican churches were neglected and decaying. Martin V began to repair the desolation, but it was reserved for a later Pope to initiate the building of Christendom's great cathedral. The site was sacred alike by pagan tradition and Christian use; for in the Vatican hollow of the Janiculum, the fabled shrine of Etruscan "vates," or oracles, there had been first the oratory of a bishop, then a basilican church, built by an emperor for a Pope, and lastly rose the cathedral of the Renaissance. In 1506, under Julius II, Bramante started his gigantic plan with four great piers for the colossal dome at the centre of his Greek cross. Then in succession came Raphael, Peruzzi, Sangallo, and Giulio Romano, with their various designs, till, in 1546, the great Michelangelo returned to the plan of the Greek cross, and began the dome. Again, after Giacoma della Porta and Vignola—whose cupolas give scale to the dome—came Carlo Maderna, with his lengthened nave and unpleasing façade, both of which dwarf the size of the soaring dome. Thus through succeeding centuries the building grew, and the charge of continuing it was handed on as a heritage from Pope to Pope, who each in turn employed great architects. It was, said the lecturer, difficult to estimate in terms of ordinary buildings, the designs, proportions, and construction of this extraordinary building. It overawed by sheer size; it awed rather than attracted, and impressed by magnitude rather than by solemnity. There was everywhere a baffling absence of scale, and this was nowhere better realized than in its chapels, large as independent churches. Sir Banister dealt with Popes, architects, plans, and the great cathedral itself; with the piazza for the public; the Pontifical Palace, with its series of State apartments, the world-famous Sistine Chapel, and the Vatican Museum, with its tremendous galleries of books, pictures, and sculptures, which made it the world's greatest treasure-house of art, and the most complete and imposing monument of the Christian world.

Municipal Planning of the Eternal City.

The development in Rome of the Renaissance movement was described by Sir Banister Fletcher, V.-P.R.I.B.A., in a lecture at the Central School of Arts and Crafts. He said that at that Eternal City the way of the movement had been prepared not only by the revival of learning, but by the return of the popes from Avignon, and their development of power in many directions. Gravitation to this papal and capital city on the part of many leading families caused villas and palaces to spring up apace, and these were often formed out of the ruins of the classical buildings of ancient Rome, thus forming a kind of continuity of tradition, in spite of the new character of these sumptuous palaces. Sir Banister gave views and descriptions of the Palazzo Farnese, the Palazzo Cancelleria, the Villa di Papa Giulia, and the Palazzo Massimi, besides several other examples, and supplied brief biographical notes of their leading architects. He concluded with a glimpse into the villa gardens, with their sparkling waterways, of that romantic city.

The Institution of Sanitary Engineers.

The annual dinner of the Institution of Sanitary Engineers was held at the Holborn Restaurant, under the presidency of Mr. Osmond Cattlin.

Mr. J. C. Dawes, of the Ministry of Health, responding to the toast of "Our Public Health Authorities," proposed by Major T. J. Moss-Flower, said that a lot of the achievements of the public health authorities of the last twenty years were too near for us to appreciate properly, and it would be an advantage if Dickens, who was a commissioner of sewers, or Chadwick, could come back and we could get their views.

The president, replying to the toast of the Institution, proposed by Mr. Frank Massie, President Institution of Municipal and County Engineers, referred to the question of the unification of water supplies, which, it seemed to him, linked up with sewage purification. It would seem an obvious advantage to combine, if the small districts at present without could in this way be supplied with pure-water service and the convenience of the water-carriage system of drainage. They were hopeful enough to aspire to a Royal Charter, in common with other technical societies. The example of the protection given by Act of Parliament to the medical and other professions had created the desire for registration or similar recognition for the engineer, so that all concerned would be able to identify the type of man required for a particular work.

Conference on Solid Smokeless Fuel.

A conference on solid smokeless fuel will be held in the Mappin Hall, The University, St. George's Square, Sheffield, on Friday, November 20, under the chairmanship of Sir Arthur Duckham, K.C.B. The conference is being held under the joint auspices of The Society of Chemical Industry, Chemical Engineering Group and Yorkshire Section; The Institution of Chemical Engineers; The Institution of Gas Engineers; and the Midland Institute of Mining Engineers.

Architects' Assistants' Smoking Concert.

The annual Bohemian smoking concert of the Association of Architects, Surveyors, and Technical Assistants (Metropolitan Branch), in aid of the benevolent fund, will be held at Carr's Restaurant, 264 Strand, W.C., on Thursday, November 26, from 7 to 11 p.m. The President, Mr. E. Fiander Etchells, will occupy the chair, and many well-known entertainers have promised to appear. Tickets 2s. each, including coffee and sandwiches, from Mr. J. A. Gould, chairman Metropolitan Branch A.A.S.T.A., 26 Buckingham Gate, S.W.1.

The Public Works, Roads, and Transport Congress and Exhibition

THE Public Works, Roads, and Transport Congress and Exhibition will open at 11 a.m. to-morrow at the Royal Agricultural Hall, London. It is being held under the patronage of H.M. the King, and the presidency of the Rt. Hon. Neville Chamberlain, M.P., Minister of Health, the chairman of the organizing committee being Sir Henry P. Maybury, K.C.M.G., C.B., Director-General of Roads, Ministry of Transport. During the conference papers will be read and discussed on a wide range of subjects of the first importance to local authorities, and many of them will be of particular interest to the architectural profession. Among the latter are "The Strengthening and Widening of Bridges," by Messrs. C. G. Mitchell, B.Sc., A.M.Inst.C.E., and C. S. Chettoe, B.Sc., A.M.Inst.C.E. (Ministry of Transport); "The Uses of Electricity for Housing and Industrial Purposes," by Mr. R. Hardie, A.I.E.E., Electricity Department, Glasgow; "Regional Planning and Road Development," by Mr. H. H. Humphries, M.Inst.C.E., City Engineer, Birmingham; and "Housing: Alternative Methods of Building," by Mr. Percy Morris, Chief Officer, Housing and Town Planning Department, Wakefield. At the exhibition the exhibits have been selected to show the latest developments in engineering and other trades, which supply the special requirements of county, municipal, urban, and other authorities. The exhibition closes on November 26. Following are brief notes on some of the more important exhibits:

The British Portland Cement Association, Ltd., is an organization for extending and improving the use of concrete. The exhibit shows the utility and versatility of concrete for municipal purposes. It includes a section of all-concrete road with expansion joint and white lines; paving, kerbing, and channels; treeguard; culvert; catchpit; direction and mile posts. Examples of concrete representing various natural stones are on view, demonstrating that concrete of pleasing colour and texture suitable for bridge construction, etc., can be produced. Address: 20 Dartmouth Street, Westminster, S.W.1.

The exhibit of The British Reinforced Concrete Engineering Co., Ltd., consists of a large number of photographic enlargements illustrating road work in which B.R.C. fabric has been used. The photographs cover various types of road work, and they are taken from all parts of the country. The company are making B.R.C. fabric in widths to suit all types of roads and supplying same in either rolls or sheets. The exhibit also consists of a roll of B.R.C. Fabric Reference No. 9, the reinforcement universally adopted for roads in this country. A concrete slab is exhibited showing the position of the B.R.C. fabric in the road, also an actual section of tar-macadam reinforced with B.R.C. fabric taken from a road laid some few years ago. Samples of the new B.R.C. top and bottom reinforcement are also shown. The Company have made arrangements for their film to be shown three times daily in the Exhibition Cinema Hall. This film illustrates the construction of fourteen miles of B.R.C. roads at Tilbury. Address: 1 Dickinson Street, Manchester.

Messrs. Brookes, Ltd., and their several branches are showing samples only of their many productions in connection with roadways and footways. These include specimens of granite from their English, Welsh, Scotch, Channel Islands, and Scandinavian quarries, showing their productions of setts, macadam and chippings, and architectural granite. Specimens of tarred granite and tarred slag; specimens of their "Nonslip" stone for footways, etc., and samples of their glazed brick and fireclay productions, artificial stone, mosaics, terrazzo, and jointless flooring. Address: Halifax.

The exhibits of The British Steel Piling Co., Ltd., include the No. 3 "Wonder" tilting drum concrete mixer mounted on road wheels; No. 4 "Wonder" tilting drum concrete mixer, complete with power loader and automatic water-tank; a "Zenith" ½-yd. concrete mixer mounted on road wheels, complete with power loader and automatic water-tank; a No. 5 SA builders' hoist, fitted with petrol engine; a No. 4 "Zenith" steam friction winch with boiler; sections of Universal and Simplex steel sheet piling; model pile-driving plant, complete with model McKiernan-Terry piling hammer operated by compressed air; and one No. 1 and one No. 3 McKiernan-Terry hammer. Address: 54A Parliament Street, London, S.W.1.

Messrs. Brunner, Mond & Co., Ltd., show, among other exhibits, soda ash 58°E—98/99 per cent. sodium carbonate, for water-softening by the lime-soda process. Caustic soda, in either solid or flake forms, a reagent for softening certain types of water, and calcium chloride, in solid and powder forms, containing over 70 per cent. of calcium chloride ($CaCl_2$), for dust-laying on roads and rubble tennis courts, water treatment, refrigerating, etc. P. 84 grade silicate is claimed to be specially suitable for case hardening concrete roads, floors, slabs, etc. An abrasion machine illustrating this hardening effect will be working at the stand. Exhibits illustrating the use of silicate of soda for making silicate-macadam roads are on view. Address: Northwich, Cheshire.

The exhibit of the Expanded Metal Co., Ltd., consists of samples of the company's various products, and photographs of a few of the more important municipal works carried out on its systems. The exhibits include: "Expamet" RR reinforcements for concrete roads, etc.; "Expamet" expanded steel sheet reinforcement for concrete; "Expamet" and "BB" lathings for plasterwork; "Exmet" reinforcement for brickwork, concrete blockwork, etc.; a section of the kerbing reinforced with "Kerbmet"; and "Expamet" treble-layer reinforcement. Address: York Mansions, Petty France, Westminster, S.W.1.

Messrs. W. H. Gaze and Sons, Ltd., on their stand are demonstrating the advantages of their "All-Weather" tennis court. The firm claim for this court that it "is of a colour which, in the brightest sunlight, does not trouble the eyes with glare. Yet, on a dull day, it makes a faultless background against which the travel of the ball is most clearly outlined. Immediately after a sharp shower, or within a few minutes of the finish of a long sustained and heavy downpour, the 'All-Weather' court is in first-rate condition for play. It is porous, and water will not lie upon it for any length of time. Neither will the substance of which it is composed become muddy or sticky, or in any way stain the balls. Owing to its turf-like resilience the 'All-Weather' court is not tiring to the feet. It does not cut up the balls, but gives them a bounce and 'angle' as on the turf." Address: 19–23 High Street, Kingston-on-Thames.

The Lefarge Aluminous Cement Co., Ltd., exhibit Ciment Fondu (British manufacture), which is claimed to be an indecomposable cement of high-alumina content, while its qualities include high initial resistance at twenty-four hours, and complete immunity from attack by sea-water and sulphur-impregnated waters and earths. The exhibit demonstrates the application of Ciment Fondu as a binder for macadam road surfaces. Descriptive data and tests are also shown demonstrating its general use for all forms of structural engineering work. Address: Lincoln House, 296–302 High Holborn, London, W.C.1.

The Liner Concrete Machinery Co. are exhibiting their patent concrete machinery. The "A" type "Liner" patent concrete stone-moulding machine will make the following stones:—Sills, heads, lintels, jambs, mantels, rock-faced and plain building blocks, hollow blocks, slabs, kerbs, quoins, mullions, channels, coping, fence and gate-posts, cornice, etc. Although the standard-sized moulding-box fitted to this machine is 6 ft. long by 13 in. wide by 6⅜ in. and/or 9 in. deep, these sizes can be varied to suit requirements. The "Liner" combination slab, block, and brick machine, and the "Liner" patent semi-dry concrete mixing machine are also shown. Address: Newcastle-upon-Tyne and 18 Victoria Street, Westminster, S.W.1.

Among the many exhibits of Messrs. Ruston and Hornsby, Ltd., of Lincoln, engineers, are their Universal Excavator and their class "EP" portable crude-oil engine. The chief feature of

this No. 6 Universal Excavator is its use as a standard crane navvy, dragline, grabbing crane, trench excavator, pile driver and crane. Equipment necessary for conversion to grabbing crane is seen on the stand. The machine can be mounted on rail wheels, road wheels, or caterpillars, whichever are preferred. Caterpillars are, however, by far the most useful, and 95 per cent. of the machines which the firm have on order are being fitted with this form of travelling gear. A great feature of the machine is its usefulness for development work. The class "EP" portable engine is made in four sizes from nine b.h.p. to twenty-five b.h.p. The three smallest sizes are arranged for tower-cooling, while the larger engine is fitted with radiator. In each case the engine is mounted upon a substantially built under-carriage with suitable travelling wheels. Being enclosed and dust-proof the class "EP" engine should be found eminently suited for contract work, driving concrete mixers, etc.

Among the exhibits of Messrs. William Shepherd and Sons, Ltd., who are exhibiting with their associated companies—The Hartington Quarries, Ltd., and Shepherd's Parging Block Co., Ltd., is asphaltic slag for roads. This is a superior grade of slag tarmacadam, and is available in the sizes 2½ in. to 1½ in., 2½ in. to 1 in. graded, 1½ in., ¾ in. to ⅜ in., ⅝ in. to ¼ in. Asphaltic slag is supplied in bulk in their own improved railway wagons, fitted with steel-sheeted bottoms to facilitate unloading (it is also supplied by road direct from their London depôt, Mansell Road, Acton, W.3, an arrangement which is particularly useful to customers in the London area). The firm also supply and lay asphaltic slag complete under maintenance guarantee, covering a period of from three to ten years as desired. Another speciality is "Shepfalte," a new mastic asphalt. This material has been evolved after exhaustive investigation and experiment, and the firm are equipped to manufacture and lay it complete on the most approved and scientific lines. Address: Milkstone, Rochdale.

Messrs. Stewarts and Lloyds, Ltd., are showing the welded and weldless steel tubes, fittings for water, gas and sewage. The principal items include three large diameter lapwelded steel tubes, lined internally with concrete, for water or sewage; four lapwelded steel tubes, 12-in. to 24-in. bore, lined centrifugally with a special bituminous composition, patent 224,365/24; and two weldless steel tubes, 8½ o/d by 5wg. thick, each 40 ft. long, for water. One of the latter is coated inside and outside with a bituminous solution specially prepared by the exhibitors, the other is coated inside and outside with the same solution, and afterwards wrapped with jute cloth soaked in hot solution and wound on spirally. Address: 41 Oswald Street, Glasgow.

Messrs. Stothert and Pitt, Ltd., exhibit a ten-ton portable asphalt plant, a No. 7 Victoria mixer, and a tip-cart. The ten-ton portable asphalt plant is capable of manufacturing 1,000 sq. yd. of bituminous carpeting 2 in. thick per eight-hour day. These figures are based upon a moisture content of the sand of 10 per cent., and raising the temperatures of the dried sand to 450–500° Fahr. The whole plant is mounted on road wheels while it is arranged with clear space under the mixer for lorries to receive its discharge. The machine is fitted with a belt-driving pulley. The No. 7 Victoria mixer has a mixed batch capacity of 7 cu. ft., and is provided with a side-loaded, petrol engine drive, automatic water tank, and is mounted on road wheels with swivelling fore-carriage. Address: Bath.

Messrs. Tarmac, Ltd., now own and control works in no less than ten counties in England and Wales. "Tarmac" is manufactured of specially selected blast furnace slag and the company's own preparation of refined tar and other ingredients. The company's works are erected on sites adjacent to blast furnaces producing the slag, and "Tarmac" is sent from the works ready for application to roads and similar surfaces. The exhibits include samples of untreated blast furnace slag; of all gauges of "Tarmac"; of "Vinculum" concrete articles; of concrete aggregate; and photographs of main roads laid with "Tarmac" and of Tarmac works. Address: Erringshall, Wolverhampton.

Among the prominent features on the stand of Messrs. Tuke and Bell, Ltd., is a one-ton capacity petrol motor lorry for general haulage work and the transport of house refuse. It has an end-tipping body with a patent gravity hand-operated tipping gear mounted on a "Morris" one-ton chassis, body 41 cu. ft. or 100 cu. ft. capacity as required. Another exhibit is the "Grip" patent manhole cover and frame for heavy road traffic. It has tapered concentric graded rings in height to hold up the road material to the frame, and is claimed to make abrupt edges impossible. Address: Carlton Engineering Works, Lichfield, Staffs.

Messrs. Walker, Weston & Co., Ltd., are showing a single-layer and a double-layer road reinforcement; a "Macrete" concrete road surface; and an interlocked joint for concrete roads. Address: 75 Victoria Street, S.W.1.

On the stand of Messrs. Winget (1924), Ltd., are, among other exhibits, the following: Winget (1926 model) 4 cu. ft. semi-spiral mixer, engine driven, portable set; Winget (1926 model) 7–5 cu. ft. chain spade engine-driven portable road mixer; Winget (1926 model) No. 2 hand-pressure machine; Winget No. 3 automatic slab-making machine; Winget No. 1 Universal pressure machine, fitted with kerb-making outfit; Winget (100 ton) automatic stone drying and tarring plant (scale model). All these machines will be running for demonstration purposes. Address: (Head Office)—Winget House, Grosvenor Gardens, Westminster, S.W.1.

The Selection of Stone for Building

Professor A. P. Laurie delivered a lecture on "The Selection of Stone for Building" to the students of the Royal Academy of Arts, London. He began by describing the various stones used for building purposes, and gave some account of their chemical composition. He then dealt with the two main groups of stones used for building—sandstones and limestones—and described the various causes of the weathering of the stone. He said that the most serious cause of weathering to-day was the attack on the stone of the acid oxidized products of sulphur, due to the burning of the sulphur in coal; and showed that this was not confined to the towns, but was found in buildings even in remote districts.

The action of the sulphur acids resulted in the formation, in the case of limestones and in the case of sandstones which contained calcite, of calcium sulphate, which was slightly soluble in water and would cause the stone slowly to waste away. But the most serious effect of calcium sulphate was its crystallization within the stone, resulting in the stone being mechanically broken up. In illustration of this he showed experiments on the breaking up of stone by the crystallization of salts within it, and explained the conditions under which these took place, and illustrated this by experiments made on crystallization in capillary tubes.

He pointed out that as far as sandstones were concerned, it was possible to select sandstones for building which were practically free from calcite, and should therefore be used in modern cities.

In the case of limestones, all that could be done was to select a limestone which would best resist this form of attack. Much depended upon the susceptibility of the limestone to attack, which could be tested by exposing small cubes to an acid vapour, and by measuring the rate of absorption of water and evaporation from the stone, which could also be made the subject of laboratory tests.

He described experiments on certain selected limestones, showing how much they differed in susceptibility to attack and in tendency to break up, owing to the crystallization of the sulphate of lime. Apparently one of the conditions was that there should be free and rapid evaporation from the stone after wetting, so as to draw the sulphate of lime to the surface and prevent it crystallizing inside the stone.

And this raised the question as to whether the hosing of buildings during hot weather would not be of advantage. Further research was required in these directions, but in the meantime it was quite possible to guide the architect, both in the selection of sandstones and in the selection of limestones by chemical analysis and by experiments on the rate of attack of acid vapours upon samples of the stones.

Coming Events

Wednesday, November 18.

Royal Society of Arts, John Street, Adelphi, W.C.2.—"The Furniture of Hampton Court." By Mr. Ingleson C. Goodison. 8 p.m.

Royal Academy of Arts, Burlington House, W.—"The Selection of Stone for Building." By Professor A. P. Laurie, D.Sc. 4 p.m.

The Week's News

Wider Great North Road.

The Hertfordshire County Council are to spend £380,000 in widening the Great North Road.

New Labour Exchange for Shoreditch.

The building of the new Shoreditch Labour Exchange will be begun shortly on a site off Kingsland Avenue.

1,600 New Houses for Lanarkshire.

The District Committee of the Middle Ward of the County of Lanark have decided to construct 1,600 additional houses.

New Public Baths for Lytham St. Annes.

New public baths are to be erected by the Lytham St. Annes Town Council at an estimated cost of £30,000.

Sixty-one Houses for Bromley.

Plans for 61 houses in Sirward Road, Bromley, have been approved.

Herr Otto Rehnig.

Herr Otto Rehnig, well known as an hotel architect, has died at Berlin, aged 62.

Housing at Molesey.

The Molesey Urban District Council are building 57 houses at a cost of £27,924.

One Hundred Houses for Erith.

The Erith Urban District Council have approved a scheme for 100 new houses.

Housing at Burgess Hill.

The Burgess Hill Urban District Council are to erect 37 houses of the non-parlour type on land in Norman Road. The houses will be built by direct labour.

Professor Nordhagen.

The death is announced of Professor Nordhagen, who was in charge of the restoration work which is being carried out in the cathedral at Trondhjem. He was born in 1883.

Lancashire's £3,000,000 Road Scheme.

The Lancashire County Council have agreed to contribute not more than £377,000 towards the proposed new £3,000,000 road between Liverpool and East Lancashire.

Big Manchester Property Deal.

The Exchange Arcade, Manchester, has been sold to Messrs. Woolworths, as a site for a large store. The Arcade is a familiar property, and runs at right angles from Deansgate to St. Mary's Gate.

New Art Gallery Proposed for London.

The Corporation of London have requested their Library Committee to consider the question of building a new Art Gallery and, generally, the whole question of the advancement of art within the City.

Oldbury Improvement Scheme.

The Oldbury Town Council have sanctioned a scheme to improve Todd Row and Green Street at a cost of £12,556. This includes the erection of 20 new houses to take the place of those demolished under the scheme.

Town-planning Scheme for Aberystwyth.

The Aberystwyth Town Council have adopted a town-planning scheme to include all the land within the borough, and Mr. T. Alwyn Lloyd has been appointed to prepare a scheme.

The Royal British Colonial Society of Artists.

The following have been elected members of the Royal British Colonial Society of Artists: Mr. Walter Tyndale, R.I.; Mr. Duff Tollemache, Mr. Archibald Kay, A.R.S.A., Mr. F. Marriott, A.R.E., and Mr. Fred Milner, R.B.A.

Housing Progress at Ilkley.

The Ilkley Urban District Council have decided to ask the Ministry of Health to sanction the erection of a further forty-two houses on the housing site in Leeds Road. The majority of the houses will be of the non-parlour type. This will complete the full scheme of 106 houses on this site.

An American Venice.

On Long Island an "American Venice" is to be constructed at an estimated cost of £2,000,000. Contracts have been awarded for the construction of the canals and waterways, and also for a large lagoon, 240 feet by 600 feet, which will afford bathing facilities in one of the largest swimming pools in the United States.

£100,000 for New South London Churches.

The Bishop of Southwark, at the Diocesan Conference in the Chapter House, St. Thomas's Street, Southwark, moved a resolution, which was unanimously carried, urging the necessity for the provision of churches for the new populations rapidly springing up on the borders of South London, and appealing for £100,000 to carry out the building scheme.

Great Street Scheme at Newcastle.

The Newcastle City Council have decided to incorporate in their Parliamentary Bill a new street scheme, the gross cost being estimated at £800,000. The project is to drive a new street from Pilgrim Street to Barras Bridge, in order to relieve the congestion of traffic which, it is believed, will follow the opening of the new bridge across the Tyne.

The Incorporated Institute of British Decorators.

The following have been elected Honorary Fellows of the Incorporated Institute of British Decorators: Mr. Frank Brangwyn, R.A., R.P.E.; Sir Banister F. Fletcher, F.R.I.B.A., F.S.I., F.R.G.S., F.R.S.I.; Professor A. P. Laurie, M.A., D.Sc., F.R.S.E., Hon. R.S.A., F.C.S.; Messrs. Eric Morley, W. H. Meggs, A. J. Healey, F.R.I.B.A., and T. P. Bennett, F.R.I.B.A.

Manchester Town-planning Scheme.

The Manchester and District Joint Town Planning Advisory Committee have found that their proposal for one great scheme of town planning to embrace 1,100 square miles and 104 local authorities is too large so far as time for completion is concerned. At a conference in Manchester Town Hall it was agreed to accept a scheme in order that the proposals of the Advisory Committee could become statutory schemes to group authorities in certain districts. It was agreed that the Joint Committee should call conferences of the local authorities in the proposed decentralized areas. Mr. Bruce, of the Town Planning Department, declared that he still thought that the one big scheme of town planning workable, from the point of view of both effectiveness and economy.

London Town Planning.

Officials of the London County Council are at work on proposals for the re-planning of London. These will be assisted if Mr. Neville Chamberlain carries through his proposed Bill for the town-planning of built-up areas. It is contemplated that the L.C.C. plan will cover the whole of London, and will be the basis to which future development and re-development will conform. It is claimed by Mr. Topham Forrest, architect to the L.C.C., that such a plan will enable improved conditions to be realized at a minimum cost and maximum advantage to the community. The object of the plan is to provide sites adequate to modern building schemes, to improve the roads, and to avoid undue interference with the existing buildings of a permanent, institutional, or historical character.

The Cost of Building.

At the last meeting of the London County Council, Lieut.-Colonel Levita (chairman of the Housing Committee) stated that the Council's estimates for the building of houses on their estates before the war was based on a figure of £4 15s. to £5 per rod of brickwork; but now it was from £10 to £12 per rod. The costs for labour for brickwork, on an average, for the four-roomed type was now between £65 and £70, as compared with £30 and £35 in 1914. Thus the increase in wages and costs of materials above 1914 prices exceeded 100 per cent. in each case. With regard to the proportionate cost of labour and material in a house, it might now be taken as approximately half and half, which was the same as before the war. Approximately 87 per cent. of the cost of a house was paid in labour. Land was governed by quite different considerations.

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