

THE ARCHITECTS' JOURNAL & *Architectural Engineer*

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FROM AN ARCHITECT'S NOTEBOOK.

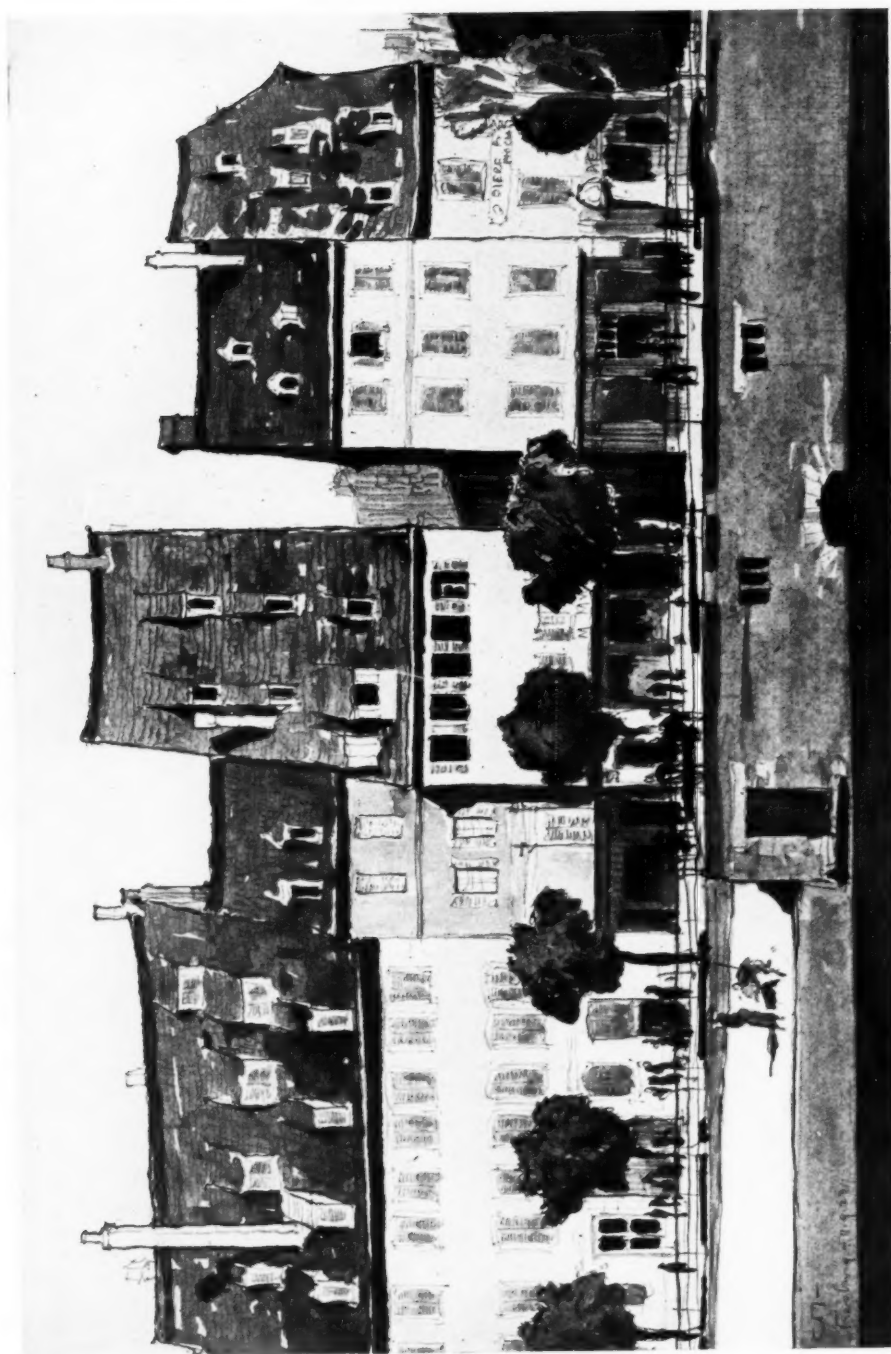
THE CARE OF OLD BUILDINGS.

Watch an old building with anxious care; guard it as best you may, and at any cost, from any influence of dilapidation. Count its stones as you would the jewels of a crown. Set watchers about it, as if at the gate of a besieged city; bind it together with iron when it loosens; stay it with timber when it declines. Do not care about the unsightliness of the aid—better a crutch than a lost limb; and do this tenderly and reverently and continually, and many a generation will still be born and pass away beneath its shadow.

JOHN RUSKIN.

9 Queen Anne's Gate. Westminster.

Strasbourg



(From a Water-colour by Keith Murray.)

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The Overgrowth of London

LONDON is now beyond hope. Long since so vast as to become officially a county, absorbing a city, it is to-day a country in itself. This is no picturesque exaggeration. Its revenue and its population are both greater than those of kingdoms that have loomed large in history. It is to-day grotesquely overgrown.

For many centuries it has gone on expanding until now it has exceeded all limits. The thing is an indecency that must offend all who like the country and the town to be nicely intermingled. It is certainly the despair of the town planner. And it is a menace to civilization. If the best that European culture can produce is this London of ours, then the worse for European culture.

We realize, of course, that London, like Topsy, "just grewed." The length of its days is its chief apology, but the awkward English habit of letting things slide until it is too late to make a proper job of reform has not improved London's chance of becoming a city of ordered beauty. We have not had the opportunity which faced the citizens of Washington. Nor have we yet the public spirit and the foresight which have given to the United States the most attractively planned capital in the world. Happily for the Americans they were not faced with the handicaps of ancient rights and the need to pull down the old before they could put up the new. They had the supreme advantage of a fresh start. They had powers of control over architectural styles and sites which London does not even yet enjoy.

Theirs was not a problem. It was simply a project. They had not even to count the cost. But in London, if vested rights and ancient streets could be ruthlessly swept away, we should have to count the cost and be conquered. The damage is beyond repair. The spreading suburbs, almost entirely the result of chance, have not had the controlling hand of the architect to restrain the eccentric experiments of the speculative builder. The present chaos has been in part the result of divided authority. And now that here and there in a few small areas the London County Council has set in motion the machinery of the Town Planning Act, it is realized that the mischief has been done.

Yet it is good to know that at least in some of the outer areas order and design will shape their growth. The pity is that henceforth every extra acre that is added to our over-swollen capital will not be under strict control. Town planning at least guarantees regular breaks in the monotony of bricks and mortar. It ensures proper breathing spaces for the imprisoned townsman. But it cannot bring the fields and the woods nearer to the dweller in the wilderness of buildings which we call London. He can, it is true, get out to rural beauty spots more quickly and more easily than ever before, but the very agency which takes him there spoils the countryside he goes to see.

And as the years pass the countryside moves farther out, while London gets still bigger. Rural rides of a few years ago are now hideous suburban streets. In this case man's triumph over Nature is his severest condemnation. From Bow to Bromley-by-Bow or to Bromley in Kent, from

the Haymarket to Harrow, and from Piccadilly to Pinner, the surging tide moves on. Fresh air is a long way off for the Londoner. And there is every prospect that year by year it will be still farther away. Brighton is almost a metropolitan suburb. Southend looks to the not distant day when there will be houses all the way from the Pavilion in Piccadilly to the Pavilion on the pier.

And this hope is a symbol of the new age of the town dweller. Every added acre is a menace. For when town engulfs country the rot sets in, and not until the folk of the cities begin to go back to the land does the cure begin. History shows that the growth of the town and the drift to it from the country is a sign of decay. When this happened in Rome the Imperial City on the Seven Hills began that decline which Gibbon so graphically describes. We know that so great was the demand for room that profiteering landlords made fortunes from turning high buildings into tenements.

The life of a city is neither natural nor healthy. Statistics may show that London is one of the healthiest places to live in, and it is true that the Cockney makes a good soldier. But from country to country in three generations represents the average life of the London family. London's clean bill of health is due to corporate conveniences which will some day be also provided in the rural areas, and to the constant recruitment of fresh blood from the provinces. But as the great cities of England grow, and the villages diminish, the countrymen will disappear, and the finest recruiting ground of the towns will no longer prove fruitful.

So will the towns by eating up the country seal their own doom. And London, already alarmingly overgrown, cannot be allowed to spread indefinitely and amorously, like an ogre, over the land. There must be a stop to it, or it will some day put a stop to us. At present it looks as if Macaulay's New Zealander, instead of viewing the ruins of the Empire's capital from Westminster Bridge will see, frowning above the Shakespeare Cliff at Dover, as he comes up the Channel, the white cliffs of London, like those forbidding halls of commerce they are now putting up in the West End.

The overgrowth of London has become a most serious problem. Better a ring of satellite towns, with at least a suggestion of a rural belt in between, than this infinite expansion. "It is not growth by bulk that makes man better be." And it is true, too, of cities. Athens was not a large city, but it was a great one. Julius Caesar was of small stature. Athens survives. Gone are Nineveh and Babylon. Thebes and Carthage are no more.

Whatever may be doubtful it is sure that by the land the people live. So we view with justifiable alarm the portent of the ever-advancing town. And as no city or town in the Empire is so bloated as London, nowhere else is there so desperate a call for a halt.

As the merchant is ousting the maker, and the factor the farmer, so the fields are giving way to factories, and the villages to towns. They are not distinct processes, but part and parcel of the same change. The road to the town is

paved—with good intentions. The path through the fields to the hamlet is narrow and rough. That is the lesson of the overgrowth of London. There is only one way of escape. And it leads to the countryside.

London must go no farther out. A stop must here and now be put to its extension. The need is immediate, lest it be found that to ring the capital with a rural belt is no longer possible. As I have already hinted, the satellite town is the only satisfactory solution of the trouble. But there must be the countryside in between London and her satellites. Give us first the rural ring, cutting off clearly and certainly the chance of any more out-cropping of the City. Beyond the ring the towns may start again. But never, it is to be hoped, to be allowed to grow as London has grown, without let or hindrance. The ideal is that town and country should be one. Satellite towns will only solve the problem if they are also garden cities. It is too late to reshape London. But it is not too soon to plan the country.

CROSSLEY DAVIES.

Mr. Arthur Keen

There is only one man who knows all the work that has been done for the R.I.B.A. by its hon. secretary during the last six years. His name is Arthur Keen, and, unfortunately he will not tell. But if only one knows the whole, every one knows a part. The bushel of modesty which he puts over his candle is capacious, but the beams have shone under the rim and through the cracks; and it has been impossible during his term of office to skirt ever so lightly upon any of the Institute's activities without becoming aware that he has spared neither time nor trouble to ensure the smooth running of that somewhat unwieldy machine. They have been stormy years; it has needed the hard labour and goodwill of many to bring them to a peaceful issue, and it is not too much to say that with an hon. secretary of another sort the issue might easily have been chaos. The work of the Institute has expanded until nowadays it is a heavy job merely to attend the more important meetings of the principal committees in order to correlate them and prevent them from nullifying each other. This Mr. Keen has done and more also—much more. Through varying presidencies he has represented the Institute on every kind of occasion, has received and led deputations, attended conferences, fought with wild parsons at the Mansion House in defence of his beloved City churches, and with wilder engineers at

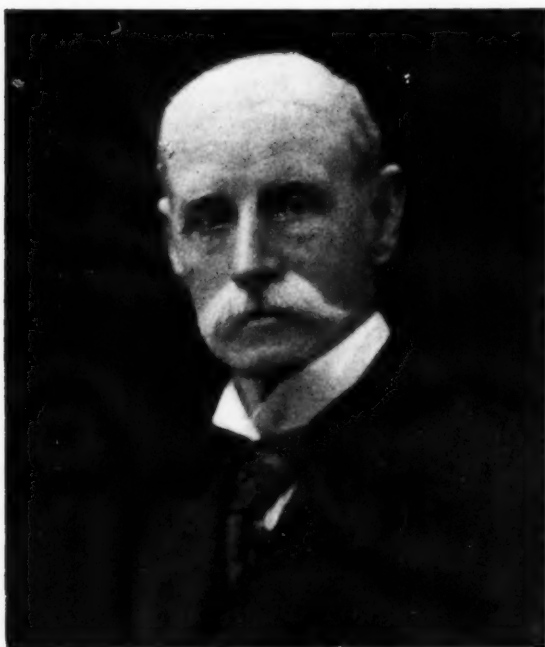
the L.C.C. to save Waterloo Bridge. He has indeed been indefatigable for the good of architecture and the honour of the Institute. And it isn't only what he does, it's the pleasant way he does it which makes him not only the officer but also the friend of the whole Institute. If he has once in these six years been seen in a bad temper under whatever provocation, the person who saw it has kept the secret. Add to all this a remarkable gift for throwing off shapely little speeches without preparation, and with so little effort that they are hardly appreciated, and it will be seen how fortunate the Institute has been in its hon. secretary. How much self-sacrifice it has involved on his part we do not know, but we do know that the debt on the Institute's side is heavy.

Sir Giles Gilbert Scott in Trouble

On Monday next the Royal Gold Medal will be presented at the R.I.B.A., and it is no secret that the chosen recipient is Sir Giles Gilbert Scott, R.A. Sir Giles was the hero of another and more unconventional function the other day, when the students of the Liverpool University School of Architecture kidnapped him as he issued from the University Degree ceremony, rode him off to the School of Architecture, and there presented him with a small silver set-square. Fortunately they had an excellent excuse for their strange behaviour in that Sir Giles is reader in ecclesiastical architecture to the University, though no student there remembers having heard him read, let alone lecture, on this or any other subject. Sir Giles admitted that this was probably his first appearance in the school in the present generation of students, but he had, he protested, as a matter of fact, been there before. Moreover, he engaged himself to come again, and it was evident that he took the entire proceeding in very good part. Lady Scott was with him, and at the conclusion of the ceremony she too was warmly cheered. We are glad of this, for there was no silver set-square for her, nor is it conceivable that the R.I.B.A. will award Lady Scott a medal on Monday next, or that she will be put on the list of Honorary Corresponding Members of the American Institute of Architects, which has just elected Sir Giles to this honour, together with Mr. Arthur Byne, M. Camille Lefèvre, and Señor Horacio Acosta y Lara, the latter gentleman being the Montevidean President of the Pan American Congress of Architects. Yet we think few professional men are in the same debt to their wives that architects are, for most women possess in a very big degree the power of evoking the "spirit of place," and of giving form and character to whatever surroundings in which they may be placed.

Glass Houses

We have heard it said that the proposal to build glass houses, now being heatedly discussed on the other side of the Atlantic, originally came from an omnibus driver of the L.G.O.C. This may, of course, be true; indeed, the wonder is that the stationary buses that daily take up their position in a long row from Charing Cross to St. Paul's have not before inspired housing politicians and glass merchants to emulate their charms in the streets of some fast-growing suburb. But after the steel house (constructed, of course, of wood) the glass house was bound to come, just as we are sure to have the cork house, the indiarubber house, the asbestos-blotting-paper house, and a score of others, each in its turn, if only we wait long enough. Of course, the glass is to be opaque, otherwise the inhabitants would enjoy an altogether inadequate degree of privacy. A city of glass would be attractive from many points of view. Its appearance—especially if it were built on a hilly site—might have an almost apocalyptic splendour, while its cleanliness ought to be impeccable. Musicians might, however, find themselves somewhat hampered there, for musical glasses would seem to be the only appropriate instrument in such a place. And there would be an end to at least one estimable adage, for in our city there would probably be no stones.



MR. ARTHUR KEEN, F.R.I.B.A.

Architectural Style—5

Punctuation

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

PUNCTUATION is a process of design by which one can give to any object a certain consciousness of its own extremities. By means of it the object appears to be saying to itself, "Thus far do I extend and no farther." Without this formal emphasis of its extremities the object necessarily lacks the essentials of organic unity. Take a plain cylinder, for instance, cut off at its top and bottom; the length of the cylinder would seem to be entirely undetermined, for one is entitled to ask: What reason is there why it should not extend farther in either direction? Suppose, however, we give this cylinder a base in the form of a group of mouldings running round it, and a capital of any simple form, circular on plan, and having a larger circumference than a section of the cylinder itself, it is clear that the cylinder has acquired an entirely new character; for being provided with these emphatic terminations, it is now an integer, whereas before it was but an indeterminate fraction.

The reader can easily call to mind innumerable examples of columns: Egyptian, Greek, or Gothic, which derive their character from their complex capitals and bases, and can, in his imagination, construct the crude and unsatisfactory shapes which would result were these punctuating features to be obliterated. It is noteworthy that originally the punctuations had a constructional justification in that they helped to prepare the extremities for the special mechanical stresses to which they would be exposed, but the universal practice of elaborating and ornamenting these terminals is entirely an æsthetic phenomenon, and it may even be affirmed that the coincidence of constructional and æsthetic emphasis is, in many cases, purely accidental.

The truth of this statement can be most clearly established if we take a number of examples of punctuation in which the constructional element is not present at all. Let us glance at Fig. XIIA, which represents an ancient archway of extremely elementary design. One cannot help recognizing that in spite of its somewhat ragged outline, it has a truly architectural quality by virtue of the row of small windows which stretch across its upper portion. In accordance with the new terminology which I am venturing to introduce into architectural criticism, these windows may be said to *punctuate* the façade at its upper extremity; take them away and the building tends to become a shapeless mass, of which the height is entirely undetermined. Now it is quite clear that these windows are by no means a constructional necessity. They do not help the stability of the structure in the least, but they provide an element of coherence in its design. Next let us consider the arched openings. In the case of the lower arch the brick voussoirs do, indeed, provide an instance where the punctuation happens to have a constructional use as well, but the pointed arch above with its multiple reveal is clearly an æsthetic form which has quite a different character from the plain soffit which constructional necessities

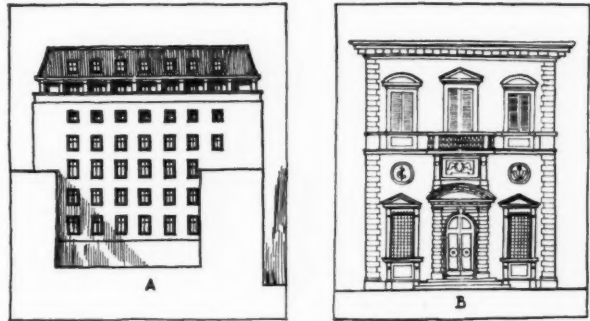


FIGURE XIII.

would have determined. Fig. XIIb, which illustrates part of the gardens of the Vatican, provides yet another example in which ancient walls have shown themselves to possess the graces of punctuation. It will be observed that the shadow cast by the roof which surmounts the battlements in the tower effectively emphasizes its terminal feature.

Example XIIIa is a highly successful modern application of a similar motif. This distinguished building has a crowning feature made up of a steep, flat-topped roof, supported by a loggia. It will be observed that the main façade is also punctuated laterally by the broad band of wallage on each side of the fenestrated portion, while the rows of windows themselves exhibit a further subtlety of design in that the top row are of smaller vertical dimension than the others. This is also punctuation, because it tends to close the repeating series of stories which had been proceeding in plain arithmetical progression.

Fig. XIIIb, typical of the Italian Renaissance, is an excellent example of quite a number of different kinds of punctuation. The grand cornice dominates the whole design, and would do much to unify it even if the internal harmony of the façade were of a lower order than it is. The building, however, takes formal cognizance not only of its upper boundary, but of its lateral boundaries as well, and the stone rustication forms a pleasing delimiting feature to each side of the façade. The doorway itself is similarly punctuated by rustication each side, while its position is further emphasized by the curved pediment which surmounts it.

The window openings are punctuated top and bottom by crowning pediment and bracketed cill respectively. It may be advantageous to contrast these two last examples and analyse a little more closely the distinction between the forms of punctuation there exhibited. In order to do this, one must turn one's attention to the subjects which find such formal expression. There can be no doubt that in the Italian example, the elaborate punctuation of the window openings gives them a social importance which is denied to the plain rectangular apertures shown in example A, where each window is conceived as a mere fraction of a large fenestrated pattern, itself comprising a single unit of design. In each case, the very emphatic punctuation of the top of the building is fully justified; for in the first instance the main unit is so great that it is worthy of a highly conspicuous crowning feature; while in the second the individuality of the separate elements of door and window, comprising the composition, is so strongly pronounced that nothing but that powerful cornice would seem capable of dominating them.

Fig. XIV shows four examples of the punctuation of towers. In example A the girth of the tower diminishes at

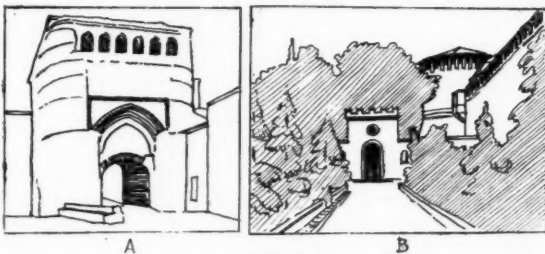


FIGURE XII.

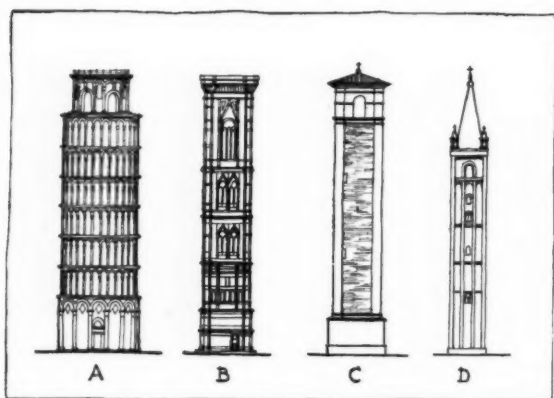


FIGURE XIV.

its topmost story, and this diminution is the means by which the tower takes cognizance of its termination. The upper story is itself punctuated by cornice and railing. It is noteworthy also that of the open arcades the topmost has taller columns than the rest, so that the arithmetical progression of the stories is brought to a close by this additional punctuation, and the ornate ground story, with its larger columns and arches and solid infilling forms a most satisfactory base to the composition.

In the tower B, another famous example, the form expands at its summit by means of machicolation surmounted by a decorative parapet, and this is also an elegant solution of the problem.

C, a plain campanile, has a solid base and a crowning feature of which a small arched window and a tile hipped roof of low pitch are the chief elements. As the body of the tower consists of plain wallage punctuated laterally by elongated pilasters, any more elaborate treatment of the base or crowning feature would have been out of keeping. The design D is effectually punctuated by a small spire.

Fig. XVA is a somewhat ludicrous example of a structure in which the punctuation has been badly mismanaged. Here the crowning feature is marred by a curious duality of purpose. The building swells, and then contracts, without sufficient reason. The initial swelling would have been a quite sufficient punctuation without the addition of the little be-steepled tower, which has all the characteristics of an unpleasant surprise. It is just as if a man who has already left the room and slammed the door, comes back again and says: "Hullo!" Towards the bottom of the tower a decorative band suggests a premature punctuation, for having made this quite meaningless halt, the building proceeds down another twenty feet to its true base, which is marked by its Gothic tracery.

In example XVB the continuation of the structure above the capital fails to act as a punctuating feature, for it too

closely resembles the form of the column itself, and seems to be a meaningless extension of it beyond its proper limitation, which is marked by the capital. Again, the base, which comprises a pedestal set on top of a tall rectangular block forming the mausoleum, is altogether too formidable to be the nether punctuation of this design. As the base is in height two-thirds of the column, and equal to it in bulk, it may also be said of the composition that it suffers from the fault of unresolved duality, for the portion above the capital, being purely an excrescence, cannot contribute to the formation of a trinity.

The design XVC is so strangely composed that it appears to suffer from a mechanical instability. The succeeding stages of the tower seem to be arranged in telescope fashion, as if the upper members had been made to slide down to the level of the first stage of the tower. To explain this unsatisfactory result it is only necessary to examine the defects of punctuation which the building shows. While it is true that each stage of the tower is punctuated laterally by the long vertical ribs, its vertical punctuation is far to seek. The long window is topped against a square panel, but the ribs themselves have no terminal features at their summits, and thus seem cut off quite at random; and it is an even worse defect that they are not punctuated at their lower extremities, for it is precisely this absence of punctuation that gives rise to the idea that the stages are capable of sliding downwards. Moreover, the building has no adequate base, and looks as if it might sink into the ground at any moment. The long thin slits of windows, although given a complex pattern of panes, are yet devoid of vitality, in that the pattern altogether ignores the head and foot of the aperture which it fills. These are some of the defects of form in this modern building. The defects in its subject, which consist partly in the inhuman dimensions of these long slits of windows, lies outside the scope of the present discussion.

It is a pleasure to turn to the unpretentious round tower shown in Fig. XVD, whose elementary cylindrical form has a straightforward punctuation of low conical roof which is quite adequate to the occasion.

The street building requires great care in the disposal of its parts if it is to provide the special type of punctuation which is proper to continuous architecture. We must bear in mind that in a town even a detached building has not that degree of independence which it may possess in the country. Thus the lateral punctuations cannot with propriety be so emphatic as unduly to separate a building from its immediate neighbours. On the other hand, the punctuating elements at the upper and nether boundaries of an urban façade are quite necessary if we are to derive any æsthetic pleasure from the appearance of our streets. Fig. XVI is a mediocre composition, for here we have repetitive design which lacks the character of true formality. The façade seems almost uniformly covered with windows, which even sprawl above the cornice and prevent the latter from having very much value as a punctuating member.

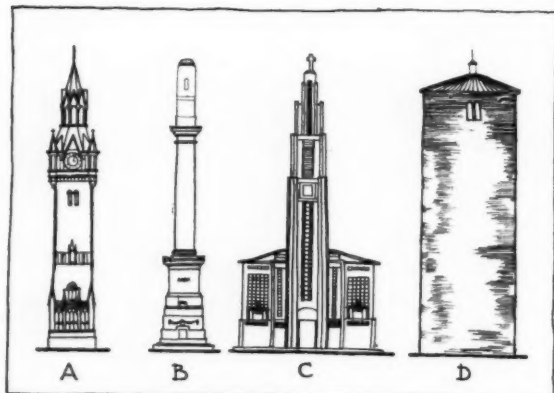


FIGURE XV.

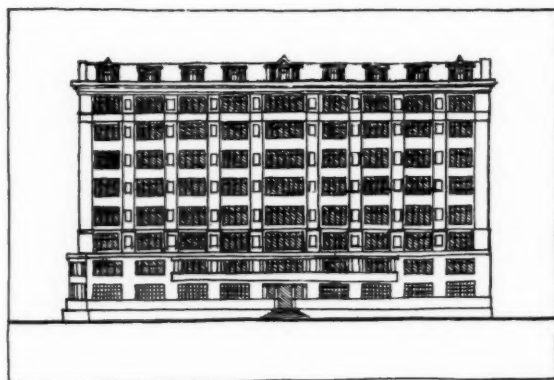


FIGURE XVI.

It is a very common fault in modern street architecture that there is an insufficient band of wallage between the ground-floor windows and first-floor windows, while the older convention of parapet wall, which forms such a successful termination to the typical eighteenth-century urban façade, is discarded in favour of a quite flimsy cornice above which there are either one or two rows of dormers, probably framed in stone against a slate roof. It might be laid down as a general rule that no dormers ought to be permitted above an urban façade, unless they are preceded by a parapet, for otherwise the fenestration is apt to peter out in a vertical series unpleasantly indeterminate.

In Fig. XVIIA we see a row of normal façades for shops, most of which are designed in that unassuming urban style which is now unhappily becoming extinct. In the centre, however, is a modern intruder, a building whose three stories are united in one gigantic frame which effectually separates it from its neighbours. Not only disparity of scale offends us here, but the abuse of punctuation, which causes this modern store to dissociate itself from its neighbours.

It is noteworthy that the other buildings of the street, although they are quite adequately terminated at their upper boundaries, keep their sides open, as it were, to the next building, so that in spite of a considerable diversity in their designs they form quite a companionable group. Even the pedimented building on the right, conspicuous though it is, does not defy the social convention so boldly or so disastrously as does the new emporium. Let us consider how such structures would look if they were placed together in a row. Example XVIIIB shows that this particular type of shop-front is incapable of forming part of a unified composition. The lateral punctuations have made each unit too self-sufficient.

This is not to say, however, that a long terrace of street buildings can dispense with lateral punctuation, for in such a case we are dealing with a unity as large as can be conveniently visualized from any one point, and such a unity requires a formal emphasis at its terminations.

The very famous street composition which is roughly sketched in Fig. XVIIIC shows the utmost subtlety in applying the principle of punctuation to a street façade. The reader will recognize what perfect terminal features to the Quadrant were provided by the County Fire Office and the small tower-like projection shown on the left-hand side of the diagram. In the Quadrant itself each row of windows, vertical and horizontal, is adequately stopped; in the County Fire Office itself, the series of columns is closed at each end by the addition of a pilaster.

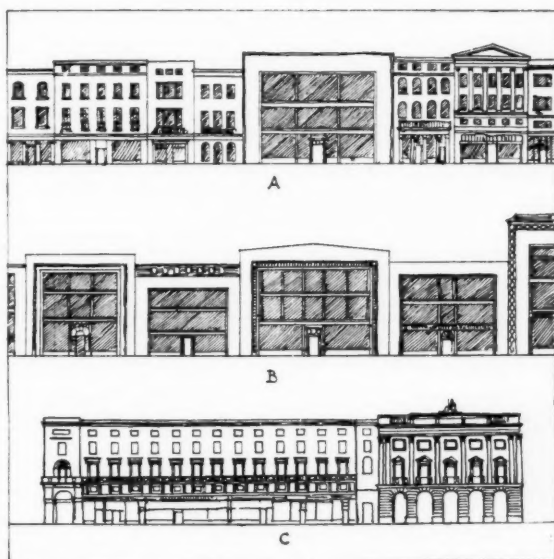


FIGURE XVII.

Fig. XVIII A shows a modern development of the tower form, which has some of the defects which characterized example XVC, inasmuch as the tall vertical ribs are crudely cut off at random. Because its main vertical dimensions are thus indeterminate, the building is lacking in vitality, and although the clock tower itself, at first sight, may seem to be the prominent crowning feature, it belongs to the centre of the building, which is completely hidden from view, and it cannot serve as a termination of the vertical lines, which so insistently spring from the main façades. Fig. XVIII B has a like blemish, and the receding dimensions of the tower show the same telescope formation which marred the design of XVC. In Fig. XVIII C an attempt has been made to punctuate the tops of the receding wall surfaces, but in spite of this precaution the apex of the building presents in silhouette a ragged and shapeless form, resembling some great crag, fashioned fortuitously by the forces of Nature, and it thus fails to give us the impression of an architectural monument.

(To be continued.)

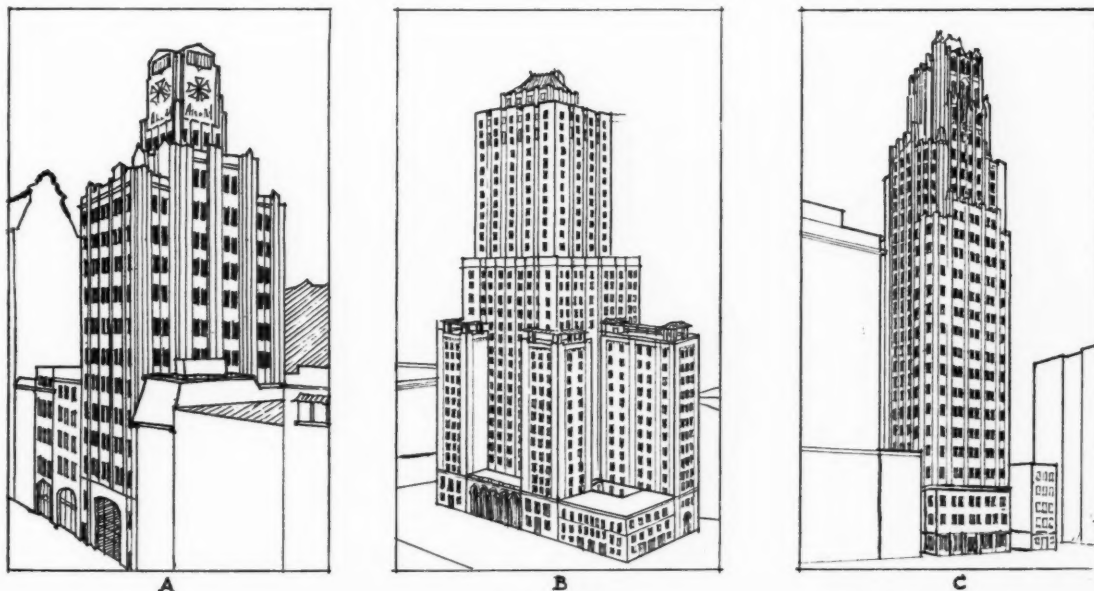


FIGURE XVIII.

The Manchester Art Gallery Competition

The Winning Design

THE first prize in the competition for a design for the new Manchester Art Gallery and Museum, on the Piccadilly site, has been won by Mr. Ernest Berry Webber, a London architect, twenty-nine years of age.

Over one hundred designs were submitted, and four prizes in all were awarded. The assessors—Dr. Percy Worthington, Professor C. H. Reilly, and Mr. Arthur J. Davis—describe Mr. Webber's designs, both for the general use of the Piccadilly site and for the building itself, as of "great appropriateness and distinguished simplicity." Their execution, it is added, would provide "a great public space such as few towns possess."

Mr. Berry Webber, A.R.I.B.A., the author of the winning design, is at present the chief assistant to Mr. E. Vincent Harris, F.R.I.B.A., of St. James's Square, London. His success in a competition in which many of the leading architects of the country have taken part is certainly a remarkable achievement. Perhaps one would have to go back to the selection of Mr. Ralph Knott as the architect of the London County Council Hall to find anything comparable to it. Mr. Knott was perhaps a year or two younger than Mr. Webber.

Mr. Webber is a Devonshire man by birth. He obtained his early architectural training at the London School of Building, under Professor Beresford Pite, F.R.I.B.A., and the late Mr. J. B. Fulton, F.R.I.B.A. Here he obtained valuable practical knowledge in the various trades connected with building, and had access to the workshops, and so was able to combine theoretical knowledge in design and construction with its practical application to the actual materials used. Later he entered the office of Mr. Robert Atkinson, F.R.I.B.A., the architectural director of the Architectural Association's schools. For the past eleven

years he has been associated with Mr. Vincent Harris, in whose office he has served a thorough apprenticeship in the work of preparing designs for competitions. The Manchester Art Gallery is the first big competition he has won, although he has been "placed" in one or two others.

Interviewed by a representative of the "Manchester Guardian," Mr. Webber spoke very modestly about his success, but he was willing to explain the main ideas which he had worked out in his design.

If my design has any merit at all (he said) it lies in the attempt I have made to keep closely to the practical requirements of the building to be used as an art gallery. I think that some of our museums in the past may have gone astray somewhat in that the designers paid too much attention to purely architectural considerations. I have tried to make the Manchester Art Gallery a working building which will function properly as a museum and art gallery, and, above all, one in which the public can see what is to be seen easily and methodically. I have kept in view all the time that this is a gallery which is sure to be most thoroughly and extensively used, and I have tried to make it as easy as possible for the completest advantage to be gained from the collection.

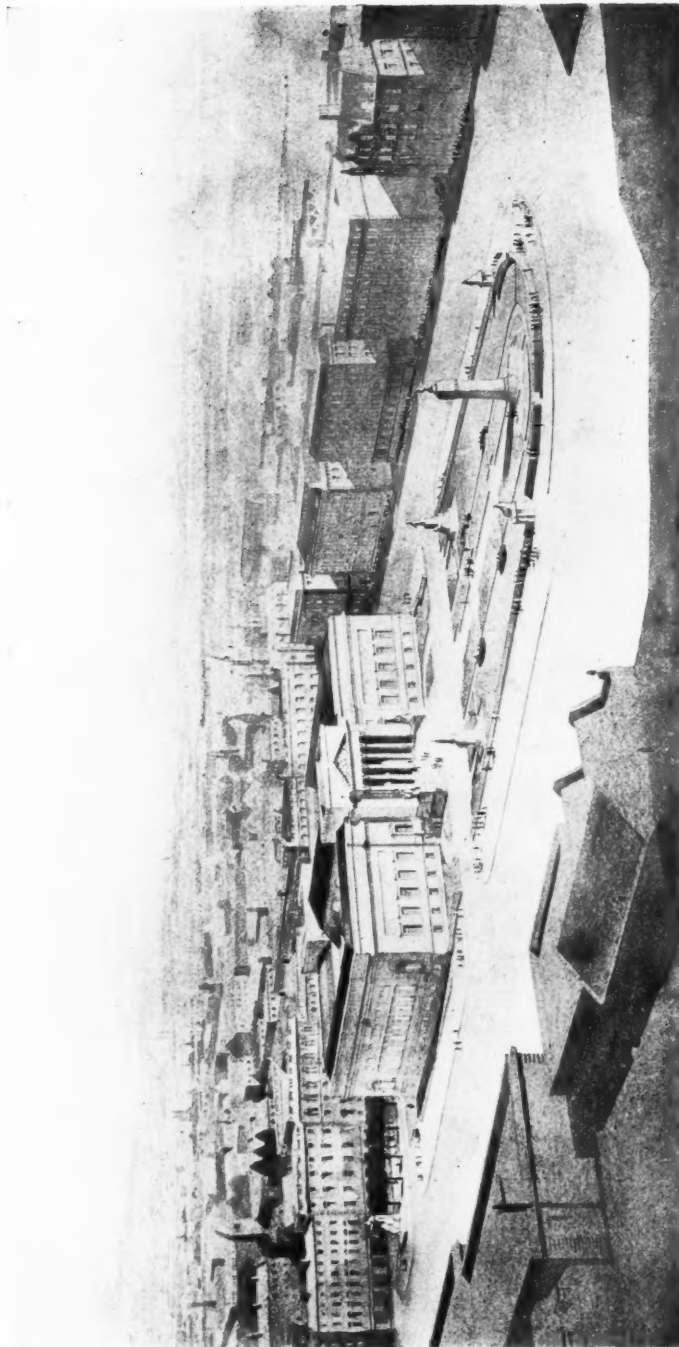
The position of the building on the site was specified, and the maximum amount of ground it was to cover was rigidly fixed. A certain minimum area was given for the accommodation, which was roughly divided into two portions—museum gallery and picture gallery. It was desired that each portion should occupy a floor. It was decided to place the museum with the sculpture hall and the memorial hall on the ground floor, and the picture gallery on the floor above. It soon became apparent that the amount of floor area required for the museum and sculpture hall would cover virtually all the ground allotted to the building, and the difficulty was how to light the internal portion of the scheme sufficiently, and to eliminate all small, poky areas. The problem was solved by placing the reserve galleries on the mezzanine floor over the smaller museum galleries, where they would still be in close contact with the other galleries. This device is, to my mind, the crux of the whole plan. It immediately freed the ground floor and allowed two large and airy lighting courts to be installed, features which it is hoped to make into pleasant garden places. It also provided students with a separate "circulation" of their own.

Then came the question of arranging the best means of access to the public. It was necessary that visitors should be able to perambulate the building, and to see everything without getting lost in a maze of corridors and chambers. It was very necessary, too, that a building of this kind should be elastic and adaptable, as collections are constantly changing in both type and bulk. It is highly desirable to be able to vary the pictures and objects shown, and to be able to shut off any portion without interfering with the convenient use of the remainder of the galleries. Both these requirements were met by planning galleries on each floor as "a double circuit." In other words, there is on each floor an outer and inner circulation round the whole building.

The galleries can be divided into four separate sections as may be desired, and any one of them may be detached for a special exhibition or for cleaning or decorating without interfering with the use of the other portions. The visitor can see all the exhibits, and go round the whole of the galleries without having to retrace his steps. I may add a word with regard to the lighting. The lower floor is given up to museum galleries that are side-lighted, and the upper floor to picture galleries which are mainly top-lighted. In the latter what is known as "top side" lighting has been

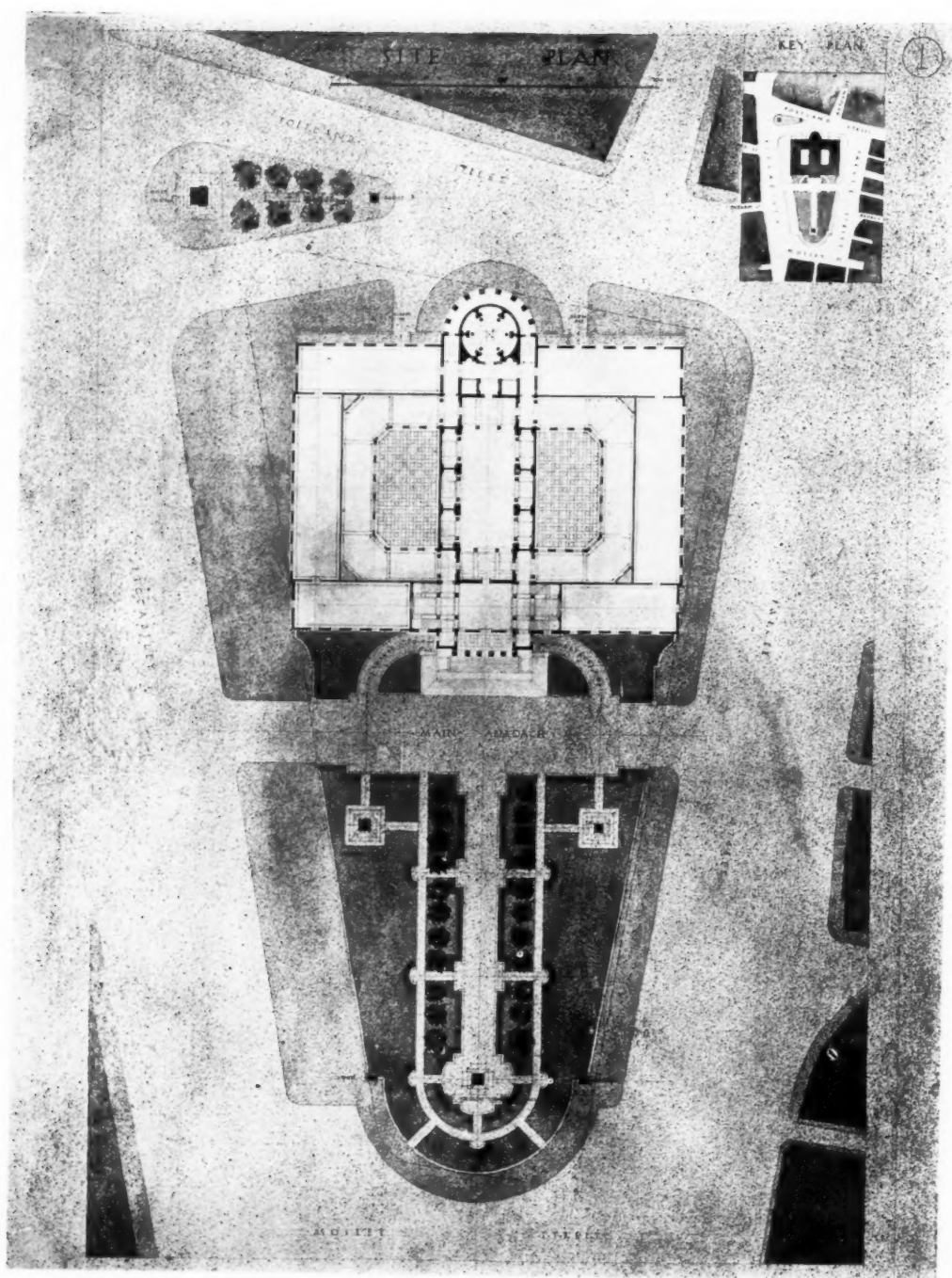


MR. ERNEST B. WEBBER, A.R.I.B.A.



MANCHESTER ART GALLERY COMPETITION: WINNING DESIGN. ERNEST B. WEBBER, A.R.I.B.A., ARCHITECT.

A Drawing showing the Art Gallery as it will appear on the Piccadilly site. In the left foreground are the roofs of the Market Street side of the Square, and the building has its back to Portland Street.



MANCHESTER ART GALLERY COMPETITION: WINNING DESIGN. PLAN OF LAY OUT.
 ERNEST B. WEBBER, A.R.I.B.A., ARCHITECT.

introduced—that is to say, the light is thrown on the walls and not on the floor, so that the visitor remains in shadow and reflections are avoided. These are perhaps the chief practical points which have influenced the design.

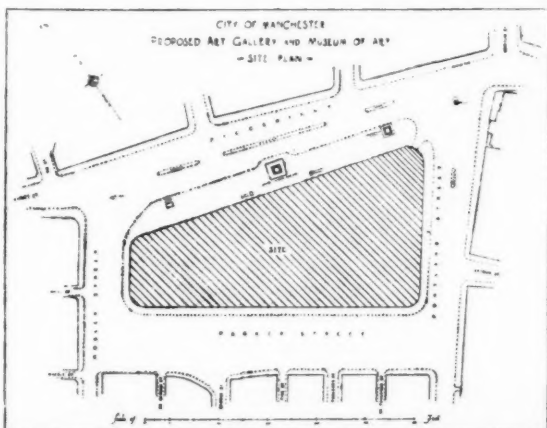
In designing the front an attempt has been made to keep the architectural treatment simple and dignified. I have tried to create a great civic building fitted to the importance of Manchester. The front is plain except for the large classical portico approached by a long flight of steps. There is under the steps a second entrance on the ground-floor level, designed to give access to the building under cover. I believe it sometimes rains in Manchester. My general aim in designing the exterior has been to avoid unnecessary decoration—in short, to create a building that looks like what it is, and which could not be mistaken for anything else.

Returning for a moment to the interior of his building, Mr. Webber described the way in which he had united the Hall of Memory with the main design. The Memorial Hall is a small circular building lit by a single "eye" in the dome, and strongly recalls the Pantheon in Rome.

My aim was (said Mr. Webber) to keep this hall away from the main-line traffic through the building. It is placed at a slightly higher level than the ground floor. From the main entrance there is a long vista through the Sculpture Hall into this circular-domed Hall of Memory, and I have tried to arrange the lighting so that strong light would be thrown upon an altar or statue placed in the centre of the Memorial Hall. This effect is obtained partly by providing an ante-room in front of the Hall of Memory, which is partially lit so as to get the effect of contrast with the concentration of light from the opening in the dome. Externally the Hall of Memory appears as a circular temple set in a peristyle of detached columns with something of the effect of a cloister. Mr. Webber finally touched on the way the building was placed on the site and the general lay-out of the open space.

What I have aimed at (he said) is for Piccadilly to cease to exist primarily as a street, and for it to become a great open space and civic centre. I have imagined a great central square and garden, and have placed my building in it. The original suggestion was that a clock should be placed on the building, but this was inappropriate to my design, so I divorced the clock from the building and placed it on a tower at the Mosley Street end of the site. The vista therefore ends in one direction at this clock tower, and in the other it is closed by the portico in front of the Art Gallery.

Mr. Webber added that it was probable that if the work goes forward he will transfer his office to Manchester for the progress of the building at least, and possibly for longer.



The Assessors' Report

The Manchester City Council accepted the report of the assessors appointed to select the winning designs, and decided to award the four prizes in the order recommended by the assessors.

The author of the winning design receives £500. In commending the award of the assessors to the Council, Alderman F. Todd, chairman of the Art Gallery Committee, said that of the 107 plans submitted the plans of Mr. Webber were far and away the best. The committee were unanimously of this opinion. The other awards were:

Second prize, £300, Mr. Edwin Maxwell Fry, 36 Paulton's Square, Chelsea, and Mr. Geoffrey Leyland Owen, 84 Upper Richmond Road, East Sheen, Surrey.

Third prize, £200, Mr. Alfred W. S. Cross and Mr. Kenneth M. B. Cross, 46 New Bond Street, London.

Fourth prize, £100, Mr. William Warman and Mr. William G. Sinning, 5 Byne Road, Sydenham.

Lay-out of the Site.

Dr. Percy S. Worthington, Professor C. H. Reilly, and Mr. Arthur J. Davies, the assessors, state that the author of the winning design has produced a scheme, both for the general site plan and for the building, of great appropriateness and distinguished simplicity.

In his lay-out (they continue) he has recognized that the open space to be visualized is the large area bounded by the buildings on the outer sides of Piccadilly, Mosley Street, and Parker Street, and on the fourth and dominating side by an important municipal building. To this building the open space must form a foreground; therefore, into this space such familiar features as the existing railings and the broad Piccadilly flags will merge, leaving one great public space such as few towns possess.

The main axis of the scheme is well marked. The vista is terminated in one direction by an isolated clock tower, and in the other by the main steps and portico to the building. These latter are approached, as they should be, by a broad way for carriages, which crosses the site from Piccadilly to Parker Street. This design varies from almost all the others in having no basement or semi-basement, except for engineering purposes, with the result that the administrative office, the refreshment room, the lecture room, the additional gallery, and other such accommodation are all excellently housed on the ground floor, with their necessary subsidiary entrances.

The whole of the upper stories is thus freed for exhibition purposes. This is an immense gain both in convenience to the administration and to the public, and gives definite meaning and use to the fine flight of steps which leads up to the portico from which the main exhibition galleries are entered. Under the portico is a second entrance on the ground-floor level, connected to the gallery floor by the main staircases. By means of it access to the building may be gained under cover, with adjacent and conveniently arranged cloakrooms for receptions. Works of art are delivered and removed on the Portland Street side. This part of the planning is excellently done.

Coming to the exhibition galleries, the principle of the plan is admirable. The sculpture hall, barrel-vaulted, and having aisles or recesses for minor sculpture, and with excellent possibilities for decorative painting, is placed longitudinally on the main axis, and forms the main central motif of the building. At a culminating point in the long axis is placed a circular-domed Hall of Memory, itself a finely-conceived feature. Right and left of the sculpture hall are large internal lighting courts, sufficient space for which few competitors have found. From these courts the smaller side-lighted galleries obtain their light. Of the two exhibition floors, the lower is entirely given up to side-lighted museum galleries, and the upper to picture galleries, mainly top-lighted. In this way a simple and satisfactory division of the building is obtained.

Unmistakably an Art Gallery.

On each floor there is an outer and inner circulation round the whole building, and a separate complete circulation on either side of the hall. The galleries, therefore, may be divided into four different sections at will, and any one of them, or part of them, detached for a special exhibition or for cleaning or decorating without interfering with the convenient use of the remainder. A visitor may go round the whole of the galleries and see all the exhibits without once retracing his steps. Galleries for the storage of reserved objects and for study are cleverly placed upon a mezzanine floor, with convenient access by stairs and hoists from the museum galleries, which they serve.

The architectural treatment, both inside and out, is as straightforward, dignified, and balanced as it is in plan. The design has all the elements of a dignified municipal building. It is unmistakably an art gallery. Approached from Mosley Street or Market Street, or from London Road and Portland Street, both in direct elevation and in perspective, the forms are good and interesting. The windows of the museum galleries form a well-spaced range above the ground floor, to which the plain wall surfaces of the top-lighted picture galleries above make a good foil. A Corinthian portico approached by a noble flight of steps marks the centre of the façade towards the open space, and the Hall of Memory the centre of that towards Portland Street. The form of the latter, with its suggestion of a circular temple, is most attractive. By means of it the memorial idea is evident, externally as well as internally. It is emphasized by a band or frieze of memorial sculpture.

Approaching from London Road or down Portland Street this front, and especially the central feature, will be very fine. Taken as a whole, it will be seen that the exterior of the building fully corresponds to and expresses the internal arrangements, and consequently the function of the building. The detail throughout is refined; sculpture is sparingly, but effectively, used; and enrichment is applied where emphasis is required, and nowhere else.

A Criticism of the Designs

Until the other designs submitted in the competition are publicly exhibited it is impossible to form comparative judgments. But it is difficult to believe that any other scheme could possess to a greater degree the qualities of directness and simplicity that distinguish the design placed first by the jury. Mr. Webber's planning of his building is as straightforward as it could well be. Indeed, to anyone not intimately acquainted with the conditions of the competition, and with the inherent difficulties of the subject, it might seem that, if the practical problem could be solved by an arrangement apparently so elementary, there could not be much in the programme. It is, however, precisely this simplicity of the winning scheme which is its supreme merit and its greatest achievement. Admittedly, simplicity as an ideal may be run to death in architecture. The notion that in every case the *parti* that can be most easily read, that can be apprehended at a single glance, is the best, will not stand analysis. There are plenty of programmes which in their nature are complex and which should properly receive a complex solution. But in this case a complex subject demanded a simple solution; for the building in the main was to be used by the general public, who were to find their way about it without guidance and without having to retrace their steps. Everything was to be open, obvious and unmistakable. And these aims are most completely realized in Mr. Webber's scheme.

Those who have participated in the competition will be in the best position to appreciate the skill with which each of the chief difficulties has been met by the winner. By virtually eliminating a basement he secures an easy approach for his covered carriage entrance, and for the goods and other entrances at the back and sides. Furthermore, his additional exhibition space, refreshment room, staff, committee and store-rooms on the ground

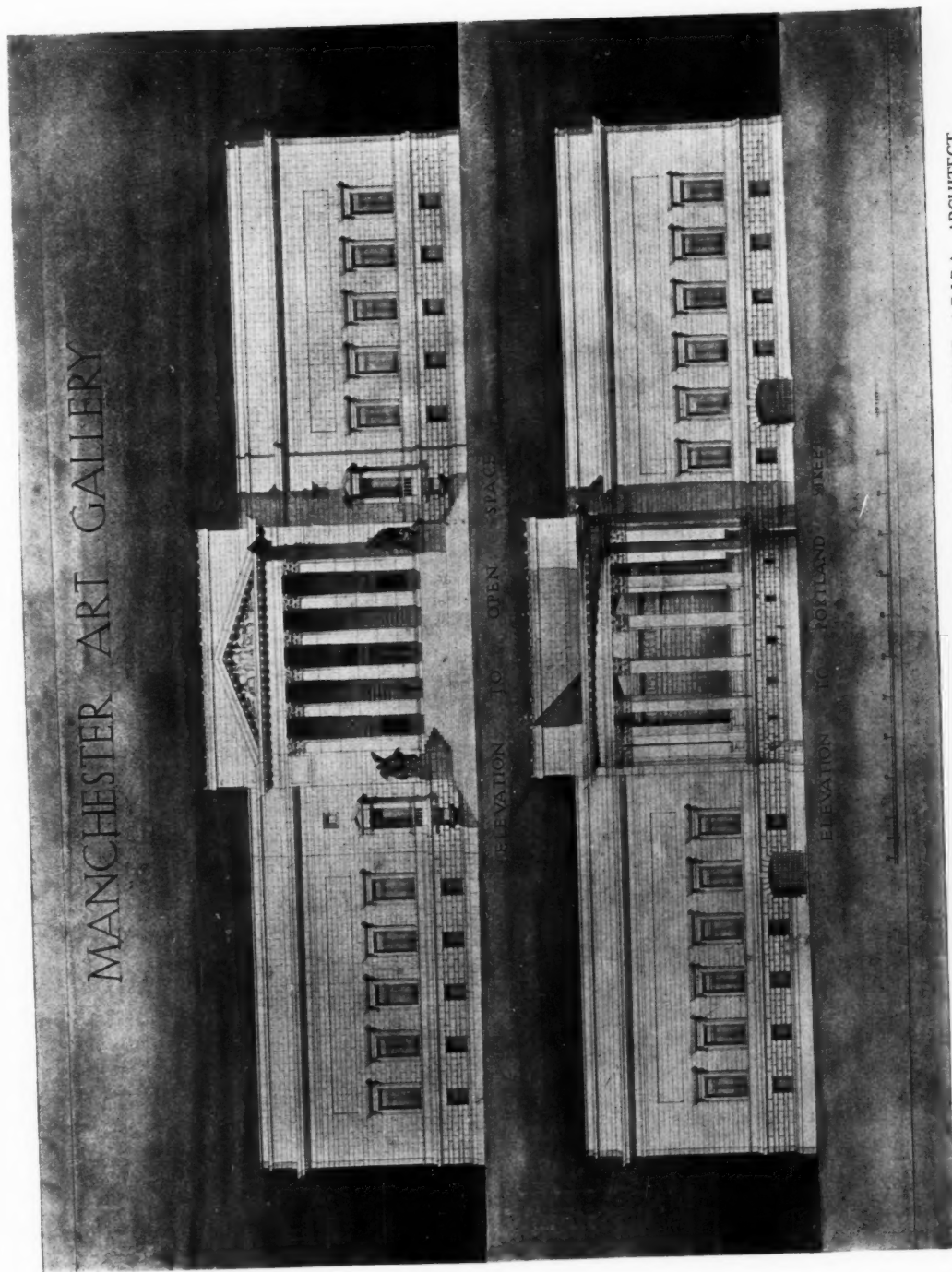
floor can be well lighted and ventilated. He has so placed his main staircases and Hall of Memory that, whilst they retain their due importance in the scheme, they yet leave his major circulation uninterrupted. But the most ingenious device—one to which the jury have drawn special attention in their report—is the housing of the reserve galleries in connection with the museum on a mezzanine floor. As a result the whole of the ground floor is liberated for a spacious and generous treatment, with ample courts and parallel systems of circulation that can be subdivided and short-circuited at will: at the same time another vital gain is secured in the whole of the upper floor becoming available for picture galleries. It is really the master-stroke of the plan, and possibly a unique feature in the competition. Finally a well-balanced division of side and top-side lighted galleries has been obtained, in the latter case a modified form of the Hurst-Seager method being used.

The dominant impression which the planning gives is that of an organic structure. The main lines run through and intersect decisively at the critical points. Out of the framework of the plan the elevational composition arises unaffectedly and with a plain logic. There is no unnecessary complication of parts, no forcing of motives. Every element of the composition comes from the plan itself, and is there primarily because it is the outward expression—more or less emphatic as the occasion may demand—of an element in the plan. Particularly admirable is the external statement of the Hall of Memory, the existence of which in the scheme certainly justified its being made visible elevationally. Here it occurs where it can play, and is allowed to play, its proper part in the composition. Stylistically the design is stated in dignified, traditional terms that make it recognizable for what it is, an English municipal gallery and museum of art. Neither its interior nor its façades are those of a Dutch, Norwegian, French, Spanish, or Russian gallery, nor do they echo the tendencies of any modern experimental movement. They are pre-eminently sober, safe, and in reasonable taste.

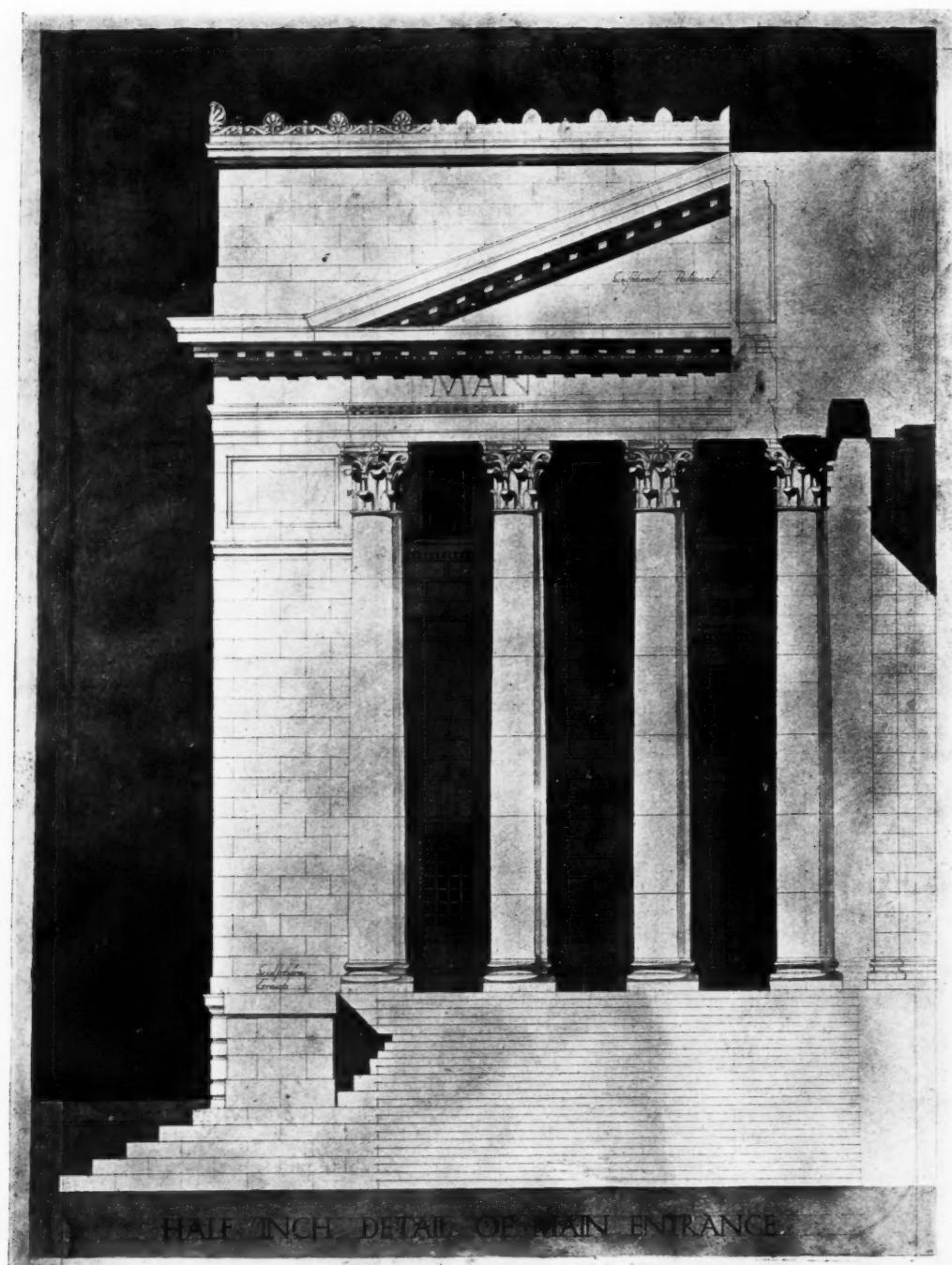
Whilst the competition was for a building it was also for an open space. Here Mr. Webber has scored again. In fact, in his perspective he has scored more even than in his site plan, by suppressing a central avenue of trees, originally shown on the latter. Everything in the space before the building is kept low, except two monuments and a terminally placed clock tower. The Queen Victoria Memorial is removed to the north-east corner of the site, where it usefully assists in regularizing the bounding lines. The consequence of thus freeing the main space of all such features as tall trees, shrubs, railings, and a multiplicity of statues, is that a fine impression of breadth is gained. Virtually the whole of the area enclosed by the surrounding buildings becomes one great open *place*: and the maximum of effect is obtained from it. In accomplishing this Mr. Webber has succeeded in reconciling the claims of those whose interest has been chiefly to see that a gallery and museum worthy of Manchester should be erected on the site, and those who have been more concerned with developing the area as an open space. It is an achievement as remarkable as it is satisfactory.

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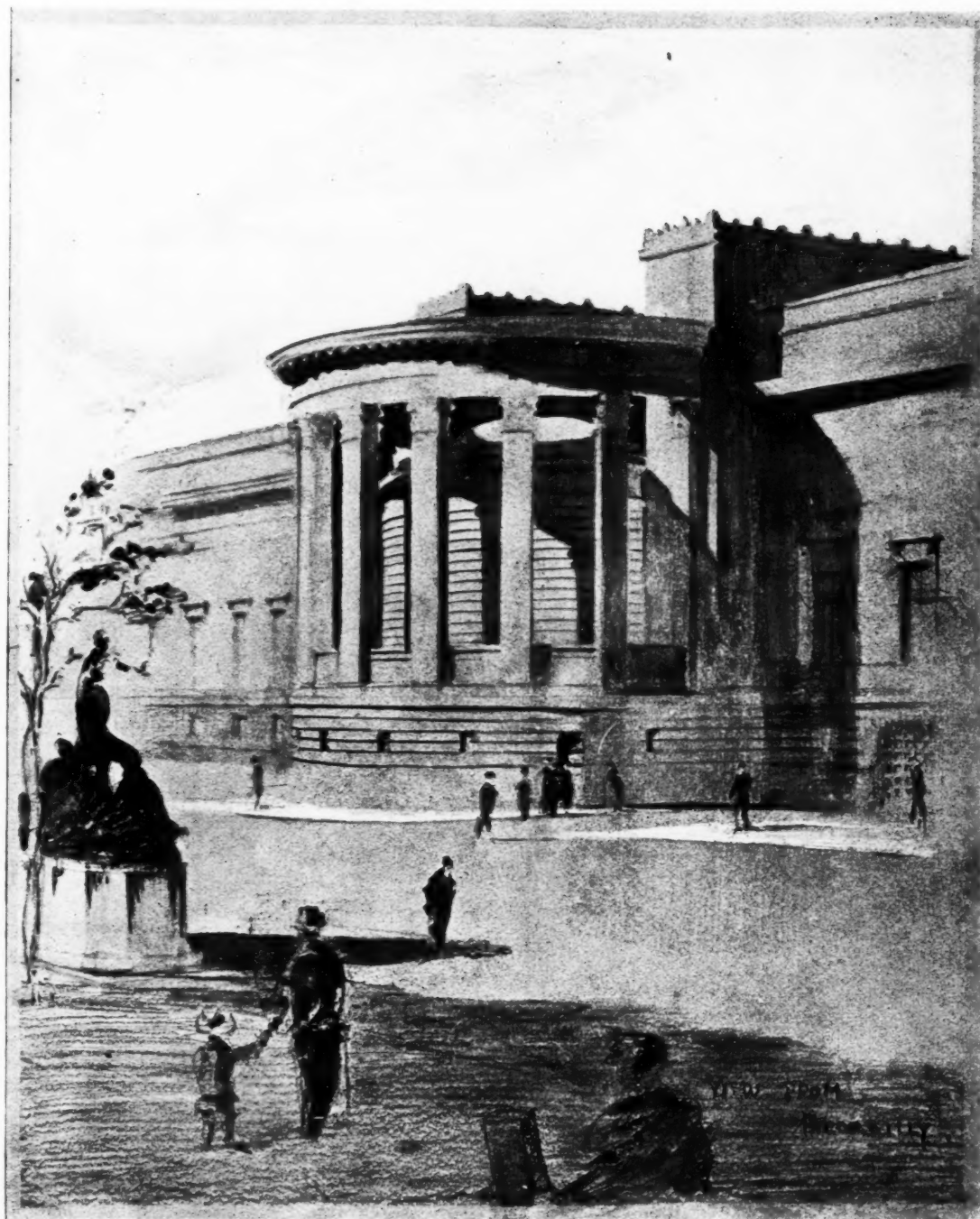
Professor Reilly, writing in "The Manchester Guardian," draws attention to the fact that many of the architectural competitions have been won by young men. Harvey Lonsdale Elmes won the competition for St. George's Hall, Liverpool, which resulted in the finest classical building in Europe, when he was twenty-four. Giles Gilbert Scott won his cathedral in that town in an open competition at an even earlier age, and the building again promises to be an epoch-making one. Ralph Knott won the competition for the London County Hall at twenty-eight, and now we have Mr. Berry Webber at the same age as far as years go, but much younger if the five years of war service are deducted, winning an equally large competition for the building and site plan which together offer the greatest architectural opportunity which has come to Manchester within the last fifty years.



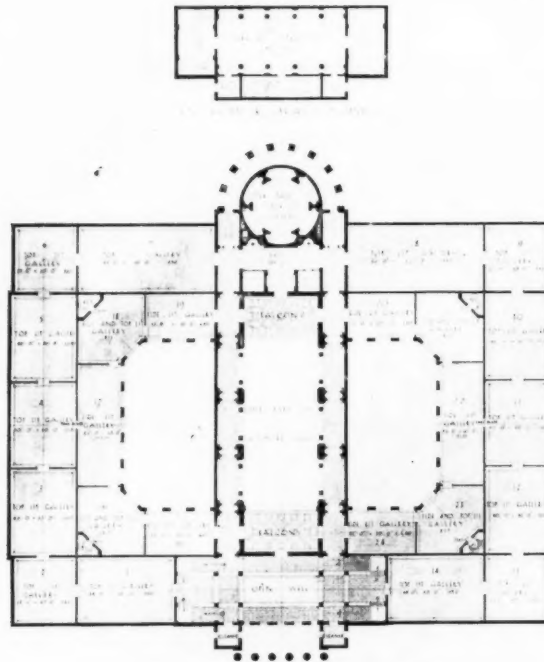
MANCHESTER ART GALLERY COMPETITION: WINNING DESIGN. ERNEST B. WEBBER, A.R.I.B.A., ARCHITECT.
THE FRONT AND BACK ELEVATIONS.



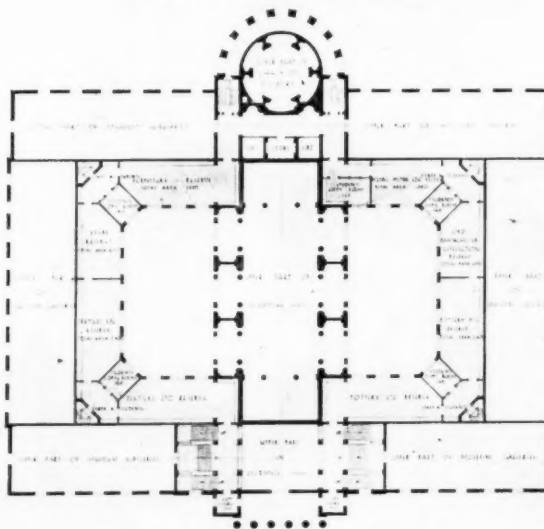
MANCHESTER ART GALLERY COMPETITION: WINNING DESIGN.
ERNEST B. WEBBER, A.R.I.B.A., ARCHITECT.



MANCHESTER ART GALLERY COMPETITION: WINNING DESIGN.
ERNEST B. WEBBER, A.R.I.B.A., ARCHITECT

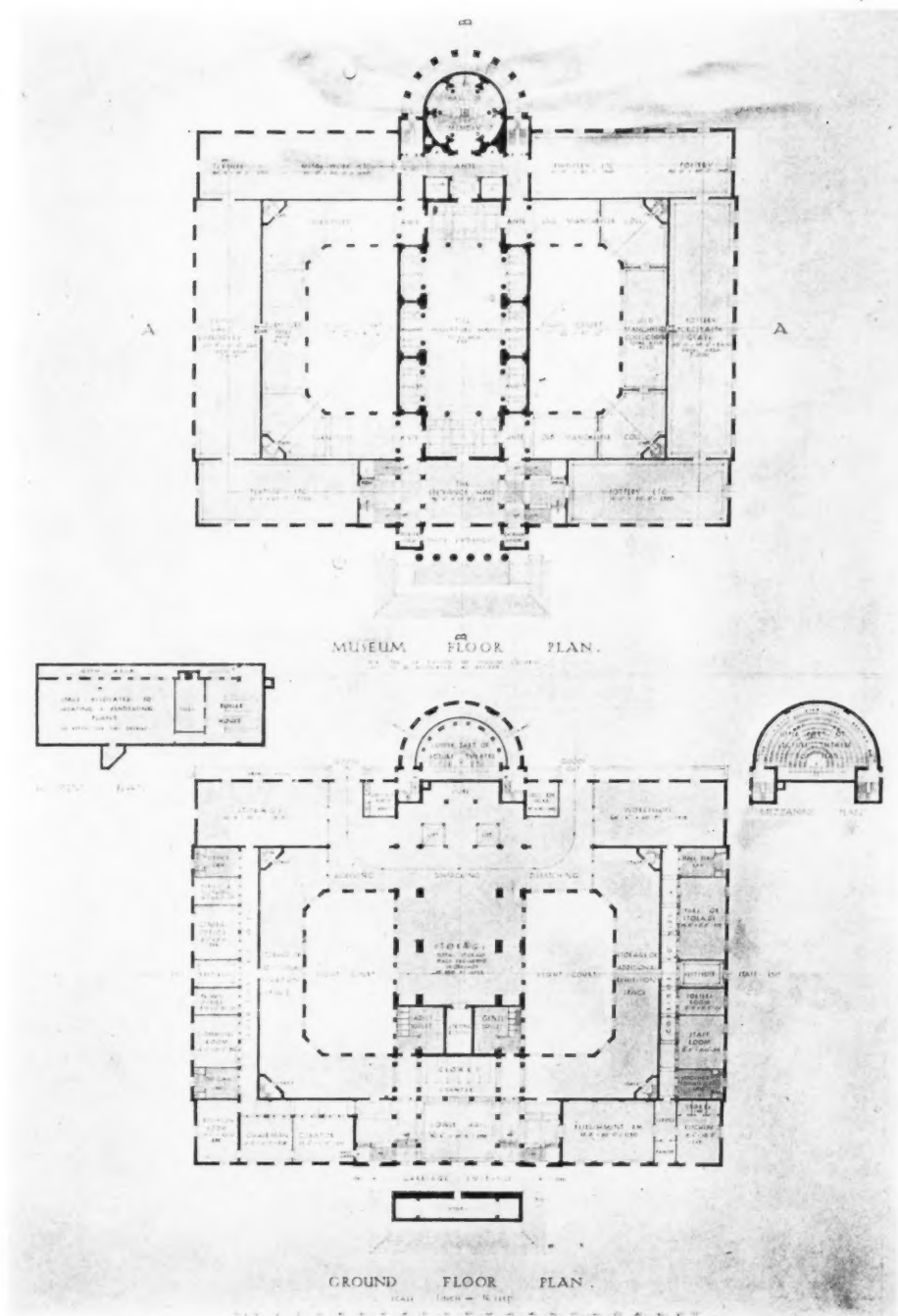


PICTURE GALLERY FLOOR PLAN



MIFFLIN PLAN OF PICTURE GALLERIES

MANCHESTER ART GALLERY COMPETITION: WINNING DESIGN:
ERNEST B. WEBBER, A.R.I.B.A., ARCHITECT.



MANCHESTER ART GALLERY COMPETITION: WINNING DESIGN.
ERNEST B. WEBBER, A.R.I.B.A., ARCHITECT.

MANCHESTER ART GALLERY

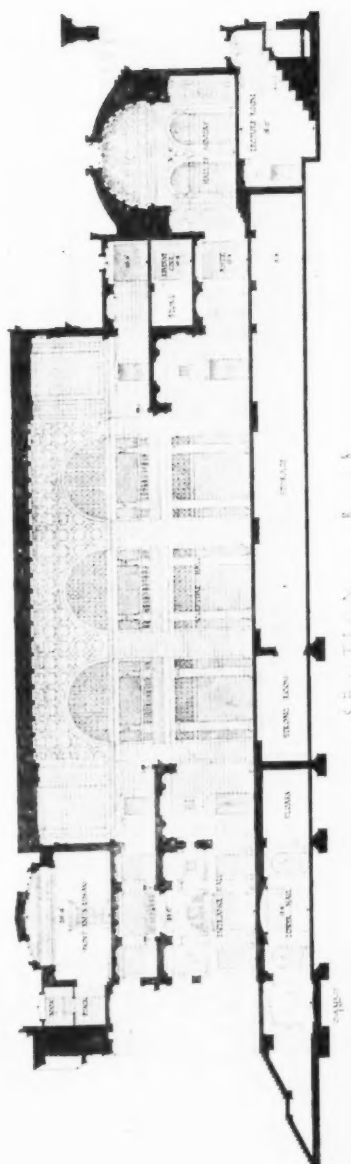
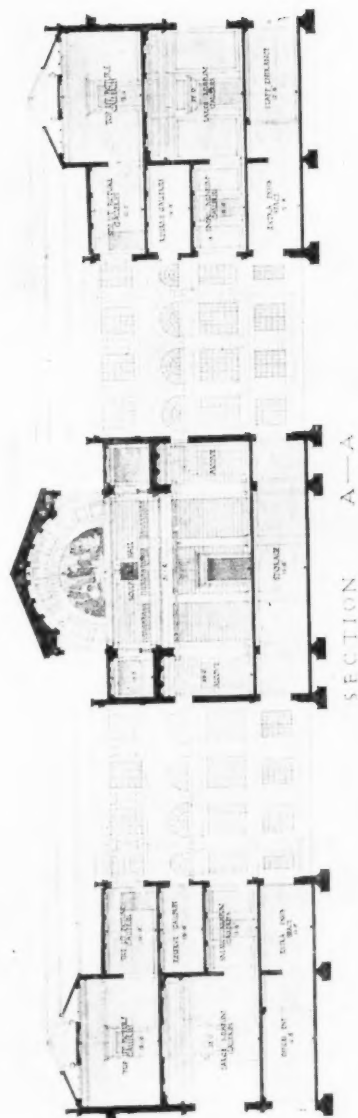


SECTION

ELEVATION TO FACADE
ELEVATION TO FACADE

MANCHESTER ART GALLERY COMPETITION; WINNING DESIGN. ERNEST B. WEBBER, A.R.I.B.A., ARCHITECT.

MANCHESTER ART GALLERY



MANCHESTER ART GALLERY COMPETITION: WINNING DESIGN. ERNEST B. WEBBER, A.R.I.B.A., ARCHITECT.

Architects' Working Drawings. 100-H

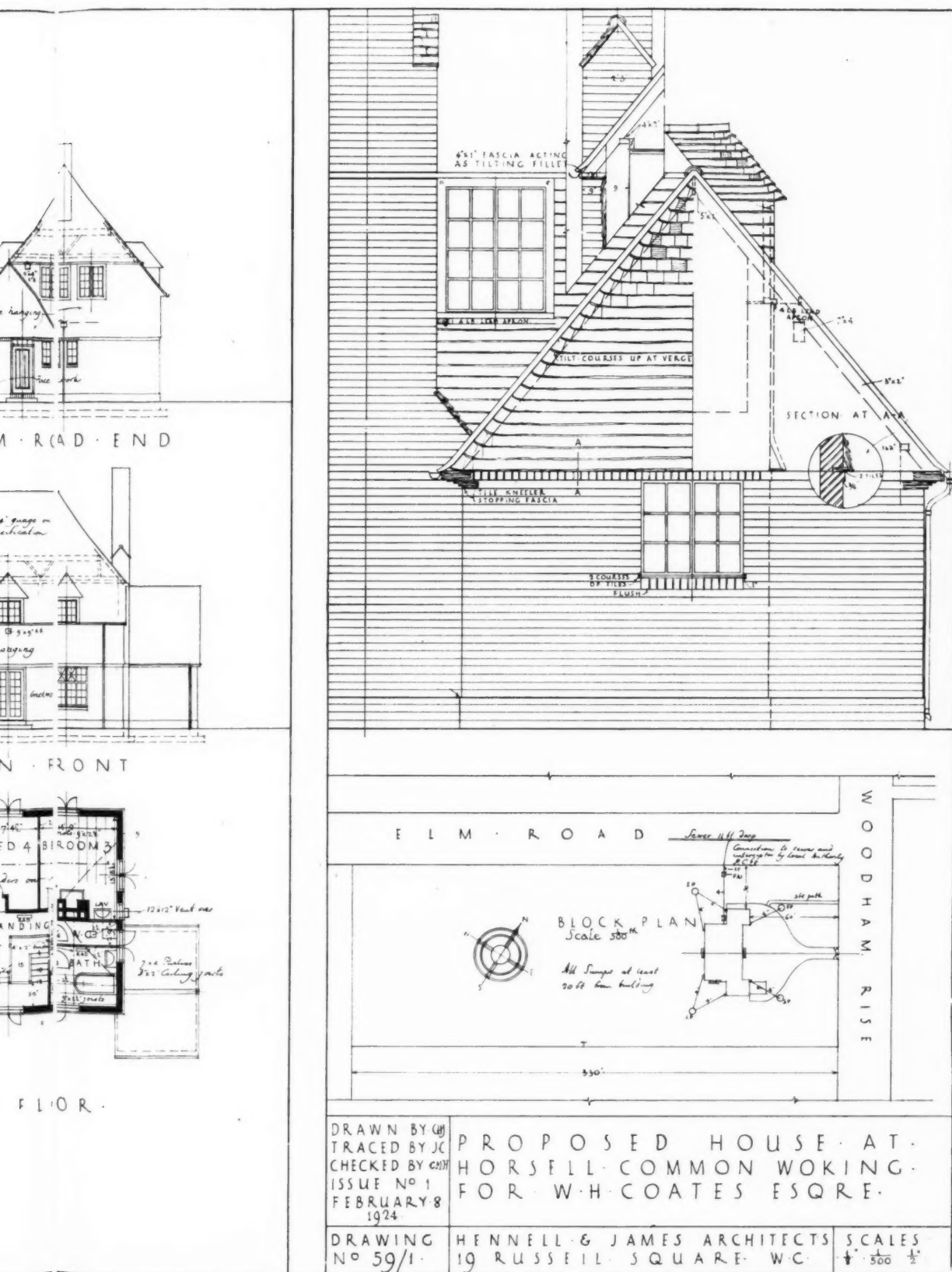
Hennell and Jones,



The working drawings given are of a moderately sized four-bedroom house of the

100-House at Horsell Common, Woking

and Jones, Architects



med house of the kind for which there is now so much demand. A garage is attached.

Public Houses in the Carlisle Area

By R. L. REISS

RECENTLY in the House of Lords certain Peers raised the question of the control of the public-houses in the Carlisle area, which are under State management, and asked for an investigation into the matter; and the Government have now decided to appoint a committee to inquire generally into disinterested management in relation to public houses. Moreover, Sir Herbert Nield, M.P., has again introduced a Private Member's Bill in the House of Commons for the purpose of facilitating the construction of "improved public-houses." There is no doubt, therefore, that the question of public-house improvement will be very much to the fore in the near future.

Few people realize that in an area of about 400 square miles on both sides of the Border all the public houses are not merely under State control, but are actually owned and managed by the State. Historically, this control dates from the starting of the large high-explosive factories in the Gretna district during the second year of the war. There was a great influx of navvies and constructional workers into the district, and also of munition workers, engaged on the actual manufacture of the high explosives. The City of Carlisle and the surrounding district, stretching away as far as Annan in Dumfriesshire, rapidly increased in population. By 1916 there were 20,000 more people in the City of Carlisle than before the war. The houses were filled with lodgers, who were overcrowded, and had comparatively little comfort in their rooms. This led to an enormous increase in the custom at the public-houses, and to drunkenness. In Carlisle the convictions for drunkenness, which before the war had averaged about 250 per annum, increased to nearly 1,000 by 1916. At the same time about half the police force had been drafted into the Army, and those responsible for the good government of Carlisle and the surrounding district found themselves in great difficulties. So serious did the position become, that



PART OF THE GRASS QUADRANGLE



THE OPEN BAR.

THE "GLOBE TAVERN," LONGTOWN.

strong representations were made both by those who were managing the munition works, and also by the magistrates and chief constable of Carlisle that the Government should take some drastic steps.

After inquiry, Mr. Lloyd George (then Minister of Munitions) persuaded the Cabinet to authorize the Liquor Control Board to take over the ownership and management of the manufacture and sale of intoxicants throughout the area. Gradually, during the latter part of 1916, 1917, and 1918, all the public-houses were acquired, and are still owned and managed by the State.

It is not necessary to deal in detail with the steps taken by the Control Board when it had assumed responsibility. It abolished all grocers' licences, and centralized the brewing into one brewery instead of five. It introduced the system of disinterested management, under which the manager of the public-house has no interest in the sale of alcoholic liquors, but receives a commission on the sale of non-intoxicants and food. All advertisements were removed from the outside and inside of the public-houses, and the number of public-houses was very much reduced. The small, unsatisfactory licensed houses up back streets were closed, and as a result, the supervision of the police was made simpler and more effective. In Carlisle itself the number of licensed premises was reduced from 119 to 65. In Longtown (just on the English side of the Border) the reduction was from 7 to 3, and in the other small places similar reductions were effected.

Most of the houses which remained open were remodelled, and in one or two cases entirely new houses were constructed. This remodelling of the houses and the planning of new ones deserve detailed description, and reflect great credit on the architect, Mr. Redfern. Many of the older houses in Carlisle itself, which were hemmed in by other buildings, could not be altered materially, and even where considerable remodelling was possible, the architect was much circumscribed in his planning. In the smaller towns and villages, however, there was space for extensive remodelling or for entirely new erections. Undoubtedly the most satisfactory houses are in the latter category.

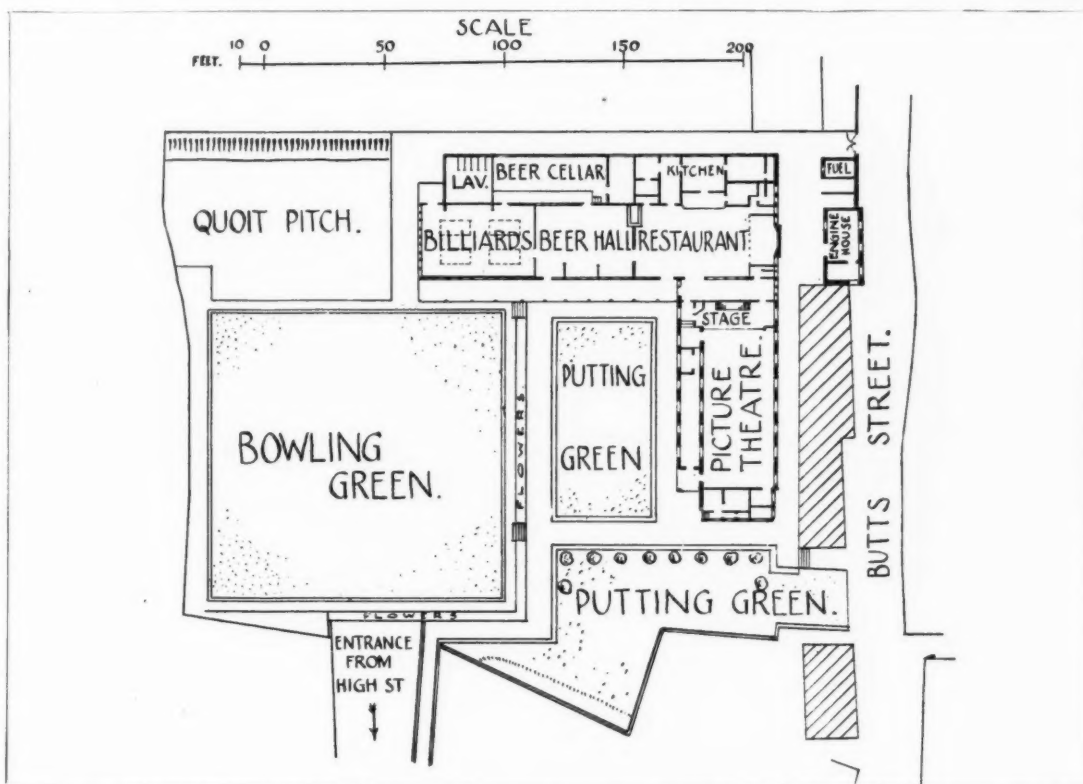
The main objects aimed at were: (1) To provide in every public-house a large open bar-room rather than the series of small "snuggeries," which is usual in public-houses in the North of England; (2) to provide means of wholesome recreation as a counter-attraction to excessive drinking; and (3) to make adequate provision for the service of meals and food.

A description of four public-houses in Carlisle itself will give an illustration of the methods adopted to achieve these objects.

At the "Bluebell," before reconstruction, there was a series of small bars with no provision at all for meals or for recreation. The architect has effected great improvements by opening out the bar-room and extending it by roofing in part of what was formerly a yard, and by providing a dining-room on the first floor. The entrance from the street is by a wide passage. After passing a door leading to the smoking-room one enters the main bar-room, which is of considerable width and depth. At one side is the bar counter. In the centre, and in an open recess on the right, are tables and chairs where people can sit and talk while they drink their beer or soft drinks. Beyond, but still part of the same room, is the extension containing two billiard tables. From personal observation as well as from inquiry on the spot, I can say without hesitation that the existence of the two billiard tables and the opening-up of the bar-room have reduced the amount of drinking. Many young men come in and go straight through to the billiard tables without getting a drink at all.

In "The Caledonian," which is in the centre of the city, there is, apart from the smaller smoking-rooms, a large open bar-room with the counter in the centre. From this point it is possible to see every part of the room, but to enable people to sit about in groups and talk in comfort the room has been divided by open partitions into several large sections. Thus the manager has complete control, while at the same time people can talk to their own particular friends.

The "Gretna Tavern" is not an adaptation of an old public-house, but has been constructed in what was once



"GRACIE'S BANKING," ANNAN, N.B. PLAN.

the General Post Office. Just recently it has been still further altered, and now it consists of a main smoking-room, where food as well as drink can be served. Beyond this is a room with glass-topped tables, where people can obtain meals of all kinds, but where drinks are not served without food. The decoration of the room and the furniture are both in the best taste. This room is used by all classes of the population. Children attending secondary schools can get a cheap 8d. dinner, and working men and women, as well as middle-class people, may be seen there on any day of the week. There is a gallery from which popular concerts are conducted on Friday evenings. Beyond this again, a large dance hall has been constructed.

The "Pheasant Inn" is of slightly different character. It is situated in the poorest part of Carlisle, close to one of the worst slum areas in the whole country. The "snuggeries" have been abolished, and the ground floor consists of a large open bar-room, all easily supervised from the bar counter, with a working-men's dining-room leading off it through an archway. Another department, with a separate street entrance, provides for the off-sale of hot food, and at mid-day children come here with their bowls to obtain 1d. and 2d. portions of soup or stew. Through still another separate entrance from the street is a staircase leading to a dining-room. This is used mainly by factory girls, who can either get a cheap meal or bring their own food and eat it there without buying anything, though as a general rule those who bring food with them obtain a cup of tea with it. Opening off this room is a rest-room, which is open in the evenings as well as at midday. The entrance to this room is some distance from the bar entrance, and no alcoholic liquor is served in the dining-room. The facilities for meals and the off-sale of hot food are a great boon both to the factory workers and the people living in buildings where cooking at home is often difficult.

It is only possible to describe two of the premises within the controlled area but outside Carlisle.

The first is the "Globe Tavern," Longtown. Before alteration it consisted of a series of small rooms, and was

on the main street. The tavern has been practically rebuilt, and is now approached through an archway. The buildings are grouped round a grass quadrangle, and there is a trellised veranda facing on to the court. There is a large room where lunches and teas are served, and in a separate room is the public bar on the open plan, with chairs and tables set round. Opening off this through a folding partition is a room which can be used for meetings and dances, and can be thrown into the large bar-room when required. On the first floor is a billiard-room with two tables. The whole building has been most successfully planned.

The last illustration shows the ground plan of "Gracie's Banking" at Annan. This was built to replace two or three unsatisfactory public-houses that were closed. It is approached by a wide passage-way off the High Street, and has been planned as a real place of recreation. The first view of the place shows a bowling-green and putting-green in the foreground, a quoit-pit to the left, and then, in a long building, the billiard-room, open bar-room, and restaurant providing cheap meals. On the right is a cinema. From the social point of view "Gracie's Banking" approaches very near to the ideal—a place of recreation, where meals and drink can be obtained, but with no inducement to drink. The Presbyterian Minister of Annan, who has known it for many years, states that the good effect of the opening of this house on the general life of the town has been extraordinary. It is patronized by all kinds of people, large numbers of whom take no alcoholic drink at all.

Enough has been said to indicate what has been achieved under public management and to show what an advance has been made on the old "pubs," with their stand-up counters and lack of recreational facilities and provision for meals. The chief constable of Carlisle, in his annual reports, states most emphatically that the opening-out of the bar-rooms and the provision of recreational facilities, as well as the closing down of small public houses in back streets, have simplified his work enormously, and have greatly improved the general standard of life and sobriety. The members of the Licensing Bench confirm this view.

McKnight Kauffer's Posters

The Arts League of Service have given us, in their retrospective exhibition of Mr. McKnight Kauffer's poster-work, one of the most interesting surveys that can be imagined. The exhibition, which is held at 60 Gower Street, Bloomsbury, contains designs dated 1915 onwards, and the distance that separates the beginning and end of this momentous decade is very strikingly reflected in Mr. Kauffer's work. There are many things to be said about Mr. Kauffer, but I have not yet heard it remarked that his exhibition casts an interesting light on the evolution of man out of his simian ancestors. It is a remarkable fact, full of mystery to some people, that though mankind has at some time in its history taken this important step, there still remain occasional instances of escape from the humanizing influences of evolution. It is equally remarkable (though, I suppose, rather less mysterious) that our hoardings should still be covered with designs similar to Mr. Kauffer's undistinguished Watford and Oxley Woods posters of 1915. These posters are not bad, though their author is, I think, quite fair when he says of them that they are "lacking in structure and emphasis." Emphasis is not exactly what is most lacking in our hoardings, but they certainly are conspicuously devoid of structure. They shout, but they do not shout anything in particular. They belong, in fact, to the monkey plane, above which Mr. Kauffer has so successfully risen.

In the later work (of which an example is here reproduced, together with another of the intermediate period—I will leave the reader to guess which is which) it will be seen exactly how successful Mr. Kauffer has been in achieving a distinct and entirely adequate articulation.





HADLEY WOOD BY TRAM

The hoarse and meaningless vociferations to which we are accustomed have here acquired clearness and exactness. Posters should not, of course, speak *sotto voce*; it is not their function to whisper sweet nothings; and Mr. Kauffer's recent designs are still sufficiently strident to answer their purpose very well indeed. But they are not inarticulate, they do not bore and annoy us, as many poster-designers still consider it their duty to do. If any improvement has occurred during the last few years, or will occur during the next, it is largely to Mr. Kauffer that we shall be indebted for it.

What is the reason for this success, and for the beneficent influence it has undoubtedly had? It lies in the fact that Mr. Kauffer is the first modern artist to recognize the artistic autonomy of the poster, and to avail himself of the opportunities it presents; not, indeed, fitfully, not by way of relaxation or experiments, but continuously, methodically, and quite exclusively. Other men possessing his qualities have been known to make brief incursions into the world of commercial art, but they have usually come out more quickly than they entered. Commercial art was still commercial art until Mr. Kauffer redeemed it from the obloquy under which it languished. To do this it was necessary to eschew the worship of that other kind of art, whose praises are sung in the galleries of Burlington House. Had Mr. Kauffer chosen to paint easel-pictures simultaneously with his posters he could not possibly have done so much to improve the standards of commercial art to-day, for he would then have tacitly acknowledged the superiority of the first over the second. It has been suggested in the Press that it would be interesting to see Mr. Kauffer paint an easel-picture or a mural decoration. I sincerely hope he will do no such thing.

N. N.

The Central School of Arts and Crafts

A QUICK passage through the rooms where the work of the students of the L.C.C. Central School of Arts and Crafts is exhibited indicates that London—indeed, that England itself—need not fear for the future ability of her artists. The standard is very high, especially as regards the posters, furniture, silver work, book-binding, writing, and cabinet-making. The more difficult art of architecture does not reach the standard of the other arts. The general impression within these rooms is that we are a race of artists, and until we again go out of the hall and confront the everyday appearance of the street, this excellence will not be questioned. It is here, outside, that hope for the future is dimmed by a sense that art is still held by the public to be some high-brow thing applied by the precious or the rich to the tangible results of our civilization. The artist is locked up, kept separate, and only allowed to work or even to play on the fringe of reality. I wonder, is it his fault? Only two groups of students have as yet really affected the daily life of London—those that study fine writing and lettering, with those who are concerned with the design of posters. Because all of us are aware of the great change that has come over London in these arts, I need not offer an apology for sincerely thanking the Principal and all who have worked with him in the really marvellous change they have so largely effected in these matters. The exhibits in these two classes are well up to the high standard we are accustomed to expect; indeed, it is unnecessary to do more than walk the streets to see much of the best work of the students who have made London gay with appeals to use the tramways of the County Council. The most conservative councillors might claim that these carriages have justified their existence in the means that is taken to advertise them. To those who are interested in the maintenance of Waterloo Bridge, it is encouraging to note that one of the best posters, by Herbert K. Rooke, shows through the abused ironwork of Hungerford Bridge the noble arches of that other bridge,

which Rennie built in 1817. It shows an unusual fairness of mind that the very body which desires its destruction should use the picture of the condemned bridge to advertise the means of transport for which its very existence is threatened. It shows, too, we may well hope, a consciousness of its great beauty, which in the end will prevail upon the L.C.C. Highways Committee to allow it to remain, in fact, as well as in picture, one of the beauties of London. It would be unfair to Miss Mary I. Wright not to notice her splendid "Zoo Cats" because they have no topical interest at the moment.

I am not the man who can, with unbalanced mind, appraise the fine binding which is to be seen on many books in the showcases of the exhibition, for among them, to my great delight, I found one excellently done upon which shone my own initials.

The cutting of well-formed inscriptions upon stone is represented by two slabs of equal and great excellence. Architects who wish for good lettering of this kind will learn from these works that to employ either Miss Lucy Sampson or Mr. C. R. Baker will ensure distinction and grace for any prosy eulogy or tedious list of names.

All these things waylaid me as I sought the results of the year's study of architecture, neither was I able to pass the beautiful pots painted by R. M. Lovett without pausing to covet these pieces. Whether one should congratulate more the students or their teachers is a question difficult to solve, but the high standard in the design and workmanship of the furniture most certainly reveals the continued success that Mr. Charles Spooner has had with his class of cabinet-makers. The best thing I can do for this group of workmen is to advise those masters who are in need of journeymen or foremen to go and see the work that is here displayed, and taking note of the names of those who made so well these delightful pieces, give them opportunity to fill the first vacancies in their shops.

Lithographers, etchers, and pencilmen all show evidence

of very high ability. It is tedious to transcribe a list of those who appeared to me, an outside layman in these arts, deserving of the public notice. Here it seems best to do no more than recommend the exhibition to the attention of those who love to see well-drawn pictures.

I have reserved architecture to the last, partly because it is an art that takes longest of any to learn. In fact, there is no end to the knowledge that should be had of it by those who practise, and, I would add, by those also who use the resulting buildings. It is probable that the work of the students of this art will attract the least attention of the public for two reasons—the beginner in architecture is a very beginner, and even this interesting innocence is made more difficult for the visitor to understand because the work that is shown is not the building itself, but only the drawings that are a means to the desired end. For the ordinary man or woman to appreciate the value of the work here shown is impossible, unless he is able to see from the scale drawings that are shown the three-dimension buildings they represent. It is as though a man unfamiliar with the score set for an orchestra were asked to enjoy the music without hearing it played.

But although the student of architecture may suffer in this way at a public show, he may be assured that those who can read his drawings will appreciate the thoughts which they express.

The critic of these drawings is, to some extent, at a disadvantage, for he does not know the conditions that are laid down to give reality to the problem that is set. Thus, in the studies for a porch, it is impossible to judge the fitness of the designs, and one is inclined to leave them without notice, because it is difficult to visualize the building against which they are to be placed. Was a photograph of the building given to the students, or did they go and examine it where it stands in some suburban garden?

Mr. R. H. Leache's plan for a nursing home clearly provides for making the fullest use of a cramped site in a populous city. It is ingenious and well thought out. The tall elevation must be imagined between two buildings, probably of very differing kinds. It appears to be a design by itself, correlated to its neighbours. Again, it would help the critic, as it must have done the student, if he also were able to see a photograph of the site between the buildings where this home is to stand. The large retail stores in concrete, by Mr. A. B. Gray, caught my attention, because I desire to see this material used visibly in the streets of our towns. But I confess to disappointment in this design. Wherein is it essentially a concrete building? Had the author pencilled-in the joints of stonework, no one would stop to say that that material was more misused than it is on a thousand veneered steel-frame buildings. Still, Mr. Gray is to be praised, because he has assayed to use this material not as one to be ashamed of, but as one worthy to grace the best or richest of our commercial streets.

The plans which seemed to me the best were those for the smaller buildings. The cottage by A. B. Waters has a clever and economically planned entrance, and would make a wholesome building. The village post office by C. J. Mills is good. Did we find such a building in a country place, we would surely stop and inquire who had designed it; wishing, at the same time, that other practising architects understood the needs of village life as well.

A. R. POWYS.

London's New Reservoir

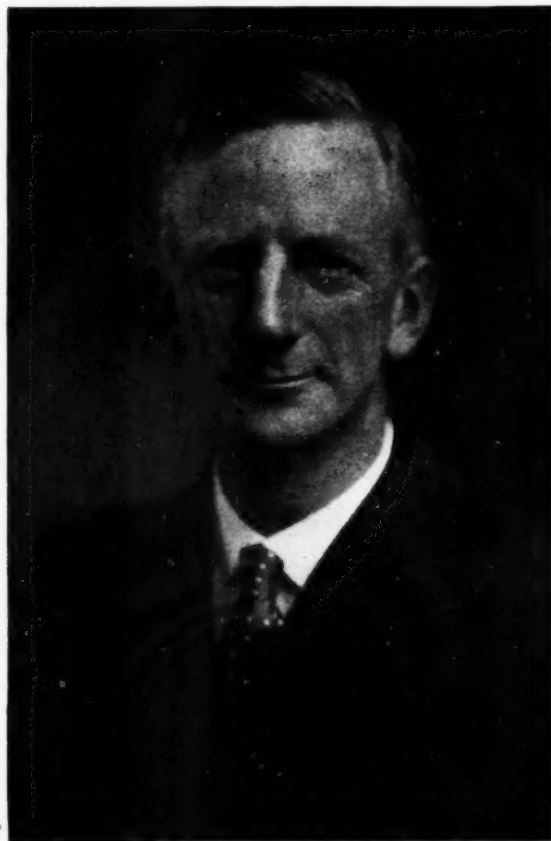
London's new reservoir, which has been constructed by the Metropolitan Water Board, at Littleton, Middlesex, was opened by the King and Queen on Saturday. It is a stupendous work, costing over £2,000,000, and eleven years were required for its accomplishment. Its readiness for use means an immense addition to the stock store of the Board. At the present time the Board supplies on

the average about 252,000,000 gallons of water per day, of which something like 150,000,000 gallons is taken from the Thames.

Mr. Harold Baily, F.R.I.B.A., was the architect for the pumping-station buildings, and Messrs. John Laing and Son, Ltd., were the contractors.

The New Hon. Secretary of the R.I.B.A.

Our congratulations to Mr. E. Stanley Hall, who has been elected Hon. Secretary of the R.I.B.A. in succession to Mr. Arthur Keen. Mr. Hall, who is M.A. of Oxford, had been in partnership with his late father, Mr. Edwin T. Hall, for a great many years, and is now carrying on the practice by himself. Although an extremely busy man, Mr. Hall has always taken a practical interest in professional affairs. He was first elected to the Council of the R.I.B.A. in 1913, and he has been President, Hon. Sec., Vice-President, and Hon. Treasurer of the Architectural Association. Among Mr. Hall's many works are the following: St. Cuthbert's Church, Copnor, and Vicarage; a school called St. Cross, Walton-on-the-Hill; Chapel at Pontywal Sanatorium at Brecknockshire; alterations of the Ashmolean Museum, Oxford; alterations and additions at Gregynog Hall and at Plas Dinam, both in Montgomeryshire; additions and alterations to a Tudor mansion at Cefn Mably, Glamorgan-shire; to Kington Manor, near Chippenham; to Perry Hill Cottage, Worplesden; additions to the Dulwich Picture Gallery; houses at Weybridge, Croydon, Woking, Dymchurch, and Warwick; the War Memorial to the Queen's Royal Regiment at Trinity Church, Guildford. Mr. Hall acted as architect for Liberty's building, and is consulting architect to the King Edward Sanatorium, Midhurst, and the King Edward VII Hospital, Cardiff.



MR. E. STANLEY HALL, M.A., F.R.I.B.A.

International Town Planning Conference

We have been favoured with the following abridged report on the International Town, City, and Regional Planning Conference, held at New York, April 20 to 25, 1925, by Mr. G. L. Pepler, F.S.I., Past President Town Planning Institute, who adds a few notes on the joint session with the American Institute of Architects.

THE meeting of the International Federation for Town and Country Planning and for Garden Cities, in conjunction with American institutes and societies with kindred aims, coincided with the annual conference of the American Institute of Architects.

The architects had also assembled an exhibition at the Grand Palace, a small section of which was devoted to regional and town planning.

The Federation held their meetings at the Pennsylvania Hotel, and there, too, were displayed numerous town-planning drawings for which there was no room at the Grand Palace.

Major George B. Ford, chairman of the Council of the International Federation, and president of the National Conference on City Planning (U.S.A.), presided.

The hospitality, kindness, and readiness with information of our American hosts were unstinted, and no delegate from any other country can ever forget the warmth of the welcome by the town planners of the United States.

Exhibition.

The space allotted to town and regional planning was relatively small, but was put to good advantage. Owing to delays at the Customs, the only countries adequately represented were America, Great Britain, and France. It was necessary to cut down the British exhibit to fit the accommodation provided; but typical plans were displayed in five sections: (1) Regional planning—four plans prepared by Mr. Bruce showing proposed zoning and arterial roads for the Manchester and District Joint Town Planning Advisory Committee; the plans of Messrs. Adams and Thompson for the West Middlesex and Thames Valley regions; eleven beautifully executed plans showing civic survey studies for Dublin and environs and the proposed plan of development prepared by Messrs. Abercrombie and Kelly; Mr. Davidge's plans of proposals for the Rotherham region and for Greater Bombay; Professor Abercrombie's plans for the Doncaster and Deeside regions, and for South Tees-side; the large development plan of the London Society; map showing the arterial roadwork of the Ministry of Transport in Greater London; Mansfield region; North Tyneside; East Kent; (2) Town Plans—Birmingham, Leicester, Bradford, Leeds, Southport, Leamington, Luton, Ruislip-Northwood, Sheffield, civic survey studies for Hastings; (3) Garden Cities—Letchworth, Welwyn; (4) Garden Villages—Kemsley, the garden village in course of erection at Sittingbourne in connection with the new paper mills of Messrs. Edward Lloyd, Ltd.; Corner Brook, Newfoundland; Knebworth; (5) Arterial Roads: Mr. Brodie's scheme for Liverpool, and coloured photographs of some of his projects that have been realized. It was gratifying to note that several of the British exhibitors had adopted the agreed international system of plan notation.

France was represented by a beautifully executed set of drawings, including studies of Paris, Reims, Region de Roubaix, etc.

The United States, naturally, had the most complete exhibit. Of special interest were two paintings, in banner form, not shown in connection with the Town Planning Section, but fine examples of the art of pictorial representation by symbolism attached to plan of place. These paintings were prepared by Fred Dana Marsh, and illustrated a map of New Connecticut, Ohio, and the early history of Cleveland.

The principal feature of the United States section was

the set of plans prepared for the plan of New York and its environs, under the direction of Mr. Thomas Adams, for the Russell Sage Foundation. The preliminary studies with reference to density of population, traffic, topography, recreation facilities, were of great interest, and some interesting aeroplane photographs were shown, but perhaps the most striking exhibit was that showing the perspective plans of the proposed east side development on Manhattan Island, by the City Hall, and including the proposed elevated riverside boulevard, round the toe of the island, the New Court House, and the entrance to Manhattan Bridge at the intersection of the Bowery and Canal Street. Space permits only a very brief reference to some of the other American exhibits, most of which were beautifully rendered, such as Mr. Nolen's plans for the garden village of Mariemont; Forest Hills garden village, planned by the Olmsted Brothers, and largely developed; garden city, Long Island, laid out by C. W. Leavitt and Son, and represented by a delightful model; the park system of Kansas City; and Fairmount Parkway, Philadelphia, a great project, nobly realized, and worthily represented at the exhibition by a huge coloured cartoon. Minneapolis was represented by the plans of the Civic Commission and some coloured perspectives prepared by D. H. Burnham and E. H. Bennett, which suggested the reflection that in England we have still something to learn in plan presentation. From Chicago came some interesting survey studies in connection with highways and recreation, and also reproductions of the celebrated Burnham plans. Baltimore displayed a magnificent model of its harbour, prepared by Philip V. Clayton, and one may note in passing that several towns appear to have seized the opportunity to draw public attention to themselves and to the facilities they could offer. Another well-indexed model illustrated the proposed superimposed highway, 204 ft. wide, at Detroit. Cincinnati exhibited an official town-planning map showing the main existing features and the proposals for improvement and for zoning. Cincinnati is the first large city in the United States to adopt officially a complete plan. Buffalo was illustrated by beautiful perspective plans prepared by Messrs. Bennett and Parsons, and including proposals for an inner arc road. Mexico showed the beauties of its foliage and of some of its old buildings.

The overflow exhibition at the Pennsylvania Hotel contained many interesting drawings, of which a few only can be noted: Stoneham and Melrose, two towns in Massachusetts, sent civic-survey studies, prepared by high-school children as part of their curriculum, under the direction of Mrs. Osgood. The drawings displayed, which covered both "user" and "traffic," made clear both the educational and civic value of such studies.

The traffic volume map of the City of Elizabeth, New Jersey, was presented in an ingenious method, new to the writer; the city is divided into wards, and each vehicle was noted in each ward. A summary revealed the main streams of traffic through the various wards, and the method of presentation was to allot to each stream a string of one colour. All the strings were attached to long pins placed along the roads marked on the map, and consequently the main directions of flow were made visible. Most valuable data for the town planner charged with a solution of the traffic problems of the city.

Among the many interesting exhibits that one would like to mention did space allow were the transit studies of St. Louis, which were clear and complete, combining studies of existing conditions with the anticipated effect of remedial proposals.

Conference.

The conference proper lasted four days, from early morn to late night, and therefore it is only possible to refer to a few of the main points made by some of the speakers. After a welcome on behalf of the Governor of New York State, responded to by Mr. Ebenezer Howard, the G.O.M. of the garden city movement, the conference was opened by the president, Major George B. Ford.

Major Ford gave an account of the progress in planning during 1925. He said that there were more than 300 city planning and zoning commissions, and at least seven State associations of planning wards, in the United States. The most important planning accomplishment in the U.S.A. had been the official adoption by Cincinnati of a complete city and regional plan.

The Papers Read.

The first series of papers related to the traffic problem. Town planning as a permanent solution was enlarged upon by Mr. A. S. Tuttle, Mr. August Bruggeman, and Mr. Jacques Greber, and by Mr. Morris Knowles. These gentlemen emphasized the point that no solution was to be found either in traffic control or in separate widenings, but must be sought in systematic planning based on a careful survey of existing circumstances and probabilities. Mr. Knowles stated the required space for motor traffic per passenger to be about 18.5 times as great as that of the tram, and that research in several cities had shown that 75 per cent. of the passenger traffic was carried by trams, but that 85 per cent. of the traffic occupancy of the street was by private cars. Mr. Bruggeman advocated the removal of all trams from the centres of large towns.

Arterial road forms and systems were dealt with by Mr. G. L. Pepler and Professor J. Brix. The chief object of the paper was first to examine existing examples and current practice in various countries, in respect to systems, road widths and their use; next, to indicate practicable units of widths, and, lastly, to suggest the best combination of these units for the following types of road, including variations to meet differing conditions: (1) Connecting large towns; (2) by-pass; (3) ring; (4) connecting parts of a large town; (5) separating industrial from residential area; (6) parkway. The authors also discussed systems, and emphasized the fundamental importance of dealing with the matter as part of the larger policy of regional or town-planning development.

Mr. Noulan Cauchon advocated relief streets, not to be used as frontages, but to be reserved solely for through traffic. He favoured a hexagonal form of street development for residential areas, one advantage of which was three-way street junctions instead of four-way. Mr. George E. Hooker, of Chicago, suggested that the most efficient way of moving people was on rails, and that these ought to be more under the control of the town-planner than they are.

A number of papers were grouped under the heading "Planning Unbuilt Areas," and included one by Professor Sverre Pedersen, of Norway, who spoke principally for the small town, and laid particular emphasis on the importance of the landscape. He described the plan of Trondhjem as follows: "The plan brings the town in touch with the landscape. One sees the ridges, the valley, the fjord, and the river. It gives the cathedral a dignified place as the termination of a most beautiful, broad, and slightly graded street. From the crossing of the main axis one has full control over the landscape, and realizes fully its form."

The professor also suggested that most building sites have a kind of architecture—a combination of regular and irregular forms which give them their distinct and characteristic "face." In planning, due consideration must be given to the architecture of the ground, including geologic conditions. In hilly districts, not only do valleys offer good sites for parkways, but also the vertical park strip gives character to the plan.

Mr. Frank B. Williams, author of "The Law of City

Planning and Zoning," contributed a paper entitled "Enforcing the City Plan." More recent decisions of the courts in the U.S.A., he said, have made it clear that in some States an owner cannot be prevented, without special legislation, from blocking the route of a proposed street. The two methods advocated by Mr. Williams are: (1) By easement under power of eminent domain, subject to compensation; (2) under "police power," subject to board of appeals. "Police power" legalizes regulations necessary for public health, safety, convenience, and general welfare. Mr. Williams favours the second method on account of its greater flexibility.

Mr. Clarence B. Stein gave figures suggesting that after a city reaches a certain size it defeats itself, because of transport difficulties and increased cost of living. Eighty per cent. of the population was now concentrated, principally on the main lines of communication, and the country districts were being drained.

JOINT SESSION WITH AMERICAN INSTITUTE OF ARCHITECTS.

This meeting was well attended, and was notable for an inspiring speech by Mr. Raymond Unwin. His main theme was that the planner must from the beginning visualize the habits and all the needs of life of the people who were to inhabit the place he was planning. Full value must be made of the site, and the plan must make possible a place where life could be lived to the full.

Better Distribution of People and Industries.—Methods of distribution were dealt with by Drs. Heiligenthal and Unwin. The former broadly classified certain industries as mobile or immobile; the latter class including heavy industries, such as mining. Dr. Heiligenthal makes self-sufficiency a test of mobility or capacity for decentralization; the textile, cotton, paper, and tobacco industries are on mass production lines, and employ both sexes; they can therefore be moved out of the cities to stand by themselves, except those branches of textile that require highly skilled workmen, who will be found in the big cities. Mechanical industries (e.g. machine-making, instruments, fine metal and fine wood), requiring skilled labour and employing mostly males, should be in the same town as female-employing industries, such as chocolates. A complete exodus from the town is not therefore usually possible for this class, but they can be removed to the periphery if good traffic facilities are available. It is therefore important that the town planner should have a considerable voice in respect to all transport facilities.

Satellite Towns and Local Government.—One of the prime difficulties in carrying into effect desirable schemes of decentralization is that of local government. This important factor was discussed by G. H. Harris and Dr. Van Poelje. They appreciate the marked disinclination of the big town to adopt the wise policy of putting bounds to its physical expansion, by transferring its growth to separate satellites, unless these satellites are recognized as parts of the parent town. On the other hand, the body now in command outside the present limits of the town is naturally disinclined to part with any of its territory. This is a substantial difficulty that may sterilize excellent schemes of decentralization, prepared by regional joint town-planning committees, that are obviously most desirable in the interest of health, comfort, and efficiency. Three alternatives are offered as means of meeting this situation: (1) A group council (or federation) of city and satellites, on which the city should have a preponderant power; (2) a regional committee with limited executive powers, but including the reservation of sites for arterial roads and open spaces, and zoning, and the carrying out of work involved in these regional proposals, and the allocation of their cost between the local authorities concerned; (3) city or county colonies. Power might be given to any city which had reached a certain population and had provided in a town-planning scheme for the permanent reservation of an open belt around it, itself to create a satellite town as a "colony"

by the purchase of land beyond its borders and by its development on garden city lines.

The financial aspect of decentralization was dealt with by C. B. Purdom in a paper entitled "Financing Garden Cities." It is now generally agreed that decentralization is a financial necessity, because of the inefficiency and waste of health, money, and comfort involved by over-concentration.

The garden city or satellite town offers the best means of decentralization, but the initial financing of such units is difficult owing to the fact that land is a slow asset. Statutory bodies, subject to some Government control, should be formed to create new towns, and the Government should make the initial guarantee. Their security will be the creation and preservation of land values that must arise owing to the new community.

New York Regional Plan.—A large and appreciative audience gathered to hear Mr. Thomas Adams and others expound the great work they have in hand. Mr. Adams happily defined the region not as any specific unit, but as "a family of communities." It contains 144 units of government, and covers an area of over $3\frac{1}{2}$ million acres. The population is about 9,000,000, varying in density from 228 families per acre to about four per square mile. There was no necessity for overcrowding, as there was in half the region room to accommodate the probable population for another 100 years at an average density of four families, or, say, sixteen persons per acre. Every day about 2,853,000 people moved in and out of Manhattan. Decentralization would not be effective unless it reduced this over-concentration. The buildings in Manhattan averaged 4.9 stories—about the same as Westminster, London. Out of 97,902 buildings, only 1,686 were over ten stories. In 1902 there were only three buildings exceeding twenty stories—now there were ninety-seven.

Colonel William J. Wilgus, consulting engineer, submitted suggestions he had made to the Regional Plan Committee

for an improved system of transportation and rapid transit in the region. He proposed an outer belt railway and boulevard, twin inner-connected railways and boulevards, linking up Manhattan with Long Island and New Jersey.

Mr. D. L. Turner, consulting engineer of the Transit Commission, said that the existing population did not ask for decentralization, all they clamoured for was additional transit facilities. The main difficulty was finance. All the authorities concerned had already borrowed up to the limit. The heavy interest they had to pay meant that they paid twice over for any work they did. Such public projects as improvement of transport facilities to facilitate decentralization greatly benefited property, and should be paid for by a levy specially assessed on the property benefited.

Westchester County have been very active in providing public open spaces in the region, and a lively account of some of their activities was given by Mr. Jay Downer, consulting engineer to the Park Commission. He said that the county had an area of over 400 square miles, and a population of 400,000. In the last twenty-one months they had raised \$22,000,000 for park purposes. Their aim was to make their county the choicest residential district in the region.

Zoning in Practice.—The legal aspect of practice in U.S.A. was lucidly stated by Mr. Edward M. Bassett, the premier exponent of the subject, who also most kindly, each day, held a round-table conference on the subject.

Mr. E. P. Goodrich contributed a most interesting paper entitled "The Influence of Zoning on High Buildings and Street Traffic." First he gave data by which the road transport of each kind of property could be estimated, and next he dealt with street capacity. Data of this kind have long been wanted, and town planners are greatly indebted to Mr. Goodrich for his research. In England, unfortunately, the factors are not the same, and are not nearly so simple as in a country of checker-board towns, but it is of great value to have had a line of approach mapped out so clearly.

Reinforced Concrete Retaining Walls—II

By PROFESSOR HENRY ADAMS, M.Inst.C.E., F.R.I.B.A.

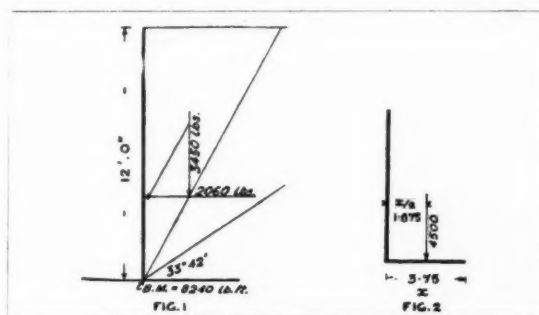
THE designing of a reinforced concrete retaining wall may be made fairly simple if the proper order of working be followed. Take a common L section as the first example. The first point to note is the difference of level between the bank of earth to be supported and the ground in front of the wall. It is assumed that the bank of earth will be level on top when finished, and will not carry any building or other load upon it; such cases will come later. The thrust produced by it will be $\frac{1}{2}wh^2 \tan^2 \left(\frac{90-\theta}{2} \right)$, where w = the weight of the earth, which may be taken as an average at 100 lbs. per cubic foot, h = the height of wall above the lower level, say, 12 ft., θ = the angle of repose of the earth, which may be taken as $1\frac{1}{2}$ to 1 = an angle of $33^\circ 42'$. Then $\frac{90-\theta}{2}$

$= \frac{90-33^\circ 42'}{2} = 28^\circ 9'$, of which the tangent = .535, and the

square of the tangent = .286. Then $\frac{1}{2}wh^2 \tan^2 \left(\frac{90-\theta}{2} \right) = \frac{1}{2} \times 100 \times 144 \times .286 = 2059.2$, say 2,060 lbs., which will be the horizontal thrust against the wall per foot run at one-third

the height, causing a bending moment B of $2,060 \times \frac{12}{3} = 8,240$ lb. ft. at the lower ground level. The thrust may be checked graphically as in Fig. 1, and the value of $\tan^2 \left(\frac{90-\theta}{2} \right)$

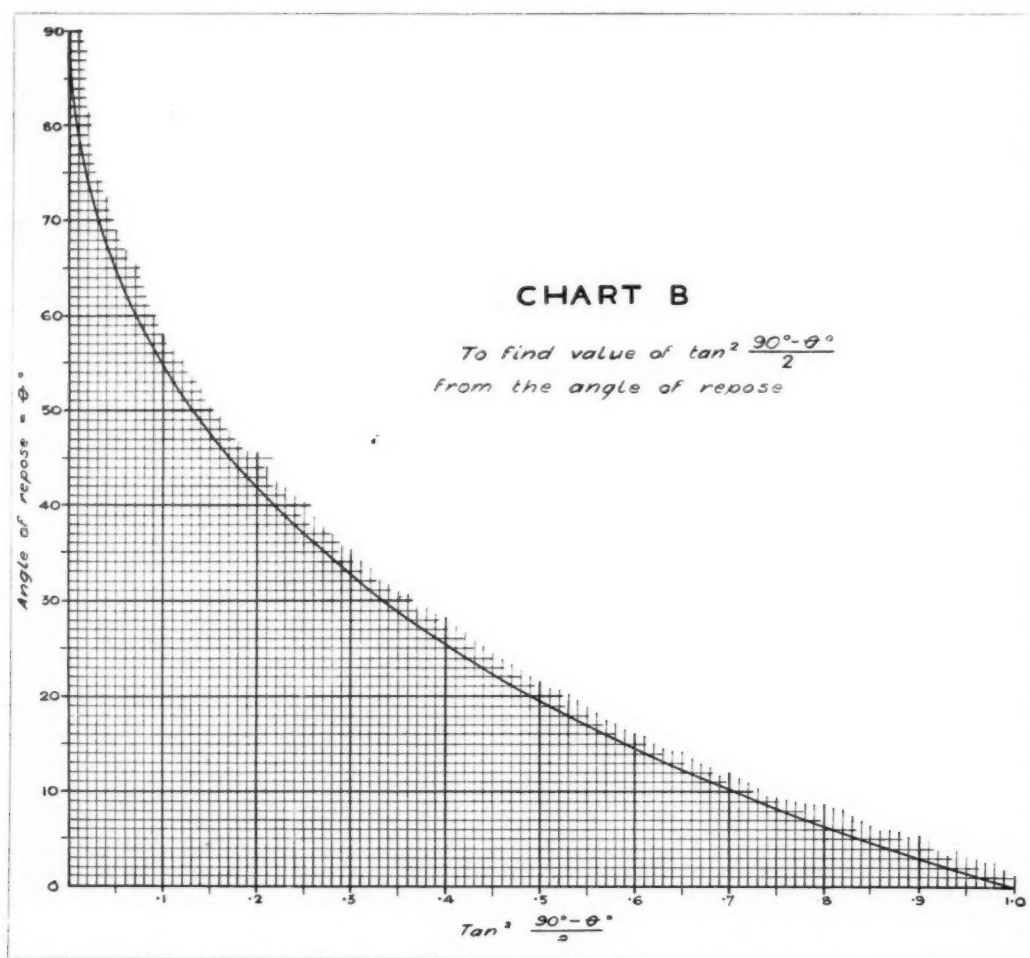
may be taken approximately from the graph on chart B to save the calculation and reference to tables. The angle of



repose being found on the left-hand side, and the line traced through to the curve, then downwards to the bottom, will give in decimals the value of the fraction. Of course, it will be only approximate, but it will be near enough for ordinary work.

The next step is to balance this thrust by the weight of earth resting upon the base slab at the back of the wall, as in Fig. 2. The width of this has to be calculated. Call it x . Then the resistance moment produced by it must equal the bending moment, or $B = R = xwh \times \frac{1}{2}x$, whence $x = \sqrt{\frac{8240}{\frac{1}{2} \times 100 \times 12}} = \sqrt{13.73} = 3.706$, say, 3 ft. 9 in. In proof

of the sufficiency of this, $R = 100 \times 12 \times 3.75 \times \frac{3.75}{2} = 8437.5$ lb. ft. against $B = 8,240$ lb. ft.



So far we have taken no account of the weight of the wall or the earth below ground level; this must come in when we are finding the pressure upon the foundation.

The approximate effective thickness of wall at lower ground level will be $B = 95bt^2$, or $t = \sqrt{\frac{B}{95b}}$, but $B = 8,240$ lb. ft. = 98,880 lb. ins., and $b = 1$ ft. run = 12 in., whence $t = \sqrt{\frac{98,880}{95 \times 12}} = \sqrt{86.737} = 9.3$, say, $9\frac{3}{8}$ in., that is from the outer face to the centre of the reinforcement. The value of t may be obtained approximately from the graph on chart C, using the left-hand side, curve, and base. The economical reinforcement is .675 per cent., and $\frac{.675 \times 12 \times 9\frac{3}{8}}{100} = .759$ sq. in., two $\frac{1}{8}$ in. rods = .7424 sq. in., and two $\frac{3}{8}$ in. rods = .8834 sq. in.; one is too little, the other too much; but we can use them alternately in each foot run of the wall, giving a total reinforcement of .813 sq. in. per ft. run, and a total thickness $9\frac{3}{8} + \frac{3}{8} + 1 = 10\frac{3}{8}$ in. The inclined lines on chart C will give the sectional area of reinforcement required at given percentages. For example, taking the effective thickness as 9.3 in., trace through vertically to the .675 inclined line, and then travel on to the right-hand side, and it will be seen that it gives .759 sq. in. We must now test the stresses that will be produced in the steel and in the concrete. The ratio (r) of steel to concrete will not be exactly .675 per cent., as we have taken the steel a trifle larger to make an even measurement, the actual ratio will be $\frac{.813}{12 \times 9.375} = .0072$. The modular ratio (m) or relative elasticity of steel and concrete (1:2:4) will be 15. The fraction of the depth given by the distance from the

neutral axis to the compressed edge (k) will then be $k = \sqrt{(r^2m^2 + 2rm)} - rm = \sqrt{(.0072^2 \times 15^2 + 2 \times .0072 \times 15)} - .0072 \times 15 = .477 - .108 = .369$ in. This is rather an awkward formula to work out. Chart D shows how k may be obtained without calculation. The arm (a) of the resistance moment in terms of the depth = $1 - \frac{1}{3}k = 1 - \frac{.369}{3} = .877$. Then the

actual maximum tensile stress in the steel (t) = $\frac{B}{rbd^2a}$

$$= \frac{98,880}{.0072 \times 12 \times 9.375^2 \times .877} = \frac{98,880}{6.656} = 14,856 \text{ lb. sq. in.,}$$
 while 16,000 is the allowable limit. The actual maximum compressive stress in the concrete (c)

$$= \frac{2B}{kbd^2a} = \frac{2 \times 98,880}{.369 \times 12 \times (9\frac{3}{8})^2 \times .877} = \frac{197,760}{321.3} = 612 \text{ lb. sq. in.,}$$
 while 600 is the usual limit; the difference, being only 2 per cent., may be ignored.

Assume the base of the wall to be 2 ft. 6 in. below the lower ground level, which is the minimum that should be allowed in any case, and the design may be commenced. Cover not less than 1 in. thick should be given to the reinforcement, making the total thickness at lower ground level $9\frac{3}{8} + \frac{3}{8} + 1 = 10\frac{3}{8}$ in. The top of wall below coping may be, say, $4\frac{1}{2}$ in. total thickness, tapered down to the base. The coping may be formed by a projection of the concrete inwards from the top of the wall.

The base slab we have found to project 3.75 ft. from the wall on the inner side, with the weight of earth above it as a distributed load upon a cantilever, giving a bending moment equal to that against the wall. We must, therefore, make the thickness of the slab equal to the base of the wall, with

CHART C

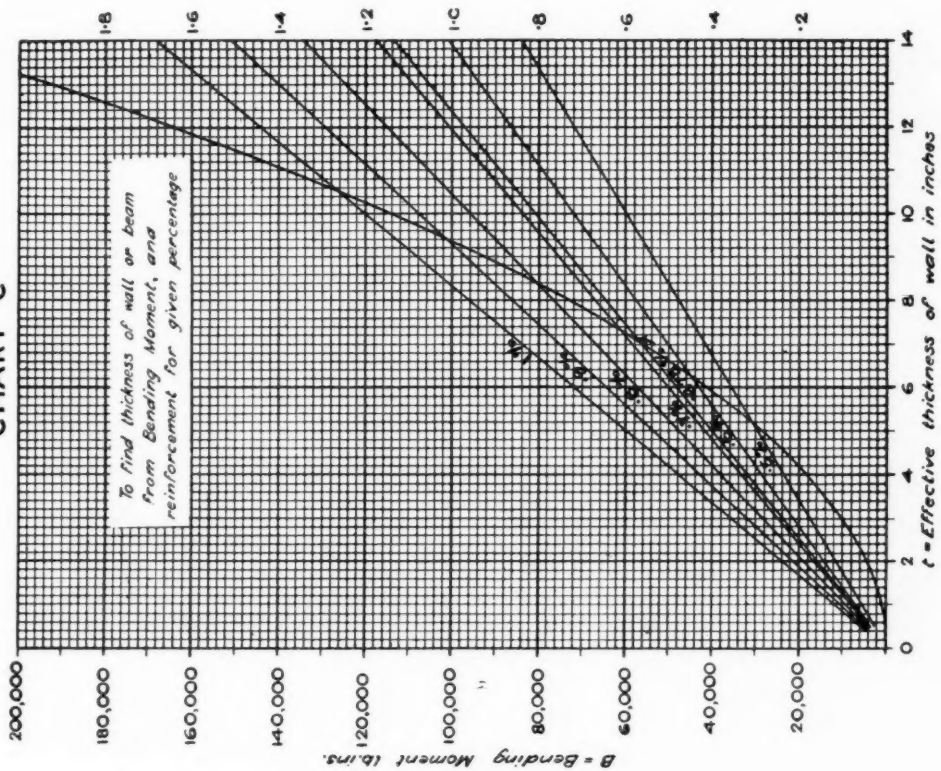
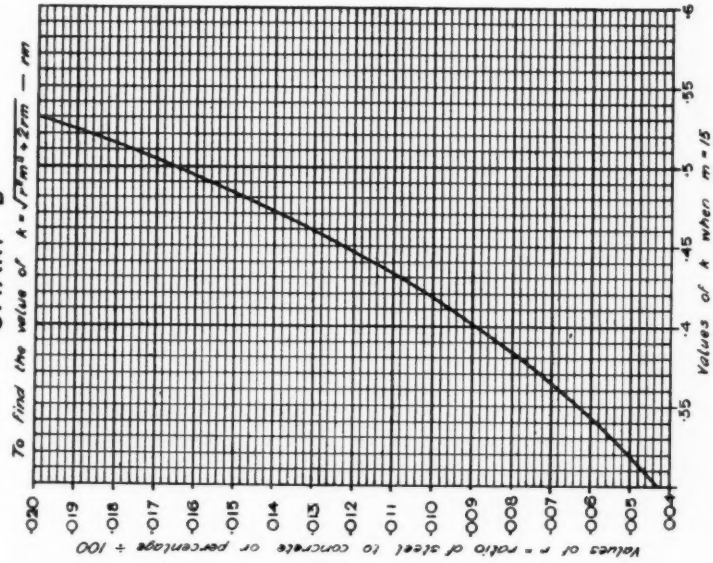


CHART D



similar reinforcement, that is, we may carry the reinforcement of the wall across the slab.

If the wall is to have shear reinforcement it should be at intervals of, say, 12 in. in the length, and divided over the height upon one of the various systems. Assume that the number of positions=height in feet, making in this case 12 in all. We may then set them off by the rule of "a common difference in spacing," say, 2 in. Then the spacing for 12 positions will be 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24 inches between adjacent stirrups, or distance from commencement=2, 6, 12, 20, 30, 42, 56, 72, 90, 110, 132, 156 inches.

Care must be taken that the wall does not fail by pushing out. The resistance of the earth may be taken as ordinates to a triangle, Fig. 3, where the base is equal to the safe



FIG. 3

pressure due to the depth d and the total is equal to the thrust against the wall. Then $\frac{1}{2}pd=2060$, but adopting Rankine's rule for safe pressure on earth, $W=wd\left(\frac{1+\sin\theta}{1-\sin\theta}\right)^2$

or if we take $p=W$, $p=100d\left(\frac{1+.555}{1-.555}\right)^2=1221d$, but we have $\frac{1}{2}pd=2060$; substitute the value of p , then $\frac{1221}{2}$

$d^2=2060$, or $d=\sqrt{\frac{2060 \times 2}{1221}}=\sqrt{3.37}=1.83$ ft., or 21.96, say, 22 in., as the minimum depth. We have provided 2 ft. 6 in., so that we already have sufficient, but it is usual to form a cleat on the inner edge of slab as an additional precaution, this may be 12 inches, as shown. The value of the fraction $\left(\frac{1+\sin\theta}{1-\sin\theta}\right)^2$ may be taken approximately from chart E.

* See Adams' "Foundations for Machinery." Tech. Pub. Co., 38. 6d. net, where the subject is more fully dealt with.

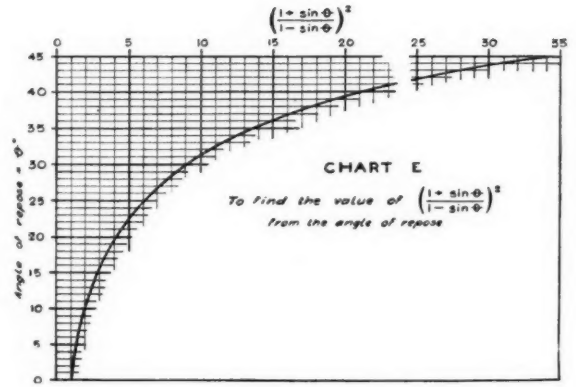


CHART E

To find the value of $\left(\frac{1+\sin\theta}{1-\sin\theta}\right)^2$ from the angle of repose

There is one more point to consider, and that is whether any tension occurs on the inner edge of the base, and, if so, to provide against it by making a projection on the face of wall. To get the position of the final resultant the weight of concrete, 2074 lb., acts through its centre of gravity on line a (Fig. 4); the weight of earth on slab, including that due to slope of wall, $b=4895$ lb.; the mean centre of gravity line is c , with the total weight=6969 lb., say, 6970 lb., to be compounded with the horizontal thrust $d=2060$ lb., giving the resultant e , having a vertical component=6970 lb. acting at point f , cutting the base at 4 ft. 4 1/2 in. from inner edge, and 4 in. from g , where outside face of wall cuts base. For the condition of no tension on inner edge of base the base must be extended in front of wall, so that the resultant cuts the middle third. This will make the projection in front of wall $=\frac{4' 4\frac{1}{2}''}{2}-4''=1' 10\frac{1}{4}''$ to point h , making the whole width of base 6 ft. 6 3/4 in., say, 6 ft. 7 in.=6.583 ft., as in Fig. 4. The eccentricity from the centre of the resultant on the base will be $4.375-\frac{6.583}{2}=1.084$, say, 1 ft.

To obtain the maximum compression apply the formula $\frac{W}{A} \pm \frac{M}{Z} = \frac{6970}{6.583 \pm \frac{1}{8} \times 1 \times (6.583)^2} = 1058.8 \pm 965 = 2024$ lb. sq. ft. and 93.8 lb. sq. ft.

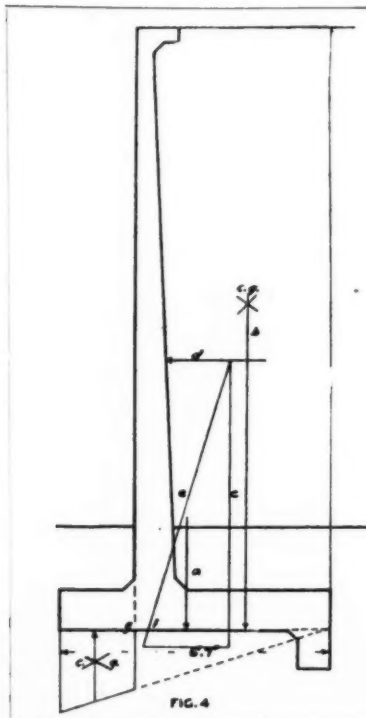


FIG. 4

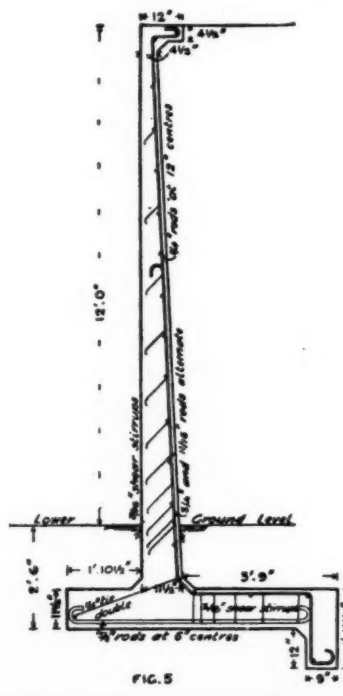


FIG. 5

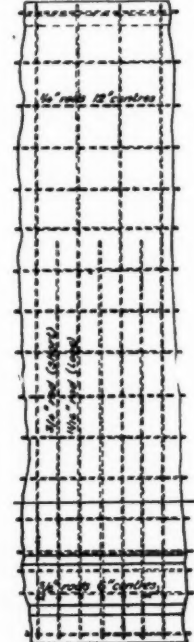


FIG. 6

To find the bending moment of the front projection we have the average pressure = $\frac{1}{2}(2024 + \frac{17}{24} \times 2024) = 1729$ lb.,

or a total pressure = $1729 \times \frac{22 \times 25}{12} = 3206$ lb., with a leverage of 12 in., giving a bending moment of $3206 \times 12 = 38470$ lb. in. To find requisite depth for projection in front of wall, say, $100bd^2 = B$, then $d = \sqrt{\frac{B}{100b}} = \sqrt{\frac{38,470}{100 \times 12}} = \sqrt{32.06} = 5.6$ in. only, but it will be more convenient to make it the same depth as the slab. The design may now be completed as in Fig. 5.

The vertical reinforcement in a wall can generally be reduced about half-way up, so that alternate bars may be stopped short there. To test this find the bending moment at, say, 6 ft. from the top = $\frac{1}{2}wh^2 \tan^2 \frac{90-\theta}{2} \times \frac{1}{3}h = \frac{1}{2} \times$

$100 \times 36 \times 286 \times \frac{1}{3} \times 6 = 1029.6$ lb. ft. = 12,355 lb. in. Then $95bd^2 = 12355$, or $d = \sqrt{\frac{12,355}{95 \times 12}} = \sqrt{10.8} = 3.2$ in., the

required effective thickness of wall at 6 ft. down from top. The necessary reinforcement will be $\frac{3.2 \times 12 \times 675}{100}$

= 259 sq. in., or, say, one $\frac{5}{8}$ in. diameter rod. We have about $6\frac{1}{2}$ in. effective thickness, and may use one $\frac{3}{4}$ in. rod, so that it is clear the larger rods may be stopped half-way up the wall. The part elevation, Fig. 6, shows this stopping off.

(To be continued.)

[The previous article of this series appeared in our issue for May 13.]

Law Reports

Breach of Covenants in a Lease

London County Council v. Hutter.

Chancery Division. Before Mr. Justice Tomlin.

The London County Council, as lessors of the Piccadilly Restaurant, at the corner of Piccadilly Circus and Shaftesbury Avenue, sought an injunction to restrain the alleged breach of covenants in the lease which was dated March 6, 1886, and was for a term of eighty years from March 25, 1885, at an annual rent of £350. The covenants in question provided that the lessee "will not without the previous written licence of the lessors, their successors or assigns, cut or maim any of the principal walls or timbers of the building or commit or permit any waste or damage to the building, or make or permit to be made any alteration in the elevation of the building or in the architectural decoration thereof."

The Council alleged that the defendant had permitted the erection of a sign 75 ft. long, 10 ft. high, and estimated to weigh three tons, and it was complained that the insertion of twenty-three supporting brackets "cut and maimed" the walls and caused "waste and damage," and that the covering of a portion of the aspect by the sign was "an alteration in the elevation and architectural decoration."

Mr. George Topham Forrest, architect to the L.C.C., said that the premises were built of Bath stone of an inferior quality, into which the cutting of holes and the insertion of brackets bearing this heavy structure would have a detrimental effect, and that in time the sign would become dangerous.

Mr. John Murray, architect and surveyor to the Commissioners of Crown Lands, said that the damage consisted of the holes cut in the walls. There was great risk of further damage. With Bath stone not of the best quality there was a risk that in a high wind this heavy sign would break away and fall into Piccadilly Circus. There was no evidence of that at present, but it might happen at any moment.

Replying to questions in cross-examination, witness said there was no sign of weakness now, but some of the Bath stone near the holes was decaying.

For the defence, Mr. F. J. Wills, an architect of Oxford Street, gave evidence, and said the sign was firm and rigid, and there was nothing to suggest any danger of falling down. It had been up two years, and if there was any weakness it

would have developed by now. He could not suggest anything necessary to make it safer. The Bath stone was of good quality.

Mr. Ralph Knott, architect, Adelphi House, said that the sign was structurally well built and that there was nothing to suggest danger to the building. The walls were in very good condition, and he observed no sign of decay.

His lordship, giving judgment, held that the cutting of holes in the wall was not reasonably incidental to the ordinary occupation and user of the premises and business. The defendant had allowed the outside walls to be converted into an advertising station. There had been a breach of all three branches of the covenant. The cutting of the stone was "cutting and maiming," causing "waste and damage," and there had been an appreciable alteration in the front fabric of the building which constituted an "alteration in the elevation of the building and the architectural decoration thereof." He granted a declaration that the operation by which the supporting irons and brackets were fixed in the wall of the building constituted breaches of the covenant, and made a mandatory order for the removal of the irons and brackets and directed the defendant to make good the damage, with costs. His lordship suspended the operation of the order for a month to enable the work to be carried out.

Flat Entrance—Right to Remove Door

Young v. Mainzer.

Court of Appeal. Before Lords Justices Bankes, Scrutton, and Sargant.

This was an appeal by the defendant from a judgment of Mr. Justice Greer, sitting in the King's Bench Division.

The defendant appeared in person; the respondent, the plaintiff in the action, being represented by Mr. Craig Henderson, K.C., and Mr. W. Frampton.

The appellant stated that he was the landlord of certain premises at 18 Berners Street, W., and the respondent, Mrs. E. N. Young, was the tenant of a flat over the shop. The respondent sought an injunction against him on the ground that he had wrongfully removed the glass door of her flat. She also claimed damages against him, and the point at issue was what was meant by the lease. It was alleged that appellant had removed the door on August 23, 1923, which left the plaintiff as she said, without protection against persons walking into her flat. When the lease was entered into in October, 1922, the rest of the premises were let as business premises. The lease of the flat was for fourteen years. Mr. Justice Greer found that there were let to the plaintiff all the premises behind the glass door with the rooms accessory to the fourth-floor room and that the removal of the door was a trespass. He awarded the plaintiff £50 damages against the defendant, £2 nominal damages for the failure by the defendant to fulfil his contract to clean the passages and the lift, and gave judgment accordingly against appellant, with costs.

Appellant argued that the door to the flat was his property, and that the respondent had no right to the door. When he removed the door to have the glass mended by a glazier the respondent sued him for trespass for removing the door. He had intended to put back the door to where it originally was, but the fact was that the door was never demised to the respondent. She had made use of the door instead of providing herself with a door for her flat, which she had agreed to do.

The court dismissed the appeal without calling upon counsel for the respondent.

Lord Justice Bankes expressed the opinion that there was no justification for the appellant's conduct. He let the respondent the flat with a door, and he had allowed her to put the door a little farther back, and then the defendant sought to move the door to a position which gave him a great advantage and the lady a very great disadvantage.

Lords Justices Scrutton and Sargant agreed.

Parliamentary Notes

[BY OUR SPECIAL REPRESENTATIVE.]

The House of Commons reassembled on Tuesday, June 9, after the Whitsun recess.

Sir Kingsley Wood informed Sir W. Davison that during the three months ended May 1 last, 21,674 houses were completed in England and Wales in connection with State-assisted schemes, and 56,202 were in course of construction on May 1. Particulars were not available as to the number of houses erected during the same period by private enterprise without Exchequer assistance.

Book Reviews

"A Prelude to Architecture."

The short argument of this delightful little book of essays is that architectural criticism and architectural thought being encumbered with old dogmas, we shall think the more clearly and do better work if we eliminate some of those which merely darken counsel. Very modestly the author expresses the hope that he can "remove a shovelful" of the obstructive and obscurantist rubbish. He has at least succeeded (if we may change the figure) in dissipating much of the smoke or fog that has long obscured the larger vision.

A useful and basic implement, the shovel; but in this "Prelude" Mr. Newton shows complete mastery of a less primitive and more effective tool. The pen is mightier than the shovel! His "Prelude to Architecture" is, in fact, a collection of brilliant little essays, in each of which he deals trenchantly with examples of certain outworn but persistent shibboleths, such as "expression of plan," "structural functions," "honesty of materials," and such-like banal substitutes for constructive thought. These and other hackneyed expressions he examines in the cold clear light of reason, thus putting the architect on his guard against the inveterate and insidious fallacies they tend to obscure, so that he may break away from the bonds they would impose upon him, or escape the lures into which they would beguile him, and learn to appreciate more fully the terrible force of Sterne's bitter saying: "Of all the cants which are canted in this canting world, though the cant of hypocrites may be the worst, the cant of criticism is the most tormenting." This "Prelude," by helping architectural criticism to discard the innutritious husks of commonplace criticism, does the profession an inestimable service.

In attacking the banalities with which architectural criticism is beset, the essayist does not stoop to use the language of scornful denunciation. He adopts the much more difficult and infinitely more effectual method of gentle persuasion, tinged with mild irony, and sprinkled with Attic salt. Always he keeps strictly within the bounds of serene urbanity. For sane views and soundly philosophic opinions, gracefully set forth in the easy but elegant style that has placed him in the front rank of modern writers on architectural subjects, Mr. Newton's "Prelude" fully sustains, and even enhances, his high reputation. While observing in respect of dignity and purity of style and treatment the best traditions of the older school of essayists, Mr. Newton is essentially modern in outlook, and his writings always reveal the greater subtlety of analysis and keenness of perception—the more sensitive apprehension of "things in their quiddity," in which the writers of to-day vastly excel those of former generations. His "Prelude" goes to the heart of things, and, while thoroughly enjoyable to read, is also (one had nearly written "nevertheless") a sound contribution to the real literature of architecture. It is as useful and practical as it is charmingly interesting. Quietly convincing rather than combatively challenging, it gives architectural criticism a new trend and a fresh interest. Happy in conception and in execution, the little book, being very tastefully produced, delights both the eye and the mind.

"Prelude to Architecture." By William Godfrey Newton. Cloth, 60 pages, 3 in. by 7½ in. Price 3s. 6d. London: The Architectural Press, 9 Queen Anne's Gate, Westminster, S.W.1.

An Artistically Decorated Boudoir.

No. III of the series of booklets on the panelled rooms in the Victoria and Albert Museum at South Kensington has just appeared in a second edition. It describes and illustrates the boudoir of Madame de Sévigny. This booklet was first issued in 1915, and in a note to the second edition, now before us, it is stated that a slight revision of the text has been warranted by the receipt of certain details of personal history relating to Madame de Sévigny which have

been supplied by Madame la Comtesse H. de Choiseuil, of Paris.

A photographic reproduction of Houdon's marble bust of Madame de Sévigny in the Wallace collection forms a charming frontispiece to the booklet. This portrait bust, which was made when the subject was in her nineteenth year, reveals her as a woman of rare beauty. One would like to feel confident that her subsequent harrowing history did not entirely mar the delicacy of her exquisitely refined features; but a woman's history is so often written legibly in her face; and Madame Sévigny's record was not remote from tragedy.

She and her husband (who was also her cousin) were, in fact, condemned to death in 1794 by the savage Revolutionary Tribunal. In her case the sentence was remitted on the plea (possibly groundless) that she was again about to become a mother. She survived to marry a second husband.

Madame's boudoir, now one of the most admired of the "Panelled Rooms" in the Victoria and Albert Museum, was first constructed in the rue Vieille-du-Temple, Paris, its design being credibly attributed to the architect Claude-Nicholas Ledoux. After undergoing various vicissitudes, the boudoir was at length purchased in 1869 from M. Recappé for the museum.

In the excellent historical and descriptive introduction prefaced to the booklet by Mr. Oliver Brickett, it is recorded that the painted wall decorations, which were at first ascribed to Fragonard and Natoire, were in reality designed by J. S. Rousseau de la Rottière, an artist of high talent if not of positive genius. The lunettes in oils on canvas within the arches of the walls are attributed to J. J. Lagvenée le jeune. They show various mythological and symbolical figures, such as those in which he was notoriously prolific.

Mr. Brickett supplies also useful descriptions of the other noteworthy features of the room—of the coved ceiling, for instance, and of the sculptured marble chimneypiece by Claude Michel, with bronze mounts by Pierre Couthière—and he concludes with a short, but judiciously critical, commentary on the room as a whole; not omitting a just tribute to the skill of the architect in combining so many diverse elements into an harmonious whole.

Altogether, the booklet is of considerable educative and practical value; nor, as we have seen, is the subject entirely without the glamour of romance. A dozen plates and a plan of the room render the booklet a valuable acquisition to those who live too far away to visit the room itself.

"Victoria and Albert Museum Department of Woodwork: The Panelled Rooms, III.—The Boudoir of Madame de Sévigny." London: Published under the authority of the Board of Education. Price 1s. 6d. (post free 1s. 8½d.).

Civic Survey and Town Planning Notation.

Town planners of the various countries have much to learn from the study of each other's plans, but, hitherto, have been faced with the difficulty of language. Mr. Pepler, therefore, made proposals to the International Conference, held at Gothenburg in 1923, for an international code. Consequently, he and Dr. Langen, of Germany, and Mr. John Nolen, of U.S.A., were appointed as a small committee to investigate the matter thoroughly.

In the course of their investigations the sub-committee came to the conclusion that it was expedient to concentrate first on the main subjects usually illustrated on plans. A notation for these has been agreed and is now published by the International Federation for Town and Country Planning and Garden Cities, 3 Gray's Inn Place, London, W.C.1.

The International Federation very much hope that town planners will make use of this notation, particularly with reference to any plans sent for exhibition. The published pamphlet reproduces the code in colour and in three languages. The price per copy is 1s. post paid, or 15s. for twenty copies.

Correspondence

The Hudson Memorial

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—Though the Hudson Memorial, better, or perhaps worse, known as the Epstein Memorial, has already been discussed *ad nauseam*, may I crave the hospitality of a small corner of your JOURNAL in which to break a nib with Mr. Roger Fry, the writer of the leader in your current issue.

Mr. Fry's literary style, if he will permit my impertinence, is, I think, admirable, and his slogan "The Philistines are upon us" is convincingly attractive, but it is these very virtues of his which I consider so dangerous. A reader is so apt to believe what he sees in print, however misguided be the principles expounded, provided the literary clothing is pleasant.

In musical and dramatic criticism the market value of a writer depends not so much upon his judgment and knowledge of his subject as upon the possession of an original point of view and his facility for turning a catchy phrase.

Amongst architectural writers stands out our old friend Ruskin, so convincing with his beautiful prose that in all probability no single man did more harm than he did to architecture of the nineteenth century.

I take it by "Philistines" Mr. Fry refers to the general public, and against them "we have to close up our ranks." Surely this is the very last thing we ought to do. Whether we be sculptors, painters, or architects, the public, after all, are our patrons, and even if we make no efforts to please them, or guide their footsteps, the very last thing we should do is to discourage their interest, and treat them as a common foe.

The old idea that an artist must be dead to be appreciated has long been exploded. Michelangelo and Raphael were honoured as princes in Renaissance Italy. Jones, Wren, Reynolds, and the rest of them, achieved in this country a popularity during their lifetime which could have left little to be desired.

In my experience the average educated person has an instinctive love of natural beauty—be it landscape, sunset, or only humanity in the flesh with a lovely face or a graceful figure.

The ideal of the great sculptors in the past has been to produce things of beauty. Their methods of technique have varied, but technique, as such, is but a little matter. It is only the results which count, and unless a certain method of handling the tools of an art is a real aid in the production of beauty, then that method or system of technique becomes merely a passing fashion.

Hudson's own description of Rima suggests to me the very essence of ethereal grace and daintiness. The Epstein effort would be an admirable panel to commemorate the horrors of the Great Plague. Perhaps the Office of Works might be able to arrange for Mr. Epstein a suitable spot in the City which it ravaged, thus leaving in Hyde Park an opening for a happier inspiration in the delightful setting designed by Messrs. Adams, Holden, and Pearson.

G. VAL. MYER.

SIR,—Is not the truth about the Hudson memorial simply that the sculptor has had so little opportunity of doing monumental work that he is not seen here at his best? Despite fine workmanship and an independent attitude, it is a fact that this is not Epstein's masterpiece. A great artist is known by his successes, not by his failures, and every genius makes failures. Epstein is a genius, but on the Hudson memorial he has not surpassed himself. The remedy is to give him more memorials and more public work to do. But I do not think his friends do him justice by trying to find in the Hudson memorial what is not there, but what is definitely to be found in many of his best works, namely, inspired imagination and noble design. Let us be frank with ourselves, and let us admit that while admiring the sculptor and most of his works with enthu-

siastic approval, yet we cannot give the same admiration to this carving. We do not know the limitations that may have been imposed upon him, nor do we know the handicaps under which he may have worked. He is probably the greatest sculptor in England, if not one of the greatest we have ever had, but he is human, and cannot rise every time to his greatest heights. Give him the opportunities that Bourdelle has been given, and let him have a chance to provide us with monumental works such as we feel he can produce.

AMELIA DEFRIES.

List of Competitions Open

Date of Delivery.	COMPETITION.
*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.
June 30	War Memorial for Marley. Maximum cost £2,000. Apply Town Hall.
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).
Sept. 5	Proposed new out-patient and casualty department for the Board of Management of the Wolverhampton and Staffordshire Hospital. Assessor, Mr. T. R. Milburn, F.R.I.B.A. Premiums, £200, £150, and £100. Apply, with deposit of £1 is., to Mr. W. H. Harper, House Governor and Secretary, Wolverhampton and Staffordshire Hospital.
Oct. 1	The Municipality of Drammen, in Norway, invites Norwegian and foreign architects and engineers to compete for the construction of a new bridge across the river of Drammen (Drammenselven) between the two neighbourhoods Bragernes and Strömsö. Judging Committee: Professor Otto Linton, Stockholm, appointed by the Norwegian Engineers' Association; Mr. Arne Eide, architect, Oslo, appointed by the Norwegian Architects' Association; Mr. M. E. N. Saxegaard, district-chief, appointed by the Norwegian State Railways; Mr. Olaf Stang, engineer-in-chief, Oslo; Mr. U. Lied, chief physician, chairman, appointed by the Municipality of Drammen; Mr. Otto K. Röncke, wholesale merchant, Drammen; and Mr. A. Heitmann Arntsen, secretary, Drammen. Mr. Lied and Mr. Saxegaard are respectively president and vice-president of the committee. The following prizes are offered for the best designs: First prize, 10,000 Norwegian crowns; second prize, 8,000 Norwegian crowns; third prize, 6,000 Norwegian crowns. Apply Bureau of the Government Engineer (Statsingeniørkontoret) at Drammen. Deposit 40 Norwegian crowns.
Oct. 8	Proposed Fire and Police Station at Marlborough Crescent, Newcastle-upon-Tyne. Premiums: £500, £300, and £100. Assessor, Mr. Percy S. Worthington, D.Litt., M.A., F.R.I.B.A. Apply, with deposit of £2 is., to Mr. A. M. Oliver, Town Clerk, Town Hall, Newcastle-upon-Tyne, by July 4.
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.

* Date of application passed.

Competition News

The Masonic Peace Memorial Competition.

Following are the names of the authors of the ten designs which have been selected for the final competition by the assessors, Sir Edwin Lutyens, R.A., F.R.I.B.A., Mr. Walter Cave, F.R.I.B.A., and Mr. A. Burnett Brown, F.R.I.B.A.:

H. V. Ashley and Winton Newman, London.
David R. Brown, Montreal.
James Bertram Francis Cowper, F.R.I.B.A., London.
T. Lawrence Dale, F.R.I.B.A., and H. Haylock Goldin, A.R.I.B.A., London.
Louis de Soissons and George Grey Wornum, London.
Lanchester, Lucas, and Lodge, London.
Nicol and Nicol, F.R.I.B.A., London.
Frank Worthington Simon, F.R.I.B.A., London.
Percy Thomas (Jones and Thomas, A. and F.R.I.B.A.), Cardiff.
Willmott and Smith, Cardiff.

Southend-on-Sea Senior Elementary (Intermediate) School Competition Award.

The assessor, Mr. J. W. Fisher, F.R.I.B.A., has made the following awards in this competition:

First Prize, 100 Guineas, Eric A. W. Ixer, 1 Mount Pleasant, Stranmillis, Belfast. Second Prize, 75 Guineas, H. A. Porter, 22 Surrey Street, Strand, London, W.C.2. Third Prize, 50 Guineas, T. R. Somerford and S. H. Collins, 70 Pulborough Road, London, S.W.18.

Societies and Institutions

The Institution of Structural Engineers.

The result of the ballot for the election of officers and Council of the Institution of Structural Engineers for the session 1925-26 is as follows:

President.

Sir Charles T. Ruthen, O.B.E., F.R.I.B.A., etc.

Vice-Presidents.

H. J. Deane, M.Inst.C.E., M.I.Mech.E., etc.; Dr. Oscar Faber, O.B.E., M.Inst.C.E., etc.; J. Mitchell Moncrieff, C.B.E., M.Inst.C.E., etc.; R. H. H. Stanger, F.C.S., A.M.Inst.C.E., etc.

Past Presidents (ex-officio members).

Major James Petrie, O.B.E., etc.; E. Fiander Etchells, Hon. A.R.I.B.A., etc.

Hon. Secretary.

H. Kempton Dyson.

Hon. Editor of Publications.

Ewart S. Andrews, B.Sc., etc.

Hon. Librarian.

R. W. Vawdrey, B.A., etc.

Hon. Curator.

A. C. Davis, M.Inst.C.E.I., etc.

Members of Council (Retiring 1928).

S. Bylander; Professor F. C. Lea, O.B.E., D.Sc., etc.; E. C. P. Monson, F.R.I.B.A., etc.; H. D. Searles-Wood, F.R.I.B.A., etc.

Retiring 1927.

W. A. Green, B.A., B.Sc., etc.; G. B. R. Pimm, A.M.Inst.C.E., etc. Two vacancies for co-option.

Retiring 1926.

Prof. Henry Adams, M.Inst.C.E., etc.; H. John Collins, M.C., M.Sc., etc.; Adam Hunter, M.Inst.C.E., etc.; J. O'Hanlon Hughes; J. T. Saunders, F.R.I.B.A., etc.; Thos. Wallis, F.R.I.B.A., etc.

The chairman of each of the four branches is also an ex-officio member of the Council.



SIR CHARLES T. RUTHEN, O.B.E., F.R.I.B.A.

The New President of the Institution of Structural Engineers.

Building Surveyors' Examinations.

The R.I.B.A. Board of Architectural Education call attention to the fact that certain revisions have been made in the syllabus for the examinations for candidates as district surveyors in London, and as building surveyors under local authorities. Forms of application for admission, containing the revised syllabus are obtainable on application at the R.I.B.A., 9 Conduit Street, London, W.1.

The Leeds and West Yorkshire Architectural Society.

The annual general meeting of this society was held at Leeds, when the forty-ninth annual report, for the year 1924-5, was adopted. Owing to deaths and resignations the membership has decreased from 204 to 192. The following officers were elected for the session 1925-6: President, Mr. W. Alban Jones; vice-Presidents, Messrs. Douglas Bowman and J. E. Stocks; hon. treasurer, Mr. W. Whitehead, A.R.I.B.A.; hon. editor, Mr. T. Butler Wilson, F.R.I.B.A.; hon. librarian, Mr. J. Addison, A.R.I.B.A.; hon. secretary, Mr. F. L. Charlton, A.R.I.B.A.; members of Council, Messrs. V. Bain, A.R.I.B.A., L. H. Bakes, Norman Culley, F.R.I.B.A., G. H. Foggitt, A.R.I.B.A., J. F. Walsh, F.R.I.B.A., and F. W. H. Allison, A.R.I.B.A., Associate Member.

The Royal Sanitary Institute Congress.

The thirty-sixth congress of the Royal Sanitary Institute will be held at Edinburgh from July 20 to 25. H.R.H. the Duke of York, K.G., K.T., G.C.V.O., has accepted the Honorary Presidentship of the Congress, and the Right Hon. Sir John Gilmour, Bart., D.S.O., M.P., Secretary for Scotland, as President, will deliver his inaugural address to the Congress on Monday, July 20. The Right Hon. the Lord Provost (Sir William L. Sleight) is President of the local committee, who have in hand the arrangements for receiving and entertaining the delegates and members, who are expected to number over 1,200 to 1,500. Already 675 delegates have been appointed from nearly 400 sanitary authorities from all parts of the United Kingdom. Delegates will be attending from Australia, India, South Africa, China, Egypt, France, Japan, U.S.A., New Zealand, Canada, Poland, and British West Indies. The health exhibition, which is an important part of the congress, will include appliances for housing and general sanitation. Visits have been arranged to works and institutions, such as infirmaries, tuberculosis hospitals, baths, markets, slaughter-houses, and other places of health and historical interest in and around Edinburgh.

The Lewis Berger Scholarship

The Lewis Berger scholarship, of the value of £60 to cover the cost of fees, maintenance, materials, and travelling expenses, is offered for competition annually by the Royal Society for the Encouragement of Arts, Manufactures, and Commerce. It is tenable at the Royal College of Art, London, for a period of three months for the purpose of study in decoration and decorative painting. The holder of the scholarship must be a *bona fide* apprentice, student or craftsman, either engaged in or preparing to follow the craft of painting and decorating. He must be not less than eighteen or more than twenty-five years of age on May 1 in the year in which the examination takes place. Entry forms can be obtained from the secretary, the Royal Society of Arts, by application through the headmaster of any school of art, and must be returned completed not later than January 31 of each year. In the drafting and piloting through of this new scholarship inestimable help was afforded by the Education Committee of the National Federation of Master Painters, through Mr. J. H. Cantrill and Mr. Will Mellor.

Obituary

Mr. Charles W. Rollinson.

We regret to record the death of Mr. Charles W. Rollinson, of Chesterfield, at the age of seventy-four. Up to fifteen years ago he was a member of the firm of Messrs. Rollinson and Son, architects and surveyors, which was founded by his father, Mr. Samuel Rollinson. The firm designed many public buildings in the town and district, including the Union Infirmary, the Miners' Hall, Saltergate, Crompton and Evans's Bank, and Whittington Church.

The Week's News

Sheffield Public Hall Scheme.

The Sheffield Town Trust have given the City Council £5,000 towards a public hall scheme.

Greenwich School Enlargement.

Greenwich Park Central School is to be enlarged at a cost of £9,000.

Children's Home for Scarborough.

The Scarborough Board of Guardians have decided to purchase a site in Stepney Road for a children's home.

Housing Site for Fulham.

The Fulham Borough Council are to buy a Wyfold Road building site for £2,000.

Public Baths Proposed for Salford.

Salford have under consideration a proposal for the erection of a public swimming bath, slipper baths, and a public wash-house in Hodge Lane at a cost of £49,824.

Housing at Harrogate.

The Corporation have decided to apply to the Minister of Health for sanction to raise a loan of £60,000 for the erection of 102 houses on the Ripon Road estate.

More Houses for Halesowen.

A scheme for the erection of fifty-seven houses on the new site at Hawne has been approved by the Halesowen Urban District Council.

New Houses for Bangor.

The Bangor Urban District Council have decided to build twenty-four houses at a cost of £14,815 on the old football field, and eighteen at a cost of £10,700 on the Penton site.

Conway Rural Housing.

The Conway Rural District Council have decided to proceed at once with the erection of twenty-four houses for the working classes in Ronald Road, Llandudno Junction.

Nuneaton Housing Scheme.

The Nuneaton Town Council have received the sanction of the Ministry of Health to the borrowing of £22,810 for the erection of fifty houses on the Tomkinson Road site.

Architect Life Governor of Westminster Hospital.

Mr. H. Percy Adams, the architect for all the improvements and additions made to Westminster Hospital, has been elected an honorary life governor. This is an unusual compliment to an architect, and is the highest honour the hospital can give.

Town-planning Scheme at Shrewsbury.

The Shrewsbury Rural District Council have resolved to engage the services of an expert to draw up a town-planning scheme to embrace an area of 3,000 acres in the Harlescott district, near Shrewsbury.

Old Stone Building Discovered.

Excavations at Sakkara, in the neighbourhood of the Step Pyramid, have revealed what is said to be the oldest stone building ever discovered. It is officially stated that the scientific results of these discoveries are of the first importance.

Ardingly College Extensions.

A considerable extension is to be made to Ardingly College, the Sussex public school, a substantial gift from an Old Boy having made it possible to add further classrooms and other accommodation.

The Kingston to Hampton Court Towpath.

Agreement has been reached as to apportioning the cost (£21,000) of repairing and improving the three miles of towpath from Kingston Bridge to Hampton Court, and an early start on the work is hoped for.

A New Hospital for Harrogate.

The Governors of the Harrogate Infirmary have decided to erect a new hospital of 100 beds, capable of extension to 150 beds, on a site to be acquired on the Knaresborough Road. The estimated cost is about £70,000.

Manchester Town Hall Extensions.

A sketch plan of Manchester's Town Hall extensions has been adopted by the committee, and sent forward to the City Council. The new building will be twice the size of the present Town Hall. The frontage of the new building will be on St. Peter's Square, where the Cenotaph stands.

The Kitchener Memorial.

The model of the equestrian statue of Lord Kitchener, which is to be placed in front of the national memorial to the Guards on the west side of the Horse Guards' Parade, has been approved by the committee of the fund, and will shortly be cast in bronze. The complete memorial is estimated to cost about £40,000.

Shrewsbury Racecourse.

The Shrewsbury Corporation have received a petition, signed by the whole of the doctors in the borough, against the proposal to use the racecourse (recently bought by the Corporation) for building purposes. In their opinion the racecourse was the ideal playground for the town, and should be preserved unbuild and in its entirety. A resolution to the same effect was received from the Shropshire Amateur Athletic Association.

Supposed Westminster Moat Wall Unearthed.

What are believed to be the remains of a moat wall have been unearthed during excavations in Richmond Mews, opposite the Cenotaph, Whitehall. When similar remains were found in Great Smith Street and Great College Street, Westminster, about sixteen years ago, experts pronounced them to be relics of a wall of a moat which originally ran round the site which included Westminster Abbey and neighbouring palaces. Both in construction and in material the workings found recently are identical with those previously discovered.

Darlington's War Memorial.

The plans for the proposed Darlington War Memorial Hospital were approved at a meeting of the War Memorial Executive Committee. Mr. W. J. Moscrop, of Messrs. Clark and Moscrop, Darlington, the architect, explained the plans, and pointed out that they provided accommodation for 228 patients, 33 maids, and 46 nurses. The estimated cost being £196,000. The Ministry of Health and the Corporation would be responsible for the maternity and skin diseases block, which were to cost £16,000, so that the actual cost would be reduced to £180,000.

A £6,600,000 Midlands Waterways Scheme.

The Minister of Transport received a deputation from Birmingham and other public authorities in the Midlands in regard to proposals for improving the waterway communication between the Midlands and the Mersey. The cost is estimated at £6,600,000. The Minister said that in view of the magnitude of the proposals, he was unable to make any definite commitment as to the nature of the assistance Parliament would afford or the amount of financial contributions, if any, they would be prepared to make. As parts of the proposed route were controlled by railway companies, he was prepared to consider favourably any request for a conference of all the interests concerned to ascertain whether any agreed proposition could be arrived at.

New House of the British Medical Association.

The new house of the British Medical Association, in Tavistock Square, now approaching completion, will be opened by the King on Monday, July 13. The King will be accompanied by the Queen. As a preliminary to the actual opening ceremony the Archbishop of Canterbury will dedicate and open the memorial gates erected as a tribute to members of the British Medical Association who fell in the Great War. These ornamental wrought-iron railings and gates, 60 ft. wide and 24 ft. high, with a bronze tablet over the central gateway, have been designed by Sir Edwin Lutyens, R.A., the architect of the building. The new building, intended originally as a college for the Theosophical Society, had been completed up to a certain point when it was taken over by the Government during the war. It was acquired by the British Medical Association two years ago from the Disposals Board.

Trade and Craft

British Catalogues Required.

The Department of Overseas Trade are informed by the Government of Palestine Department of Customs, Excise, and Trade that the chief British representative, Trans-Jordan Government, Amman, is desirous of receiving British catalogues, lists, pamphlets, etc., in connection with the following subjects: construction of roads, buildings, bridges, and water supply, irrigation and drainage, and sanitation.

Stannos Wires.

Messrs. Siemens Brothers & Co., Limited, of Woolwich, London, S.E.18, have sent us a copy of the new issue of their catalogue No. 130, dealing with "Stannos" wires. It contains a full description and prices, of the various sizes of "Stannos" wires, and of joint boxes, fuse boxes, fuse boards, "Rawl-plugs," and all the accessories required for a complete wiring installation on this system. Full instructions are given for the placing of the wire, and a diagram of connections for concentric wiring is included. The firm point out that one of the important advantages of the "Stannos" system is that the outer copper sheathing can be used as an earthed return, and that the wire is eminently suited for wiring on the concentric system.

Some Cellactite Specialities.

The Cellactite Works, Limited, have sent us copies of their new booklets concerning uralite, fireproofing material; cellactite, building and roofing sheets; asbestone, asbestos cement tiles and sheets; and urastone, non-corrosible flue pipes and fittings. Uralite is a material suited for many uses, and is composed of asbestos fibre, incorporated by a special chemical process with other materials. The firm claim uralite to be "light, unaffected by gases or acid fumes, a non-conductor of heat, and that it prevents condensation, is vermin proof, is easily handled and fixed, is an excellent non-conductor of electricity, does not warp, crack, shrink or expand, and will stand an unflinching protection under the severest tests of fire." In the booklet dealing with this material views are shown of Osborne Naval

College, and of the Wellington Pier Garden Pavilion, Great Yarmouth, two of the many buildings in which uralite has been used. It was placed in the Wellington Pier Garden Pavilion more than twenty years ago, and to-day it is still serving its purpose. Extracts are also given from the report of the British Fire Prevention Committee on the fire test with uralite. In this test a door was subjected to temperatures increasing from 500 to 1,780 deg. Fahr., during a period of about one and a half hours, without damage to the uralite external surface.

Cellactite steel-lined corrugated roofing sheets are claimed to be light in weight, strong, tough, non-hygroscopic, permanent, acid, fire and weather resisting; and to be as easily fixed as galvanized iron. The compound sheet is formed by a patented process by which a thin steel sheet is permanently embedded between two sheets of cellactite, the outer or exposed cellactite sheet being thicker than the inner. The whole is consolidated under intense pressure, and measures just over one-eighth of an inch in thickness when finished. Cellactite steel-lined flat sheets are made in a precisely similar manner in so far as the compounding and consolidation of the sheet is concerned.

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Urastone may be used as a flue pipe for gas appliances, and for venting other products of combustion or fumes where the temperature does not exceed 300 deg. centigrade. The larger diameters can be used for ordinary chimneys and stacks, and can be bricked-in, chimney breasts (in the case of gas fires) being unnecessary, and a great economy in brickwork being thereby effected.

Copies of the booklets can be obtained from Cellactite Works, Limited, London Sales Office, Lincoln House, 296-302, High Holborn, W.C.1.

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