Wednesday, February 11, 1925 Vol. LXI. No. 1571.

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal."

FROM AN ARCHITECT'S NOTEBOOK.

ARCHITECTURE AND ETERNITY.

Architecture aims at Eternity; and therefore is the only thing incapable of modes and fashions in its principles.

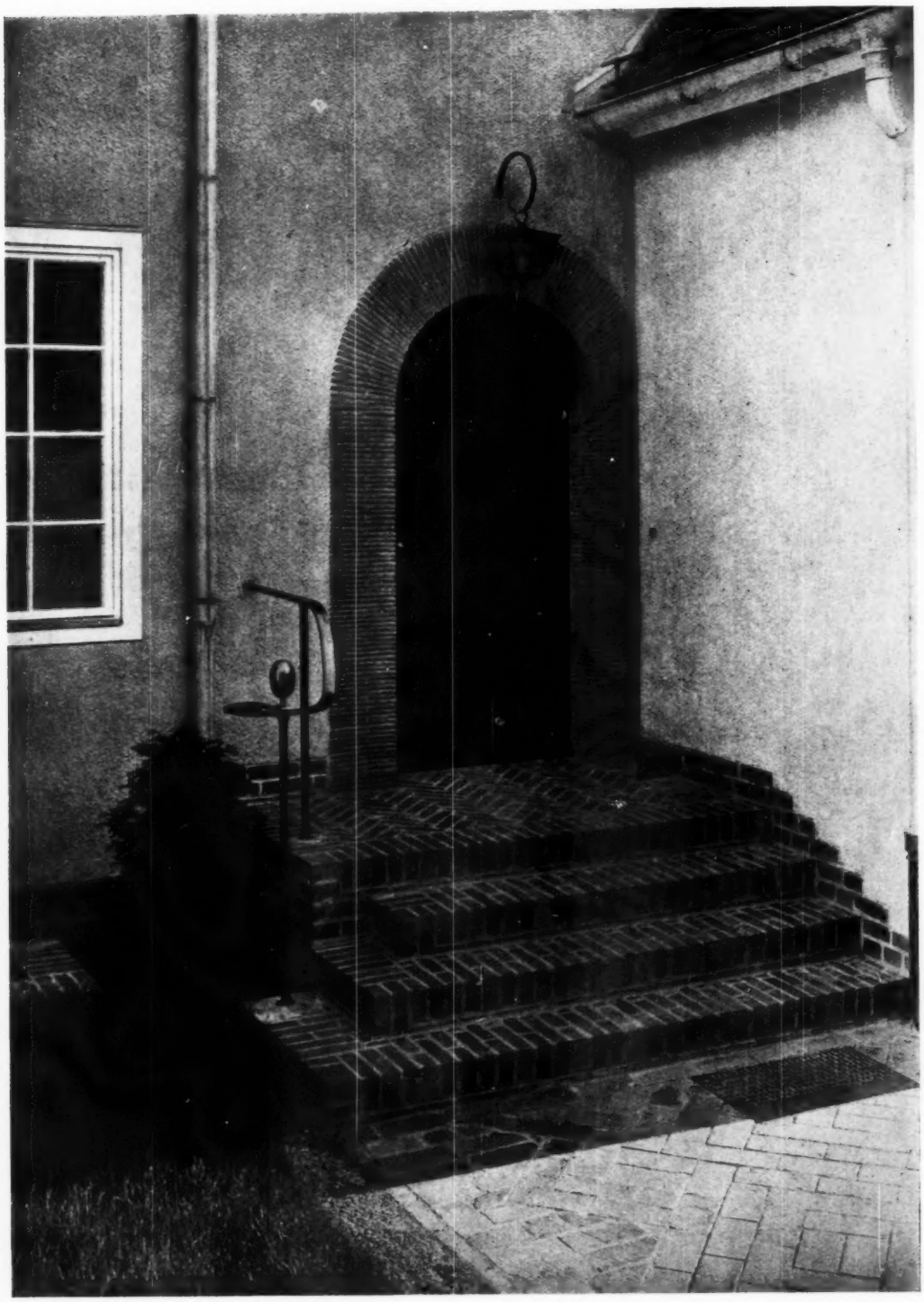
SIR CHRISTOPHER WREN.

("*Parentalia.*")

9 Queen Anne's Gate, Westminster.

Entrance Doorway to a House at Nikolassee, near Berlin

Professor H. Straumer, Architect



"At the present time ornamentation in brick building is practically non-existent (in Germany). One tries to get surface effects by choosing special material to produce good colouring and good structure."—Mr. Eckhart Muthesius.

THE

ARCHITECTS' JOURNAL

9 Queen Anne's Gate, Westminster.

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Mr. Todd and St. Paul's Cathedral

ENGLAND has to thank Mr. Todd, the surveyor to the City Corporation, for his eminently proper action in issuing a dangerous structure notice in connection with the eight defective main piers of St. Paul's Cathedral, and thereby officially calling public attention to the inadequacy of the proposals contained in the second interim report of the commission appointed in 1921 to advise on the best method of repairing the fabric.

He is undoubtedly correct in his objection to grouting in the present instance, and correct also in recognizing that a principal cause of fracture in the piers is the eccentric application of the excessive load they bear upon one inner corner of each of them.

Having cleared the ground by making it apparent that he entirely disapproves of the commission's proposals, he has now issued a statement in which his own alternative suggestions are put forward. With his main theme, that the dome must be preserved without demolition, and that its safety should be ensured for a considerable period, few will quarrel. Although the dome shows signs of considerable settlement it is in relatively sound condition, and as has already been pointed out in Mr. William Harvey's articles, the upper parts of the building are among the most fascinating and efficient of Sir Christopher Wren's constructional inventions and do not require rebuilding if they can possibly be left where they are during the repair of the lower parts of the building.

Mr. Todd, however, votes wholeheartedly for rebuilding the piers, and to this end would shore and centre the arches with brickwork stiffened with reinforced concrete beams. The foundations for the new piers he would take down to the blue clay and deep into its substance to obtain a lateral grip, and, on the tops of his caissons, he would erect reinforced concrete piers calculated to take the weight of the arches and dome as an evenly-distributed load.

Just how he would distribute it is a little obscure in the account before us. "This was no boy's job; it was another labour of Hercules; it was a job for giants to put St. Paul's right. They had to do something equivalent to taking off the dome to the level of the top of the piers, pulling the present piers down and rebuilding them. They could not take the dome down because they could never put Wren's dome back again, and all the sentiment and glamour of the cathedral would disappear. But they could build the dome up in its present position by temporary structures, take down and make good the piers, remove the temporary support, and gently lower the dome bodily one three-thousandth part of an inch, which represented a thin line drawn by a very fine pen on paper.

"By lowering all the reconstructed piers, buttresses, and cross walls, it would automatically take its bearing on them as Wren intended it should, and the stresses would automatically go back to their original position, and then we should have Wren's building without any modern nostrums or fads."

It seems possible to recognize the work of "a very fine pen on paper" here, for, as to the settlement of the dome by one three-thousandth part of an inch it will be quite easy to lower it by this amount—and more. Unfortunately, the real problem is to keep settlement within bounds, and talk of settlement in terms of three-thousandths of an inch is simply academic. But, whether the lowering of the dome can be stopped at a hair's breadth or no it is difficult to believe that the pressures will "automatically go back to their original position," or that this original position would not cause severe eccentric loading. It cannot be forgotten that, admirable as Wren's arrangements for spreading the weight have proved themselves to be, they have nevertheless partially failed in the original settlement of the building and in its movements that have since taken place. The settlement of the new piers as they receive their load will be bound to have a similar effect.

It would be profitable to compare Mr. Todd's proposal merely to make good the thirty-two buttresses around the outer drum before lowering it and them upon his new piers with Mr. William Harvey's recommendation that they should be both repaired by means of reinforcement and incorporated in an enclosing cone designed to augment their effective action in spreading weight on the unloaded back portions of the piers and the bastions.

The contrast of rebuilding reinforced concrete piers as advocated by Mr. Todd with Mr. Harvey's proposal to recore the present piers with reinforced concrete is also an interesting one. In rebuilding a pier the total weight would have to be thrown upon the centres and needles; in recoring operations only a fraction of the sectional area of the pier is attacked at one time, and far less violent shocks are administered to the surrounding work. Recoring has also the advantage that pressure can be placed upon the several masses of reinforced concrete as they are set by jacking up to the work immediately above, whereas in rebuilding, the green work is not compressed as it proceeds, and would be liable to take all its settlement suddenly when the falsework was struck.

Like the commission, Mr. Todd confines his attention to the piers, their foundations, and the parts of the building immediately superimposed upon them. His estimate of £2,000,000 would, therefore, still leave the outward spread of the bastions and the transept gables to be dealt with as extras, nor does he attempt to discuss the damaging effect of the yielding buttresses upon the stability of the piers themselves. The omission is not altogether surprising, for the interaction of parts in a huge vaulted structure does not come within the ordinary routine of surveying practice, and Mr. Todd acknowledges that his information is derived from facts placed before him by the members of the commission and not from an exhaustive independent survey of the building as a whole.

Even in a new building the unequal settlement of different parts is likely to cause a great deal of trouble, and in under-

pinning the avoidance of settlement assumes such importance as to become a determining factor in the selection of a possible scheme and in the manner of its application.

Just how much Mr. Todd's proposed new ferro-concrete piers would shrink upon themselves and into the foundation when they received their immense and eccentrically applied load—for a glance at the section of the building demonstrates that it would still be eccentrically applied—is a matter of the gravest importance. According to the report issued in August, 1907, Wren's main dome piers have sunk at cornice level from $2\frac{5}{16}$ in. to $6\frac{1}{8}$ in. in comparison with the cornice levels of adjoining parts of the church. These figures, therefore, do not give the full measure of total settlement in respect of a fixed datum, for the whole building must also have settled to some extent.

But neglecting this indeterminate quantity, a range of settlement from $2\frac{5}{16}$ in. to $6\frac{1}{8}$ in. is itself sufficiently serious, and though well-built reinforced concrete erected with all due precautions would doubtless stand up better than lime-built masonry, some degree of settlement is absolutely unavoidable, and it is also bound to affect the heavily-loaded portion more acutely than the lightly-loaded portion of the pier.

Recoring operations at Jedburgh Abbey tower piers and the insertion of new foundations under them resulted in the descent of the tower top by something approaching $\frac{1}{8}$ in. in a height of 84 ft.

St. Paul's piers are not so old by more than five hundred years as these Norman piers of Jedburgh, built in 1147, and their decay is not nearly so advanced. Fractures that a man could thrust a hand into were the rule at Jedburgh, and the core was so loose that no tool of any kind was used in its removal. But though St. Paul's does not exhibit such obvious evidences of collapse, the great scale and enormous load to be borne by the piers at the cathedral hardly gives promise of any improvement upon this figure, even if the repairs are performed, as at Jedburgh, by the patient method of recoring which seems most applicable to the case.

Hands off Waterloo Bridge!

"After much difference of opinion," the Special Committee on Thames Bridges has decided to advise the L.C.C. to remove the whole structure of Waterloo Bridge and to build an entirely modern bridge in its place. The engineers, it seems, have convinced the committee that it would be foolish to preserve Rennie's design, and that it would be impossible to rebuild with the old material. "It was explained that the material of which the old bridge is built is entirely unsuitable for use in a new bridge, and the old design is not suitable for modern requirements." This last objection is really the only one that need be considered; the others are immaterial. It is rumoured that the engineers want a three-arch bridge at Waterloo. They dislike Rennie's comparatively narrow deck, but much more do they dislike his not unduly wide arches. They are thinking, we believe, primarily of the fairway. Now much nonsense is talked about Waterloo Bridge being an obstruction to river traffic. The biggest craft passing under Waterloo Bridge are the sea-going colliers belonging to the Wandsworth Gas Company. These boats always move at low tide, for the difficulty with the bridges is not so much one of width as of height. Actually the boats have much more trouble in getting under Westminster Bridge, because of its extremely low elevation. Waterloo, crossing the river at a much higher level than Westminster, offers far less obstruction. As to width, the arches of Waterloo Bridge could take boats twice as wide as these colliers and still leave plenty of room on either side. So the fairway argument falls to the ground. The narrowness of the bridge for vehicular traffic is a more serious matter. It might well be wider, but not much. To make it double or treble its present width would be fatal. Packing your bridge with vehicles will not ease congestion; in the peculiar case of Waterloo Bridge it will merely increase it. One must think not only of bridge capacities, but of outlets. With a great cross-flood of traffic at the bridge end, such as we find in the Strand, confusion becomes worse confounded in proportion to the increased volume of traffic poured into it. What we want is not wider bridges but more bridges; diffusion not concentration. A glance at the map of London is sufficient to show that new bridges are wanted between Waterloo and Blackfriars, and between Waterloo and Westminster. Mr. Lanchester, in the former instance, has already suggested a new bridge crossing the river in line with the eastern arm of Aldwych and terminating somewhere near the Old Vic on the south side. With, in addition to this, a new vehicular bridge in place of the present railway bridge at Charing Cross, central London would be more than adequately served with cross-river communications for years to come. On the question of underpinning Waterloo Bridge the engineers on the committee have decided that such an operation is impracticable. Very well. Other equally distinguished engineers have expressed a contrary opinion. We are not alone in the belief that on utilitarian grounds there is no case for the demolition of Waterloo Bridge. A strong plea could be made for its preservation on æsthetic grounds, but to do so would be to invite the accusation of sentiment. Let us keep to practicalities. Until they make out a much more convincing case than they yet have done, the Bridges Committee must expect to find unyielding resistance to their proposal to do away with Waterloo Bridge.

The Royal Gold Medal

The nomination of Sir Giles Gilbert Scott, R.A., as this year's Royal Gold Medallist will receive universal approbation. Honours have fallen upon him thick and fast, and it was inevitable that this further one should sooner or later be added. That it comes early in life instead of late (which is usually the case with the premier distinction of architecture) is wholly in keeping with Sir Giles's character of a veritable William Pitt among architects. Often these honours come too late in life for the recipients to enjoy them to the full, which is a pity. Perhaps the nomination of Sir Gilbert for the Royal Gold Medal will mark the inauguration of a new era in the bestowal of professional distinctions. Perhaps the time will come when the presidency itself will be achieved at an earlier age than is now commonly the case. However that may be, and all question of age apart, Sir Gilbert's wonderful record of accomplished work makes plain his title to the distinction which is to be conferred upon him. Felicitations!

Effort and Architectural Education

On the occasion of the presentation of the R.I.B.A. prizes Mr. Gotch delivered himself of a little homily on "work" that had in it a wealth of wisdom. Whether he was entirely right in regarding the present age as an easy one for youth may be doubted; his words on architectural education none will dispute. The older generation of architects, and numbers of the younger, gained their knowledge of the exacting art of architecture by very strenuous effort. The ambitious junior, after a day at the drawing-board in his principal's office, thought nothing of putting in the evening at the R.A. or A.A. schools. He had to do so if he were to get a thorough grasp of the principles behind the details that he occupied himself upon during the day; for no matter how well-disposed, his chief could not spare the time (even if he had the ability) to impart to his pupil the knowledge that it now takes five years to acquire in a school. Hence the life of the student was of a strenuousness largely unknown to-day. Also the distractions were fewer. None would be so rash as to say that the old way was better than the new. For better or worse, change has worked its will, and perhaps we have a more sympathetic understanding of the adage that tells us the effect upon Jack of all work and no play. The moral is that play has its rightful place in the scheme of things, but is fatal to work if overdone.

Modern German Architecture

By ECKHART MUTHESIUS

(Concluded from last week's issue.)

THE new post-war residential quarters which have been built all round Berlin are a sad example of the devastating effects of the war in the domain of architecture. In Germany at present, building has been brought to a very low level as a consequence of the financial situation. During the inflation of the currency, building was still going on, but now there is such a dearth of money that no one can think of building.

As in building, the planning of gardens has undergone a complete change during the last twenty years. With the German villa went the so-called "landscape garden," and the two harmonized with each other in being unpractical and ugly. The aim of gardeners was, like everyone else, in the nineteenth century, to deviate from the reasonable way. Even on the smallest tracts of land, pretentious landscape effects were constructed; woods and heaths, streams and lakes were imitated on the smallest scale, and in a ridiculous and burlesque manner. With the introduction of the new artistic movement, the reformers declared war on the so-called garden. Fierce attacks were made on landscape gardens, whose supporters soon gave in; and then the formal garden triumphed. Here architects led the way, the gardeners following very slowly; even now some are still opposing the formal garden.

As in all large countries, there are in Germany a great many local differences in architecture. The South German style is entirely different from the North German. The southern manner is more delicate, more complete than the northern one; the North German style is tenser, more sinewy, and consciously sober.

A fundamental difference lies in the building material. Plastered stone is used in the south, whereas in the north brick work is more common. In the North German plain, where no building stone is to be found, bricks have been for centuries the only material for houses. During the imitative period, principally of the German and Italian Renaissance styles, bricks were very largely supplanted, but lately they have been used with much success. This brick building is perhaps the most gratifying achievement in German architecture during the last twenty years. In all coast towns such as Hamburg, Lübeck, Bremen, etc., the best architects have a great preference for brick, with which they build simple straightforward houses.

At the present time ornamentation in brick building is practically non-existent. One tries instead to get surface effects by choosing special material to produce good colouring and good structure. The manufactories have devoted themselves to the improvement of bricks and there exists now in Germany a large choice of splendid material for brick building. The smoothness and elegance of the old style of brick, are now entirely neglected in favour of other qualities.

During the last twenty years a not inconsiderable development of the building profession has shown itself in the so-called "Siedlungsbau," that is to say, the building of whole towns and villages. Originally these were built for the workmen of large manufactories, but very soon many of the "Siedlungen" were erected for the ordinary population. Owing to the dearth of houses arising from the war it became necessary to produce new houses, and as the desire to leave the town and live in the country has steadily grown during the last ten years, the whole of the post-war building has been devoted to the erection of new garden cities (Siedlungen).

In all parts of the country projects were made for new cities and the Government set on foot a new policy of support, which helped to forward the movement very effectually. The majority of these projected cities were

A HOUSE AT GRUNEWALD, NEAR BERLIN. ALBERT GESSNER, ARCHITECT.

either not started, or else remained at a standstill, in consequence of the inflation of the currency, when the first estimate of cost proved totally insufficient. Recently attention has been fixed once more on the building of flats in towns. This had been purposely avoided in the years following the war. It appears that to-day, in all towns and cities, there are many roads quite ready with drainage and electricity. By building on these roads a great many expenses can be saved, and it is for this reason that the building of town houses has been taken up again.

The war has made many changes in the building of country houses. The room space is greatly reduced, and large houses such as were built before the war are no longer possible. Most of the latter are now empty and are for sale, small houses being essential. In Germany now the first aim is to make the houses as rational as possible. Perhaps from this necessary reduction will come salvation from the tyranny of style, which has always been a danger to German architecture, and which has a tendency to certain peculiarities. The younger generation holds a strong preference for effects of simple form. And the most satisfactory result of German development is just this, that all redundant ornament and exuberant form has been put aside.

Among the architects who have devoted themselves to the design of the private house, Josef Hoffmann, of Vienna, is the most important figure. Hoffmann represents the modern art movement in Germany in the purest and most perfect way. He has built a large number of beautiful houses, the inner details of which are remarkably fine. For the exterior he has selected in general the simplest style. Hoffmann stands on the Continent as the most remarkable exponent of the art of interior architecture. His rooms exhibit the highest elegance and at the same time the highest artistic qualities.

In North Germany Alfred Messel, the architect of the large store-house "Wertheim," ranks unconditionally among the first of the last ten years. His early death was an irreparable loss to German architecture. Messel has erected offices, large commercial shops and buildings principally, but there exist quite a number of excellent country houses of his.

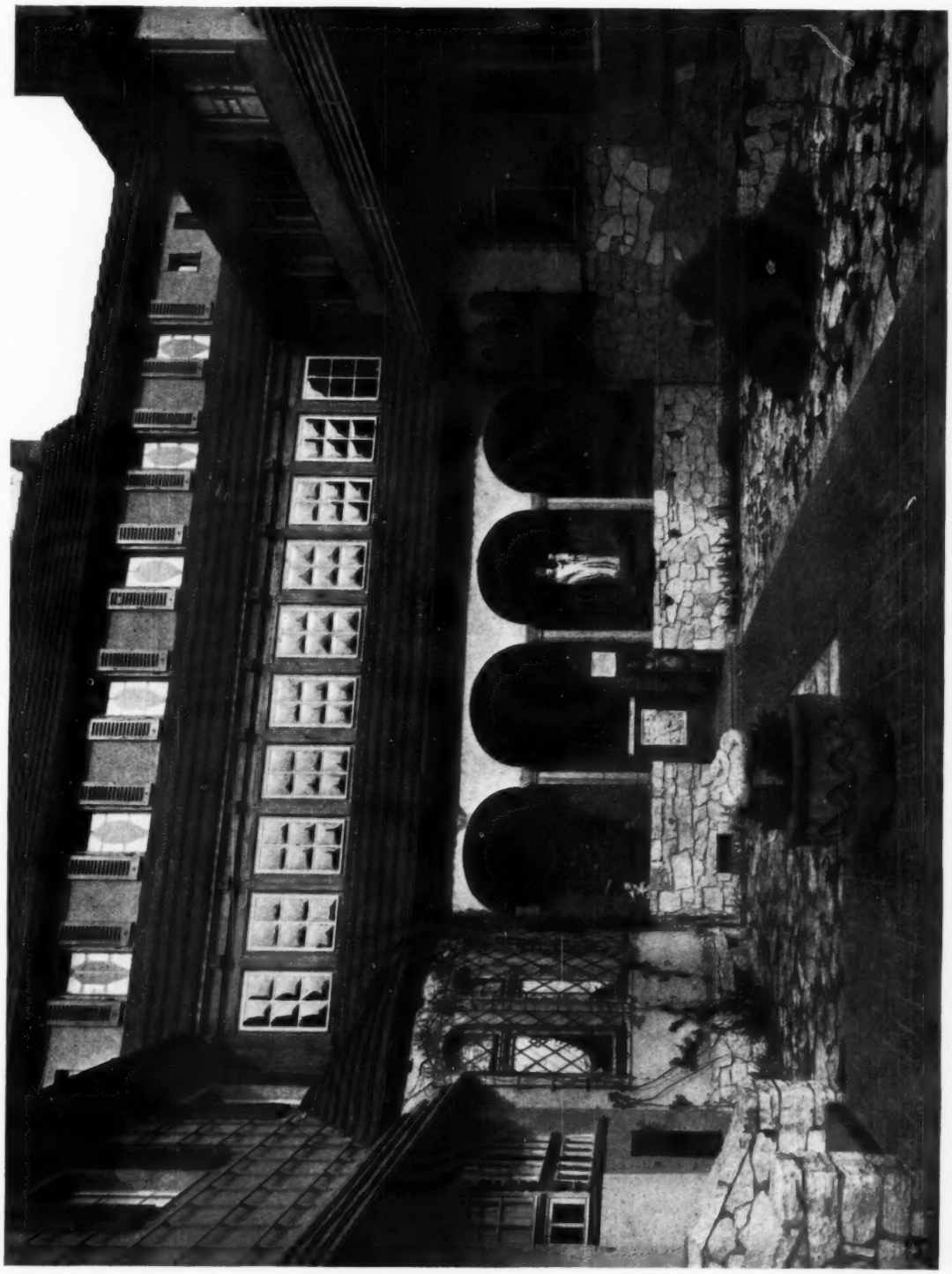
Apart from Messel special attention should be called to Albert Gessner, who must also be included among the first-rank architects. He has distinguished himself in designing excellent town flats. His numerous country houses are, however, just as good as his town houses. He also became a whole hearted supporter of the new movement. The harmony and proportions of his houses are especially remarkable.

Of the Berlin architects, Heinrich Straumer is distinguished among those who have mastered the art of country house building in the most successful way. Straumer has learnt a great deal from England, without making the mistake of imitating peculiarities, suitable only to its climate.

In South Germany Theodor Fischer, and Richard Riemerschmidt, are the most prominent builders of the country house. While Fischer came from the technical schools, he nevertheless was not drawn away from the influence of the new movement. Riemerschmidt belongs to those artists who, in the year 1896, turned from painting to the applied arts and then became an architect. South Germany is richer than the North in the number of architects who build well, especially good country houses, though in North Germany are found the more remarkable artists.

Here are given only the most prominent representatives of country house building. In all parts of Germany, nowadays, are able architects who are erecting good houses. A new generation has arisen, which regards the good traditions of country house building as an inheritance that must be developed. On the other hand, the danger of the inheritance being wasted by eccentricities arising from the desire of being modern, is by no means to be overlooked. Greater still than this danger is the fact that there are very few clients who have the courage to go to an architect when they want to build. If the public were wise enough to go to the best sources for design, the prospect of German country house building would be cloudless, as there is less lack of able architects than of reasonable customers.

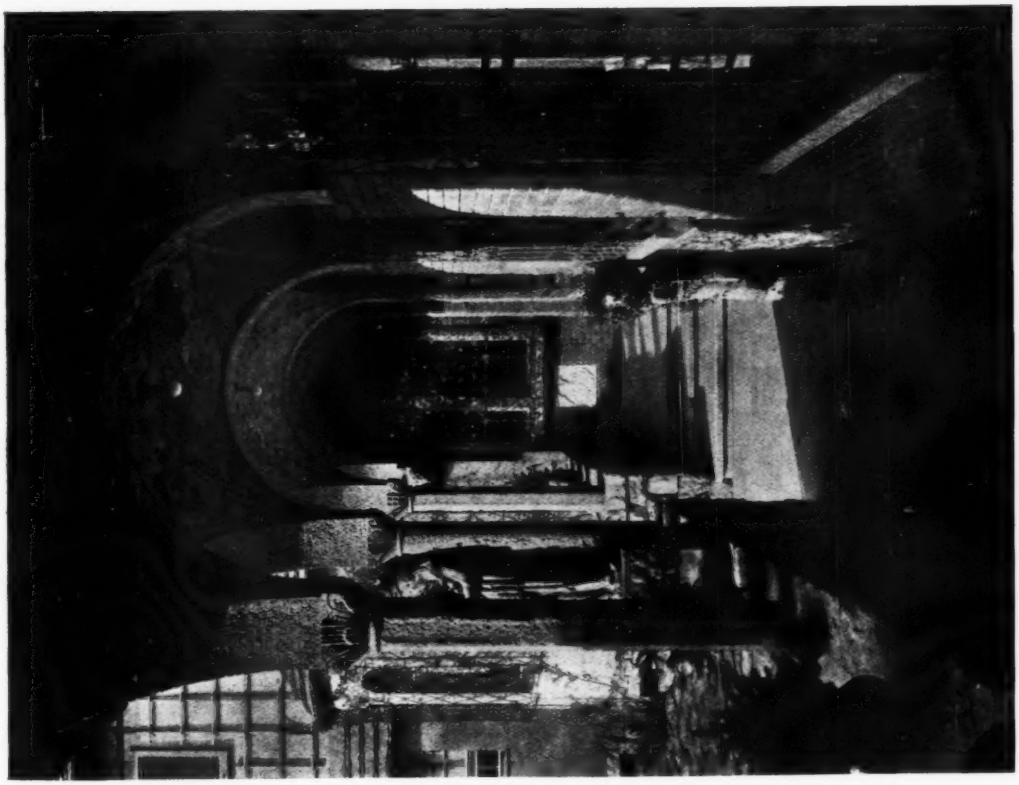
A HOUSE AT GRUNEWALD, NEAR BERLIN: THE GARDEN SIDE. ALBERT GESSNER, ARCHITECT.



A HOUSE AT GRUNEWALD, NEAR BERLIN: THE COURTYARD. ALBERT GESSNER, ARCHITECT

A HOUSE AT GRUNEWALD, NEAR BERLIN: THE COURTYARD, SHOWING KITCHEN ALBERT GESSNER, ARCHITECT

THE HALL.



THE ENTRANCE VERANDA.

A HOUSE AT GRUNEWALD, NEAR BERLIN. ALBERT GESSNER, ARCHITECT

A SUMMER RESIDENCE IN MARSBURG, WESTPHALIA: A VIEW OF THE SOUTH-EAST FRONT FROM THE PERGOLA.
PROFESSOR H. STRAUMER, ARCHITECT

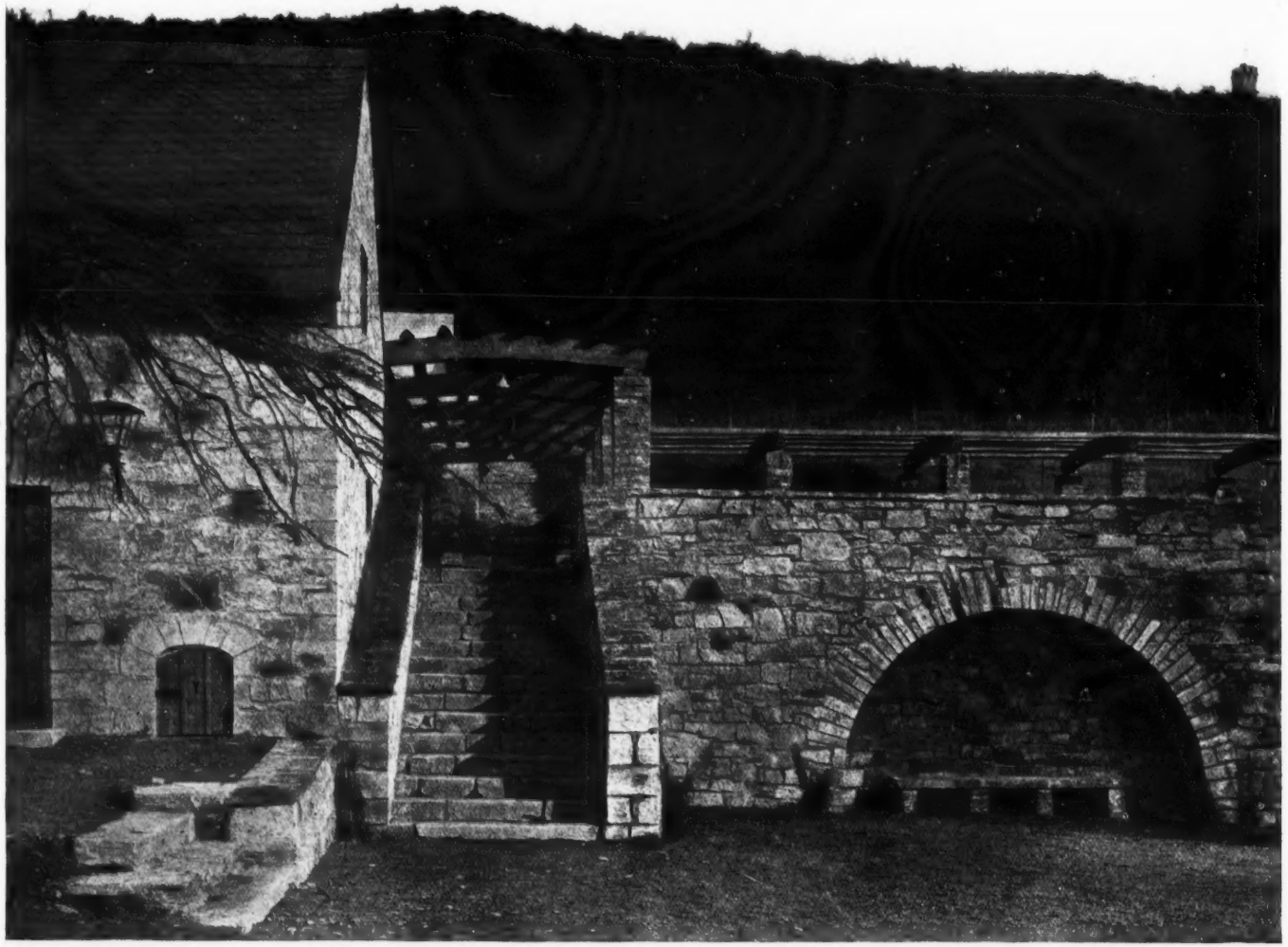
A Summer Residence in Marsburg, Westphalia : The South-east Front

Professor H. Straumer, Architect

"Heinrich Straumer is distinguished among those who have mastered the art of country-house building. . . . Straumer has learnt a great deal from England, without making the mistake of imitating peculiarities, suitable only to its climate."

A Summer Residence in Marsburg, Westphalia : Stairway to Upper Garden

Professor H. Straumer, Architect



Professor H. Straumer, a leading German exponent of the art of garden design, makes effective use of wallage built in random courses.

"Students' Night" at the R.I.B.A.

Mr. Gotch on "Work"

At a meeting of the R.I.B.A., held on Monday evening, last week, Sir Giles Gilbert Scott, R.A., was nominated for the Royal Gold Medal.

The president of the Institute, Mr. J. A. Gotch, delivered the annual address to students, and Mr. Maurice F. Webb, F.R.I.B.A., read a criticism of the prize-work of the students. At the same meeting the presentation of prizes and studentships was made.

In the course of his address Mr. Gotch said :—

In the far-off days, when I was an active member of the Architectural Association, I remember thinking and (I believe) saying that it was rather hard on young architects and more particularly on those who were pupils or assistants, that they should have to work all day and then be obliged to devote their evenings to a different kind of work at the Association, while their friends in other callings were able to amuse themselves as they pleased. When I say they were "obliged" to do this, I do not mean that there was any compulsion about it, but that, outside the Royal Academy school, it was only in the classes and lectures of the Architectural Association, which were all held in the evening, that there was any opportunity of becoming acquainted with those sides of architecture which lie beyond the routine of office work.

But all this is now changed. The A.A. is no longer an institution carried on by voluntary effort. Nor is it the only institution of its kind, as was the case in the old days. Architectural schools, under the eventual control of the Institute, have been established in many of our large towns —Liverpool, Manchester, Leeds, Cardiff, and others. Some of the modern universities, and Cambridge of the old, have started schools of architecture. The opportunities, therefore, of acquiring a sound training in the innumerable subjects with which an architect has now to be familiar, are within the reach of nearly everyone.

I think we shall have to beware lest unstinted help lead to a lessening of strenuousness. I am told—and the phenomenon was illustrated in the A.A. play recently presented within these walls—that, although the drawing-boards are crowded during the first three years of the student's course, they are sparsely occupied during the fourth year and are almost empty during the fifth. Does this, by any chance, mean that when help and guidance are abundant, full advantage is taken of them, but that when the student is thrown more completely on his own resources, he shrinks from the ordeal? If so, ambition should be made of sterner stuff. Few are the young geniuses, facile in acquiring and expressing ideas, who make their corresponding mark in after life. Brains can achieve but little without work. It is the plodders, the hard workers, who carry on the world. If any man of middle age will look back upon the circle of his youthful friends, how many of the brilliant leaders of those distant days does he find in the forefront now?

If I modestly shrink from giving advice, I may perhaps venture to bring to your remembrance a few things, old and new, from which you can draw your own conclusions. Among the old things worth recalling are the views on the great topic of Work which have been held from time immemorial, and have found expression in the literature of all ages. In our own tongue are records reaching back to the dawn of history, and throughout those records will be found allusions to labour which take for granted that hard work is the natural lot of man. The burden of these utterances is that, outside of Paradise, man must gain his living by the sweat of his brow; that he is born to labour as the sparks fly up; that if any will not work, neither shall he eat—a wholesome doctrine, often heard with impatience.

The same ideas pervaded the Middle Ages and were embodied in the well-known aphorism, *Laborare est orare*. Nor did they die out at the Renaissance, that age of joyous delight in life, and of revolt against the crabbed philosophy of past centuries. The suave Raphael, the mighty Michel Angelo, the turbulent Cellini, all lived in an intermittent fury of hard work. Our own Shakespeare recognized its inestimable worth when he said: "The labour we delight in physics pain," and—coming at a stride down to recent times—Stevenson concludes his essay on "El Dorado" with the words: "To travel hopefully is better than to arrive, and the true success is to labour."

Thus far the past: but in modern days a different view seems to prevail in certain quarters. There seems to be a widespread inclination to curtail work and working hours, to limit output, to take full advantage of unearned doles, which theoretically are provided for the zealous, hard-working man, temporarily deprived of work, but eager to resume it: all of which would appear to indicate the existence of a certain aversion to doing work if it can be avoided.

In following our own vocation—of which, more than any other, it may be said that its ideals can only be expressed through work, and its particular advantages can only be obtained through work—in our own vocation we are inclined to content ourselves with pressing the button of photography instead of wielding the pencil of the sketcher. The button has its excellent uses, it is true, but for the student the pencil is the nobler instrument, more intimate in its teaching, more useful in its exercise.

The very deficiency of strenuousness in the mass gives greater scope to the individual; the hard worker has fewer competitors. Without undue perturbation he can work out his problem of construction, his problems of design; from one inadequate effort to another he can climb to his final solution. He can wring its secrets from the past, through long summer days amid the soaring pillars of some ancient church, or beneath the mazy ceilings of Elizabeth, or from the graver adornment of the Georges. No trouble will be too great, no day too long.

Youth will have its day, and will still long, now as of yore,

> "To sport with Amaryllis in the shade
> Or with the tangles of Neæra's hair,"

even if Amaryllis herself sits at a drawing-board, and the tangles of Neæra's hair hide her bowed head as she taps the typewriter. But let us not forget, after all, that now, as of yore, Fame (that last infirmity of noble mind) will still insist as a condition of our winning her, that we must

> "Scorn delights, and live laborious days."

But there is one matter upon which, in conclusion, I must touch, and which I am sure will be of interest. The very handsome prizes which, chiefly through the beneficence of individuals, the Institute is enabled to offer to students, are now to be co-ordinated in an intelligible manner, and they are to be arranged in a kind of ladder, of which the topmost rung will be the Rome prize. More than this, it is felt that maintenance scholarships are sorely needed in order that youths of narrow means, who have a call towards architecture, may be helped in their start on the arduous path. A considerable amount of money is now practically dissipated in small prizes throughout the country, prizes which do not always attract competitors. It is proposed to approach the donors to see if it may be possible to pool the funds with a view to founding maintenance scholarships with them. But whether this prove practicable or not, a first step has been taken in the desired direction

for the Society of Architects have allocated part of their funds to one maintenance scholarship and the Institute part of theirs to another. On this agreeable outlook I will conclude.

At the close of the proceedings a vote of thanks to the president was moved by Mr. J. C. Squire, president of the Architecture Club, and seconded by the vice-chancellor of the University of Cambridge.

The president replied and moved a vote of thanks to Mr. Maurice Webb.

Among those present were: Sir Hubert Llewellyn Smith, G.C.B.; Sir Frank Heath, K.C.B.; Sir Richard Winfrey; the vice-chancellor of the University of London; Mr. W. R. Davies, C.B.; Mr. Michael Holroyd; Mr. Octavius Satchell; Mr. G. Spencer Watson, A.R.A.; Mr. Oswald Barron, F.S.A.; Mr. H. S. Rogers, F.S.A.; Mr. Charles Marriott; Professor W. H. Wagstaff; Mr. J. Irwin Scott, M.A.; Mr. J. L. Holland (director of Education, Northamptonshire County Council); Mr. T. C. Gotch; Mr. F. Inigo Thomas; Mr. George Brudenell; Mr. Dudley Forman; Mr. C. E. Lamb; Mr. J. Hutton Freeman; Sir Edwin Savill (president of the Surveyors' Institution); Mr. J. C. Squire (president of the Architecture Club); Mr. H. S. Goodhart-Rendel (president of the Architectural Association); Mr. A. J. Taylor (president of the Society of Architects); Mr. E. J. Partridge; Mr. C. McArthur Butler; Mr. J. E. Butterworth.

Modern Architectural Colour*

By L. H. BUCKNELL, A.R.I.B.A.

THE architect of to-day is realizing more and more that colour is an important factor in his work. In spite of much talk in recent years and a certain amount of research work, colour decoration is still in a somewhat nebulous state. I hope you will not ask me to define "Modern," but I will say at once that I do not mean "Jazz." This distressing word has already led to much confusion and should be quietly buried.

It is unfortunate that decoration has to some extent become separated from architecture. Such separation has given us the "Period Rooms," "Period Furnishings," etc., to the detriment of architectural progress.

Architecture embodies many things, most of which we treat seriously as a matter of course—practical requirements, construction, finance, and so forth, but decoration is equally important if we are to consider the spiritual and æsthetic effect of architecture as much as its material safety and convenience.

An architectural conception is only a complete unity when all the component parts are considered relatively. If decoration becomes a matter of painting on form designed without relation to colour, the result can only be painted form, which generally means the usual architectural forms in a new dress, whereas if form and colour are considered as one, the result may be of greater artistic value and more originality.

We need more collaboration in the fine arts if we are to achieve success, a collaboration which already shows signs of development.

It is not sufficient for the architect to call in the furnishing firms to install their "period trappings." That unhappy phase we have had long enough, and if we are to get away from it we must take it into our own hands as architects.

Our buildings must be conceived as a unity and not as shells to be decorated, and since an architect cannot know all things perfectly, he must endeavour to know sufficient to obtain and control the collaboration necessary to the perfect development of his ideas.

Much could be done with our civic buildings, not only in the form of permanent decoration, but in temporary decoration by the use of great painting and sculpture. These things are not only for the museum and picture gallery, and there are sufficient examples to form changing decoration for such buildings. Such a scheme would be a source of interest and inspiration, an aid to the development of civic pride and possibly a broader interest in affairs.

Our public buildings must be made more open to the public if such interest is to be encouraged, and if these buildings are suitably adorned a great educational work could, I believe, be accomplished.

* Substance of an address to the Liverpool Architectural Society.

External Colour.

We have heard much talk in recent years about external colour work, the brightening of our streets, and so forth, but so far our experiences have not been very elevating, due partly, probably, to lack of broad conception and insufficient consideration of conditions, suitability, etc. A series of buildings of varied form and colour—like textile pattern—cannot, I think, add dignity to our streets, or even brightness. Multiplicity of colours will sufficiently neutralize the effect aimed at and produce only restlessness and uncertainty. Such use of colour, too, is not the natural expression of our temperament.

If we are to use colour in street architecture we must first of all consider the natural and climatic conditions. Many of our streets are already beautiful in the colour of weathered stone and mellowed brick. We have that much-abused article soot to consider, though even this at times can give us wonderful velvety blacks.

It would seem that we must consider fine colour as we do precious jewels, to adorn and not to confuse, to be used preciously in fine settings and, from a practical point of view, where they can be properly cared for.

There is more joy in a well-placed, finely-conceived piece of carving against a suitably simple background than in a mass of carved detail; so with colour, a choice spot will have more effect than an all-over pattern or confusion of detail.

We place our rich notes of ornament to give emphasis to particular points; so we can place colour, and I believe with greater effect than if colour is indiscriminately smothered over great areas.

Such ill-considered use of colour leads to the risk of undue emphasis, to a competition between individual adjoining properties, eventually to a sort of chromatic squabble. This is to be avoided. One can imagine that in those black cities of the mining areas the blackness might be turned to account as a background for colourful spots of interest as it might also in those cities blessed with the pearl-like colours of bleached stonework.

An important point to consider is the relationship of colour and form. These are really inseparable, and to put fine colour on poor form is to emphasize only the poorness of the form. There are many details in our streets which could, were it not for this, add greatly to their cheerfulness.

Internal Colour.

With interior work we have fewer restrictions than in external work, but of the many conditions, "suitability" must be regarded as vital.

This may seem a very unnecessary remark, but most people are familiar with many instances of the abuse of such condition. There is a natural temptation for the colour enthusiast to "stunt," or to gain his experience and maturity at the expense of many errors. This, of course,

does not apply only to colour, but it is more noticeable since our interest in colour is fresh.

We have got over that first childlike or savage-like joy in brilliant raw colour and look for greater things, but we must be guarded, in searching for greater subtleties, against those errors of weakness and timidity which can only lead us to that period of neutrality from which we have recently escaped, "The Edwardian."

We are, I think, nearing the end of the early experimental period and are developing a more mature vision and appreciation of colour. The errors of our early experiments were the natural outcome of the dinginess of this period, a revolt against it—a period of heavy crimsons, stale greens, and chocolates.

In our search for better things we shall look for those practical and æsthetic qualities which colour may possess, expression, suitability, fitness, character, and so forth.

The decoration of buildings used for short intervals will not need such subtlety of treatment as those in use for long periods, e.g., a cinema or casino may have a more exuberant scheme of colour than a living-room.

Every building must be a special case, and though buildings may be broadly divided into sections, each section will have many sub-divisions. It may be true to say that the public rooms of an hotel may be more gay than those of a private house and less wild than a cabaret, but there are many grades of hotel, and what will suit one may be very unsuitable in another.

Expression and character are more difficult, being more subtle, and we have to study carefully and with imagination the circumstances and people involved.

This will apply particularly to domestic work and to those buildings where the expression of emotion or ideals is an essential factor, as in a church.

In schools, where the classroom occupies many hours of the child's day and has a great influence in the development of his character, carefully chosen colour might be of inestimable value.

One cannot imagine an atmosphere of varnished pitch pine and stone colour paint being helpful or adding pleasure to instruction. This is a matter which needs more attention. Children are extremely responsive to colour, and it seems a pity that opportunities for its use are so rarely taken or made.

In domestic work the field of study is almost unlimited; although nearly all people see the principal colours similarly they are not all equally affected, some natures being much more responsive to colour than others.

Certain colours will delight some and irritate others, and the effect of colour on the people concerned must be studied before a suitable scheme can be conceived.

The character of rooms, too, must be taken into account. A drawing- or dining-room may be bright and cheerful, a bedroom reposeful. We are too used to making our dining-rooms heavy, ponderous affairs—one of the causes of nerves at breakfast; since feeding is a necessity we might make it pleasurable and surround it with light and a reasonable cheerfulness.

We get so little sun that the possibility of some compensation in colour should be explored. Colour can give much which our climate lacks, and if it cannot produce sun, it can at least provide brightness and cheer.

The value to health of light and brightness needs no proof. During the war some experimental work was carried out in hospitals to study the effect or curative value of certain colours with, I believe, good results.

Colours have similar effect on the majority of people, but with varying intensity, according to their degree of responsiveness to colour. They have many qualities—repose, stimulus. They may be rich and vibrant or gloomy and ominous, delicate or strong, but the effects they have will depend on their use.

Yellow at one time was referred to as a bilious colour, not, I presume, because it had that effect, or it would not have been so popular as in recent years. It can be a wonderful colour, with the brightness of sunlight and spring flowers or the richness of amber and gold. No one ever called a daffodil bilious. It is a colour to be used cleanly, and according to its quality and hue may vary from the ultra æsthetic to the joyfulness of "Scheherazade." The yellow room will depend, apart from the quality of the yellow, upon the supporting colours. Lemon yellow used with mauves and turquoise may provide too rare an atmosphere, but a rich golden yellow, with oranges, violets, and fine blues may, on the other hand, be too stimulating. Obviously it must always depend upon the personalities of the occupants of the rooms decorated and of the light value of the rooms. I am inclined to think that always a room should have one dominant note, that on entering a room one should never be conscious of a "colour scheme," but only of a sense of pleasure; that if strong supporting colours are used they should be confined to incidental details, and the stronger the colours the smaller these details.

A richly-coloured Chinese vase is a joy in almost any room, but the same colours used in the same proportions on a large area would have a very different effect.

Green, blue, and red have all been accused of having baneful effects. Green, "enervating"; blue, "mournful"; red, "of exciting the worst human passions." All these epithets obviously need considerable qualification.

Green can be enervating, but certain strong hues may be distinctly stimulating. It is a difficult colour, and certain heavy yellow greens should, I think, be entirely avoided as leading colours. On the other hand, a pure apple-green can be very beautiful. The value of the blue-greens we know from the many fine Georgian examples.

Blue is another difficult colour; it may vary from the mournful to the rich heraldic and royal blues, or be of those curiously fascinating Persian and Chinese hues. It is a colour to be used boldly in noble apartments, but needs very great care if used in small rooms. One can imagine in a large room a wonderful Persian or Chinese blue, with rich golden hangings and parquet floor; a parchment-coloured ceiling, with hints of purple, blue green, and emerald; brocades or cut velvets to echo the general colour, so far from being mournful, being very rich and regal.

Red, the colour of passion and war, but also the source of liveliness and joy. Bakst and Lovat Fraser have shown us how wonderful red can be. On the other hand, some Edwardian dining-rooms have shown us how terrible.

It is, I believe, a colour to be used sparingly, but full, with all its life and vitality. I have seen a room of dull crimson and grey green which, to me, was maddening. I also know a room with a quiet warm grey, a Chinese hanging of crimson vermilion, a dull gold frieze, a pillar-box red picture rail, and ivory ceiling, and it is delightful. Red has greater intensity than other colours, and for this reason should be used in smaller areas.

It is curious how much we neglect ceilings. For years we have been satisfied with a chalk-like finish, yet in the past the ceiling has been one of the glories of a room. It may be due to our modern low ceiling. A low ceiling will not stand heavy colour; but many of our large public buildings have high ceilings and would, I think, be greatly improved by colour, however simple.

There is one matter out of many in the use of colour which is all important. The question of "Distribution" or proportion. As architects we are familiar with "proportion," the relation of the parts and the harmony of the whole. With colour it is similarly important. However perfect a selection of colours may be, if they are ill-proportioned, or, as it is better described, badly disposed, the result will be disastrous. This "disposition" is the most difficult of all the problems in colour, and only constant practice will bring success. We have to arrive at the same sense of proportion in colour as we have in form.

It is not a matter of taste any more than is any other form of æsthetic expression, but owing to the infinite number of combinations is more difficult to reduce to a formula.

I would recommend to your notice a really excellent book with a simple colour theory, "Colour," by Barrett Carpenter, and one on "Colour and its Application," by M. Luckiesh.

Peterborough Cathedral Roof and Its Repair

LESLIE T. MOORE, F.R.I.B.A., Architect

PETERBOROUGH CATHEDRAL is among the many great church buildings that are just now showing serious signs of decay. Mr. Leslie T. Moore, F.R.I.B.A., has made a thorough examination of the principal roofs of the cathedral and has reported to the Dean and Chapter and the Peterborough Cathedral Restoration Committee. Hitherto proper investigation has been impossible owing to the darkness of the roof spaces, but with the new gangways and electric lighting the condition of the timbers can now be seen.

Unlike other large churches, says Mr. Moore, all the upper roofs of the cathedral have wood ceilings below constructed of thin boarding, and the preservation of these, which are of special interest, claims first consideration.

In the case of the choir roof the greater part of the timbering is co-eval with the groined and panelled ceiling visible from below which dates from the end of the fifteenth century (Robert Kirton—abbot). Both roof and ceiling are framed together and are structurally one. It is clear that from the beginning the roof construction proved weak, and large timbers were inserted to form a tie to the principal rafters and to strengthen the roof generally. Unfortunately, owing to the design of the structure, these subsequent additions all transmit the load on to the framing of the ceiling and now about two-thirds of the weight and stress of the ceiling and roof with its wind pressure is thrown on to three original tie beams, having a span of over 35 ft. These beams do not reach the walls, but are carried on wall posts and have but little bearing; the ends are decayed, and two of the beams which, being moulded, are reduced in section in the centre, are fractured at this point.

The ribs and boarding of the ceiling, re-decorated about fifty years ago, appear fairly sound, but being chiefly dependent on the three main beams which form part of the roof as described, the structure is in a precarious condition.

Two of the main principals of the roof, both of which have previously been repaired, are in a very weak state; the original and strengthening timbers are much decayed and insecure.

The present state of this roof and ceiling is due to destruction by both the death-watch and smaller beetle, combined with wet and dry rot; added to which the faulty design of the original scheme of construction and subsequent endeavours to correct it, without reframing, has produced such strains on the main timbers that the condition cannot be too clearly stated as serious. After studying the construction and state of this roof, I am forced to the conclusion that the only satisfactory treatment would be a reconstruction with new roof trusses independent of the ceiling, the preservation of which cannot be assured while the roof and variable wind pressure are imposed on its weak timbers, which must be strengthened to carry the weight of the ceiling alone.

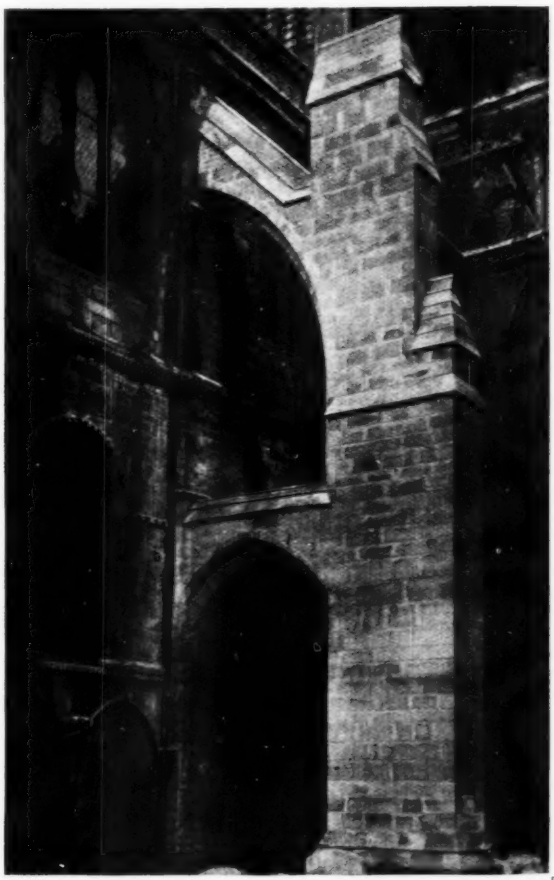
The nave roof was entirely rebuilt of imported deal about 1830 and is generally in a very fair state. Some immature timber was used, and has been extensively attacked by the small beetle, and though the damage from this species is not very serious in itself, such old pine timber having lost all its resinous matter is liable to attack by the larger beetle—*Xestobium tesselatum*—and other forms of decay; especially here, where there is total darkness and the air is very warm and stagnant. In my opinion the whole of this timber should be treated with a wood preservative and proper ventilation and some daylight introduced.

The joists to which the flat boarded ceiling is nailed are of very old oak, not framed together, but suspended from the roof; this method was doubtless adopted on the reconstruction of the roof owing to the then decayed condition of the ceiling joists, making it impracticable to re-frame them as a separate structure. The timbers by which the sloping sides of the ceiling are held in position are in varying stages of decay, and the stability of this part of the ceiling cannot now be regarded as secure. I recommend that new strengthening timbers are very necessary here; they can be inserted without much difficulty or any interference with the ceiling.

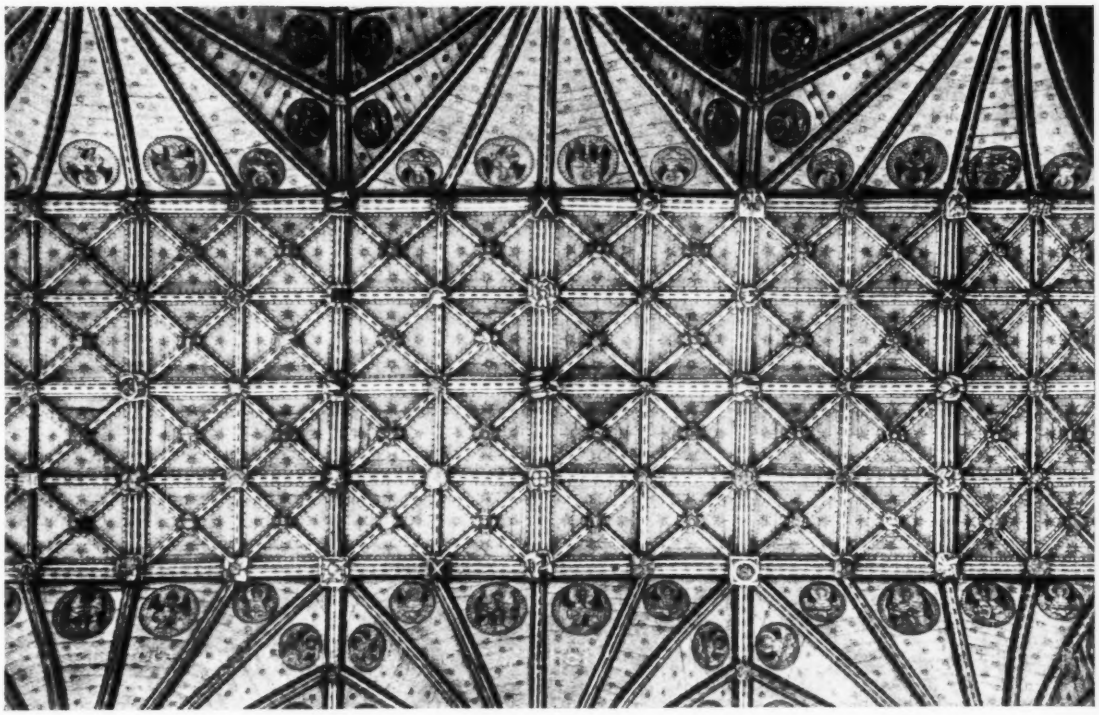
With regard to this structure it can well be said that of all the interesting features of the cathedral, the painted wood ceiling of the nave, dating from the twelfth century, is the most remarkable and unique. The early flat ceilings to the transepts are equally so from the architectural point of view, being undoubtedly in their original position.

The rich panelled and groined wood ceiling to the choir, executed some 300 years later, is without parallel in England for its scale. No other European church possesses such ancient wooden ceilings to the extent of Peterborough Cathedral.

Some reconstruction work was executed to the south transept roof in 1886, when the ceiling beams were restored. Unfortunately, the conservative spirit of the restorers at that time in retaining some of the old oak timber of a former roof has left the necessary food for the beetle, and there is evidence of active attack in some of the main beams. The larvæ of the death watch beetle and dry rot are very often found closely associated in the same wood,



1. The new buttress to the north choir aisle wall



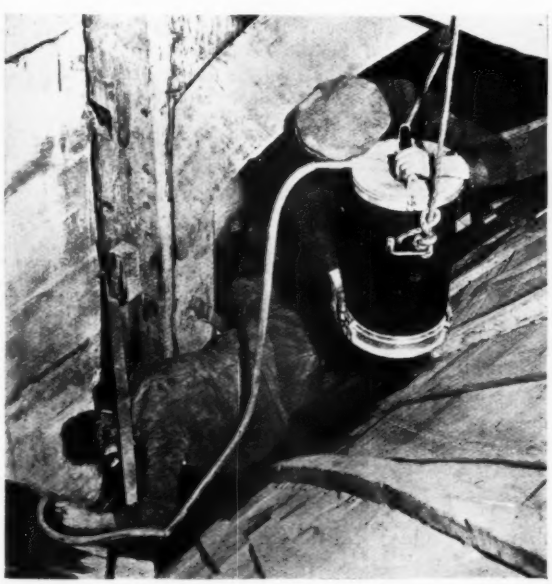
2. The choir roof, of wood, groined-vaulted.

the ill-ventilated conditions which conduce to the one being also favourable to the development of the other.

Much of the old oak timber in this roof is diseased, especially the inner wall plates, which are devoured by the large beetle, and in places entirely hollowed out, also dry rot fungus is only too apparent. These timbers are very apt to transmit infection throughout the length of the roof to which they extend. Their removal is imperative; indeed, all the decayed timber should be removed and the roof treated in the same way as has been done in the north transept, otherwise the risk of infection to the modern oak that is now sound is considerable. More ventilation to this roof is essential.

The boarded ceiling to this transept is in a fair state; the seven old ceiling beams that were retained in 1886 and turned over owing to deflection should be treated with a preservative, and the ironwork repainted, for failure in any one of these large beams might have serious consequences.

The structural timbers of the roof over the eastern chapel showed signs of failure in 1920 and were then secured by iron shackles. There is no sign of further movement, and the ironwork is holding the fractured tie beams. But it must be recorded that the decaying timber remains untreated. Dry rot and attack by both the large and small beetle exist, and the conditions are only too favourable for further decay. This roof is vital to the preservation of the fine fan vaulting beneath, on which the slightest deflection of the tie beams causes an undue central pressure—in



3. Removing dust from the pocket of wood groined-vaulted ceiling over choir.

Photos: Topical.

4. A fracture in the centre of the main ceiling beam to the choir.

5. The south transept roof. Removing ancient oak plates from centre of walling.

Photos: Topical.

6. A large cross-beam eaten away by the death-watch beetle.

one case a tie beam is within $\frac{1}{8}$ in. of the crown of the vault. Treatment of the timber for its preservation should be undertaken.

During the recent wet weather a considerable leakage has been apparent in the lead-covered roof to south choir aisle which, being exposed to the heat of the sun, has "crawled" and the flashings slipped. The gutter at the outlet also leaks and must be repaired.

The roof to south-west (unfinished) tower is covered by a roof which was probably only intended to be temporary. The rafters generally are old fir-poles and very rotten at the ends, which have dropped off the plate on the wall below. The roof is consequently in a very uneven condition and should be restored.

Mr. Moore concludes his report as follows :—

Considering that all materials for work to the major roofs have to be taken up and over the aisle roofs, that the height of the ceilings above floor level is about 80 ft., and that much of the work must necessarily be executed with artificial light, the following estimates of cost must be regarded as approximate :—

1.	Choir roof and ceiling, about ..	£3,500
2.	Nave roof and ceiling	1,000
3.	South transept roof	1,500
4.	Roof over the eastern chapel ..	450
5.	Roof to the south choir aisle ..	350
6.	Roof to south-west tower	400

The use of the vacuum cleaner, as shown in some of the accompanying illustrations, is to remove all dust and decayed loose fragments of wood, etc., to prepare the wood for the application of anti-beetle solution. The vacuum cleaner is an excellent means of removing dust.

The photograph showing the removal of timber from the centre of the south transept wall (Fig. 5) is of considerable interest. This original timber fully embedded had been attacked by beetle and dry rot, and in some cases live larvæ of the beetle were found. Another point worth mentioning with regard to the beetle at Peterborough is that the insect has attacked a piece of pine wood, which is rare, though the pine in this case is no doubt over fifty years old, probably nearer a hundred years, and therefore the resinous matter (which the beetle apparently does not like) no longer exists. English oak is undoubtedly the beetle's chief diet, and when a hundred years old it is at its best for attack.

Fig. 1 shows the new buttress to the north choir aisle wall, built of Weldon and Clipsham stone. The Lady Chapel of the Early English period formerly abutted this wall, which is now 1 ft. 1 in. out of plumb. After the "Restoration" the Lady Chapel was demolished for the sake of the material, in order to repair the great damage which the cathedral church had received from Cromwell's troopers. Fragments of worked stone (some decorated with colour) were recently discovered within this aisle wall, evidently used in making good after the destruction of the Lady Chapel.

Fig. 2 is a view of the choir roof, looking up.

Fig. 3 shows the removal of dust from the pocket of wood groined-vaulted ceiling over the choir.

Fig. 4 shows a fracture in the centre of one of the main ceiling beams to the choir. The pole plate to the right, notched on to the beam, was a subsequent addition contrived to arrest the failing roof over, and transmits a considerable load to the ceiling beam. The fracture has formed a ready access for the beetle. The top of the ribs of the wood panelled ceiling can be seen in the lower half of the picture. Two out of four of the main ceiling beams are fractured in this manner.

Fig. 5 is a view in the south transept roof showing removal of ancient oak plates from the centre of the walling, the timber being of no structural value and badly decayed from beetle and dry rot. Live grubs of the beetle were found in places.

Fig. 6 shows a large cross-beam, and how it has been eaten away by the death-watch beetle.

7. End of the main ceiling beam. White line shows bearing.

Photos: Topical.

8. End of one of the four main ceiling beams.

Fig. 7 illustrates the end of a main ceiling beam spanning 35 ft. The white line shows its bearing. On removal this oak beam, throughout its length, had several colonies of live larvæ of the death-watch beetle, which had eaten away the timber to a dangerous extent, and the beam had deflected 5 in. in the centre.

Fig. 8 is of the end of one of the four main ceiling beams to the choir, showing the bearing it now has on the wall post. These beams space 37 ft., and owing to the poor construction of the roof are failing, they carry the major part of the roof as well as the ceiling. All have indications of attack by the death-watch beetle, which has in some cases reduced the section of the timbers considerably. This photograph shows the end of the beam has but a 4 in. bearing, and there is only 4 in. of timber in the other direction owing to decay. The foot of the principal rafter bearing on the top of the wall is also decayed, as seen in the bottom right-hand corner of the picture. The exit holes of the beetle can be seen in the end of the oak beam which has deflected and fractured in the centre, as shown in another photograph.

Correspondence

"A Fable"

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—With reference to Mr. Arthur Welford's suggestive "Fable," in your issue of January 28, I should like to point out that Sjvmmnu must have caught the infection of current finance during his visit to Earth, for Mr. Welford reports him as saying (of the proposed credit to be issued for house building): "This credit would soon be repaid by the dwellers in the houses. . . ." Now, when a credit is provided, it is distributed as purchasing power through wages and salaries. But, to quote Mr. McKenna, "Increased purchasing power, unaccompanied by greater production" (of consumable goods), "leads to higher prices" (of consumable goods), which, of course, is consonant with the so-called law of supply and demand. This rise in prices takes place while the houses are being built, and as a direct consequence of their being built, and by the time the credit is exhausted its amount has been recovered from the community as a whole, through the intermediary of these increased prices. That being so, surely it would be absurd to expect industry to run smoothly if the amount of the credit were again collected, whether from the dwellers in the houses or anyone else. It would amount to providing the community with insufficient purchasing power to buy the goods they produce.

Profits are quite harmless to the industrial system as such, provided they are duly distributed as purchasing power through dividends and bonuses.

W. A. WILLOX, A.M.INST.C.E.

"Vagaries of Town Planning"

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—In your issue of January 28, Mr. H. B. Creswell asks me to state why I object to his criticism of the principles by which modern town planners are guided. Perhaps this explanation will make my point clear.

Mr. Creswell selected one of the worst examples of towns definitely planned by Roman engineers, namely, Timgad, which was essentially of the military type. He then chose the freak design for an imaginary sixteenth-century city, attributed to Scamozzi (this is, of course, invariably shown to the student as something to avoid), along with similar examples of pattern-making by Perret de Chambery and others. The ridiculous Nyland plan of 1874 was then illustrated, also to prove the futility of paper designs, and, finally, an extract from the banned Canberra competition was resuscitated to complete the historical data on which Mr. Creswell's argument is based. The very able criticism of all these abortive efforts at town planning proved amusing to read; but when we are told quite seriously that the modern town-planning movement is guided by the same principles, and is nothing more than the making of complex symmetrical patterns, one is provoked to question at once Mr. Creswell's verdict, for he has drawn conclusions on very slender evidence. If Mr. Creswell still thinks that the work of English town planners to-day is confined to the drawing-board and that their vision is limited by T-square and compasses, I would ask him, before he makes such sweeping denunciations, to examine more closely the schemes being prepared under the Town Planning Act by nearly two hundred cities of this country in order to extricate them from the chaotic condition of the last century, when towns were *not* planned. Although he will not find that attempts are being made to reproduce the charming street pictures of Bruges, Carcassonne, Nuremberg, and Chartres, it is because we live in an age of motor omnibuses and big industries, therefore our street planning must be modified to suit the new conditions. Even if the German romanticist school of the late nineteenth century contributed something to the art of civic design (and it certainly received proper attention in England), the principles of that school were found of little assistance in solving the traffic problems of the twentieth century.

Mr. Creswell may be assured that I had no intention to discountenance his enthusiasm for such a vital subject, but I would in conclusion suggest to him that his condemnation of the modern town-planning movement is premature, and cannot be justified by a biased examination of results.

W. HARDING THOMPSON.

Lincoln Cathedral

Mr. John Todd, the City surveyor, has addressed the following letter to the Press:—

SIR,—It is a grief and sorrow to me that my action with regard to St. Paul's had had an unexpected and most serious effect at Lincoln. The appeal for subscriptions for St. Paul's has resulted in the cessation of subscriptions to the fund for the salvage of Lincoln Cathedral.

Lincoln Cathedral is in peril, although not in the imminent danger of St. Paul's. Great fissures up to 10 in. in width have opened in its walls. Much work, excellent and wonderful work, under the direction and control of Sir Francis Fox, has already been done to preserve it, but much yet remains to be done. The work should be continued without intermission until this most lovely of all Gothic minsters is made safe. Delay can only increase the risk of its loss.

Sir Francis is eighty years of age. His intellect is still in full vigour. His ripe and priceless experience in the preservation of these ancient structures is still available. No man can do the work so well as he. It is of national importance that the work needed at Lincoln should be completed within the few years which remain to him.

I believe that if the great papers were to unite in a concerted appeal to the English people, the amazing and magnificent response which has been made to the appeal for St. Paul's would no longer check the raising of a sufficient fund for Lincoln.

JOHN TODD.

The Ruskin Galleries, Birmingham

Peacock and Bewlay, Architects

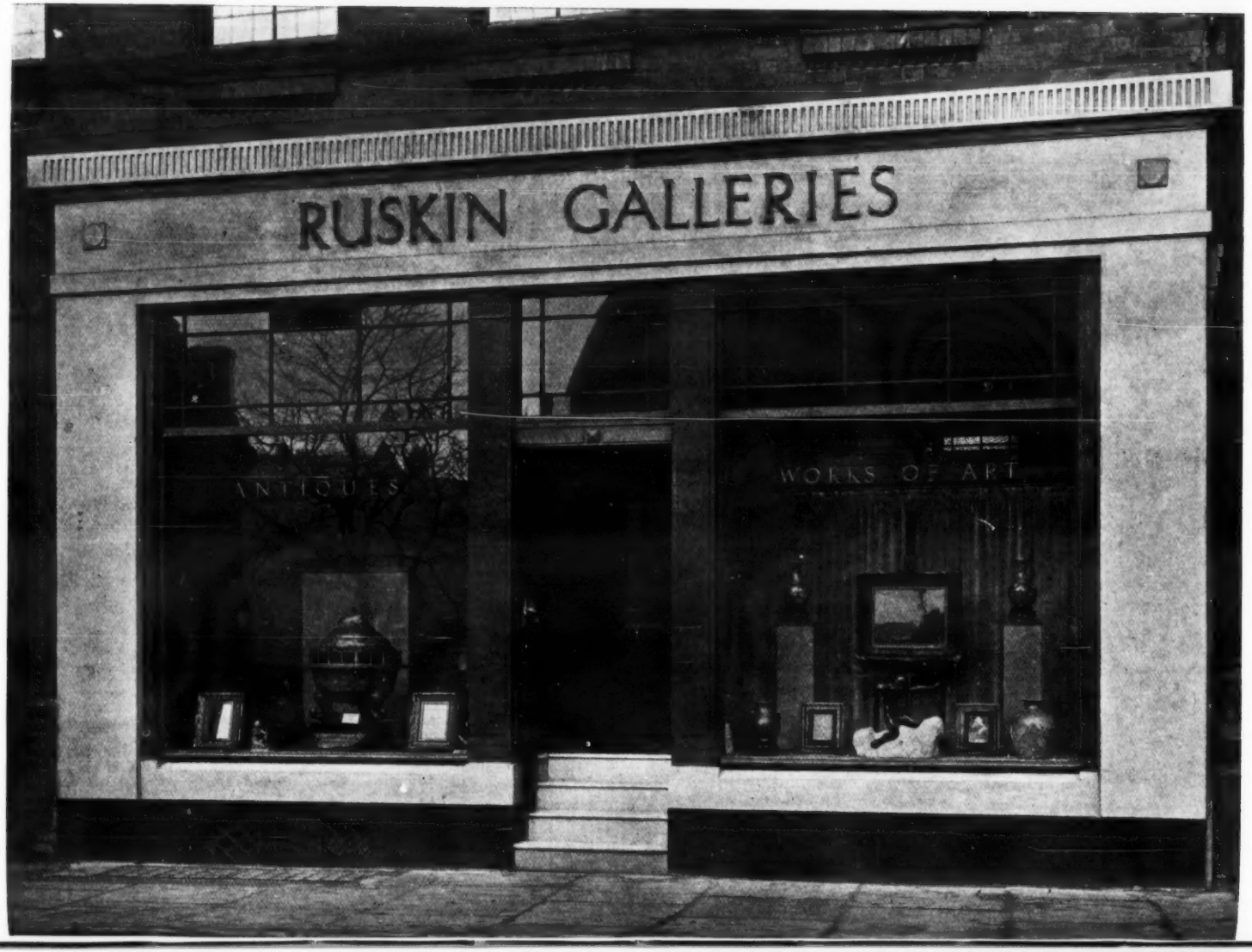
These galleries have been formed for Mr. John Gibbins by the reconstruction of existing premises in Edmund Street, belonging to the University of Birmingham. The rooms have been specially designed for the effective display of works of art, both as regards lighting and decorative treatment.

The shop-front has been kept as severely simple as possible to give effect to the contents. The jambs and cornice have been executed in white cement, with a rough surface. The plinth is in black Belgian marble, the steps in Nabresina grey marble, and the woodwork is fumed oak.

The contractor was Mr. Charles Twigg, of Birmingham. The marble was supplied by Messrs. Fenning & Co., Hammersmith. The Atlas White cement was supplied by Messrs. Goodman & Co. (Birmingham agents).

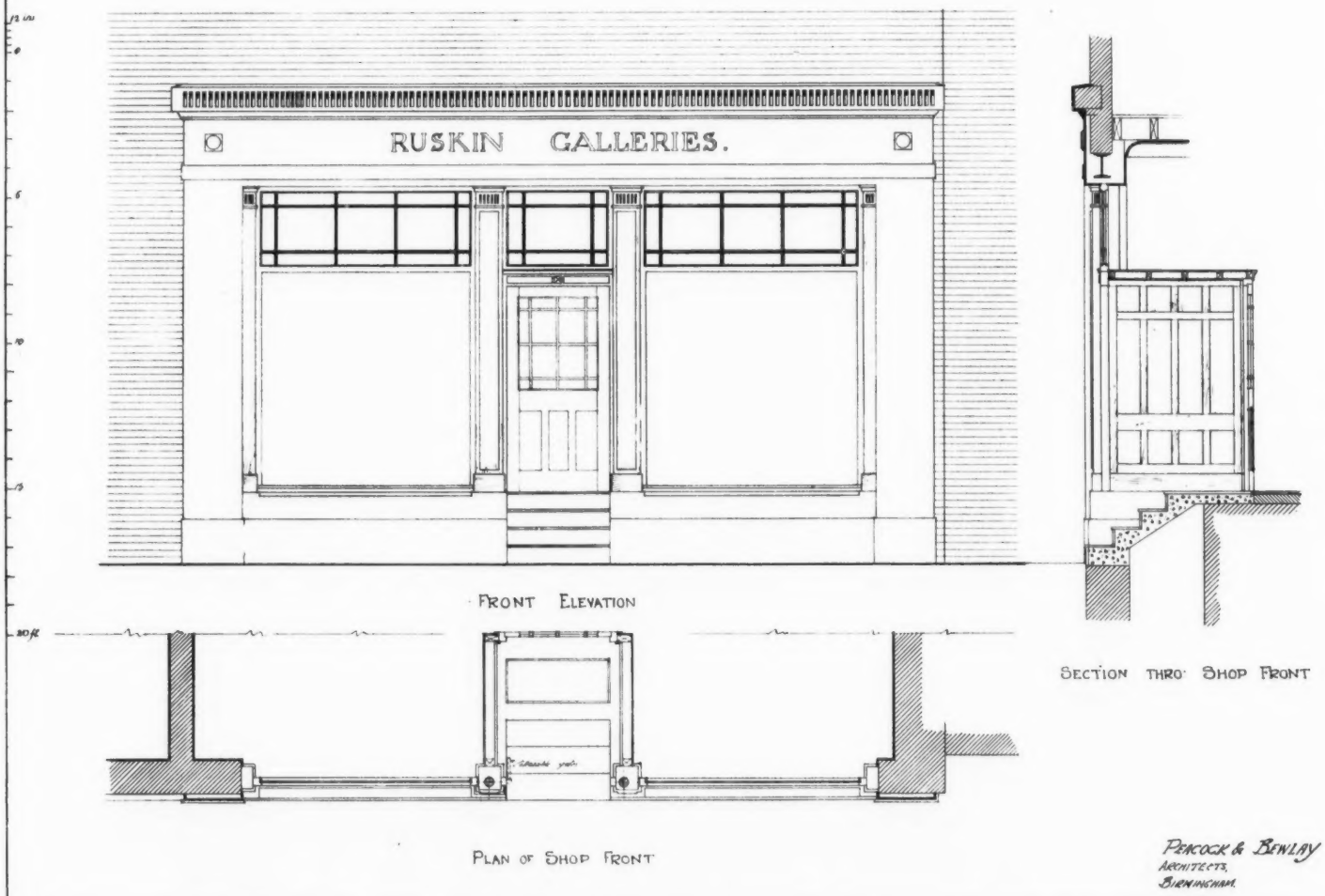
Modern Shop Fronts. 18.—The Ruskin Galleries, Birmingham

Peacock and Bewlay, Architects



· SHOP FRONT · RUSKIN GALLERIES · · EDMUND STREET · BIRMINGHAM ·

· HALF-INCH DETAIL ·



This front has been kept as simple as possible in order to give effect to the objects displayed. The jambs and cornice are in white cement, with a rough surface. The plinth is of black Belgian marble, and the woodwork is fumed oak. Further particulars are given on page 265.

Science and Architects

WILL the advance of science leave the present-day architect marooned? In the opinion of one of the chief scientists of the day the modern architect is falling behind in the struggle for existence. He asserts that far greater attention ought to be paid to the training of the architect in scientific questions, that the present examinations of the R.I.B.A. are too much concentrated on art and æsthetics, and that insufficient consideration is paid to some of the new problems that are constantly arising. He gave one or two recent examples to illustrate his meaning. He spoke, for example, of a building erected within the course of the last few years and designed by a well-kown architect. The roof of this building, which was very much admired at the time, has been giving way, with the result that considerable expense is now involved in making it safe.

Regarding this building, it may be said that this roof was primarily a question for an engineer, who should have been consulted. But the troubles that have arisen in so many buildings recently prove that more study should now be given to questions relating to the loading and the strength of buildings. It should be remembered that the whole tendency of present-day design is towards higher, larger, and more complicated building. In addition to this factor, for which a solution was found in both Athens and Rome, when the Parthenon and the Coliseum were first erected, there is an entirely new factor due to the advent of mechanical transport. The heavy motor-lorry rushing through our streets, loaded with heavy freight, is a Juggernaut of the Century that menaces the survival of many a building because of the unusual vibration that results. In Lincoln, for example, a city through which motor traffic rumbles from industrial Yorkshire to the Metropolis in ever-growing volume, those responsible for the security of many ancient buildings are disturbed. How long, for instance, will the Newport Arch, one of the most interesting survivals of the Roman occupation of Britain, resist this vibration?

These and other questions are now being investigated by some of the leading scientists of the world. The architectural profession will be wise to recognize the work that is being done both in London and elsewhere in studying the effect upon buildings of wind-pressure; or questions effecting the weight that can rest on firm and stable foundations of reinforced concrete; the results of continued vibrations on such buildings as are now being erected in Regent Street; and also the complex question of the stresses that are set up inside a structure owing to changes in temperature. For example, in the laboratory of Dr. W. N. Thomas, at Oxford, under the supervision of Professor C. F. Jenkins, the Professor of Engineering and Science, research work of great importance and direct value to the architectural profession is now being carried out.

St. Paul's Cathedral presents to-day an infinite variety of problems that demand for their solution the scientific and engineering skill of our most learned men. Some of them have known for some time of the threatened catastrophe to Wren's memorial.

Among the questions that are being examined is that of vibration. The movement of buildings can now be measured to an infinitesimal fraction of an inch. When the full results of the investigations are known to the public it will surprise them to learn how distinct and appreciable are the movements of some of our most famous historical buildings to-day. Then there is the problem of wind-bracing for roofs on the top of high buildings. So far, too, as materials are concerned, the building industry in many respects exists in an age of "patent medicines," for very little is known from the scientific point of view of many of the materials used in the industry.

All these matters vitally affect both architects and builders. They can encourage an extension of these investigations by supporting Lord Curzon, the new President of His Majesty's Council, in any steps that he may decide to take in developing the work of the Department of Scientific and Industrial Research. This is only one of the newest Departments of State formed, as Dr. Addison points out in his informative new book, "Politics from Within" during the war, when we learnt how essential was scientific research, if we were to survive as a nation in the struggle against Germany where science has been far more honoured, and its development far more encouraged than in this country.

This Department is already paying attention to the problem of acoustics, for example, but much more work needs to be done. Almost alone amongst architects Mr. Hope Bagenal has been giving to this work the study that it deserves. It is encouraging, therefore, to learn that the Department of Scientific and Industrial Research is now using Mr. Bagenal's knowledge in conjunction with that of certain scientists, hoping that the Council Chambers both at Delhi and Geneva may be designed in such a way that even the weaker-voiced members may be heard in the Press gallery.

The whole work of research in an applied science, such as building, is full of difficulty. Architects and builders must recognize these new developments, so that art and science may become more closely united.

B. S. TOWNROE.

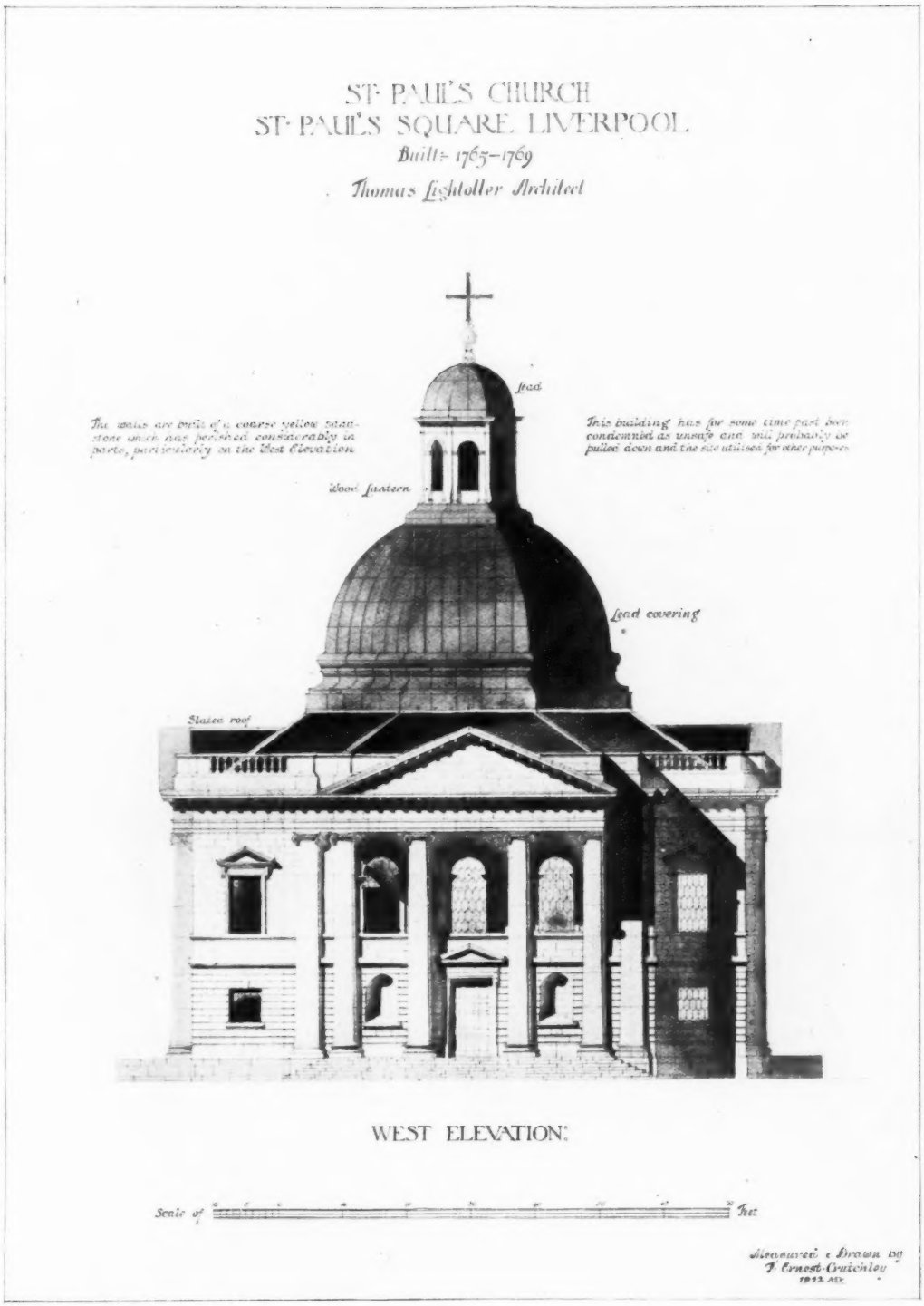
St. Paul's Church, Liverpool

A Set of Measured Drawings by F. Ernest Crutchley

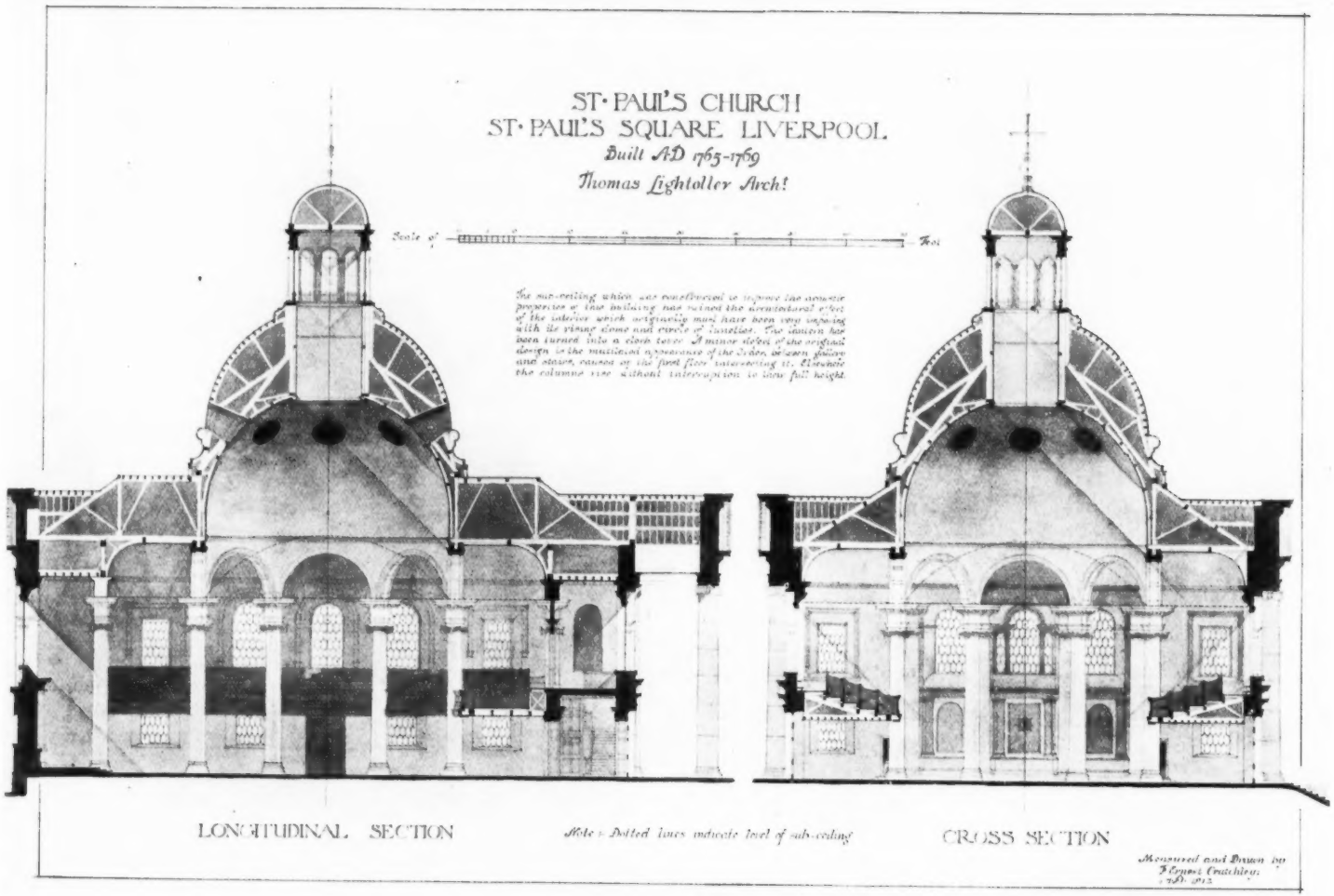
St. Paul's Church, St. Paul's Square, Liverpool, was built, 1765–1769, from the designs of Thomas Lightoller. It is a characteristic example of late Renaissance architecture of the rather heavy kind, and as the building has been condemned as unsafe, and will probably be demolished, Mr. Crutchley's drawings, which we reproduce in this issue, are valuable as an historical record, as well as for their architectural interest.

The walls are built of coarse yellow sandstone, which has perished considerably in parts, particularly on the west elevation. The church has an interesting double dome, the effect of which is lost internally, owing to the unfortunate introduction of a sub-ceiling to improve the acoustic properties. There are sixteen trusses supporting the dome —one over each column, and one between each intercolumniation. The wood used is red pine, and is in an excellent state of preservation. The external leadwork of the dome is laid directly on to the boarding; the lantern to the dome is of wood, with a lead top, and the roof of the church is slated.

The plan is a square, with end projections, and eight columns, arranged to form an octagon, support the dome. A minor defect of the original design is the mutilated appearance of the order, between gallery and stairs, caused by the first floor intersecting it. Elsewhere the columns rise without interruption to their full height.



MEASURED AND DRAWN BY F. ERNEST CRUTCHLEY.



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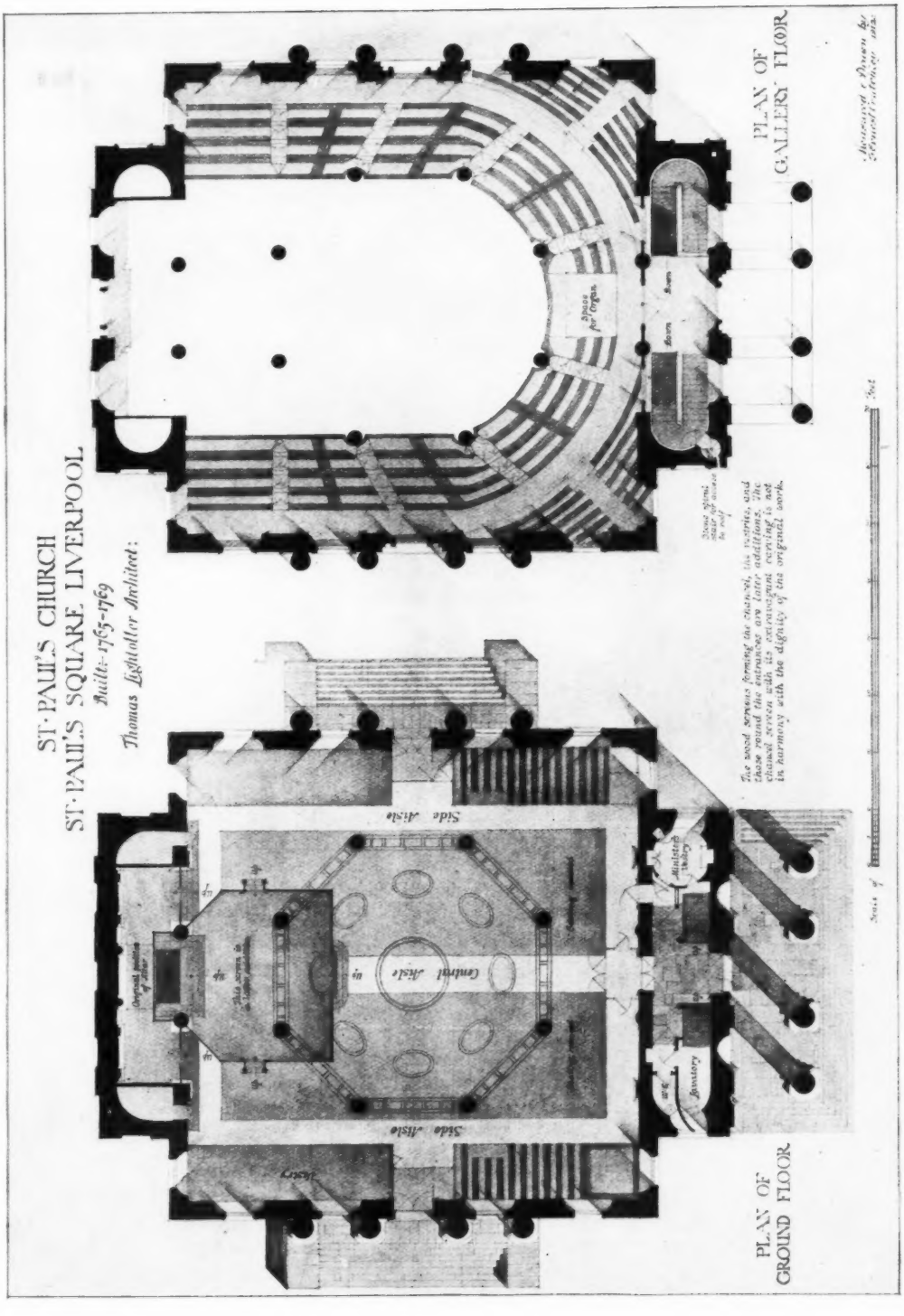

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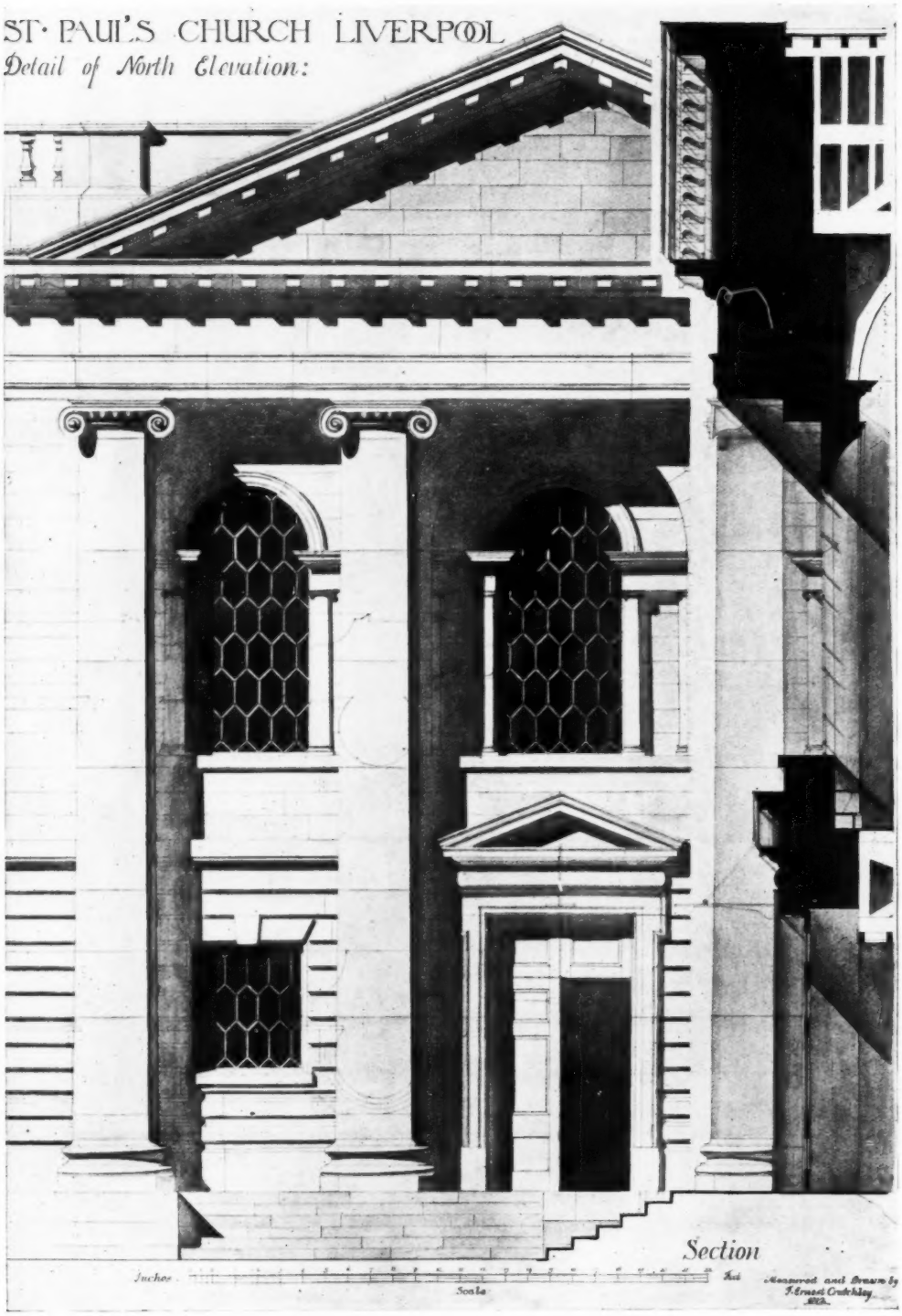

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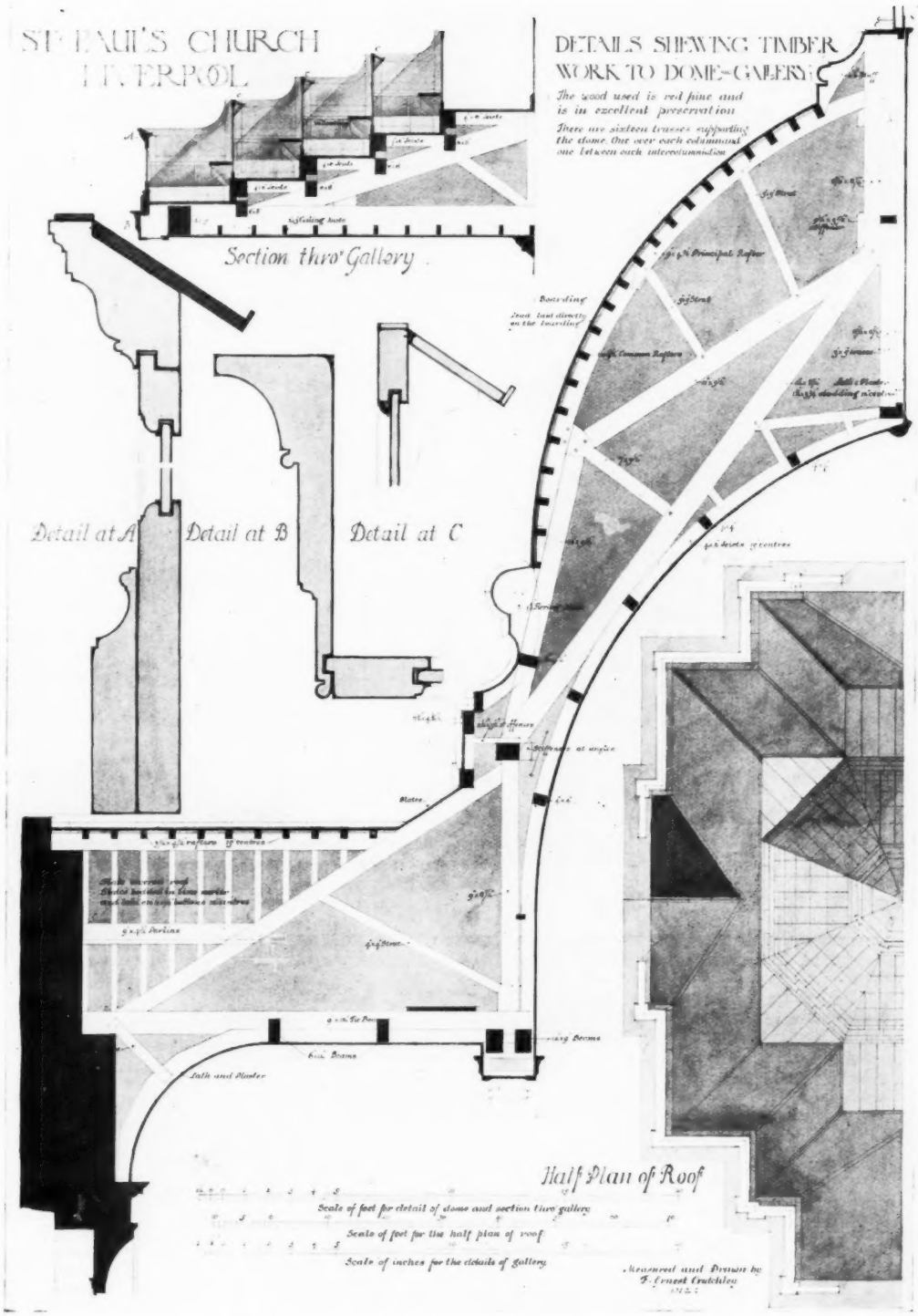


MEASURED AND DRAWN BY F. ERNEST CRUTCHLEY.

Enquiries Answered

Enquiries from readers on points of architectural, constructional, and legal interest, etc., are cordially invited. They will be dealt with by a staff of experts, whose services are specially retained for this purpose. If desired, answers will be sent direct through the post. In no case is any charge made for this service. Whenever diagrams accompany an enquiry, they should be clearly drawn and lettered and inked in.

COMPETITION DRAWINGS.

"Out of Touch" writes: "Your expert in reply to my query published in your issue for January 21, as to the best and most up-to-date way of finishing competition drawings, deals entirely with monochrome. Is it legitimate to put a wash on the elevation to darken the roof and windows to show shadows, put a light wash over the floors, and line in the slates on the roof?"

—My remarks on full monochrome would apply equally well to any other washes. All I can say in addition is that it is better to put on one first-body tone over the whole plan or elevation, and whatever colours are used, some of this first tone should be mixed with them to assist them in blending. In his paragraph where he asks "is it legitimate," etc., I should say "Yes," but would add that for ten different offices there are probably ten different methods of rendering, and each man follows his own experience. A great number of architects do not put any washes on the plans at all, and only wash the elevations, the plans having the walls blacked in and being "dressed up" by putting on a mosaic of light pencil lines or watered ink.

H. R.

PASSAGE THROUGH PREMISES.

"R. F." writes: "A client of mine has purchased some premises in a main street, and wishes to make a new 8 ft. passage through ground floor of his premises to gain access to the rear of house. An existing ground-floor fireplace, which is bonded into and not simply built abutting on the wall between my client's house and the adjoining premises, will have to be removed, and two steel joists put across the new passage at first-floor level to support the existing fireplace on first floor and chimney-stack above. The owner of adjoining premises refuses to allow my client to fix the two steel girders in the wall. It seems to me that the fireplace in my client's house, being bonded into the wall, and also the chimney-stack above, resting 4½ in. on the wall, gives my client a right to support in the wall for his first-floor fireplace and chimney-stack above. I shall be glad to have your opinion on this point."

—In our opinion, unless the owner of the adjoining premises will give his consent, it is not safe to undertake the works which you propose. The facts are clearly explained to us, but we fear, if the structural alterations which you propose should be commenced, that a successful application for an injunction might be made against the building owner.

S. J. S.

FIXING JOINERY IN A HOT COUNTRY.

"J. R. H." (Rhodesia) writes: "Can you suggest any fixing for joinery to brickwork to take the place of the usual plugs or breeze blocks. The difficulty in this country is that, owing to the long dry season following a severe wet season, the shrinkage in timber is abnormal, and plugs, whether hard or soft wood, soon become loose. What is really required, I think, is a mastic or mortar which could be forced into the joint of the brickwork which would become hard, but which would permit of nails being driven into it. Breeze bricks can be made in one or two of the larger towns, but in the greater part of the country the material is not available.

—The whole question turns upon the possible aggregates that may be mixed with the mortar, to make it receive and hold the nail. Pumice stone, fibre, reeds, and canes are sometimes used as alternatives to coke-breeze, and are mixed either with Portland or other cements, or with plaster of Paris.

If these materials are not procurable, it might be possible to manufacture porous terra-cotta blocks by mixing clay with small particles of combustible material and firing it until the combustible is well burned out. Then, if the experiment did not result in the production of a sound block, the fragments might be mixed with cement and formed into a brick something like a coke-breeze or pumice brick in quality.

Probably the best way to overcome the difficulty will be by building tags of hoop-iron into the wall and fastening the joinery to holes, in the projecting portions of the hoop-iron, with screws. At Hebron, where similar alternations of wet and dry seasons are experienced, a heavy joinery partition was kept vertical and safe by the use of small iron wedges which did not so much as penetrate the plaster surfaces of the walls and vaults against which the edges of the partition were scribed. It is necessary to choose for the wedges positions where they will apply to the end grain of the joinery stuff, but with precaution the practice works out satisfactorily except in the case of a few exceptional timbers of peculiarly twisted grain, which shrink in the direction of their length.

THE REDRAINING OF HOUSES.

"Remo" writes: "A local authority requires the redraining of a row of houses. The houses belong to six different owners, and the drain runs to the sewer from the centre of the block. Is this a drain or a sewer? The drain has been condemned in two portions. The portion to the right of the drain to the sewer was condemned prior to the portion to the left, and the three owners concerned in the right portion had accepted a tender before the right portion was condemned. They now refuse to pay anything towards the cost of the intercepting trap, etc. Can the local authority apportion the whole cost of the work between the several owners in proportion to the number of houses they own, even though the drain is relaid by two different contractors employed by the two groups of owners?"

—I am of opinion that the pipe from the connection to the manhole is a public sewer repairable by the local authority, and that the portions in the gardens are drains repairable by the respective owners of the properties—no doubt the whole belonged to one person when it was built. I advise the present owners to bow their heads to the storm, it will certainly be more economical than contesting the matter.

F. S. I.

THE RENDERING OF GEORGIAN HOUSES.

"F. T." writes: "(1) Please give me information as to how, and with what material, the Georgian houses throughout the country were rendered, and what was put on top of the rendering, so as to leave it that white colour which appears not easily to wash off. (2) What modern materials are available to secure the same result without going to greater expense than necessary? (3) Would you enumerate any disadvantages in building a fairly good-class house entirely with coke breeze slabs, the exterior being whitened as in paragraph one, noting particularly if they are likely to shrink, and any precautions that can be taken to prevent this. (4) If tile hanging on the first floor is nailed to concrete slabs, is there any risk of the nails becoming rusted where driven into the coke breeze?"

—(1) Rendering in Georgian times was normally composed of lime and sand, mixed with washed and beaten cow's-hair, the processes of manufacture and application being very similar to those in use at present. Experiments were being conducted in the use of hydraulic limes and with gypsum (plaster of Paris), also with Dutch terrass and with oil cements.

Two principal factors, which differentiate modern work from the fine examples of rendering which remain to us from the Georgian period, are—

(*a*) The thorough mixing and mellowing of the material before use.

(*b*) The improvement effected by natural chemical processes with the lapse of time. Time has also permitted the inferior examples of Georgian plastering to decay, and, as they have almost certainly been removed or covered in the interval, the remaining specimens probably convey a highly favourable rather than an average impression of Georgian rendering.

The adhesion of colour-wash to old lime is also very largely a question of age and dryness. New building materials which effloresce and throw out salts on the surface naturally dislodge or tend to dislodge any pigment applied to them. It is highly improbable that Georgian rendering took its coat of paint or whitewash quite satisfactorily when new and green, or that the surface colour we see on Georgian buildings is original. It was only as the rendering became bleached and chemically stabilized by the slow impregnation of the slaked lime with carbonic acid gas that colour-washes applied to its surface from time to time have dried out evenly and adhered firmly.

The Georgian plasterers themselves lamented the inferior quality of their plaster, and in this they resemble the plasterers of every generation, who inevitably fail to make allowances for the extremely slow action of fat lime in setting and hardening.

Chambers's "Cyclopædia," published in 1781, includes the following observations on the plastering of their time :—

"The modern taste runs greatly into *plastering;* and it were much to be wished that the art could be again brought to its ancient perfection. In our best buildings the *plastered* walls and ceilings crack and fly, and in a little time grow damp or moulder to decay."

The experiments of Dr. Higgins, "in consequence of the modern discoveries relating to fixed air" (choke-damp or carbonic acid gas), "for the purpose of improving the mortar used in our buildings," are also mentioned under the heading "Mortar," though rendering was also kept in view.

His recommendations include using the mortar fresh before it has absorbed "fixed air" from the atmosphere, and to this end he also proposes that the quick-lime be slaked with freshly made lime-water, i.e., water from which the contained "fixed air" has just been chemically abstracted. The selection of pit sand consisting of "hard quartzose flat-faced grains," and its careful washing and grading, and the sifting of the lime to weed out unslaked particles formed an essential part of his process.

The mortar was to be made up of 56 lb. of coarse sand, and 42 lb. of fine sand, mixed and wetted with lime-water, with 14 lb. of purified lime, and 14 lb. of ground bone-ash. The whole to be added gradually and thoroughly beaten all together. The mixing was to be done with "sweat," i.e., by turning the materials over and over and not with excess of water, in order that the plaster should not shrink in drying when applied to the building.

The damping of the sand seems to have been intended to ensure complete slaking of all particles of lime placed in contact with it so as to avoid blow-holes in the rendering.

The large proportion of aggregate of a porous character facilitated drying and chemical action by allowing free access of air containing carbonic acid to the interior of the mass.

The new rendering was to be allowed to dry as slowly as possible, and to this end was to be protected by screens from rain, wind, and sun. For the finishing coat fine sand 98 lb., lime 15 lb., and bone-ash 14 lb. were to be used. Colour was added in grain by using either self-coloured materials, or by mixing coloured talc in powder, or coloured vitreous or metallic powders, or "other durable colouring ingredients commonly used in paint."

The exclusion of dirt and of fine rounded particles was recognized as being of the first importance.

Mortar made of lime and sand tempered with linseed oil is recommended for sundials where a fine hard-weather-resisting surface is required.

A stucco of lime and sand is described in the same work, its mode of application being as follows :—

"When properly compounded it should be put up in small parcels against walls, or otherwise to mellow (as the workmen term it); reduced again to a soft putty, or paste, and well trowelled. A succeeding coat should be laid on before the first is quite dry, which will prevent joints of the brickwork appearing through it. Much depends upon the workmen giving it sufficient labour and trowelling it down. If this stucco, when dry, is paid over with boiling linseed oil, it will last a long time, and not be liable, when once hardened, to the accidents to which common stucco is liable."

The contradictory recommendations to use mortar fresh and stucco mellowed should be noted, as also the use of oil when the work is dry.

Oil is repeatedly mentioned in connection with waterproof stuccos and "Adam's Oil-cement" is described at length. Linseed oil would still be considered a good material for improving the weather-resisting qualities of an exposed surface.

(2) Portland cement is so much stronger than lime-mortar that its use in modern rendering seems to be reasonable. The white Portland cement might be used with light-coloured sand where a white finish is required.

Colour can be imparted by using a special aggregate of pebbles or marble chippings for the finishing coat. The aggregate is made to show on the surface by spraying the rendering with water just as the cement is setting.

Colour washes of pigments that will have to be renewed every few years can hardly be considered economical, although the first application will be cheaper than the production of an interesting surface by the use of a special aggregate, though this method has the advantage of permanence. If pigments are used as washes they should not be applied until the rendering has become bone dry, which may take from six to twelve months, according to weather conditions. Spraying the surface of the rendering with boiling linseed oil, or coating it with "stoppon" might then be resorted to before actual colour-washes are applied. Where washable distempers are used the undercoats should be put on in accordance with the manufacturer's instructions.

(3) Coke-breeze slabs are too soft and too liable to be disintegrated by the weather to be recommended for exterior work unless heavily rendered in Portland cement that has been made waterproof by the use of some specific composition. It is very doubtful whether a coat of white pigment would be an adequate protection to the breeze slabs.

Coke-breeze slabs have been recently used for the walls of bungalows, and even of two-story villas, but the practice is too new to be considered other than experimental. Cavity walls consisting of an inner and outer shell of slabs, each 4½ in. thick, are constructed with a space of 2½ in. between the walls. A liberal supply of iron ties should be provided to unite the two parts of the wall. Coke-breeze is liable to crush under excessive pressure rather than to shrink, and frequently causes trouble by expanding in the work and throwing it out of alignment. Sometimes the movement assumes structural importance and dislodges heavy masses of adjoining material, but a more frequent cause of trouble and annoyance is the "blowing" of particles of the breeze which creates small craters in the surface of any rendering or plaster that may have been added to its face.

Another defect of coke-breeze slabs as a building material is their very limited cohesive strength. Bonding fails to keep a wall built of them from cracking under unequally applied pressure which severs the blocks at the points where they overlap one another and creates a "race" joint. Cracks are also caused by vibration and impact, such as may easily be set up by a door being slammed-to by the wind.

The pressure of a bed or table wheeled with accidental force against a coke-breeze partition has been known to crack it to a dangerous extent. The thinner kinds of slab should therefore be avoided. Slabs of a thickness of 3 in. should be reinforced with hoop-iron bond or expanded metal in two or more courses in each story. If the plan provides excessive lengths of coke-breeze walls between return or cross walls the unsupported lengths are practically certain to bulge, and then to crack at the convex curves.

The cracks sometimes follow horizontal joints, and where this occurs in external walls the protective rendering is fractured and is transformed into a catchment area for driving rain which sinks into the crack, where it is liable to freeze and destroy the work.

(4) Iron is frequently corroded by the active chemical constituents of coke-breeze, and nails might very well rust were moisture present to assist this chemical action. An even more immediate cause of trouble is the uncertain hold of nails in a coke-breeze slab. In driving a great many nails at frequent intervals (as would be required in attempting to attach tile hanging direct to coke-breeze) some of the slabs would very probably split and crumble and cause a great deal of inconvenience even if many other nails held. Vibration also soon loosens nails driven into coke-breeze slabs, and tiles (which are liable to lift somewhat in windy weather) would supply the slight destructive force required to draw the nails in process of time.

W. H.

Law Reports

Structure on Wheels—Temporary Building Question

Keeling v. *Wirrall R.D.C.*

King's Bench Division. Before the Lord Chief Justice and Justices Avory and Acton.

This case raised a question similar to that raised by the case of the Garstang District Council *v.* Wade, reported in the JOURNAL on January 21, p. 166.

In this case the "structure" was a caravan composed of a railway carriage on wheels, and the question was whether this was a temporary building within the meaning of section 27 of the Public Health Amendment Act, 1907.

Mr. A. T. Miller, K.C., for the appellant, Mr. Keeling, stated that his client owned a large field in the Wirrall district, on which he had drawn a number of caravans, made of railway carriages on wheels, and which were used as houses by people without other homes. The Wirrall Rural District Council had, under the Public Health Act, 1907, passed by-laws prohibiting the use of tents, huts, and other temporary buildings unless plans had been approved of by them. They objected to fourteen such caravans, arguing that the places were temporary buildings that should not be used for human occupation until the Council had approved. Appellant was eventually convicted of an offence against the Act, for he persisted in allowing people to occupy the "buildings" without obtaining the Council's sanction.

Counsel contended that it could not be said that the construction was a vehicle within the meaning of the Act.

The court, without calling upon counsel for the respondents, dismissed the appeal with costs.

The Lord Chief Justice, in giving judgment, said here the question raised was whether there was evidence upon which the justices could find as they had. No evidence had been offered by the appellant before the justices to refute the inferences from the statements of the Council's surveyor. It was true that inferences from the circumstances in different cases might be varying, but it was the object of the Public Health Act to protect the public health, and it gave local councils the opportunity of making by-laws to see that the provisions of the Act were complied with. But the ingenuity of mankind was infinite, and it was to be expected that all sorts of means and artifices would be employed to escape the stringency of the enactment. The question here was whether the ingenuity had been sufficient. Although movable, this particular structure was not moved, and there was no evidence at what future date it would be moved. In fact, evidence seemed to indicate that it would not hastily be moved. In consequence, he thought the structures in question came within the meaning of the section, and the justices had materials to come to the conclusion that here there was a temporary building or structure.

Justices Avory and Acton concurred.

Building Contract—Architects' Certificate

Wheater v. *Corporation of Brighton.*

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

This case occupied the attention of his lordship for a number of days, and was a claim by a builder to recover from the defendant Corporation some £38,000, alleged to be due to plaintiff under a housing contract on the Moulscombe estate at Brighton.

The contract, which was for the erection of some 500 houses, provided that the builder was to get a certain percentage of profit upon the price of the work, and one of the main points in dispute was whether allowances had been properly made to the Corporation for decreases in the cost of labour and materials. The plaintiff contended that such allowances had been made, and that in refusing to pay the balance of the contractor's account the Corporation were in effect trying to obtain the benefit of the decreases twice over. The defences to the action were *inter alia* that until the architects had certified that a sum was due plaintiff had no cause of action, that the architects' final certificate could not be questioned, and that the £2,000 for which the certificate provided had been paid into court.

In a considered judgment his lordship said that when the plaintiff's account was sent in, the matter was taken by the architects to the Ministry of Health, with whom they discussed the propriety of issuing a further certificate or not. His lordship did not suggest that anyone here acted with corrupt intent, but he did not think this procedure could be supported. The architects went to the Ministry in a way which appeared to put the Ministry into a position of far greater command over the certificates than was justified. The Ministry of Health suffered from an inability to see that even where a public department was concerned as building owner or as behind a building owner they must stand aside and leave the contractor to have the decision of the architect in the sense in which he contracted for, and they had not done that. The defendants could neither say there was a certificate which barred the plaintiff from more than a specific sum, nor could they say there was no certificate. The architects had exercised their functions in a way that was not valid, and, that being so, the certificate could not be relied upon and it must go. The result was that the plaintiff had practically failed in the action. He granted declarations that the defendants were entitled to debit the plaintiff with sums amounting to £18,099, and referred questions as to other deductions to an official or special referee as the parties might agree to.

Compulsory Acquisition of Land

The King v. *The Ministry of Transport.*
Ex parte The Tipton Land Co., Ltd.

King's Bench Division. Before the Lord Chief Justice and Justices Avory and Acton.

For the Ministry of Transport, the Attorney-General, Sir D. M. Hogg, K.C., said in this case the Ministry was called upon to show cause why it should not be prohibited from confirming an order for the compulsory acquisition of land for the making of a road at Tipton by the U.D.C. It was stated that the land was desired by the Tipton U.D.C. for a roadway and the employment of out-of-work men, but the company argued that the road was not necessary, its construction would be disadvantageous to the company, and the proper use of the land was for sites for buildings, which would do more good than the temporary employment of a few people. The company said no offer had been made for the land by the Council, a statement that was literally true, but the arguments advanced by the company were such that it was obvious that they would not sell at any price. In the circumstances the Council desired the Minister of Transport to affirm the acquisition of the land under the Unemployment Relief Works Act. The Council had received offers from the company that were considered unreasonable. In the circumstances, said counsel, there was nothing for the court to consider. The Minister of Transport, added Sir Douglas, was the person to say whether the terms for the acquisition of the land were reasonable, and the court was asked to prohibit the acquisition without any evidence as to what offers had been made. In fact, the company were hostile, and had definitely and emphatically declined to deal with any offers and refused to negotiate. How, therefore, could the Minister say that the Council could acquire the land on reasonable terms ?

The court discharged the rule with costs against the applicants.

The Lord Chief Justice said it seemed plain that the Land Co. refused to part with the land on any terms, and the condition precedent to compulsory acquisition of the land had therefore been fulfilled, with the result that the court could not interfere with the powers of the Minister.

Justices Avory and Acton concurred.

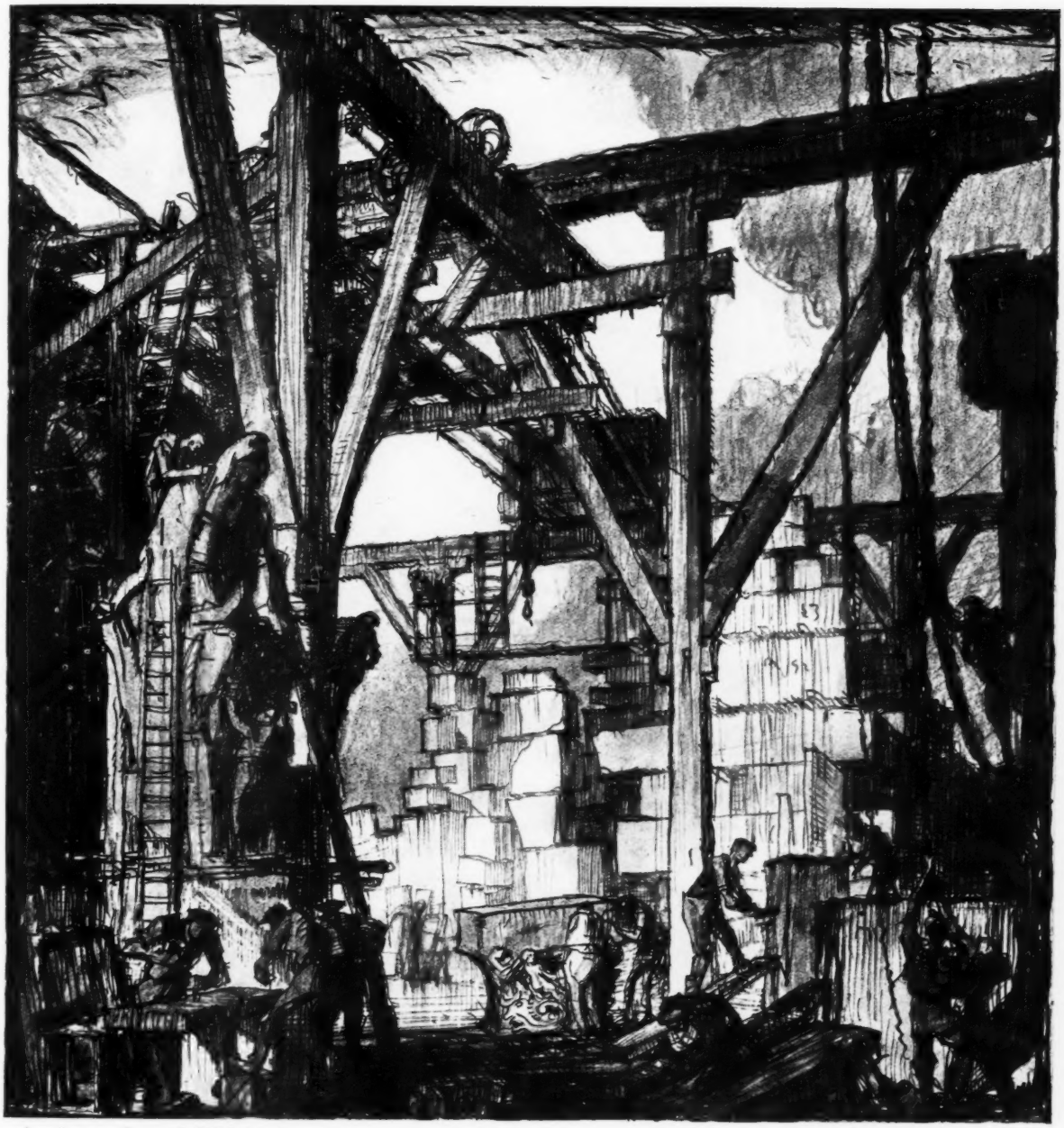
Public Health Act—Question of Bar

Bennett v. Moodie and others.

King's Bench Division. Before the Lord Chief Justice and Justices Avory and Acton.

The point raised in this case was where, when a demand for payment of the cost of repairing a private road was made by the local council on the landowner, proceedings before the justices for recovery of the sum due were barred under the Public Health Act, 1917, because they were brought after the expiration of six months from the date of the demand for payment.

Mr. Ridgway Bennett, appearing for the appellant, the clerk to the New Mills, Derbyshire U.D.C., said it appeared that Poplar Cottage Road, New Mills, a private road, needed repairing, and notice under the Public Health Amendment Act, 1917, was served on the three landowners concerned to do the work. This work was not done, so the council took the



An impression of Whitehead's Marble Works

Frank Brangwyn, R.A.

This fine composition gives Mr. Brangwyn's impression of the Imperial Works, and will be of special interest to Architects.

J. WHITEHEAD & SON, LTD.,

Marble Experts,

Imperial Works, Kennington Oval, S.E.11.

matter up, repaired the road, and apportioned the cost between the three respondents. Demand for payment was made and eventually proceedings were commenced at the police-court for recovery of the money. The claim, however, was dismissed on the ground that it was barred under the Act because the claim was not made by civil proceedings until after the expiration of six months after the date of the demand in writing for the money. Counsel said the justices were wrong because in this case apportionments of the cost were made and delivered, and this rendered it necessary under the Act to allow three months to pass for objection to be made to the apportionments. Therefore the six months should be reckoned from the end of that three months, and not from the time the demand for the money was made.

It was contended for respondents that there had been no apportionment, but that a definite demand for the money was made by the council, who did not take proceedings before the justices until after six months after the date of the demand.

The court allowed the appeal with costs.

The Lord Chief Justice said it was admitted that respondents never disputed the amount of the apportionment. The whole point was, was this complaint out of time, and had there been a notice of apportionment so as to interpose a period of three months before the date at which the six months grace for bringing the court proceedings commenced? His lordship thought the justices were wrong when they upheld the respondents' contention that the notice sent out was a demand for payment. It was a notice of apportionment, and gave the owner of the land three months in which to make objections to the sum. In those circumstances the council were within the allowed time when they sued respondents for the sums due, and the appeal would be allowed with costs.

Justices Avory and Acton concurred.

Shadows and Diffusion of Light

A somewhat novel point, of considerable interest to architects, was brought out by Mr. J. W. T. Walsh in his paper before the Illuminating Engineering Society on January 27, on "The Effect of Internal Obstructions on the Performance of a Lighting System." In the case of an ordinary direct lighting installation shadows are well defined. We can detect their presence and avoid them. But when the light is received from a very extensive area—as, for instance, an illuminated ceiling in an indirect lighting installation—the shadows lose their edges and become almost inappreciable to the eye. Architects accustomed to considering access of daylight into buildings are familiar with the effect of obstructions in diminishing the available "diffused" light. Mr. Walsh referred to a diagram recently presented by Mr. P. J. Waldram, showing how this effect may be calculated. But the corresponding effects that occur in an artificially-lighted room are less often appreciated.

Mr. Walsh mentioned two clear instances. There is the shadow cast by a person's body when seated at a table. When a room is indirectly lighted such a person would probably be unaware of a shadow being cast by his body. Yet the shadow is really there, as a measurement with a photometer would show, and the illumination is correspondingly reduced. Even in the case of direct lighting installations a certain amount of light is received from adjacent walls and ceiling, and any obstruction may prevent some of this light reaching the photometer-screen, though the shadow may not be evident. This, it was pointed out in the discussion, is one reason why measurements of illumination in practice are apt to be inconsistent, and results less accurate than those obtained in the laboratory.

The other illustration mentioned by Mr. Walsh was the case of a room in a factory, having light walls and ceiling, which appeared to be excellently illuminated when empty. But when the machinery was installed the result was most disappointing. Owing to the obstruction of light it appeared much less brightly illuminated than before. In order to minimize such effects it has been advised that machinery and other objects should be painted a light colour, so that, though inevitably causing obstruction, they also reflect light. But it has been found disadvantageous in a factory to have very light surfaces as a background to the relatively dark material worked with. Hence a light grey colour is preferred to white.

In the course of the discussion many other instances of obstructions met with in practice were discussed. It was pointed out how the effect of an overhanging gallery in obstructing light from a ceiling could be estimated; how a large opaque pendant bowl supplying light to a white dome above it also caused loss of light. Even the lamp itself, especially if coated with some diffusing material, may act as an obstruction. When such a lamp is equipped with a reflector the light must first emerge through the diffusing coating. Then, after reaching the surface of the reflector, it is directed back, and may have to pass through the bulb once more. Hence in all such lighting fittings there are elements of inefficiency, which serve to explain why one form of unit is sometimes more economical than another.

The R.I.B.A.

Notes from the Minutes of the Council Meeting, January 19.

Officials and Public Work.—On the recommendation of the Practice Standing Committee it was decided to bring forward a resolution at a general meeting to the effect that all public buildings paid for out of the rates or other public funds should be technically and architecturally worthy of the locality. To achieve this end the design of such buildings should be either the subject of competition or entrusted to a qualified architect without competition; further, that if such resolution is approved by the general body of members, it should be forwarded to the appropriate authorities.

Housing Competitions: Model Conditions.—The Council approved an amendment to clause 4 of these conditions so as to provide for the remuneration of the successful competitor being in accordance with the proposed scale of fees for housing work.

Zoning of Built-up Areas.—The Council approved a report on the subject of the zoning of built-up areas drawn up by the Town Planning Committee, and ordered it to be submitted to the London County Council in response to a request from that body for the views of the R.I.B.A. on the subject.

Reform of the London Building Acts.—On the recommendation of the London Building Acts Committee it was decided to submit the committee's report on the reform of the London Building Acts to the London County Council.

Albert Bridge, Old Windsor.—On the recommendation of the Art Standing Committee it was decided to inquire from the Ministry of Transport whether this design had been brought to their notice, and to suggest that in view of the expenditure of public money involved, the Minister of Transport should urge the local authority concerned to seek the advice of the Royal Fine Art Commission.

Report of the Special Committee on Housing Fees.—The draft of the revised scale of fees for housing work was approved and ordered to be submitted to the general body at an early date.

The Allied Societies.—(A) Sanction was given to an alteration in the constitution of the Manchester Society of Architects to enable the Burnley Society of Architects to be admitted to alliance with the Manchester Society. (B) An alteration of the boundaries of the Liverpool Architectural Society and the Birmingham Architectural Association was sanctioned to enable a branch of the Liverpool Architectural Society to be formed at Chester.

Model Specification of Water Pipes and Fittings.—On the recommendation of the Science Standing Committee the model specification of water pipes and fittings prepared by a committee appointed by the Minister of Health was approved, and the following additional paragraph was suggested for the consideration of the Minister of Health: V. "Every overflow should be easily accessible for cleaning purposes."

St. Paul's Cathedral.—A donation of 100 guineas was voted in aid of the St. Paul's Cathedral Preservation Fund.

The University of Bristol.—Mr. Mowbray A. Green was appointed as a member of the Court of the University of Bristol.

The National Association of Water-Users.—Mr. P. M. Fraser and Mr. Alan E. Munby were appointed as representatives of the R.I.B.A. upon the council of the National Association of Water-Users.

The National Register of Electrical Installation Contractors.—Mr. Max Clarke and Mr. Alan E. Munby were re-appointed as the representatives of the R.I.B.A. upon the Registration Board of the National Register of Electrical Installation Contractors.

Reinstatement.—Mr. H. W. Mole and Mr. Percy J. Groom were reinstated as Associates.

Resignation.—The resignation of Mr. G. F. Byron (Licentiate) was accepted with regret.

Exhibition of Architects' Working Drawings.

An exhibition of architects' working drawings will be held in the R.I.B.A. Galleries from Wednesday, February 18, to Saturday, March 7.

The exhibition will be open daily between the hours of 10 a.m. and 8 p.m. (Saturdays 5 p.m.), and will include drawings kindly lent by: Sir Edwin L. Lutyens, R.A. (F.R.I.B.A.) (Britannic House); Sir John J. Burnet, A.R.A., R.S.A. (F.R.I.B.A.) (Adelaide House); Messrs. Helmle and Corbett (Bush House); Mr. H. S. Goodhart-Rendel (F.R.I.B.A.).

A special students' evening will be held at the exhibition on Wednesday, February 18, at 8 p.m. All students are cordially invited to attend. It is hoped that the architects who have lent the exhibits—or their representatives—will be present in order to explain the drawings to students. Refreshments will be provided, and no cards or admission are required.

Contemporary Art

French Animaliers.

French painters and sculptors have so lively a sense of the importance of the animal as subject in art that those who use it extensively formed themselves, before the war, into the Société des Animaliers Français. The seventh exhibition is now being held in the beautiful galleries of the Hotel Jean Charpentier, in the Faubourg Saint-Honoré, and in conjunction a retrospective show of the work of Carle Vernet, the celebrated painter of horses. There are nearly three hundred exhibits—paintings, drawings, prints, and sculpture—of quadrupeds, birds, and fishes. The most conspicuous is the life-size "Poule d'Eau" of François Pompon, a fine study in carved white plaster, by a sculptor at one time the *practicien* of Rodin, and now one of the most esteemed of the school of direct sculptors in Paris. This is the most modern of the plastic pieces, the most simplified; but there are a number of carvings in wood which make an approach to it in this respect. René Paris shows a Vulture, the technique of which is altogether admirable. Raymond Bigot an Owl and Black Hen, and Henri Valette a Brie Sheepdog in ebony. Other studies of dogs are a Greyhound and Hare by René Paris, two groups, and a Basset by Emile Perrault-Harry in bronze, a very engaging bronze Pekinese by Henri Valette, and a Bulldog in marble by Stanislas Lami. Cats are even greater favourites with the sculptors, and Valette and Edouard Navellier have some charming examples, the latter contributing no less than four bronzes beautifully modelled in easy planes, and Maurice Marx two characteristic examples in yellow Siena marble. The larger members of the cat tribe are well represented; Georges Gardet's sketch in terra-cotta and Navellier's bronze are respectively of Lion and Lioness; the Panther appears among the works of Roger Godchaux, and René Paris (three studies in marble and bronze). The Elephant is treated in bronze by Godchaux and Perrault-Harry, the Gorilla also by the latter. Bears and Boars in bronze by Maurice Marx, Perrault-Harry, and Gaston D'Illiers have proved to be happy and amusing subjects. D'Illiers is also among the sculptors of horses, as is also Georges Malissart, both doing admirable work in bronze. A delightful horse-sculptor is Emile Pinchon, who combines human with equine interest and adds a decorative quality. A notable set of works was contributed by Jeanne Piffard, who also imparts a decorative quality to her work, an example of which was a group of rabbits carved direct in stone and coloured.

The large number of paintings included several interesting decorative designs which proved how fertile a field the animal kingdom is in this respect. Henri Deluermoz had a sketch for a panel and a lion study for a frieze which are admirable, and Paul Jouve's Elephant design was effective, his life-like single studies of Panthers and Tigers being even finer. All the work of Jacques Nam is decorative, his subjects being Fish and Cats, and of the latter he is one of the best exponents. Several of his panels are in lacquer of gold and fine solid colour.

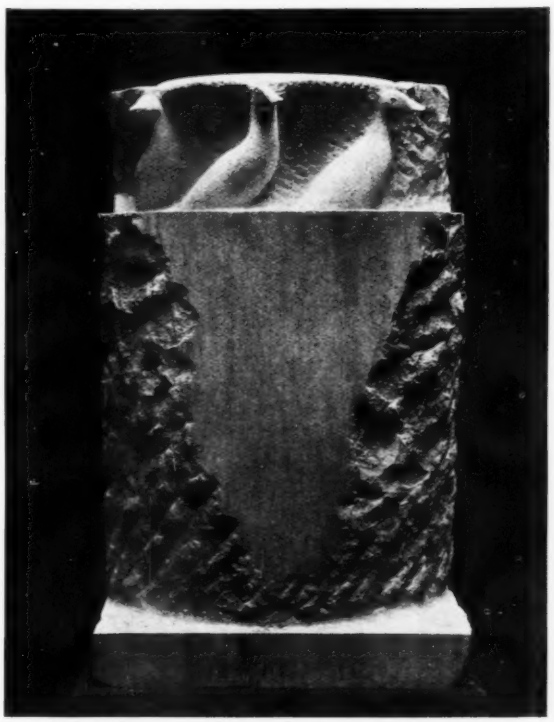
At the same gallery was exhibited a collection of paintings, pastels, and drawings in gouache by Maurice Eliot, sound work in landscape for the most part, a striking variation being the Paris study of the Butte Montmartre, with a view of the great modern church of Sacré Cœur.

LITTLE GIRL AND PONY. BY EMILE PINCHON.

Sculpture and Decoration at Druet's Gallery, Paris.

The fifteenth annual exhibition of "Group One" is a distinguished one. A special interest attaches to it from the fact that Aristide Maillol contributes one of the very rare examples of his work carved direct. It is a Girl's Head, beautifully done, but proving all the same what all the artist's modelled work proves, that his genius is essentially plastic. There are beautiful glyptic qualities about this bust, but not such as obscure its essentially plastic character. Another sculptor, represented here by invitation, is Anna Bass. Her work, too, is plastic, and consists of four exquisite bronzes, one of them gilt, another with a fine green patina, another bust of a woman in plaster, and a small female torso in terra-cotta. Maillol's modelled work shown consists of a number of the small terra-cotta Tanagra-like figures for which he is celebrated.

Among the painters Maurice Denis, whose mural works are now features of several important buildings in France, is represented by landscape and portrait. "Plage, 1924," and "Madone aux hortensias" have fine decorative quality, as have also the works of Paul Sérusier, especially "La tapisserie." Pierre Laprade contributes an architectural subject in Siena, seen in beautifully expressed clear air, and in this artist's one-man show in the upper gallery is an important sketch for a triptych decoration. KINETON PARKES.



THE DUCK VASE. BY FRANÇOIS POMPON.

The Week's News

New Shoreditch Building.

A £9,000 extension of their maternity and child welfare department is being considered by Shoreditch Council.

New Road, Southall.

A £6,239 tender for a road between Norwood Road and Western Road has been accepted by Southall Council.

Manchester Housing Scheme.

Manchester Council Housing Committee has prepared a scheme to build 186 houses at a cost of £107,000.

New Hospital, Wembley.

A local hospital is to be provided for Wembley at a cost of £12,500. A sum of £5,000 has already been raised privately.

Technical Institute, Kingston.

Kingston Technical Institute is to be extended at a cost of £32,000.

More Houses for Skipton.

The Skipton Urban District Council have decided to build 118 new houses on the Carleton Road site.

Promenade Extension, Poole.

Poole Borough Council have approved proposals for works at Canford Cliffs costing over £20,000 in connection with the proposed extension of the promenade west of Bournemouth.

City Corporation Housing Schemes.

The total amount expended by the Corporation of the City of London for their housing schemes is now £1,384,599. They had a loan for housing purposes of £2,750,000.

Billingham Housing Scheme.

The Billingham Urban District Council have decided to apply to the Ministry of Health for sanction to raise a loan of £17,170 for the erection of thirty houses.

New School, Denaby.

An elementary school for Denaby Roman Catholics is shortly to be begun. Plans have been prepared by Messrs. Empsall and Clarkson, a Bradford firm of architects. The school will cost about £10,000.

New School for Middlesbrough.

Middlesbrough Education Committee have decided to erect the Marton Grove Council School, to accommodate 1,432 elementary scholars, and a special subject centre, to accommodate 100 pupils, at a cost of £55,207.

The English Bridge, Shrewsbury.

The tender of Messrs. Muirhead, Macdonal, Wilson & Co., of London and Birmingham, for the reconstruction of the English Bridge and its approaches at a figure just over £76,000 has been recommended for acceptance.

A New Hotel, Newport.

The Tredegar Arms Hotel, with frontages to High Street and Cambrian Road, Newport, is to be rebuilt with Portland stone, and will be of four stories. The architects are Messrs. Griggs and Vaughan, Newport.

Scarborough Spa.

At the annual meeting of the Scarborough Spa Company (Limited), the chairman referred at some length to important improvements now being carried out at the south end of the Spa, including the provision of a new dancing hall. The total cost, including furnishing, was estimated at £30,000.

Proposed Ice Rink, Glasgow.

An appeal has been circulated to curlers and skaters in Ayrshire in connection with the proposed ice rink in Glasgow for curling and skating. The sum required for the purpose is £50,000, and it is proposed to raise this by debentures carrying 5 per cent. interest.

Liverpool Cathedral's Next Stage.

Promises and payments towards the cost of the next part of Liverpool Cathedral amount to £60,000. Sir Giles Scott is engaged upon the final revision of his plans for the portion concerned, and these are not expected to be ready for some months.

New Nave, Oldswinford Parish Church.

From the designs of Sir Giles Gilbert Scott, R.A., the nave of Oldswinford Parish Church is to be rebuilt. The new interior will consist of a central aisle 29 ft. wide, and two side aisles, each 16 ft. wide. The complete scheme anticipates the expenditure of £21,000.

£40,000 Liscard Improvement.

The Works Committee of the Wallasey Council have approved plans for a £40,000 improvement scheme at the tramway junction in Liscard Village. There are to be sixteen shops with offices and a café above, and a cinema with seats for 1,500 people, and waiting-rooms large enough to obviate pavement queues.

British Architects to Meet in Newcastle.

The annual conference of the R.I.B.A. is to be held at Newcastle this year, from July 8 to 11, inclusive. The Northern Architectural Association is arranging a programme, the honorary conference secretary being Mr. R. W. McKellar, partner in the firm of Messrs. Cackett and Burns-Dick, Newcastle.

Building Trade Labour Augmentation.

The Ministry of Health has issued a circular to local authorities on the augmentation of skilled labour in the building trades. This may be obtained, price 1d., from H.M. Stationery Office at the following addresses: Adastral House, Kingsway, London, W.C.2; 28 Abingdon Street, London, S.W.1; York Street, Manchester; 1 St. Andrew's Crescent, Cardiff; or 120 George Street, Edinburgh; or through any bookseller.

A Proposed New Forth Bridge.

The proposal to construct a new road bridge over the Firth of Forth has been favourably considered by a conference of the local authorities affected. Representations are being made to the Ministry of Transport to point out that no further progress can be made without a full preliminary survey, and further, that as the bridge would form a link in a national highway, the whole of the cost of this survey should be borne by the State.

£36,000 for Houses at Port Talbot.

The Housing Committee of Port Talbot Town Council recommended that sites be inspected for the erection of fifty houses for letting purposes. It was decided to apply to the Ministry of Health for sanction to borrow £26,250, under the Small Dwellings Acquisition Act, to meet advances for the completion of seventy-five houses, the erection of which had already been sanctioned, and also for sanction to borrow £10,000 for the payment of the £100 per house subsidy in respect of 100 additional houses.

Mr. William Dunn and St. Paul's Cathedral.

In response to an invitation from the Dean of St. Paul's, the Council of the R.I.B.A. have nominated Mr. William Dunn, F.R.I.B.A., late consulting engineer in reinforced concrete to H.M. Office of Works, to represent the Institute upon the committee now being formed by the Dean and Chapter of St. Paul's in connection with the administration of the funds recently subscribed by the public for the preservation of the cathedral. Mr. Dunn was in Italy on his way to East Africa, but consented by telegram to return to London immediately for the sole purpose of serving on the above committee.

Rents of L.C.C. Tenements.

As the second block of dwellings on the Collingwood estate, Bethnal Green, known as Pellew House, will shortly be completed, the Housing Committee of the L.C.C. have considered the question of the rents to be charged for the accommodation, which consists of forty-eight tenements—twelve of two rooms, twenty-four of three rooms, nine of four rooms, and three of five rooms, each tenement containing, in addition, a scullery and a bath. They propose that, subject to the approval of the Minister of Health, the initial weekly rents be as follows: Ground floor—two rooms, 9s.; three rooms, 10s. 6d. to 11s.; four rooms, 13s. First and second floors—two rooms, 9s. 6d.; three rooms, 11s. to 11s. 6d.; four rooms, 13s. 6d. Third and fourth floors—three rooms, 10s. 6d. to 11s. 6d.; four rooms, 12s. 6d. to 13s.; five rooms, 14s. 6d.

The Week's News—*continued*

Architectural Association Sketch Book.

Owing to lack of support and the general high cost of production at the present time, it has been decided to discontinue publication of the Architectural Sketch Book. The last volume issued was for 1923.

Professional Announcement.

Mr. R. Dobson, A.M.S.A., A.I.Struct.E., who for the past three years has acted in the capacity of architectural assistant to the Morecambe Corporation is commencing in private practice at No. 22 The Crescent, Morecambe, at which address he will be glad to receive trade catalogues.

Epsom Grand Stand.

It has been decided to provide exits from the top of the grand stand at Epsom before the Spring Meeting. New additional stands are to be added, and an architect has been engaged to make plans for these. This work, however, is expected to take at least a year, or even eighteen months.

New Omnibus Station at Victoria.

A new motor-omnibus station is to be constructed at Victoria Station, together with traffic-control tower from which departures will be regulated. The portion of the forecourt of the station to be used by motor-omnibuses will be no larger than at present. It will, however, be railed off from the rest of the forecourt, and a very definite line will be drawn between the portion to be used by omnibuses and that available for taxicabs and private cars.

London County Hall Art Advisory Committee.

The London County Council Establishment Committee has constituted the following committee to advise them in the matter of decorative additions to the County Hall and to assist them in dealing with any offers of works of art which might be made to the Council: Chairman, the Right Hon. Viscount Esher; painter, Mr. George Clausen, R.A.; sculptor, Mr. F. Derwent Wood, R.A.; architect, Sir Reginald Blomfield, M.A., R.A. Mr. Ralph Knott, F.R.I.B.A., the architect for the County Hall, will be associated.

Societies and Institutions

Cardiff School of Architecture Dance.

The fifth annual dance of the Cardiff School of Architecture Club was held in the Assembly Hall of the Cardiff Technical College on Saturday, January 18. The hall had been tastefully decorated by the students for the occasion, and all the arrangements made for the evening reflected great credit on the Students' Committee. Almost one hundred guests were present, including Mr. Ivor Jones, A.R.I.B.A., hon. sec. South Wales Institute of Architects, and Miss Jones. Mr. R. H. Winder, M.A., A.R.I.B.A., and Mrs. Winder, and Mr. W. S. Purchon, M.A., A.R.I.B.A., and Mrs. Purchon.

Norfolk and Norwich Association of Architects.

The annual meeting of the Norfolk and Norwich Association of Architects was held at the City tea-rooms, Norwich, on Friday, January 30. The annual report and balance sheet were adopted.

The following were elected officers and members of council for 1925:—

President: E. T. Broadman, F.R.I.B.A.
Vice-presidents: G. J. Skipper, F.R.I.B.A.; J. Page, B.A., A.R.I.B.A.
Hon. Secretary: E. W. B. Scott, A.R.I.B.A.
Council Members: E. H. Buckingham, A.R.I.B.A.; C. Upcher; S. J. Wearing, A.R.I.B.A.
Associate Member of Council: F. A. Varney.
Honorary Auditor: J. O. Bond, Lic.A.R.I.B.A.

The prizes awarded for the competitions for measured drawings and sketches to G. S. Buckingham and G. Bidwell were presented.

The total membership on December 31 was: Full members, 39 (decrease 3); associate members, 27 (increase 3); honorary members, 8.

Heavy losses this year were sustained by the deaths of J. W. Cockrill, A.R.I.B.A., Henry Olley, H. W. Worrall. Mr. Cockrill was a vice-president of the Association from its commencement until his death.

The Castle Meadow widening scheme has had a great deal of attention during the last few months. The Council strongly advocates the removal of the County police-station from its present position, and urges the widening of Castle Meadow at that point, and the opening up of the view of the Castle Mound from Prince of Wales's Road. It is intended to extend the County offices from the Shire Hall toward Castle Meadow, and the opportunity of improvement if now lost is not likely to recur for generations.

Sir Banister Fletcher's Lectures.

On January 28, Sir Banister Fletcher, F.R.I.B.A., delivered a lecture on English architecture at the Central School of Arts and Crafts, this time taking the interior and exterior design of cathedrals, with the openings giving access and light to them, as his subject. The lecture was a fascinating revelation of the English cathedral-builder's search for light, which brought about the wonderful transformation from the tiny Norman window in the wall to the immense traceried windows from pier to pier, which grew to be filled with glowing stained glass. Sir Banister described the evolution of windows through single lights to plate tracery and bar tracery.

On February 4 Sir Banister dealt with piers—their caps and bases—mouldings, towers, and spires, and timber roofs. He described the evolution of the first-named from the stumpy cylindrical pillar of the Normans to the shafted pier of early English and moulded pier of later times; he also illustrated by slides the various forms of capital, carved and moulded. The illustrations he showed of spires famous in England were of great interest. From his descriptions the audience could easily glean such lore as would help them in describing and dating examples which they meet on their future travels.

List of Competitions Open

Date of Delivery.	COMPETITION.
1925 Feb. 16	Designs are invited for a library to be erected at the Compton Road estate, Leeds. Assessor, Mr. Percy S. Worthington, F.R.I.B.A. Premiums of £35, £20, and £15. Apply Town Clerk, Leeds.
*Feb. 28	Art gallery and museum of art for the City of Manchester. Assessors, Professor C. H. Reilly and Mr. Percy S. Worthington. Premiums £500, £300, £200, £100.
*Mar. 28	Competitive designs are invited from qualified architects, being British subjects, for proposed New Railway Offices to be erected in Nairobi, Kenya Colony. Assessor, Mr. William Dunn, F.R.I.B.A. Premiums £200 and £100. Designs must be received at the Offices of the General Manager, Uganda Railway, Nairobi, Kenya Colony, not later than March 28, 1925.
*Mar. 31	Bethune War Memorial. Assessor, Sir Aston Webb, P.R.A.
April 7	Swimming Baths, &c., Stockbridge. To be erected at a cost not exceeding £8,000. Premiums, £25, £15, and £10. Sending-in day, April 7.
*May 1	The United Grand Lodge of England invite designs for rebuilding the Freemasons' Hall in Great Queen Street, Kingsway, London.
*May 15	Technical College for the Middlesbrough Education Committee. Assessor, Mr. Percy Thomas, F.R.I.B.A. Premiums £200, £100 and £50.
*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.
Dec. 31	The Argentine Government offer prizes of 10,000, 5,000, 4,000, 3,000, and 2,000 Argentine gold pesos for the best architectural designs for a National Institute for the Blind. Apply Enquiry Room, Department of Overseas Trade, 35 Old Queen Street, Westminster, S.W.1.
No date	New Secondary School in Perth Road, Dundee. For the Education Authority. The Competition is limited to architects in practice in Scotland and carrying on business on their own account. Copies of the conditions of the competition and instructions to competing architects, along with a plan of the site, may be obtained on application to Mr. John E. Williams, Executive Officer, Education Offices, Dundee, on payment of a deposit of £1 1s. All questions in regard to the conditions of the competition should be addressed to the above not later than February 18. Mr. J. A. Carfrae, Licentiate R.I.B.A., is the Assessor.

* Date of application passed.

Competition News

Extensions to Leeds University.

The president of the R.I.B.A. has nominated Dr. Percy S. Worthington, F.R.I.B.A., as assessor in the above limited competition.

Wimbledon Town Hall.

Wimbledon Corporation proposes to institute a competition for a new town hall and public assembly hall. The president of the R.I.B.A. has been asked to nominate an assessor.