ednesday, March 12, 1924. Vol. LIX. No. 1523.

THE ARCHITECTS' JOURNAL & Architectural Engineer

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FROM AN ARCHITECT'S NOTEBOOK.

ARCHITECTURE AND THE PRINTING PRESS.

Opening the window of his cell he pointed out with his finger the immense church of Notre-Dame, which, outlining against the starry sky the black silhouette of its two towers, its stone flanks, its monstrous haunches, seemed an enormous two-headed sphinx, seated in the middle of the city.

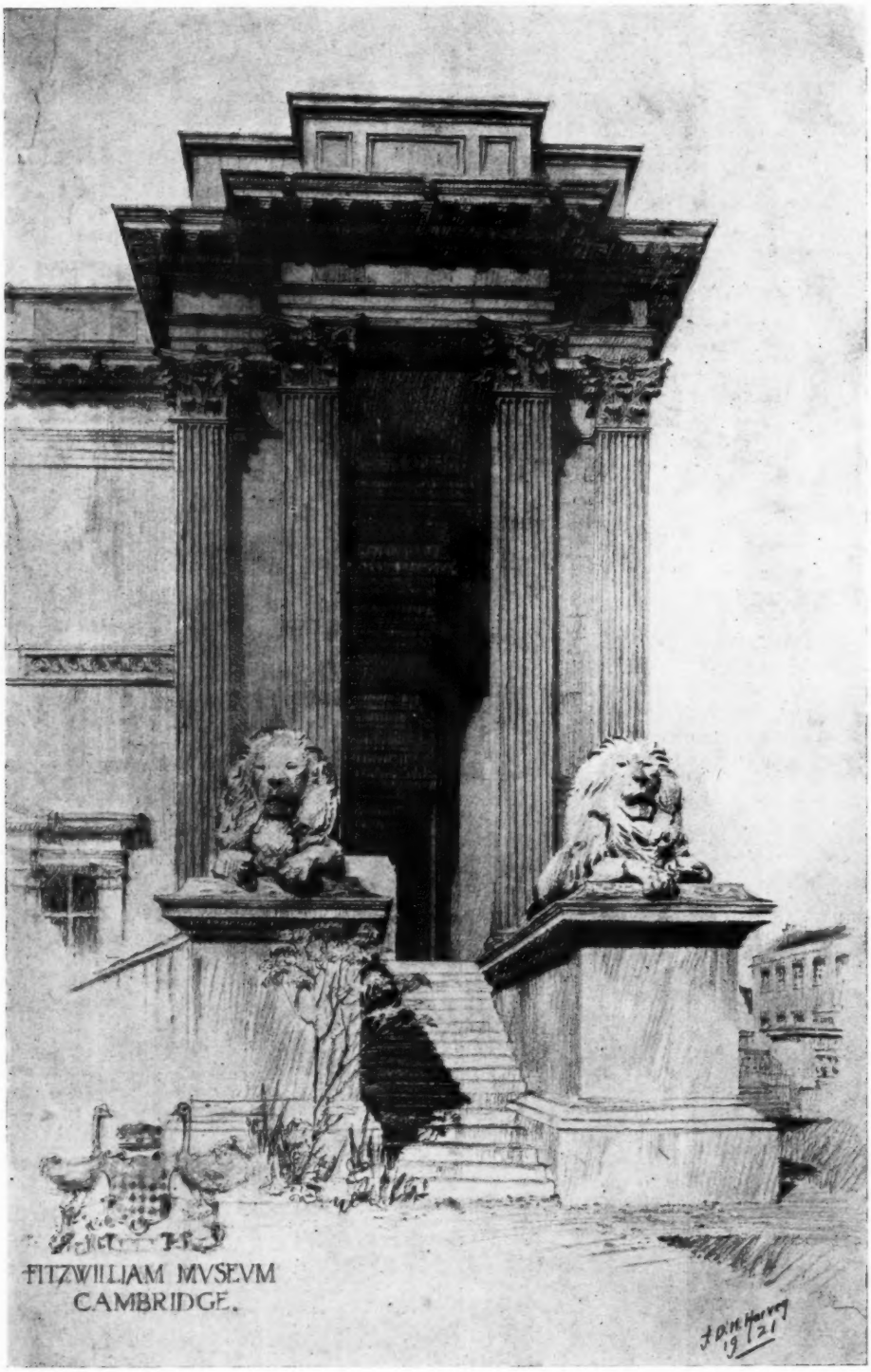
The archdeacon gazed at the gigantic edifice for some time in silence, then extending his right hand, with a sigh, towards the printed book which lay open on the table, and his left towards Notre-Dame, and turning a sad glance from the book to the church,—"Alas," he said, "this will kill that. . . . Alas! alas! small things come at the end of great things; a tooth triumphs over a mass. The Nile rat kills the crocodile, the swordfish kills the whale, the book will kill the edifice."

VICTOR HUGO: *Notre-Dame.*

27-29 Tothill Street, Westminster, S.W.1.

Drawings of Architecture. 3.—The Fitzwilliam Museum, Cambridge

From a Pencil Drawing by J. D. M. Harvey



Basevi's design for the Fitzwilliam Museum was selected in competition. Basevi, however, never lived to see his work completed, as he was killed in 1845 by falling from an opening in the West Tower of Ely Cathedral. The completion of the building was undertaken by Cockerell.

THE

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Labour Saving: A Question of Values

ALMOST the first inquiry which is put nowadays by a prospective tenant or house-purchaser is concerned with labour-saving properties. It would seem, indeed, that household labour is above all things to be avoided; it is undignified, unnecessary; it is a waste of time. Yet it may be worth while to try to discover if this ubiquitous phrase has any precise connotation in the minds of those who use it with such monotonous frequency.

It is evident that the genuine labour-saving house would resemble a glorified public lavatory, consisting of several absolutely bare rooms (for all furniture, textiles, beddings, are labour-making), which could be flushed down from roof to cellar by water from a hose, like an abattoir. It is doubtful, however, if this is the kind of labour-saving house which these idealists desire; nevertheless, it is the logical outcome of their aspirations.

What is it, then, that they have in mind? Is utility to be the test? Even were this so, the issue would still remain complicated. Some would maintain that beauty is unnecessary, or that efficiency provides the only necessary form of beauty; others would say that inasmuch as beauty is necessary for the human spirit, it is useful; that although the particular object of contemplation—a picture, a moulding, a vase, or a piece of carved ivory—serves no immediate use, it tends to perfect the contemplator, and is therefore of the utmost use. The architect, presumably, would argue along these lines. Yet pushed to their extreme, they, too, would end in the ridiculous, and a house might soon become a veritable museum, a repository for works of art, in which the routine lives of the inhabitants received scant consideration. On the other hand, if beauty cannot be maintained in a house without labour, such labour is not to be despised. No sooner is a beautiful thing made than its upkeep entails labour. And those whose daily task it is to dust china or to polish furniture are in their particular way as necessary to the maintenance of beauty as the creative artist or craftsman. No one resents the time spent by a subordinate in cleaning and oiling machinery, for it is realized that without such humble services the machine would soon become derelict, or at least lose efficiency. Few even resent the hundreds of thousands of pounds that are spent annually in maintaining our ancient and beautiful buildings in a tolerable state of repair. Yet the employment of a domestic servant upon the upkeep of beautiful things about a house or even of the house itself is resented.

It would seem, then, that a superficial conception of the American standards in which efficiency (a euphemism for money-making) is placed before all else is gaining ground, and that this generation, despite its declarations, has less use for beauty as an asset to daily life than that which preceded it. Of what *use* are flowers? Yet there is less talk about the labour-saving garden. It would seem that the labour-saving house should have a labour-saving garden comprising, perhaps, a plot of unmown grass and a vegetable bed. Flowers are a solace and a joy to all sensitive-minded people, but their nurture and care require labour, and such labour is surely as much—or as little—to be despised as the work of dusting and polishing about a house. The only distinction that it may be possible to make is this: that whereas almost all flowers are beautiful, many household adornments are ugly. Yet this fact is scarcely relevant since no one advocates devoting labour to the maintenance of ugly things.

However, this does not mean that all endeavours to save labour about the house are to be deprecated. What is needed is a realization of the limitations and difficulties which beset such activities. No one disputes, for example, that houses have in the past often enough been planned with little consideration for economy in their upkeep. To resort again to the mechanical analogy, the human labour required in the upkeep of a house may be regarded as the equivalent to the fuel required by an engine, and the aim of the designers of both should be, *inter alia*, fuel economy.

Similarly, in the equipment of the house, there is scope for labour-saving activity. In the past much unnecessary labour has been spent in sweeping and dusting. The removal of dust from a house is desirable for many reasons, but the old practice did not, for the most part, remove it from the house; it merely threw it into the air where it hung poised for a brief time only to re-settle a little later on floor and furniture. A modern vacuum cleaner, however, actually enables the dust to be removed from the house.

Upon the choice of fittings depends much upkeep labour. For example, white enamel taps are every bit as pleasant to look at as brass ones. Yet the appearance of brass taps is dependent upon their being kept highly polished, while the appearance of white enamel taps is dependent upon no such labour. Small wonder, then, that the labour-saver looks askance at brass fittings in the house.

The advocate of labour-saving has a big field of activity in connection with the plumbing trade. Laid-on water in the bedrooms certainly lessens labour, but he is apt to forget that it also adds very considerably to the first cost of a building, and the question of capital versus income expenditure requires careful consideration. The time will doubtless arrive when running water in bedrooms will be considered a *sine qua non*, even in the small house, just as the bathroom is to-day, but until such time, the capital cost will continue to receive consideration.

The finest scope for labour-saving activity is certainly in connection with fuel. Collective national action on a big scale to abolish soft-coal consumption would do more to lessen useless labour, not only about the house, but in

almost every department of life, than all the pettifogging opposition to dusting and cleaning beautiful articles about a house. In the first place, much of the dust would cease to be created; laundry work about the house would be enormously reduced; disease would be lessened; the vitality of all would be greater; while the happiness of all would be increased. Thus the labour itself would be directly decreased, as would, too, the opposition to labour, much of which is due to indifferent health and spirits.

The fact is that labour-saving is ultimately a question of values. If we are to have beauty in our daily lives we must pay for it. A people which, both collectively and individually, places the payment for beauty at the bottom of its budget is retrogressing. "What shall it profit a man if he gain the whole world and lose his soul?"

Mr. Lethaby's Refusal

Mr. Lethaby's refusal of the Royal Gold Medal does not establish a precedent, for Ruskin declined it exactly fifty years ago. The reasons for refusal have, however, nothing in common. Ruskin was entirely out of sympathy with the architectural ideals of his day, and regarded the rejection of the Medal merely as a means of reinforcing his vocal and literary protest. Mr. Lethaby, while probably very much of the same mind as Ruskin on the question of contemporary architecture, refuses the Medal for personal reasons and, in the words of the President of the R.I.B.A., on account of "extreme modesty." Those who know Mr. Lethaby will understand his feelings perfectly, and their sympathy will go out to him in the rather embarrassing situation which has arisen. The Medal cannot now be awarded for the current year. To offer it to someone else might lower the prestige of the Medal—might, indeed, lead to further refusal. Some reform in the method of making the award seems to be necessary if embarrassment is to be avoided in the future. Would it not be prudent, before announcing a nomination, to ascertain whether the intended recipient were willing to accept the distinction?

Ruskin's Reasons

Ruskin's reasons for refusing the Royal Gold Medal read rather curiously to-day. They were four in number. The first referred to the neglected condition of the Tomb of Cardinal Brancaccio at Naples; the second to the conversion of the church of San Miniato, Florence, into a cemetery; the third to the destructive restoration of the chapel of Santa Maria della Spina, Pisa; and the fourth—the only English instance cited—the recklessness with which the ruins of Furness Abbey had been approached by the railway engineers. In conversation with Sir Gilbert Scott, who had used his best efforts to get the obdurate old man to accept the Medal, Ruskin said he considered that the members of the Institute "were assuredly answerable" for this state of things "at least in England," and that it was no time for them to play at adjudging medals to each other. He might as well have accused architects of complicity in the Fenian outrages of the period. Although Ruskin had refused the Medal, it was not withheld for that year, though the Institute had decided that it should be. Queen Victoria commanded that another name should be submitted to her, and G. E. Street was chosen. The existence of this precedent is not, apparently, to weigh with the R.I.B.A. Council in the present instance. It may be recalled that upon another occasion the Gold Medal was not awarded, the nominee, J. F. Bentley, dying before he could receive it.

The Decline of the Medal

It has been said that Mr. Lethaby objects to medals on principle. There are many nowadays who hold with him in this matter. The virtue of a man is not to be gauged by the medals he wears upon his chest. "By their deeds shall ye know them." The medal is no longer the mark of distinction that it has been in the past. Everybody seems to have medals of some sort or another nowadays, and in the words of W. S. Gilbert: "When everybody's somebody then no one's anybody." Hence it comes about that to be without a medal is a greater distinction than to be with one. This was sometime a paradox, but now the time gives it proof. These observations, it need scarcely be added, have no application to the Royal Gold Medal, which, since it is the personal award of the Sovereign, must always remain a highly-coveted distinction.

Exit Academic Dress

At last Monday week's special general meeting the R.I.B.A., on the motion of Mr. C. Ernest Elcock, rescinded the academic dress decision come to at a former meeting. Let us hope that this is the last we shall hear of the question, though, with recent history in mind, we cannot be certain that someone will not bring forward the proposal again and get it put through on a snap division. We have every sympathy with those members who, on the strength of the former decision, have already bought their gowns and birettas, but they have only themselves to blame. *Festina lente* is still a counsel of wisdom. The R.I.B.A. does well to abjure academic dress, even though (as one of the speakers reminded the meeting) it is worn by the Tonic Sol-fa Society and other bodies. Academic or official dress is entirely appropriate to an academic body or to one that, if not academic in the strict meaning of the word, yet wears the dress as a necessary adjunct to vocation or occupation. To invent such a dress deliberately with the idea of wearing it for show purposes only is an illogical proceeding that, though it "make the unskilful laugh, cannot but make the judicious grieve." Let us hope we have heard the last of it.

An Undesirable Tower

It is reported that Mr. Selfridge is about to build a tower 450 ft. high at his famous store in Oxford Street. We seem to remember that this idea was put forward some time ago, but without gaining the approval of the L.C.C. Apparently the embargo has now been removed. We do not doubt that the tower would be a great architectural achievement (Sir John Burnet is reported to have designed it), but surely it is undesirable that such a tower should be reared in conjunction with a commercial building. If Mr. Selfridge is permitted to build his tower then every other tradesman who can afford such a costly advertisement must be allowed to have one. Mr. Selfridge would not long be free to boast that his tower dominated London: his rivals would soon see to it that his pride was humbled. Then we should have towers out-topping one another to the skies—all, no doubt, properly equipped with electric "dazzle" signs. The possibilities of unrestricted enterprise in this direction fill one with dread. What has the L.C.C. to say?

Another City Church Suggestion

Some people display a good deal of inventive resource in their eagerness to rid London of the City churches. The latest suggestion (that of Mr. Edward P. Gaston, F.R.G.S.) is that they should be taken down and re-erected "in the capital cities of the Dominions and of Washington"—whatever that may mean. The Bishop of London has thanked Mr. Gaston for his suggestion, observing, however, that "it was the opinion of many well-known architects that the churches would look very curious in surroundings different from the cramped little corners of the city on which many of them were built." The Bishop's respect for architectural opinion when it relates to the amenities of "the capital cities of the Dominions and of Washington," is very touching. Architects, however, would be better pleased if he displayed a little more concern for the churches while they still occupy their cramped little corner sites in the City of London.

Some Recent Street Features of Paris

By GORDON H. G. HOLT

I—*Shop Fronts.*

IN a pleasant, if voluble, book on the "Aestheticism of Towns," published some years back, Mr. Emile Magne wound up a lively chapter on "Movement in the Street" with the remark that "the shop is the ardent soul of the street. Any street, in a modern city, denying its existence, assumes the look of those Egyptian alleys winding their way between two funerary walls." This is no doubt a little exaggerated, but it does hold in regard to the kernel of any capital where life must throb for vast multitudes. Imagine, in London, Regent Street or Bond Street, bereft of shops, or the Rue de la Paix or the Rue St. Honoré in Paris, without theirs. It is unthinkable; they are their charm and lasting attraction. A metropolitan town naturally must have streets *de luxe* of various character: the strictly private residential street, the public residential street, the commercial street, the street of amusement, of offices, of journalism, and so on, and all round, in the offing, the street of Suburbia, endeavouring to copy the character of its more mundane models, in the heart of the great city. The commercial street *de luxe* is therefore very important and should be one long temptation to dally, peep, and buy. It should hide the bustle of its replenishment. Though business is there transacted in an atmosphere of amiable and brisk activity, the heavy lorries necessary to bring into it the necessities and luxuries of life should not be seen. Such manipulations of service are, in fact, carried out in distant warehouses and in the unobtrusive dependencies at the back of the shop. That is why this commercial street *de luxe* keeps its appearance of splendour and smooth concern. The shop is its feature, its unit, and a street of that character contrives to show its best goods in their most fitting frames. The shop itself should assume general shapes and ornaments most suited to its own idiosyncrasies, and in that connection it is interesting to see to what lengths the modern shopkeeper will go. From such a cultured city as Paris one expects a full use of rare materials to which have been given, at times, forms almost too original, too exquisite. Significant forms and rare materials are made to express the nature and quality of the contents available, and also the assumed refined taste of affluent, and, shall we say, discriminating patrons. Ever since wealth and whims have been able to demand showy results, marble and bronze have been used for fittings, and thus we see many marble surroundings with bronze ornamentations running along them. The smartest shops of Paris have their "vitrines" so set off. Most marbles are light-hued, but the risk of stain from fittings above, such as large awnings, or on the sides, in the case of small blinds supported and stretched on extensible metal brackets, have compelled the more cautious to resort to darker marbles, especially the yellow-brown and grey-blue varieties.

FLATS IN THE RUE VAVIN, BOULEVARD RASPAIL.

In the shop front of Marie Labatut (page 440) the marble chosen is black, with white caps and end-pieces. The wrought-iron fittings look well enough, as material. The carving to each end is robust and simple, an improvement on the usually over-teased sculpture. The long window in the shipping office (bottom right-hand illustration, page 440) has a frame of blue-grey marble, but it has been robbed of its chance to make an effective appeal, on account of the too numerous features introduced. The bronze work is skilfully wrought, but, of course, French metalwork yields to none for finish and technical excellence.

Reference has been made to original treatment. Such end can be attained at the expense of congruity. Of darkly-stained wood, a shop front, in the Boulevard des Capucines, has a rugged simplicity, but it must be admitted that it looks a little out of place amid its more permanent - looking neighbours.

The handsomest shops in Paris naturally deal with modes, jewellery, and perfumery. The more costly and fashionable cluster within the triangle made by the Avenue de l'Opéra, Rue St. Honoré, and Boulevard Madeleine, but others almost as elegant are to be found elsewhere. Besides variegated marbles and flat wall decoration, recourse is also made to flowers, foliage, and the brightening of awnings. The fenestration to the "Philippe Restaurant," near Rue Royale, combines the employment of all three. Here, marble has given way to a whitish limestone, soberly carved; the bracket lamps throw a discreetly inviting colour note at night.

As will be seen later, French architects have a little weakness for heterogeneous materials. Mosaics, gilded metalwork, veined, polished marbles are made to challenge and insist. Regent Street has a taste of it in the Galeries Lafayette, a near replica of the same establishment in Paris. Purists may dislike its blatancy, out of keeping in London when so treated, but it is an arguable point whether this method of approaching the general public is altogether wrong. If the highbrow *clientèle* is best appealed to through reticence of treatment, the bourgeois *ctientèle*, on the other hand, still relishes more forcible methods, and so long as this state of affairs obtains, it may well be that the more vulgar way is necessary, therefore right. Arguing on those lines is not to be confused with the unseemly theory that architects should pander to popular taste. A demand for bold shapes and bold colours does not

SHOP FRONT IN RESIDENTIAL QUARTER. WITH BLACK MARBLE, STREAKED WHITE, WROUGHT IRON-WORK AND WHITE STONE CARVING.

necessarily mean being given bad shapes and bad colours. In the Magasins du Printemps, M. Binet, the architect, has managed to introduce a fresh note of appeal without being trite; the flat carving on the pilasters to the angle rotunda is spiritedly done, and the detailing of the order running round very capable.

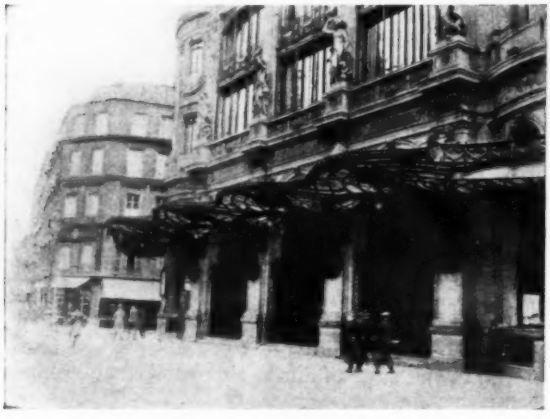
Vastly different is the treatment of the Maison de Rapport in Rue Vavin, off Boulevard Raspail. The architect, M. Henry Sauvage, took a brave step. These flats were erected in 1913, if my memory serves me well, but thanks to the use of enamelled bricks, they look just as fresh now. The receding terraces in the upper part of the elevation has much to commend itself; it allows plenty of air and sun and gives an illusion of garden to the tenants. The white bricks are picked, here and there, with cool colours. It may be of interest to know that this able architect has since gone further ahead, and one of the most tantalizing exhibits in the architectural section of last Spring's exhibition, held by the "Société des Artistes Décorateurs," at the Grand Palais, was his model of a "Maison ouvrière à Gradins," similarly conceived, but of four-fold magnitude. This type gives scope for a definite, simplified architectural

MARQUISE TO THE HOTEL CHAMBORD, CHAMPS ELYSÉES. OF WROUGHT-IRON, PARTIALLY GILDED.

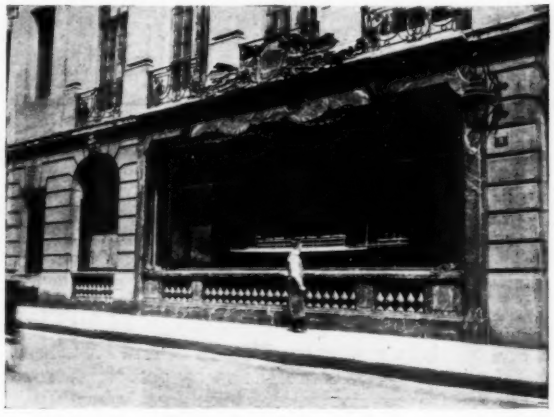
treatment, with services and staircases planned together and rising well out of the receding upper stories.

II.—*Marquises.*

Nothing is more typical of the ease with which French architects design architectural niceties than the marquise. They can throw into its outline a grace unequalled by that of any other race. The palatial examples to be seen in large American towns, especially at New York, where money, talent and opportunities abound, are directly influenced by French methods and models. With this particular feature, the vitality so characteristic of good French work is, for the time being, trammelled within what seems a fairly narrow range, yet it manages to find accents of unfettered loveliness; the result is alive, joyous and grand. Even though creditable examples of good marquises can now be seen around Mayfair and the West End, these, also, can be traceable to French precedent. Most of those shown here embody Renaissance forms. This Gallic excellence is due to two reasons: one is the very exact training undergone by their architects, with its need of quick draughtsmanship and thinking; the other is the long tradition and high standard of their craftsmen. The two go together and the result is a peculiarly handsome architectural feature of great utilitarian and artistic value. Most frames are made of wrought-iron, sometimes gilded, or of bronze; they hold glass sheetings bent this or that way, at the fancy of the designer, who seems to revel in difficult and sweeping shapes. It is possible, however, to be over-fascinated by this show of bravura, because a good deal of the pleasure derived is due to the appeal which sheer technical excellence always makes, legitimately enough, so long as it does not paralyse the

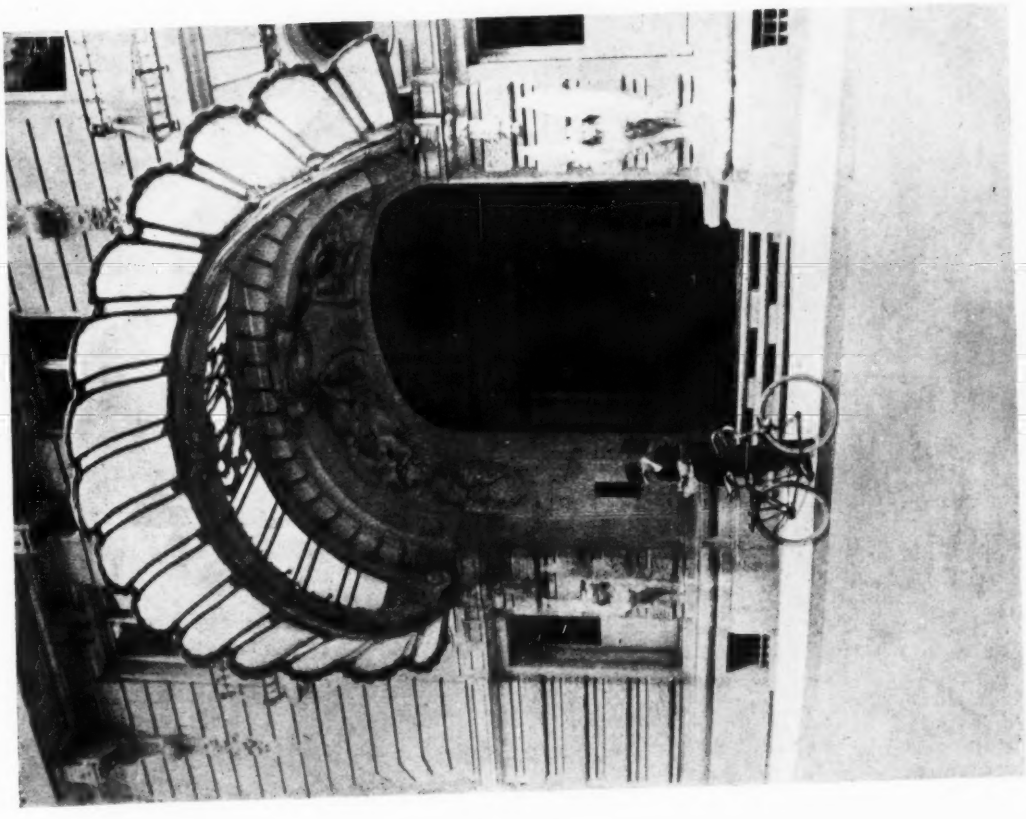


THE MAGASINS DU PRINTEMPS. FLAT, RADIAL MARQUISE PROJECTING WIDTH OF PAVEMENT.

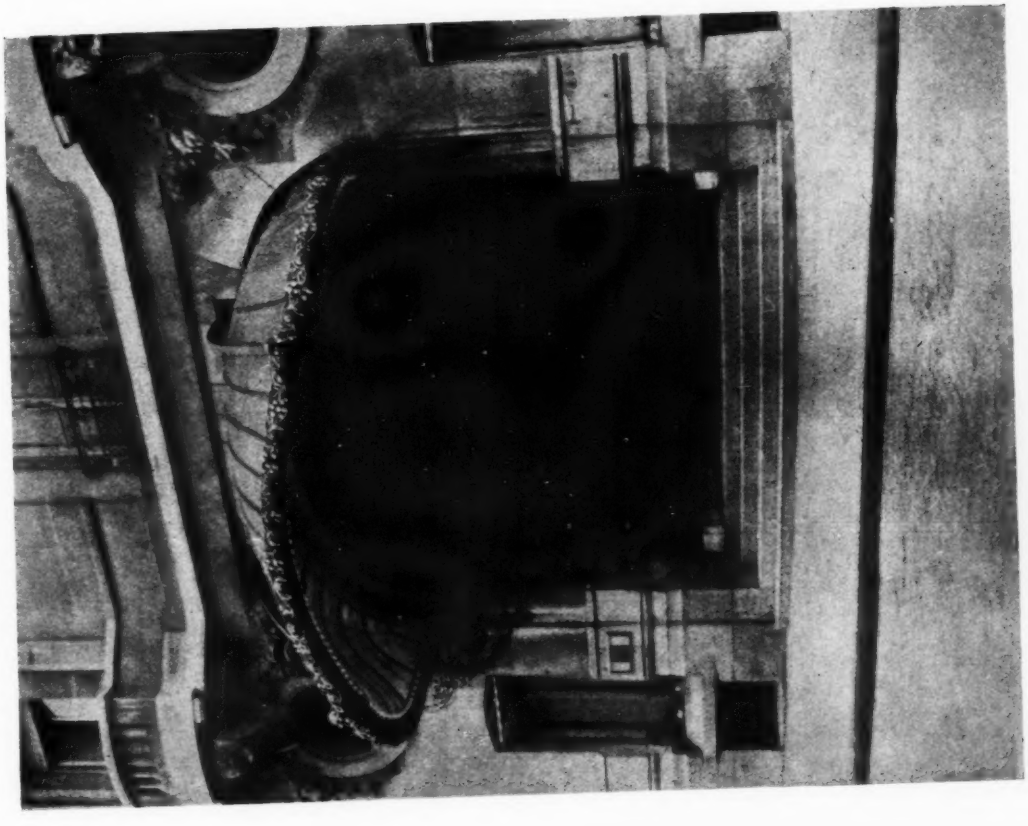


A SHOP FRONT OF GREY-BLUE MARBLE AND HIGHLY WROUGHT BRONZE.

Two Examples of Hotel Marquises in Paris

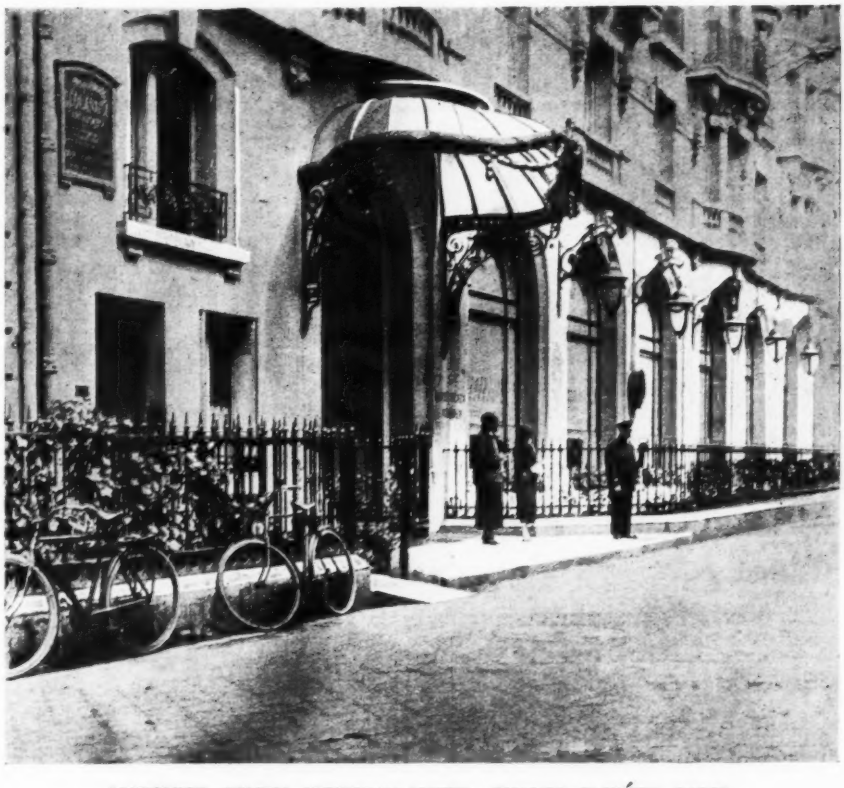


OFF THE CHAMPS ELYSÉES.



IN THE BOULEVARD RASPAIL.

MARQUISE, HOTEL CLARIDGE, CHAMPS ELYSÉES, PARIS



MARQUISE, SOUTH AMERICAN HOTEL, CHAMPS ELYSÉES, PARIS.

critical faculties; but it is conceivable that the mastery over all such Renaissance motifs contains in itself an element of danger. It is the one danger likely to threaten the value of those French examples and indeed of French architecture generally, and one which, on the contrary, is not so noticeable in northern countries, where individualism plays a greater part, but where, on the other hand, such delicacy of treatment and such rare knack in welding together various materials in one cohesive and beautiful detail is very difficult to match. Otto Wagner, Oscar Strnad, in Austria; Peter Behrens, E. J. Margold, and Poelzig, in Germany, have made ingenious efforts to emancipate iron, copper, cement and marble from the bondage of the old hackneyed forms, but it cannot be said that their efforts have yet reached the homogeneity, or—alternatively—the artistic graciousness of their French equivalents. It is therefore these qualities which are justly to be admired in good French details, and the accompanying illustrations, it is hoped, convey a fair measure of their excellence. They are, for the most part, marquises protecting entrances to hotels or large stores, and need little comment. In the Theatre des Champs Elysées, in Avenue Montaigne, a modern structure by MM. A. and G. Perret, architects, in appearance not unlike some of the German theatres, exuberant enrichments have been eliminated; the pleasure is derived from a careful distribution of openings and from a chaste use of sets-off to the walling. On the corner, very flat bas-relief panels, vigorously incised by Bourdelle, help, by their very treatment, to emphasize the massing of the three entrances, spanned over by one long protecting soffit. As to the entrance to Lafayette Galleries, it is an instance of the ambitious marquises with foliated ribs round a flat dome. Unfortunately, its abnormal height defeats the primary purpose of a marquise, and it can only be considered as an effective monumental motif and no more. The continuous marquises girdling the sides of the building, at the entresol level, do not sin in that respect; their depth is such as to afford plenty of shelter in boisterous weather. A similar arrangement does duty outside Pathé head offices, on the Boulevard des Italiens, though the handling of the ironwork is somewhat tame. But the idea of a deep overhead protection for pedestrian traffic is a good one; we could do with such depth and length in our own busy streets in London, where bye-laws have been known to cancel their former meanings, once progress leaves them meaningless. A plentiful supply of awnings is better than no protection, no doubt, but awnings, even large ones, have a tendency to sag and leak, and Selfridge's building, to take an instance, would look better still were it allowed a deep continuous marquise. Besides improving its appearance it would on wet days save the temper of countless passers-by.

The Principles of Architectural Composition.–6

By HOWARD ROBERTSON, S.A.D.G., Principal A.A. School of Architecture

IN addition to the basic laws of unity and contrast we shall find that a further analysis, dealing this time more in detail with the architectural elements employed, will reveal the presence of secondary principles which may be consciously employed to the benefit of the general composition. In the chapter on contrast we have shown that in design we are dealing with elements which may be of opposing form and character. In pursuing the same theme in the analysis of the elements themselves we discover that each element may be composed of still smaller elements, which fall into two main categories, according to their function in the scheme of design.

In effect, we may distinguish in each architectural detail a character peculiar to it, such character being revealed at first sight less by logical examination than by intuition. The two main categories into which these characteristics fall may be termed the "positive" and the "negative," and, as might be expected, they contrast with, and are complementary to, each other.

A straight line, for example, conveys an impression of decision, rigidity, and simple function. A wavy line, on the contrary, produces an opposite effect, one of hesitation, flexibility, and decorative value. The expression of these two contrasting types is "positive" in the first case, and "negative" in the second.

In Nature, as in art, we shall find these two types represented, the one direct, simple, and obviously functional, the other indirect, more complex, and more passive in character. The trunk of a tree, for example, is a positive element, the foliage is negative. Fire is positive, and water is negative. In colour, the red colour of fire is vivid, hot, and exciting, and like the element is positive. Green or blue, the colours of water, provide the direct negative contrast. In painting, effective use is made of the contrast of positive and negative. The painters of the Italian schools, in particular, have grasped its dramatic possibilities. For example, in compositions of figures and groups, decorative, flexible, and complex in design, we often find the introduction of a rigid architectural background which serves a functional purpose of unifying the composition, and provides the positive foil to the negative element (Fig. 67).

In architectural design we find innumerable analogous examples. A series of columns, positive in the weight-bearing and actively functional capacity, receives the passive, static, and negative lintol, an element which is not "working," as it were, but is being supported. In Fig. 59 we have functional columns supporting an arch, and adjoining them columns which have a slight buttressing effect, but are chiefly valuable in their negative or decorative capacity. These, like the forms applied to the stern of the magnificent vessel shown in Fig. 60, are negative elements which accompany the positive structure, and their utility lies in the decorative accompaniment, the emphasis, the softening of stern rigidity which they provide. They are merely obeying the law of the necessity for contrast in design.

The desire which is universally felt for this contrast of positive and negative is sufficient to explain the retention in architectural design of elements which answer no structural requirement and which are, in addition, often illogical. To condemn such features as "meaningless" reveals, therefore, a certain lack of understanding. The dissatisfaction which is often felt by critics of the ultra-modern school of design, which is tending to produce effect by the manipulation of form alone, results in part from an unfulfilled desire for the presence of the so-called "useless" or negative features which provide the relief from the strain of continuously positive expression. The rigid and uncompromising lines of the Dutch design shown in Fig. 61 would have been at once emphasized and relieved by a more generous introduction of playful and decorative forms or patterns. Buildings almost entirely positive in character have the defect of their quality, are apt to be over-insistent, and to crush instead of charm the beholder by their too dynamic intensity of expression. An opposite, but equally unsatisfactory effect, results from an over-emphasized "negativity."

Architectural ornament is full of the same kind of con-

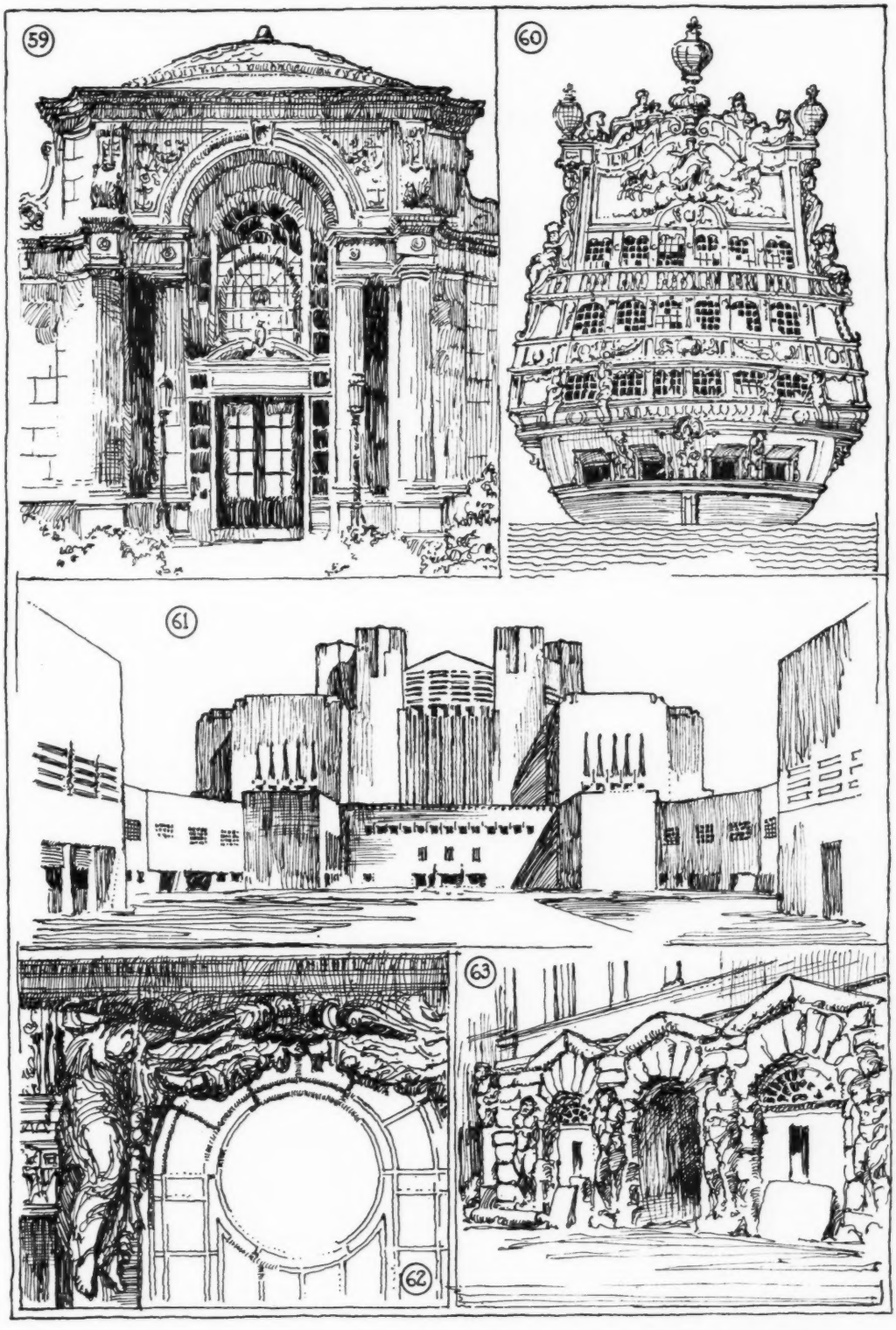


FIG. 59.—The entrance to an American hotel. Here we have "positive" columns taking the arch weight, columns bearing consoles which are practically "negative," and purely "negative" decoration in the arch spandrils.

FIG. 60.—The stern of "Le Roi Soleil," a vessel of the time of Louis XIV. Exemplifies the softening of "positive" rigidity by "negative" accompaniments.

FIG. 61.—A design by a student of the Dutch Reijks Academy for a People's Hall. Severity almost unrelieved, showing tendency to "dehumanize" architecture.

FIG. 62.—Window at the Wesleyan Hall, Westminster; Lanchester and Rickards, architects. Sketch after the architects' drawing for sculpture over window to main front. "Negative" masses tending to obscure "positive" function.

FIG. 63.—The "Grotto of the Pines," Fontainebleau. Human figures semi-conventionalized and used as a decorative motive. Structure here does not depend on their presence as is the case with the Caryatide Porch of the Erectheion.

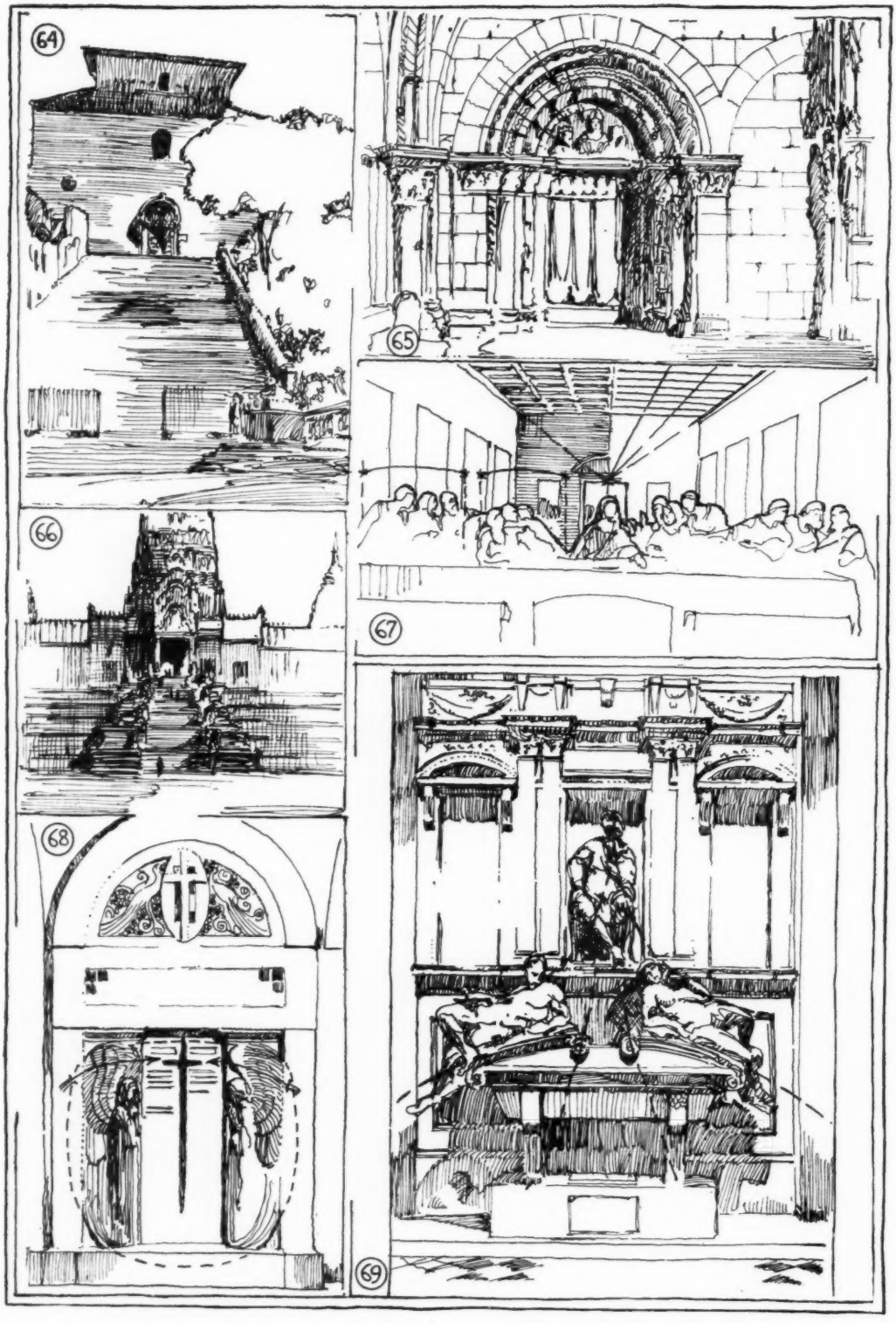


FIG. 64.—The Church of Santa Maria Aracœli, Rome. Accentuation of the doorway.

FIG. 65.—The Dom Kirche, Mayence. Concentration by radiating pattern. The arrows show the direction of the general concentration on to the sculpture of the over-door lunette.

FIG. 66.—Central doorway of the Temple of Angkor Vat as reconstituted at the 1922 Colonial Exhibition at Marseilles. An effect of climax heightened by receding planes, and perspective accentuated by repetition of motives diminishing in size.

FIG. 67.—Leonardo da Vinci's painting of "The Last Supper." Note contrast between rigid architectural background and free grouping of figures and the method of accentuating the central figure of Christ by converging lines.

FIG. 68.—Monument to the dead of the French Seminary in Rome, by Roux-Spitz and Delamarre. The wings of the figures and the flow of the drapery are subtly used to focus the interest towards the central name tablet.

FIG. 69.—Tomb of Lorenzo di Medici, in the Sacristy of San Lorenzo, Florence. The dotted lines show how the composition is arranged to guide the eye towards the focus of the central figure.

trast and the relief of positive by negative gives it the life and sparkle which prevents "deadness" and lack of interest. The distaste which we feel nowadays for much applied ornament results from its poor design, apart from the fatigue engendered by mechanical craftsmanship and detail which is faultily reminiscent; but good ornament is of immense value, not only as a means of expressing character, but in its enhancement of structural form.

In every period of architecture negative elements are seen to be employed in a more or less bold manner as an accompaniment to functional details, good examples being found in Gothic work, where figures, foliage, crockets, and devices of every kind are used to obtain an effect of extraordinary brilliance. It is when an attempt is made, however, by the designer to coerce a negative element into a positive function that dissatisfaction ensues. The use of rich masses of carving in a structural position tends to produce a sense of discomfort, however cleverly handled the treatment may be. Such an instance occurs in the arched window-head of the Wesleyan Hall (Fig. 62), where the structure of the arch voussoirs is lost in the decoration. The dislike which some architects may feel, in spite of hallowed precept, for the motive of the Erectheion caryatide porch, results from the use of a decorative and negative figure as a structural and positive unit. The "crime" is accentuated by tendency to realism in the handling of the figures; conventionalizing of the forms would have resulted in an increase of the purely architectural character. The figures of the Grotto at Fontainebleau (Fig. 63) are merely a decorative adjunct; they are performing no real functional work. The caryatides of Jean Goujon at the Louvre merely accompany the functional wall, and the stability of the structure would be unaffected by their absence. But the design of the Erectheion porch cannot be wholeheartedly approved except for the charm of its execution, and its value as a piece of possibly whimsical fancy in a generally austere composition.

The architect may readily accustom himself to detect in design the presence of positive and negative elements, and he may then use his knowledge of their proper function to enhance the effect, in original composition, of the broader and more general lines of his scheme.

As a corollary to the principles enunciated in regard to suitable use of the positive and negative elements, we have a further principle which we may term that of "accentuation."

Emphasis or accent in the elements of a composition are used primarily to enhance the effect aimed at in the general grouping, and accentuation properly comes under the general heading of contrast, since accent provides an interruption or contrast to monotony. Accentuation is a resource of the designer in obtaining strength of effect, and in underlining as it were certain phrases in his architectural essay, thus calling attention to the ideas or features which in his opinion should be salient. Emphasis, while not necessarily strong, should always be definite, or weakness in expression of the idea will result.

Emphasis may be obtained in a variety of ways, by sheer mass and bulk, by concentration of richness of decoration, by strength of colour or tone, by interest of line, or by the subtler process of suggestion or inference. It is only with this latter case that it is necessary to deal, since for the former no particular knowledge is required other than an understanding of proportion in mass, line, and colour, coupled with an observance of the principles of contrast, and with these we have already dealt.

In order to obtain accentuation of any element without direct emphasis of the element itself, it is necessary that the eye should be unconsciously but unhesitatingly led in the direction of the element, so that a centre of attraction is created to which, as it were, all avenues tend to direct the vision of the spectator. Such a result is equivalent to the preparation and the ultimate achievement of an architectural climax (Figs. 64 and 66).

There are numerous methods of obtaining this result, and they constitute examples of the refinements of architectural design. It is only useful to cite one or two examples, for the architect will find the means at his disposal to be infinite and variable.

A simple example of emphasis indirectly obtained is that of employment of converging lines, sometimes called "radiation." We must assume the fact that lines converging from all directions upon a given point lead the eye towards this focus and emphatically establish its position, particularly if the lines are themselves accentuated in the sense of the desired direction.

An excellent example of the employment of converging lines as an aid to emphasis is provided by Leonardo da Vinci's painting of the "Last Supper" (Fig. 67), where the ceiling lines in the architectural background are made to converge upon the central figure of the Christ, which is thus subtly emphasized as a focal point independently of the other devices employed in the composition, such as colouring, the grouping of the figures, etc. An architectural example of the same character occurs in the converging lines in a recessed opening (Fig. 65), though in one case the lines are radial and in the other concentric.

A simpler and more direct instance of accentuation applied to a doorway occurs in the arrangement of a flight of steps which not only guide the eye, but actually lead the spectator. An effect of converging lines may be introduced as an additional emphasis, as is the case with the diminishing central staircase in the remarkable reconstitution at the Marseilles Exhibition of the Temple of Angkor Vat. (Fig. 66).

The process of accentuation of any feature entails on the designer's part the obligation to design the feature in a manner worthy of the emphasis given. Too often we find a splendid arrangement of motives converging on a centre in which is found, not a brilliant spot of fine carving or colour, but some relatively plain diamond or circle shape, totally unworthy, through lack of interest, of its focal position; or perhaps a whole area of plain wall will be arranged to accentuate by contrast a piece of concentrated decoration, or a richly-framed void, and yet the design of this decoration or void treatment is too often trite and ill-conceived.

Another method of accentuating climax consists in the device of arranging the accompanying effects in such a way that the climax is continually deferred, thus heightening by expectation the emotions of the spectator. Instances of this occur in the introduction of receding planes and masses, or the preparation of small climaxes or points of interest serving to emphasize more surely the main focus. Such effects are often obtained by a well-conceived repetition. In the Temple of Angkor Vat we have numerous horizontal and receding planes, a staircase where repetition occurs in the carved dragons diminishing as do the steps, and the placing of the central doorway in such a way as to heighten the effect by a feeling of remoteness, almost of difficulty of attainment. A climax more obvious and easy would certainly have been less powerful.

The dome of St. Paul's is a magnificent climax in itself, but it is intensified by subsidiary climaxes such as those formed by the portico and the flanking towers, which detain the spectator's eye and defer the main climax, which ultimately gains by its clear dominance over those presented by the subsidiary features.

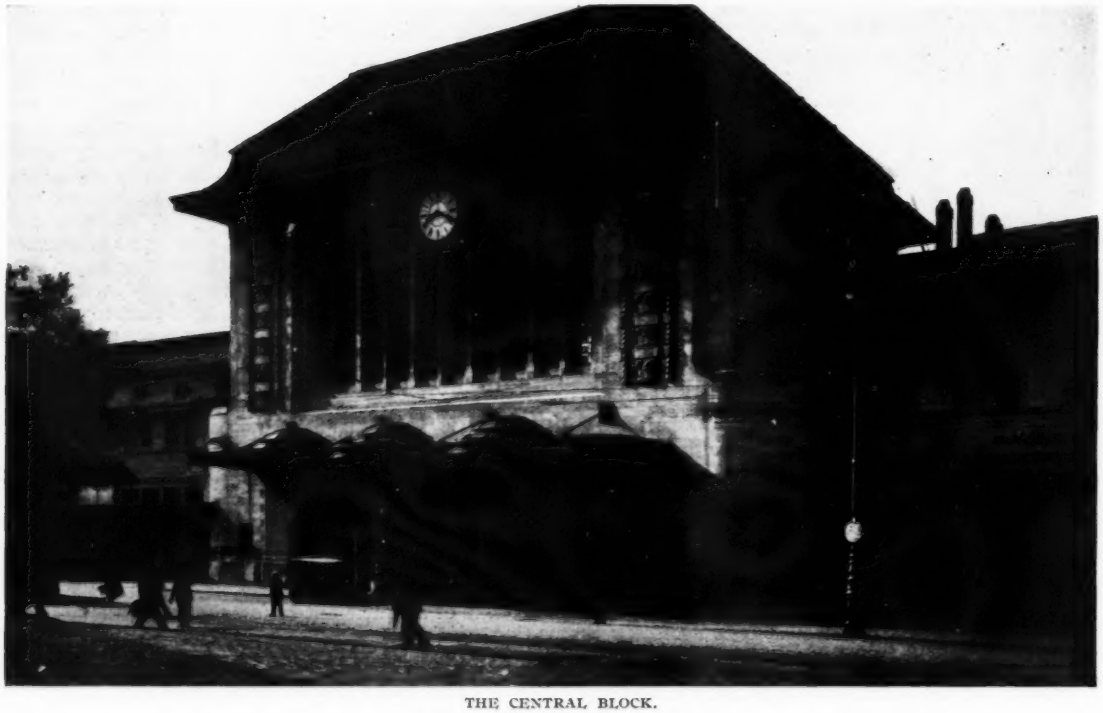
In discussing the principle of accentuation we border closely on abstract questions of expression, we begin to deal with effects which are related closely to the desire or otherwise for dramatic effect. We must consequently beware of any attempt to force effects without full realization of the atmosphere which we wish our building to convey. It is sufficient to mention that certain effects produced in architecture are largely analysable, and that in consequence the means for obtaining them may be studied with profit, and when mastered employed.

[The previous articles in this series appeared in our issues for January 9, 16, and 30; February 13 and 27.]

Modern Architecture in Lausanne

Two of the more modern buildings in Lausanne—the Railway Station and the Union Bank of Switzerland—are illustrated on this and facing page. The Continental character of the former is unmistakable, but in the Bank building it is not so evident. The station is an interesting example of the new movement in Switzerland, which has a good deal in common with that of Germany. In the plate illustration the persistence of the classical tradition is seen on one side of the road and the new movement on the other.

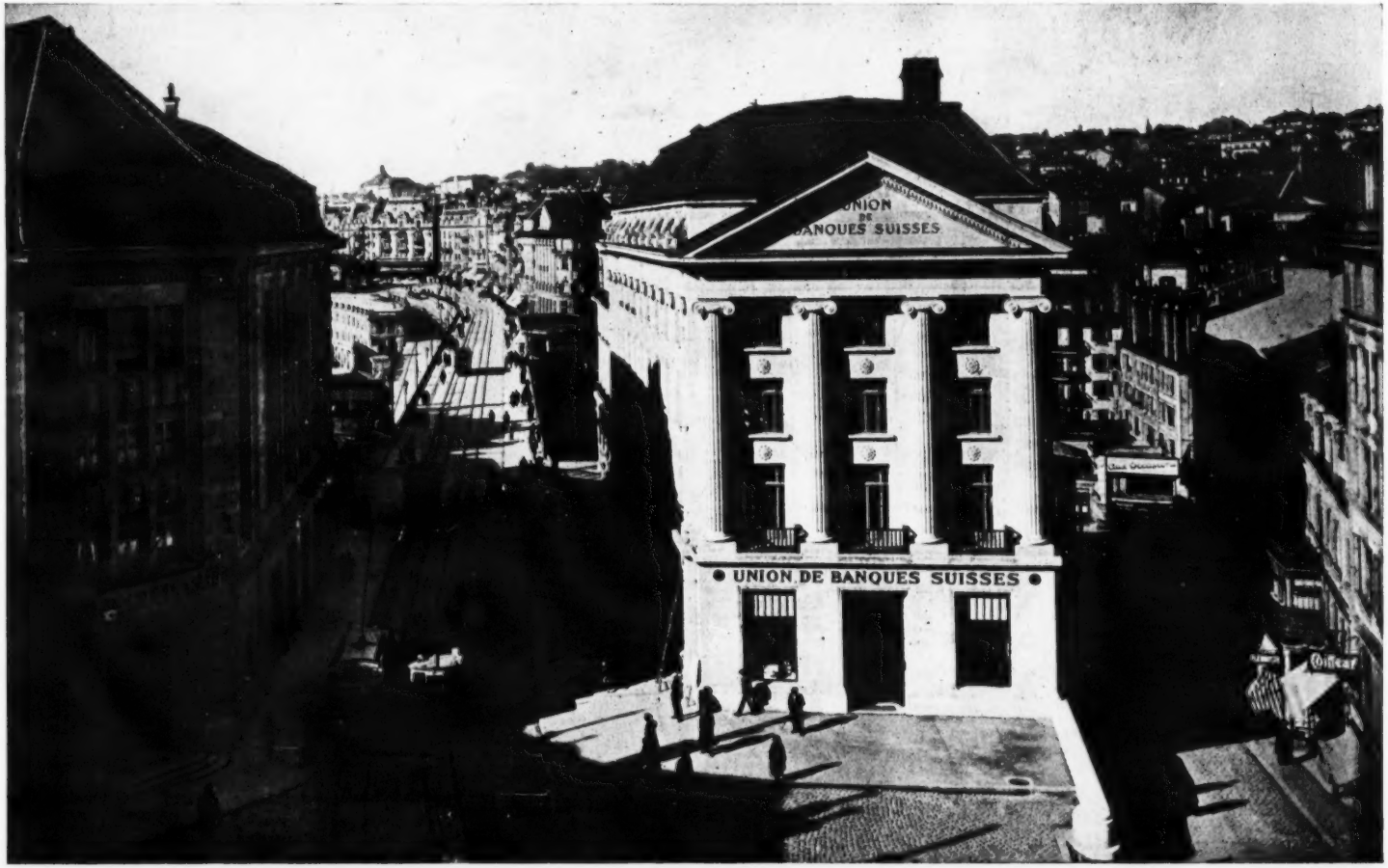
A GENERAL VIEW



THE CENTRAL BLOCK.

THE RAILWAY STATION, LAUSANNE

The Union Bank of Switzerland, Lausanne



The Union Bank of Switzerland is one of the most modern buildings in Lausanne. To the left will be observed the tram route over the Grand Pont.

The Replanning of Aston Park, Birmingham

THE Birmingham Civic Society has submitted to the City of Birmingham Parks Committee a scheme for the replanning of Aston Park, which is the result of several inspections of the site and a most careful consideration of each aspect of a rather complex problem.

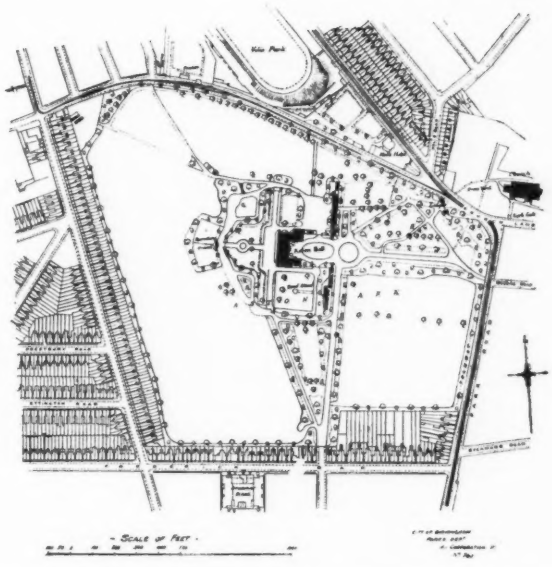
It is impossible to deal with Aston Park as with ordinary suburban enclosures. The historical value of the hall at once claims consideration for a special environment, and provides the best of reasons for a suitable difference in treatment from other public grounds.

It is not proposed to attempt a restoration of the grounds to their original character as shown on the plan of 1758; the chief features of which were the great avenue extending axially as far as the Lichfield Road, some shorter lateral avenues, and a deer park of 327 acres. These are features which cannot be re-established; and the proposal now put forward is designed to give (within the area now available) gardens which might have been contemporary with the house.

This development of historical character in the grounds immediately about the hall has been so arranged as to break up the lower ground on the west, with a view to its better control and maintenance. The hard usage of the ground, which has made grass impossible at this point, is provided for by covering two relatively large areas with asphalte, the chilly appearance of which is moderated by surrounding avenues and gardens; and it is thought that these avenues —each with a fenced strip of ground to protect the trees— will serve to cut off the adjoining playing fields, and so make possible a satisfactory growth of grass within the boundaries left unpaved.

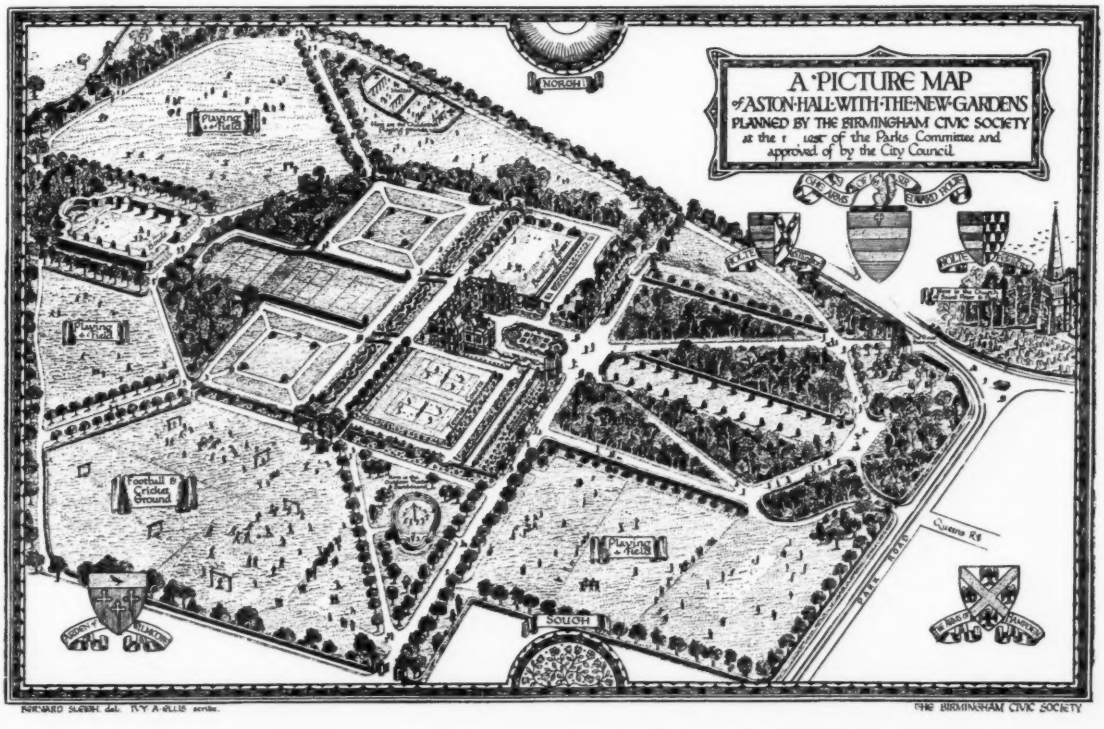
The children's gymnasium and the bandstand are two of the least satisfactory details of the present park. Both are incongruous adjuncts to the hall, and it is proposed to move the former to a site near the north-west entrance, where it will adjoin the asphalted playing areas, and to construct a new music stand, stage, and auditorium near the south entrance, as shown on the plan.

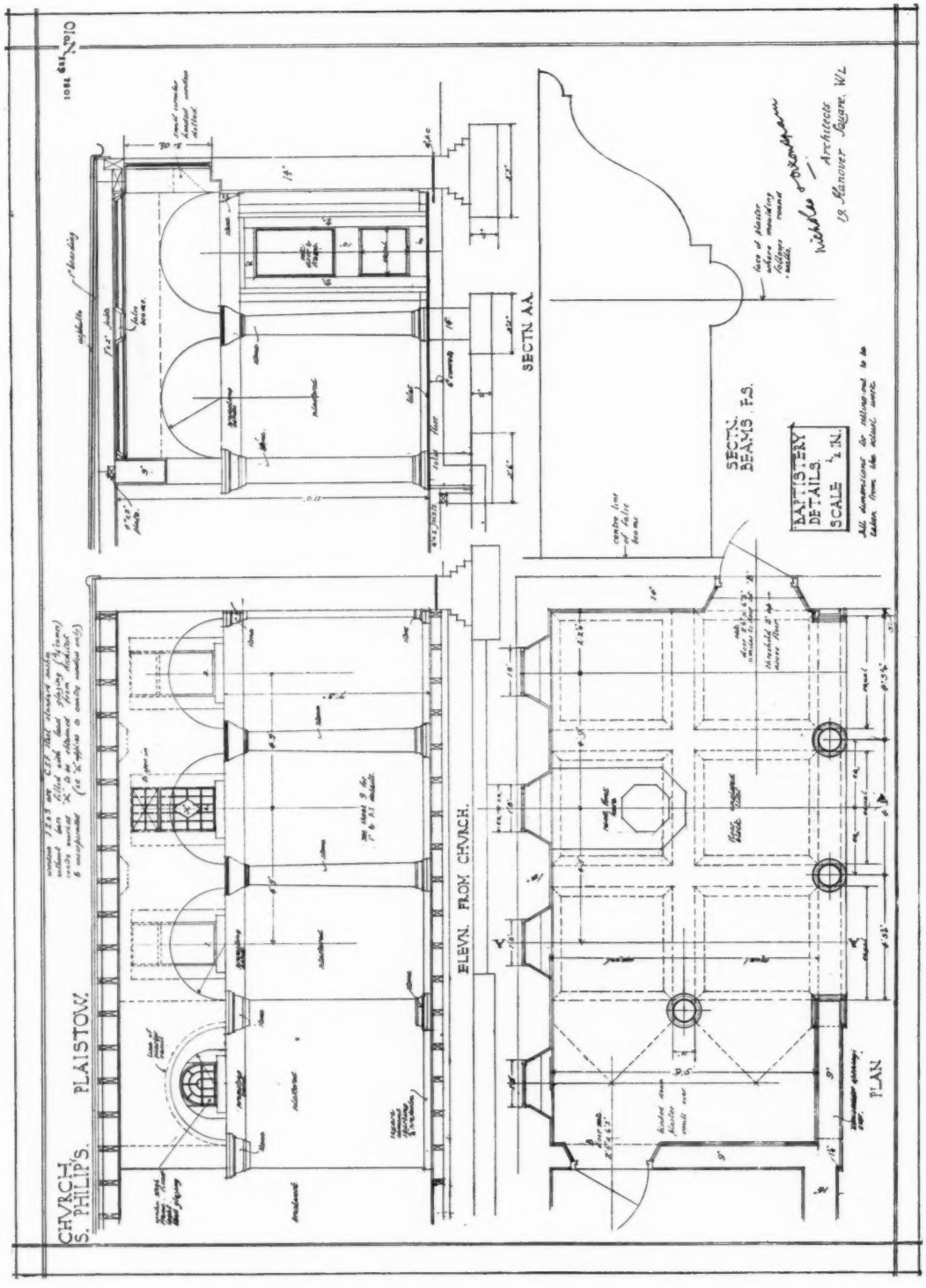
The revised arrangements of the gardens about the hall include vistas radiating from the east and west fronts, which would add greatly to the stately character of the mansion.



One of these vistas is designed as a direct approach from the lodge entrance in Church Lane, and this approach is balanced in effect by a new route from Park Road, while the present central road is converted into a great lawn, with formal trees at intervals, and a suitably designed view-point as a terminal feature.

It is suggested that the formal bedding in the east fore-court and on the slope below the west terrace, should be laid out with topiary work of a character contemporary with the hall; that the lawn now occupied by the bandstand should be converted into tennis courts; that the west and south margins of this green should be planted with double herbaceous borders between clipped hedges; that the bowling green on the north front should be increased in size, and the path area be reduced. These alterations are associated with a proposed blocking up of the way down the slope at this point.

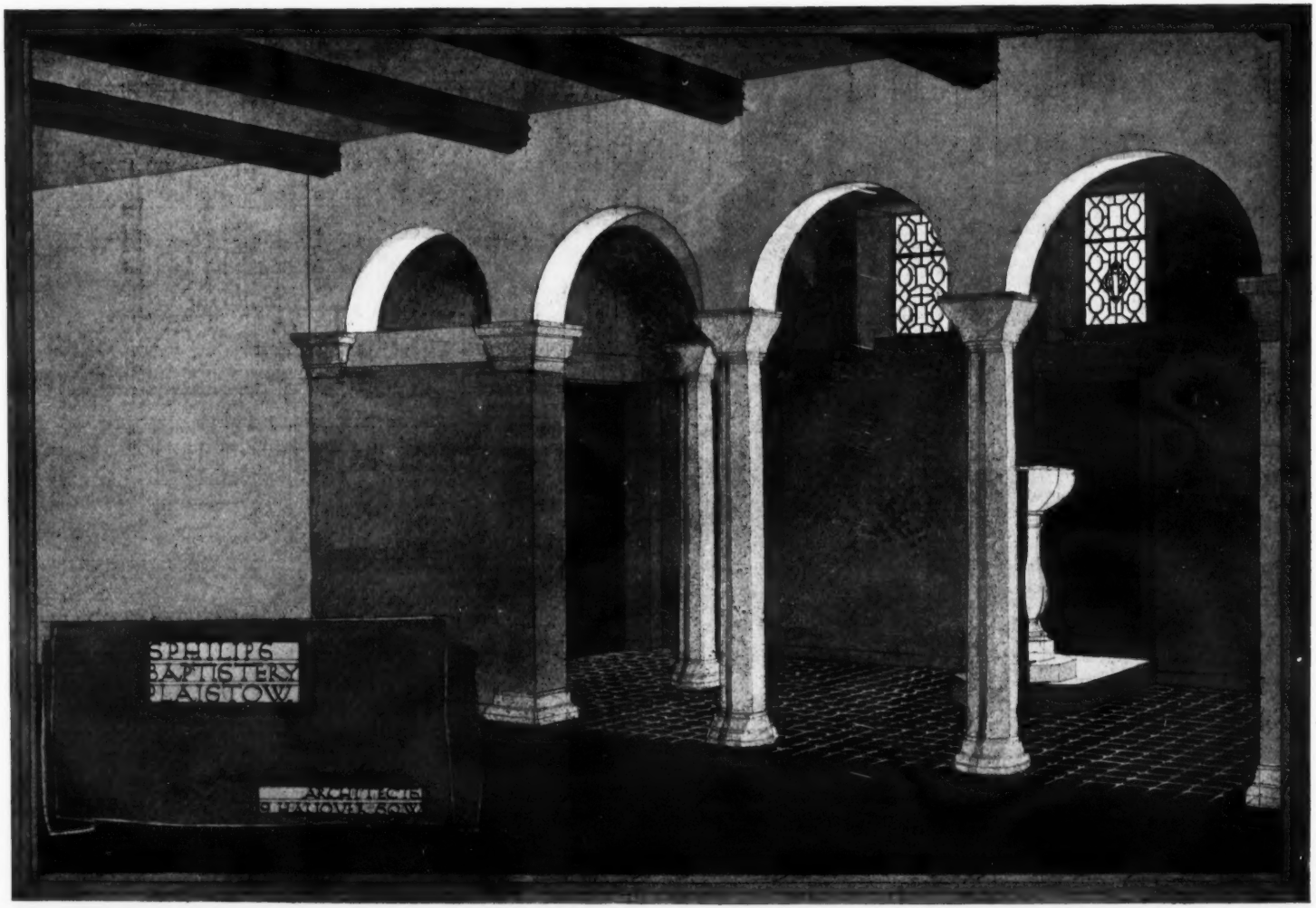




THE BAPTISTERY, ST. PHILIP'S CHURCH, PLAISTOW. NICHOLAS AND DIXON-SPAIN, ARCHITECTS.

Modern Ecclesiastical Architecture. 27.—The Baptistery, St. Philip's Church, Plaistow

Nicholas and Dixon-Spain, Architects



In carrying out alterations and repairs to St. Philip's Mission buildings at Plaistow, the opportunity presented itself of adding the baptistery which we illustrate. The stonework is Ancaster, and the flooring of unglazed black tiles.

Arterial Roads in Town Planning Schemes

The Fairy Godmother

ORDERLY progress is only possible when there is a definite objective made clear by a general plan decided only after a careful study of the tendency of existing circumstances and forces; and the wise planner is content to give of his best although he knows full well that he is not likely to live long enough to see the full fruition of much of his work. Sometimes, however, there comes a Fairy Godmother to turn his plans into realities long before he could have expected to see them carried out in the ordinary course of events.

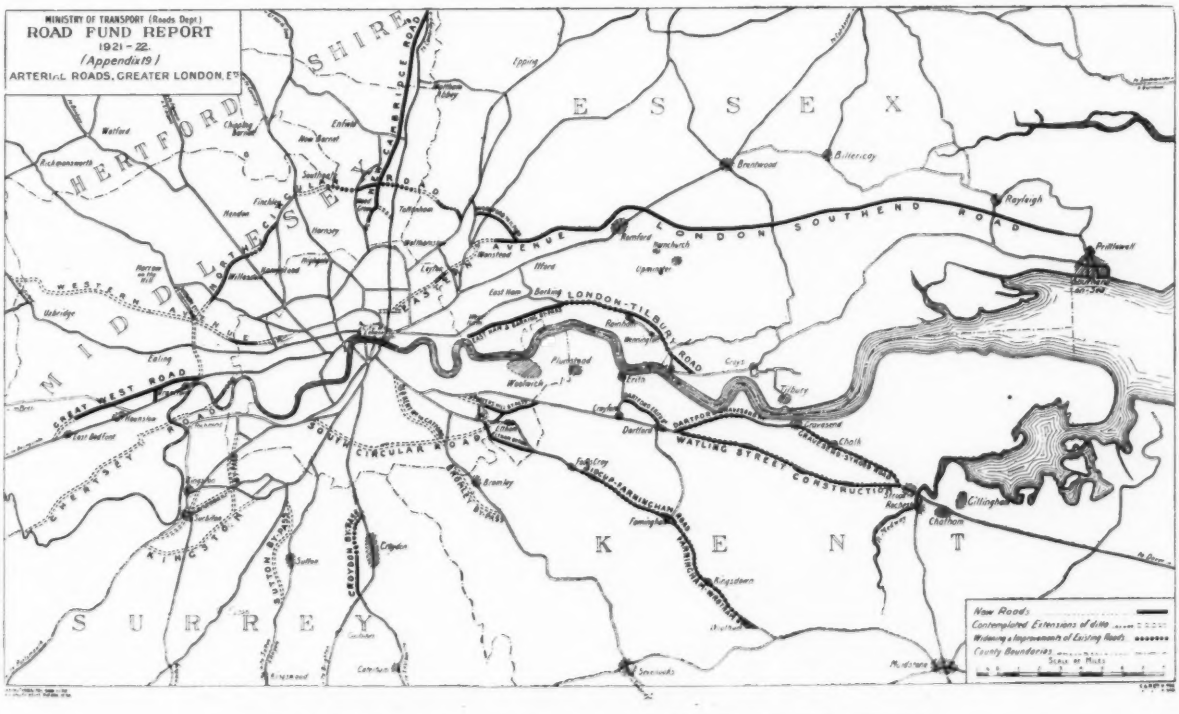
For example, in 1913, Mr. John Burns, then President of the Local Government Board, called together the local authorities in Greater London and counselled them to join forces, look ahead, and plan out a system of arterial roads. The Cinderella in this case had been Colonel Hellard, of the London Traffic Branch of the Board of Trade, who, for some years, had been studying the whole problem of traffic in and around London, accumulating and classifying data and devising a system of roads to meet the rapidly increasing pressure. Unfortunately, hitherto he had found his warnings unheeded, and openings were allowed to be blocked up, and thereby the economical and efficient solution of the problem made more difficult.

Mr. Thos. Adams was the first organizer of the Arterial Road Conferences, but early in the proceedings took up an appointment in Canada and was succeeded by Mr. G. L. Pepler. The Conferences, which included representatives of the Road Board and of interested societies, such as the R.I.B.A., as well as of local authorities, quickly got to grips with the problem, being content first to concentrate on deciding how best the needs of road traffic could be satisfied, leaving for future consideration the question of how the cost was to be met.

They had not proceeded far with their labours when war broke out, and although greatly hampered thereby, they persevered, largely because they felt that peace might bring unemployment, in which case productive schemes on which surplus labour could be employed would be of immense value. By 1916 their scheme of roads, largely based on Colonel Hellard's earlier plans, was completed; a scheme, much of which was not expected to fructify for twenty or thirty years, but which was to form the basis of the town-planning schemes of the hundred odd local authorities in the region.

Unemployment followed in the train of peace, but happily the Fairy Godmother appeared in the form of the Roads Department of the Ministry of Transport, ready to make grants for roadwork on which unemployed were put to work. The county councils responded, and in consequence, to-day, only seven years after the Arterial Road Conferences completed their scheme, all the arterial roads they proposed, with the exception of the Bromley by-pass, are provided for or are in course of construction, either wholly or as regards sections, and many parts of them are being used by traffic; e.g., the North Circular, the Chertsey and the Cambridge roads, the Eastern and Western avenues, the Eltham and Shooter's Hill by-passes. In addition, the Fairy Godmother herself projected a continuation of the Eastern avenue to form a splendid new direct road to Southend-on-Sea. The council of that authority had for some years been busy with town-planning schemes, including some fine projected boulevards, and were glad to help with this new project and incorporate it in their own road system, parts of which they were already constructing for the relief of unemployment.

The case of the Kingston and Sutton by-passes are of



A PLAN OF THE NEW ARTERIAL ROADS AROUND GREATER LONDON.

E

SLADE LANE, WEST POINT, MANCHESTER.

PARKSIDE ROAD, MANCHESTER.

interest because the councils on the spot were willing to use their town-planning schemes to keep the route open, on the Ministry of Transport and the Surrey County Council agreeing to guarantee them against the estimated extra cost involved for the excess in width over 50 ft.

The Fairy Godmother has shown no favouritism to the Metropolis, but has been willing to help all those who would help themselves and has touched with her magic wand of gold the schemes of town planners in all parts of the country. The projects she is helping to materialize are too numerous to mention seriatim, but it may be of interest to note a few examples :—

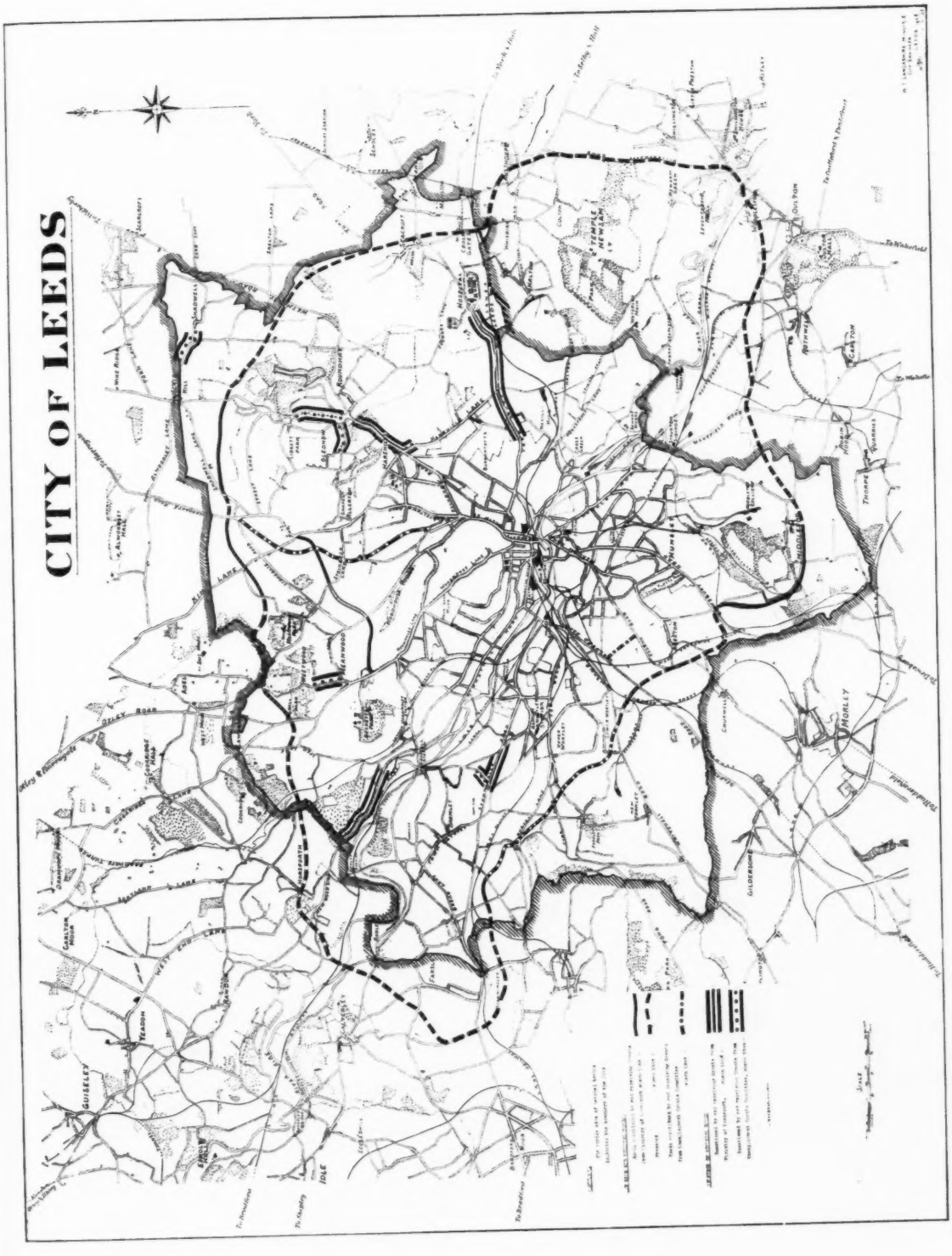
The Arterial Road Conferences of Greater London were concerned with a branch of regional town planning, and somewhat similar bodies have since been set up in various parts of the country to prepare outline town plans for their regions. Mention may be made of the South Tees-side Joint Town Planning Committee, one of the principal proposals of which is a new road (120 ft. wide) from Middlesbrough to Redcar and beyond, which should be of enormous benefit to a great industrial region. It was a project obviously needed, but easier to plan co-operatively than to carry out. However, with the help of Sir Henry Maybury and his merry men, sections of the road are already in hand.

The City of Manchester was busy with town planning and looking well ahead, and had planned several important new roads 100 ft. wide. One of these roads was an alternative to the existing rather indirect road to London, another led out to the open country in Cheshire, another was destined to give a clear run to the cotton towns lying to the north-west, another to connect the radials coming from the north and west, and several others; but all those mentioned are now in hand, and some of them already in use.

Further north, Mr. Thomson, of Dundee, had prepared some splendid road projects, including a great ring road, and many of these have now been put in hand as relief works.

The City of Birmingham was a notable pioneer in town planning, as in many matters of local government, and with wise foresight had planned many important new roads 120 ft. wide. This Corporation, too, have turned to the

THE BRISTOL END OF THE BRISTOL TO AVONMOUTH LOW-LEVEL ROAD.
L. S. MACKENZIE, A.M.I.C.E., ENGINEER.



LEEDS TOWN-PLANNING SCHEME: PLAN SHOWING THE RING AND RADIAL ROADS.
W. T. LANCASHIRE, M.INST.C.E., CITY ENGINEER.

THE REINFORCED CONCRETE CULVERT UNDER THE NEW ROADWAY AT CASTLE EDEN, CO. DURHAM.
ALBERT E. BROOKES, A.M.INST.C.E., COUNTY ENGINEER.

Fairy Godmother, and in consequence the construction of many miles of these roads has been hastened.

Mr. Brodie, the City Engineer of Liverpool, has been celebrated for many years for his bold road projects, 120 ft. wide and more, and incorporating a track for fast trams, quite separate from the carriage-way. He had been gradually putting his plans into practice in accordance with a general scheme for the whole city, but this process has recently been considerably accelerated by the help of the Ministry of Transport.

Leeds was one of the cities quick to take advantage of the Town Planning Acts, and Mr. Lancashire had planned a noble ring road and radial roads to link up with it. Much of this planning was in preparation for development not expected to materialize for many years, but here again the Fairy Godmother has hastened fulfilment.

Undoubtedly these new roads are stimulating development and are increasing the area of land available for building. It is the function of the town planner to see that openings and intervals are left on such land so that towns may not be entirely smothered by this extra "wrap" of buildings.

Many more cases might be mentioned where arterial roads projected as part of town plans are being constructed, but space forbids. Obviously it should be more economical for local authorities and better in every way for road construction to be subsequent to the completion of town-planning schemes. This is a reason for speeding up schemes, as relief works cannot wait.

History suggests unfortunately that unemployment is not merely an outcome of war, but is likely to be periodic. One conclusion that can be drawn from this brief statement is that it is well worth while for local authorities to prepare schemes looking well ahead; for one reason, so that they may be prepared with jobs worth doing when work has to be found for those whose ordinary means of livelihood have ceased to function for the time being.

[NOTE.—The concrete roads shown in the two illustrations at the top of page 456 are reinforced with Johnson's steel wire lattice (Johnson's Reinforced Concrete Engineering Co., Ltd.); that at the bottom of the same page is reinforced with B.R.C. fabric (British Reinforced Concrete Engineering Co., Ltd.); the culvert at the top of this page (458) is reinforced with expanded steel (Expanded Metal Co., Ltd.); the road shown in the illustration below being a B.R.C. road.]

THE GREAT WEST ROAD EXTENSION FOR THE MIDDLESEX COUNTY COUNCIL, UNDER THE HESTON AND ISLEWORTH U.D.C. J. G. CAREY, SURVEYOR.

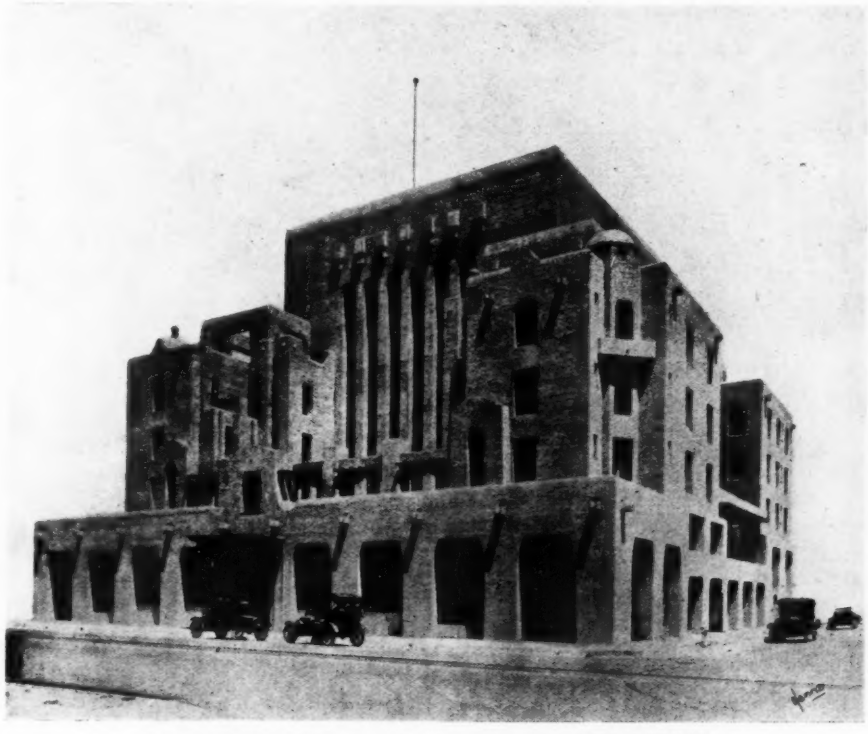
Magazines of the Month*

A Literary and Pictorial Digest

THE ARCHITECTURAL REVIEW for March opens with the second article of the series upon "Bases of Criticism," the current one dealing with "Expression of Plan." The writer concludes with the caution "all this is to say no more than that 'expression of plan' is not a criterion of universal validity. Each case must be considered on its own merits. Generally speaking, the large building made up of simple large elements, a church or a town hall, or a great railway station, will tend to express its plan in its elevations, because the parts of which it is made up are in themselves so big that they bulk on the outside. But the mere expression of its plan is not of necessity the way of salvation. Many lunatic asylums and hospitals, with radiating wings and blocks that dominate or retire, make their planning obvious, without making their presence desirable, to the passer-by. . . . Plan expression is simply one, though a most important one, among the many instruments of design of which architecture may avail herself. If in any case she refuses to avail herself of it, there must be reasons which over-ride the claim of the plan and the choice must be deliberate." The town house of Mr. Nigel Playfair, in Kensington, designed by Messrs. Darcy Braddell and Humphry Deane, is described and illustrated, and it may be inferred that client and architect have here worked together. An article upon Wren, in which some of the sources of the great man's inspirations are traced by Mr. Fiske Kimball, should create a stir. "Great floods have flown from simple sources," of course, and Sir Christopher is in no sense depreciated. Mr. T. H. Lyon's beautiful work at Cambridge, Sidney Sussex College Chapel, is described by Mr. L. A. Powys. By permission of the Editor, we are able to give one of the accompanying illustrations. "W." has seen the Queen's Doll's House and it has given him a delight that can be put only into rhyme. In matters of taste, quality, and production, from cover to cover, the REVIEW is its usual sumptuous self.

THE ARCHITECTURAL RECORD for February contains an article by Rose Henderson upon "The Spanish-Indian Tradition in Interior Decoration." She writes: "Following the lead of painters and architects, decorators are adapting Spanish-Indian tradition and design in interesting new interiors, to which they have conveyed something of the charm of the old Mission churches, where primitive vigour and simplicity are combined with the luxuriance of elaborate carving, rich altar-cloths and hangings. In the south-west especially, where the Pueblo-Spanish type of building has been effectively developed, interiors show the carved polychrome beams, decorative friezes, panels and borders, with patterns that are often direct copies of Indian pottery and weaving motifs. Aspen sticks are used with surprising richness of effect, as in the New Mexico Art Museum, where they form herring-bone patterns between ceiling beams. Mexican fireplaces are common, and simple, straight-lined furniture is carved in symbolic devices which are often painted in crude blues, reds and yellows.

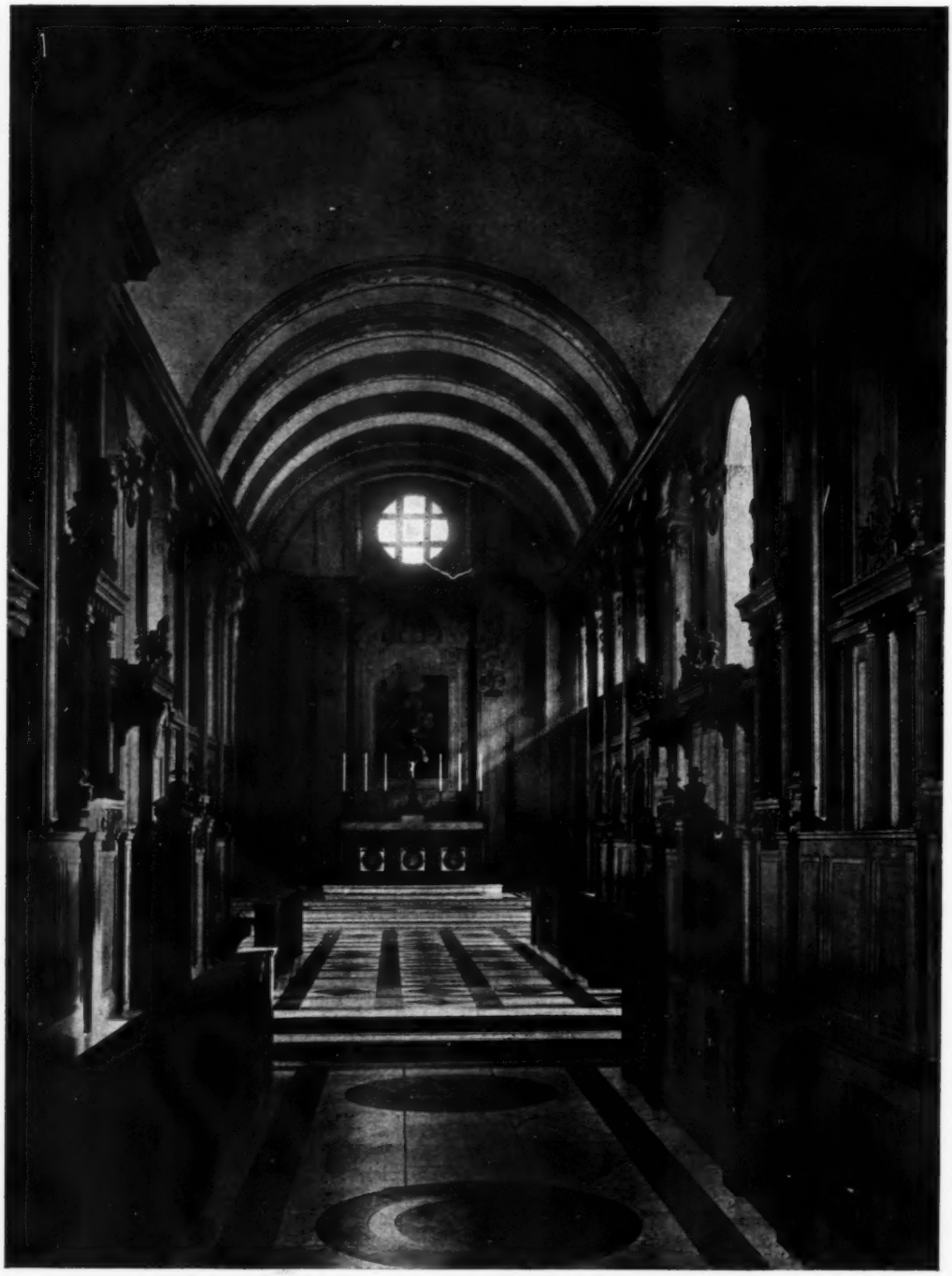
"Both colours and patterns should be used with discernment, of course. When applied to rough plaster or to heavy wooden beams in the plaster houses of the south-west, they are appropriate and satisfying. Some of them would be obviously out of place in the ordinary modern interior: yet



THE FRANCISCAN HOTEL, ALBUQUERQUE, NEW MEXICO.
TROST AND TROST, ARCHITECTS.

(*From "The Architectural Record."*)

* All the above magazines and many others may be seen in the Reading Room at 29 Tothill Street, Westminster.



SIDNEY SUSSEX COLLEGE CHAPEL, CAMBRIDGE.
T. H. LYON, ARCHITECT.
(*From "The Architectural Review."*)

even here motifs could be selected and adapted so as to harmonize. Like the typical Indian blanket, this decorative design is a primitive, desert-born thing, and in the proper setting is as effective as a rattlesnake against yellow sand. The Spanish realized this and used colours and patterns with excellent effect, bringing to the native artistry of the Indian something of the richness and refinement of the Moorish and Arabian influence."

ENGLISH LIFE grows better—if anything which was already so good can grow better—with each number. It is one of those papers in which you always find something interesting, something useful, something fresh. Of some interest to architects is the illustrated article in the March issue, by Mr. John Gloag, on "Furnishing with Modern Work." "Most people," writes the author, "have acquired the regrettable habit of ignoring modern furniture completely, and this is a pity, because many possibilities of fine furnishing are lost through ignorance of the work of present-day craftsmen." Mr. Gloag proceeds to show the extraordinarily pleasant ideas that may be put into practice by using the work of our own time—not to the exclusion of antique models and reproductions, but in agreeable association with the best work of the recognized periods of furniture design. Among the examples of work illustrated is a dining-room by Mr. J. Henry Sellers, and by the courtesy of the editor we reproduce a modern sideboard which is included in the dining-room.

The February issue of THE AMERICAN ARCHITECT contains one more of Mr. Clinton H. Blake's articles upon the "Law as to Architecture." In this he warns the architect of the danger of entering into agreements with clients which may, in the end, lead to his being out of pocket for work done.

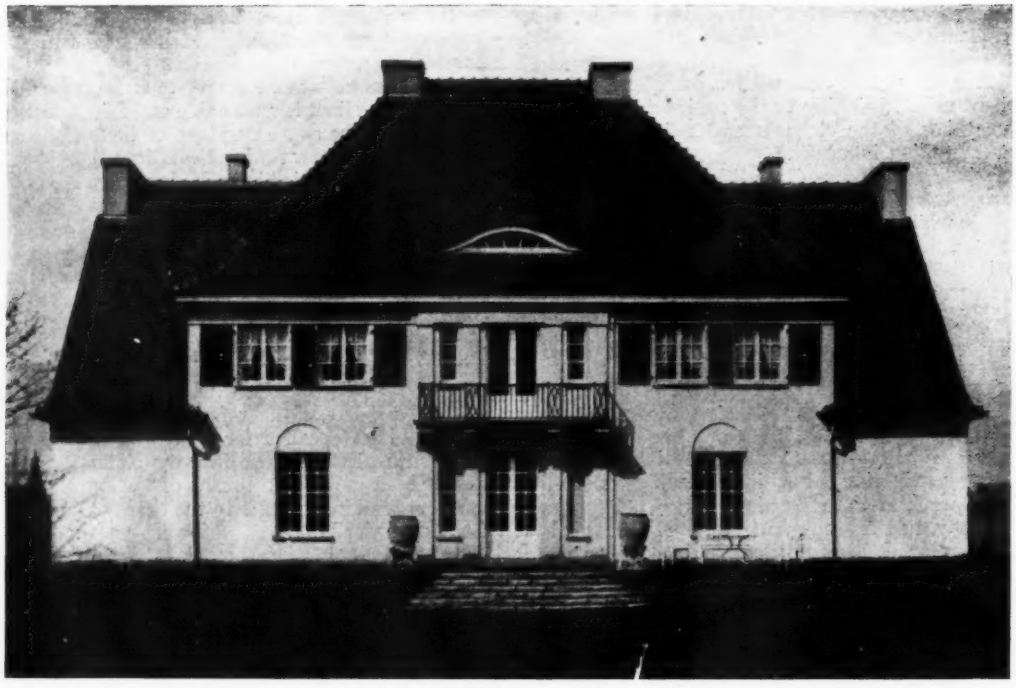
"Sometimes the architect will agree with a client, either by a definite written agreement or verbally, that the plans are to be satisfactory to the client and that, whatever changes are necessary to make them conform to the wishes of the client, will be made and are included in the architect's services. This is a particularly dangerous proceeding. Unfortunately, also, the chances are that it will be adopted by the architect in the case of work involving a considerable amount of money, as it is in just such a case that he is anxious to secure the job and to give to the client such assurance as may be necessary to enable him to do so.

"Where a client is reasonable and fair-minded, and is not inclined to take any advantage of the architect, the latter will probably suffer no ill effects from having entered into an agreement of this kind. If, however, the client is either inclined to sharp practice or of the arbitrary and unreasonable type, the architect will have reason to regret having, in effect, placed himself in the client's hands by agreeing that he will perform whatever services are required to meet the latter's wishes. The architect would much better not secure the job than to proceed with it and be called upon to prepare set after set of studies and plans, without receiving adequate compensation for his work. Not only will his fee be jeopardized under a provision such as that referred to, but, if he refuses to make the changes and additional plans called for by the client, unless he is paid an additional fee, he will face the claim by the client that he has been guilty of a breach of the contract, and that he must respond in damages to the client as well as forfeit any fee for the work done.

"The architect, where new sketches or plans are prepared, should be entitled to receive the reasonable value of his additional services and, if those services involve the change to a different scheme, rather than simply modifications of the scheme first submitted, and the preparation, in effect, of entirely new plans, he should be entitled to payment for the second set of plans on the same basis as the payment accorded him on the plans originally prepared. This applies equally to plans and preliminary studies, and should be covered by the contract, where this is practicable. If it is not covered by the contract in this way, the contract should at the least provide that the architect is to receive the reasonable value of extra services made necessary by changes in the studies and plans. Where this is done, the

A SIDEBOARD. DESIGNED BY J. HENRY SELLERS.

(From "English Life.")



A HOUSE IN KÖLN-MARIENBURG, GARTENAUSICHT.
THEODOR MERRILL, ARCHITECT.
(*From "Moderne Bauformen."*)

question of reasonable value will be one to be determined upon all the facts in the case. The important thing is that the architect should not allow the prospective profit of an important job to blind him to the danger of placing matters entirely in the hands of the client and in effect agreeing to make as many plans as the whims of the client may call for. No job, however important it may be, warrants the taking of any such risk. The more important the work is, the more expense the architect will be put to for changes and for the redrafting of sketches and plans, where the client insists on holding the architect to the letter of his agreement."

Considerable space is also given to the Thirty-ninth Annual Exhibition of the Architectural League of New York.

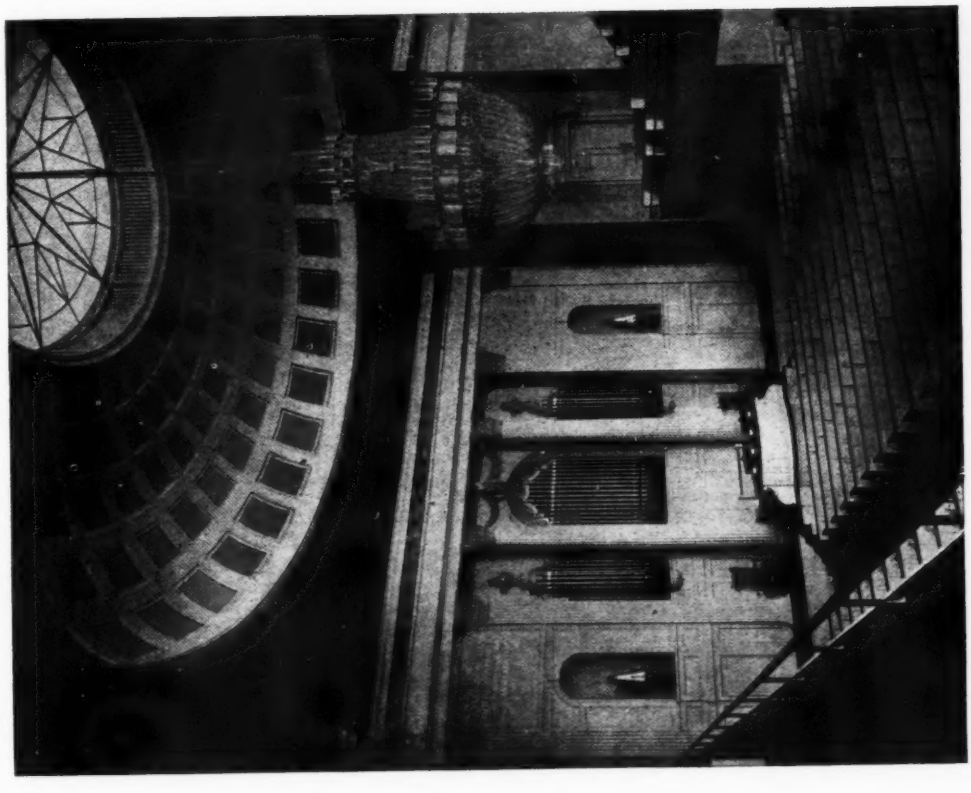
"Success marks this year's exhibition in the same brilliant manner that it has marked those of the last ten years. With succeeding years, the interpretation of architectural exhibitions becomes broader. No longer are they planned and executed as something of purely professional interest. Rightfully, it seems to us, exhibitions are now more largely a motive for popular education in architecture. This value is served by the fact that when the man in the street has visited an architectural exhibition he has received in part a liberal education as to what properly constitutes civic pride. He learns, to use a homely expression, to stand on his hind legs and look through his eyes; to elevate his vision from the sordid level of usual observation and to gaze with appreciation on the good architectural expression that is everywhere to be found. Undoubtedly, there is a very great artistic impulse in these annual showings of architecture."

MODERNE BAUFORMEN, a magazine devoted to the art of architecture in Germany, usually reproduces one or two interiors in colour, and from the two plates in the January issue one can judge that Germany is in no way behind, but perhaps ahead, in the introduction of colour into design. The small house shown indicates the English influence that is to be observed in present-day domestic work.

THE TOWN-PLANNING REVIEW tells us of a new interest in Flint. It is, says Professor Patrick Abercrombie, an almost perfectly preserved specimen of mediæval town-planning. The town, like the castle, was plumped down by Edward I, on a site not particularly important for any but military reasons. So it has had a somewhat low vitality since 1277, changing its tissues less rapidly than is usual with prosperous towns. For these constantly consume and re-create themselves, like healthy human bodies, at their exacting work of satisfying ever-growing human needs. So Flint, in spite of the railway which runs it through the body, is a true "museum piece." With its almost complete avoidance of cross streets, with the fine vista down its main street to the castle, with its founders' determined policy of keeping the houses well spaced out and giving each house its bit of garden, and with its one big transverse street drawn somewhat zigzag, so as to compel the thirteenth-century road-hog to slow down, Flint is a savoursome document of the order of Conway itself, though the charm of Conway is more instantaneously seen.

The British Architects' Conference

The annual conference of the R.I.B.A. and its allied societies in the United Kingdom and the Dominions overseas will take place at Oxford from July 9 to July 12. A preliminary programme is in course of preparation by the Executive Committee under the chairmanship of Mr. Edward P. Warren, F.S.A., president of the Berks, Bucks and Oxon Architectural Association. It is confidently anticipated that there will be a "record" attendance at the meetings, the banquet, the visits, and the excursions, which are now being arranged by the Executive Committee. A preliminary programme will be issued at an early date. Ladies will be especially welcomed at the conference, and it is hoped that a large number will be present. The remarkable popularity of the previous conferences at Liverpool, Cardiff, and Edinburgh, and the attractions offered by Oxford to a gathering of architects should contribute to ensure a memorable success for the conference of 1924.



THE THIRD CHURCH OF CHRIST SCIENTIST, PARK AVENUE, NEW YORK.
DELANO AND ALDRICH, ARCHITECTS.
(*From "The American Architect."*)

Book Reviews

The Smaller House.

THEORETICALLY, there must come a time when everything in the world will be perfect. There will be the perfect man, and he will live in the perfect house. Which will come first is a very nice question. You see—but perhaps we had better keep to what we set out to do.

But our meditations were started by the inspection of some of the houses in a volume just issued on "The Smaller House." There are dwellings here which seem ideal, perfect. If they can ever be superseded by anything better—well, one will lose faith altogether in the Present Day. And yet—what changes there always are. "There are houses included here which, built before the war, are fairly typical of pre-war design; but when these are compared with the post-war houses which compose the greater part of the book, it becomes immediately clear that there is a difference, subtle, perhaps, but radical." And so even now, one can infer, the last word in good planning and good design has not been said. But if there will ever be a better idea for a sleeping balcony than that devised by Mr. Barry Parker for his own home at Letchworth, or a more labour-saving plan than that by Mr. J. M. D. Henderson for a bungalow (it won a prize from "The Daily Mail"), we cannot imagine them.

The domestic work illustrated consists of over fifty examples. House after house is put before us, and the range is as great as from a fishing lodge in Argyllshire to a house in Surrey, a Sussex farmhouse, to a modern Essex inn. What is of great use is the list appended giving the cost of the houses when built with an approximate estimate of present-day cost. As an indication of falling prices, in many instances the latter is the lower.

"Since the war," writes the editor of the volume, in a style refreshing for its clarity, "we have been faced with the absolute necessity of building so that not a halfpenny be wasted because the nation to-day has not a penny to spare. We have been faced with the old problem, how to make bricks without straw, and eventually we have been driven, bitterly against our will, to consider essentials only, and to rule out every kind of trimming."

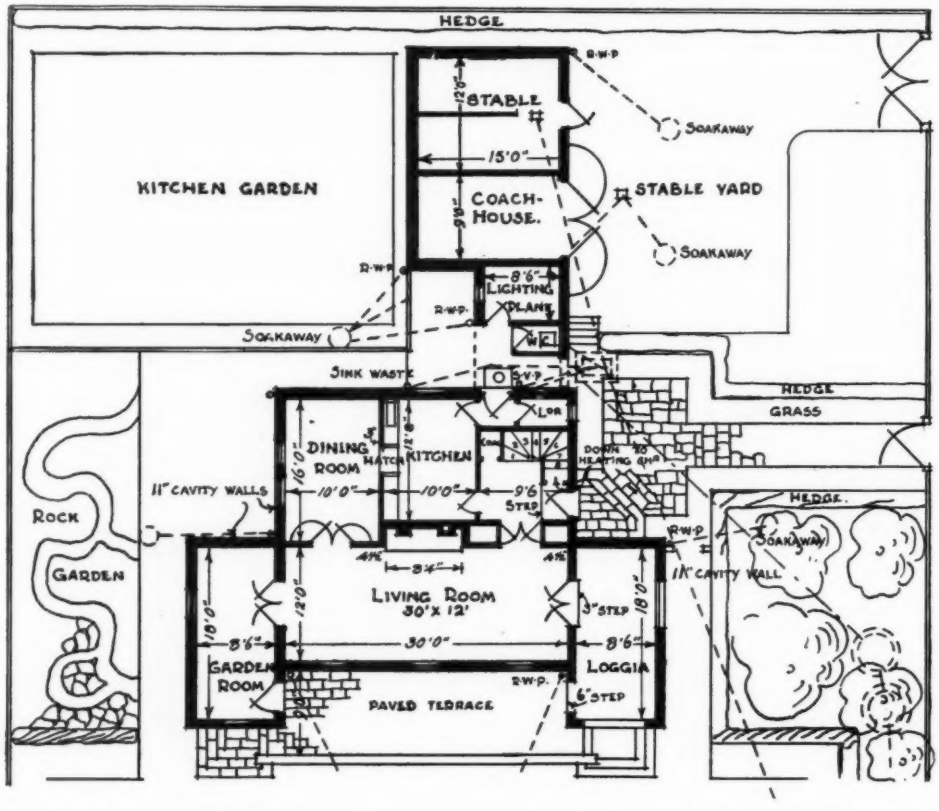
The volume here reviewed goes a long way in teaching how bricks *can* be made without straw (for the task has to be faced, or we must leave the land of Egypt). It does not teach in so many words, but by holding before one examples of what has been done.

"The Smaller House, being selected examples of the latest practice in Modern English Domestic Architecture." London: The Architectural Press. Price 25s.

A Housing Manual.

Despite the supposed dismay with which the City may view the present political situation, those who are interested in national housing cannot but rejoice at the present prospects. The enthusiasm which greeted the unjustly abused Addison scheme was pitilessly quenched by the succeeding Minister, and since then there have been one or two paltry measures, productive, for the most part, of few and bad houses, constructed very often of a hideous assembly of substitute materials, defacing any landscape with which they came into contact as completely as the decried work of the nineteenth-century speculator. Those who understood and were really interested in housing, realized all along that such pusillanimous measures could achieve no real good; not only would the arrears continue steadily to mount up, but the wonderfully improved standard of houses, of house planning, and of house grouping would deteriorate again into the abyss of the previous century.

Throughout the dark years following upon the collapse of the Addison scheme there were both individuals and



A HOUSE AT WORTH, CRAWLEY, SUSSEX: PLAN AND LAY-OUT OF THE GARDEN
(From "The Smaller House.")

A HOUSE AT WORTH, CRAWLEY, SUSSEX. ROBERT ATKINSON, F.R.I.B.A., ARCHITECT.
(*From "The Smaller House."*)

organizations that held fast to their ideals. Foremost amongst the latter must be placed the National Housing and Town Planning Council, and in the first rank of the former must be placed its secretary, Mr. Henry Aldridge. Although varying in detail, the policy of most housing reformers (we use the rather discredited term for lack of a better) is unanimous on one issue, and that is that the provision of houses is a national matter, and cannot be left to the mere adjustment of supply and demand. From whatever aspect the subject is viewed—expediency or morality, health or religion, economy or finance—there can be but one conclusion, and that is that the nation must be decently housed, and if houses cannot be provided one way, they must be provided another. Private enterprise has not and cannot provide what is needed, but the united efforts of the nation could succeed where individuals fail. This united effort must therefore be made. Now, at last, there are prospects that this effort will be made, and there will be no body more deserving of the nation's gratitude than the National Housing and Town Planning Council.

No organization nowadays can do useful work in building up public opinion without resorting to propaganda. The N.H. and T.P.C. has, during the last few years, done invaluable work by means of lectures, of organized conferences, and of publications. Of these the volume before us is the latest example, but although it is the largest, and in a sense the most important, we cannot extend to it the welcome that we should like. Its range is encyclopædic, but its arrangement is chaotic. It is a mass of facts flung together, not only in the most unattractive manner that could have been devised, but also, one is inclined to think, in the least useful manner. In the first place, it is a little hard to comprehend on what basis the housing of primitive Aryan peoples, the funeral vases at Corneto or Bizeni, and similar matters are included in a national housing manual. It is surely a little unjust to speak of such matters as "A History of the Housing Movement." The modern connotation of the word *movement*, as here employed, applies to a comparatively recent and entirely self-conscious activity, and to attribute such an activity to prehistoric cave-dwellers is manifestly absurd. Yet this information, of necessity scrappy, is included in Part I, which has the title just mentioned. But it is only after disposing of this somewhat irrelevant, even if interesting matter, that the real chaos begins. The arrangement, or rather lack of arrangement, consists of myriads of small paragraphs, many of them of only two lines, broken into by headings, sub-headings, tables, figures, quotations, extracts from reports, speeches, statements, and documents, until the mind, as well as the eye, is completely dazed.

With such a haphazard compilation, extending over 520 pages, a thorough index might well be considered absolutely essential. A note tells us that, "in view of the complexity of the subject matter of this book the English method of indexing has been placed aside in favour of the admirably clear method followed by French writers." We can only say that it is not an index at all, but a table of contents, by means of which it is quite impossible to find any precise piece of information, and a proper index should have been included, not instead of, but in addition to, such a table. The book can surely have no other use than as a work of reference; we can scarcely imagine the most ardent housing reformer reading it from cover to cover, and surviving the ordeal.

Part II deals with "Housing Progress between the Outbreak of the Great War (1914) and July 1923." This section contains the various housing Acts, and is fully documented with various forms and regulations; there is also a reprint in full from a leading article which we had the honour of writing for the columns of this JOURNAL, dealing with the high standards of the houses built under the Addison scheme. Part III deals with "The Preparation and Adoption by the State of a National Housing Policy," followed by Part IV, "The Administration of a National Housing Policy." These two parts are the most useful in the book, but throughout there is a lack of discrimination between the general and the particular. Part V contains descriptions of recent housing activity in other countries. The book is illustrated with examples of dwellings from prehistoric times to the present day.

Until recently there certainly was a real need for a comprehensive work on housing; this need has now been largely satisfied by Major Barnes's wise, readable, and discriminating book "Housing." Nevertheless, the subject is so immense that there must be room for other books dealing with it from a different aspect. Major Barnes's book is concerned rather with the general than with the particular. There is thus room for an orderly history of the housing movement, which may be said to have begun with the events leading up to the Torrens and Cross Acts, showing in well-arranged form exactly what has been done in different parts of the country up to date, terminating with an examination of the current lines of thought for dealing with the situation. It is more than likely that before such a work were completed some really bold programme will have emerged towards the achievement of which all who are truly interested will be lending their co-operation. H. J. B.

The National Housing Manual. A Guide to National Housing Policy and Administration, by Henry R. Aldridge, Secretary of the National Housing and Town-Planning Council. Published by the National Housing and Town-Planning Council, 41 Russell Square, London.

Laxton's Builders' Price-Book for 1924.

It was in 1817—two years after Napoleon was vanquished at Waterloo—that one William Laxton first published a price-book for builders.

This same work it is which, after numerous improvements and variations in form and size, still renders so distinctive and unique a service to all engaged in building. An unbroken continuity of publication for 107 years is a very uncommon record for a book of reference, and is an achievement which at once proclaims its prestige and value.

The 1924 edition shows a marked increase in size as compared with its predecessors, and includes, among other new features, chapters on reinforced concrete work and pile driving.

Over 700 pages are devoted to the prices of materials, fittings, and labour. These cover the whole of the building and allied trades, and give the actual costs ruling as lately as December last. Valuable tables and graphs, showing cost fluctuations since 1914, will be found in the preface.

In the blue section of the book there are the names and addresses of the manufacturers of nearly 12,000 specialities or proprietary articles in common use in the building and allied trades, each classified under the brand name of the article.

Besides much other useful information of a technical nature, the book contains the Building Acts and the by-laws of the London County Council.

Laxton's Builders' Price Book, 1924. Kelly's Directories, Ltd., London. Price 7s. 6d.

Useful Pocket Books.

The Practical Engineer Electrical Pocket Book contains nearly 700 pages of information on every branch of the industry, and a buyers' guide and technical dictionary in French, Spanish, and Russian. It is edited by Conrad Arnold, A.M.I.E.E., and has now reached the twenty-fifth year of issue. This year important revisions and extensions have been made in several of the sections. Thus that on lifts and cranes has been rewritten by Mr. Claude W. Hill, A.M.I.C.E., M.I.E.E., and the sections relating to dynamos and motors have been carefully revised. Additions and revision have also been made in other sections.

For the thirty-sixth edition of the Practical Engineer Mechanical Pocket Book and Diary many of the notes have been entirely rewritten, while new matter introduced has increased the editorial pages to nearly 600. The book is edited by Mr. Ernest G. Beck, Wh. Ex., A.M.Inst.C.E., and also contains a buyers' guide and technical dictionaries in French, Spanish, and Russian.

"The Practical Engineer Electrical Pocket Book and Diary, 1924," and the "Practical Engineer Mechanical Pocket Book and Diary for 1924." The net price of each book is as follows:—Cloth binding, 2s. 6d. net; pluviusin, 3s. net. Oxford Technical Publications, 1 Bedford Street, London, W.C. 2.

Correspondence

The correspondence of readers is welcomed. It is naturally preferred that a letter should bear the name of the writer, but the use of a pseudonym is permissible. The Editor does not necessarily associate himself with the views expressed. Anonymous letters cannot be published.

The Rome Scholarship Drawings

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—Your criticism of the Rome scholarship designs, in which we are naturally very interested, contains an implication which is contrary to the facts. It states that of the sixteen entrants nine were from Liverpool, two from Manchester, two from Aberdeen, and three from London. Later on at the end of his article your critic, who, I am glad to notice, does not entirely hide his identity and thereby gains in respect, states that the schools must realize that the Rome scholarship is one of the senior prizes and that to allow junior students to enter serves only to throw the scholarship into disrepute. From these two statements I do not think your critic knows that the procedure for candidates for these scholarships has altered since he himself was the distinguished winner of one of them. There is now a preliminary stage before the recent competition, which was absent in his day. Candidates to-day with their applications state their academic careers and submit portfolios of their work. It is on this showing that the Faculty judges whether students are worthy of being admitted to the first design competition (just held) or not. The work of a number of applicants was this year not considered of sufficient merit for the students concerned to benefit by the competition, and their applications were declined. As a member of the Faculty I am naturally precluded from giving numbers. It must, however, be inferred that the figures given above represent the result of such preliminary selection, and that if junior students (though in the Liverpool case none of less than four years' standing) have been allowed to enter the competition, it is the Faculty itself which has admitted them after careful consideration of submitted work. It should not be forgotten, too, that the average age of students entering is now lower than it was. The war is the cause of this. The war years can be added but are, in general, no longer applicable. When they were, it meant that the candidates were men of more mature minds, if not of greater technical skill.

C. H. REILLY.

The R.I.B.A. Defence League

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—At a recent committee meeting attention was called to a letter signed by Mr. Maurice E. Webb in which he refers to registration.

We beg to enclose a copy of the circular letter signed by us, and dated January 31, 1924; you will see that the only reference in it to registration is as follows :—

"Our committee wonders what reason is to be given now for the admission of several hundred men without examination. Surely the promoters of this foolish scheme will not attempt again to throw dust in our eyes by saying : ' If you admit these men then you will get registration,' or words to that effect, for our parliamentary agents have shown how ridiculous and misleading such an assumption may prove to be. If every architect in England belonged to the Institute, the great difficulty would still be before us, namely, how to make out what is known as a 'public case.' For example, a kindred society of another great profession wanted registration, but, ultimately, had to abandon the idea, not on account of any opposition from its members or from any rival society, but because the society in question could not make a 'public case.'"

Mr. Webb writes that our circular letter "indicates clearly that the policy of this league is now definitely anti-registrationist for reasons set out in the circular." This entirely misrepresents our views, but Mr. Webb gives us another opportunity to remind your readers that the R.I.B.A. Defence League has always been, and is still, in favour of registration. In our letter of January 31 we gave the principal reason why we consider it will be so hard to obtain, and we did so at greater length in our letter of January, 1922, when we printed *in extenso* the opinion of the parliamentary agents of the R.I.B.A.

Whatever views your readers may have in favour of or against unification, or amalgamation with any society or societies, we feel convinced that a very large majority of the members of the R.I.B.A. are satiated with these constant attempts to undermine the status of the Institute, and the usual result of the initiation of such schemes is to stir up strife and resentment, and create bad feeling at the R.I.B.A.

The Defence League was founded to protect the interests of those who have entered the Institute in accordance with our charters and by-laws and has no other object.

ALFRED W. S. CROSS,
Chairman.
SYDNEY PERKS,
Hon. Secretary.

Building Contracts

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—I was very interested to read Mr. Murray Hennell's article on Contracts in THE ARCHITECTS' JOURNAL.

The cost-price contract, item three, is very clearly set out, but in my judgment Mr. Hennell misses a very important point, viz., in all cost-price contracts quantities should be prepared and priced at current rates, and it is upon this the lump-sum commission can be agreed. Also the quantities are an easy means of checking cost and making any adjustments at completion. Ordinary variations should carry no extra commission. Clear additional work would carry extra commission pro rata. A measured valuation at completion should be made as in the case of the lump-sum contract.

In my opinion the commission should never be a percentage—it is wrong in principle. My firm only accepts those contracts with lump-sum commissions. I think it is a contract very favourable to the owner, especially for certain types of work. The builder will work for a very small profit with a large, quick turnover. But, and this is a big point, you must have a straight builder. There must be no secret discounts. The client is entitled to all discounts. Also it must be a builder with a good organization who gets his work out cheap. One man's cost could well carry a good profit for another man better organized. The foremen and men must not know or think it is a cost job, and the quantities and valuation avoid this. There is more work done on the lump-sum basis than many architects realize. My firm, within the last fortnight, has secured four contracts amounting to over £200,000 on this basis. You would be surprised to know how small the commission is, but it is all rush work to be done within nine months, so for a quick turnover it is worth while.

CONTRACTOR.

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.

SAFE LOAD ON TILE LINTEL.

"E" writes: "Are there any data from which may be computed the safe load which a tile lintel will bear, apart from the load carried by the concrete or other lintel built behind?"

—The information given is hardly sufficient to enable a reply to be framed. If the load is carried by a lintel or relieving arch at the back, the face work will have only its own weight to support owing to the bonding of the brickwork above. Then there is the question of the construction of the tile lintel. Presumably it would be terra-cotta facing blocks, which would not support more than their own weight unless tied back by cramps or otherwise to prevent bulging, when they would act as an arch. An elevation and section would have made the matter clear, and probably have also enabled some calculations to be made.

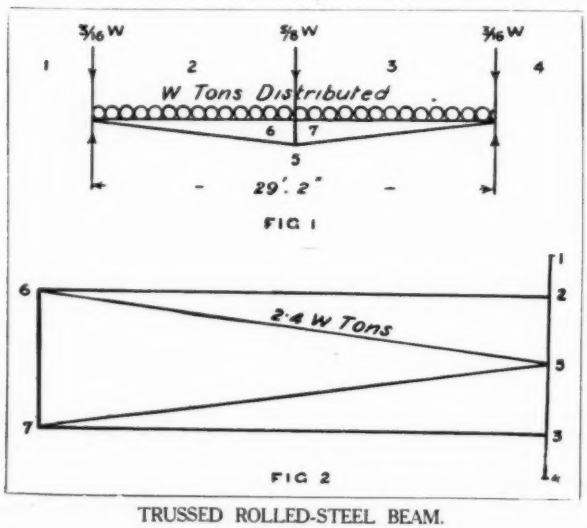
HENRY ADAMS.

A TRUSSED ROLLED-STEEL BEAM.

"J." writes: "Two 9 in. by 7 in. R.S.J.'s are supported in the middle by a strut and tie rod. Under the present load the beams have sagged 2½ in. in the middle. What is the present value of the beams, etc., as regards carrying power, that is the moment of resistance, and how is this arrived at? When is a beam considered to have lost its structural value by bending?"

—The junction of the thread with the body of the 1½ in. tie rod is apparently the weakest place. Drawing the frame diagram, Fig. 1, and the stress diagram, Fig. 2, and scaling off, the stress in the tie is 2·4W tons. The 1½ in. rod is 1·3 sq. in. at bottom of thread, this at 5 tons sq. in. gives 6·5 tons, therefore $W=\frac{6\cdot5}{2\cdot4}=2\cdot71$ tons distributed. The weight of joists, strut, and tie is about 1·718 tons, leaving 0·992 tons, say 1 ton, for the safe distributed external load, showing that the design is a mere picture and could never have been calculated. No information is given as to the actual load, but a deflection of 2½ in. shows that the structure must be upon the point of failing. The best that can be done now is to shore it up while a new strut and new brackets are being made to take two 1½ in. tie rods with four 1 in. bolts in each of the brackets. This would carry a distributed load of 3·617 tons, say 3½ tons, beyond its own weight. The span is so great compared with the depth of the joists that nothing can be allowed for their stiffness, and all the load must be taken by the truss as a whole.

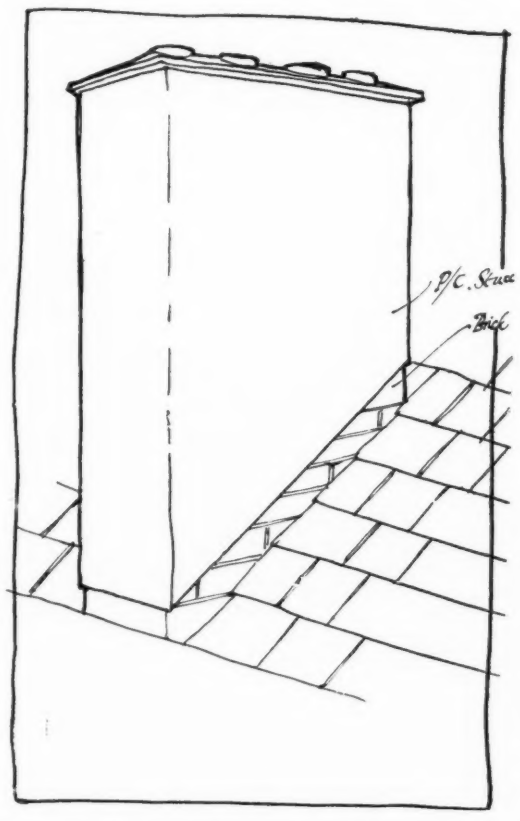
HENRY ADAMS.



TRUSSED ROLLED-STEEL BEAM.

FLASHINGS TO STUCCOED CHIMNEY.

"H" writes: "Can you suggest a method of treatment for the flashings of a brick chimney which is to be cased in Portland cement stucco? The chimney is built on the slope of a slate roof."



—The point of the enquiry is presumably an objection to the appearance of the customary soakers and stepped cover-flashing, which admittedly have a ragged look when the bottom of stucco facing follows the raking steps. It is, however, quite possible, after completing the flashing, to execute the stucco to a raking line parallel with the roof slope and covering the points of the cover-flashing as far as the re-entrant angles—a guide-strip being temporarily fixed as a finish for the plasterer to work to. In situations not unduly exposed the cover-flashing may be dispensed with, and the stucco carried down over the tops of the upstanding soakers about 1 in. In that case the soakers themselves may quite well be of zinc, if the situation is not otherwise against that material.

E.

OLIVITE PLASTERING.

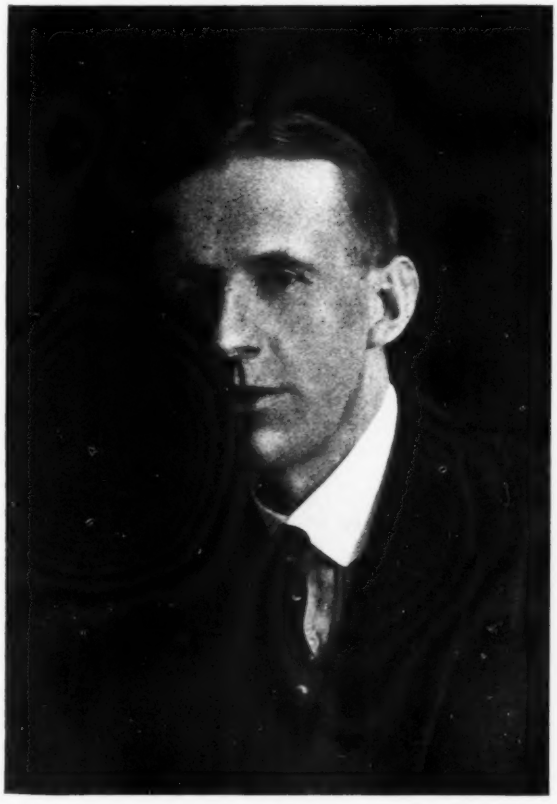
A correspondent wishes to obtain the name and address of the manufacturers of the Olivite plastering process. Can a reader supply this information?—[ED. A.J.]

Professorial Conferment for Mr. Lionel Budden

At a meeting of the council of Liverpool University, last week, it was agreed that the title of Associate Professor be conferred on Mr. L. B. Budden, M.A., A.R.I.B.A., senior lecturer in the theory and practice of architectural design in the School of Architecture.

Mr. Budden has earned his success. His work is marked by refinement and taste, and as a teacher his achievement has been notable. Recently he won a competition for the Birkenhead War Memorial, while with Professor Abercrombie several years ago he was second in an open competition for replanning the centre of Bradford and for re-designing its street façades. At the School of Architecture he is responsible for the theory of design, and the Royal Institute of British Architects awarded him its annual medal for his "Introduction to the Theory of Architecture." Mr. Budden, who was born in 1887, was educated at Merchant Taylors' School, Crosby, and at Liverpool University. He entered the School of Architecture there in 1905, and graduated with first-class honours in architecture in 1909. He was awarded the Holt Travelling Scholarship and University Scholarship in Architecture, and was a student at the British School at Athens, 1909–10. In the latter year he took his M.A., and was appointed studio instructor in the School of Architecture. A year later he became assistant lecturer, first in the history, and afterwards in the theory, of architecture. In 1913 he became an Associate of the Royal Institute of British Architects. Rejected on medical grounds for war service, he was in 1915 elected a member of the Faculty of Arts, and was in charge of the School of Architecture (in the absence of the professor) until 1919.

In 1919 he became senior lecturer in the Theory and Practice of Architectural Design. After being convenor to the Board of Studies in Architecture and Civic Design, Mr. Budden became chairman of that body for 1921–22.



PROFESSOR LIONEL B. BUDDEN.

He was chosen as Liverpool representative of Associates of the R.I.B.A. to serve on the London Committee on Architectural Registration, and was appointed by the R.I.B.A. thesis examiner in design for final examination of that body. In 1923 he was elected to the Council of the Liverpool Architectural Society, and in other ways his standing has been recognized. In addition to the competitions mentioned, Mr. Budden (in collaboration with Mr. H. J. Rowse) was first in the recent competition for Collegiate Buildings at King's College, Cambridge.

Professor Lethaby Declines the Royal Gold Medal

A special general meeting of the R.I.B.A. was held last week for the purpose of electing the Royal Gold Medallist for the current year. At the outset of the meeting, however, the chairman (Mr. J. A. Gotch, president) announced that they would not be able that night to follow the usual procedure, because Professor Lethaby (who was nominated for the Royal Gold Medal some weeks ago), "owing to personal reasons and extreme modesty, felt it impossible to accept the medal." The Council, therefore, would be unable to present the medal this year.

Academic Dress

Mr. C. Ernest Elcock, F.R.I.B.A., moved the following resolution :—

"That the resolution on the subject of academic dress passed at the general meetings on April 30, 1923, and on January 7, 1924, be rescinded, and that no further action be taken in the matter of the proposed academic dress."

In introducing the resolution, Mr. Elcock assured the gathering that it was brought forward entirely as a private member's motion, and not at the instigation of any member of the Council.

The resolution was seconded by Mr. Septimus Warwick, F.R.I.B.A.

Mr. W. E. Riley, F.R.I.B.A., rose to oppose the resolution, and contended that members of the Institute had an educational and professional right to an academic dress. There was nothing ridiculous about the idea—they could take it from him. He then proceeded to read the names of various bodies that donned ceremonial dress, mentioning, amidst laughter, that of the Tonic Sol-Fa College. Some members of the R.I.B.A., he concluded, had already had an academic dress made. The matter, to him, was of no personal interest, but he did not like members of the Institute to have been put to expense for a dress they would be unable to wear.

Mr. William Woodward, F.R.I.B.A., in the course of remarks in support of Mr. Riley, mentioned that he was one of the members who had had the dress made.

Mr. W. Scott-Moncrieff said that the very people who were giving a medal for the best building of the year were the very people who were saying that an academic dress was absurd.

Mr. Edward Warren, F.R.I.B.A., whilst feeling sure that Mr. William Woodward would grace any costume whatsoever, held that a non-academic body should not wear academic dress.

After further discussion the motion was put to the meeting, forty-five voting in favour of it, and twenty-two against.

The president then moved a vote of thanks to Mr. Arthur Keen, who had been responsible for the reconstruction of the gallery at the R.I.B.A. (The meeting was the first to be held in it since its closing for alterations in the autumn.)

Mr. Keen, acknowledging the vote, said that he would like Mr. Bagenal to be associated with him. Mr. Bagenal's advice had been considered in all respects, and only in one or two respects had it been superseded.

The Practical Design of Steel Beams and Pillars in Buildings.—5

Factor of Safety and Working Stress

By W. BASIL SCOTT, M.I.Struct.E.

IN article 2 of this series (October 17, 1923) it is stated that structural mild steel to the British Standard Specification must show a tensile *breaking strength* of 28 to 33 tons per sq. in. As a basis for calculation in steelwork design, 30 tons per sq. in. is taken as a fair average value of the above in tension and in compression. This value is also termed the *ultimate stress intensity*.

Stress intensity is the quotient obtained by dividing the total stress developed uniformly over a cross section by the area of the cross section. It is the amount of stress per unit of area and it is usually expressed in tons per sq. in. If a steel member is in a state of simple tension or compression, the assumption is made that the stress is distributed uniformly over its entire cross section. This assumption is not strictly true, but it is sufficiently so for practical purposes.

Although structural mild steel made to the British Standard Specification may be relied upon to develop an average ultimate stress intensity of 30 tons per sq. in., no argument is necessary to demonstrate the inexpediency of attempting to load it to this maximum. The ultimate stress intensity, therefore, is divided by a number called the *factor of safety* in order to obtain a lower value termed the *working stress intensity* or simply the *working stress*.

In building construction the factor of safety generally adopted for mild steel beams under static loading is 4, and the corresponding safe or working stress in tension and compression is 7·5 tons per sq. in., viz., 30÷4=7·5.

This is a very simple statement, but it is one of the greatest importance. So much depends on the factor of safety of 4 that it is desirable to remark at some length on its origin and function.

It has been termed the "factor of ignorance," and it has been exhibited as the essence of wisdom.

The probability is that these are expressions of opinion from two different points of view, and that the factor of safety of 4 is neither such a perfectly conceived value that it should not be modified under any circumstances, nor is it merely a convenient device to cloak ignorance.

Two points of view may be suggested.

One is that the only function of the factor of safety is the determination of a proper working stress.

The other is that the function of the factor of safety is to provide for various contingencies, such as the difficulty of estimating floor loads accurately and the possibility of a building being put to a use for which it was not designed.

These statements may appear to have the same resultant meaning, but there is this difference.

The first one means that even when the loads can be calculated exactly, then the factor of safety of 4 and the working stress of 7·5 tons per sq. in. are the correct values to be used.

The second one implies that the working stress of 7·5 tons per sq. in. is a desirable average to be kept in mind, but that it may be decreased or increased according to the accuracy of the load calculations and the history of the building after completion.

Before examining these two points of view further, some comment may be made on the possible origin of the factor of safety of 4 for structural mild steel under static loading. It is not a matter to be dogmatic about, but it does not appear to have been originated by Board of Trade regulation in the same way as the factor of safety of 6 corresponding to a working stress of 5 tons per sq. in. prescribed for bridges.

Before the introduction of mild steel (or ingot iron, as it was called) there were numerous cases on record of failures of cast-iron and wrought-iron beams in buildings. That these failures were generally traceable to ignorance of the principles of design does not affect the fact that the new material, mild steel, was regarded with grave suspicion. Expression of this suspicion may be found in architectural text-books published little more than twenty years ago, and it is to be admitted that the early product of the Bessemer process of steel manufacture was not the uniformly reliable material we have to-day. It does not seem unreasonable, therefore, to regard the common acceptance of the factor of safety of 4 as a survival from the time when it was not considered safe to load mild steel beams with more than one-fourth of the actual load that by experiment of a rough and ready kind was found sufficient to produce failure. If this supposition is correct, it follows that accuracy of load calculation was assumed, and that the factor of safety of 4 was not intended to provide for problematical load contingencies.

At the present time the only British Act of Parliament prescribing working stresses and floor loads is the London County Council Building Acts Amendment (1909), which is applicable to buildings of steel skeleton construction in London. This Act prescribes a working tensile and compressive stress of 7·5 tons per sq. in. for beams, which, of course, corresponds to the factor of safety of 4. If this is considered in conjunction with the specified floor loads, it appears that the intention of the Act is the same as the early intention.

On the foregoing basis, the function of the factor of safety of 4 is simply to produce 7·5 tons per sq. in. as the correct maximum value of tensile and compressive stress actually realized in beams in practice as the result of proper load calculation and design.

The merits or demerits of the factor of safety of 4 may now be examined from this point of view.

In the first place, a factor of safety of 4 does not mean that steel is only to be worked to one-fourth of its capacity.

Steel is an elastic material, but its elasticity or power of recovery is lost long before its average breaking strength of 30 tons per sq. in. is attained.

When specimens of steel are being tested to destruction, the point at which it loses its elasticity is termed the *elastic limit*, and the average limit of elasticity for British structural mild steel may be taken roughly at 15 tons per sq. in. The exact determination of the elastic limit requires much care, so that in ordinary commercial testing the point at which the material obviously begins to fail under the load is noted and called the *yield point*. For our purpose, the elastic limit and the commercial yield point may be taken at the same average value. This means that if steel is stressed beyond the value just mentioned, it becomes permanently deformed or strained; it is reduced to a plastic condition in which, being without resilience, a slight addition of load is sufficient to cause complete collapse.

In this way the nominal factor of safety of 4 on the

ultimate strength is reduced to an actual factor of safety of 2 on the elastic limit or yield point.

A steel beam, when stressed to 7·5 tons per sq. in., is supporting a load equal to half the maximum that could be applied without permanent injury resulting.

The advocates for the factor of safety of 4 hold that a margin of safety of 100 per cent. is the correct allowance, but during recent years, it is being argued on the other side, that such a margin of safety is excessive in view of the proven reliability of modern mild steel and our accurate knowledge of its capabilities. On the assumption of accurate load calculation, a margin of 50 per cent. would appear to be sufficient for a material of uniform quality, free from hidden flaws and not liable to sudden failure.

Deflection is not necessarily involved in the question of safety, so far as human life is concerned, but excessive deflection is a danger to property as well as being displeasing to the eye.

If a beam is stressed to 7·5 tons per sq. in., and the span is greater than twenty times the depth of the beam, then the deflection will exceed one-thirty-second of an in. per ft. of span, which is considered the maximum allowable over plastered ceilings.

For instance, a girder composed of 1–H beam 12 in. by 5 in., with 1-12 in. by ½-in. plate on each flange, and weighing 107½ lb. per ft., supporting a uniformly distributed load of 23·3 tons (which stresses it to 7·5 tons per sq. in.) on a span of 26 ft., will deflect practically 1 in.

In this case, although the working stress produced by the factor of safety of 4 is not exceeded, yet the deflection is too great for plaster work.

Such an example has been cited in support of a high factor of safety, but its relevancy is questionable. The actual question it raises is not the strength of the steel, but the economic ratio of depth to span.

In the example, the span is 24 times the depth of the girder, but if on the same span a plain H-beam 18 in. by 7 in. at 75 lb. per ft. be used and stressed as before to 7·5 tons per sq. in., then the load of 23·3 tons may be carried with a deflection of ⅝ths in., which is not excessive. The span is less than 18 times the depth of the beam, and there is a saving of 30 per cent. on the weight of the beam in addition to the cost of workmanship.

Against the high factor of safety it is also argued that there is less necessity for its retention, because actual tests of beams to destruction or beyond the elastic limit have shown higher results than those obtained by calculations based on established theory. This, however, is an intricate and controversial question on which no opinion need be expressed here.

Sufficient has been said to show that on the assumption of accurate load calculations there are opinions both for and against the commonly accepted factor of safety of 4.

The second point of view is more complex and obscure than the first, and the idea that the factor of safety of 4 may be looked upon as an all-powerful medium providing for errors, aberrations, and contingencies may be responsible for the invidious name "the factor of ignorance."

In favour of retention, it is stated that buildings are liable to be put to uses for which they were not designed. Particularly, that dwelling-houses erected in good residential localities are in later years occupied as warehouses and workshops.

This cannot be denied, nor that such transformations are made without structural strengthening operations.

The argument raises a question concerning the duties of an architect. If an architect is commissioned to design a residence, should he make it strong so that at some future period it may be used as a warehouse, or if he carries out the ascertained requirements of his client, has he performed all that can reasonably be expected of him?

If it is the duty of an architect to provide for undefinable future contingencies, is it not merely a begging of the question to assume that efficient provision can be made by means of a factor of safety, which according to the only relative Act of Parliament is prescribed for the definite conditions specified therein?

The other leading argument put forward in favour of the retention of a high factor of safety is the admitted difficulty of calculating accurately the live or superimposed loading in a building.

It is a counsel of perfection to say that floor loads should be determined exactly; therefore, the argument appears to be a plausible one or in accordance with the popular maxim, "safety first" should be observed where there is doubt.

The general argument against the foregoing is that the factor of safety is neither intended to be a means of evading this difficulty nor is it suitable for such a purpose.

It is contended also that the custom prevailing throughout this country at the present time is to overestimate rather than to underestimate floor loads; therefore, if floor loading is to be taken into account, the factor of safety should be decreased instead of being retained at its present value.

The idea that the factor of safety of 4 is supposed to create an indefinite reserve of strength to be drawn on as may be required for future contingencies or underestimated floor loads, also implies that the factor must be considered too high in all cases where the loading may be calculated fairly accurately (and these are not uncommon) or where a definite maximum may be provided for.

If I may express a personal opinion on a subject of much importance, it is this:—

1. The function of the factor of safety is to determine a maximum allowable working stress.

2. In view of the uniform quality of structural mild steel made to the British Standard Specification, the maximum allowable working stress of 7·5 tons per sq. in. might be increased by such an amount as may be agreed upon after careful consideration.

3. When provision has to be made for future contingencies or for the difficulty of estimating floor loads accurately, it should be done by means of thoughtfully increased load allowances and not by haphazard reliance on a factor of safety irrespective of its value.

4. Measures should be taken to prevent a drastic change of the use of a building involving greatly increased floor loads without any examination of its suitability for the new condition.

5. In every case, every possible means of making an accurate estimate of loading and future contingencies should be exhausted.

6. A higher working stress and lower factor of safety might result advantageously in an increased knowledge of the theory of structural steelwork design.

Floor and other loads will be considered in the next article.

[The previous articles in this series appeared in our issues for September 5, October 17, November 14, and January 16.]

Steel Construction

At the last meeting of the Sheffield, South Yorkshire and District Society of Architects and Surveyors, Professor J. Husband, M.I.C.E., M.As.Soc.C.E., delivered a lecture on "Steel Construction." The requisites of a good foundation were enunciated, and the importance emphasized of distributing the load in order to ensure uniform settlement of all parts of the framework. Several arrangements of foundations were illustrated and expedients for overcoming particular difficulties noticed. The general design and value of grillage foundations were considered, the various types of stanchions suitable for framed buildings were reviewed, together with their relative advantages and disadvantages. Matters relating to the effects of machine-riveting on built-up stanchions, arrangement of joints and design of base castings were discussed, after which the several types of floors suitable for use in steel buildings were dealt with in detail, and very fully illustrated on the screen.

Contemporary Art

The Drawings of Randolph Schwabe.

Not so long ago a drawing in pencil or charcoal was valued for what it left out; Randolph Schwabe has changed all that by the compelling verisimilitude of what he puts in. We know that "Alice putting on her Shoes," and "Alice Knitting" has feet with five toes and hands with four fingers and a thumb, and these two exquisite studies gain largely on that account. "Turner's Circus, Newquay, Co. Clare," loses nothing by its figures being made to live and by their humour, and "The West Mersey Regatta" is a real subject. There is no perfunctoriness about Schwabe's drawings; you know his joy in doing them was at least as big as yours in beholding them. They are so true that in front of them there is no question as to the value of representation—it is obvious here. "Shelling Peas" and "The Afternoon Rest," not to mention the portrait studies of J. D. Innes and E. Bernard Lintott, are quite true representations, and need nothing more to express themselves. There are several other drawings to the same effect, while the architectural etchings, especially "Nash's House, 14 Regent Street," "The Quadrant," and "The Basilica of Constantine," admit of no discussion about it. They are not only fine etchings, finely drawn, they are subdued to the architectural medium from which they are worked; architecture suffers no disadvantage in them as representation.

The Reginald Frampton Exhibition.

There is no doubt that English art has suffered by the melancholy early death of E. Reginald Frampton. He was a fine artist rather than a great painter, but his versatility afforded him a wide appeal to people of taste. He painted in oils, he drew in water-colour; he was an observer of Nature and a lover of the literary; above all he was a decorator. He felt Nature, and must have studied his land and sea work direct, and having a strong sense of decorative form and a clear, clean feeling in colour, he subdued Nature to design more formal than Nature usually affords. The exhibition, which is held at the Fine Art Society's Galleries, includes examples of most kinds of his varied and always pleasing work.

Drawings in Water-colours.

At the St. George's Gallery, D. Murray Smith is showing a collection of his accomplished drawings, mostly of the Midlands. There are two Buckinghamshire studies: "Autumn," and "A Farm," which exhibit charming colour effects, and some of the others are well-observed impressions of light.

Cumberland and North Wales afford excellent subjects upon which the distinctly talented art of E. Carter Preston has been exercised to advantage. A very fine sense of distances is achieved, and not least in the smaller drawings, as shown at the Fine Art Society.

Harry Goodwin's half-century of drawings of Italy and Switzerland at Walker's Galleries include a number of studies of buildings which have distinction. Those of "The Sanctuary, Como Cathedral," "Capri," "The Palazzo Municipale, Perugia," and "The Campanile, Venice," are marked by admirable atmospheric effects.

Exteriors and Interiors.

Delissa Joseph's architecture is well known, but reminders of it are provided in the form of illustrations and photographs of synagogues, hotels, and flats at the exhibition now being held at the Suffolk Street Galleries, Pall Mall. In conjunction therewith Mrs. Lily Delissa Joseph is showing a considerable collection of paintings which include several of interiors at the National Gallery among many others; some landscapes, and some portraits of girls, are evidences of a versatile and industrious talent.

Mural Paintings for Underground Station.

A very satisfactory termination to the discussion about the rejection of the students' panels by the County Hall, so far as the two emanating from the Westminster School of Art are concerned, has been reached by Mr. Walter Bayes, who has disposed of them to Mr. Frank Pick, of the Tube Railways. They will form part of the wall-decoration of Westminster Underground station, for which purpose they are eminently suitable. KINETON PARKES.

Town-Planning Conference and Exhibition at University College

It is interesting to note how in the growth of Local Government there has ever been a gradually increasing demand for greater creative ability on the part of officials responsible for its administration. This is particularly apparent in regard to the preparation and carrying out of town-planning schemes. Perhaps if town planning had been more a matter of judicial administration, and less a matter of imagination, it would have been put into operation to a far greater extent than it has been. Hence, there is need for education in town planning.

It is ten years since there was founded in London a department of town planning in connection with the School of Architecture at University College, and during these ten years a large number of students have passed through their certificate and diploma courses, and have emerged as town planners.

Immediately after the war, short courses were provided for officers returning overseas, and the new method of developing land, which the modern interest in town planning has evolved, will, no doubt, have a considerable influence in the future development of our colonial towns. But in a new subject like town planning, we are all students, and progress in education in the subject has depended very much upon the accumulated successes of good students.

As marking a stage in education in the subject, and as providing an opportunity for those who are not actually students to avail themselves of the teachings of the recognized exponents of the subject, it has been arranged during the week, March 31–April 5, to hold a town-planning conference and exhibition at University College, and a very excellent programme has been provided.

The exhibition is to be confined to the work of past and present students, and to the exhibition of important town-planning features in the neighbourhood of London.

The exhibition will be opened by His Royal Highness, Prince Arthur of Connaught, on March 31, and the following is the programme of what is to take place during the week :—

Tuesday, April 1, at 5.30.—Address by Dr. Raymond Unwin on "Zoning requirements of Town-Planning Schemes under the Act." Chairman : Mr. Alfred Gotch, president of the R.I.B.A.

Wednesday, April 2, at 5.30.—Address by Mr. Geo. Pepler, on "The Technique of preparing Maps in connection with Town Planning Schemes." Chairman : Mr. Thomas Mawson, president of the Town Planning Institute.

Thursday, April 3, at 5.30.—Address by Dr. Gibbon on "Town Planning Schemes in relation to their Regional Development." Chairman : Mr. Neville Chamberlain.

Friday, April 4, at 5.30.—Address by Mr. Topham Forrest on "Architectural Interests involved in the making of Town Planning Schemes." Chairman : Mr. Andrew Taylor.

Members of local authorities and architects are cordially invited to attend the lectures, and as the conference is entirely educational, great importance is attached to the value of open discussion.

The London County Council have very kindly (through Mr. Topham Forrest, their architect) intimated their intention of assisting with the exhibition of models and maps. The students in the course of their studies have prepared schemes for very many interesting areas around London, and an exhibition of these should be of great interest to the local authorities concerned.

Parliamentary Notes

[BY OUR SPECIAL REPRESENTATIVE.]

The Housing Subsidy.

In the House of Commons, Sir P. Sassoon asked the Minister of Health whether he could see his way to grant to private builders who, having commenced to build houses with the approval of their local authority, but before their local authority's scheme had received the approval of the Ministry, completed such houses in all respects in accordance with such scheme as subsequently approved by the Ministry, the same financial assistance to which such private builders would have been entitled had they postponed commencing such houses until after the Ministry had signified its approval of the scheme?

Mr. A. Greenwood, Parliamentary Secretary to the Ministry of Health, said that in cases in which the Minister was satisfied that builders, on the faith of assurances given by or on behalf of local authorities, had proceeded with building in anticipation of the approval of the local authorities' scheme for assisting private enterprise, the equivalent of the Government grant under the Act would be paid in respect of houses which would otherwise be eligible for assistance.

Mr. Wheatley, the Minister of Health, informed Mr. Black that it was estimated that on the basis of the present rents and charges the deficit to be made good by the Exchequer in respect of houses erected in England and Wales under the provisions of the Housing and Town Planning Act, 1919, would be approximately £7,700,000 per annum. The deficit would continue for sixty years, but when the loans raised for roads and sewers were repaid at the end of twenty and thirty years respectively, a reduction in the annual sum would be effected. The total amount paid in respect of lump-sum subsidies to private builders under the Housing (Additional Powers) Act, 1919, was £9,498,000. No further liability arose in respect of these houses. The liability of the Exchequer for houses erected to January 31 last under the terms of the Housing Act, 1923, was £28,000 per annum for twenty years.

Rural Housing.

Replying to Mr. E. Brown, Mr. Wheatley said that schemes had been approved by the Minister of Health for the erection of houses in rural districts by rural district councils and private enterprise providing for 24,526 houses. Of these, 3,398 were houses to be built by the rural district councils, and 21,128 by private enterprise. Of the 3,398 houses to be built by the local authorities contracts had already been entered into in respect of 1,200 houses, and seventy-six of those had been completed. In respect of the 21,128 houses included in private enterprise schemes, certificates had been issued on full approval of plans for 12,352 houses, and of those 977 had been completed. The number of houses erected with State assistance by rural district councils, public utility societies, and private persons in areas administered by rural district councils were as follows: 1919, six; 1920, 3,851; 1921, 25,248; 1922, 20,103.

Office of Works' Housing Schemes.

Mr. Jowett, the First Commissioner of Works, informed Lt.-Com. Kenworthy that the average cost of the 5,178 houses built by the Office of Works was, approximately, £836, but many of those houses were constructed when wages and building materials prices were at "peak" level. The average cost of those now under construction was estimated to work out at from £400 to £500. These figures included the cost of roads, paths, sewers, and fencing, and every charge, with the exception of the cost of the land. The types varied from flats consisting of living-room, scullery, and one bedroom, to houses consisting of living-room, scullery, parlour, and four bedrooms, with bathroom, etc. The number of houses to the acre varied from ten to twelve. Approximately 300 men were engaged on the houses now under construction. The whole of this labour was employed by contractors and not by the department. The building of further houses depended on the general housing policy of the Government, which was at present under consideration.

The Density of Houses.

Answering a question with regard to density, Mr. Wheatley said he proposed to take steps in connection with future approval of local authorities' housing schemes to require the authorities to submit to him any proposals for building at a density exceeding twenty to the acre.

Housing at Plymouth.

Mr. Wheatley informed Mr. Hore-Belisha that the number of houses erected by the town council in the borough of Plymouth under the Housing Acts was: 1919, nil; 1920, four; 1921, 261; 1922, 403; 1923, 36; total, 704. The number of houses erected by private enterprise under those Acts was: 1921, 8; 1922, 10; total, 18.

Unfit Houses.

Mr. Wheatley informed Mr. C. Wilson that during 1922, 15,867 houses in England and Wales were found to be unfit for human habitation.

The Supply of Bricks.

Commander Bellairs asked the Minister of Health whether he was aware that clinker refuse from destructors and electric-light works was worked up abroad, successfully and cheaply, into bricks for building, and whether he would consider this method of relieving the brick shortage and obtaining cheaper houses?

Mr. Wheatley said he was aware that good clinker might be used successfully as aggregate for concrete, though it was difficult to form a judgment of relative cheapness of the process without reference to local conditions in the particular case. He had every hope that the brick industry would succeed in producing sufficient bricks to meet the housing needs, and he should welcome all action to that end on the part of the industry. Attention would, of course, be given to all promising methods of alternative construction.

In answer to Major R. Williams, Mr. Wheatley said that he was hopeful that the demand for bricks would be met by an increase of output by the industry without recourse to special measures on the part of the Government.

The Ideal Home Exhibition

The Ideal Home Exhibition, the eighth to be organized by "The Daily Mail," was opened at Olympia by the Duchess of York. The whole of the floor space is occupied, while the long range of galleries is given over to stands illustrating the scope and extent of commodities and appliances connected with the household.

On the ground floor is "The Township of Ideal Homes." There are sixteen houses, ranging from bungalows at £166 to a manor house at £2,500. There is a timber-framed week-end bungalow, the roof covered with reed thatch; and a sixteenth-century farmhouse in which all the windows are glazed with lead lights and the square entrance-hall is used as a large living-room. In the manor house there is direct service from the kitchen to the dining-room by way of the pantry, which prevents any cooking smells from reaching the dining-room. In this township also there is a houseboat, with pontoon and river complete. It can be taken on land and used as a caravan, or attached to a motor as a trailer and taken to some other river. Near to it on dry land is a caravan, such as can be used for a pleasant holiday or as an itinerant shooting-box.

Full place is given to wallpapers and decorations, and there is a room with lacquered panels after the "Chippendale-Chinese" school. In another spacious court is arranged a series of twelve gardens as planned by well-known horticulturists, showing how the owner of even limited space to the front or rear of his dwelling may make the best use of the ground. Photography, wireless transmission, poultry, and domestic pets all have their own departments.

The Week's News

Stoke-on-Trent Housing Proposals.

The Stoke-on-Trent Corporation propose to apply to the Ministry for sanction to the erection of 500 houses.

Hull Building Schemes.

Sixty-three plans for new buildings were approved at the last meeting of the Hull Corporation Works Committee.

New Houses for Edmonton.

Plans have been passed by the Edmonton Urban District Council for the erection of 300 houses at Bush Hill Park.

Housing at Scarborough.

At Scarborough 100 additional houses are to be erected under the subsidy scheme.

Torquay Sea Front Development Scheme.

A scheme estimated to cost about £40,000 for the further development of the sea front is being considered by the Torquay Town Council.

St. Thomas Rural Housing.

The Ministry of Health have sanctioned the erection of 130 houses in the rural district of St. Thomas, near Plymouth. The houses will be built by private enterprise.

Chesterfield's Housing Progress.

In five years 881 houses have been erected at Chesterfield. There are 160 in course of erection, and plans have been passed for 128 other houses.

Southwell Housing Loan.

The Southwell Rural District Council have decided to apply to the Ministry of Health for sanction to a loan of £7,500 for housing purposes.

Woodlands 550 New Houses.

Operations have commenced for erecting 550 houses for the Brodsworth Colliery Co. on the Doncaster Lane site at Woodlands model village.

A New Reinforced Concrete Bridge for Norwich.

Work is about to be commenced on a new reinforced concrete structure to replace the Whitefriars Bridge at a cost of £16,000.

New Houses for Southport.

Application is being made to the Ministry of Health by the Southport Corporation for sanction to a loan of £10,000 in connection with the erection of 200 houses by private enterprise.

Rowsley's Historic Bridge.

The proposal of the Nottinghamshire County Council to demolish the historic Rowsley Bridge and build a new structure is being opposed by the North Darley Urban District Council.

A £300,000 Road Scheme.

The Nottingham City Council have adopted a £300,000 road scheme leading from the centre of the city to Trent Bridge. The thoroughfare will be doubled in width. Four hundred new houses are included in the scheme.

A Big Housing Scheme for Lambeth.

The Lambeth Borough Council Housing Committee have under consideration a scheme for building houses on the Blomfield Hall estate, Upper Norwood. It is proposed to build 318 cottages and flats.

The Cavalry War Memorial.

It is expected that the Cavalry war memorial will be ready for unveiling early in May. It is the work of Captain Adrian Jones, M.V.O., F.R.B.S., and will occupy a site inside the Stanhope Gate of Hyde Park.

A New School for Newcastle.

The Newcastle Education Committee have received the approval of the Board of Education to proceed immediately with the erection of the Heaton Secondary School. It will accommodate 1,000 scholars, and cost about £80,000.

More Houses for Keighley.

The Keighley Corporation Housing Committee recommend that application be made to the Ministry of Health for sanction to borrow £18,000 for the erection of thirty scullery houses on the Broomhill site, and £9,000 in respect of subsidy to private builders.

Architectural Partnership.

Mr. Arthur G. Leighton, F.R.I.B.A., of 225 Long Lane, Bermondsey, S.E.1, has taken into partnership Mr. H. John Higgs, A.R.I.B.A., who has been associated with him for some years since the war. The style of the firm in future will be Messrs. Leighton and Higgs, F. and A.R.I.B.A.

The Royal Masonic School for Boys.

On page 384 of our last issue we stated that Mr. Henry C. Smart, the winner of the Royal Masonic School competition, is a Fellow of the R.I.B.A., and that he entered the office of John Wimble in 1870. This is incorrect. Mr. Smart is a Fellow of the Society of Architects, and entered the office of John Wimble in 1876.

The Athenæum.

The committee of the Athenæum have elected the following under the provisions of Rule II of the club, which empowers the annual election by the committee of a certain number of persons "of distinguished eminence in science, literature, the arts, or for public service": Mr. Robert Anning-Bell, Mr. John William Simpson, PP.R.I.B.A.

Medals for Leeds Students of Building.

The Council of the Institute of Builders have decided to offer two medals each year to the best students in the department of building at Leeds Technical School. The medals are intended to encourage the study of the science and technology underlying the building industry among students preparing to become master-builders.

Proposed Museum for Woolwich.

A deputation from the Woolwich Borough Council met the Local Government and Museums Committee of the London County Council and put forward the local view in favour of converting Castlewood House, Shooters Hill, into a museum and art gallery. It is estimated that between £2,000 and £3,000 would be necessary to renovate the house.

Lambeth Housing Scheme.

The Lambeth Borough Council Housing Committee have under consideration an extensive scheme for building houses on the Blomfield Hall estate. The property consists of 18¾ acres of parkland, and it is proposed to build 318 cottages and flats on the land, which would give a density of seventeen houses to the acre. Most of the cottages will be of the living-room and three bedrooms type.

Professional Announcement.

Mr. Douglas Wood has resigned his appointment with the Ministry of Health and has returned to private practice at 35 Craven Street, Strand, W.C.2. Mr. Wood has acted as Housing Commissioner for ten Midland Counties, and as technical adviser to the Minister in connection with the settlement of many of the largest housing contracts in England during the past five years.

Building Trade Wages.

An adjourned meeting of the National Wages and Conditions Council of the Building Trades, held to consider a proposal from the workmen's side for a variation of the wage agreement, which would give the workmen an advance of 2d. per hour on the sliding scale, which is regulated by the Board of Trade cost of living figures, failed to reach agreement. The next step rests with the Building Trades Federation. If it is intended to press the claim for the advance, it will have to be submitted to the Building Employers' Federation for consideration as a trade union application, distinct from the National Council.

Sea-Coast Site at New Brighton.

The Corporation of Wallasey offer on lease of 999 years an area of 13,500 yds. of land at New Brighton in the County Borough of Wallasey to be utilized for structures adequate to the site. It is stated that the natural advantages of the land now offered are probably unequalled to-day in Great Britain. Fringing the promenade it faces to the west and north-west and commands uninterrupted views of the whole of the Mersey estuary. In clear weather Snowdon and the Great Orme's Head in Wales and the Blackpool Tower are visible. Further particulars will be found in our advertisement columns (page xxii).