Wednesday, July 23, 1924 Vol. LX. No. 1542

THE ARCHITECTS' JOURNAL & Architectural Engineer

With which is incorporated "The Builders' Journal."

FROM AN ARCHITECT'S NOTEBOOK.

I have tried to design a cathedral which will make people feel that they want to pray.

SIR GILBERT SCOTT, R.A.

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

Houses at Monnikendam, Holland

Photo: F. R. Yerbury.

"The Dutch character is most directly shown in the simplest structures. . . . . a simple brick wall, a well-proportioned window or door, or the natural grouping of masses without too much 'architecting.'"—Dr. Ir. D. F. Slothouwer.

THE

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Sunshine First

POETS and authors who have concerned themselves with architectural subjects have often directed the attention of their readers to the effects of sunlight and shadow rather than to details either of structure or of ornament. And, while the sceptic may set down the omission of technical terms of the art to the poet's discretion and a desire to disguise his ignorance of such matters, there is more to be said for this literary method of architectural composition than that it is merely expedient.

Light is an essential factor in any work of art, and in using the sunshine for their building material the poets are building wisely, for a structure presents itself to observation and criticism as an effect of masses and lines of light thrown into relief by other lines and masses of shadow. Whether the poet knows or ignores the names of those salient features of the building that receive the light, or of the retiring portions that stand in the shade, is immaterial to his purpose; he is in the happy position to write his specification and construct his building without having at his elbow a glossary of architectural terms.

No architect designing for an oriental potentate could have devised any more stately pleasure dome than the one that Coleridge built for "Kubla Khan" of sunshine and coolness, nor set it so feelingly amid starry blossoms and running water and the solemn shade of cedars. Byron, more critical than constructive, clearly shows in the "Curse of Minerva" his recognition of climatic influences. Praising Athenian art and dispraising its Scottish despoiler, Lord Elgin, he associates the creative glory of the south with the brilliance of its sun, which, even in its setting, shines:—

> "Not as in northern climes obscurely bright
> But one unclouded blaze of living light."

The sluggish spirit that clothes itself in the trappings of stolen art without comprehending the essential lack of harmony inherent in this proceeding he refers to the dismal atmosphere of "A land of mea ne s, sophistry and mist."

Ruskin, in words more directly aimed at the encouragement of what he thought an appropriate national style of building, points out the difference existing between the ribby and shadowy architecture of the north and the broad sunlit walls of buildings suited to southern lands.

It is the effect of London seen in morning sunlight that Wordsworth immortalized in his sonnet "Upon Westminster Bridge, September 3, 1802."

Mark Twain, whose imagination pictured the Taj Mahal at Agra as "built of tinted mists upon jewelled arches of rainbows supported by colonnades of moonlight" also showed himself capable of building a sunny effect in domestic architecture. "It was a charming house—my new one," says the dog heroine of "A Dog's Tale." "A fine great house, with pictures and delicate decorations, and rich furniture, and no gloom anywhere, but all the wilderness of dainty colours lit up with flooding sunshine."

Chaucer, on the other hand, renders the horror of war and violence by describing the Temple of Mars as illuminated only by the cold north light penetrating a long and narrow entry.

Many other instances could be quoted to show that writers are sure of their ground and are convinced that architectural effects, both pleasant and unpleasant, can be produced by the appropriate arrangement of the masses in respect to the lighting. The ancients described the creation of light as a primary element in the building of a world, and Arnold Bennett graphically sums up the architecture of the Potteries by relating how his hero, "The Card," "first saw the smoke" on such a date in "Brougham Street, Bursley."

A glance at the heterogeneous architecture of our streets shows that the designers of buildings do not share with writers this unity of outlook. A building whose several features were invented to receive the brilliant sunlight of Greece stands adjacent to one adapted to harmonize with a misty Scottish hillside, and near to another containing details derived from both of these and, in consequence, incapable of harmony with itself or anything else. This again has for neighbour a building so meanly utilitarian as to show no artistic regard for illumination whatsoever.

The composition of ornamental details in accordance with the lighting possible in this climate is rarely practised in modern England, and it would be no easy task to convince those concerned that this was an affair of importance and not merely a side issue of architectural design. Even now the architect has an enormous programme of study, and he would be intensely reluctant to concern himself with a poetic and purely theoretical way of regarding his art unless it promised to him the advantage it affords to the poet of eliminating burdensome technicalities. As it is, a student finds himself required to delve into the mysteries of sciography, but his exercises in the projection of shadows and the production of rendered drawings are rarely carried far enough to enable him consciously to create in terms of sun and shadow, though that, of course, is their object. And if, by means of sciography, the features and ornaments of ancient and Renaissance architecture are at last translated from a medley of facts and proportions into masses of light and shade, even this is no adequate guide to the design of an economic house where effects must be obtained in the simplest possible manner. For the production of bright and cheerful internal effects it is no guide at all.

Of those fortunate examples of respectable modern architecture which achieve something like conformity with considerations of light and shade, some do so by the safe but unintellectual process of repeating line for line the proportions and details of some building that has met with approval in the past. Ability to design a sunny pleasure dome in a hot climate without obliterating the sunshine by the use of unsuitable materials or excessive use of "architectural" features is conspicuously rare among modern European architects, and houses that have "no gloom anywhere" and are "lit up with flooding sunshine" are practically non-existent.

The greater number of modern buildings contain chambers whose windows are placed at their ends, where they will dazzle the eyes, and not upon their broad sides, though this arrangement makes for a forced contrast of light and dark at the two ends of the room, and gives the poorest visibility for any objects, pictures or furniture, that may be placed within it.

The extreme case of thoroughly unpleasant illumination is the narrow entrance passage, where the wan gleam that filters in through the fanlight over the front door is reflected in a sickly line of bluish light upon the varnished matchboarding or "sanitary" wallpaper. That such a miserable approach should be the normal means of access to town houses is pitiable enough, for thousands of English homes suffer from this melancholy form of planning. The needless repetition of the defect in houses built upon open sites is astonishing, and argues the force of old associations. Personal preferences are sometimes urged in defence of dark rooms on the score that they are more reposeful or more romantic than bright ones, but there can be little doubt that the greater number of gloomy interiors, as of ill-regulated features upon exterior façades, are the result of accident and not of conscious intention.

Violent contrasts of light can be interesting where every detail is in keeping with the whole effect, but there is no comparison between the romance of a long room lighted at one end and a cavern opening upon a scene of sunny foam or rock-shadowed waves. The roughnesses of the rocky walls and roof receive a subdued glow by reflection that is, indeed, beautiful, but which does not find its counterpart in the plaster and wallpaper or even the panelling of a regular parallel-sided chamber.

If personal preference also covers the case of the entrance hall that resembles the entry of Chaucer's Temple of Mars Armipotent in being "long and streit and gastly for to see," that is perhaps just as it should be, for the Englishman's home is his castle.

WILLIAM HARVEY.

SIR GILBERT SCOTT, R.A.

Sir Gilbert Scott

The novelists who deal in romance never conceived anything more romantic than the career of Giles Gilbert Scott. Winner of the greatest architectural competition of modern times at the age of twenty-one; elected A.R.A., and later Royal Academician, and subsequently knighted at the age of forty-four, after the opening of his masterpiece by his monarch in person—these are the ingredients of romantic fiction, yet they are actual facts, which all goes to show that though truth may not always be stranger than fiction, it is at least sometimes as strange. Perhaps in this particular instance it *is* stranger, for your romantic novelist would not dream of making his hero the son, nephew, and grandson of eminent architects, one of whom also received the honour of knighthood. The history of the second Sir Gilbert Scott's rise to fame is so familiar that we will not recapitulate it. All we need do here is to offer to Sir Gilbert our hearty congratulations upon a success magnificently achieved.

Simplicity

Reviewing "The Pleasures of Architecture" (C. and A. Williams-Ellis) in a recent issue of "The Spectator," Mr. Osbert Sitwell makes some very shrewd observations upon current architectural tendencies. One paragraph is particularly significant. "Since no reaction is entirely just in its swing," writes Mr. Sitwell, "it may perhaps be whispered low that the sweeping away of Victorian ornament has led us to overrate simplicity. We are still so encrusted with the ornamentation of the last age that we do not as yet notice it, but it looks as if we were in for a period of 'Safety First' in architecture, when any barn erected on a bare down will be hailed as a supreme achievement of man's imaginative powers. Alas! The mere absence of ugly, silly, and trivial detail does not, necessarily, in itself spell beauty." These are words of wisdom, and few of the modern school of thought can say with entire truthfulness "our withers are unwrung." Much of our current simplicity is, of course, due, not so much to inclination as to necessity, but it cannot be denied that the pursuit of simplicity has to a large extent, and in certain quarters, become a cult. We must avoid overdoing it. It was the lifeless simplicity of early nineteenth-century classicism that immediately preceded the Gothic Revival. Let us be careful lest our conscious austerities do not provoke some dreadful reaction.

"Truth in Advertising"

Mr. Kipling has a poem in which he commends the eternal verities of the "copy-book headings." The slogan of the great advertising convention at Wembley is "Truth in Advertising," which, after all, is only another way of saying "Honesty is the best policy." Ultimately all wanderers from the truth discover that they cannot ignore the the "copy-book headings" with impunity. The slogan of "Truth in Advertising," which Wembley has now made famous, is no new cry. The architectural press has uttered it these many years. In no other industry is truth more obviously essential than in that of building, both for the safety of the body and the satisfaction of the mind, and in no other does Nemesis more quickly overtake those who stray from the path of verity. Hence it has come about that the advertising pages of the architectural press can challenge comparison with those associated with any other profession or industry. With this grasp of the necessity for truth of statement has gone an enlightened apprehension of the right form of appeal. It has been widely realized that to appeal to a learned profession in terms of exaggeration or bombast is worse than useless, with the result that architectural publicity is almost invariably dignified. Moderate wording, good illustration, attractive typography and display—these are the factors that count in publicity that is meant to attract the professional man, and this type of publicity, we are glad to note, is rapidly on the increase. For this extremely healthy condition of things the architectural press may be pardoned if it takes to itself some small measure of credit.

Some French Views on Architectural Education

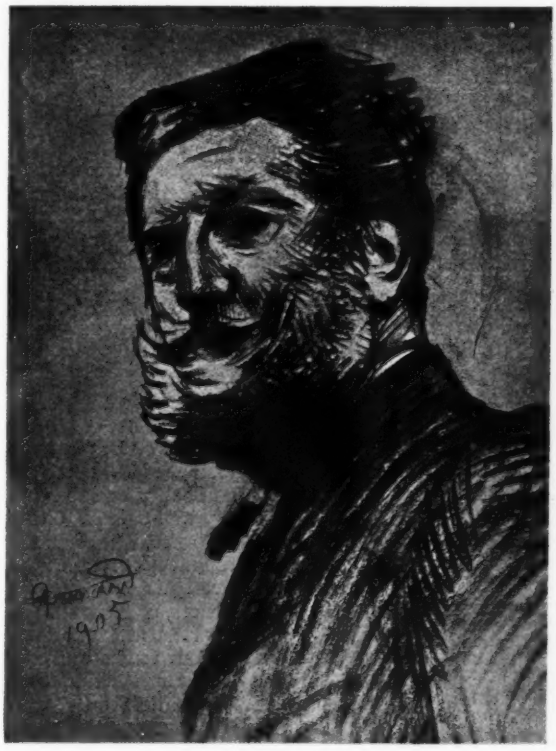
Interviews with Leading Parisian Architects

By GORDON H. G. HOLT

IT has been thought, in view of the International Congress convened by the R.I.B.A., that the ideas on contemporary architecture and architectural education held by some of the leading French architects might be of interest, especially if coming from men known for their modern tendencies. Several living French architects, not mentioned here, do hold views almost as arresting, but a choice had to be made.

Mons. Frantz Jourdain.

Born seventy-seven years ago and, to use a charming word, still flourishing, this valiant architect received me in his flat, Avenue Malakoff. More than anyone else, in a transitional period difficult of permanent achievements, he has fought—spread over decades—a dour and relentless battle, but in spite of it, his nature is still singularly warm-hearted and fresh. I went as an interviewer and left, in a manner of speaking, as a friend. No sooner were preliminary questions established than Mons. F. Jourdain settled down to a vivid exposition of his views. For a man so alive, and whose ideas are so much part of himself and his work, it was natural that they should draw their force from those very sources. Early in life, his conception of contemporary architecture drew free from the shackles of Ecole des Beaux-Arts, where he was a student, and it can be surmised that for a youngster to dispute, with a show of impetuosity, the rulings of the great Daumet, was to court trouble and contumacy. There is in Mons. Robert Rey's book on "Frantz Jourdain" an amusing paragraph; it conveys the sense of propriety and acquiescence then supreme and how the young renegade wilfully challenged it. "He took the liberty to invent motifs and to invoke the appeal of reason against the asseverations of academism. He actually dared, in a projet, to decorate the interior of a winter garden with *faïence!!* an outrage that made the whole atelier quake, and which the master wiped off with sponge and water, lest the outside world should know that such a monster was born in his atelier!"



MONS. FRANTZ JOURDAIN.
From a sketch by Albert Besnard.

Mons. Fr. Jourdain soon left, and started a practice of his own. It was hard work, but various jobs paved the way for the great buildings for which he is so widely known: *La Samaritaine.* Around this piece of audacity, dismay and ranting anger unlashed a violent polemic. The man had gathered round his head, now so venerable, a perfect hornets' nest, but it is from this period, without a doubt, that French architecture felt within its stricken shell a new seed germinate, the flowers of which are now increasingly in evidence. *La Samaritaine* has defects, especially of decoration, but its architectural value lies in the fabric, the planning and, above all, in the materials used, namely, iron and glass. Later, he built in ferro-concrete. We accept that now without demur; in those days it was scandalous, and the body politic never forgave him for breaking the tradition of stone, of the Orders, and the usual motifs; he did not receive his Cross of Commandeur de la Légion d'Honneur from that quarter.

This running sketch may give an indication of his views. Mons. Fr. Jourdain thinks that architecture is not the rearing upon some kind of plausible plan of floors, roofs, and walls enriched with some sort of obvious rhythm. It is something more difficult and simpler at the same time. It is the best plan and the best section. And it is a façade free from cogitative niceties and motifs.

The plan may be complicated, and the façade simple, or it may be the reverse, but in either case, the requirements of the client have to be reasoned out and, in the main, followed, and the financial demands met. Both will dictate the choice of materials. Nowadays, architectural problems are so varied, the means of expressing them so diverse; truth, in other words, and beauty assume so many aspects that architects, to be worthy of their hire and representative of their period and its culture (this is rather important), will indeed need a different kind of education. The Beaux-Arts system may alter; as it stands it is bankrupt. Its debit side is a drain; its credit one a fallacy; it should be wound up, or else an entirely new board of directors be placed at its head. The architect of the future will need a severe and up-to-date technical education—yes, sheer technique—strengthened by informed and sensitive general culture, and controlling them, industry, faith, and—courage.

This is the gist of Mons. Fr. Jourdain's ideas; the marrow of his convictions.

Messieurs A. and G. Perret.

No more consummate example to support another view held by Mons. Fr. Jourdain, that an architect might also be an *entrepreneur*, could be invoked than these two brothers, for they are both.

If I mistake not, they started as contractors (they are so still), and became architects, good architects, afterwards. Together, they seem to stand half-way between the rigid theory, the traditional one than an architect is, and can be, but—an architect; and the other, launched in England by Mr. Wyndham Lewis two or three years ago, that to do any good these days, an architect should be the blending of an engineer and a painter.

In a short period these gentlemen set up a new standard in modern French architecture, and beside their native abilities, they owe a great deal to their faith in this new version of an old material : ferro-concrete. It is a pleasure to observe their skill in handling it. Stores in Algiers, private hotels in Paris, the alluring Théâtre des Champs-Elysées, and, lately, the church of Notre Dame du Rainey, built throughout in ferro-concrete, are convincing proofs of their genius.

Their very offices, unlike most French offices, have an air of efficiency; they are spacious, light, and busy. Mons. A. Perret listened closely to what I came to ask him, and with a genial assurance, in a sonorous voice, he developed views identical to those given by him a short while ago to the new French quarterly, "L'Architecture Vivante." Gathered in a sheaf, they read as follows : "Living architecture is one that faithfully expresses its own period. The architect shall seek examples in all domains of constructions; he shall lean towards those works which strictly subordinated to their use, and by means of a judicial handling of materials, shall reach beauty by harmonious proportions, by the just distribution of their elements."

He went on, smiling and urbane: "Architectural education must, by all means, adapt itself to what are, truly, changed conditions. We shall never build as our predecessors did, a hundred years ago. Speed, economy, standardization are against the old methods. Even the æsthetic problem has evolved so quickly that architects must respond to its new demands; not consciously, but instinctively."

" I agree with you," proceeded Mons. A. Perret ; " it seems inevitable that common sense will demand of an architect the possession of a sound technical education. The bulk of modern architecture tends to large volumes. You cannot ask of stones and bricks to perform miracles in spanning. Steel, of course, can, but to cover it with a veneer of stone or what-not, is a tempting fallacy. That is it : a technical education backed by a general culture, which is everything, from history to a sense of line and colour.

Mons. Henri Sauvage.

It is no mean praise to say that Mons. Sauvage has well-nigh created a new type of buildings, and no disparagement to add that he still clings to it, though, on reflection, it may be misleading to the extent that if he still adheres to the type, he has, since he first put it in practice some twelve years ago, taken it a stage further.

Urbanism, or the architectural development of towns, has been in Paris the subject of much study among the profes-

MONS. HENRI SAUVAGE.

sion, and Mons. Sauvage has done well in its service. He believes that the best way to house town-dwellers is to create vast blocks of flats whose floors, as they succeed one another, he contracts, so that the street façade, as it rises, is stepped back. These steps, or *gradins*, allow more air and light circulation, and form balconies on which flowers and plants are encouraged to grow. The buildings are planned with due regard to the unit principle, made indispensable by the spanning of ferro-concrete and the choice of as few supporting piers as possible. The concrete fabric is finished with glazed tiles, chiefly white, but relieved with a sheen of cool colours. It may be deduced that a mind bent on solving such problems, so calibred, so sensible to the magnet of logic is liable to harbour views at variance with ultra official ones, and so they are.

Here are his words : The lamentable set-back, during the last thirty years, suffered by the efforts of a handful of courageous architects is proof manifest of the slowness with which even most reasonable ideas evolve. The modern movement, of which the first manifestation was "l'Art Nouveau," with all its excesses—the cause of which was the will to change everything in one stroke, to sweep away the past—soon led to an architecture overloaded with *bizarre* ornaments, and one which criticism, from 1890 to 1910, disapproved of *in toto*, though without taking into account the energy spent by innovators.

The reaction against this movement, seen at first in the design of furniture and everyday utensils, then in painting (cubism), and ultimately in architecture itself, has taken concrete forms in works where appears clearly a desire to set all surfaces free from ornament deemed useless, and to limit all æsthetic searches to ratios, proportions of volumes, surfaces, and of tone. Thus, a remedy was applied to every evil : the seeking of extreme simplicity, of bare nakedness, the elimination of all decorative elements. But who shall say the boredom of a traveller walking in such cold and depressing city streets ? As it happens, such monotonous experiments were not tried, and could not be tried, because a living architect, taught by those two tentatives, now seeks the balance of an art rendered wise and uniting the exigencies of pure logic to the charm of imagination. Therefore, it is, nowadays, possible to consider the equipoise of efforts which, by their former excesses, had bewildered the public not a little, and, in France, where sane reason sooner or later prevails, a period of Renaissance, having well-defined characteristics of simplicity, purity, and elegance, will certainly set in.

Urbanism, in leaning on these principles, will be able to develop itself. Problems of circulation, orientation, of free spaces, of general hygiene have already received happy solutions. Unfortunately, except for some rare exceptions, few of our towns and villages destroyed by the war have benefited by such an improved outlook. Administrative procrastination is not alone to blame; the town-dweller's or the peasant's love of his bit of ground, which he wishes to keep very much as it was left to him, is the principal impediment to rising urbanism. But in new towns it is undoubted that an informed urbanism will dictate the general lay-out.

It is to be hoped that every country will keep its regional character, and use, when possible, local materials. It is only in large centres, easily provided with materials of all kinds, that ferro-concrete brings real advantages. The improvements rendered possible lately by the use of concrete possessing rapid setting qualities point the way to wonderful developments. The architect shall then have a choice between leaving his structural material bare, or coating it or of covering it. Faïence and enamels (*grès*), terra-cotta, stone, or marble, etc., could be used. This external clothing of the fabric should never imitate other modes of construction.

With regard to schools of architecture, it is a sad fact that they do not exist in France. The Ecole des Beaux-Arts, despite praiseworthy attempts by several distinguished masters to rejuvenate it, is still far too immersed in dangerous pseudo-Classicism. Yet, with all its short-

comings, it has to be admitted that there only can a student indulge in healthy gymnastics, and acquire that suppleness indispensable for the study of a plan, the possible variations on a given problem, and for the mastery of those special requirements proper to every type of buildings. I do not share the scepticism of some architects on the future rôle of the school. It is just possible that it may revivify itself. All that is needed is one man, one intelligent director able to put it on the right track. Already minds like Mons. Paul Léon, Director of Fine Arts, or Albert Besnard, head of the school, have made their influence felt. The day when students shall better know the materials put at their disposal by modern science, when they shall understand the new needs, abandon the servile copy of antique art—though keeping its expressive and varied aspect—that day, modern architecture, with the help of former strivings and errors, shall become once again the expression of its period and of the people it is there to serve and gratify.

Mons. Le Corbusier—Sauguier.

By keeping this stormy petrel of French architecture back to the end might lend credence to the view that it is good policy to write an article much as you screw up the handcuffs clapped on some bewildered bourgeois; until he sits up and takes notice. It is partly true. This young and rising architect has created and nurtured theories on architectural education so startlingly logical, but also so widely apart from those held in England, even in "advanced" quarters, that their amazing radicalism may compel a degree of attention denied to ideas less potently charged.

The reading of Le Corbusier's book, "Towards a New Architecture," made me resolve to seek this dynamic monstrosity. (I wasn't far from the conviction.) I did track him in his lair: strange to say, an office like any young architect's office, whose space, though, was punctuated by models of houses, the like of which I had never seen before. A certain dizziness overcame me, but the advent of two large horn-rimmed eyes, staring icily out of an enigmatic face, dispelled the *malaise*, and with my wits back to their proper function I was soon in battle with my man.

Here candour compels me to say that, notwithstanding a small, faithful, and increasing band of adherents, Le Corbusier is not held in pious odour by the same *monde bien pensant* (for it changes hardly at all) that exploded when, forty years before, Mons. Fr. Jourdain gave it gunpowder and caviare. He is held round the Louvre and the Rue Bonaparte to be a thinly-disguised heretic! This much, however, should be said: Le Corbusier commands attention and respect. He has delivered lectures before distinguished audiences, and under unimpeachable patronage. Further, his work and ideas are now seized upon by journalists and architects of every country, from the two Americas to Poland. What is more satisfactory, he is putting his theories into practice.

It is not easy to resume his ideas, because they burrow so deep into the soil, and go back to so many essentials that nothing less than a complete reconsideration of what makes a modern town will do.

A few staccato and bare statements may, however, serve, hence what follows are mere shorthand notes. Modern life has been revolutionized since the coming of machinery. Machinery means factories. Factories attract workers and form centres. Those centres, those factories are best near towns, on account of transport and, therefore, of efficiency and economy. As the supply creates the demand, so more factories, of all kinds, spring up. Their complements are offices, also in towns. Business—that is, commerce and industry—it can be seen, is bound to expand enormously until this earth of ours is yielding its maximum. It follows that business will enlarge towns and create new ones to an extent we seldom dream of. But it *must* happen. Existing towns, taken by surprise, have not had time or the capacity to react to what, admittedly,

MONS. LE CORBUSIER—SAUGUIER.

have been sudden and portentous changes. But the lackadaisical and unscientific way modern society has chosen to cope with those cracking activities is, indeed, pathetically inadequate. Life, in our big towns, is wasteful, dangerous, and gets worse and worse. Palliatives will not and cannot do. The logic of things, the volition of progress, everything points to some striking revolution, or else to some swift evolution. Preferably the latter. But time strides on, and it is now that the great jerk should be given.

Away with slums and appalling concentrations! Away with crazy traffic! Away with timid methods of a past age. Create big; standardize, if necessary; design for future years, not for 1800. Plan as scientifically as you can; use materials that will bear huge spans, great heights, concentrated loads. Cut out almost all this silly decoration and learn to handle those gigantic and new masses of building materials with the rhythm and dignity they demand. Town houses for the workers? They will be enormous skyscrapers, veritable colonies placed, say, every 400 metres, and served, under their very foundations, by electric traffic, each block a station. The avenues those blocks will form may be like the Champs-Elysées in width, 120 metres, and although their yield for capacity per square yard will be infinitely better than what we are accustomed to, they will afford around them far more space for sun and air.

"But surely, Mons. Le Corbusier, this future town will look somewhat inhuman?"

"That is where you err. It will be nothing of the kind. Shops, restaurants, theatres, all those necessary units of a town will be there, but lower and spreading; they will link these house-towers and give scale, rhythm, incidences. They shall be fanciful or severe, plain or coloured, if you will. It is bound to come."

"Then you hold that architects must prepare themselves for the change? The Beaux-Arts. . . ."

"*Cher Monsieur*"—the voice was terse and spoke with earnest resolution—"the architects needed now must be trained to create, not abortions, but children and men, that is, beings *alive*, vigorous, and beautiful. Architecture needs eugenics."

"You are, then, in favour of a sound technical education?"

"That is so, but it must be backed by a *real* general culture, an austere and delicate training almost self-applied. I wonder"—his eyes twinkled, his head, moved by the flux of amused memories, nodded to and fro—"I wonder how many living architects do possess the one or the other. . . ."

Fascinated by large diagrams our eyes danced on the walls, and outside Paris sizzled and hummed delightfully.

C

A Famous Old Parisian Landmark

"La Cour du Dragon"

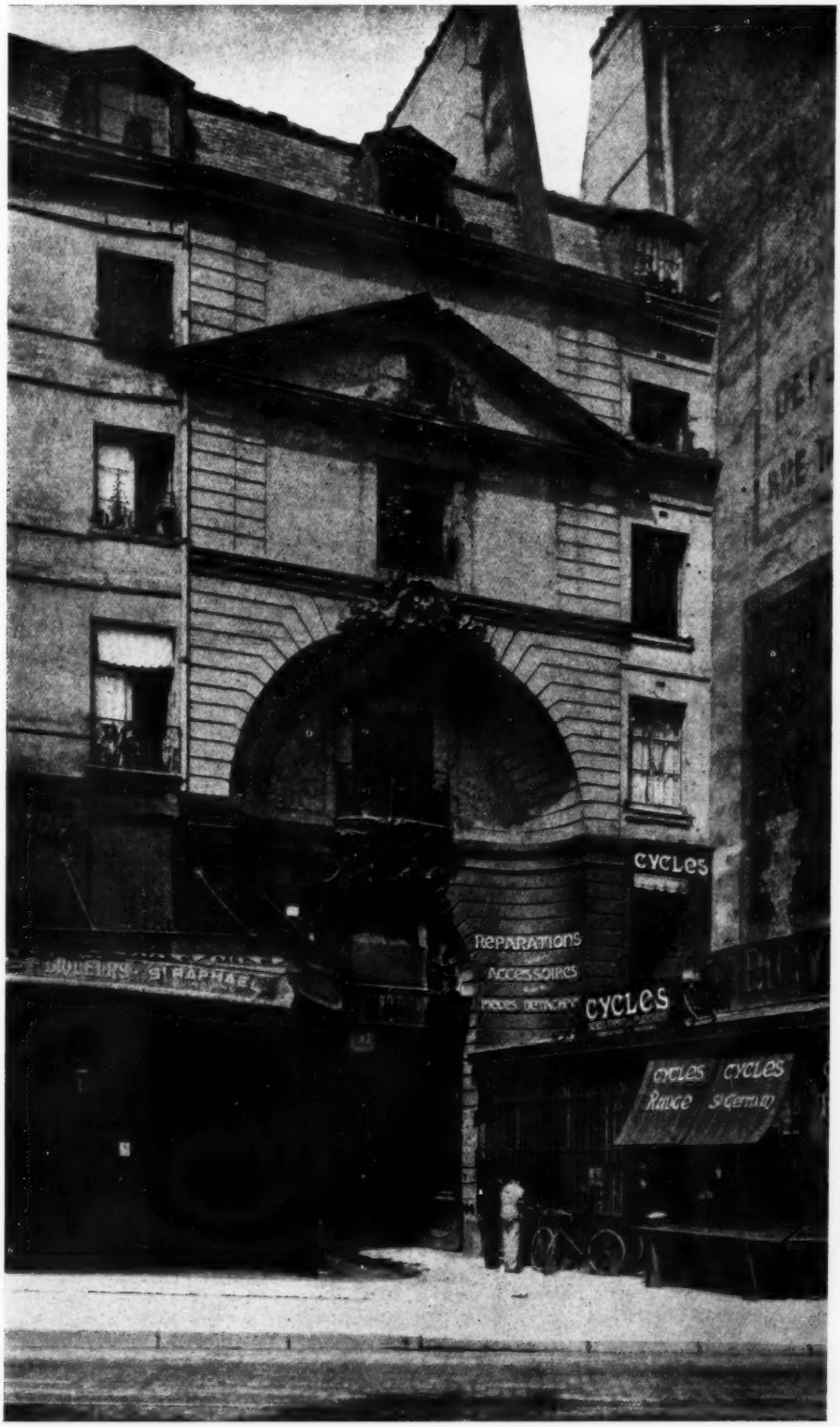
By H. BARTLE COX, A.R.I.B.A. (Membre de la Société de l'Histoire de l'Art Français)

PROVINCIAL in character, the world-famous romantic-looking "Cour du Dragon" is the chief feature of the most complete "ens mble" of Old Paris. In England, as well as in France, reports have recently been circulated to the effect that this relic of eighteenth-century architecture is about to be demolished. There may be some truth in the statement, but the theme has been a favourite one for some years since. The court, sympathetic in appearance, full of historic associations, and with a universal artistic reputation, is an insanitary area more attractive to look at than to live in. The rents are not in proportion to what the neighbourhood should produce. It is, nevertheless, an interesting remnant of eighteenth-century life, and continues to delight the lover of Old Paris so long as he is neither a tenant nor the proprietor. Dimly lighted and badly drained, its antiquated charm is destined to disappear unless acquired by the State and classed as a "Monument Historique." In spite of certain propaganda it is not so classed. The "Cour du Dragon" is private property and the owner is at liberty to dispose of it as he pleases. The court is shut every night, one end at 9 o'clock, and the other at 10 o'clock. Some years ago there was a question of its being purchased by the "Ville de Paris," but the negotiations fell through on account of expense. Till recently it belonged to the Comtesse de Courcy, but it is now the property of a company in formation, who do not own all the buildings adjoining it. A few tenants at one end of the court have lately been given notice to leave, and

For much useful information the author is gratefully indebted to: Monsieur Jacques Hermant, Architecte-en-Chef de la Ville de Paris (retired May 1, 1924); Monsieur Louis Bonnier, Inspecteur Général des Services Techniques d'Architecture et d'Esthétique de la Préfecture de la Seine; Monsieur Schommer, Secrétaire de la Commission des Monuments Historiques.

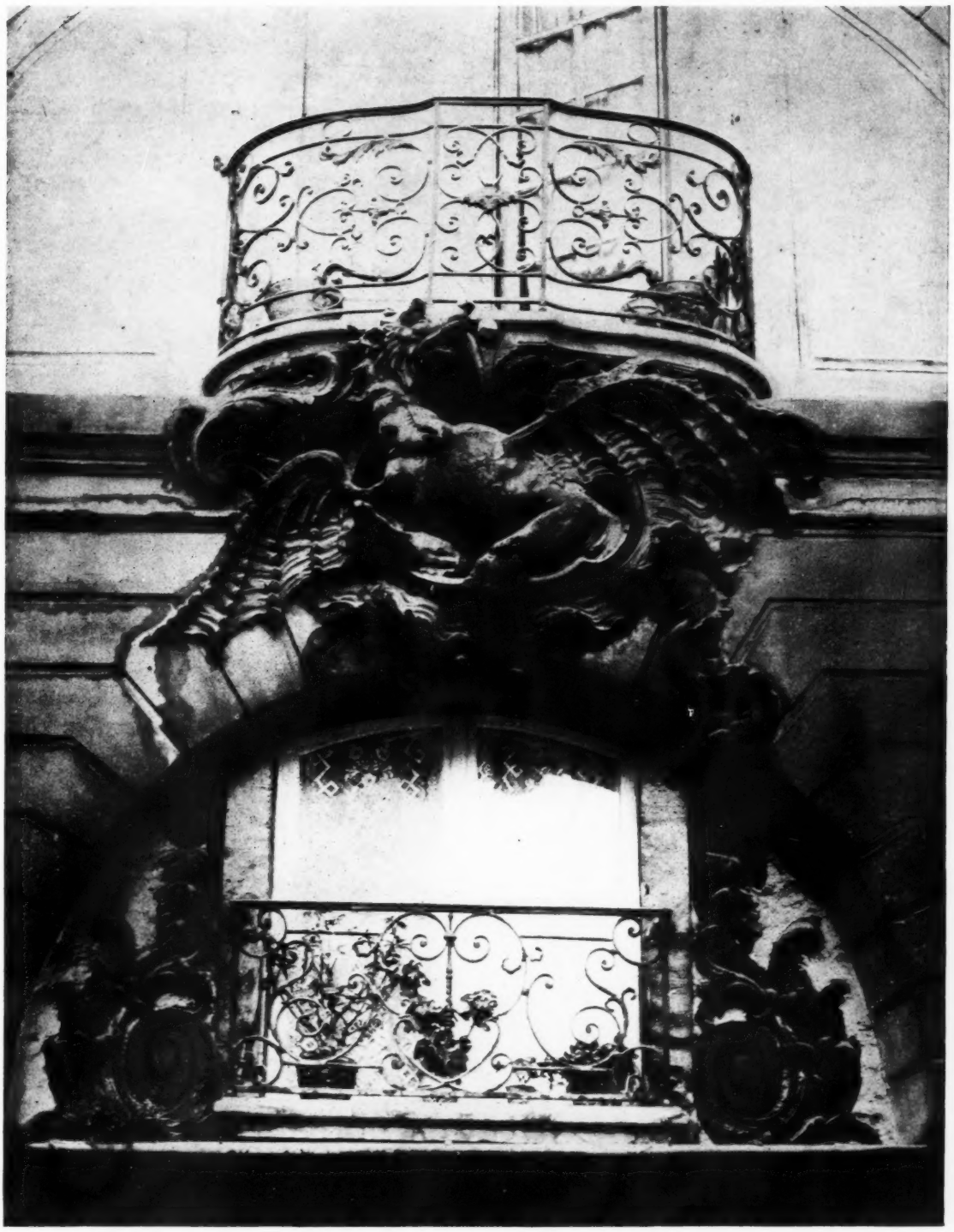
ENTRANCE TO THE "COUR DU DRAGON," RUE DE RENNES

The "Cour du Dragon," Rue de Rennes, Paris: The Façade



"In this old-world relic of seventeenth- and eighteenth-century Parisian life, with its bunches of amusing hovels, undoubtedly the 'Cour du Dragon' gives us the most perfect specimen of what was once this network of unhealthy by-streets, passages, and blind alleys, in which the circulation of carriages was impossible."

The "Cour du Dragon," Rue de Rennes, Paris: A Detail of the Façade with the Sculptured Dragon



"The architect . . . is chiefly interested in the design of the finely-proportioned monumental entrance bearing the ornamental sculptured dragon."

it is expected to effect a certain transformation of this end. The official authorities of the city have been consulted for the purpose of this article and they all state that, for the moment, they have no cognizance of any projected total demolition. The site, an odd one, has a disputed commercial value.

The "Cour du Dragon" is on the "Rive Gauche" in the 6th Arrondissement, extending from No. 50 Rue de Rennes to No. 7 Rue du Dragon, within a stone's throw of the abbey church of Saint Germain des Près. Surrounded by old houses on one side and modern shops on the other, the relatively narrow "Cour du Dragon," with its comparatively low houses back-to-back with their neighbours, is essentially a passage-way destined, if modernized, to become a street unless absorbed into some huge scheme affecting the whole neighbourhood.

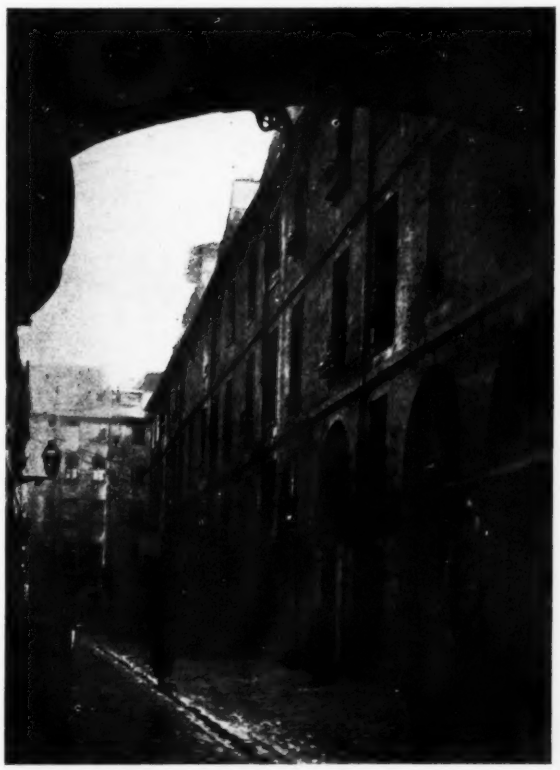
The speculator would gain by pulling down the whole of the stage scenery to build up modern money-producing premises, but should he be an archæologist (not very likely) he would like to keep the whole of it intact, and would even regret the very few hygienic improvements that have been effected since the eighteenth century. The trained architect, whose opinion, in France, has considerable weight with the average layman, is chiefly interested in the design of the finely proportioned monumental entrance bearing the ornamental sculptured dragon; should he, however, be an artist as well (quite possible), he would with painters and actors be more charmed by the interior, which has preserved in a most marked degree, besides the picturesque setting, something of real eighteenth-century life. To this day it is full of old families carrying on in old houses their old trades such as tinkering, and especially locksmith's work, and ironmongery. It was here where in 1830 the first hordes of the *insurgés* came to fetch pikes and bars of iron to arm themselves against the troops of King Charles I.

A NICHE CONTAINING A STATUE OF THE VIRGIN.

. . . . . .

The historical as well as the artistic interest of the "Cour du Dragon" is essentially in what is left of the agglomeration of the quaint streets that surrounded it. It is an old-world spot in Paris modified by the opening of modern thoroughfares and hidden by vulgar business premises. The Rue du Dragon since the fifteenth century was called the Rue du Sépulchre, as it contained a house owned by the canons of the Saint-Sépulchre. Its present name on account of its proximity to the "Cour" dates only from 1806.

The much admired entrance at the other end gives on to the Rue de Rennes, a street opened in 1853 and extended



TWO VIEWS IN THE "COUR DU DRAGON."

in this direction in 1866. The part in question of this new commercial thoroughfare was formerly called "La Rue de l'Egout," and was in front of the "Rue Sainte-Marguerite," where there was a signboard bearing a pictorial representation of the legend of Sainte-Marguerite from which, it is said, the sculptors later took their inspiration. The only part of the old Rue Sainte-Marguerite that is left is now called the Rue Gozlin.

The Rue du Sabot, also named from a signboard, is another quaint street with curious old houses. It is on the south side of the Cour du Dragon and makes an awkward corner for traffic turning into the attractive Rue Bernard-Palissy butting on to the "Cour" and formerly called "Petite Rue Taranne." It received its present name in honour of the celebrated potter in enamels (1510–1590). Bernard-Palissy is thought by some to have lived at No. 24 Rue du Dragon. A statue to this sixteenth-century artist by Barrias (1880), is to be found in the Square sud de Saint Germain dès Pres, quite close to the venerable church.

The "Commission du Vieux Paris" have had a tablet placed on 175 Boulevard Saint Germain, with an inscription recalling the remembrance of the old "Rue Taranne," which, since 1876, has been absorbed into the Boulevard Saint Germain. The "Cour du Dragon" was built on the site of the ancient "Hotel des Taranne," sumptuous money changers in the time of Charles VI, Charles VII, and of Louis XI (fifteenth century). In the seventeenth century a certain Monsieur Longpré founded in the Rue de l'Egout, opposite the Rue Sainte Marguerite, an academy of equitation. This riding school was closed in the early part of the eighteenth century. The widow of the financier Crozat and mother of the Duchesse de Choiseul, bought the ground, had several houses erected and a communicating passage built from the Rue de l'Egout to the Rue Saint Sépulchre, by the architect Carnaud in 1735. The passage was called "La Cour du Dragon," doubtless in allusion to the dragon, the fabulous animal, which Sainte Marguerite is supposed to have trampled under foot, admirably ornamenting the entrance doorway (pp. 120, 121).

In the centre of the court at No. 7, on the left-hand side entering from the Rue de Rennes, is a pretty little statue of the Virgin in a circular headed niche. The statue is still respected, the tenants of the court keeping it in repair and ornamenting it with flowers besides burning candles in her honour, especially in May, the month dedicated to her worship (p. 125).

At the end of the court nearest the Rue du Dragon are two very charming semi-circular turrets, one of which serves inside as a staircase. These turrets, from the ground floor are constructed on curved arches, the masonry of which is of much technical interest. It is this part of the court that is liable to be changed in aspect (p. 125).

Monge, the celebrated mathematician, one of the founders of the "Ecole Polytechnique," and who accompanied Napoleon to Egypt, lived at the end of the court at No. 7 Rue du Dragon in 1784.

No. 31 Rue du Dragon, not far from the court, was once the premises of Raveneau, coachmakers to the court (1754), it is now the world famous "Académie Julian," so well-known to painters of the *ancien régime* and admirers of the celebrated Jean Paul Laurent.

A white marble slab, placed by "Les Hugophiles" on the façade of No. 30 Rue du Dragon, tells us that Victor Hugo lived here in 1821. "L'enfant Sublime" was only nineteen years of age when he took a garret at No. 30 with his cousin Trébuchet, a law student. At variance with his father, the general; broken down by the death of his mother, our hero passed the most painful period of his life in this Rue du Dragon. "Marius Indigent" in "Les Misérables," is an account of his sufferings at that epoch of his life. He lived under the roof, his balcony, an attractive circular erection, can still be seen overhanging the road and surmounted by a pulley, the remains of an old hayloft. Whilst harassed by poverty, for he lived a whole year on 700 frs., the genius of Hugo was awakened, the following year appeared "Les Odes et Ballades," partly composed in this wretched house almost adjoining "La Cour du Dragon."

. . . . . .

In this old-world relic of seventeenth- and eighteenth-century Parisian life; with its bunches of amusing hovels, undoubtedly the "Cour du Dragon" gives us the most perfect specimen of what was once this network of unhealthy by-streets, passages, and blind alleys, in which the circulation of carriages was impossible. It makes an instructive contrast with our modern thoroughfares. If sympathetic on account of its oddness and its sense of easy retirement it is unhygienic and impracticable. Boulevards are sometimes monotonous in aspect, but they have air and light and facilitate traffic. What is history compared to health? Administrative organization precedes all civic design. Our court has not followed the laws of progress, it remains poor in the shadow of proud buildings provided with modern comfort. In winter as in summer it is a much frequented sketching ground for lovers of quaint architecture. The author is informed that the death-rate is very high in this area of eighteenth-century art. Such is an account of this shameful remnant of conservatism, which if filled with actors in eighteenth-century costumes, with strong artificial lighting, and with a sedan-chair of the period, would make an excellent setting for a cinema film, provided the *metteurs en scènes* arrive before its transformation.

Waterloo Bridge

THE London County Council have rescinded their original resolution with regard to Waterloo Bridge, and have referred the matter of reconstruction, both from the point of view of road and river traffic, to the Committee on Thames Bridges for consideration and report. This decision was reached after the Improvements Committee had presented a further report in which they stated that they could not accept the views put forward by the Society for the Protection of Ancient Buildings, who had submitted a report suggesting that the bridge should be underpinned. They saw nothing to modify their original opinion that the best method of dealing with the bridge was to rebuild the old superstructure on new foundations. They were giving consideration to the representations made by various authorities, and particularly to the suggestion of the Port of London Authority that two arches of the temporary bridge should be thrown into one. The resolution now rescinded contained an expression of the general desire to preserve the character and identity of the bridge. As a result of their decision, the Council have issued, for the information of the public, the reports by Mr. G. W. Humphreys, the chief engineer to the Improvements Committee, and the letters received from the Society for the Protection of Ancient Buildings, together with the report of Mr. H. H. Dalrymple-Hay with regard to the suggested underpinning of the bridge, and the report of Mr. Basil Mott, C.B., and Sir Maurice Fitzmaurice, C.M.G., F.R.S., on the proposals of Mr. Dalrymple-Hay. The chief engineer is in general agreement with the report of Mr. Basil Mott and Sir Maurice Fitzmaurice, who are unable to accept the views put forward by Mr. Dalrymple-Hay, and who can find nothing which causes them to modify their original opinion—that the best method of dealing with Waterloo Bridge is to rebuild the old superstructure on new foundations put in either in a cofferdam or caisson. The Special Committee on Thames Bridges, to whom the matter has been referred, have lost no time in setting to work. The first meeting was held last week, when matters of a preliminary character were dealt with. Major Harry Barnes and Mr. Andrew T. Taylor, are members of the committee.

The Amsterdam Town Planning Conference and Exhibition

By G. L. PEPLER, F.S.I., PP.T.P.I.

THE conference and exhibition held at Amsterdam from July 2 to July 5, was devoted to regional planning and park systems. Representatives of more than twenty nations (including about thirteen from across the Atlantic, and several from Japan) met together to exchange ideas and to compare a great variety of experience. The following members of the Town Planning Institute were present: Messrs. Thomas Adams, B. F. Brueton, De Cassiere (Holland), P. Geddes, H. F. Halloran (Australia), G. M. Harris, E. Howard, G. L. Pepler, C. B. Purdom, R. L. Reiss, M. Sabry (Egypt), Dr. Stubben (Germany), Sir John Sulman (Australia), Dr. Raymond Unwin, L. Veiller (U.S.A.).

The local arrangements were in the hands of Dr. D. Hudig and of the local societies, and to them and to the Corporation of Amsterdam the delegates are deeply indebted for much charming hospitality and for a most successful and enjoyable conference. It was instructive to have studied last year the evolution from its Dutch origin of the town of Gothenburg in Sweden, and this year to visit a great Dutch city.

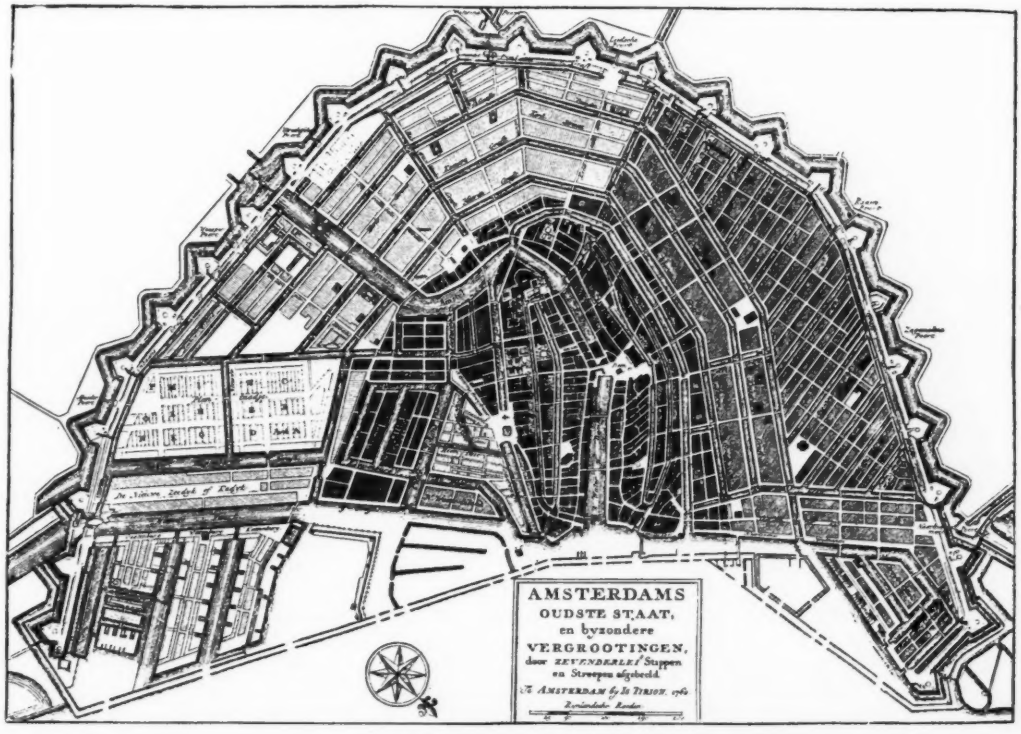
Amsterdam is full of interest for the town planner. A glance at the map shows the old city with its wonderful system of road-flanked canals, clearly constructed according to plan and still functioning to the effect that transport is here cheaper than at Rotterdam, with its fewer canals. In the year 1866 a bold plan was prepared for extended development outside the then redundant city walls, but unfortunately the neighbouring local authorities would not co-operate, and in practice the next extension degenerated largely into a mere following of estate boundaries. Happily in more recent times the boundaries of the city have been extended, and the corporation, remembering their tradition, with all the latest extensions, follow the most interesting plan of Dr. Berlager.

Architecturally, Amsterdam is primarily a city of vertical lines. Like England, it appears to have suffered from a Victorian era or pseudo-Gothic revival when the traditional Dutch style was departed from; for example, in the designs for the State Art Gallery, Post Office, and the Railway Station. The modern Dutch architect is unhampered by tradition and makes his own style: consequently the new buildings, particularly the housing schemes, are full of life and vigour—not to say exuberance.

Amsterdam has shown great enterprise in housing, both municipally and through housing societies, and a number of schemes were visited. Clever use is made of material and in arrangement of line in plan and elevation, and the effects are very striking. From the English point of view the effect sometimes lacks homeliness, and there is also a scarcity of garden and playground space. Also single-family houses are in extreme minority.

The conference was opened by the Prime Minister of Holland, and papers were presented by the following: J. Granpré Molière, Dr. Raymond Unwin, Professor P. Abercrombie, Thomas Adams, Francis Sentenac, Dr. F. Schumacher, C. B. Purdom, Dr. G. A. Van Poelje, Flavel Shurtleff, E. P. Goodrich, Dr. R. Schmidt, P. Bakker Schut, Professor H. V. Hubbard, Professor J. Gréber, H. C. Azn.

The papers were divided into groups. The first, of which a summary was prepared by G. L. Pepler, referred to



A PLAN OF AMSTERDAM, 1760.

SMALL FLATS, TRANSVAALBUURT.
GRATEMA AND VERSTEEG, ARCHITECTS.

regional planning in general. Each author of this group, from a somewhat different standpoint, approached the problem through a study of the big city; finding that the difficulties with which a large town is beset, and to which, failing a remedy, it must succumb, can only be cured by dealing with the matter on a regional basis.

The writers, whose interests are chiefly social and artistic, see in the modern town the result of the victory of greed over ideal. Those who approach the question more from the economic standard find in the big city confusion and waste; therefore from all points of view it is necessary to find a remedy, and the chief hope of this lies in dealing with the problem on a regional basis.

People and things are in the wrong place in our towns, hence there is much unnecessary movement, confusion, and congestion of traffic. For expansion by unregulated accretions, either vertically by tall buildings, or horizontally on the circumference, we must substitute expansion by definitely planned and organized units, self-contained suburbs, satellite towns, or garden cities. We must turn our attention to the better and greater localization of life attained through the regional plan and made easier by the powers which science has given us. Support is given to this idea by Mr. Henry Ford, who finds that the cost of maintaining the necessary public services and the cost of keeping in order great masses of people and traffic is greater than the advantages derived from a community life. "The modern city has been prodigal, it is to-day bankrupt and to-morrow it will cease to be." Owing to the increasing overhead expenses of living or doing business in great cities, decentralization has become essential.

The disorderly growth of the modern town is not only self-destructive, but is also a menace to civilization. On no account, therefore, must central congestion be allowed to increase, nor must the people be further divorced from the sanity of nature, but it must be stopped by decentralization, the chief agent of which should be the satellite town as part of the regional plan.

The papers on the technical side of the question, such as that of Mr. Thomas Adams describing the work being done by the committee on the plan of New York and its environs, including a most thorough civic survey, and the paper by Dr. Schmidt on the work of the federation of towns in the Ruhr, were of very great interest, as were the papers on particular aspects of the problem such as parks, drainage, etc.

This conference was the first held by the International Federation for Town and Country Planning and for Garden Cities, under its new name, which emphasizes the importance of town planning in all its aspects. The happy combination of the planner and the potential translator of plans into accomplishment was referred to by Sir Theodore Chambers and other speakers as a hopeful sign of progress.

The conference and exhibition made plain that the professional knowledge and ability required for preparing regional plans and schemes for healthy, economic, and orderly development is available. Also much progress has been made (although much still remains to be done particularly on reaching the general public) in the acceptance by local authorities in many countries of the idea that co-operative action is essential, and that the problems of modern community life can only be solved on this basis. The advance made in this direction is most encouraging and brings us to the next stage, with which, no doubt, many further conferences will deal, namely, to devise the means by which these plans and schemes can be carried into effect. In some countries the machinery already exists—the problem is to devise means of using it that will be accepted by the constituent bodies as fair, and that will combine the maximum of unity with a minimum loss of local independence. The plans that have been made and the sentiment of the conference indicate that the desirable course is to accentuate local identity, by planning intervals of open country, etc., while at the same time moving towards regional federation.

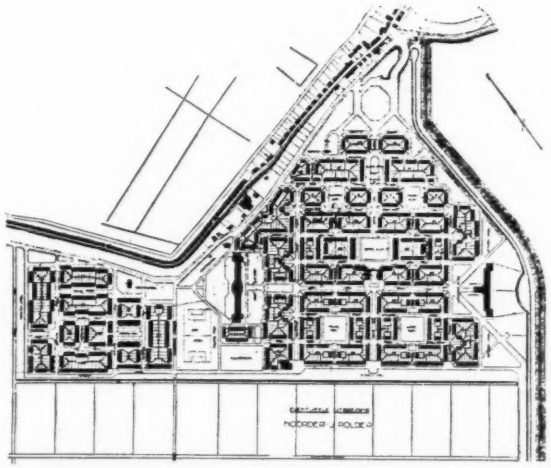
The most complete federation so far established appears to be that of the Ruhr region, for which Dr. Schmidt is responsible. It is interesting to note that this Federation was brought about by the Prussian Government in 1920, with the definite object of increasing the productivity of that region, which comprises about 1,437 square miles, and extends over two provinces and three government districts, and embraces numerous independent towns and communes. The Federation was required by the law which established it, to prepare a regional town plan within six months.

With reference to parks, the opinion that one acre was required for each 200 persons was supported by speakers from England, Holland, and Germany, and Mr. Shurtleff (U.S.A.) said that good American practice provides at least one acre of park for each 150 persons.

The exhibition was held at the Town Museum, and was excellently hung. It was arranged in sections, according to countries, and lectures were given in the evenings by representative of each country.

Dr. Schmidt's plans for the Ruhr region were of particular interest, in view of the wide powers possessed by the Federation for which he works. They included some survey studies and bold proposals for zoning, main communications, and regional parks. Despite his extensive powers, Dr. Schmidt feels the need of further authority, so that now he has zoned the region he may be able to hasten the appropriate use of each part by moving the man who is not using his land in accordance with its ultimate destiny, to the part of the region where that use is provided for permanently. Elsewhere in the German section one noted Dr. Langen's interesting diagrams indicating ideal planning for rural communities.

England was fortunate in being able to show more regional plans than any other country, and, in addition, to such well-known friends as Doncaster, Manchester, Dee-



A GARDEN VILLAGE SCHEME FOR 1371 HOUSES.

side, Rotherham, North-Tyneside, West Middlesex, and Thames Valley, etc., there were preliminary plans from joint committees at North-East Surrey and West Kent, Mansfield, and East Kent.

The huge region of New York and environs was represented by a most interesting series of survey studies and other towns in the United States such as Boston, Minneapolis, and Kansas City showed plans of park systems.

From Copenhagen was a plan of the region round that city, showing existing parks and parkways, with proposed extensions so as to complete a comprehensive scheme, and also an arterial road system approved by a joint committee of the local authorities.

Czecho Slovakia sent an interesting series of studies and proposals for Prague and its environs, including bold park schemes, greatly simplified by extensive municipal ownership of land.

Several other countries, e.g., France and Belgium, were represented by plans too numerous to refer to separately, but mention should be made of the excellent Dutch exhibits. Several of the towns, such as Amsterdam, Utrecht, Rotterdam, and The Hague had prepared time zone maps, and there were a number of park plans. As already mentioned, Amsterdam has done much town planning, and, in fact, has established a satellite town, across the North Sea Canal, near to the shipyards on that side. No doubt if the North Sea Canal had been constructed many years earlier, the harbour would have been made on the North Sea side of the city, and it would have been possible to have a bridge and thereby to have opened up more easily the part of the country farther north.

At the conference and exhibition it was my good fortune to get into personal touch with representatives of eighteen different nations; each man imbued with the desire to bring order out of the chaos that exists in towns and society all the world over, and hoping and believing that by applying the true, forward, co-operative spirit of town planning, this could be done. To be in touch with such men and to get a glimpse of the work they were doing was a privilege, an education and an inspiration.

Correspondence

Disfiguring the Countryside

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—I was in Devonshire and Cornwall last week, and was pained to see just the sort of thing you described in a recent note. The universality of the motor-car together with the desire to obtain a dwelling-place at a reasonable cost, has encouraged people to range far afield. Things we have got used to in association with the suburbs of a town are now spreading to the remotest and most beautiful parts of the country. Devonshire and Cornwall have, in the latter half of the nineteenth and early twentieth century, had a poor appreciation of architectural amenities. It is sad to remember that whereas nearly every building put up before 1830 was beautiful, nine-tenths since have been atrocious. The horror of the recent ones is, of course, accentuated by their newness and the lack of vegetation around.

The remedy is not so simple as your leader-writer supposes. What is being done is not entirely due to a lack of the sense of architectural fitness, but in a great measure to the grinding necessity of keeping the cost down to an almost hopelessly impossible figure. The natural materials of the district—stone, and a very beautiful small slate—are, unfortunately, relatively expensive in use as compared with the liver-coloured brick and asbestos abominations so popular. But that the mixture (including Welsh slates) should be embellished with white, long and short, trimmings, is a sign of a desire for better things.

The remedy is a long and slow process (that there will ever be a local inspector of architecture on the lines of the local sanitary inspector, is not to be thought of; the sanitary inspector is the result of years of work, with such powerful incentives as you "will be poisoned by the drains or burnt in your beds" as helps; moreover, he is often a misguided strainer after gnats and swallower of camels. The remedy is the education of the builder (in this term I include every one working on a building) and his employer—in fact, a complete change of local opinion.

The extraordinary beauty of the vernacular building of Devon and Cornwall gives me some ground for hope. The spirit has hardly been dead a hundred years; the influence of the by-laws helped to kill. When it came to laying down a law that windows must be tenth the floor area, or nearly 50 per cent. more than is found in old buildings, and heights at 8 ft., or 25 per cent. higher than is desirable, the spirit of the old-builders (already undermined by such new-fangled things as railways) got its last kick.

Another hopeful thought is: These places depend in part for their livelihood on visitors, who are attracted partly by their quietude and beauty; I admit that 50 per cent. are equally interested in the purity of the air and the cream. But this beauty has a measurable commercial value; to destroy it is to destroy part of the golden goose. It should not be impossible to stir up local opinion. Local societies should be formed, local archæological societies, the S.P.A.B., the Scenery Preservation Society, and, most of all, the lay Press, should be enlisted.

In a Plymouth paper I saw a long leading article on "Why Does Not Plymouth Attract?" The missing answer, "because it has destroyed ninety-nine hundredths of its old-building," had been overlooked. Towns have their publicity departments; districts should have the same; "unspoiled" should be the hall-mark. Intending builders should be sought out (the local surveyor can be of use here); in the case of a particularly conspicuous site even money might be provided (but this would be a dangerous precedent).

The public has to be led along the path of architectural education. I know of instances where it has been done; it is not easy, and it is not well for the architect to appear. Obviously he is an interested party. Architects have their differences of opinion; some of the younger, "conscious as they may be of the shortcomings of their predecessors," have not arrived at quite so perfect a manner of building as they suppose.

But, believe me, the subject is worth while. The English countryside, the English village are worth preserving.

Though we may decorate Piccadilly Circus with animated lights, though we may allow in Regent Street buildings so heterogeneous that no two have the slightest regard for one another, these may be the foibles of a semi-cosmopolitan city, but our countryside is our own. HAROLD FALKNER.

The Double Staircase

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—The correspondence published in your columns concerning the origin of the idea of planning two staircases in the space of one is very interesting, but the fact that the earliest recorded example has not, so far, been referred to by any correspondent is surprising.

I think this is to be found in Vol. VI of Viollet le Duc's "Dictionnaire" at p. 225 in the article "Maison." On p. 223 there is a description of a pair of early thirteenth-century houses at Montreale (Yonne), of which the plans are given (p. 225) and front view (p. 226). The arrangement of the double staircase is quite clearly shown and described.

So far as I know this is the earliest recorded example, and in view of the influence of French architecture and architectural literature in America, it may well be the source of examples in that country. HAROLD G. LEASK.

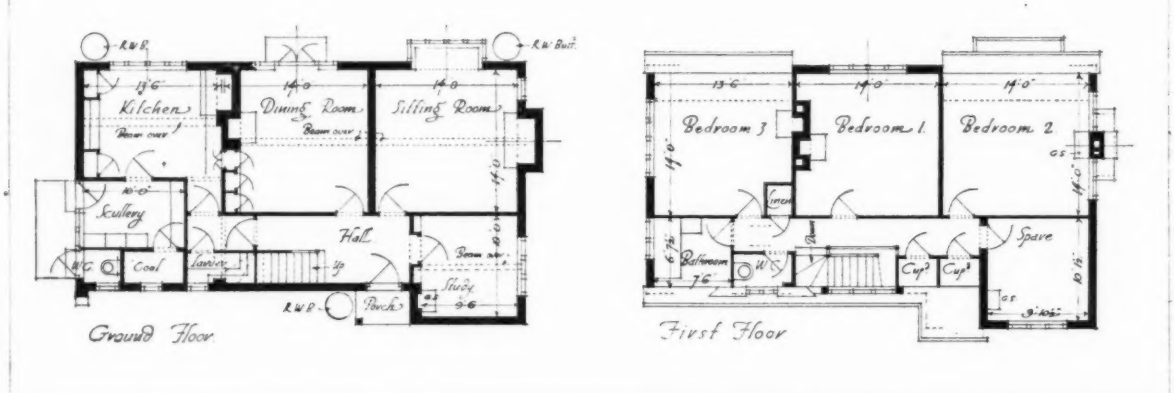
A GENERAL VIEW OF THE TWO HOUSES.

Two Houses at Cranleigh

W. SYDIE DAKERS, Architect

THESE two residences are for masters at Cranleigh School. They are similar in plan and elevation. The ground floor walls are built hollow, and the first floor "rat-trap" fashion, covered with vertical tiling. All the external joinery, ground floor beams, window lintels, staircase, and joinery are in English oak, the first floor joinery being in pine stained. Some fireplaces were built in stone and brick as the work proceeded. The study is provided with bookshelves from floor to ceiling at each side of the door, and is heated by gas. The ventilating pipe to the first floor w.c. is carried up in a chase behind the vertical tiling, and emerges from the face at the top.

The contractors were Messrs. W. G. Tarrant, Ltd., of Byfleet, who supplied the hand-made bricks and tiles from their Chobham and other works.



PLANS OF THE GROUND AND FIRST FLOORS.

Modern Domestic Architecture. 88.—A House at Cranleigh : The Garden Front

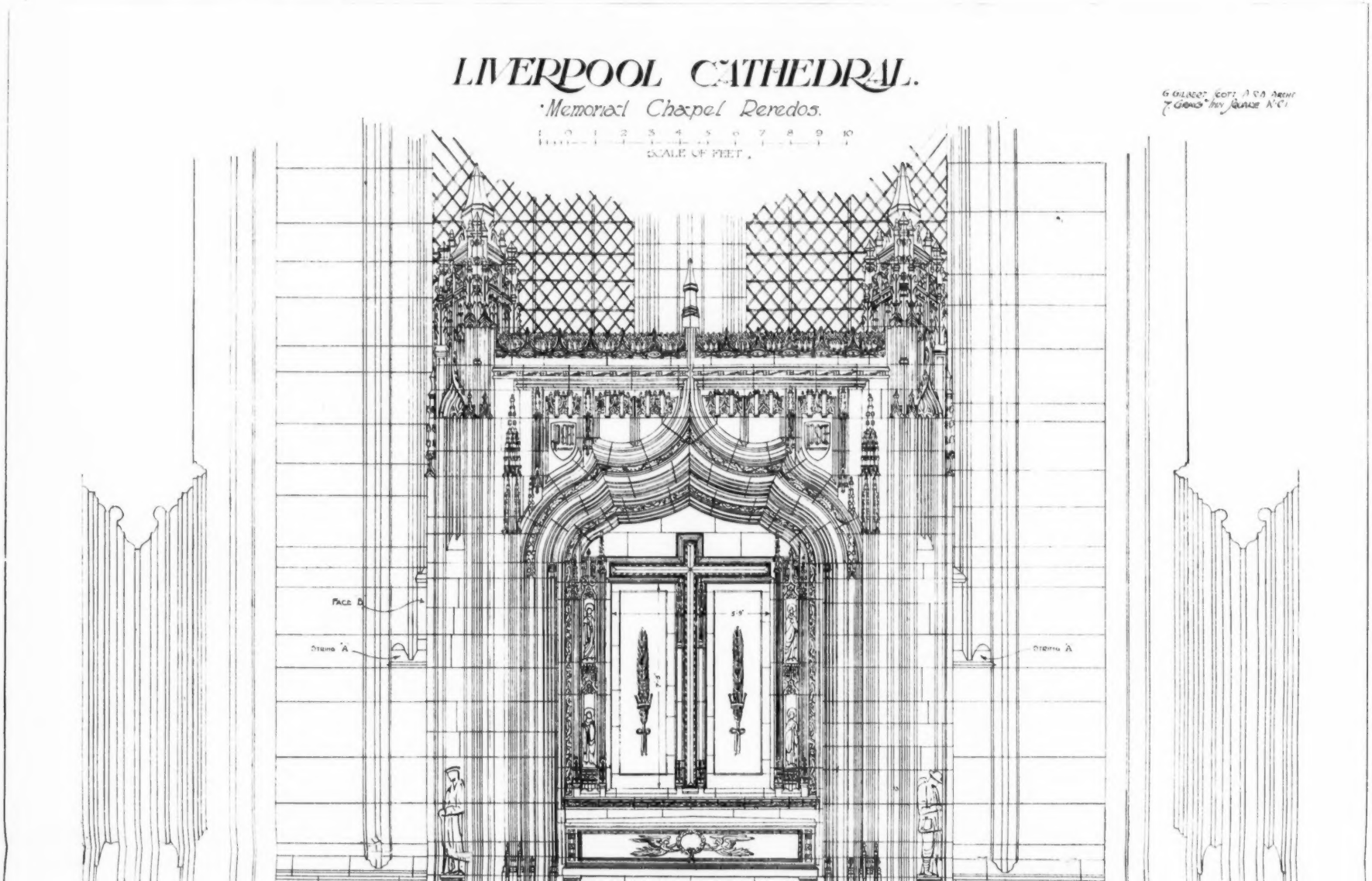
W. Sydie Dakers, Architect

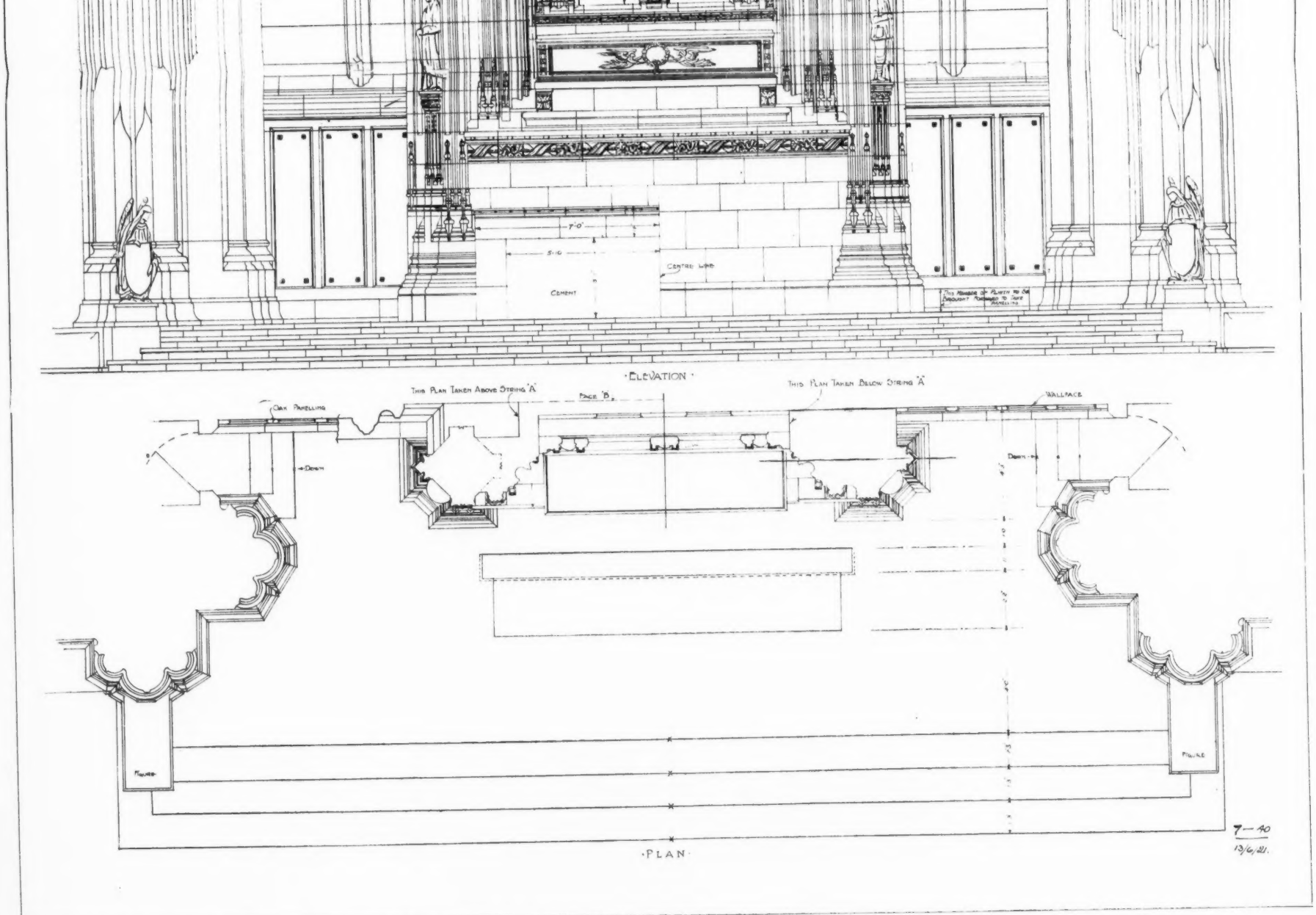
The two residences for masters at Cranleigh School, one of which is illustrated, are on adjoining sites, and are similar in accommodation and design.

A HOUSE AT CRANLEIGH: THE ENTRANCE FRONT. W. SYDIE LDAKERS, ARCHITECT.

Architects' Working Drawings. 82.—Liverpool Cathedral: Memorial Chapel Reredos

G. Gilbert Scott, R.A., F.R.I.B.A., Architect





The Memorial Chapel is in the north-east transept of the Cathedral. Facing the reredos, shown above, is a cenotaph, which stands between the arch separating the chapel from the central space of the Cathedral.

Expression in Architecture

By E. FORSTER

IN making a mental estimate of our fellow creatures, on what do we base our judgment so much as on the buildings in which they live or work or worship? When we land on a strange shore, or come to a new town, we instinctively form our first opinion of its inhabitants from the character and condition of its buildings. Are the streets and houses spacious and imposing? Then, we say, the people are rich. Are they mean and dirty? Then, we say, they are poor. Poverty or wealth, indolence or industry, strength or weakness—every property and peculiarity of the human character has its representative building from end to end of the town.

Without question we accept man's buildings as the concrete expression of himself. They mirror his life in almost every detail. They express his thoughts or his lack of them, and they stand as monuments of his foibles and vanities for posterity to smile at. His ambitions he has written in their stones, and each phase of his yearnings after the ever-elusive thing called Truth is so imprinted on their time-worn faces, that they carry on his old controversies long after he has faded from the earth.

As, when we take a broad view of the history of any country, we look only at the important figures that strut across the stage, so, in a survey of a country's architecture, we consider only such buildings as are remarkable for the pains and skill lavished upon them. Civil, religious, and domestic buildings—these express the ideals of the people. They are works of art.

Now, experience teaches us that the appeal of art is always to the emotions. Great buildings, like great music, have the power of striking chords deep in the human heart. But that is not all. Emotion alone cannot produce architecture. There is a rule of human nature which says, that, before emotion can be stirred in a man, his intellect must, for the moment at least, be satisfied. We cannot feel admiration for a pearl until we know that it is genuine. We laugh at the impossible story—it leaves us unimpressed. Undeveloped intelligence fails to appreciate true beauty, and cleaves to the tawdry and worthless. But the admiration of a cultured Greek, for example, could only be evoked by that which can satisfy the most powerful intelligence as perfect.

Thus architecture to the architect becomes a logical art. The poet expresses his thoughts and dreams in words, the architect his in the language of stone and brick; and just as the poet, if he would express his thoughts, must obey the laws of composition and prosody, so the architect knows that he can produce beauty only by keeping in harmony with the laws of æsthetics. It is obvious, therefore, that it is by the degree to which he is capable of complying with these laws that we judge his powers of expressing himself in his medium of architecture. Which is precisely the same as saying that we judge him to be a good or bad architect on that basis.

Coleridge, speaking of prose, says: "The collocation of words is so artificial in Shakespeare and Milton, that you may as well think of pushing a brick out of a wall with your forefinger as attempt to move a word out of any of their finished passages." It is evident, then, that just as there can only be one "collocation of words," which will perfectly express any one idea of the mind, so in architecture there can only be one design that can perfectly express one ideal.

But what is this ideal that architecture expresses? The whole course of history is but the ebb and flow of a restless sea; man's fortunes are always on the rise or fall, and his arts follow him as naturally as does his shadow. He is always in search of that vague Truth, which will solve all his difficulties for him. Now he is in the trough and his dissensions are drowned amidst those of his fellows, and now he rises triumphant to the crest, rejoicing in a common conviction that he has really found the true philosophy of life. It is at these moments that we get our great architectural ideals. The fifth century B.C. in Greece, the Augustan Age in Rome, the Gothic period of the thirteenth century, and so on. They are the culminating points of an ideal which has been evolved through the long years that have preceded them. The Greek reaches his ideal of a life based on intellectualism, the man of the Middle Ages his ideal of national unity founded on the individual's liberty; and in addition to this they have both perfected the means by which they can express their ideals in architecture. The Greek has applied all the refinements which his intellect can invent to lintel construction, the mediæval builder has developed the arcuated style to express his pleasure in his new social joy. Each craftsman, rejoicing in his own freedom, worked with enthusiasm, and the building rose an harmonious whole, the pride of nationality written in every nook and cranny of its lofty structure. Such buildings speak their definite thought with the clarity of a work of literary genius. They are the *ideal* expression in architecture.

As we pass in revision the hurly-burly of modern architecture, we are apt to sigh for the good simple art of olden days. The reasons for this confusion are not far to seek. There are two kinds of simplicity—the one of ignorance, the other of complete knowledge—and the unhappiest position is in between. Give a man only mud, timber, and straw, for his materials, and with practice he will be able to build a beautiful cottage. But in an age which offers to the architect, not only tremendous varieties of materials, each with its retinue of imitations, but also records of the world's architecture, catalogued in styles, from which he is invited to choose with freedom, it is not to be wondered at that the singleness of purpose, which we have seen, is the keynote of all great building epochs, is lacking. We have not developed the powers of expression in any one medium, but grabbed at a thousand. A score of instruments make a beautiful orchestra, but can make a disagreeable din when all are playing different tunes in different keys.

The poet, I have said, expresses himself in verse and the architect in the language of stone; and, as the poet must master his language so that he can impart every shade of his meaning to his reader and bend it to shape every phase of beauty, so must the architect perfect himself in the knowledge of his medium. He must be "an artist, whose hands could execute what his mind had conceived." Then, just as nature, toying with that one idea, the human face, never repeats herself but produces endless varieties to express the thousand and one influences of environment and temperament, so the architect, playing with that "box of bricks," which man's energies have bequeathed to him, should strive to realize in his buildings "what oft hath been thought but ne'er so well expressed."

[The above essay was awarded the ARCHITECTS' JOURNAL Essay Prize for last year at the School of Architecture, University College, London.]

The Richardson Building, Port Elizabeth

THIS building has been erected in Port Elizabeth for Sir Lewis Richardson, C.B.E. The colonnade is of Table Mountain granite and has a vaulted ceiling with the arches carried over in granite. The concrete groins between are treated in white, and give a fine effect behind the granite columns. The two great stone piers forming the terminals rise without a break to the main cornice, which is carried in one simple bar across the whole front, and casts a pleasing shadow on the great bay thus formed. This bay is of white plaster, the stone balconette in the centre being emphasized against the white.

Above the main cornice the attic story is terminated by two pieces of sculpture in sandstone. These are in bas-relief, and are well supported by the plain piers below. These pieces of sculpture, representing "Commerce" and "Agriculture," are each 8 ft. 6 in. high by 7 ft. wide.

The roof is of Italian tiles. A feature has been made of the two flag poles, which are made to rest upon the main cornice. They have swelled and moulded bases, and scroll stays off the wall below the eaves, producing a decorative effect on this otherwise plain story.

Current Architecture. 238.—The Richardson Building, Port Elizabeth

Jones & McWilliams, FF.S.Arch., Architects

This building has been erected in Port Elizabeth for Sir Lewis Richardson. The colonnade is of Table Mountain granite. The two great stone piers forming the terminals rise without a break to the main cornice, which is carried in one simple bar across the whole front.

The Drainage of Roofs—I

By ERNEST G. BECK, Wh.Ex., Assoc.M.Inst.C.E.

IT is surprising that so important a matter as the drainage of roofs should have received so little attention at the hands of investigators concerned with the construction and maintenance of buildings. Certainly there are few items likely to cause more damage to the walls and main framing of a building through poor design than is the system of roof drainage; and no less certainly there are few items more likely to involve unprofitable outlay. Consequently there can be no excuse for neglecting the subject on the grounds that the effects of poor design upon the first cost, maintenance charges, and efficient operation of a building are not sufficient to warrant the trouble of investigation. Nor can it be supposed that such investigation holds little promise of interest; for, in addition to the interest which is inseparable from all endeavours to ensure a uniformly high standard of efficiency throughout the various departments of design, this particular subject involves many points which are in themselves of outstanding interest.

Too frequently, in designing buildings, the roof plan is regarded as something altogether apart from the remainder of the design. The roof is considered either as a mere lid, or as an essential part of the elevation; and in either case the results are often both costly and unsatisfactory, water being collected in small quantities at numerous isolated parts of the roof. In this way trouble is introduced and multiplied instead of being avoided; and the problem of roof drainage is made to appear highly complicated and difficult, whereas in fact it requires little beyond common sense and care for its effective treatment.

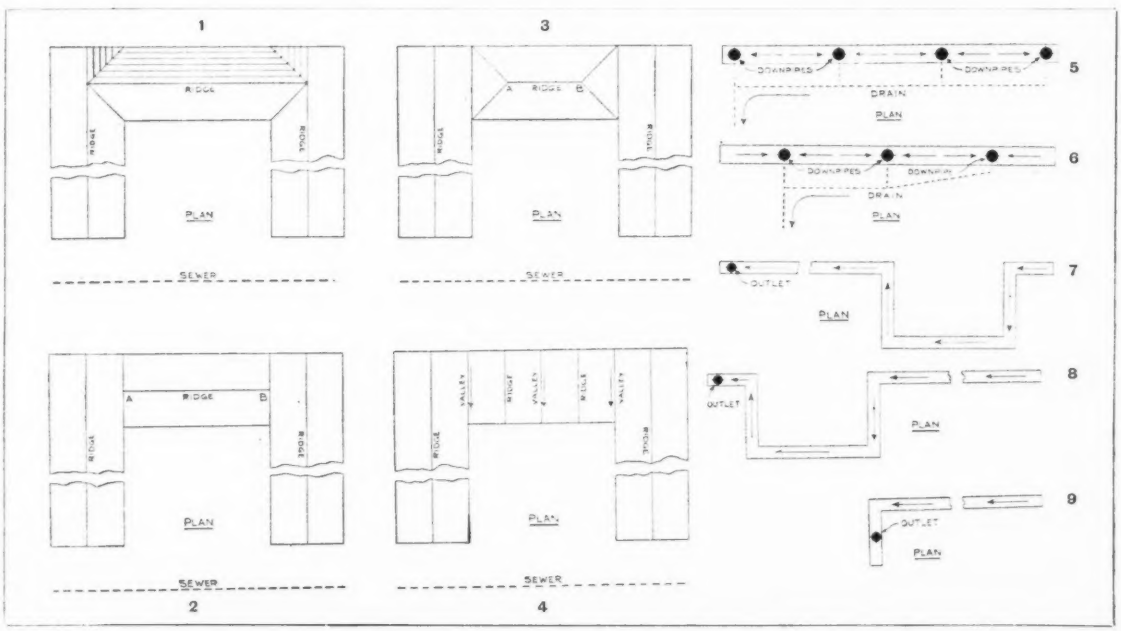
In this short series of articles an attempt will be made to consider and discuss the matter on plain and simple lines, taking as a basis the facts which may be observed by anyone sufficiently interested, and deducing therefrom inferences likely to be of service in practical designing. There is neither intention nor desire to appear in any way dogmatic, nor to claim either originality or finality for any suggestions which may be offered. The main object is to evoke and stimulate thought regarding a matter of unquestionable importance which may (and should) be treated on plain, common-sense lines; and although every remark and suggestion to be advanced will represent the results of careful observation from actual fact, it is hoped that they will all be subjected to impartial examination, and the inferences compared with the indications to be observed in existing cases under appropriate conditions. By this means a reliable basis for design, to ensure effective results at minimum cost, should be established, and reliance upon a few obviously empirical rules (mostly of doubtful origin and questionable applicability) replaced by a sound knowledge of the facts, tendencies, and probabilities concerned.

It will be obvious upon consideration, and abundantly demonstrated by trial, that the best results from all points of view are to be obtained by treating the entire design for a proposed building as one complete scheme, instead of as several more or less related parts. The lay-out of the various floors, all the elevations and sections, the underground drainage system, and the roof plan should all be conceived and developed as one complete whole; otherwise it is highly probable that additional expense will be incurred in providing for the collection, conveyance, and disposal of drainage water from small, isolated portions of the roof, while the results as regards drainage will almost certainly be less satisfactory than those which might have been obtained with a more simple and unified design.

A typical instance of bad roof planning in this respect is indicated in Fig. 1; and alternative methods of treatment for the same case are shown in Figs. 2, 3, and 4.

With the plan of Fig. 1, the conveyance of drainage water from the hatched roof slopes to the sewer would be troublesome and costly, involving additional downpipes and sub-surface drains; while in some cases the conveyance might be so difficult as to border on the impracticable—as, for instance, if drains were not permissible either at the rear of or under the building, or if the extra length of drain required had the effect of bringing the main drain below the sewer into which it must deliver.

Either of the roof plans indicated in Figs. 2 and 3 would afford a solution of the difficulty (the plan of Fig. 3 being



DIAGRAMS ILLUSTRATING METHODS OF ROOF DRAINAGE.

preferable to that of Fig. 2 in some ways), all the roof drainage being brought to the front of the building by the gutters. If the internal arrangements of the building be suitable, the plan of Fig. 4 is at once economical, direct and simple as regards roof drainage, and in many cases might be more advantageous even than those of Figs. 2 and 3.

Other instances of similar character will doubtless suggest themselves readily on consideration, and many may be observed in existing buildings.

Questions concerning the orientation of roof slopes will generally be determined by reference to the requirements of planning for the building as a whole, and need not be specially influenced by considerations of roof drainage in any but exceptional circumstances.

At the same time, however, in cases where the general requirements would be met equally well by any one of several orientations, that which is most favourable for roof drainage should be chosen; and in this connection, two points of fundamental importance in the planning of roofs for effective and economical drainage may be observed.

First, drainage from each point on a roof should be conveyed to the sewer by the shortest path consistent with sound construction and real convenience. For instance, water should not be led away from the sewer in a gutter and then brought back again—either in another gutter or in a sub-surface drain—for this involves the construction of two distinct conductors where not even one was necessary. Of course, this point must be interpreted with reasonable broadness and with due regard to other factors and circumstances, for sometimes the two conductors (or one of them) may be necessary for other purposes, in which case it might be more advantageous to utilize them (or it) than to devise separate means for the particular purpose; or, again, water may sometimes be conveyed away from the sewer by a roof slope (e.g., from the ridges AB in Figs. 2 and 3), and brought back by the gutters which are necessary in any case—though the advantages afforded by such planning as that indicated in Fig. 4, in the way of more direct (and therefore more rapid) clearance from the roof, should be observed and borne in mind.

Second, duplication of conductors should be avoided—or at least minimized. For instance, with a stretch of gutter and rank of downpipes delivering into a line of subsidiary drain, as in Fig. 5, the gutter overhead is completely duplicated by the drain. Doubtless the full stretch of gutter would be necessary, but by suitable arrangement of gradients and placing of outlets it should be possible in many cases to save a considerable proportion of the drain, and also to reduce the depth of the excavation for it (besides saving one downpipe, gulley, etc.)—for example, on some such lines as those indicated in Fig. 6.

Valley gutters and eaves gutters alike have their particular advantages and disadvantages; and each should be used where more suitable than the other, care being taken, of course, to ensure the full utilization of advantages while minimizing or providing for disadvantages. The arrangement and proportioning of gutters will be discussed later; but there are a few points of general applicability which may conveniently be observed here.

Three important advantages possessed by the valley gutter as compared with the eaves gutter are :—

1. The collection and conveyance in a single duct of water from two roof slopes, with the consequent saving which may be effected by the use of a single rank of downpipes, and a single line of sub-surface drain, for the two slopes.

2. The convenience and facility of support, and the comparative simplicity of adjustment to correct disturbances of gradients due to unequal settlements and other causes; and

3. The utilization of the gutter itself as part of the roof covering.

The principal disadvantages of valley gutters as compared with eaves gutters are :—

1. The greater liability to obstruction, owing to the accumulation of dust and refuse in the valleys, and especially to the formation of snow drifts; and

2. The greater damage and inconvenience likely to be caused through overflowing.

These two disadvantages may, however, be minimized (and often practically eliminated) by the exercise of proper care in design and the provision of ready means for access to the gutters for the purpose of keeping them free from obstruction. The latter provision is not so necessary for small roofs, of course (though the desirability of so arranging that all gutters on every roof shall be easily accessible is too obvious to need argument); but for large and important buildings, such as factories, warehouses, and buildings of other types in which serious and extensive damage may be caused, either to the building or its contents, or loss occasioned by interruption of work, through the overflowing of a gutter, it is necessary that such means be provided, and that those responsible for the operation of the building be made fully aware of the need for effective and intelligent utilization of the means provided.

Sharp changes of direction are a fruitful cause of flooding in gutters, and should therefore be treated carefully where they cannot be avoided. The water flowing along a gutter is, of course, subject to the laws which govern all moving bodies; and a change in the direction of motion cannot be effected otherwise than by either of the following :—

1. The application of an external force, suitable both as regards magnitude and direction, or

2. The surrender of momentum in the development of a deflecting resistance, through pressure against an obstacle suitably formed and placed.

As regards the first of these two means, it is possible to introduce external forces by altering the inclination of a gutter, transversely or longitudinally or both; and this, in combination with the use of less abrupt changes of direction, might certainly be turned to much greater practical advantage than it is. Changes of longitudinal gradient should, however, be made with care, and only in positions where they will assist instead of obstructing the flow—both in the particular stretches of gutter concerned and in others affected. This matter will be discussed more fully in due course.

As regards the second means, it follows that an angle in a gutter must inevitably retard the flow; and consequently angles should be avoided in parts of a gutter where it is likely to be heavily charged. At or near the summit of a gradient a change of direction may not be open to serious objection; but it becomes less and less tolerable as its position approaches the outlet to a downpipe—unless, of course, the gutter be of much greater section than would otherwise be sufficient for the drainage it has to convey, and unless the change of direction almost coincides with the outlet.

Thus, the gutter plan of Fig. 7 might give reasonably good results, while that of Fig. 8 would in most cases be liable to flooding and overflowing. With the arrangement of Fig. 9 it is probable that the retarding influence of the angle would be nullified by the relief afforded by the outlet so close beyond it.

Trouble and expense may often be saved by first ascertaining the views and requirements of the local drainage authority concerned. According to their own particular needs and resources, some will allow a more or less considerable proportion, while others will not allow any, of the roof drainage to be delivered into the soil sewers; and yet others have a single system for both surface water and soil drainage. Clearly, such different conditions call for correspondingly different methods of treatment—otherwise it may be found necessary to encircle the building with soil drains, and again to encircle it with surface water drains, whereas, with previous knowledge of the local requirements, and by designing accordingly, a large proportion of either (or both) systems might have been saved.

(*To be continued.*)

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.

STANCHION AND FOUNDATIONS.

"E. C." writes: "The stanchion, Fig. 1, carries the loads on Fig. 2; what is the method of finding the size and spacing of lattice bars? The wind pressures and loads below the point of contraflexure are given in Fig. 3; what type of foundation should be used, and how is this calculated? The safe pressure on soil is 3 tons per square foot."

—There is no satisfactory formula known to the writer for the diagonal bars of a lattice stanchion, they are generally put in by judgment only, say bars $2\frac{1}{2}$ in. by $\frac{3}{8}$ in. with $\frac{3}{4}$ in. rivets, with a maximum inclination of 30 deg. from the horizontal, but in the present case the lattice bars would be longer than usual, and a better size would be 3 in. by $\frac{1}{2}$ in. with $\frac{7}{8}$ in. or 1 in. rivets. There are two types of foundation for the stanchions of a steel-framed shed. One spreads out without going deep, the other going deep without much spread. The former resists by its area requiring a considerable tilt before it can go over, and the latter resists by the surface it presents to the ground on its opposite faces. For the shallow foundation we have

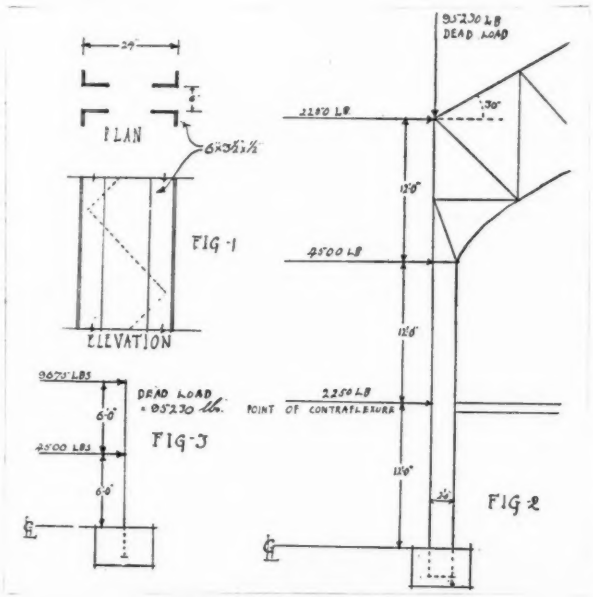
$$\frac{W}{A} \pm \frac{M}{Z} = \frac{95230}{x^2} \pm \frac{143100}{\frac{1}{6}x^3} = 3 \times 2240,$$

therefore x = say, 6 ft. The depth should be not less than 1 ft. 6 in., and the base plate on stanchion, say, 3 ft. by 2 ft., buried in the concrete 6 in. from underside. The contents of this block would be $6 \times 6 \times 1{\cdot}5 = 54$ cub. ft. For the deep foundation we have first the horizontal sectional area $= \sqrt{\frac{W}{2240 \times 3}} = \sqrt{\frac{95230}{6720}} = \sqrt{14{\cdot}2} = 3{\cdot}75$, or 3 ft. 9 in. side of square block. The depth of block would be about $D = \sqrt[3]{\frac{B - 5000}{470}}$ where D = depth in feet, B = bending moment in lb. ft.

$$D = \sqrt[3]{\frac{143{,}100 - 5000}{470}} = \sqrt[3]{294} = 6{\cdot}65, \text{ say, 6 ft. 8 in.}$$

The contents of this block would be, say, 94 cub. ft. The narrow sides of the stanchions should be battened at intervals.

HENRY ADAMS.



STANCHION AND FOUNDATIONS.
(*See answer to "E. C."*)

THE STRENGTH AND USES OF BRICKS AND CONCRETE BLOCKS.

"J" writes: "Please give in a tabular form a comparison between bricks and concrete blocks arranged in order of strength; state also the purposes for which each is best suited, and the tests you would apply to each."

—The word concrete is applied to blocks either composed of breeze, clinker, gravel, broken stone or granite, and other materials differing from one another in strength and chemical stability of composition. Blocks may be made in any proportion of mixture with one of these materials and Portland cement. The process of manufacture has not yet been sufficiently standardized to permit of generally representative tests being made and reliable figures obtained. The safe compressive strength of concrete blocks for building purposes has been estimated at 103 tons per sq. ft., but neither the composition of the block nor the factor of safety has been given. Supposing this figure to indicate the cracking pressure, it would represent a strength comparable to that of a gault brick as per table below.

Even with bricks the published lists of crushing strengths give figures showing a very wide variation in strength in similar bricks built into similar piers.

Variety.	Tons per sq. ft. Cracked.	Tons per sq. ft. Crushed.	Use.
Staffordshire blue bricks	471	701	Piers in which great strength with limited area is required and to resist abrasion.
Specimen piers of same in cement	29 min. 97 max.	61 min. 139 max.	
Leicester red bricks ..	248	382	As blue but with less efficiency and for facings.
Specimen piers of same in cement	19 min. 62 max.	47 min. 86 max.	
Fletton bricks ..	—	220	General purposes behind facings.
Specimen piers of same in cement	35 min. 54 max.	54 min. 56 max.	
Gault bricks	102	182	As Flettons but less efficient.
Specimen piers of same in cement	11 min. 45 max.	17 min. 51 max.	
London stocks ..	76	84	General purposes and facings.
Specimen piers of same in cement	8 min. 29 max.	13 min. 39 max.	

For particulars of conditions of testing consult the "R.I.B.A." report on brickwork tests, 1905.

Concrete composed of Portland cement one part mixed with two parts clean, sharp sand and five parts of suitable aggregate broken to pass through a $1\frac{1}{2}$ in. ring, is said to be capable of sustaining safely fifteen tons per square foot, as against the twelve tons per square foot generally considered permissible on a pier of blue brick in cement. The figure of fifteen tons would probably be too high for concrete blocks built into a coursed structure as the jointing material and the methods of building might very considerably reduce the strength, as in the case of the brick piers quoted above.

A concrete cannot be stronger than its aggregate, and where a high value for compression is desired an aggregate possessing this quality must be selected. Where it is proposed to utilize the compressive value of the material to the full the tests obtained under laboratory conditions should be supplemented by others conducted on the site with bricks or blocks assembled as nearly as possible in the positions they will occupy in the actual buildings. The construction, to be satisfactory, should be able to support a load considerably in excess of that which will be applied to it in practice.

A matter-of-fact test of this sort would prevent the use of an unduly weak and thin partition block throughout a whole housing scheme, as it would demonstrate the failure of the partition to carry the weight of ceiling joists or to support its own weight under ordinary conditions of use.

Minor tests to be applied to each material would include examination of it in respect to the following qualities :—

1. Good bricks or blocks should withstand reasonable handling and cartage.
2. They are geometrically regular and true to pattern.
3. Uniform in internal composition and free from flaws and incipient planes of cleavage.
4. Sound bricks or blocks will give out a characteristic ringing note when two of the same kind are struck together.
5. They will not exceed a certain recognizable range of variation in surface colour and texture applicable to each class.
6. They should be capable of being broken or cut only after repeated blows, not by single blow.
7. Bricks or blocks should not absorb more than 15 per cent. of their own weight of water.

In conducting tests on the site or in interpreting figures obtained in the laboratory it should be noted that—

1. The strength is very materially reduced as the proportion of height to width in the pier is increased.
2. That experiments on small-scale models require expert mathematical analysis as the ratio of load to area of support is not faithfully represented in a model faithfully made to a reduced scale.

WILLIAM HARVEY.

TIMBER FOR SHOP FRONT.

"M. H." writes: "What timber do you recommend should be specified for a small shop front. It will be somewhat eighteenth-century in character, and is to be finished painted."

—For clean working there is probably no timber commonly obtainable so suitable as well-seasoned pine, which should be quite suitable if selected of good joinery quality free from knots. If the members are very slight and greater strength is needed teak could be used, at some increase in cost both for material and labour.

CUBE COST OF VARIOUS BUILDINGS.

"C. R." writes: "Please give me the prices per cube foot based on the present cost of materials and labour in London (tradesmen 1s. 8d. per hour, labourers 1s. 3d. per hour) for the following types of buildings :—

1. Churches.
2. First class hotels, similar to Midland Adelphi, Liverpool.
3. Town halls, similar to Marylebone.
4. Large office buildings, similar to Cunard Offices, Liverpool.
   Ditto, similar to Bush House, steel frame building.
5. A large store, first class, similar to Peter Robinson, Ltd., steel frame building.
   Ditto, similar to Messrs. Selfridge, London.
6. Cinemas.
7. Schools.
8. Large café, similar to Lyons', Oxford Street.
9. Bungalows.
10. Cottages.
11. A large workshop, steel frame building, brick walls, reinforced concrete floors.
12. Power-house, steel frame, brick walls.
13. Block of London flats.
14. A large cotton-spinning mill.
15. A large weaving shed.
16. Garages.

—There is at present a great deal of variation in cube costs dependent upon many things, such as site and access thereto, architect, class of contractor, etc. I have, however, indicated approximately the figures desired against each of the items. These figures are only approximate, and on the higher rates there might be a variation of 1s. either way. I have, however, been very carefully into it, and some of the figures represent actual recent costs. *They do not, of course, include elaborate finishings* :—

1. Churches, brick built, with stone dressings, 1s. 8d. per ft. cube.
2. Churches, stone built, with internal stone columns, etc., 2s. 3d. to 2s. 6d. per ft. cube.
3. First class hotels, similar to Midland Adelphi, Liverpool, 5s. 6d. to 6s. per ft. cube.
4. Town halls, similar to Marylebone Town Hall, 4s. 9d. to 5s. 6d. per ft. cube.
5. Large office buildings, similar to Cunard, Liverpool, or Bush House, Kingsway, 5s. 9d. to 6s. 6d. per ft. cube.
6. Large stores, similar to Peter Robinson's or Selfridge's, 5s. 3d. to 6s. per ft. cube.
7. Cinemas, about £45 per seat for seating accommodation 700 to 1,000, or an average of, 1s. 10d. to 2s. 4d. per ft. cube.
8. Schools, 1s. 10d. to 2s. 6d. per ft. cube.
9. Large café-restaurants, similar to Lyons' Corner House, 5s. 6d. to 6s. 3d. per ft. cube.
10. Bungalows, 1s. 5d. to 1s. 9d. per ft. cube.
11. Cottages, 1s. 6½d. to 1s. 11d. per ft. cube.
12. Large workshops, steel frame building, brick walls, etc., R.C. floors, 1s. 8d. to 1s. 10d. per ft. cube.
13. Power-houses, steel frame structure, brick walls, 1s. 7d. to 1s. 10d. per ft. cube.
14. Block of London flats, 2s. to 2s. 9d. per ft. cube.
15. Spinning mills, 1s. 8d. to 2s. per ft. cube.
16. Weaving sheds, 1s. 8d. to 2s. per ft. cube.
17. Large commercial garages, 8d. to 11d. per ft. cube.

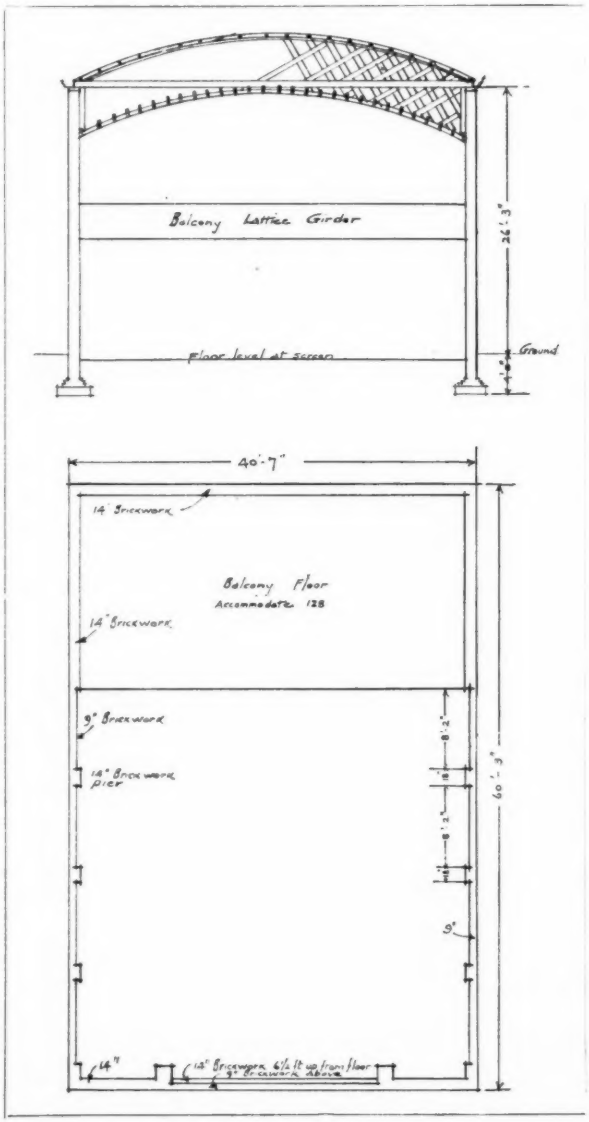
E. I.

THE STABILITY OF CINEMA WALLS.

"H. A." writes: "Please give me your views as to the ultimate reasonable stability of the walls of a building, when erected in composition brickwork, built in cement mortar (4 to 1). As indicated on the accompanying sketch the building would be used as a cinema. The building would be roofed with the usual Belfast truss, the outer surface being covered with 'Rok' roofing, and curved ceiling finished in plaster."

—In the first place no wall should be less in thickness than one-sixteenth of its height. The walls here are 28 ft. 9 in. above the footings, and $\frac{28{\cdot}75}{16} = 1{\cdot}8 = 1$ ft. 9⅖ in., therefore the least thickness of the auditorium walls will be 18 in. for a height of, say, 17 ft. 6 in. and 14 in. above with the piers in addition as shown. Again, the double curved Belfast truss will tend to spread and put further stress on the walls unless the tie shown between the wall-plates is securely attached to the walls. If the balcony girder ties in the side walls it will still leave a length of 38 ft. 6 in. unsupported, which renders it more necessary that the walls should be of substantial thickness.

HENRY ADAMS.



STABILITY OF CINEMA WALLS.

(*See answer to "H. A."*)

Parliamentary Notes

[BY OUR SPECIAL REPRESENTATIVE.]

Mr. Wheatley informed Mr. W. F. Mitchell that according to the circular to local authorities issued in connection with the Housing Act, 1923, the materials to be used for the construction of houses must be of good quality, such as was ordinarily specified by a local authority in a contract for workmen's houses; and the construction must be of a type for which a period of not less than sixty years would be allowed by the Minister of Health for the repayment of the loan. Provision was, however, made for variation by special approval of the Minister.

In reply to Mr. Penny, Mr. Wheatley said he was aware that Belgian bricks were being offered alongside wharf in the Thames at 55s. per 1,000, as compared with 85s. and 75s. for Kentish first and second-class stock bricks in the field. He understood, however, that these bricks were not regarded as being equal in quality to first and second-class stock bricks. He was not aware that the bricks were being used on subsidy houses. If foreign bricks of satisfactory quality were available at lower prices than British bricks, he should expect local authorities to avail themselves of them.

Answering Mr. T. Thomson, Mr. Wheatley said he was aware that in many cases empty houses were held for sale, but he could not undertake to introduce special legislation to deal with this matter during the present session.

Mr. T. Thomson asked the Minister whether he was aware that, at the annual meeting of the Municipal Corporations Association, a resolution was passed protesting against the limitation of the maximum measurement for houses prescribed in the Government's Housing Bill, and would he now reconsider the policy of the Government on this question.

Mr. Wheatley said he had had no intimation of the resolution, but he was aware that very few local authorities had utilized to the full the powers they already possessed.

In answer to Sir Kingsley Wood, Mr. Wheatley said there had been considerable fluctuations in the prices of such building materials as lead and iron water pipes. He was not able to say to what extent these fluctuations had been due to the demand of foreign markets. They had, no doubt, been due to various and usual circumstances, but especially to the fluctuations in the prices of raw materials.

Mr. Wheatley informed Lieut.-Commander Fletcher that a small number of proposals had been received from local authorities for the erection of houses mainly constructed of wood, or for sanction to grant financial aid to such houses, and in some cases approval had been given.

Mr. Wheatley informed Mr. Montague that the occupation and number of skilled men employed in the building trade in England and Wales in October, 1923, was :—

Bricklayers	53,630
Plasterers	13,910
Carpenters and joiners	106,880
Slaters	2,880
Plumbers	28,430

Mr. Wheatley informed Captain Terrell that applications were still being received for authority to proceed with the erection of houses under the 1923 Act. Since the beginning of the year authority had been given for the erection of 62,743 houses—20,421 by local authorities and 42,322 by private enterprise.

Mr. Kirkwood has introduced a Bill to provide for the removal of the Scottish Stone of Destiny from Westminster Abbey to Holyrood Palace, Edinburgh.

The New Housing Bill

The National Housing and Town Planning Council, in their last fortnightly record, place on record the main arguments advanced by housing reformers in favour of the endeavour now being made to secure the amendment of the conditions prescribed as to the measurements of the houses to be built under the Housing Bill. It is pointed out that at a series of conferences held during the past ten days under the auspices of the National Housing Council, representing more than 300 local authorities, the following resolution was passed by overwhelming majorities : "That this conference desires to protest against the limitations of the maximum measurement prescribed under the financial resolution on the Housing Bill to 950 super feet for the building of 2,500,000 (two million and a half) houses providing homes for 12,500,000 (twelve millions and a half) people. It urges all Members of Parliament, irrespective of party, to secure amendment of this provision, leaving to the wise common sense of the local authorities engaged in housing administration the task of determining what standards can best be adopted for their areas." At the conference of Lancashire and Cheshire local authorities held in the Town Hall, Manchester, the opinion was so strong that directly the resolution was submitted the whole conference unanimously expressed agreement, and not a single dissentient note was raised in a gathering representing the Housing Committees of upwards of seventy local authorities.

Contemporary Art

Decorations.

Louis Davis is almost the last living exponent of the aftermath of pre-Raphaelitism; he has the two essentials of the school, the romantic imagination and outlook, and the love of truth to Nature. The symptoms of the latter faculty were always to be found in the foregrounds of the pre-Raphaelite pictures : meadows with daisies pied or as adjuncts to the figure pictures in bunches of lilies and other flowers, naturalistically treated. Louis Davis follows the practice, not in imitation of the principle, but out of pure love of Nature's forms, as may be seen in some of the studies. The exhibition as a whole, however, owes its importance to its decorative qualities, displayed mostly as designs for painted glass in the wrong, but very charming method of the Morrisian-Burne-Jonesian convention. They are less original than the designs of Burne-Jones, but more homely, more fitted to the private uses to which most of them have been applied than to the larger expanse of general church work which has claimed some of them. They do not display a wide ecclesiological knowledge or incentive so much as an intimate human appeal. The artist is a Ruskinian, and there is a small pencil flower-drawing displayed, actually done to Ruskin's orders, and this in itself gives the keynote to the whole exhibition.

Decoration is the note of Prebble Rayner's interesting show at the Little Art Rooms in the Adelphi. Up till now I have known this artist as a good etcher; it seems he has made at least one large and striking poster. The decorative landscapes here seen partake somewhat of the quality of poster art; they may be classed also as examples of the English "toy-box" school, for they possess the *naiveté* of the flat set convention, and are altogether delightful as such, but they have none of the clear-cut line-work of the etching. In spite of the deliberate convention in which the artist has made these pictures, they have truth to Nature, and indicate a love for it.

Drawings.

The Independent Gallery exhibits nearly fifty joyful examples of the draughtsmanship of Walter Sickert, and many of them I was glad to see marked with the red badge of courage, which indicates that there are in London lots of people appreciative of one of the finest talents in its midst; it also indicates that it pays to put unprohibitive prices on works of art. It is also much better to state the prices of works directly in the catalogue, for there are many people to whom it seems an indignity to have to ask the "how-much" of a work of art they covet.

At the Beaux Arts Gallery in Bruton Street—a gallery, by the way, which has now speedily and definitely established itself—there is a striking exhibition of pastel drawings by the Australian artist, Cumbrae Stewart. Half of them are female nudes, drawn with style and possessing a flesh quality very rare in this kind of work. The other half are largely of buildings, in the same medium, and with the same satisfactory result. There is an air of facile, but not unprofound, accomplishment about these drawings, and an unusual technique in the use of pastel that makes them very attractive.

The water-colours of Scottish lochs and moors by W. Egginton, at the Fine Art Society, are well done, but somewhat monotonous. The artist has a love of Nature, and a knowledge of the proper water-colour method: he never obtrudes, but he seldom thrills. The drawings are honest, but inclined to be pedestrian.

Topography.

At the Beaux Arts Gallery Keith Henderson shows some admirable pictures of Egypt, Brazil, and other countries, some of which are illustrations to the delightful book the artist has just issued called "Palm Groves and Humming Birds." At the XXI Gallery, A. C. Amarasekara, the honorary secretary of the Ceylon Society of Artists, has an exhibition of paintings (in the European manner) of Ceylon. KINETON PARKES.

Law Reports

House Divided into Flats—Effect of Rent Act

Mewes v. *Lichtenstein.*

July 9. King's Bench Division. Before Lord Darling and Mr. Justice Shearman.

This was an appeal by the defendant from a judgment of deputy judge Thomas, of the Westminster County Court, in favour of the plaintiff, who was the landlord. Plaintiff sued the defendant for arrears of rent, and the defendant set up that the structural alterations the plaintiff had carried out at the premises were not of such a character as to take his flat outside the Rent Restrictions Act, 1920.

Mr. Woodgate appeared for the appellant, and Mr. E. Moseley for the respondent.

Mr. Woodgate stated that the appellant's defence was that he had overpaid rent in the past, the landlord having purported to divide the house into two self-contained flats and let one to defendant very much above the proper portion of the rent. His (counsel's) contention was that there was no evidence on which the judge could decide that the premises were reconstructed into self-contained flats as to be outside the Rent Act. Counsel quoted section 12, sub-section 9 of the Act of 1920. All that was done to the premises, said counsel, was that a partition was put up in the passage to divide the ground floor from the floor above, the cost being £15.

Mr. Justice Shearman: Is a man to lose the benefit of that because it was done cheaply?

Mr. Woodgate submitted that there was no substantial alterations as to put the premises outside the Act.

The court, without calling upon Mr. Moseley, dismissed the appeal with costs, holding that the matter was one of fact, and that there was evidence upon which the County Court judge could find as he did.

Architect's Claim for Fees

Ingram v. *Willers.*

July 10. King's Bench Division. Before Mr. Justice Rowlatt.

This was an action by Mr. William E. Ingram, an architect, of Verulam Buildings, W.C., against Mr. F. Willers, of Cavendish Drive, Leytonstone, to recover £1,158 odd for work done and services rendered in connection with the development of the Glebe estate at Hendon.

Mr. Holman Gregory, K.C., appeared for the plaintiff, and Mr. Neilson, K.C., for the defendant.

Mr. Gregory said the defence was an allegation that all the work which the plaintiff did for the defendant in his capacity as architect and surveyor was worthless. Through plaintiff's introduction a firm of solicitors financed defendant in a contract to buy 4½ acres of land at Hendon at £800 an acre, and Mr. Ingram was then instructed to act as architect and surveyor in the development of the land. Plaintiff also prepared plans of some shops on the front of the estate, with tenements over them, and agreed to do the work for 100 guineas a shop and flat. In August, 1922, plaintiff was surprised to receive a letter from the defendant saying he thought that the best was not being made of the site by the plans, and there had been serious delay. Defendant had therefore, he said, called in another architect, whose plans he proposed to use. When plaintiff sent in his bill defendant replied that the plans were useless, and were never accepted, and that he had failed to arrange the necessary finance.

Plaintiff gave evidence in support of his case.

Mr. Neilson cross-examined. Plaintiff denied that he told defendant at the outset that he need not worry about the charges, as he (plaintiff) would not overcharge him. It was not true that the solicitors to whom he introduced defendant never found a shilling for the finance of the buildings. Plaintiff admitted that originally his charges were £1,800, and that he was advised to reduce them.

Defendant gave evidence, and said he had experience in building. Plaintiff agreed to his (witness's) suggestion that he should prepare the plans if he found someone to finance him. At the beginning of April, 1922, he made a contract with the builders to erect shops, but did not get the plans from plaintiff until July 5. It was never agreed that Mr. Ingram should charge 100 guineas per shop, nor was any figure mentioned.

His lordship, after hearing the evidence, gave judgment for the plaintiff for £850 and costs. He did not think that because one architect had done the work for 500 guineas the plaintiff must do it for that figure. At the same time there was a good deal of repetition in the plans of the shops and flats, and he thought he ought to award plaintiff £850.

Book Reviews

"Masters of Architecture"*

The fifth and sixth volumes of Benn Brothers' interesting series deal respectively with the work of McKim, Mead, and White, and that of the versatile Austrian, Fischer Von Erlach. Mr. H. V. Lanchester has obviously found in Von Erlach a subject after his heart, and in the short prelude to the illustrations brings into vivid relief a personality remarkable for extreme facility in design and a surety of touch present in all his works from first to last.

Baroque architecture is exerting an increasing attraction over English designers, chiefly perhaps on account of its almost unlimited plastic possibilities and its freedom from pedantry. It is bound to invite study at this period, when the importance of form is beginning to receive its due as opposed to mere eclecticism in detail. As Mr. Lanchester has it, the Baroque is characterized by the "abandonment of qualities traditional in architecture in favour of a freer outlook." It is a manner which uses for its effects every possible component—much in the way that the architecture of the future will undoubtedly combine the increasing variety of modern building materials.

Much of Von Erlach's work is familiar in image to architects, but perhaps without precise attribution to this same master designer. The Karlskirche at Vienna, with its imperial stateliness of massing, the Swarzenburg Palace at Vienna and two charming street palace façades—all from one hand—would have been sufficient to place their designer in the first rank, but Mr. Lanchester's monograph reveals still other treasures of warm-blooded architecture, lavish of pleasure and refined always by dignity of composition.

Professor Reilly's companion book on the work of the great American firm strikes another note. This author, too, feels his subject—Liverpool University looks towards America, and in doing so cannot find a better model than the finished products of modernized Roman and Italian Renaissance design, which emanate from the office of McKim, Mead, and White. Some of their work, notably the University Club, and the Morgan Library, seem to have almost reached the finality of perfection in this type of handling, and rank amongst the architectural masterpieces of the world.

It is precisely this fact which makes clear the extraordinary good fortune of American architecture in having such a pillar of strength as was this firm upon which to lean in the early chaos, following upon the success of individualists like Richardson. The architecture of McKim, Mead, and White was necessary, and has purified American design. Influence of this type will always be necessary in all countries, but whether the particular expression of their buildings has not worked out its allotted span is another and more open question. One sees, even in the early work of such designs as the Tiffany Building, the struggle between a not too supple style and the requirements of a new age. To an even greater extent is antagonism present in the Pennsylvania Station.

The illustrations of this book are perhaps not amongst the most interesting of the series. One would have enjoyed seeing the Century Club, the Gorham Building, the Morgan Bank; and the rather faded charms of Madison Square Gardens do not justify the occupation of five plates. But Professor Reilly's clear exposition of the parts played by each of the partners in the original firm is a compensation and perhaps a justification for the selection made.

* "Masters of Architecture," under the general Editorship of Stanley C. Ramsey. "Fischer Von Erlach," by H. V. Lanchester; "McKim, Mead, and White," by C. H. Reilly. Ernest Benn, Ltd., 8 Bouverie Street, London, E.C.4. Price 10s. 6d. each.

Publication Received

"Housing Betterment," May 1924. The National Housing Association, 105 East 22nd Street, New York City.

The International Congress on Architectural Education

Further details have now been issued of the arrangements for the International Congress on Architectural Education to be held in London from July 28 to August 2. All Members and Licentiates of the R.I.B.A. and all Members of the Architectural Association, the Society of Architects, and of the Allied Societies are invited to attend the congress, of which the cost of membership has been fixed at 10s. 6d., to include all publications in connection with the congress and the privilege of introducing one lady guest. The headquarters of of the congress will be at the R.I.B.A., 9 Conduit Street, London, W.1. The programme, so far arranged, is as follows :—

Monday, July 28.

Members will assemble in London.

In the evening at the R.I.B.A. there will be a reception of the members of the congress by the President and Council R.I.B.A. Members will have an opportunity of inspecting exhibitions in the R.I.B.A. galleries.

Tuesday, July 29.

In the morning there will be a meeting of the members at the R.I.B.A., when papers on architectural education in the past in America, France, Italy, and England will be read and discussed.

In the afternoon the members will assemble at the Architectural Association, 34 Bedford Square, W.C., for a visit to the School of Architecture, and proceed thence on a visit to the Bartlett School of Architecture, University of London, Gower Street, W.C.

Wednesday, July 30.

In the morning papers on architectural education in the present in America, France, Italy, and England will be read and discussed.

In the afternoon members will assemble at the R.I.B.A., and will be conveyed to Lambeth Pier, where they will embark on a private steam launch and proceed to Greenwich by river. Tea may be obtained in Greenwich Park. Members will then return by steamer. The cost of this trip will be 8s., excluding tea.

Thursday, July 31.

In the morning members will meet at the R.I.B.A., when papers on architectural education in the future in America, France, Italy, and England will be read and discussed.

In the afternoon a visit will be paid to the British Empire Exhibition at Wembley. The party will be conducted round the exhibition by Sir Lawrence Weaver, Director United Kingdom Exhibits, Sir John Simpson, and Mr. Maxwell Ayrton. Tickets 3s., including admission to the exhibition.

In the evening the congress banquet will take place at the Hotel Victoria, Northumberland Avenue, S.W. Tickets 12s. 6d., exclusive of wines; 32s. 6d., inclusive of wines, etc.

Friday, August 1.

The day will be devoted to a visit to Cambridge. Members may proceed to Cambridge by motor or by rail. Luncheon will be served in the Hall of Gonville and Caius College. The Cambridge School of Architecture and other places of interest in Cambridge will be visited during the day. Arrangements will be made for tea.

The inclusive charges in connection with this trip will be as follows :—

Motor, luncheon, and tea ticket	32s. 0d.
Rail (3rd class), luncheon and tea ticket	13s. 11d.
Rail (1st class), luncheon and tea ticket	18s. 6d.

Saturday, August 2.

The following conducted visits have been arranged :—

Westminster Abbey, by Professor W. R. Lethaby.

St. Paul's Cathedral, by Mr. Mervyn Macartney.

The City Churches, by Mr. Arthur Keen and Mr. Arthur Stratton.

The British Museum, by Sir John Burnet.

As the hotels in London are likely to be crowded in July and August, it is advisable to reserve accommodation without loss of time. Thomas Cook and Sons have been appointed travel agents, and their local representative will hold himself at members' disposal as regards accommodation and transport. It is most desirable that notification should be made to Mr. Everard J. Haynes, Secretary, Board of Architectural Education, 9 Conduit Street, London, W.1, as soon as possible by those intending to be present.

An exhibition of students' work will be held in connection with the congress. About fifty schools will be represented, and it has been found necessary to use both Grosvenor House, Upper Grosvenor Street, and Devonshire House, Piccadilly, in addition to the galleries of the R.I.B.A. The exhibition will be open daily from July 28 to August 2 inclusive, from 11 a.m. to 9 p.m.

Facilities for Students.

In order that students have an opportunity of inspecting the exhibition, arrangements have been made for opening those sections of the exhibition which will be held in the R.I.B.A. Galleries and Devonshire House, Piccadilly, one week before the opening date of the Congress, i.e. from July 21st to August 2nd inclusive, from 11 a.m. to 9 p.m. daily, admission free.

In the R.I.B.A. Galleries there will be an exhibition of work done at the British and French Schools at Rome and the American Academy in Rome, also an exhibition of educational books and equipment.

In Devonshire House, Piccadilly, there will be an exhibition of works of Schools of Architecture in Great Britain and the British Dominions, together with examples of R.I.B.A. prize drawings.

Lord Crawford on Architecture

The exhibition of the work of students of the School of Architecture of the University of Liverpool, held at the Walker Art Gallery, was opened by the Earl of Crawford and Balcarres (chairman of the Commission on Fine Arts).

Professor C. H. Reilly, in an explanatory statement, said that his ambition was that the school should some day have a group of professors and develop on the lines of the Académie des Beaux-Arts.

Lord Crawford said the Liverpool School of Architecture, in its personnel, was not a purely Liverpool or Lancashire institution. No fewer than two-thirds of its students came from distant parts, many from our overseas Dominions and Colonies. Popular interest in architecture was growing steadily and consistently, and, if well guided, would grow intelligently. Every private or business structure—even the chimney-stack—should share the dignity of our great public buildings, and thus contribute towards the improvement and ennoblement of our cities. The public was demanding more and more from its architects.

Architecture, he said, was not uninfluenced by modernist tendencies, and young students were asking why, at this stage of the world's development, we should still be guided by the traditions of Greece or Rome. He (Lord Crawford) would be the last to oppose originality, research, or boldness of invention. It had to be borne in mind, however, that an objectionable portrait could be put in the cellar; prosified verse could be left on the bookshelf; a record of jazz music, which was more offensive than usual, need not be played through. But one could not live in a house that was going to tumble down, and architecture was the only one of the great arts upon which human life ultimately had got to depend.

After expressing the hope that the people of Liverpool realized what an asset they possessed in the School of Architecture, his lordship said he believed that was almost the only school in the country which had its own department of town planning and civic design. If such schemes had existed fifty or eighty years ago, even in an elementary form, half our local government problems of to-day would be non-existent, and half the squalor and distress of our life would not haunt us with difficulties which appeared to be overwhelming. Although we required garden suburbs, the town must always remain the primary objective of civic art development. From the extraordinary rise of spontaneous effort in towns and villages he was certain we were on the verge of a most remarkable revival of dramatic art. Whether that was equally true of architecture he could not yet decide. He profoundly hoped that, at any rate, in twenty-five years' time we should regain what people were apt to forget we once possessed—something approaching a primacy in the great art of architecture.

Mr. Hugh R. Rathbone, M.P., in proposing a vote of thanks to Lord Crawford, said Liverpool was ahead of most towns in the plans it had made for its future development, and the School of Architecture had no doubt had a subconscious influence in that direction. He hoped the dream of Philip Rathbone would be realized, and that Liverpool would become the Venice of the North. The School of Architecture ought to be more worthily housed. Before the war Lord Leverhulme gave a large donation for that purpose, but, owing to the increased cost, it had been impossible to proceed with a building scheme. There was now an opportunity for generous citizens to contribute the balance needed.

Pinchbeck Building

By Edwin Gunn, A.R.I.B.A.

One of the unfortunate legacies of the war, and of the difficult period which succeeded it, is the continuance from force of habit of many parsimonious building practices then first followed. However advisable or necessary such "economies" may have been at the time when materials were in short supply and prices soaring, it behoves the careful man from time to time to weigh the advantages of all methods and materials which he habitually specifies, and to revise or discard accordingly.

Of course, not every economy which was thus introduced in stress of circumstances is detrimental—many innovations are greatly otherwise, and it is to be hoped may persist. Notable among these is the simplified planning which followed on war-time stringency. A pre-war cottage plan (or sometimes, perhaps, the work of a pre-war planner!) can now almost be identified at a glance. Other practices which possess sufficient merit to justify continuance are beam and joist floors in cottages and small houses—a sphere in which single floors had from early Victorian times become almost universal—the abolition of internal wood linings and architraves to cottage windows; the "transome-light" without a transome; and the "standard metal casement," which has certainly come to stay.

Is it not time, however, that we ceased to specify 4 in. surface concrete below floors, joists, and rafters spaced 15 in. apart, 4½ in. brick manholes, and like tenuities? Are we wise also in accepting as almost the normal thing in cottage-building any form of tiling in which the major extent of a roof is covered by one thickness of tile only, as against two everywhere, and three at the lap in plain tiling; and that moreover without any form of underlining? It will often be found that the difference in actual cost laid on a simple roof as between plain tiling and somebody's patent interlocking masterpiece (on a pantile model) is quite trifling. Foundation and roof are two points at which it does not pay to economize—one recalls the old Devonian saying quoted by Mr. Williams-Ellis as applied to cob walling: "Give 'un a good hat and pair o' butes an' er'll last for ever."

It pays at all times to study the markets, for there is no certainty that what was a justifiable economy a year or a month ago is at all worth while to-day. The metal market in particular fluctuates, so that copper may be cheaper, both for roofing and pipe work, than lead. In some districts local oak, when it can be used sawn in fairly large scantlings, such as for structural timbers and beams, is permanently no dearer than imported fir. Then, again, there is window glass, which it has latterly been the fashion to specify as 15 oz., where pre-war practice would have insisted on 21 oz. Those who study the advertisement pages (among the most valuable parts of any technical journal) will be familiar with the fact that for windows of the standard metal casement type and for wood casements or sashes having panes of similar proportion it is possible to obtain 21 oz. glass at so nearly the price of 15 oz. that the difference in cost is almost negligible—amounting to about five shillings per house. It is therefore no longer desirable to insist on being supplied with the thinnest glass procurable, giving the maximum of fragility, distortion, and surface defects. The fact that 21 oz. glass is obtainable at so nearly the cost of material 50 per cent. weaker is due to the largest British glass manufacturers having accumulated stocks of small sheets—the residue of conversions—which it is possible for them to dispose of at a low rate in sizes up to 3 ft. super. This affords an instance where neglect to spend five shillings is "penny wise—pound foolish." Incidentally it affords architects another excellent reason for the use of small panes—thereby fortifying their predilection with further practical reasons.

The Bombay A.A. Year Book

The Bombay Architectural Association, in issuing their last Year Book—a copy of which has just come to hand—express the sincere hope that it may not be long before they will be able to realize one of their many cherished objectives to convert the annual into a quarterly, or even a monthly publication. The importance of the place occupied by the Bombay Architectural Association is no doubt increasing in responsibility and influence. The annual report shows the threefold character of its activities. The work of the sub-committees, the excursion, the library, the practice and the competition sub-committees, indicate the business-like enthusiasm with which the problems of importance are attacked and solved. The series of papers read before the Association form another interesting aspect of their activities. The following subjects were discussed during the last sessions: architects and clients; the architect associated with the engineer in town planning; strength of brick masonry; architecture as an art; Indo-Saracenic architecture of Gujarat; general aspects affecting town planning; styles of architecture, modern conveniences and façade designs. The selection and variety of subjects here indicated is an evidence of the wide outlook and care of those on the committee who, having realized the importance of these discussions and frank exchange of views, have constantly endeavoured to provide the opportunities for them. There is the third aspect of the Association's activities that deserves particular mention. The Association have approached the Government and the public institutions asking them to give increased facilities for and encouragement to Indian architecture. It is thus evident that the threefold character of its activities of the Association enable it to prepare the atmosphere necessary as an essential preliminary to an enduring revival of public interest in architecture. The record of the work of the Association outlined here entitles them to appeal to those who are in earnest about the renaissance in architecture to give it their support.

The "Manchester Guardian" Advertising Review

The "Manchester Guardian" has made a notable addition to the literature concerning the art of advertising. On Wednesday last an advertising review, arranged and produced by Mr. Charles W. Hobson, giving a notice of some of the theories and principles of advertisement and of the contributory arts, was published with that newspaper. The review opens with an article under the title "In Justification," in which the writer discusses among other things the effect of advertising upon the price and quality of goods and on the habits of the people; and the many worthy means and graces of life which are being inculcated by advertisers, inculcated perhaps the better because the teaching is rather insinuated than enforced, and because the approach is not direct but oblique. The other articles deal with every branch of advertising, and include such subjects as the economic case for advertising; trade marks and brands; the illustration of advertisements; advertisement writing; the typography of advertisement; some principles of beauty in advertising; should the State advertise? the package as an advertising opportunity; psychology, and some problems of advertisements; advertising in its legal aspect; and the art of the poster. There is also a calendar of interesting events in advertising. The production, which is bound in a striking cover, reflects great credit upon Mr. Hobson, and should be in the possession of everyone interested in advertising.

Wages Slips on Tenders

The proposal of the National Federation of Building Trades' Employers to instruct their members to affix to all tenders a slip providing for adjustments to be made in the event of a rise or fall in wages has been the subject of a conference between the National Federation and the R.I.B.A.

The Council of the R.I.B.A. have agreed to this proposal of the National Federation, subject to the following conditions, which all Members and Licentiates of the R.I.B.A. are recommended to accept:—

(*a*) That if any slips are attached to tenders they should provide only for actual wage increases or decreases to men employed by the contractors or sub-contractors at the agreed standard rates and paid by the hour, and not for the inclusion of overhead charges or profit upon such increases as well.

(*b*) That in circularizing their members the Federation should direct that the instruction regarding the slip should hold good until March 25, 1925, and should be reconsidered at a convenient date prior to the above.

(*c*) That the slip shall not be affixed to tenders up to £2,500, provided that in the case of tenders below £2,500 a provisional sum shall be included equal to 2½ per cent. on the total tender, out of which the above increases to men paid by the hour are to be met, but such provisional sum in any event shall not be exceeded.

The Week's News

A New Public Hall for Barnes.

A public hall is to be built in Gordon Avenue, Barnes.

More Houses for Acton.

A hundred and fifty houses are to be built in North Acton by private enterprise.

Wolverhampton and a New Public Hall.

The Public Hall Committee recommend the Corporation to erect a public hall upon a site in North Street.

A Buckinghamshire Pulpit Copied for Madrid.

The seventeenth-century hexagonal pulpit in Cheddington, Bucks, parish church is being copied for the new British Embassy church at Madrid.

New Sculptor R.A.

At a general assembly of Academicians and Associates of the Royal Academy, Mr. Charles Leonard Hartwell, A.R.A., sculptor, was elected a Royal Academician.

More Houses for Eltham.

The Woolwich Borough Council are to build 100 more houses at Eltham by direct labour at an estimated cost of £58,200.

A Big Housing Scheme for Leeds.

Eight hundred and fifty acres of land have been acquired by the Leeds Corporation for their housing scheme. The total cost of the scheme will be about £1,500,000.

Proposed Big Housing Scheme for Dundee.

A scheme is being considered by the Dundee Housing Committee for the erection by private enterprise of 5,000 houses at a cost of about £1,500,000.

A New School for Lambeth.

A London County Council school, to accommodate 500 children, is to be built near the new Council housing estate at Lambeth.

More Houses for Wombwell.

The Wombwell Urban District Council are applying to the Ministry of Health for sanction to a loan of £27,400 for the erection of sixty additional houses at Wombwell, and fourteen at Hemingfield.

Eston's New Garden Village.

The Eston Urban District Council have received the sanction of the Ministry of Health to a loan of £43,000 for the purchase of land in connection with the Grangetown garden village scheme.

A Rare Piece of Stained Glass Discovered.

Workmen doing repairs discovered a rare piece of fifteenth-century stained glass behind the wooden face of the old parish clock in the church tower at Wolvey (Warwickshire). It is stated to be all that Cromwell's men left when they passed that way from Coventry to Leicester.

The Reconstruction of Carlisle Bridges.

The Carlisle Corporation have resolved to apply to the Ministry of Health for sanction to borrow £68,500 for the widening and improving of St. Nicholas Bridge, and also £20,000, one-half the estimated cost of the Caldew Bridge improvement.

A Warning to Architects.

The R.I.B.A. have sent us the following communication: "Architects are warned that an individual is soliciting subscriptions in London for an American architectural publication, and they are advised to make careful inquiries before giving any orders in this way."

Church Building and Repair.

At the monthly meeting of the Incorporated Church Building Society, held at Westminster, grants were made towards building new churches at Furzedown, Surrey; West Silvertown, Essex; and Walthamstow, Essex; and towards enlarging, reseating, or repairing many churches in various parts of the country.

Mr. A. E. Murray's Estate.

Mr. Albert Edward Murray, of Clyde Road, Dublin, and of Dawson Street, Dublin, and of Dinard, France, who died on March 20, aged seventy-four, left personal estate in England valued for probate at £9,118. He was lately President of the Royal Institute of Architects of Ireland, and had designed numerous hospitals, banks, and schools in Ireland.

Changes of Address.

Mr. F. G. Troup, F.R.I.B.A., has moved to Comptons Clew, Horsham, Sussex. Telephone No. 213. His London office is 9 New Square, Lincoln's Inn, W.C.2. Telephone: Holborn 4949.

On and after August 1 the practice of Mr. G. W. C. Porte, architect, will be transferred to offices in No. 1 Howard Street, Belfast.

The Rebuilding of the Bank.

The Corporation of the City of London have decided that the directors of the Bank of England should be allowed to proceed with their rebuilding scheme, provided they did not ask permission to make an entrance for vehicles in Princes Street. The Corporation have decided not to adopt the Improvements and Finance Committee's proposal to widen Princes Street to 60 ft. at a cost of £500,000 to £750,000.

Wellington Barracks Improvement Scheme.

The work on the scheme for the improvement of Wellington Barracks, in order to bring the buildings up to present-day requirements in respect of administration and hygiene, has begun. The scheme includes the reconstruction of the regimental offices, the erection of a new adult school, a new regimental institute, and the provision of new quarters for the officers' mess.

Grants to Women Sculptors.

The committee of the Feodora Gleichen Memorial Fund, of which Sir George Frampton, R.A., is chairman, have made a grant of £50 each for the ensuing year to two women sculptors, whose work they adjudged the best of the eleven candidates for the grant. The fund was started some time ago to assist women sculptors, who send in photographs of their work to be considered by the committee.

Royal Show Buildings as Houses.

A proposal to use as dwelling houses such of the buildings erected recently for the royal show as are suitable is to be considered by Leicester City Council. Such buildings as the royal pavilion and the entrance hall would provide accommodation for many families. The entire site is already provided with newly laid out roads and tramway tracks, while a new goods station has already been built by the L. and N.E.R. Company.

Manchester and a Longer Kingsway.

The Manchester Town-Planning Committee are negotiating with other local authorities for the extension of Kingsway from Parr's Wood to Schools Hill, Cheadle. A landowner in Cheadle has prepared a scheme of housing development involving an area of 200 acres, the scheme being contingent upon the extension of the road. The land required for extending the road at its present width of 100 ft. has been offered free to the authorities concerned.

The Prices of Building Materials.

Sir H. J. Mackinder, chairman of the Inter-departmental Committee appointed to survey the prices of Building Materials has issued his report for the month of June. As in the case of former reports, he has set out in full the prices for the previous month, and only recorded the June prices where a change has occurred since the last report. He also includes the prices for April, 1914, and April, 1923. There has, he says, been a further fall in the price of lead, but otherwise there have been no changes of general application to which attention need be drawn.

The Glasgow Domestic Welfare Exhibition.

The Glasgow Corporation have arranged to hold a Domestic Welfare Exhibition in the Kelvin Hall during the three weeks commencing October 13. It will be run on the same lines as the former housing and health exhibitions, but more importance will be concentrated on the interior decorations and furnishings of the home than to the constructions of the buildings. The classification of sections will include house furnish-

The Week's News—*continued*

ings, lighting, heating, and labour-saving appliances, and house decoration. All the features of the housing and health exhibitions which have proved outstanding successes at the Kelvin Hall will be retained, and many more will be added.

A Generous Gift to the National Gallery.

The gifts made on the occasion of the centenary of the Gallery at the beginning of April, have been followed by a generous donation from Mr. Henry Wagner of twelve pictures chosen out of his collection. These have now been placed on view in the east vestibule at Trafalgar Square. Among the pictures is a characteristic specimen of Adam Elsheimer, representing the "Baptism of Christ"; four Flemish works of about the year 1500; a very early painting of "The Dead Christ"; Venetian work of the fourteenth century; a powerful "Noli me Tangere," by Jacopo di Cione; a somewhat injured "Pieta," by Ambrogio Lorenzetti; and examples of Tommaso da Modena and Bartolo di Fredi. With them must be mentioned a "S. Paul," apparently from the famous studio of Verrocchio, and a picturesque "Salver," also painted in Florence, c. 1450, by the so-called "Cassone Master." These make a valuable addition to the small nucleus of works by the Italians, which the Gallery already contains.

A Notable Gift to Cardiff University.

A gift has been made to the University College, Cardiff, of nearly 300 volumes on architecture and kindred subjects from the library of the late Mr. Robert Williams, F.R.I.B.A., who died in Cairo on October 16, 1918. This fine collection of books has been presented to the college by Mr. Inigo R. Williams and Mrs. Margaret Travers Symons, in memory of their father, and is of considerable value. It includes a number of scarce folios of the eighteenth century, many costly monographs on various periods of art, and a remarkably catholic selection of works on all aspects of architectural design, history, and construction. Mr. Robert Williams was a native of Cowbridge, and won the national medal and other prizes at South Kensington. He had, prior to his death in 1918, been in practice in Egypt as an architect for nearly twenty years, having gone out originally to make plans for Messrs. Davies Bryan's widely known premises in Alexandria. He subsequently designed and carried out their building in Cairo, as well as a number of other works in different parts of Egypt, his latest design being for the new Bible House for the British and Foreign Bible Society in Jerusalem. Just before the war he was appointed architect to the British Postmaster-General in connection with wireless stations in Egypt. He was the author of a number of books on housing reform, and drove home his ideas on this subject when a member of the London County Council.

List of Competitions Open

Date of Delivery.	Competition.
Aug. 23	The United Grand Lodge of England invite designs for re-building the Freemasons' Hall in Great Queen Street, Kingsway, London. Apply, with deposit of one guinea, to the Grand Secretary, Freemasons' Hall, Great Queen Street, London, W.C.2. The envelope should be marked "M.M.M. Competition."
Sept. 1	Entertainment hall for the Bexhill Corporation. Premium £50 and £25. Apply Town Clerk, Bexhill. This competition is open only to architects in the district.
Sept. 30	The Hamilton War Memorial Committee invite designs for the proposed war memorial to be erected in the Public Park. The estimated cost of the memorial will be £2,000. Premiums £60, £40, £20, and £10. Mr. G. A. Paterson, President of the Glasgow Institute of Architects, will act as Assessor. Apply, with deposit of £1 1s., to Mr. P. M. Kirkpatrick, Town Clerk, and Clerk to the Committee, Hamilton.
Sept. 30	Designs are invited for a statue in bronze and a pedestal (at a cost of about £3,000) in honour of the late Sir Ross Smith, K.B.E. Apply The Agent-General for South Australia, Australia House, London.
Sept. 30	Competitive designs are invited for a Memorial Club House and Pavilion to be erected on the ground of the Glasgow High School Club at Anniesland, Glasgow. The competition is confined to former pupils of the High School of Glasgow. Apply Mr. Hugh R. Buchanan, Hon. Secretary, Glasgow High School War Memorial Committee, 172 St. Vincent Street, Glasgow.
Sept. 30	The Committee of the Harrogate Infirmary invite designs for the extension of the infirmary by the addition of 67 beds. Application had to be made by May 31.
Sept. 30	The Newton-in-Makerfield Urban District Council invite designs for Public Baths. Premiums £150, £50 and £25. Assessor Mr. Arnold Thornley, F.R.I.B.A. Application had to made to Mr. C. Cole, Clerk to the Council, Town Hall, Earlestown, Lancashire, not later than July 25.
No Date.	Memorial to the Missing at Cambrai and Soissons. Apply The Secretary (Works), Imperial War Graves Commission, 82 Baker Street, W.

Societies and Institutions

The R.I.B.A. Examinations.

The questions set at the intermediate and final (or special) examinations held in December, 1923, have been published, and are on sale at the R.I.B.A., price 1s. 6d. (exclusive of postage).

The following decision with regard to the final examination was arrived at at the last meeting of the Council of the R.I.B.A.: "In the case of fourth- and fifth-year students of schools of architecture exempted from the R.I.B.A. final examination, six months spent on building works and/or in a builder's office (approved by the school), and otherwise gaining knowledge of the practical side of building shall be recognized as equivalent to six out of the twelve months now required to be spent in an architect's office."

The Amalgamation of the R.I.B.A. and the Society of Architects.

An extraordinary general meeting of the Society of Architects will be held at King George's Hall, Caroline Street, Tottenham Court Road, W.C.1, on Thursday, July 24, at 3 p.m., for the purpose of considering, and, if thought fit, passing the subjoined resolution, viz. :—

"That this meeting hereby approves, ratifies and confirms the Provisional Agreement for Amalgamation dated May 29, 1924, and made between the R.I.B.A. of the one part, and the Society of the other part, and hereby directs the Council of the Society to carry such Agreement into effect either with or without modification."

Should the above resolution be passed by the requisite majority, it will be submitted for confirmation as a special resolution to a second extraordinary general meeting to be held on August 8, at the registered office of the Society, 28 Bedford Square, London, W.C.1, at 3 p.m.

Royal Society of Arts Silver Medals.

Among the authors of papers read before the Royal Society of Arts during the past session to whom the Council have awarded silver medals are the following: Sir Frank Baines, C.V.O., C.B.E., "The Preservation of Ancient Monuments and Buildings"; Major-General Sir Fabian Ware, K.C.V.O., C.B., "Building and Decoration of the War Cemeteries"; Brig.-General Sir Henry Maybury, K.C.M.G., C.B., "The Victoria Dock District and its Roads."

Women's International Housing Congress

The Women's International Housing Congress was held under the auspices of the National Housing and Town Planning Council in the Caxton Hall, Westminster. Delegates were present from Great Britain, Czechoslovakia, America, Denmark, Austria, Germany, Sweden, and the British Overseas Dominions.

The Marchioness of Aberdeen said that as President of the International Council for Women, she had had opportunities of hearing the bitter cry that was going up from the women of all civilized countries as to the inadequacy of housing accommodation everywhere, and the consequent suffering, disease, and wastage of physical, moral, and social life thereby entailed.

Mr. Henry R. Aldridge said that there were differences of opinion as to what road should be taken to end the present scandalous state of housing accommodation, but whatever road was travelled there must be a travelling of some road to clear away the housing conditions that at present disgraced the country.

Dr. C. W. Saleeby advocated the provision of sliding windows to admit the sunlight without the intervention of glass, and urged that more women should train as architects.

A resolution was adopted that provision should be made in the Housing Bill for limiting the number of houses per acre to twelve in urban housing schemes and eight in rural schemes. The resolution also protested against the limitation of the maximum measurement prescribed under the financial resolution of the Housing Bill.

Lady Aberdeen gave details of the efforts being made in Dublin, which they hoped would result in a town-planning scheme which would make Dublin the beautiful city that it could be made.

Dame Henrietta O. Barnett pleaded for the small type of house which met the needs of many people.