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THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal."

FROM AN ARCHITECT'S NOTEBOOK.

REDCLIFFE CHURCH, BRISTOL.

Stay, curyous traveller, and passe not bye,
Until this festive pile astounds thine eye;
Whole rocks on rocks with yron joyn'd surveie,
And okes with okes entremed disponed lie,
This mightie pile, that keeps the wyndes at baie,
Fire-levin and the mokie storm defie,
That shoots aloft into the reaulmes of daie,
Shall be the record of the buylder's fame for aie.

. . . . .

Well mays't thou be astound, but view it well;
Go not from hence before thou see thy fill,
And learn the buylder's virtues and his name;
Of this talle spire in every country telle,
And with thy tale the lazing rich men shame;
Showe how the glorious Canynge did excelle.

CHATTERTON'S ROWLEY MSS.

9 Queen Anne's Gate. Westminster.

Montefiascone : The Cathedral

From a Wash Drawing by S. Rowland Pierce.

THE

ARCHITECTS' JOURNAL

9 Queen Anne's Gate, Westminster.

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The New Road Crossings

SOONER or later the new great arterial roads will be seriously undertaken and will be growing into a system. The change is imposed by necessity. But for the war it would have come before this, and our danger is that the haste to which we may be compelled as a community through the increasing advance of road transport and traffic, may make us omit characters which it would be later difficult or impossible to add, or to incorporate in the scheme ill-features, which it might be difficult or impossible to eliminate later on.

Of the hundred aspects which the thing presents, a layman like myself can only deal with very few. Experts must determine the essential points of surface and of dimension, and even of trace, with I know not how many other technical but fundamental factors in the problem. The economic side of the affair with which a member of the general public, reasonably instructed, has some right to deal, is a consideration apart from the rest, and I will say nothing of it here. There is only one point which I would put forward here as a member of the public. It is of such a character that the widest tribunal may judge it; it will affect us all, and it is such that any grave error in regard to it will hamper and perhaps render useless the whole system: I mean *the intersections between the new arterial roads and the old road system of the country*. It is a subject I have touched on briefly in a paragraph of my recent book upon the English Road, and one to which one cannot return too often.

That conception of the road which was the only one possible to our forefathers since the beginning of a civilized system of communication, envisaged any new road as no more than an added unit to roads already in existence. It came into the same category as the rest; it cut across these without fear of disturbing their original function, save in so far as the new road might by competition destroy or lessen the uses of an older one in its neighbourhood. The new road under those conditions acquired no special regulation to guard its intersection with the roads of the existing system. It fitted in simply with what it found awaiting it, and merged into the general plan.

Then came the railway. Here was a new kind of transport way which had for its two main characteristics (from the point of view which I am examining, that of intersection) (1) the necessity for easy gradients; (2) the presence upon it of very great weights moving at a very high rate of speed, and therefore with exceptional momentum. The first of these continually made it necessary to conduct the new transport ways above or below the existing road system in any countrysides other than flat plains. The tunnel and the cutting and the embankment left—especially in England—what is called the "level crossing," an exception; and even where the contours made level crossings possible, our predecessors were often at the expense of taking the road over the railway artificially by a new approach rather than expose themselves to the dangers of collision. The whole aspect of our railway system to-day is a fossilized memory of those high precautions, and of the way in which the two generations previous to our own regarded the peril of a new high-speed traffic brought into conjunction with the old horse and foot traffic of the common road.

A continuous barrier follows the railway on either side, to prevent obstruction to the trains and to save human beings and animals from danger. Public authority forbids the use of the railway and the land immediately to the side of it by any but those concerned with the working of the line. The level crossings are carefully guarded with gates; very many of them have the extra security of watchers; all those upon the main ways have such security.

Everything was done, and remains done, to differentiate between the new high speed traffic and the old, and to safeguard the one from the other.

The gradual advent of the internal combustion engine was of such a kind that this distinction failed to take root. The new vehicles came designed for the public highway, comparatively cheap, made to carry at first few in number, their speed at first not remarkable, nor their weight. It was on the public highway that they developed their uses.

Though the thing grew rapidly, yet it grew continuously and without shock, until after these few years we find a form of transport comparable, in the perils with which it menaces the older forms, to the locomotive and train: but with no simple, effective, universal protection for the older form of traffic against the new.

The problem thus presented has barely been tinkered at. There was for a long time in this country an effort to do something by the imposition of speed limits. These were largely disregarded and even when they were observed were insufficient. For wherever a vehicle weighing many hundredweight moves down one of our narrow winding roads, whether at fifteen miles an hour or thirty, especially if it moves, as the modern car does, silently, it is equally destructive in case of collision to the horse vehicle and the pedestrian. As the number of automatic vehicles grew, the difficulty was met by a very imperfect compromise, which is less and less easily adjusted with every passing year. The foot passenger and the horse vehicle use the road, one might almost say, by tolerance; the petrol vehicle is master of it, but an uneasy master; it works in continual anxiety and (if I am not mistaken) with a rising proportion of accident.

The conclusion is that the new great arterial roads will, in any case, *tend* to be roads for petrol traffic rather than for other traffic; and the first policy which suggests itself is that, whether they be created specially for petrol traffic by private enterprise, so that the owners are free to forbid any other use, or whether they are created by public enterprise, to petrol traffic alone should they be confined.

That seems to me the first, the cardinal proposition, from which we must start. At the beginning of such projects—long before the war—a politician of some foresight proposed exactly that: the creation of new roads, which should be set aside for the new traffic.

But that obvious (and, it is profoundly to be hoped, certain) piece of policy is not sufficient.

The new roads must intersect the old roads, just as the railways intersected the road system of their day. Everywhere, but in this country especially, the railways, as I have said, frequently meet such intersection above or below the general level; but in the case of the new arterial roads there is no mechanical necessity procuring this advantage. There is no necessity for low gradients. The most economical way of constructing any such new arterial road, if the question of cost alone were being considered, would be to follow the general contours of the country just as our present roads do, with only very rare occasion for cutting or embankment. As a result the new arterial roads, left to the line of least resistance, would everywhere intersect the older roads at their own level. In other words, the new arterial roads would create a mass of what are virtually level crossings.

We have already some experience of this drawback in the case of a few wide main roads which support to-day a stream of fast-moving heavy petrol traffic, and into which those approaching from the side roads are at some peril. That peril will be indefinitely increased in the case of great arterial roads, which cannot but canalize and draw upon themselves much the greater part of the petrol traffic of a large district.

I pointed out (in that recent book upon the road to which I have just referred)* that if you have a great arterial road running, say, from London to Birmingham and confined to petrol traffic, a motor vehicle travelling between two points other than the two termini—say, between Henley and Stratford-on-Avon—would no longer take the shortest way by the existing road, but would get, as soon as it could, on to that arterial road and keep on it to the last moment possible; preferring to add a few miles to the way for the advantage of a clear run for the greater part of it unobstructed by the older forms of traffic.

Now level crossings in the older sense we cannot have. The cost would be prohibitive, the obstruction intolerable. We are driven to the conclusion that the makers of the new arterial roads should or must make provision for the points of intersection by carrying the old roads above or below the new ones, or by carrying the new roads above or below the old ones. It is the new road, presumably, which would have to bear the burden of this policy. Not only would it increase the cost of their creation, but it would also introduce perpetual short gradients. Both these factors militate against the adoption of such a policy. On account of both, resistance must be expected. But, so far as I can see at any rate, it is imperative that that resistance should be overcome, and that the points of intersection should not be upon one level.

We have here, then, two policies which impose themselves, it would seem, upon the new roads; but there is a third, correlative to them, from which there is no escape. At the points of intersection, or at any rate at many of them, petrol traffic must have access to the new arterial roads. Motor-cars are owned and used from points innumerable scattered all over the country. Motor traffic moves from any one of these innumerable points to any other. A great arterial road joining (let us say) Hull and Liverpool, or London and Bristol, cannot be confined to the use of those who are going from one terminus to the other; it must be available for those who live upon either side, and desire to use it for part at least of their journey. Therefore we must have special approaches from the intersecting older roads whereby petrol vehicles may reach the new arterial roads from these. Therefore, at each point of intersection, or at any rate at all the main points of intersection, there must be a system composed of these three elements: (1) the older road; (2) the new arterial road carried above or below it; and (3) "feeders" leading up or down from the older road to the new arterial road; and what is more, it is probable that these "feeders" will have to be so arranged that the traffic coming in on to the arterial road from the older road shall arrive at the side which it is going to use. That means, in practice, two "feeders" at each point of intersection.

We have then, as I see it, three policies among others which impose themselves almost of necessity upon the new system: (1) the use of these new roads for petrol traffic alone; (2) the carrying of them above or below the existing roads at points of intersection; (3) the provision of approaches at, or at any rate at the main, points of intersection, so that the districts on either side of the main roads may use them.

These three combined present a very different picture of the new roads from that which is in most men's minds, or indeed from that which is apparent in one or two of the provisional essays in this new kind of way. They impose a very great increase in cost over the older methods of road building, and this is added to the very considerable expense of new surface and larger dimensions. But I am persuaded that if any one of these three be neglected we shall pay heavily for that neglect in the future. We shall, by neglecting any one of these three, soon render the new experiment useless, and leave transport more dangerous and more chaotic than we found it.

HILAIRE BELLOC.

* "The Road." Messrs. Unwin.

The Mutilating of Waterloo Bridge

In the course of work on the temporary steel bridge at Waterloo, Rennie's masterpiece has been rather seriously mutilated. The parapet and cornice over the stone staircase adjoining Somerset House have been removed, and the two columns on the eastward face of the first pier from the Embankment have been hacked away, together with their superstructure. This mutilation may or may not be necessary. In any case it is difficult to find any real justification for the hacking away of the columns, which appears to have been done in order to provide room for an access staircase from the bridge level to that of the protective piling around the caissons of a pier of the temporary bridge, though, oddly enough, where staircases have been provided to other piers, it has not been found necessary to remove the columns. Such mutilation ought not to be permitted without serious necessity, and we are glad to note that Lord Crawford has protested strongly against it in a letter to "The Times," which is reprinted elsewhere in this issue. Waterloo Bridge has not yet been condemned to death, and no satisfactory reply has been made to the case for its preservation recently made out by a responsible deputation to the L.C.C. To mutilate the bridge at this moment is tantamount to hanging the prisoner before trial. So far as we can see there is no vestige of justification for much of what has been done. We hope that the matter will be thoroughly investigated. The County Council should at once issue a strict order against the infliction of any further damage.

The Elgin Marbles

The delicate question as to whether, in the event of the Parthenon being restored, the Elgin Marbles should be returned to the building, is still the subject of inconclusive debate. The disputants range themselves into two directly opposite camps of yea and nay. It cannot be disputed that the sculptures belong to the Greeks. Why should they not be returned to them? It is answered that the Greeks proved by indifference to be unworthy of the custody of the marbles. If Lord Elgin had not rescued them (with, be it noted, the full authority of those then in possession) it is conceivable that they would have perished with so much else of the Parthenon that is returned to dust. In the British Museum they are safely preserved for all time. Possession may be nine points of the law, but—an uncomfortable doubt of our right to keep what may not belong to us persists.

Architectural Style—3

Duality Resolved and Unresolved

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

IN the previous article I began to analyse the first of the three grammatical principles, namely, that of Number. I propose to discuss this in detail first and then the principles of Punctuation and Inflection, also in detail, giving two articles to each. Then must follow a résumé in which the three grammatical principles are discussed simultaneously with reference to a number of examples which in various degrees embody them all. At that stage the main outlines of the grammar of design will have been established, but what of the philosophic implications of the grammar? What bearing will it have in the first instance upon our choice of style, and, secondly, how will it affect our judgment with regard to the various other acute controversies which have raged and are still raging in the architectural world? In what does architectural proportion consist, how far are the merits of a design dependent upon the degree in which it is influenced by its materials and methods of construction; to what extent is it possible to turn one's back on the past and create an entirely new architectural style? These are some of the questions which will assume an entirely new aspect when the grammar of design is once apprehended.

Let us at this point resume the discussion of duality, that formal blemish which the artist must at all costs eliminate from his design. It may seem an easy thing, this elimination of duality, but it is surprising how the evil spirit, the devil of unresolved duality crops up again and again in design and in the most unexpected places. A student of architecture may have learnt how to exorcise this devil when it appears in one particular guise, and may resent the assumption that he has not yet fully grasped the principle of Number, and, nevertheless, on the very next occasion he will gaily commit an error in design, which, upon investigation, will prove to be but another form of unresolved duality. I make no apology for the fact that some of the illustrations here shown are taken from designs premiated in important architectural competitions. That the designs in question have been awarded prizes cannot in the least affect one's judgment concerning their formal qualities. Nor do I anticipate that the readers of the Journal when once the subject has been put before them in this particular way, will be able to resist the conclusion that an unresolved duality, wherever and by whomever it is committed, is a cardinal error in design. For reason is all-powerful, and gives confidence even to the most obscure of its votaries; and it cannot be in conflict with authority, for if it be but right reason authority itself must necessarily defer to it.

It will be found that not only animate nature, which shows itself in all the shapes and dispositions it assumes to be instinct with logic, but such works of art as are acknowledged to be best, obey the grammatic formula here expounded; for human genius itself and the consensus of taste by which the products of genius have been raised to their high place in popular estimation are themselves inspired by this same logic, which is an inborn capacity in every one of us. Thus the grammar is not a "modernist" upstart which would presume to render "out of date" the noble works of the past; rather it does but confirm our admiration for these, while at the same time it gives us a standard by reference to which we are enabled to defend these works against their unintelligent detractors. It will be found that buildings exemplifying an ancient style will, by virtue of their obedience to the grammar, be possessed of great vitality, whilst some of our newest structures, albeit their authors claim that they are splendidly original, are, in reality, stillborn, because they altogether lack the organic attribute.

Now, a building is an atrocity and an abortion if it is split down the centre by a narrow vertical dividing member into two equal symmetrical parts. This much was established in the last article. Let us consider for a moment how it is possible, keeping the central member fairly constant in width, to resolve the duality of the wings by modification of their shape. The very use of the word "wings" is sufficient to offer a suggestion as to the solution of this particular problem. Fig. No. II illustrates three butterflies, two of which are freakish and the third natural. Example No. 1 shows a pair of rectangular wings, a shape

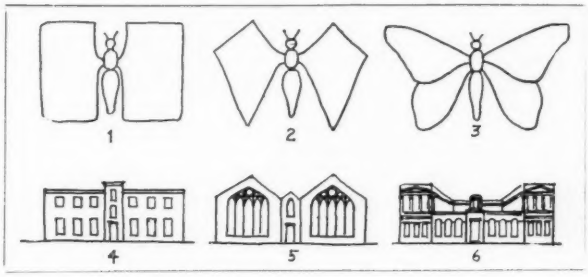


FIG. II.

which Nature could not recognize because the principle of unity has been flagrantly defied by them. On looking at these shapes it is clear that they do not compose a pair; if we were to see the left wing in isolation we do not immediately ask for its right-hand counterpart: the composition is dead. And still less vitality is expressed in the second example, for here the two wings exhibit their detachment even more aggressively by reason of the fact that each is markedly a complete whole, having symmetry about its centre axis. In example No. 3 Nature shows how the duality of the wings has been completely and elegantly resolved by the simple device of making the wings complementary to one another. They are bound together by a process which I here describe as *conjugation*. Let us see how in architecture this method of conjugation can be applied to the problem of resolving duality. In Fig. II underneath the drawings of the butterflies are three buildings which in a certain manner correspond to them. In example No. 4 the central member is so narrow that it utterly fails to dominate the façade and merely succeeds in cutting it in two. In example No. 5 the case is even worse, for here, as in the corresponding insect pattern, the two wings are given a symmetrical formation which detaches them from the centre feature more completely than in the previous illustration. In example No. 6, however, although the central member is even smaller than in the other two cases, a far higher degree of unity is obtained for the simple reason that the two wings are obviously shaped as pairs. We cannot look at one of them without immediately asking, "Where is the other?" This building is slightly reminiscent of Queen's College, Oxford, a notable example of the resolution of duality by means of conjugation. Let us glance at Fig. No. III. Here again we start by considering a façade whose exiguous central feature fails to unify the design. In example 2, a double solution of the difficulty is effected by a process which may either be described as conjugation, or else one may say of it that the duality has been displaced by a trinity. We have here three features which are sufficiently prominent to be dissociated from the façade, and to form a self-contained group for which the intervening wallage serves merely as a junction. This system of composition is to be found in very many famous buildings, and it is so extremely satisfactory from a formal point of view that

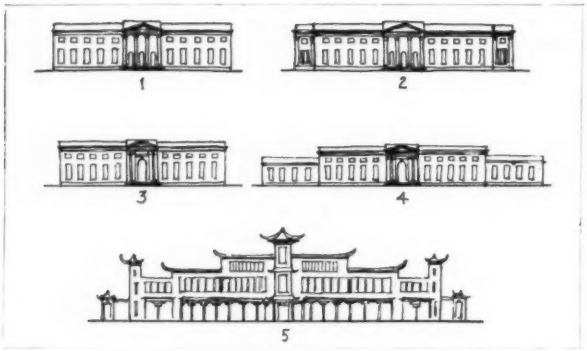


FIG. III.

it is safe to say that no future architectural development can deprive it of its usefulness. I need mention only one example of this configuration, namely, Buckingham Palace, and doubtless the reader can call to mind many other similar façades. I have described the three prominent features as constituting a whole by reason of the fact that trinity has itself the character of unity, but let us look at it in a different light. Each terminal feature in conjunction with the wallage between itself and the central pediment may be considered as a wing shaped right and left as a pair, so we may also say that this is an example of conjugation.

In example No. 3 the central feature is even narrower. One may safely say that the narrower it becomes the more pronounced is the need for the wings to be conjugated in an emphatic manner. In example No. 4 we see how the main body of façade No. 3 can have its duality resolved by the simple process of addition; two extra side-wings are set in relation to the façade in such a way that the lateral members are obviously paired, and the result is satisfactory, and although in comparison with the total length of the façade, the central feature is even narrower than in example 3, it has ceased to irritate us. Example No. 5 shows us a still closer approximation to the organic form of the butterfly, and this might almost be described as an extreme example of conjugation. I do not express any opinion as to the subject of this building, but it is not an extravagant assumption that the design might be suitable for a first-class modern hotel in a Japanese forest. Coloured scarlet against the background of foliage, its appearance might be highly attractive. And who shall say that structures such as these may not some day find a natural home in our own country? But I am anticipating the later part of my argument.

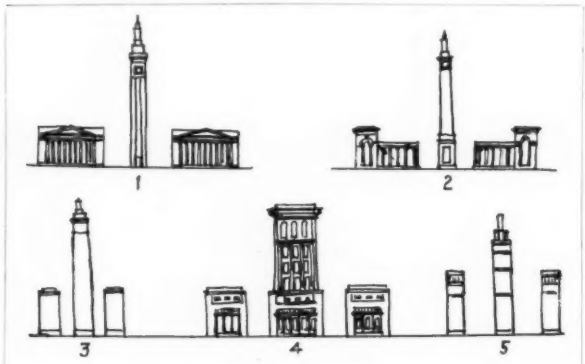


FIG. IV.

Fig. IV shows in its first example the well-known shape of an ancient Egyptian gateway. It will be seen that in this instance the conjugation has been effected in a different way. The sides of the pylons are sloped outwards, providing spreading bases for the lateral features, with the result that the central doorway is by no means crushed. It is easy to imagine how insignificant the central feature would have become if the sides of the pylons had been vertical. Let us make a bold experiment and turn the structure upside down. Example No. 2 of Fig. IV shows the result, and it is clear that in this instance also the duality has been adequately resolved; whether such a form could ever be considered structurally convenient or expressive of any practical purpose, I do not attempt to determine. I am here dealing with the formal qualities of buildings, and I am content to affirm that example No. 2 is just as beautiful as example No. 1. In No. 3 we have the end of a street which abuts upon a bridge. Here the buildings which terminate the street have their duality resolved by conjugation, as the bracketed upper stories form shapes complementary to one another. Here is a case where the interval between the wings is larger and more important than the wings themselves, and thus the interval acquires the characteristic of a central feature. The central feature is the street itself, which becomes the main architectural unit of design, to the cohesion of which, however, the shaped terminal buildings make an important contribution, while it is clear that the pediment which closes the vista also helps to unify the whole.

Example No. 4 shows two complementary buildings which again by virtue of the size of the interval between them have the character of a gateway. Were these placed closer together their unity would be impaired, because, although the wings are conjugated, there would not be

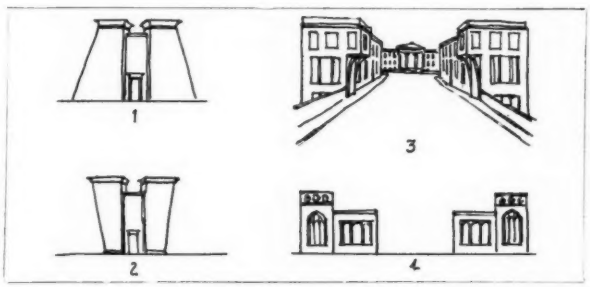


FIG. V.

left between them a sufficiently striking central element. In No. V the first example shows an unsuccessful attempt to resolve a duality without the help of conjugation. We shall see in subsequent cases that this is often possible, but to effect such a result the central feature must clearly have the character of a dominant. Here the tall, narrow tower is quite unsuitable to form a trinity with the two squat pedimented buildings on either side of it. In fact, it has very clearly the character, not of a joining member, but of a dividing member. But even here, however, although I do not say that the suggested solution is altogether satisfactory, something can be done by conjugation, and example No. 2 shows how an effect of greater unity has been obtained by shaping the lateral buildings so that they become complementary to each other. In examples Nos. 3, 4, and 5 (Fig. IV) we have trinities which are so constituted that they form unities without the aid of conjugation. This is because in each case the central member is broader than the others. It may be noted, however, that example No. 5 is less satisfactory than the remainder, because here the intervals being broader than the buildings, are becoming rather obtrusive, with the result that an unresolved reality of intervals is beginning to be apparent.

It is extremely difficult for a tall, narrow tower successfully to form a dominating feature to an important building if it be placed centrally. Fig. VI shows two examples, of which that on the left hand signally fails because the lines of the tower, when continued downwards, cut the façade in two in an irritating manner. In the right-hand example, however, the tower is seen to broaden out into a pediment which still further broadens into a

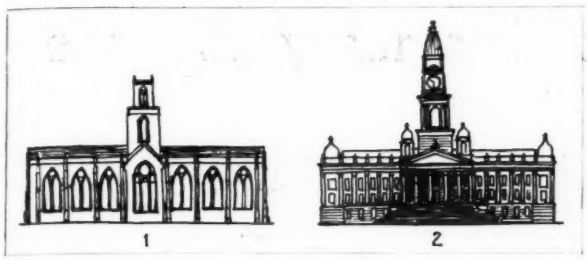


FIG. VI.

grand flight of steps, so although the dominating feature is itself quite narrow in girth, it has the wisdom to change its character when it merges into the façade. I have just described only one of the qualities by virtue of which the Portsmouth Town Hall is one of the most beautiful buildings in England.

Fig. VII shows a number of examples which may here be quite rapidly reviewed. In line 1 the reader will readily determine which of the buildings constitutes an unresolved duality. Examples A and B are obviously unsatisfactory, while D, E, and F have the true trinitarian qualities by virtue of which they are satisfactorily artistic wholes. It is noteworthy that in none of these three instances has it been necessary to resort to conjugation in order to unify the main features. In Fig. C the two towers, although not entirely dominated by the central spire, are yet so harmoniously bound together by the rows of arches and niches that one would hesitate before describing this façade as an unresolved duality. In fact, it is one of those fascinating examples where unity has been satisfactorily achieved by very subtle means. The arrangement of triple towers is often found in the great English cathedrals, which, by virtue of their scale and harmony, form some of the grandest architectural compositions which have yet been achieved.

Fig. G of Line 1 shows an unresolved duality of a different character from that of A and B, for here the façade is cut in two by a deep crevice which, however necessary it might have been for purposes of ventilation, effectively destroys the unity of the composition. Line 2 shows how in a general silhouette of a town or village duality can appear if prominent features, such as two spires of approximately equal value, are allowed to compete with each other. In example B we see such a conflict. Visitors to the Hampstead Garden Suburb will call to mind a similar discord expressed by the two spires on the top of the hill. Fig. C shows how a group of three prominent buildings, even though these differ in character from each other, will bring unity to a town, while example A portrays a little village which has a suitable climax because a single spire is allowed to reign supreme over it.

In Line 3 the principle of Number is applied to arches and bridges. Examples A, B, and E are satisfactory, while C and D are not. In F we have the apparent paradox that although there are two principal spans, the duality is yet quite satisfactorily resolved. This is because in the cantilever system of construction the pairs of cantilevers themselves are more prominent formally than the intervals between them, so although there are two spans our attention is much more forcibly directed to the fact that there are *three* pairs of cantilevers. So the Forth Bridge is a notable example of a composition in which unity has been achieved through trinity.

Line 4 elucidates still further the distinction between interval and dividing member. In example A the gate-posts form an unresolved duality, but in B by reason of the solid wallage on either side they become conjugated, and our attention is directed, not so much to the duality of the posts as to the single interval comprising the gateway. In Fig. C the conjugation is carried still further by the abutments to each gate-post, while in Fig. D the degree of unity is again enhanced by conjugating the two halves of the gate itself. Figs. E and F of Line 4 show how an even number of columns under a pediment making an odd number of intervals is a superior composition to that of an odd number of columns making an even number of intervals. In example F the three columns fail to achieve unity because the duality of the intervals is more conspicuous than the trinity of the columns.

So much for the vertical division of buildings. In the next article, before considering the second of the main grammatical principles, namely, that of Punctuation, I propose to analyse a few examples in which unresolved duality occurs in the horizontal division of façades.

(To be continued.)

[The previous articles of this series appeared in our issues for March 18 and April 1.]

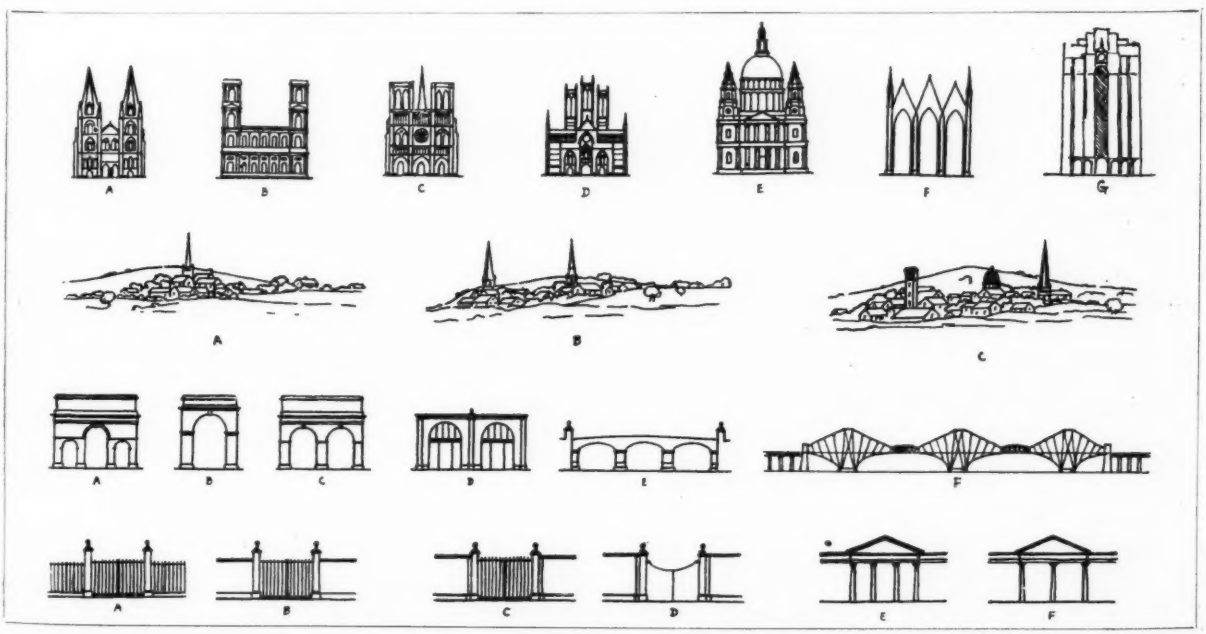


FIG. VII.

Waterloo Bridge: An Imaginary Episode

By H. J. BIRNSTINGL

"IS there still time to pass over, constable?"

"Yes, sir, it wants two minutes to midnight."

"Then I can get across before they close the barricade at the north end."

This conversation took place just before midnight on April 30, 1925, and at its conclusion a middle-aged man hurried on to Waterloo Bridge. It was a clear moonlight night. The black and silver water swirled under the arches, and there, to the west, loomed the baulks and cranes of the temporary bridge that was soon to bear the ceaseless burden of London's ever-flowing traffic. Ahead, silhouetted against the bright, pellucid sky, rose Somerset House, mute, dignified, and looking, so the fanciful might imagine, not a little resentful at the imminent loss of a century-old companion. But the man whose footsteps echoed on the pavement was not, so he had always flattered himself, of a fanciful disposition. No, he was in fact a fine, hard, practical county councillor. And even now he recalled with pride how he had rallied the wavering members of his committee.

"Let it not be said," so had run his peroration, "that we have yielded to sentiment: the needs of the present are more imperative than the claims of the past, and in a vital community beauty must never outweigh practical considerations. We must not burden ourselves by supporting the effete of whatsoever beauty. The bridge is doomed; the bridge must go." And as he had ceased speaking he had known that the resolution condemning the bridge would now be passed.

Yet even as these thoughts swept across his mind his elation seemed to evaporate. Could there be any doubt that posterity would say they had been right? Surely not. He had always known that beauty was insidious, but he was not the kind of man to let it influence his fine mature judgment. He was not a schoolboy to be seduced by an April night.

"Good evening, sir." So occupied had he been with his meditations that he had altogether failed to notice the figure which now, gliding ghost-like from one of the embrasures, accosted him. A curious figure it was, too, he now observed, immensely tall, with grey shaggy hair and with a high stock about the neck, yes, and knee breeches.

"Good evening. You know this bridge will be closed in a few minutes? You'd better hurry off it."

"Ay, full well I know it, and that's why I'm here. So they've condemned the bridge, sir. It's true."

"Oh, yes. Our engineers—I'm a councillor, you know—tell us it can't be saved, and it is altogether inadequate, as you must have noticed in the daytime. Obstructs the river, too, so we shall build another wider one with fewer arches."

"Is there still no hope of saving it?"

"Hope! Danger of its being saved, you mean! I think not. The other party, poor, feeble sentimentalists and beautymongers, gave away their case. First they said the bridge was perfect, so that any change would mar it, then some compromised, and said, 'Well, why not widen it a little?' That was the breach through which we entered. If it can be widened without spoiling, then it cannot possess that perfection of which they boasted, so since 'twas falling I urged my fellows to destroy it. They've agreed."

"And what will you put in its place?"

"Oh, some modern engineering affair, in steel or concrete, of greater width and with fewer arches. It is not yet decided."

"Something resembling, perhaps, this honest iron structure above at Charing Cross? Or will you model on that engineering wonder at the Tower, playfully robed in Gothic shrift?"

"As I said, it is not yet decided, but our engineers are wondrous clever; with iron and steel, and concrete there's nothing they can't do."

"Except save Waterloo Bridge." The sidelong glance accompanying these words was fraught with part irony, part sadness, and the listener was not sure what to make of it.

"It's not worth saving," he curtly said.

"Perhaps not. I'm glad to have had your company. Good night. Ah, stay, here comes an illustrious acquaintance whose opinion of this bridge you may care to hear, although scarcely agreeing with your own. His name is Canova, the Italian sculptor, doubtless familiar to you. He visited this country in 1816, I think it was, when my bridge was yet building."

"I don't understand your pleasantries."

"Of course you don't. But these are no pleasantries. My name is Rennie: you may have heard of it."

"Rennie—Rennie—I seem lately to have heard the name, though in what connection I must confess I do not recollect."

"I'm the designer of this bridge, for whose destruction, if I understand aright, you are largely responsible."

"Indeed! Of course; how stupid. But you misunderstand me. It is the wish of Londoners that your bridge should go. I only voice that wish. For more than a century it has spanned this river and no one has noticed it. Now, when practical men see that its day is over, a few cranks raise an outcry. But excuse me, how came you here?"

"A few admirers of this bridge have leave to forgather here till midnight," and turning to the newcomer he addressed him, "Good evening, signor."

"Good evening. So the bridge is really doomed; what fools these Londoners have indeed become! I still maintain, as I told you more than a century ago, 'tis the noblest bridge in the world, alone worth coming from Rome to London to see,* and here I am come to take a last farewell. Who is this mortal? Doubtless some lover, too, who comes at this late hour to bid a tender solitary adieu; to lay his feet for the last time on these flags?"

"No, signor, you're altogether wrong; he is one who counselled its destruction."

"Foolish, presumptuous man! Here's Dupin. He'll sing its praises to this iconoclast.

"Good evening, Monsieur. Tell this misguided mortal what you told your government after first beholding this bridge."

"'If,' I said, 'from the incalculable effect of the revolutions which empires undergo, the nations of a future age should demand one day what was formerly the New Sidon, and what is become of the Tyre of the West, which covered with her vessels every sea, the most of the edifices devoured by a destructive climate will no longer exist to answer the curiosity of man by the voice of monuments; but the Waterloo Bridge, built in the centre of the commercial world, will exist, to tell the most remote generations, "Here was a rich industrious and powerful city." The traveller on beholding this superb monument will suppose that some great prince wished, by many years of labour, to consecrate for ever the glory of his life by this imposing structure.'† But I fear I misjudged. It appears they value not your work, Rennie. But who comes now? Surely the Prince Regent."

"Good evening, gentlemen."

"Good evening, your Highness."

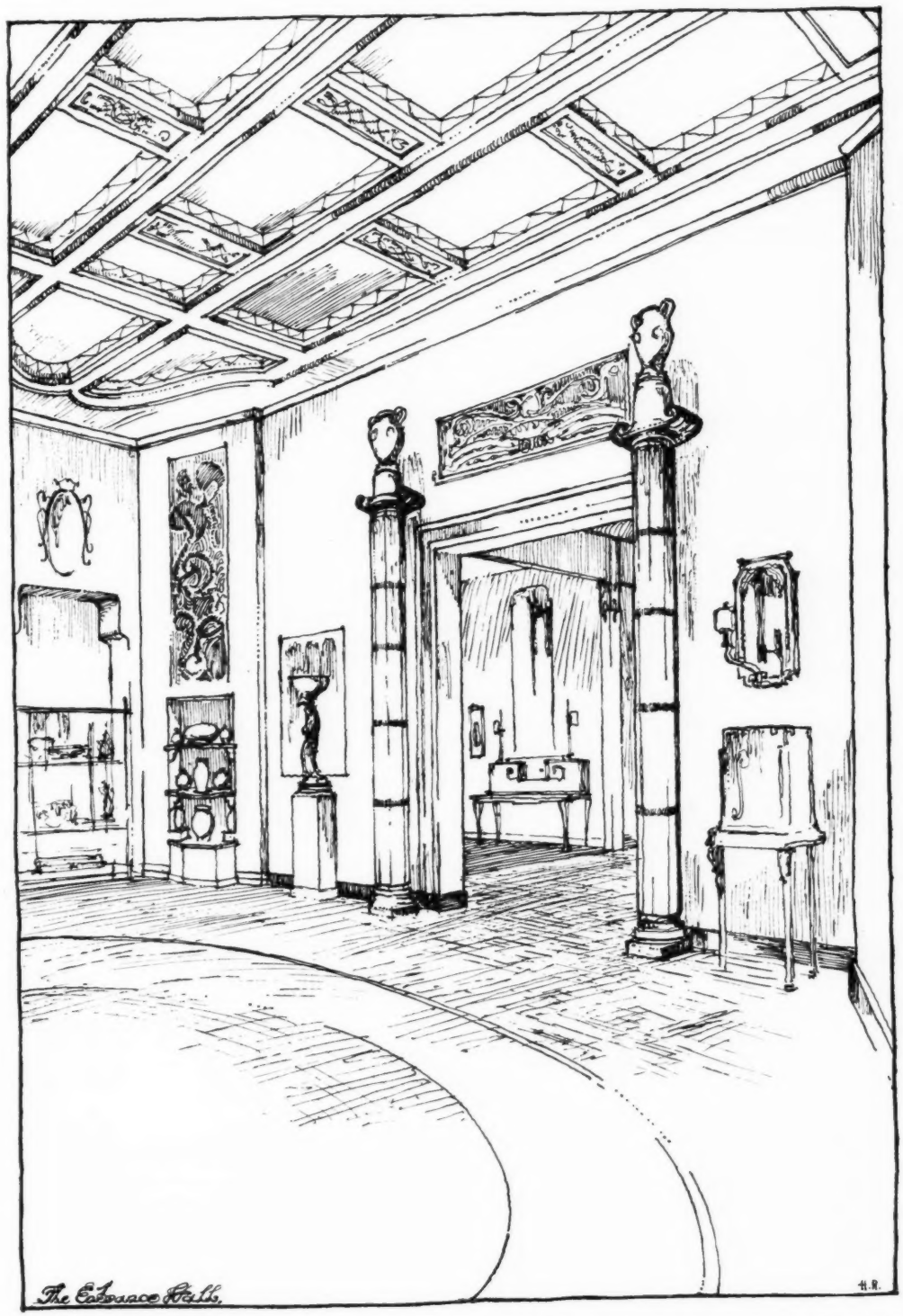
"Well, Rennie, you and I built without reckoning on posterity. My street and your bridge they think they'll

* Vide "Old and New London," vol. III.

† Vide Britton and Pugin, "Illustrations of the Public Buildings of London," vol. II.

The British Pavilion in the Paris Exhibition

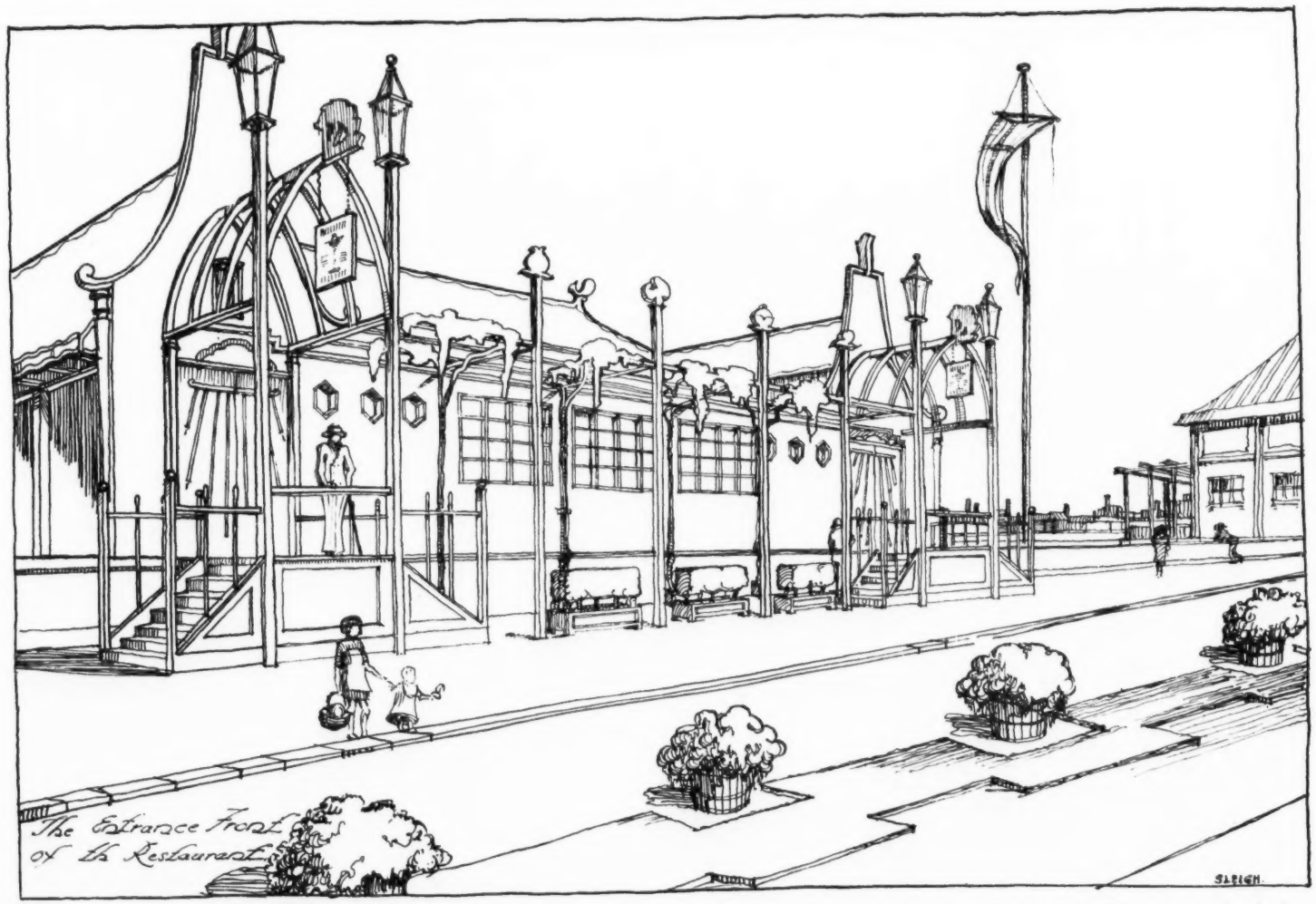
Easton and Robertson, Architects



The above original sketch shows the entrance hall of the British Pavilion in the forthcoming Exhibition of Decorative and Industrial Art with the doorway to the central vaulted corridor. The two columns on either side of the doorway were designed by the architects and contributed by Messrs. Doulton. They are in salt-glazed stoneware, in colour. The ceiling of the entrance hall is in plaster with an infilling of Velarium.

The British Restaurant in the Paris Exhibition

Easton and Robertson, Architects



This sketch shows the quay side of the restaurant, with the entrances. The restaurant is covered with a painted tent awning, and will seat over a hundred and fifty people. The work on this, and on the Pavilion illustrated on the previous plate, is rapidly approaching completion.

better them, yet they but replace dignity with pomposity. They have lost all sense of civic reticence and harmonies. With what will they supplant the sweet curves of your granite arches, the solid dignity of your columns?"

"I know not, sire, but this mortal says their engineers are very clever."

"Clever, are they? That's good. Is this rusted iron monstrosity at Charing Cross a specimen of their cleverness? Will they desecrate the grandest view of Wren's and Chambers's masterpieces with some such tinker's paradise or with some bascule-rearing tomfoolery? Clever are they, and yet not able to save this glorious bridge of yours, which is now called upon to bear thrice the burden that your cofferdams were reckoned for. I remember well how Alexander* envied it, declaring it to be the finest work in masonry in the world, and amidst what jubilation I opened it, on the anniversary of Waterloo, in June '17, with Wellington riding by my side. Speak, mortal!"

"Well, your Highness, the fact is there are some who say the bridge can yet be saved, but we believe them not, but honestly I'd no idea the bridge was held in such high esteem by older generations. 'The finest masonry in the world, worth a visit from Rome to see.' I must look into this, your Highness."

"Indeed you must; you'd far better save the bridge and build another elsewhere; there are many wanted, they tell me, so posterity may not mark you out as vandals."

* * * * * *

"Come along now, sir, the bridge is closing."
He hurried off, a little shaken in his self-sufficiency.
"Good night, sir, you're the last to cross this bridge."
"I'm not so sure, constable."

* Alexander I, Emperor of Russia.

Two New Buildings for the District Bank, Limited

FRANCIS JONES, F.R.I.B.A., and H. A. DALRYMPLE, A.R.I.B.A., Architects

ON this and the following pages we illustrate two new bank premises for the District Bank, Limited. That which is here illustrated first, stands on the site of a former bank in Cornhill, but occupies a much larger area. The elevation is of Portland stone, and the architectural treatment is plain and dignified. Among the most notable features are the three large arches, with deep reveals, on the ground floor, and the stone balcony above them and below the first-floor windows. The windows on the next three stories give perfectly plain and well-spaced fenestration, and above them is a very richly carved frieze and cornice, which shows boldly above the plain surface of the stonework below it.

The strength of the design on the ground floor indicates the scale of the banking hall, which is a fine lofty room covering practically the whole area of the building. The hall is lined with a light-grey Mazzano marble, with an Ashburton marble base, architraves, and large table-like pedestals to the windows in the public space.

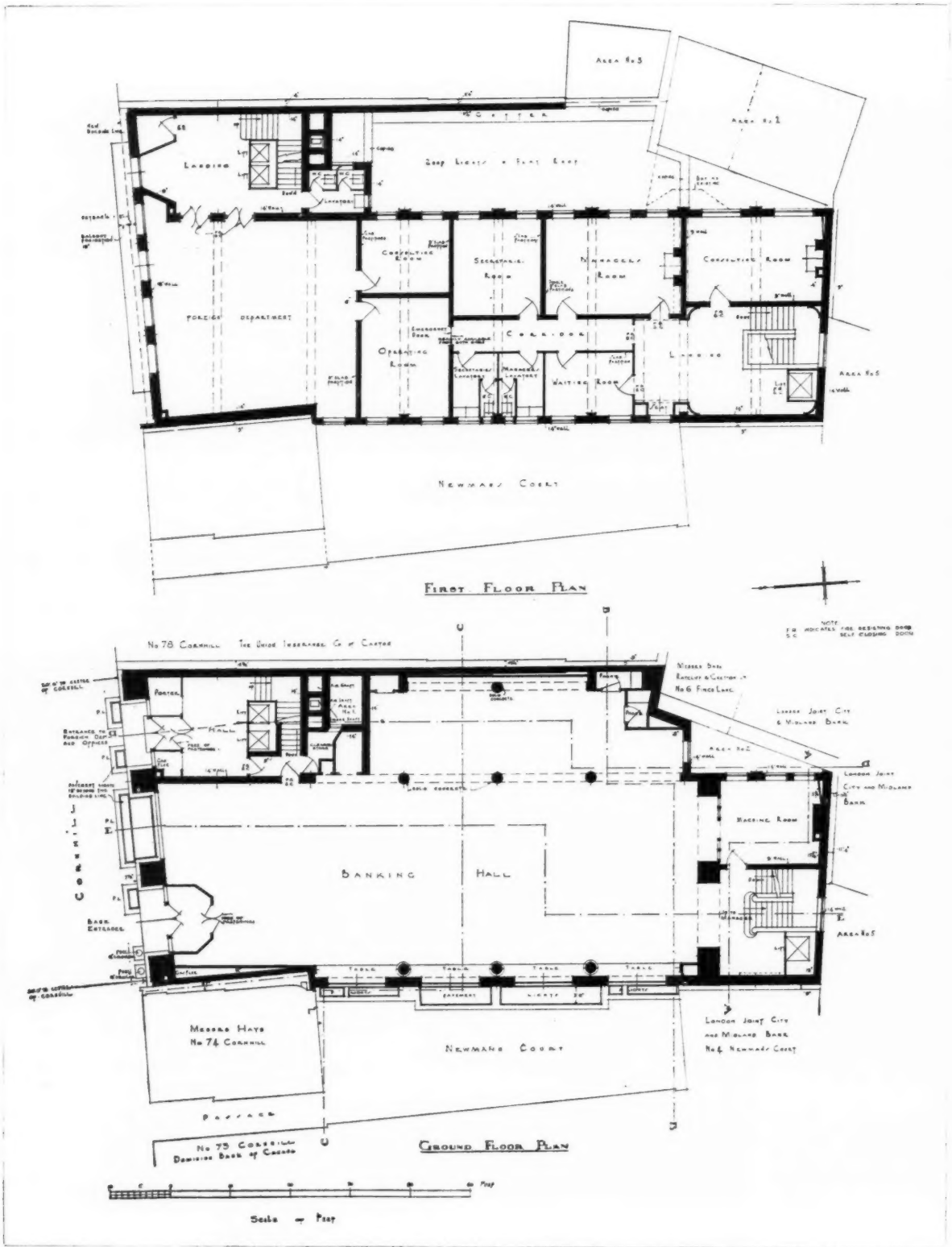
Round the banking hall runs a well-modelled frieze carrying a nicely detailed coffered ceiling. The bank fittings are very plain, but are of excellently figured mahogany. The counter front is veneered in Cuban mahogany, with ebony and kingwood banding. The vestibule screens, windows, and counter grilles are in toned bronze.

GENERAL VIEW OF THE BANK IN CORNHILL.

The dark woodwork and the Ashburton marble dressings contrast well with the quiet grey of the Mazzano marble, and it is felt that the treatment is very well suited to the requirements of a large banking hall.

The general contractors for the premises at 75-77 Cornhill, London, were Messrs. Trollope and Colls, Ltd., who also executed the fireproof floor and the special woodwork; and the sub-contractors were as follows: Earp, Hobbs, and Miller, Manchester (carved stone work); Wm. Kirkpatrick, Ltd., Manchester (granite base and steps); E. Wood & Co., Ltd. (steel work); Conway & Co., Manchester (wall and floor tiles); Ames and Finnis (Lombardic tiling to roof); Henry Hope and Sons, Ltd. (casements and casement fittings); W. Macdonald & Co., Ltd., Manchester (patent glazing); the Well Fire and Foundry Co., Ltd. (grates); Shanks & Co., Ltd. (sanitary ware and fittings); the Acme Flooring and Paving Co.

(*Continued on page* 630)



NEW BANKING PREMISES IN CORNHILL, LONDON, E.C., FOR THE DISTRICT BANK, LIMITED: PLANS OF THE GROUND AND FIRST FLOORS.

FRANCIS JONES, F.R.I.B.A., AND H. A. DALRYMPLE, A.R.I.B.A., ARCHITECTS.

Current Architecture. 271.—New Banking Premises in Cornhill, London, E.C., for the District Bank, Limited : A Detail of the Façade

Francis Jones, F.R.I.B.A., and H. A. Dalrymple, A.R.I.B.A., Architects

These new banking premises have been erected on the site of a former bank in Cornhill. The façade is faced with Portland stone.

Current Architecture. 272.—New Banking Premises in Cornhill, London, E.C., for the District Bank, Limited: A View of the Banking Hall, looking towards the Entrance

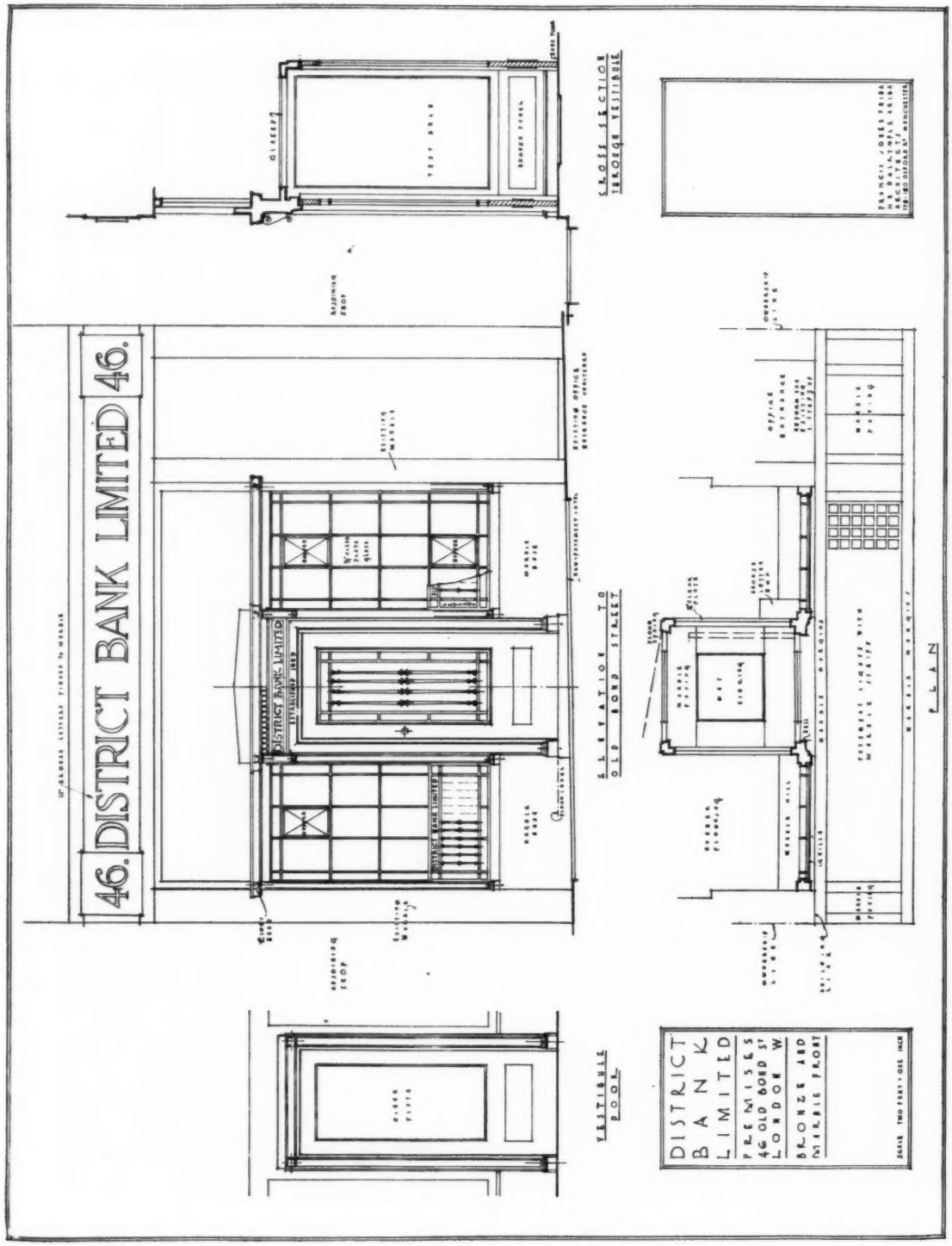
Francis Jones, F.R.I.B.A., and H. A. Dalrymple, A.R.I.B.A., Architects

The banking hall is lined with a light-grey Mazzano marble, with an Ashburton marble base, architraves, and large table-like pedestals to the windows in the public space.

A VIEW OF THE BANKING HALL, LOOKING TOWARDS THE STAIRCASE.

THE MANAGER'S ROOM.

NEW BANKING PREMISES IN CORNHILL, LONDON, E.C., FOR THE DISTRICT BANK, LIMITED.
FRANCIS JONES, F.R.I.B.A., AND H. A. DALRYMPLE, A.R.I.B.A., ARCHITECTS.



BANK PREMISES IN OLD BOND STREET, LONDON, W., FOR THE DISTRICT BANK, LIMITED: A DETAIL OF THE NEW FRONT.
FRANCIS JONES, F.R.I.B.A., AND H. A. DALRYMPLE, A.R.I.B.A., ARCHITECTS.

FRANCIS JONES, F.R.I.B.A., AND H. A. DALRYMPLE, A.R.I.B.A., ARCHITECTS.

BANK PREMISES IN OLD BOND STREET, LONDON, W., FOR THE DISTRICT BANK, LIMITED.
FRANCIS JONES, F.R.I.B.A., AND H. A. DALRYMPLE, A.R.I.B.A., ARCHITECTS.

(1904), Ltd. (flooring); Small and Parkes, Ltd., Manchester (rubber flooring); Chas. Smith and Sons, Ltd. (ironmongery, locks); Drake and Gorham, Ltd. (electric wiring); G. Jackson and Sons, Ltd. (plaster work); Bromsgrove Guild, Ltd., also the Birmingham Guild, Ltd. (bronze work); Bromsgrove Guild, Ltd. (external windows and gates); George Wragge, Ltd. (railing over cornice); H. T. Jenkins and Son, Ltd. (marble wall and floor linings); the Art Pavements and Decorations, Ltd. (stair treads); Waygood-Otis, Ltd. (lifts); G. N. Haden and Sons, Ltd. (heating and ventilating); Dictograph Telephones, Ltd. (telephones); Trollope and Colls, Ltd. (bank fitting); Chubbs and Sons, the Chatwood Safe Co., and Lock and Safe Co., Ltd. (strong-room doors, safes, etc.); Electric Standard Time Co., Ltd. (clocks); George Wragge, Ltd. (clock faces); Grant's Office Equipments (cloak-room fixtures); Alfred Williams & Co., Ltd. (artesian well and pumps); the British Luxfer Prism Syndicate, Ltd. (pavement lights).

The general contractors for the premises at 46 Old Bond Street, London, W., were Messrs. Trollope and Colls, Ltd., who also executed the special woodwork and the bank fittings; the sub-contractors were as follow: Henry Hope and Sons, Ltd. (casements and casement fittings); Small and Parkes, Ltd., Manchester (rubber floor); Drake and Gorham, Ltd. (electric wiring); G. Jackson and Sons, Ltd. (fibrous plaster work); Bromsgrove Guild, Ltd. (bronze front); Birmingham Guild, Ltd. (counter grille); H. T. Jenkins and Son, Ltd. (marble work to front); Waygood-Otis, Ltd. (lifts); G. N. Haden and Sons, Ltd. (heating and ventilating); Chatwood Safe Co., Ltd. (strong-room doors); Haywards, Ltd., Manchester (pavement lights).

The Liverpool Empire

W. and T. R. MILBURN, Architects

THIS is a one-tier house. All the patrons enter from the front of the building from what is practically one entrance extending along the whole of that frontage. Every part of the house has tip-up chairs, of which there are 2,450, and adequate and special arrangements have been made for standing room at the sides of the house. The space underneath the grand circle is used as a lounge, and the upper space is utilized for management rooms.

Each portion of the building has retiring-rooms for ladies and gentlemen. These are luxuriously furnished, and lead into the respective toilet apartments. Adequate cloak-room accommodation is provided to every part, and refreshment bars are provided for the stalls, the circle, and the upper circle.

A prominent feature of the auditorium is the marble balustrading. The decoration of the auditorium is also notable. It is carried out in broad sweeping lines with ornament in low relief, without the use of the recognized architectural forms, such as cornices and capitals.

Photo: Stewart Bale.

A GENERAL VIEW OF THE INTERIOR.

Current Architecture. 273.—The Liverpool Empire

W. and T. R. Milburn, Architects

Photo: Stewart Bale.

In this building seating accommodation, in tip-up chairs, is provided for 2,450 persons. All the patrons enter from what is practically one entrance extending along the whole of the main front.

Photo: Stewart Bale.

THE LIVERPOOL EMPIRE: TWO INTERIOR VIEWS. W. AND T. R MILBURN, ARCHITECTS.

The stage is fully equipped on the latest principle, and is sectionally fitted with adequate cuts, traps, etc. The whole of the scenery is counterweighted.

The dressing-rooms are well equipped, and each one is provided with hot and cold water, electric light, heating, and shower baths. A laundry is provided for the use of the artistes, and an electric passenger lift runs to all the floors. Heavy goods are lowered on to the stage by an hydraulic lift from the street level.

The heating is by steam-heated calorifiers, with low-pressure hot-water radiators. Hot air is also driven to all parts of the building by electric fans, purified by an air washer and heated by steam batteries.

Advantage has been taken of the very latest ideas in lighting and in stage effects. On the stage Samoiloff lighting has been installed, and a three-coloured system has been extended to portions of the auditorium.

The consulting engineers were Messrs. H. W. Hawkins, chief engineers to Moss' Empires, Ltd. (electrical installation); C. F. Chettle, London (steelwork construction); and N. Vaux, Sunderland (heating installation). The clerk of works was Mr. F. Scruton.

The general contractors were Messrs. Wm. Moss and Sons, Ltd., of Liverpool; and the sub-contractors were as follows: John Tanner and Son, Liverpool (decorations); John Stubbs and Sons, Liverpool (marble work); Beck and Windibank, Birmingham, and Messrs. Goodalls, Manchester (chairs and carpets); Mather and Platt, Manchester (sprinkler installation); Blackburn, Starling & Co., Ltd., Nottingham (electrical installation); Ashby Tabb, Liverpool (draperies and hangings); Ed. O. Griffiths, Liverpool (carving and auditorium ornament); H. H. Martyn & Co., Ltd., Cheltenham (stone carving); Redpath, Brown, Manchester (steelwork); Frame and Barr, Glasgow (vacuum cleaning); Mallin & Co., West Bromwich (fireproof curtain); W. MacFarlane & Co., Ltd., Glasgow (veranda); Quiggin Bros., Liverpool (handrailings and balustrading); Musgraves, Liverpool (sanitary fittings); Ruboleum Co., Liverpool (floor coverings); Griffiths, Son and Cromwell, Ltd., Liverpool (heating and ventilation); Bullivants, London (counterweighting system).

Foundation Problems—5

By BURNARD GEEN, M.Inst.C.E.

(Concluded.)

IN preparing a contract, one or two points in connection with foundation work call for very special attention. If the contract is such that contractors are left to take off their own quantities for the purpose of quoting a comprehensive lump sum for the whole work, then the drawings and the specification must be as complete and detailed as they can be made.

This is only possible if the architect has a thorough grasp of the various trades involved, and completely understands what is necessary or likely to be necessary in the execution of the work.

In the event of unforeseen difficulties arising, leading to claims for legitimate extras, all the advantage will be upon the side of the contractors unless some basis is laid down in the contract to cover them.

For this reason it is advisable before signing the contract to establish a schedule of variations which will cover all items liable to variation.

This schedule should receive the most careful attention to make it effective, and it should be as detailed and full as possible.

For example, if excavation for foundations is assumed in the contract to be necessary to a depth not exceeding 6 ft., it would be prudent to provide in the schedule of variations for excavation to greater depths rising by steps of 3 ft.

The excavation should be described as measured, the net size required for the concrete work or brickwork and the prices in the schedule should include for any extra width required for timbering and working space, and should include for any pumping found to be necessary.

The soil through which excavation is to be carried should be described if possible, but where this is unknown it should be specifically stated that the rate is to cover excavation through any material met with in the operation, and the contractor must be left to protect himself.

Though at first sight it may appear that this will lead to high rates being quoted, it will be found to be much better from every point of view, as it will avoid disagreements and disputes, or inordinate demands at a later date.

It is always far better to work on the basis of bills of quantities for foundation works, as there is much more likelihood of variations in this portion of general works than any other.

A carefully conceived and prepared schedule which will cover possible variations in foundation work is of very great advantage, as it will ensure fairness and will enable more rapid decisions to be made where considerable changes of plan are involved.

The probable cost of variation can then be readily estimated without the delays necessitated by reference to the contractor, and the building owner will always feel that he is protected by such a schedule, and that his contractor is not taking advantage of circumstances.

In the case of pile foundations a complete schedule of variations is absolutely essential, whatever system or type of pile is employed.

Piling work in this country is a special class of work, carried out mostly by people with long experience in it, and who know how best to turn to their advantage variations in assumed conditions on a contract.

It must be assumed that the contractor undertakes the contract for the purposes of making a profit, and there is nothing improper on his part in trying to make as much profit as possible.

If the architect is to earn his commission it will be his business to see that the contractor's profit is kept within reasonable limits, by arranging such a schedule of variations as will cover all possible variations on the contract.

This he will not be able to do if he is not familiar with all classes of pile-driving operations, as it is an extremely specialized subject.

Speaking generally, the cost of piling will vary with the number of piles to be driven on the site, the length of the piles, the accessibility of the site for carriage and transport of the piling plant, and the general contours of the site and conditions under which piles are to be driven.

As the cost of bringing plant to a site and taking it away again is very considerable in these days of high transport costs, it is usual for a contractor to base his rates upon a minimum length of pile to be paid for whether driven or not.

This is quite a reasonable arrangement, as in the event of piles finishing much shorter than anticipated, a contractor might otherwise not be able to make enough profit on the total feet driven to reimburse him for his heavy transport charges.

This can also be made to operate the other way by a reduction of the rate per foot after an agreed minimum length of pile has been driven.

In the case of a contract for *in situ* piles a fair contract can be readily drawn, which will reasonably protect both parties.

In the case of a contract for timber or precast concrete

piles, however, an extensive schedule of variations is an essential part of the contract for the protection of the building owner.

The following schedule will show generally the points to be taken care of, though each contract will be found to have special requirements.

It is anticipated that piles of the length of 40 ft. will be required to be driven, but the contractor must insert prices against the following items, which will form part of the contract :—

1. *Making only*, on ground 14×14 in. square, precast concrete piles 40 ft. long (with shoe) complete, as shown on drawings, reinforced with 4–1 in. mild steel round bars bound with ¼ in. binding each at

2. Extra price over last for any additional length of pile at per foot run

3. Making only, 14×14 in. piles, all as (1), but 35 ft. long each at

4. Do. Do. Do. Do.
Do., but 30 ft. long each at

5. Handling, pitching, and driving precast concrete piles as described to a depth of 40 ft. each at

6. Do. Do. Do. Do. to a depth of 35 ft. each at

7. Handling, pitching, and driving precast concrete piles as described to a depth of 30 ft. each at

8. Extra only for driving piles an additional depth of 5 ft. beyond 40 ft. each at

9. Do. Do. 10 ft. Do.
Do. each at

10. Do. Do. 15 ft. Do.
Do. each at

11. Dollying down to extra depth not exceeding 3 ft. below ground level each at

12. Cutting heads, bending and cutting steel to connect with *in situ* work or for lengthening piles per No. at

13. Lengthening 14×14 in. concrete pile *in situ* up to 5 ft. above top of driven pile per foot run at
Do. Do. 5 ft. to 10 ft. Do. per foot run at
Do. Do. 10 ft. to 15 ft. Do. per foot run at

14. Redriving piles (lengthened *in situ*) to additional depth not exceeding 10 ft. each at
Redriving piles (lengthened *in situ*) to additional depth over 10 ft. Extra only over last each at

15. Cutting off piles not driven to their full made depth and disposing of piece cut off. Not exceeding 3 ft. above cut each at
Not exceeding 6 ft. Do. each at
Do. 9 ft. Do. each at
Do. 12 ft. Do. each at

The question of the determination of actual loads on footings is sometimes very complicated, and must always be carefully considered.

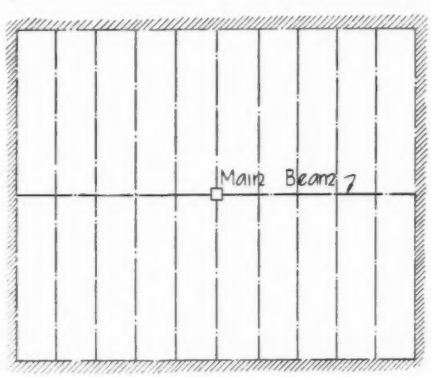


FIG. 10.

Take, for example, an ordinary factory building, constructed in reinforced concrete with a number of floors, and shown in Fig. 10.

In America it is customary to vary the live loads on the floors in such a fashion that the unit live load considered as acting is steadily reduced from a maximum on the slab to a minimum on the column, and allowance in the live load is also made in the case of a number of floors.

Thus if to provide for local distributions of load the slab is designed for 2 cwt. per square foot live load (in a case where the total floor load could not give such a live load) the secondary beams are taken to carry slightly less live load per square foot measured over the whole area supported by one secondary beam, and the load per square foot taken over the whole area supported by the main beam is still further reduced, and the load on the columns is then reduced in like manner.

Referring to Fig. 10, it should be borne in mind that the continuous beams have a considerable effect upon the column loads.

In the case given the load on the centre column is increased to no less than 1·62 times the ordinary floor distribution with free spans loaded with equally distributed load.*

Each case of load distribution in a monolithic building, such as that referred to must be considered on its merits, and the appropriate increased column loads should be allowed for; though the case chosen has been chosen as one extreme case to show how serious the increase can become.

The serious effect of eccentricity of load upon foundations has already been referred to, and it is desirable that foundations, when built, should be accurately checked to make sure that they are in correct position relative to the centres of loads coming upon them.

In the event of errors being discovered the varying pressures on the foundations should be calculated to determine whether the maximum pressure so arrived at is in excess of the safe pressure on the soil, and if found to be excessive, steps must be taken to deal with the error.

This question of eccentricity of load is often a serious trouble in the case of pile foundations.

With every care taken it is rarely possible to drive piles with absolute accuracy of position, nor is it always possible to drive them truly vertical.

The piles as driven should be accurately surveyed before any caps or concrete are put on top, and this record should be carefully compared with the loading plan showing the centres of loads.

If the eccentricity is considerable the distribution of the total load over the pile group should be calculated and may be found seriously different from that assumed.

If the load on any pile or piles is then found to be more than the estimated safe load it may be necessary to drive further piles to take care of the error.

For this reason it is wise to specify in the contract a limit of positional error, and make it a provision that additional work consequent upon such error is carried out at the contractor's expense.

In general it is not safe to allow so much load on piles subjected to vibration and hammering action as for still load.

Where a travelling load in the case of a crane gantry or the like is large in proportion to the dead load of the structure, a still greater reduction in safe load should be made, though a slight settlement in such a structure would not, under ordinary circumstances, be serious.

In the case of an elevated structure supported upon piles, and subjected to wind pressure, special provision must be made to take up the bending in the piles.

* See Chapter V, "Continuous Beams in Reinforced Concrete." Burnard Geen. Published by Chapman and Hall, Ltd.

[The previous articles in this series appeared in our issues for February 25, March 11, 25, and April 8.]

Correspondence

Competitions

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—What strikes me as the saddest thing about modern conditions of competition is the R.I.B.A. condition dealing with the estimated cost of buildings. Why should it be thought necessary to insert such a condition as: "A design shall be excluded from a competition if the assessors shall determine that its probable cost will exceed by 10 per cent. the outlay stated in the instructions, or the estimate of the competitor should no outlay be stated"?

Why should the competitors, presumably competent architects, be treated like irresponsible schoolboys, and their estimates checked by an assessor? After all, the best judge of the cost of a design should be the competitor who has worked out the scheme and knows the details of his construction in a way that no assessor possibly can.

If the competitor is a member of the R.I.B.A. his estimate should be absolutely reliable. If his estimate is not reliable, then the Institute should exclude such a person from its members. Once this attitude were taken up, and the public informed of it, the status of the profession would be raised far higher than by registration, as membership of the R.I.B.A. would then become a hall-mark of reliability, and the outsider would be looked on with suspicion.

AN OCCASIONAL COMPETITOR.

Waterloo Bridge—Treatment of the Piers

Lord Crawford's Protest

In a letter to the Editor of "The Times" Lord Crawford writes: "Many people are alarmed by the treatment to which the fine masonry of Waterloo Bridge is now being subjected. The hemicycle at the north-eastern corner has had most of its entablature removed in order to give a spring-off to the new bridge; this may be necessary, but it is unfortunate. It is difficult, however, to understand the reason for the mutilation of the piers. On the Somerset House side of the bridge, the first pier standing in the water is being maltreated—the columns have been shaved off, the entablature has likewise been cut right out, and the cornice extracted. Above it again the pedestal and adjoining balustrade have been wholly removed. Yesterday a man was still hacking away at the granite plinth where these noble columns stood. The process seems unsystematic and one wonders how far it may extend.

"One is puzzled as to the object of this mutilation, and whether it means that the new metal bridge is to be structurally dependent upon the old. It is all the more disconcerting because it was recently announced by the London County Council, authoritatively and repeatedly, that no stone of the existing bridge could be touched until the temporary bridge had been completed about the middle of July. May we have some reassurance?"

Obituary

John Singer Sargent, R.A.

By the death, on April 15, of John Singer Sargent, R.A., the light of a great genius was extinguished. Although he had reached the age of sixty-nine, his natural force seemed unabated. To the last he was painting so consummately that he seemed not to have overpassed the meridian of his genius. There are, it is true, critics who hold that his work is of an age, and not for all time—that it will grow old-fashioned with the garb of his subjects. But no such carping can rob him of the glory of unsurpassed achievement in the course he adopted; although persistence in that querulous line of argument may at length result in his being definitely ranked among the Old Masters; which, indeed, may be said to have been already done by the admission during his lifetime of certain of his masterly paintings to national collections. Whether or not the fashion in portrait painting suffers, even as architecture and most other things, from fickle fluctuations in popular taste—with the first favourite now a Reynolds or a Romney, a Gainsborough or a Raeburn, a Whistler or a Sargent—is of very little importance. Neither time nor custom can change or wither the essential and vital content of Art. Principles do not perish nor change, even though the caprices of fashion may leave them to languish awhile in the cold shade of neglect. Sargent saw with such abnormally acute vision as to create a presumption that he suffered from the defects of that fine quality. It has been complained by critics of the "precious" school that he "did not paint the soul." It should be sufficient to answer that no painter ever had more penetrating vision, but that neither he nor another could paint more than he could see. To his art of painting he brought many accomplishments besides skill of hand—those of musician, linguist, man of reading and culture. Withal, he remained modest to shyness, and of an altogether genial and charming personality. At the time of his death, Sargent was on the point of visiting America to fulfil an engagement to decorate the Boston Library there. Although Sargent was of cosmopolitan antecedents, having been born in Italy of American parentage, and having studied in France under Carolus Duran, he had so long made his home and painted his pictures among us that it is hardly presumptuous to claim him as an English genius whose last resting-place should be Westminster Abbey.

Mr. L. A. Westwick.

We regret to record the death of Mr. L. A. Westwick, of Mansfield, architect. He was about sixty-eight years of age, and for many years was partner with the late Mr. R. J. Vallance, the firm being known as Messrs. Vallance and Westwick.

Mr. J. H. France.

We regret to record the death of Mr. James Harold France, architect, of Brown Street, Manchester. In his profession he attained considerable prominence, and among the buildings he designed were the Roby Congregational Church and the Hale Congregational Church.

Mr. Raffles Davison's Exhibition at the R.I.B.A.

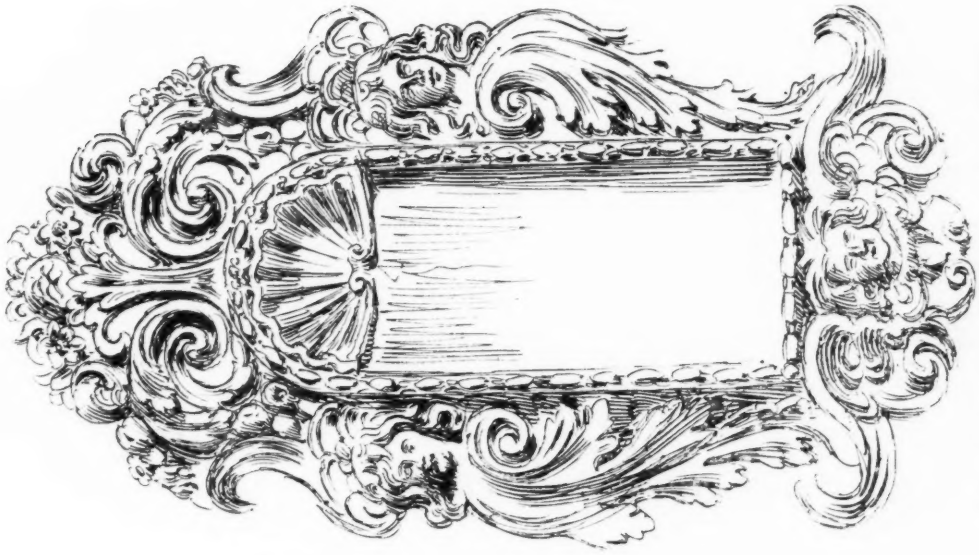
The "one-man show" now being held by Mr. T. Raffles Davison at the R.I.B.A. Galleries in Conduit Street, represents, the artist tells us, the activities of a lifetime. Most of the sketches, he says, have been done for the pleasure of the occupation and the attempt to reflect in the pages of a contemporary for some forty years examples of old and new work, which it was hoped would interest the public.

The exhibition was opened by Mr. H. M. Fletcher, who referred to some of the salient qualities of the artist's work—his fine draughtsmanship, distinguished by its breadth and openness, and in which detail was given by suggestion rather than by elaboration, his certainty and softness of line. Mr. Davison had shown how young he was by now taking up a new medium—pastel.

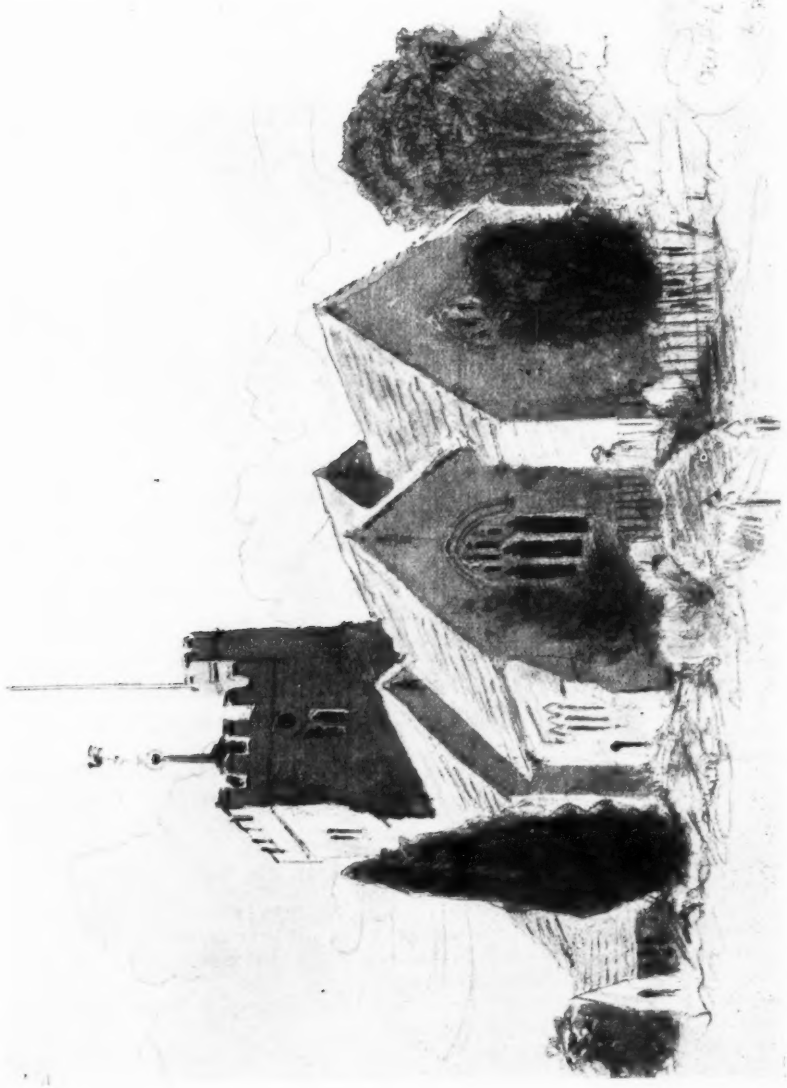
The exhibition includes sketches of doorways, windows, bench-ends, and furniture, from all over the country, and the pastels are of the Island of Lewis, Devon, Bruges, and nearer home—The Heath, Reigate, Abingdon, Watford, Chanctonbury Ring, and the North and South Downs.

Portraits of Mr. J. A. Gotch, P.R.I.B.A., Mr. Rudolf Dircks, Librarian of the R.I.B.A., Mr. Arthur Keen, F.R.I.B.A., Sir David Murray, R.A., Mr. W. T. Plume, and Mr. W. Burroughs Walker are shown.

All these pictures and s' tches are representative of the output of some forty years. Since the age of four, Mr. Davison told us at the opening of his exhibition, he had done fifteen thousand drawings.



OLD CARVED NICHE, THE WHITE LION, COBHAM.



COWFOLD CHURCH.

FROM TWO SKETCHES BY T. RAFFLES DAVISON IN THE R.I.B.A. EXHIBITION.

Underground Parking Places for Motor Cars

DURING the past year the Automobile Association have specially considered the possibility of providing underground parking places in cities and towns, and have incorporated their ideas in connection with such facilities in a model showing what can be done below Leicester Square, London. Parking, as distinct from garaging, must provide easy ingress and egress, and be available for short periods at low charges. Ground rents in cities prevent the construction on private property from the point of finance, while with the continued growth of road transport it is important that roads and streets be kept as free as possible from standing vehicles; therefore, the provision of underground parking places is put forward as a solution of this important problem.

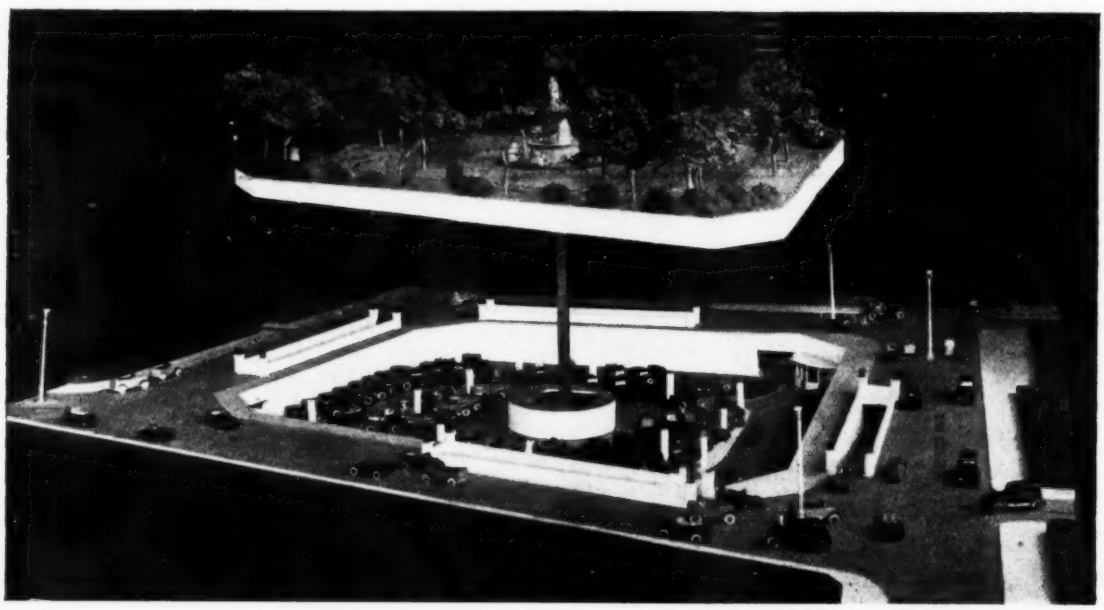
The model provides that cars and motor cycles would enter and leave on the near side of the road, and thus avoid crossing other lines of traffic. Two entrances and exits will be necessary in case of breakdowns, accidents, and repairs, but the entrances and exits will be easily controlled, thus economizing in staff charges, and facilitating the parking of the vehicles in their allotted places. All the parking space would be available, without any crossings, as traffic will circulate "one way" only. Stairway communication between the Square and the underground parking space will be necessary for the convenience of drivers who have parked their cars, or are returning to them, while signals will be provided at each entrance, operated by attendants, indicating when the parking space is full.

To establish such parking facilities upon a proper basis, it will be necessary to promote a Parliamentary Bill to empower local authorities to raise loans for the construction of underground parking spaces, such powers covering, of course, the diversion of gas, water, sewers, electricity, and other underground services, and providing whenever necessary, for powers enabling local authorities to acquire land and to make charges for parking cars above ground. The use of parking places above ground, or underground, would, of course, be subject to regulations ensuring the safety and general convenience of all users.

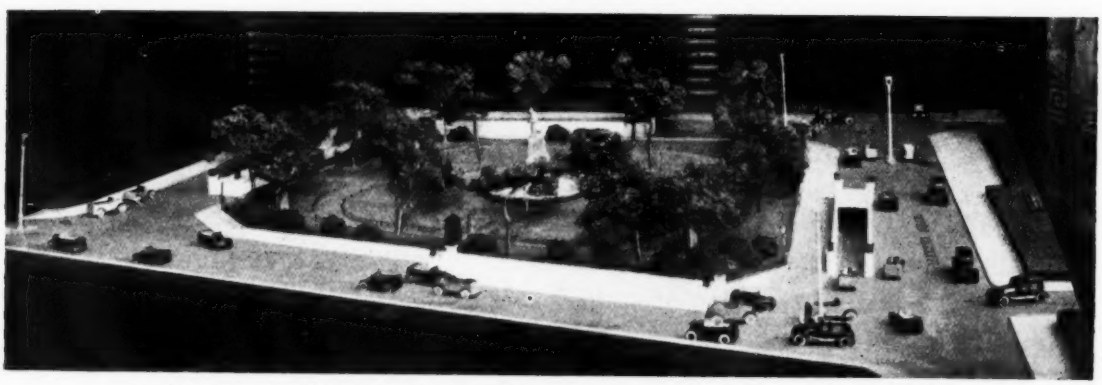
The Automobile Association suggests that charges might be made on cars according to overall length, so that the cost of parking cars, for example, for two hours, would range from 2s. down to 6d., according to length. At the other end of the scale such charges would range from 6s. down to 1s. 6d. for sixteen hours, while motor cycles and sidecars would pay 4d. for two hours, or 1s. for sixteen hours, and motor cycles (solo) from 3d. to 9d. Provision would also be made for the parking of push cycles at very low charges.

The proposed underground parking spaces should be used exclusively for parking purposes, so that washing, replenishing, or repairs will not be permitted, neither will the transfer of any inflammable material to a motor vehicle whilst in the parking place be sanctioned.

The "A.A." model, as it applies to the conditions in Leicester Square, London, is offered as a practical attempt to meet the present-day requirements of motor users, which, in view of the rapid development of motoring during the past few years, is now considerably overdue.



THE PARKING SPACE UNDERNEATH THE SQUARE.



THE SQUARE, SHOWING THE ENTRANCE TO THE UNDERGROUND PARKING SPACE.

Book Reviews

Architecture's Debt to Greece and Rome.

It was as inevitable as desirable that architecture should be conspicuous in a series of books bearing the general title of "Our Debt to Greece and Rome." Yet clearly the debt on account of this item cannot be acknowledged at all adequately in a little book of a hundred and ninety pages. Nor does the author pretend to attempt such an impossible feat. In his little treatise, Mr. Alfred Mansfield Brooks has simply aimed at deepening the reader's sense of the prepotency of classic art, and the formative influence of its spirit. In attempting this sufficiently difficult task, the author has at least succeeded in producing an estimable little book, which will be read with pleasure and profit by architects and laity alike.

Sir Reginald Blomfield's introduction to this little book is an apt illustration of the vigorous and pellucid English of which he is a past master. Architects have set up a high tradition in this kind, and Mr. Brooks does not discredit it by this philosophical little treatise of his, in which he deals in a fresh and original way with the familiar and time-honoured themes which must inevitably form the subject of a book on the architecture of Greece and Rome. A very useful feature of it is a succinct but serviceable bibliography.

"Our Debt to Greece and Rome": Architecture, by Alfred Mansfield Brooks, Professor of Fine Arts, Swarthmore College. Introduction by Sir Reginald Blomfield, R.A. London: George G. Harrap & Co., Ltd. Price 5s. net.

The Rudiments of Citizenship.

Education must always have a more or less direct trend towards good citizenship. This fact is not always so clearly recognized as it is, for example, by the National Adult School Union, an institution which very usefully follows up and amplifies the work of our elementary schools. This Union has issued a small pamphlet in which the duties and obligations of citizenship are surveyed and sketched. A short list of sources whence to obtain further knowledge on the subject is very usefully appended, and a pithy chapter on housing outlines an intelligent method of studying that vitally important but complicated question. The chief merit of the pamphlet is its cheapness.

"Social Survey: A Guide to Good Citizenship." By George Peverett and Alfred T. Pike. London: National Adult School Union. Price 6d. net.

Maxwell's Guide to the Housing Acts.

Housing Acts, so-called for want of a more comprehensive title, are so voluminous, and embrace so many details, that a guide to them is essential to those who have to administer them, still more so to those to whom it is perilous to disobey them through misinterpretation. Dr. Maxwell's little book minimizes this peril, even though entirely to eliminate it passes the wit of man. Dr. Maxwell's sound and clear exposition of the law on the subject is supplemented by some useful notes, derived from the practical experience of Mr. J. T. Cowderoy, chief sanitary inspector of the Borough of Kidderminster. As, moreover, the book is in its second edition, it can be trusted as a real guide to the subjects of which it treats. These include valuable summaries of the statutory provisions relating to construction and sanitation; and there are also addenda concerning specifications for repairs, some useful official forms, and a collection of official circulars relating to the position and duties of sanitary inspectors. An index that might have been more serviceable if it had been more copious, completes a very handy and practical little book.

"Remembrancer and Guide to the Housing Acts, 1890 to 1924." Second Edition. By R. C. Maxwell, LL.D., Barrister-at-Law. Including Specimen Specifications for Repairs by J. T. Cowderoy, F.S.I.A., Chief Sanitary Inspector, Borough of Kidderminster. London: The Sanitary Publishing Co., Ltd. Price 7s. 6d.

Victoria and Albert Museum Monographs.

It is a truism that our national museums would be infinitely more valuable if their contents were better known by the general public. Not to put too fine a point on it, those institutions are regarded with callous indifference. A football match may attract a hundred thousand enthusiasts, but our museums and art galleries are passed by with cold disdain. Perhaps the comparison is not quite fair, but it is nevertheless poignant.

One small reason why the people so persistently neglect these opportunities of æsthetic enjoyment is sheer ignorance that such interesting treasures exist in their midst. An excellent attempt, though one that does not meet the needs of the masses, who are not amenable to such an appeal, is the publication of authoritative illustrated monographs and descriptive catalogues of the more important contents of the museums. Those monographs listed in the footnote appended to this notice are fairly representative of the series.

Each of these is usefully illustrated, now photographically, and now with measured drawings, and each pamphlet is preceded by an informative preface providing succinct historical and technical particulars of the exhibits. Such prefaces usually affording a clear outline of the whole subject, and, stimulating an interest in it, serve to create a demand for more complete treatises and more extended investigation.

One of the monographs under notice (1) gives a succinct account of a panelled room of carved oak and cedar, the panelling details of which were rescued from No. 3 Clifford's Inn, and acquired for the Victoria and Albert Museum, whose experts assign them to the year 1686 or 1688.

Another monograph in this "Panelled Rooms" series is occupied by the Waltham Abbey room (2), to which the date ascribed is "about 1530." Vigorously carved medallion portraits are the distinguishing features of this room, but its wainscot panels show also many other skilfully wrought decorative carvings—wreaths, fruits, heraldic devices, and so forth—in the Italian mode.

Volume I of the catalogue of "English Furniture and Woodwork" (3) comprises examples from the Gothic and Early Tudor periods, of which work several interesting plates are shown. Like each of the other publications under notice, this catalogue may well serve as a persuasive introduction to the study of a fascinating phase of art.

In the design and execution of woodwork and cabinet-making Britain undeniably holds a very honourable position, and these excellent monographs should render valuable help towards retaining it.

Victoria and Albert Museum Publications:—(1) "The Clifford's Inn Room"; (2) "The Waltham Abbey Room," 1s. 6d. net each; (3) "Catalogue of English Furniture and Woodwork," Vol. I; "Gothic and Early Tudor," 2s. 6d. net. London: H.M. Stationery Office, Imperial House, Kingsway.

The R.I.B.A. Prizes and Studentships, 1925-1926.

The R.I.B.A. Prizes and Studentships Pamphlet for 1925-1926 has now been issued. As a result of the R.I.B.A. conference on prizes, the conditions for the various prizes and studentships have been largely revised, and the alterations have been embodied in the pamphlet. Copies are obtainable at the R.I.B.A., price 1s. exclusive of postage.

Forthcoming Publications

"The Prelude to Architecture," by Mr. William Godfrey Newton, M.C., M.A. Oxon., F.R.I.B.A., will be published on April 29. Among the problems discussed by the author are the following: Modern architecture should not be judged upon old theories, but upon its own bases of criticism. Is there not need to-day for the recognition of a change of outlook, the clearing away of old dogma, and the encouragement of a deeper study of the principles upon which the beauty and fitness of the architecture of our own time depend? Mr. Newton discusses many of these problems in the hope that his statement of personal views may lead others to consider them anew. Following are the contents of the book: Chapter I.—Citizen and Artist. II.—Expression of Plan. III.—Expression of Structure. IV.—Style. V.—Paint and Stucco. VI.—Natural Taste. VII.—Wealth of Nations. VIII.—Golden Treasures. IX.—The Music Makers. The book will be published at 3s. 6d. net by The Architectural Press, 9 Queen Anne's Gate, Westminster, S.W.1.

Publications Received

"How to Heat Your House." By Edwin Gunn, A.R.I.B.A. Price 2s. 6d. net. Country Life, 20 Tavistock Street, Covent Garden, W.C.2.

Law Reports

Restrictive Covenants—Building Scheme

Ellwood v. *Brown.*

Chancery Division. Before Mr. Justice P. O. Lawrence.

This action raised a point of some interest as to how far restrictive covenants governed a residential estate in regard to the erection of garages.

The plaintiff, Mr. R. Ellwood, of Homewood Gardens, Finchley, sought an injunction against Mr. C. Brown, of Oak Lodge, Christchurch Avenue, Finchley, to restrain him from erecting or using buildings as garages on the Regent's Park Road estate, pleading a building scheme which made the estate a residential one. The benefit of the restrictive covenants was claimed to be vested in the plaintiff by assignment and a covenant of May 29, 1913, between Mr. Albert Edward Rudd and plaintiff. Injunction was asked for, alternatively, under a building scheme whereby the covenants were mutually enforceable by the owners of the plots. An order was asked for on the defendant to pull down or not to use any building otherwise than as a dwelling-house. The defendant denied the building scheme and said that in any case the restrictive covenants had not been enforced and breaches had been permitted. The estate had been so laid out that its preservation as a residential estate, in accordance with the scheme, was impossible, and the plaintiff was not entitled to relief. It was in 1884 that the Second Birkbeck acquired this freehold estate of twenty-one acres, and it was admitted that the original building scheme was not in all its details adhered to. Detached houses were to be of at least £1,000 value, or the pair, £1,600; in Woodberry Grove and Montrose Crescent the minimum values might be £800 and £1,400, drawings to be approved by the vendors. No shop, place of business, tavern, or hotel was to appear, nor any manufactory or building objectionable to neighbouring occupiers or prejudicial to their interests.

His lordship, after hearing a mass of evidence, came to the conclusion that he must find for the plaintiff. He considered the matter as if Mr. Middlebrook, the original purchaser, were the defendant instead of the present defendant, and the conclusion he came to was that the original purchaser could not have set up the case which the defendant had set up. Nothing the plaintiff had done had altered the main object of the owners, for the preservation of the estate as a residential estate. Defendant was not entitled to set up an equity against the plaintiff in view of the restrictive covenants. His lordship must hold the plaintiff entitled to the relief he claimed, and there would be an injunction which, in view of what had taken place on the motion, would include an order to pull down the garages in question and would restrain the defendant from committing any further breaches of the restrictive covenants.

Leave to appeal was granted, his lordship intimating that his order would be to pull down within three months.

The Housing and Town Planning Act, 1891

Myers v. *Hollington.*

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

This was an action by Mr. M. L. Myers, of Ramsgate, against Mr. A. and Mr. R. Hollington, of Middlesex Street, London, claiming damages for breach of covenant to yield up premises in New Street, Gravel Lane, Houndsditch, in proper repair.

The point raised in the case was whether the Housing and Town Planning Act, 1891, where property had been compulsorily acquired, overrode a covenant to deliver up in a state of repair on the expiration of the lease.

His lordship, after hearing counsels' arguments, said the eighty years' lease expired on June 24, 1923, and defendants, as lessees, admitted there were dilapidations in respect of which plaintiff could have recovered but for the Corporation's intervention. The land formed part of an area scheduled by the Corporation for acquisition, and an order was made; this land and premises were to be acquired as insanitary under the Housing of the Working Classes Act, 1890. There could be acquisition by agreement or compulsorily; notice to treat was given on December 7, 1922. On June 24 following, the term expired under the lease, and plaintiff continued to draw accommodation rent. The writ was issued in November, 1923. Not long after, on February 21, 1924, the price to be paid by the Corporation was fixed by agreement at £2,829. Possession was not given until March 23, 1925. Defendants' answer to the claim was that prior to the breach of the covenant plaintiff had parted with his interest in the reversion, and after the notice to treat plaintiff held in trust for the Corporation.

His lordship observed that Mr. Montgomery, K.C., for the defendants, made the Act of 1919 his sheet anchor, and said the date of the notice to treat was, under the Act, the date at which the valuation of the property was to be made. From that it would follow that no matter how the lessees broke their covenants to keep and yield up in repair, no farthing's worth of damages could accrue; the value of the property was determined by the Act of Parliament; section 9 of the Act of 1919 reacted on the property itself and modified the right and liabilities of all persons interested in it, so that the notice to treat obliterated for all persons the eighty-year old covenants as though they had never existed. His lordship thought this argument could not prevail, and that the legislature never intended anything of the kind. This matter between the Corporation and the plaintiff could not affect long-standing covenants, as between lessor and lessee, and, therefore, plaintiff was entitled to succeed. The matter would go to the Official Referee if the parties failed to agree on terms.

Parliamentary Notes

[BY OUR SPECIAL REPRESENTATIVE.]

Captain Elliot, Under Secretary for Scotland, stated that in Scotland something like 19,000 houses had been approved or were under construction under the 1923 Housing Act, and 7,000 under the 1924 Act, a total of 26,000. It was the intention of the Secretary for Scotland to press on the provision of houses by whatever Act could be made to yield them.

Sir K. Wood informed Mr. H. Williams that particulars as to progress of house building were obtained half-yearly as regarded houses erected by private enterprise without State financial assistance, and he hoped that particulars for the period to March 31 would shortly be available. As regarded State-assisted houses returns were obtained monthly. The latest figures available were for March 1 last. During the three months ending that date 21,750 houses were commenced in England and Wales in connection with State-assisted schemes, 21,346 were completed, and 54,586 were under construction at the end of the period. The corresponding figures for the same period in 1924 were 16,042, 4,970, and 27,742.

Lieutenant-Commander Kenworthy asked how many schemes for building houses by new methods of construction, other than brick, had so far been sanctioned.

Sir K. Wood said a return, unfortunately incomplete, obtained from local authorities at the beginning of the present month showed that arrangements had been made for the erection by local authorities or otherwise in subsidized schemes of more than 9,000 houses in various forms of concrete or other new methods of construction. The Minister of Health hoped that when the next return was obtained further information would be available as to the numbers of houses to be erected by other methods than brick construction. Local authorities only required the Minister's specific approval to the adoption of a method other than the ordinary method of construction where the method proposed was not one for which a sixty years' loan would normally be allowed.

Mr. Hurd asked the Minister of Health if he was aware that the definition of an agricultural parish in the Housing Act of 1924 excluded many agricultural parishes, as, for instance, in the home counties, from the encouragement which the Act was supposed to give to house building in such areas; and what steps he proposed to take to give effect to the intentions of Parliament?

Sir K. Wood said the clause defining agricultural parishes was debated at considerable length during the passage of the 1924 Housing Bill, and amendments were made which had the effect of considerably widening the scope of the clause as originally drafted. The Minister did not think it could be said, therefore, that the section did not carry out the intentions of Parliament, and he was afraid he could not at present contemplate introducing further legislation on the subject.

Mr. Mitchell asked the Minister of Health, in view of the fact that the life of a stone or brick house would probably be considerably longer than that of a steel house, and that for both types of houses an equal grant was given, and in order to encourage those who preferred to erect the more permanent type of dwelling, whether he would be willing to consider the question of increasing the grant for houses of this nature?

Mr. N. Chamberlain replied: "No, sir. Houses are at present being erected by the ordinary method of construction up to the full capacity of the house-building industry, and an increased subsidy for this type of house would not result in a greater output of houses."

Eliminating the Death-Watch Beetle

Professor Maxwell-Lefroy's Investigations

PROFESSOR MAXWELL-LEFROY writing in "The Morning Post," shows how, as the result of his investigations, the death-watch beetle can be eliminated from our historic buildings at a fraction of the cost previously involved. In the course of his article he says: The furniture beetle has been written about for a century, but not investigated, and the means of treatment have been the rough and ready ones of squirting in turpentine or solutions of corrosive sublimate. To this day such methods are advocated by official institutions because they are ancient and have a flavour of sound experience, but they are not wholly corroborated by actual tests. The death-watch beetle is big enough to study, but no one until recent years has done so, because there was no apparent occasion. The present position is, without any exaggeration, a serious one; it is fortunate that there has been necessity to study the beetle; but it is more fortunate still that this has revealed the state of things as regards the activities of the beetle. There is no question that if this generation is to hand on to later ones the older buildings in which timber was used, the beetle has to be dealt with. We are really in a dilemma; for new buildings built of steel corrode; while old buildings in which oak is the essential fabric are being utterly destroyed by the beetle.

Noble Oak Framing

Nearly all our important buildings come into one or the other category; and to the ordinary man it is far more important that Peterborough, Canterbury, St. Paul's, Hampton Court, Middle Temple Hall, the buildings of Oxford and Cambridge should be preserved than that Bush House, or other such concrete buildings, should be. Their turn will come, and the next generation may go back to wood fabric buildings. But our concern at the moment is the real destruction of our old oak-framed cathedrals, churches, halls, and country houses.

Those in charge of such buildings will wonder why we should now have to consider this problem; and many will curse the science that has led men to go digging into this problem. Against this quite reasonable view one can only say that science is providing simple methods of dealing with the problem on exact knowledge of the insect causing the damage. The question, of course, still remains as to why the beetle should be so vigorous now. Why should this generation in 1925 have this problem to consider, whereas in 1825 no one apparently bothered?

There are, I think, three possible explanations: one is the fact, definitely established, that the beetle does the damage, whereas in the past it was thought of as the inevitable process of time. Secondly, the beetle is a wild beetle living in oak trees, and these are getting fewer, while the beetle is getting more and more used to the buildings. Thirdly, in the past our ancestors built with seasoned timber uninfected, but in the last century they put in much new oak in restoration or repairs, bringing in the beetle with them. We know quite definitely that in some buildings the attack was in progress centuries ago, and has ceased either entirely or, at any rate, as far as the original timbers are concerned. Why it ceases we do not know: if it ceased before vital structural points were affected it would not matter; but, unfortunately, it is in the unventilated places where principals, wall posts, wall plates, purlins, &c., meet and join that the destruction goes on.

This is not the place for a list of buildings known to be attacked. One wonders if there are any fine oak buildings unattacked. One sees St. Paul's, or King's College Chapel, glorious stone memorials of the skill of our ancestors, and one forgets that behind the stone is the intricate oak construction that makes possible the stability of the less resilient stone. In all parts of the country from the City churches of London to the beautiful parish churches dotted over the country, the story is the same. One hesitates to look into any church, for fear of what one is almost certain to find. One sympathizes with the parish authorities who would like to let things be and leave it to a later generation. And really the only reason for trying to awake interest in this question is that treatment has become so much simpler, that the attack may be arrested.

The Duty of Preservation

This generation, may now, by a small effort, hand on to the next generation, irreplaceable buildings that will otherwise certainly collapse. This holds true of all old buildings, including our fine old country houses. Cases are known where an expenditure of a few pounds has unquestionably saved ultimate reconstruction at a cost of thousands. There are parish churches unable to provide more than perhaps thirty to forty pounds, which are at that cost saving an ultimate collapse of the fabric or an expenditure of thousands in rebuildings.

It is a big claim to make that this can be done, but instead of indefinite facts about the beetle, we have now an almost complete history of all its activities. We know how it attacks. We know little intimate details of its life, and from these, can, with some certainty, decide what to do. A later generation, using resources of science unknown to this one, will scoff at our clumsy methods; but unquestionably the research of the last few years has put us in a position far more secure than when twelve years ago Westminster Hall was tackled; the methods used there are already entirely superseded, and simplification, with a fair guarantee of certainty, is the outcome of definite inquiry.

Important Considerations

While there are many points of interest to be determined, such as the relation between the age and variety of woods and the liability to attack and the possible effects of the use of incense, the main point I wish to emphasize now is that the condition of every oak-timbered building should be ascertained and, if it be a church or public building, recorded. If it be found to be infested, this fact should be recorded and treatment undertaken now or when possible. My personal experience is that if we knew the condition of all our parish churches, public buildings, university and college buildings, eight out of ten would be found to be attacked. In one out of ten the attack would have ceased. In the remainder the attack has never started and will never start, until the repairer or restorer brings in fresh oak.

Within the past months it has been announced that Lincoln Cathedral is attacked by the death-watch beetle, particularly in the north-west tower, and this will be dealt with. Within the last few weeks a new and disquieting feature of the beetle's activities is its discovery in a very valuable library, where it has spread from the oak to the books. I think that it is right that those responsible should be aware of the facts and not shut their eyes, trusting comfortably to the possibility of the beetle not being at work. One would like to feel sure that the facts, let us hope good, would be ascertained and recorded in every case.

List of Competitions Open

Date of Delivery.	Competition.
April 27	Lay-out of Jackey Bakers Farm, Ramsgate. A portion of the land will be used for a Recreation Ground, another portion for Allotments, and the remainder for an Elementary School with Playground and Playing-field near. The Corporation are offering as a prize £100. Apply, with deposit of £1 1s., to Mr. A. Blasdale Clarke, Town Clerk, Albion House, Ramsgate.
*May 1	**The United Grand Lodge of England invite designs for rebuilding the Freemasons' Hall in Great Queen Street, Kingsway, London.**
*May 15	**Technical College for the Middlesbrough Education Committee. Assessor, Mr. Percy Thomas, F.R.I.B.A. Premiums £200, £100, and £50.**
May 15	Conversion of Ashford Assembly Rooms. Premium £50. Apply Clerk to the Ashford Urban District Council.
May 30	New Secondary School in Perth Road, Dundee. For the Education Authority. The Competition is limited to architects in practice in Scotland and carrying on business on their own account. Application for the conditions of the competition and instructions had to be made to Mr. John E. Williams, Executive Officer, Education Offices, Dundee, not later than February 18. Mr. J. A. Carfrae, Licentiate R.I.B.A., is the Assessor.
May 31	The best and most economical system of shuttering or equivalent suitable for use in connection with poured or *in situ* cottages. First prize £250; £250 may be awarded in additional prizes. Methods which are already in use or for which patent rights had been applied for before January 1 will not be considered. Apply Mr. H. H. George, Ministry of Health, Whitehall, S.W.1, not later than May 24.
June 11	National Commemorative War Monument, to cost one hundred thousand dollars, for the Government of Canada. Apply Office of the Secretary, Department of Public Works, Hunter Buildings, Ottawa. A few copies of the conditions, together with declaration forms, can be obtained from the R.I.B.A.
*June 30	**Lay-out of open spaces and fortifications between Valletta and Floriana and those encircling Floriana. Premiums £1,000 and £500. An indemnity of £100 will be awarded to three other designs showing conspicuous merit. Assessors, Mr. E. P. Warren, F.S.A., and Professor Patrick Abercrombie, A.R.I.B.A.**
July 1	An extension building adjacent to the Shirehouse, Norwich, for the Norfolk County Council. Premiums £150, £100, and £50. Assessor, Mr. Godfrey Pinkerton, F.R.I.B.A., on the whole of the designs submitted, and to make the award. Apply Mr. H. C. Davies, Clerk of the Council, The Shirehouse, Norwich.
Sept. 1	High bridge over Copenhagen Harbour. Three prizes to the value of Kroner 35,000. Apply City Engineer's Office, Town Hall, Copenhagen. Deposit of Kroner 100 (returnable).
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.**
No date	Proposed Presbyterian Church at Cheam, Surrey. In the first instance rough sketches only will be required and therefrom the committee will select the architects to be paid for the preparation of more finished drawings. Apply Mr. George Tweddle, Jr., Secretary to the Building Committee, "Southdown," Burdon Road, Cheam, Surrey.
No date	Rebuilding of Bethel Baptist Church, Pontlottyn. Premium £5. Apply Mr. J. R. Mathias, Rose Villa, Pontlottyn.

* Date of application passed.

Competition News

The New Royal Hospital School, Holbrook.

Messrs. Buckland and Haywood, of Birmingham, architects, have won the competition for the design of the new Royal Hospital School, to be erected at Holbrook, near Ipswich. The cost of the work will be £700,000.

The present accommodation of the Royal Naval School is in Greenwich Hospital, in that portion of it that included the Queen's House, built by Inigo Jones, and certain other buildings which had been associated with it for the accommodation of the boys. The larger buildings on the other side of the road, built by Sir Christopher Wren, were used for the training of cadets. The first section, built by Inigo Jones, was for the training of non-commissioned officers, and it is that part which is now to be transferred to Holbrook, near Ipswich, overlooking the Stour estuary and looking right up to Harwich. The buildings are to be very extensive. They will include the school block with a lofty tower in the centre, the dining hall, gymnasium, swimming baths, fourteen hostels each for eighty boys, a chapel, an infirmary, an isolation block, a parade ground, about a dozen houses for the principals, fifty-six houses for the artisan staff, and twenty-three houses for the teaching staff. There is a parade ground, with a saluting base, and the school buildings are grouped on the north side. The site is terraced, falling away gradually towards the sea.

Messrs. Buckland and Haywood were one of six firms selected from among many candidates to compete. To each of the six competitors the governing body, having satisfied themselves as to the standing of the competitors, allowed a sum of £500 for expenses.

The Gravesend and Ashford Competitions.

The R.I.B.A. have issued the following notices in connection with the competition, promoted by the Ashford Urban District Council, for designs for the conversion of the Assembly Room, and that organized by the Borough of Gravesend for designs for a new diphtheria block: "Members of the R.I.B.A. must not take part, because the conditions are not in accordance with the published regulations of the Royal Institute for architectural competitions." Similar notices have also been issued by the Society of Architects.

White Lead

The campaign of the industrialists through the Federation of British Industries against the prohibition of the use of white lead in painting seems, according to "The Manchester Guardian," to be succeeding all along the line. It was recently announced that the War Office had decided to rule out the use of paints containing more than 2 per cent. of white lead in future contracts. This was followed by protests from the manufacturers, and the War Office has now decided to cancel the order. This action of the department seems to be connected with the general policy of the Government, which, as was announced on the last day before the holidays, has decided not to carry out the decision of the International Labour Conference at Geneva, whose draft convention provided for the total prohibition of lead paint in interior painting after the year 1927 subject to certain exemptions. The Home Secretary is bringing in a bill after Easter which will enforce a comprehensive and useful series of regulations intended to minimize the danger of the use of white lead. In this the Government is really carrying on the policy of the Labour Government, which last year, after bringing in a bill which would have completely prohibited the use of lead paint in interior painting, gave way later to the opposition in the House and promised to allow the bill to become one for regulations only if the Standing Committee deleted the prohibition clauses.

The Selfridge Wholesale Building

We much regret that through a misunderstanding the responsibility for the structural steelwork in the Selfridge Wholesale Building, illustrated in our last issue, was wrongly attributed. This work was carried out by Messrs. Archibald D. Dawnay and Sons, Ltd., of Battersea. The cast-iron façades were supplied and erected by Messrs. Walter Macfarlane & Co., of Glasgow.

Sir J. R. Fergusson's Estate

Sir James Ranken Fergusson, second baronet, F.S.A.Scot., J.P., of Spitalhaugh, West Linton, Peebles, who died on October 28, aged eighty-nine, son of the late Sir William Fergusson, Serjeant-Surgeon to Queen Victoria, left, in addition to considerable real estate and settled property, unsettled personal estate valued for probate at £16,430.

A New Pencil for Architects

An innovation in the ordinary coloured pencil manufacture —the production of thin leads instead of the large diameter leads hitherto employed—has been made by the American Lead Pencil Co. This change adapts the coloured pencil to a great variety of architectural and town-planning uses, especially in connection with maps, plans, charts, and diagrams. The colours available in the thin lead pencils are blue, red, green, and yellow. The pencils are named Unique, and the composition used for the leads permits sharpening to a fine point and prevents the frequent breakages of leads. Many uses for the new pencil will readily suggest themselves, particularly in connection with city planning lay-outs, the mapping of streets and sub-surface structures, such as sewers and water, gas and steam pipe lines, transit systems, traffic studies, progress diagrams on construction work, and organization and personnel diagrams. Samples of the new thin lead pencils can be obtained from Alpco Pencils Limited, 173-175 Lower Clapton Road, London, E.5.

Sculpture in Architecture

Mr. J. Else, R.B.A., Principal of the Nottingham School of Art, in reading a paper on the above subject before the Nottingham and Derby Architectural Society, said that architectural sculpture should, in the broader sense, always be built into architecture, and the more character it absorbed from its architectural environment the better it became. If they considered the best periods of architectural sculpture, they were impressed with this integral function of sculpture—its oneness with the building it adorned. The Assyrian, the Egyptian, the Grecian, and the Gothic periods were each in this way perfectly architectonic. Each combined with and maintained the character of its architectural setting.

Appropriate sculpture properly applied would enhance good architecture, and poor or misapplied sculpture would certainly bring æsthetic ruin upon an otherwise good building. That opened the controversial ground of what was poor or misapplied sculpture, and the architect and sculptor were able to show each other how difficult a thing was collaboration. To collaborate successfully a certain similarity of outlook was necessary, and the applied sculpture must ever be in the spirit of the building. The architect who sought to redeem the otherwise unattractive face of his building by the use of sculpture was courting disaster, while the sculptor who regarded the building as a mere background for the setting of his work was deserving of the crushing which he would undoubtedly receive at the hands of the architect.

A matter about which much misunderstanding existed was the tilting of figures and their elongation to correct perspective views. The tilting forward of figures to allow a possible view under the very walls of the building was fundamentally wrong. Obviously the vertical face of the wall gave the lie to the pose of the figure, which in any case would appear unstable from the longer views, and it was those longer views which again frustrated any effort in elongation to defeat the natural principles of optics. It should always be remembered that naturally possible proportions would look possible from whatever viewpoint might be selected.

On the subject of sculptured ornament there was little to be said. Like all ornament it should be used with discretion, and never obscure construction. Carving should always be examined to see if that effective piece of ornament owed any of its strength to colour cleverly applied in its undercutting; the fact that those old tricks were still practised argued that they did succeed sometimes. Marble should be treated in the manner of the Italians, but freer stone should always be cut briskly showing plenty of arris and tooling. Marble was quite unsuitable for outdoor work in this climate.

He suggested that the young architect should find some time to give to this branch of his profession; more consideration given to the proper use of good sculpture would make collaboration between architect and sculptor much easier. The architect was the master mind in building, and he should not risk marring his work by inattention to what was often its crowning feature.

A Daily Inspiration

It is rubbish to say we can do without the monuments of the past. They are the greatest inspiration of our daily lives. These remarks are made by Mr. Walter G. Bell in the course of a recent article in "The Daily Telegraph" on St. Paul's. He says: The taste, whether of this century or that, is not necessarily the best taste, but its own best will always continue to exert an influence, while the worst falls into merited oblivion. For an illustration—small, perhaps, in comparison with colossal St. Paul's, but very intimate in our daily lives—take furniture. We have recently escaped from what was notoriously a bad era for furniture design, the Victorian era. For chairs and side tables and cabinets we have gone back to the best designs of late eighteenth-century craftsmen; their original pieces are to-day those most highly valued. It is only because some have esteemed and preserved these graceful examples of cabinet work, and not swept them away for replacement by the momentarily fashionable Victorian heaviness and ugliness, that twentieth-century homes are made attractive and satisfying as now they are.

Another monument much in public attention is Waterloo Bridge. There can hardly be a man who will not desire that it shall be underpinned and made safe, and so left untouched, if that be practicable, and accommodation for supplementary traffic found elsewhere. Look at it from a distant spot on the Embankment in sunshine at the flood tide. The arches float upon the water. It seems of ethereal lightness. One imagines that it unlocked at the shore abutments it would float gently away down-stream. There is genius in the rhythm of those arches. Many Thames bridges have been built since Waterloo was fought, but none so graceful as this. In a century we have not found Rennie's peer—unfortunately—but some day that bridge might be the inspiration for another as good. London, the great capital city, is made richer by its possession, and will be immeasurably the poorer by its loss.

Christ Church, Oxford: A Great Opportunity

The most casual visitor to Oxford can scarcely fail to remember the stately splendour of the front which the west side of the Great Quadrangle of Christ Church—commonly known as "Tom Quad"—presents to St. Aldate's. Yet, says a correspondent to "The Times," few of its lifelong inhabitants are aware that the southern side, where Hall stands, possesses a façade looking down towards the river which rivals—if, indeed, it does not surpass—not merely the St. Aldate's front, but any other group of buildings in Oxford. And this is due to the fact that hitherto it has been so completely veiled and smothered from view by a mass of high walls, stables, and all sorts of mean outbuildings belonging to Christ Church that no living man has ever been able fully to realize it. The widening of the southern approach to Oxford over Folly Bridge has now furnished an opportunity of opening out this superb example of Tudor architecture, and, incidentally, of making such an addition to the glories of Oxford as has not arisen for many a generation.

The land on the road for the first hundred yards or more below Christ Church is the property of the governing body of that college, with whom alone it rests to determine what use shall be made of it. Some of the buildings covering the ground which has been sold for the widening of the road have already been cleared away; the rest will vanish very shortly. Behind this new building line stands a mass of more or less dilapidated stabling and other buildings, few of which have served any very useful purpose for some years, whilst most are in any case to be demolished before long. The governing body have not yet fully made up their minds how to deal with the area thus placed at their disposal. But all lovers of Oxford, and especially those old members of Christ Church who hold dear the memories and the traditional dignity of their ancient house, will learn with deep concern that, so far from grasping eagerly at this unrivalled chance of opening up a splendour long concealed, the greater part of those who now control the destinies of the house are rather set on employing the trust committed to their charge in the pursuit of very different aims. Shop frontages and room for offices near the centre of the town, they say, are growing scarcer and costlier every day. Here are 100 yards or more of valuable street frontage. Why not turn it into hard cash? Brasenose and Oriel of late wiped out great slices of shops to thrust new college fronts into the High, regardless of the loss of revenue thereby entailed. Let us rather profit by this windfall and build a sea of plate glass to continue Wolsey's front, for the display, maybe, of tempting viands, or maybe of the latest "cry" in men's "neckwear," whilst overhead the lady typist plies her busy trade in crowded offices. So shall the fame of Christ Church grow, and the advancement of learning be spread wider abroad.

In sober truth there is grave risk of this almost hallowed ground being put to some such purpose. The latest decision, happily not unanimous, is in favour of a line of shops, offices, lodging houses, and the like to border the whole stretch of Christ Church property east of the road, broken by a sort of crescent about the centre. This is to be pierced by an arcade, running due east at right angles to St. Aldate's, to meet the end of the Broad Walk, lined on each side with similar buildings.

A few weeks hence Christ Church will be celebrating the quatercentenary of their foundation by Wolsey in 1525. The present scheme would for ever destroy all hope of opening out the southern front, which, save for Wren's balustrade crowning its eastern and Bodley's battlements its western end, is Wolsey's work pure and simple, just as he left it—complete before his fall. Surely it would be the better way to mark the occasion by making a clean sweep of all that blocks and disfigures the view of this masterpiece of such a master-builder's brain; to begin the new eastern side of St. Aldate's with the most fitting extension of his western front, a low and mostly open barrier guarding a wide stretch of spacious lawn

and broad pathway. Across this the traveller entering Oxford from the south could look clear through to the Broad Walk and meadows of Christ Church; whilst facing him the southern front would stand in a suitable setting revealed in all its glory. Such a memorial would surely earn for the governing body the unstinted thanks of all that behold it, and cause countless generations of Oxford men yet unborn to rise up and call them blessed.

The Building Surveyors' Association

The quarterly general meeting of the Building Surveyors' Association was held at Liverpool. The "Report of the Committee," which dealt with the future educational policy of the Association, and laid down the different classes of membership, was accepted, after slight amendments. Another scheme of interest was alteration of rules. Under this heading came the changing of the title of the Association; now it is to be known as "The Building Surveyors' Association." It was decided to close membership of the Association after June, 1926, to all except those holding the certificate of the R.I.B.A. for building surveyors, or at the time holding a post as building surveyor and being over forty years of age. It is intended to hold the annual meeting at Stoke-on-Trent in June next. The syllabus and rules relating to membership are now in the printer's hands, and it is hoped to be able to supply anyone with copies early in May. Application for these should be made to Mr. Crossland, Lit. and Organizing Sec., 42 Highfield Road, Bramley, after April 21, 1925.

The British Electrical Development Association

At the annual general meeting of the British Electrical Development Association, Sir George Sutton, managing director of W. T. Henley's Telegraph Works Co., Ltd., was elected president for the ensuing year

At a luncheon held later at the Hotel Cecil, Mr. Frank Gill, past-president of the Institution of Electrical Engineers, proposed the toast of the Association. He suggested that in their Association there ought to be a place for the consumer. If the electrical industry had as much "push" and enterprise as the toffee makers and pill manufacturers, it would make greater progress.

The president, responding to the toast, emphasized the importance of educating the public in the uses of electricity. It was only in recent years that the need for advertising public utilities had been recognized in this country. If they could get the public to realize the convenience of electricity, its reliability, and its economy, there was no reason why it should not be universally used. He pointed to the success of the propaganda carried out by the gas industry, and said it was in that direction that the Electrical Development Association could best serve the interests of those which it embraced.

Mr. A. F. Berry, first chairman of the Association, who also responded, said electricity was the only agent that was both a luxury and a perfect convenience, used alike for the driving of the sewing machine and for the power required to pierce an armoured plate. The electrical industry had something like £500,000,000 invested in it, and within a few years that figure would be trebled. Their concern as an association was to see that there was a yield on that capital.

Mr. S. E. Doane, of the International General Electric Company, New York, replying to the toast of "Our Guests," proposed by Mr. S. T. Allen, the retiring president, said to his mind electrical development was the outstanding feature of the age, and it was his opinion that the nation which was the most electrical would be the most efficient in the future. Electricity properly applied was bound to increase the efficiency of human effort. The war had acted as a great stimulus, and during that period more money was spent in research than at any previous time. Much remained to be done, and the education of the public might be regarded as the line of advance which would produce the best results.

The Wrought-iron Entrance Gates at Bethnal Green

The pair of wrought-iron entrance gates to H.M. Office of Works Housing Scheme at Bethnal Green, illustrated in our last issue, designed by Mr. C. J. Mole, F.R.I.B.A., were executed by Messrs. J. Starkie Gardner, Limited.

The Brighton Aquarium Scheme

The Brighton Aquarium reconstruction scheme, to be considered by the Corporation shortly, will involve the expenditure of £80,000. Of this total, £30,000 will be absorbed by a concert hall at the eastern end. There will probably be opposition to this feature of the plans, a section of the Council being convinced that the front is not a fitting place for a concert hall. It is proposed to retain the main part of the building as an aquarium, and to provide a restaurant and other accommodation, which is much needed at this point.

Two Wembley Exhibitions

Two short-period exhibitions will be held in the Palace of Arts at the British Empire Exhibition at Wembley this summer. One will be devoted to the advertising art in all its branches, and will take place during the first half of the exhibition. The second, which will be open during August, and will probably continue until the close of the exhibition, will deal with applied arts and crafts. The Advertising Exhibition will consist of original drawings and paintings, and reproductions of posters, show-cards, Press advertisements, and other work used in advertising. The railway companies and many of the biggest national advertisers are contributing posters, while advertising agents and artists who specialize in this work will be prominently represented. The Applied Arts and Crafts Exhibition has been arranged following the great success which attended the Exhibition of Applied Arts last year.

The Temporary Closing of Waterloo Bridge

Waterloo Bridge will be closed to wheeled traffic but not to pedestrians for two months from May 1 in order that the great central span of the temporary bridge may be prepared and placed in position. While all the other temporary spans are the same width as the arch openings, the central span will facilitate navigation by stretching across two arch openings. The original openings are 140 ft. across, and the single span will be 280 ft. The side of this span will be a deep girder construction about 30 ft. high in the middle, and it will be so heavy that the ordinary timber piling which has been used for the other spans would not be strong enough to bear the weight. Iron cylinders have, therefore, been sunk in the timber framing to take the top structure.

Town Planning at Knaresborough and Shrewsbury

The Knaresborough Urban District Council are in a quandary over the development of building sites on Crag Top. This locality occupies a rather isolated position, and is being found somewhat difficult to make accessible. A town-planning scheme has been proposed jointly with the Knaresborough Rural District Council, but as this project includes a bridge over the Nidd, which an expert estimates would cost at least £50,000, the Rural District Council will have none of the suggested idea. Rather than embark on such expenditure the rural councillors prefer a scheme of their own.

At the meeting of the Shrewsbury Rural District Council it was reported that the Chatwood Safe Company, of Bolton, had deposited with the Council plans for the erection of buildings on a large site purchased by them near Shrewsbury borough boundary. The Council in consequence adopted a recommendation of its Town Planning Committee for the preparation of a town-planning scheme for the district in question.

Change of Address

Mr. Charles W. Hobson, of 3 St. James's Square, Manchester, has moved his head office to 41 Bedford Square, London, W.C.1 (Telephone: Museum 9148 and 9149), to which address all communications should now be sent.

The Week's News

Worcester's Housing Programme.

The Worcester City Council have decided to erect 500 houses during the next two years.

Housing at Weymouth.

Forty-four more houses are to be erected at Westham by the Weymouth Corporation.

Two Hundred Houses for Dundee.

The Scottish Board of Health have approved the erection by Dundee Town Council of 200 houses.

A New Cricket Pavilion for Blackpool.

A pavilion is to be built on the ground in West Park Road of the Blackpool Cricket Club.

More Houses Proposed for Burton-on-Trent.

A scheme for the erection of 320 houses is being formulated by the Burton-on-Trent Corporation.

Housing at Manchester.

Sixty houses are to be erected in the Rycroft district of Manchester.

Big Bungalow Scheme for Clydebank.

At West Kilbowie 146 concrete bungalows are to be erected by the Clydebank Corporation at a cost of £55,000.

Hornsey Rise College as Flats.

The Hornsey Rise Training College is to be converted into London County Council flats for 1,100 people.

More Houses for Sheffield.

The Sheffield City Council have prepared a scheme to build 340 small houses for tenants displaced from slums.

Croydon Bath Extension Scheme.

The Croydon Borough Council are asking for leave to enlarge Thornton Heath Baths.

Exmouth Housing.

The Exmouth Urban District Council have completed arrangements for the erection of a further 100 houses.

The Ventilation of the House of Commons.

A sum of £2,000 is to be spent on improving the ventilation of the House of Commons.

Concrete Houses for Eastbourne.

The Ministry of Health have sanctioned the erection by the Eastbourne Corporation of 200 concrete houses.

Hyde Housing.

At Hyde the Corporation are to build an additional 150 houses.

Housing at Whitley.

Plans are being prepared for the erection of fifty houses by the Whitley Urban District Council.

Building by Private Enterprise at Redcar.

Plans were approved at the last meeting of the Redcar Town Council for the erection of 120 houses by private enterprise.

Big Housing Scheme for Southampton.

The Southampton Corporation have decided to build 1,500 houses.

Housing at Worthing.

The Worthing Town Council propose to erect 200 houses in two years.

Steel Houses for Bolton.

The foundations are being formed for 100 steel houses to be erected by the Bolton Corporation.

£4,000,000 Port Improvement Scheme for London.

A sum of £4,000,000 is to be spent by the Port of London Authority on the improvement of the port.

Big School Modernizing Scheme for London.

During the next three years the London Education Committee will modernize sixteen existing schools, at a cost of £1,000,000.

Liverpool Cathedral.

In July work will begin on the great central space of Liverpool Cathedral. The construction of the foundations will take twelve months.

Birmingham £50,000 Water Scheme.

The Birmingham Water Committee have decided to extend the third water main from the Elan Valley. The cost is estimated at £50,000.

Over 400 Houses for Derby.

The Derby City Council have resolved to acquire fifty-five acres of land in different parts of the town as sites for 453 additional houses.

Manchester's £80,000 Housing Scheme.

Twelve acres of land at Openshaw are to be acquired by the Manchester City Council as a site for 142 concrete cottages. The total cost is estimated at £80,000.

Building Developments at Hendon.

Plans passed by the Hendon Urban District Council during the year included 841 private houses and nearly 500 other buildings. Road improvements have involved the expenditure of many thousands of pounds.

Projected New Government Building for Edinburgh.

It is reported that the Government propose to erect on a central site in Edinburgh a huge building to accommodate all the Government departments, with the exception of the Post Office.

Proposed New Employment Exchange for Halifax.

A scheme is being considered for the erection of more commodious premises for the Halifax Employment Exchange. The site under consideration is on the Crown land adjoining the County Court.

Eastbourne Development.

Practically the whole of the land on one side of Victoria Place, one of the principal streets leading directly to the sea front at Eastbourne, has been acquired for the erection of shops, and plans for twenty-six lock-up shops have been submitted.

More Houses for London.

The London County Council propose to spend £26,968 on the erection of dwellings on the Staple Street site, Southwark. The Housing Committee recommend the acquisition of land near Burnt Ash Lane for addition to the Downham housing estate.

The Suggested Charing Cross Bridge.

It was stated at the last meeting of the London County Council that a report had been asked for on Sir Reginald Blomfield's scheme for a Thames bridge between Waterloo and Charing Cross, together with other schemes for a bridge at Charing Cross.

The Architect of St. George's Hall, Liverpool.

After persistent agitation by Mr. John Clancy, the Finance Committee of the Liverpool Corporation have given permission for a bust of Edward Elmes, the architect of St. George's Hall, to be placed in that building. It is hoped, however, to have a statue instead of a bust.

Unhealthy Stockton Area to Go.

The Stockton Town Council have approved the scheme for the removal of the unhealthy area known as Housewife Lane. Over 800 persons will be displaced, but before the houses are pulled down the inhabitants will be provided with alternative accommodation on the municipal housing site. The total estimated cost is £111,533.

The Week's News—*continued*

£85,000 School Buildings Proposed for Carlisle.

Sketch plans have been prepared for the Carlisle Education Committee of a new block of buildings to be used as secondary schools for boys and girls, and as schools of art and chemistry. The Swifts have been suggested as a site. It is estimated that the buildings will cost £77,500, with an addition of £8,000 for furnishing.

£30,000 War Memorial Scheme for Leicester.

The war memorial scheme for the erection of a hall, twenty cottages for disabled service men, and the laying out of tennis courts, and bowling and croquet greens at Oadby, near Leicester, has been approved by the Management Committee of the Disabled Warriors' Fund. The cost of the scheme is estimated at £30,000. Mr. T. Trevor Sawday, A.R.I.B.A., is the architect.

Trade and Craft

Change of Address.

The Ransome Machinery Co. (1920), Ltd., have moved their London office to Windsor House, 42-50 Victoria Street, London, S.W.1. Telephone: Victoria 8060. Telegrams: Ransomaco, Sowest, London.

A Thousand and One Uses for Gas.

The current issue (No. 133) of "A Thousand and One Uses for Gas" gives an interesting "peep behind the scenes" into the dental mechanics' workshop, and shows that, in almost every stage of the modelling and finishing of dentures, gas is required. The book with its numerous excellent illustrations will undoubtedly be of interest not only to dental surgeons and others professionally interested in this work, but to those readers with that healthy curiosity which makes them always anxious to learn what they can regarding the manufacture of any necessity (unfortunate or otherwise) of modern civilized life. A copy of the publication can be obtained on application to the Secretary, The British Commercial Gas Association, 28 Grosvenor Gardens, S.W.1.

New Inventions

Latest Patent Applications.

8346.—Bland, L.—Builders' scaffolds. March 28.
8267.—Brambleby, W.W.—Concrete, &c., buildings. March 27.
8049.—Burditt, T. H. F.—Walls, &c., of concrete, &c. March 25.
8055.—Burditt, T. H. F.—Construction of houses, &c. March 25.
8073.—Dennent, E. J.—Building construction. March 25.
8144.—Doble, H., Appleton, W. T.—Folding shuttering for concrete building. March 26.
8320.—Gates, J.—Fireproof partitions. March 28.
8198.—Griffiths, C. H.—Shuttering for constructing concrete walls. March 27.
8150.—Johnston, S. M.—Floor surfaces. March 26.
8412.—British Reinforced Concrete Engineering Co., Ltd.—Metal reinforcing fabric for concrete roadway foundations, &c. March 30.
8521.—Brock, E. W.—Reinforcements for concrete, &c., structures. March 31.
8522.—Brock, E. W.—Construction of concrete walls, floors, &c. March 31.
9049, 9050.—Commin, F. J.—Roofing materials, lining boards, &c. April 4.

Specifications Published.

230601.—Knapman, E. G.—Scaffold trestles.
230712.—Bennett, W. J.—Blocks, boards, and similar objects for covering floors, walls, and the like.
212272.—Bergner, A.—Wall tie or cramp.

Abstract Published.

228780.—Knight, G. T., Meaford, Ontario, Canada.—Balusters and hand-rails.
229149.—Bamford, C. F., 66 Great Portland Street, London.—Building-blocks.

The above particulars are specially prepared by Messrs. Rayner & Co., registered patent agents, of 5 Chancery Lane, London, W.C.2, from whom readers of the JOURNAL may obtain all information free on matters relating to patents, trade marks, and designs. Messrs. Rayner & Co. will obtain printed copies of the published specifications and abstract only, and forward on post free for the price of 1/6 each.