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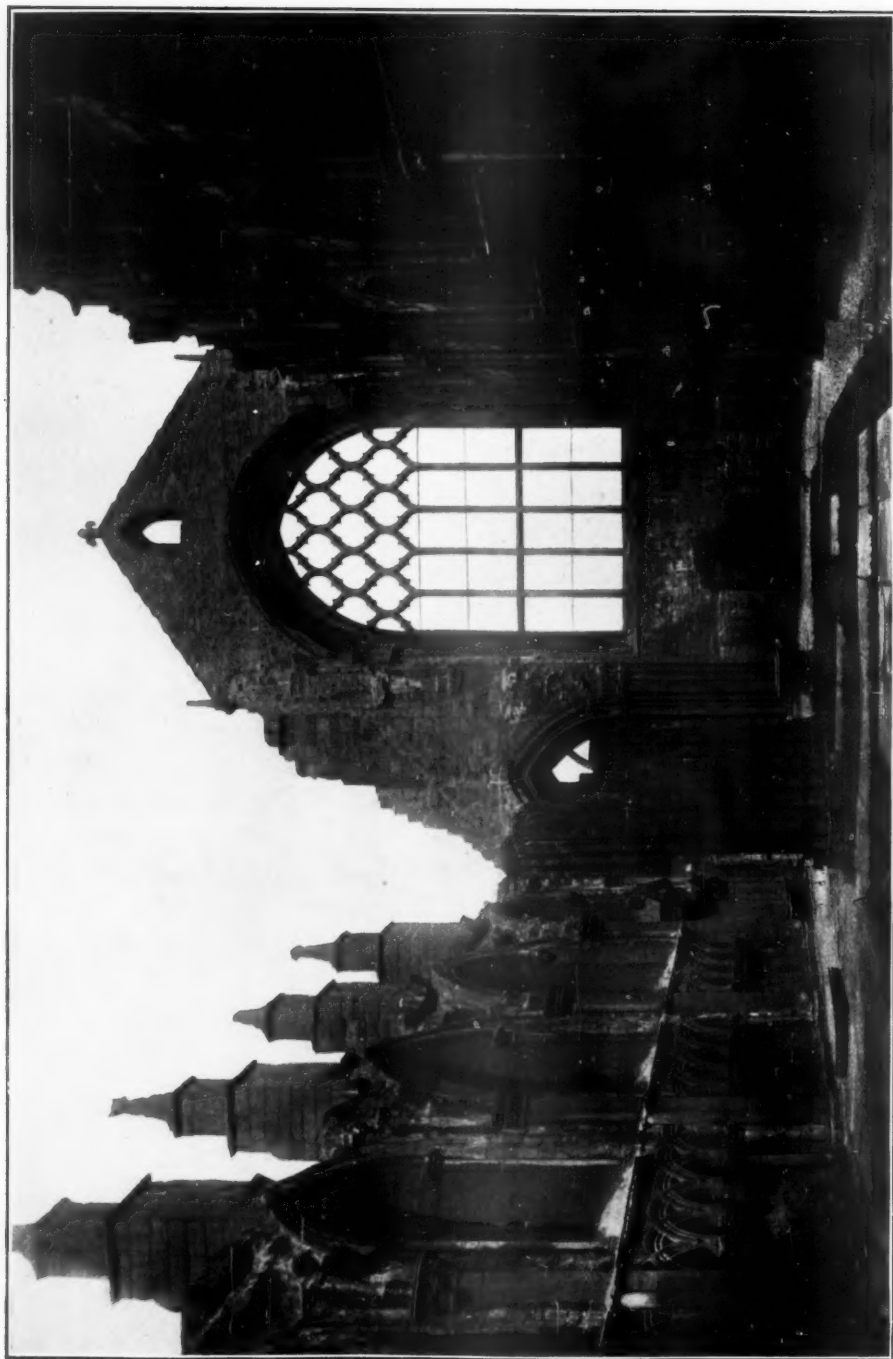


Photo: Fifth.

THE INTERIOR OF HOLYROOD CHAPEL.

Notes of the Month.

The Restoration of Holyrood Chapel—Mr. Lethaby's book on Westminster—Mr. Blomfield's Lectures—The R.I.B.A. Report on Registration—The Craftsman's Union—The Abolition of the Scale of Fees—Municipal Architecture.



THE projected restoration of Holyrood Chapel is still a matter of active controversy. It will be remembered that the late Lord Leven and Melville, whose official duties kept him in residence at Holyrood Palace from time to time, left by his will a sum of £40,000 for this purpose, and nominated Mr. Thomas Ross, the well-known Scottish antiquary, as architect for the work. The trustees of the late peer's will chose to call in further professional advice before proceeding in the matter, and after receiving a report from Professor Lethaby decided to abandon the idea.

The position is extremely simple—Mr. Ross says that the chapel can be restored; Professor Lethaby says, in effect, it could be rebuilt.

The trustees' decision to abandon the project has raised a storm of criticism in the Northern Kingdom, and Lord Rosebery, Mr. Andrew Lang, and others have joined in the fray. Unfortunately the pro-restorers cannot state a very good case. If, as they assert, Scotsmen are anguished at the slow disintegration of this historic building, they might reasonably have been expected to have moved ere this to the work of putting the structure in a satisfactory state of repair. On the most favourable computation the building has been left as a ruin for 120 years, and more probably for very nearly 200. The sudden zeal for restoration seems only to have arisen when a large sum of money became available for the purpose.

We learn that the expert opinion of Mr. Watt, K.C., has been taken as to the legal position of the trustees, who in his view are not carrying out the terms of the will, and can presumably be compelled to do so. There is, however, another side to this question; the building, though nominally a national one, is part of a Royal Palace and under the custody of His Majesty's Office of Works for Scotland, so that with due deference to the wishes of the pro-restorers and the legal opinion of Mr. Watt, we venture to think that the consent of the custodians of the building, and, behind them, His Majesty's Government, must be obtained before anyone is in a position to start

the restoration, or, as Professor Lethaby regards it—rebuilding.

The controversy of Restoration *versus* Reparation is a very old and stale one. It has been threshed out at great length in these columns more than once, and it has been the subject of innumerable pamphlets, lectures, and speeches; yet it is still difficult to make the average layman realise that the most we can hope to do in the present day is to repair our ancient buildings with all possible care and reverence, but that our conditions of working at the present day absolutely preclude us from building in the spirit of the past or conferring a new interest in a building from which time has eliminated older ones.

Mr. James A. Morris with a thoughtful and lucid article in *The Glasgow Herald* of March 9 confirms this view, and from his article we quote the following paragraph, which we hope to the lay mind will be as convincing as it will be to an architect:—

Architecture, it is much to be feared, is still the ugly duckling of the brood; but in the cycle of time she is destined as before once again to become the beautiful swan. But alas for to-day! In building, is not ours the period of ferro-concrete, by whose means creatures, like Jonah's gourd, arise almost in a night, hurrying lest they be late to meet the needs of the hour? In enterprises so conceived, what place is there for quiet and devout thought, for aspiration worth formulating to endure? Regard for such qualities is frankly non-existent, and is being deeply buried under utilitarian and speculative endeavour, interesting to promoters and workmen, as potential dividend or daily wage; and in this race those who design and build most quickly are most in demand. It is an expression of the modernity of speed, and in large enterprises the individual workman, the life and the soul of the buildings of olden days, is now merged into a number, a negligible unit, working so many hours per week, ingathering little of joy from his work, save only in wage-earning. How seldom is a workman now to be seen taking his wife, his children, his friend to look at his handiwork, at the work he has himself done or helped to do—the stone he has carved, the beam of wood (not the steel girder) he has laid or moulded! After working hours the very building in which is his work is closely barricaded against him, and if, out of working hours, he were by any chance found therein a police court magistrate might perhaps next day ask for an explanation. With workmen so circumscribed and trained, is it reasonable to ask that they should at call be able to transpose themselves into the spirit and mental environment of the free craftsman of the Middle Ages? As a matter of fact, he is a free craftsman no longer—only an operative. Possibly as operative he has never heard of his prototype, hardly ever given him a passing thought, and

it would require most marvellous alchemy to transmute to him the spirit emanating from the craftsman of that earlier day, even granting, which is perhaps unreasonable, the desire to possess it. Suppose our ferro-concrete period had preceded by several centuries the Middle Ages, and a thirteenth-century builder had been asked to restore a ferro-concrete building in the ferro-concrete style: would it not be just as unreasonable to assume that he would succeed with the materials and appliances of his day as it is for the architect or workman of our day, with his modern ideas and environment, sympathetically to recreate the past? Surely the thing is manifestly too absurd. Or suppose, even if it be an anticlimax, suppose some one laboriously tries to copy another's signature: skill is doubtless required to produce its similitude, but the freedom and vigour of the original are lost; it is bereft of genuineness and spontaneity. At best it is an adroit copy, at worst a forgery; and in neither case is it honest origin or result. So also is it with those who seek to reproduce the natural work of a remote age.

It is almost needless to say on which side our opinion on this matter lies, and it is no conceit in the infallibility of English opinion that makes us hope Professor Lethaby's view will prevail. The time for rebuilding or repairing Holyrood Chapel has gone by, and undoubtedly any responsibility in this direction must remain with the ancestors of the present Scots race who allowed it to ruinate for a century or two without seriously considering the question of its repair.



R. LETHABY'S book, which we review on another page, is, if one takes a long view of it, something more than a sympathetic study of our greatest English building. It is a symptom of the new spirit which is developing in the study of historic architecture. Dr. Dryasdust may not be dead, but he is moribund. A younger school of archæology is growing up, in which school Mr. Lethaby, Mr. Prior, and Mr. St. John Hope are conspicuous figures. The new tendency is to give life to the dry bones of antiquarian fact, by the exercise of a restrained but none the less lively imagination. The motive power of this development is in the fact that the monuments of antiquity should be approached not only in the light of modern observation, but in the spirit of the men who fathered the work. Archæology is, in fact, not a study merely for the old, but even and especially for the young, and in particular is this the case with the history of mediæval art. As Paul Sabatier points out in his delightful "*Life of St. Francis of Assisi*," the temperament of the Middle Ages was that of a man of twenty. In Southern Europe this spirit incarnated itself in saintship, in the North in cathedrals.

The study of mouldings and of the outlines of

tracery is essential, but these things are effects, while the spirit of the men who wrought them is a cause. In the history of architecture, as in every other science, a neglect of causes leads no-whither. Work like that of Mr. Lethaby has, therefore, a far wider reach than Westminster Abbey and its story, for it will influence the rising generation of students in their outlook on the work of the world when its thoughts and enthusiasms were young. It is precisely this gift of Mr. Lethaby which makes his recent appointment as surveyor to the Dean and Chapter of Westminster Abbey so appropriate. The late Mr. Micklethwaite's qualifications were many and distinguished, but he was above all an antiquary of the old school. It is no disrespect to his memory, so justly honoured, to suggest that his strength lay in his profound learning in things ecclesiological and liturgical, rather than in any markedly acute and sympathetic perception of the spirit of mediæval craftsmanship. Mr. Lethaby's practical knowledge of the technique of the building crafts will ensure that all restoration that may be essential during his reign at Westminster will be carried out in a pious and judicious way. Of Mr. Lethaby's strongly pronounced opinion that the only thing to save the stonework of the Abbey from surface decay is to wash the whole with lime, more is likely to be heard, if, as we hope, this is done. It is easy to imagine the frenzied cries with which the general public, and particularly that incarnation of it which writes to the press, will greet the proposal to whitewash the Abbey. There is a belief abroad that nothing looks old and duly romantic unless it is cased in dirt. One may agree that a building wearing none of those lights and shadows that weathering brings would be a dreary sight. The G. P. aforesaid will doubtless think that the idea is to produce that glistening newness which steam brushes are producing on sundry office buildings and flats, and the least that Mr. Lethaby may expect is to be called a "wastrel." If, however, it can be proved, as we think it can, that the lime (which need not, of course, be white, but toned to any suitable colour) will protect the stone from "the smokes of sea-coal," which as long ago as 1683 were observed to be damaging the walls, we trust that the Dean and Chapter and Mr. Lethaby will have the courage of their convictions. It would be a misfortune if clamour were to hinder them from any wise exercise of their trusteeship. Moreover, the masonry so limed will soon again take on gradations of dirt. Mr. Pearson's transept is doubtless thought by thousands to be the original work. It is certainly dirty enough, and it has taken the London atmosphere only about twenty years to achieve this cloak of antiquity.



THE Royal Academy School of Architecture has for some time been out of favour, but the four lectures, of which we give a *résumé* in another column, which Mr. Reginald Blomfield has delivered to the students give great promise that under the ægis of the new Professor the school will become an active and enlightened centre for educational work. For Mr. Blomfield is one of our few architects who possess the grand manner. He exhorts the students in effect, if not in words, to think Imperially about their art, and to regard their buildings as conceptions rather than conglomerations of detail. Some such teaching as this has long been wanted, for it is apparent to the outsider that the English architect too often looks at his work through the wrong end of the telescope, and this restricted vision nearly always brings him trouble when he has to face a large problem or tackle a big public building.

Excellent also was the advice to students to study buildings, analysing them with sympathy, taking into account what the building was for, what the architect had set out to do, and how he had arrived at his solution. Further, the student must approach his studies with a mind free from irrelevancies or bias.

One factor that was not very clearly expressed in these lectures—perhaps the occasion was not very opportune—was the necessity for a higher standard of culture in the student himself. Though the whole of Mr. Blomfield's remarks pointed to the vital importance of an intellectual mind to tackle the great problems of architecture, yet the clear expression of this need seems lacking in the lectures, if we except a statement in the third one, where he pointed out that the quality of a great artist was his capability for eliminating the unessential, and for this a certain "mental æstheticism" was needed.

We may be forgiven perhaps for reverting to this subject again, because it is one which is imperative to the well-being and progress of English architecture at the present time. When we have the Institute endeavouring to formulate its ideas on registration, and draft out a Bill which in its terms will be acceptable not only to Parliament, but to those of its members who regard their work as an art, and to other members who look on it as a profession, or solely as a means of livelihood, it is essential to keep this question of culture perpetually in the foreground. We have previously stated this year that while the genius would always proclaim himself, the others would have to be dragged into a respectable mediocrity, and this is no less true now than it was a couple of months ago.

The architect who looks upon his work solely as a means of bread-and-butter is not likely to give much more than bread-and-butter value. Moreover, the commercial architect at the present rate of things must find himself eventually between two stools. While steel construction and reinforced concrete are bringing the engineer more than ever into competition or collaboration with the architect, it is essential for the latter to decide which horse he means to ride, whether art or business. Otherwise a client will quickly decide that if an architect cannot give him art, and has to call in an engineer to assist him over the construction, he is an individual who can be dispensed with altogether.

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THE Council of the Royal Institute, after consideration of the proposals of the Registration Committee received last year, presented them in a revised form to the general body of the Institute at the meeting on March 4, when they were debated and finally adopted after the deletion of a clause.

The first three sections of this amended report were practically statements of principle to which the Institute has already given its adhesion.

Section four contains the important proposals which the Institute will attempt to bring into operation. Clause *i* of section four, requiring public bodies to employ professional members of the Royal Institute, was, after considerable discussion, struck out. It is almost incredible that this clause could have ever been seriously considered. The nation is in no mood to confer further privileges upon any particular class or profession, and a similar clause in the bill promoted by the Society of Architects is meeting with determined opposition from all the municipalities in the kingdom.

It would perhaps have been well that the proposal to legalise a scale of charges had also been dropped. This clause also is never likely to receive the consent of Parliament, and it was argued in the discussion that the inclusion of it was certain to be fatal to the Bill which the Institute is to promote in Parliament. It is very evident that the spirit of compromise has been strained to produce the terms of the final report. Mr. Burnett's proposal to add an amendment to the clause, "requiring public bodies to employ professional members of the Royal Institute of British Architects, notwithstanding the possibility that there may be more distinguished architects outside," is a sufficient indication of the views of the Art section of the Royal Institute.



WE are favoured with some particulars of the Craftsman's Union, which has apparently been established after a preliminary meeting at the Clifford's Inn Hall on February 27. The Union, we learn, aims to be large enough to include all legitimate workers who are willing to subscribe to the rules. It will not include the employer who is not a craftsman, or the craftsman employer who has ceased to be an artist. It is in no sense a trust to control prices, but aims to resist and to secure for the craftsman a more independent exercise of his art.

We have received the following letter which we publish in full:—

15, Holborn, London, E.C.

The Craftsman's Union has been established. The formation is due to the action of a number of craftsmen who, some time ago, in view of the prevailing unsatisfactory conditions affecting their art, and the absence of any organisation competent to deal with the difficulty, proposed a Union of Craftsmen. All craftsmen who are not merely employers but are themselves actual workers in the crafts are eligible for membership, the term craftsman being held to refer to men and women equally, and including authors, &c.

The title of the Union having been agreed upon, the basis of the Constitution was adopted at the Conference held at Clifford's Inn Hall on February 27, when the following resolutions were passed:—

1. That this meeting is in sympathy with any movement tending to ameliorate the craftsman's condition, and to enable him to give free expression to his own individuality, and to get into more personal contact with the public.

2. That this meeting approves the basis proposed for the Craftsman's Union, and pledges itself to promote the objects of the same.

The basis of the scheme is the recognition of the common heritage of Art, as against its exclusive claims, and this will govern the practical measure taken to organise the crafts, which are to encourage a higher standard, by promoting the extension of the small workshop throughout the country, on sound and humane principles; by the re-establishment and control of workshop practice in regard to the limit and terms of employment and apprenticeship; and by limiting the use of machinery and unskilled labour.

A centre will be established for permanent exhibition purposes and the work of the Union.

Signed (for the Executive),

REGINALD HALLWARD.

The scheme seems to us at present a little vague, but this is possibly because we are out of touch with the moving spirit behind it. We very much doubt, however, the Union's ability to "establish price and payment on a natural reckoning of real conditions, and not upon caprices or comparison with what is produced under totally different conditions." The price that anything will fetch is the price that the public are prepared to pay for it. The Union can hold out for its own prices, but we do not see

that it can force the public to pay them. No doubt, in safeguarding the interests of the craftsman who is an employee of a commercial firm, the Union will find its largest field of labour, more especially as it includes within its ranks authors, musicians, &c. Does our youngest trade union contemplate a tilt against the book publishers? We doubt whether artists will run very long in the confines of a trade union; such a scheme will, we think, appeal only to men of minor calibre. The artist cannot hope, *via* a trade union, to escape the inevitable economic penalties of his craft.



MR. WILLS has not succeeded in getting the Institute to reopen the discussion of his indictment of the Municipalities for employing their Engineers to undertake architectural work. We notice that whenever architects get up a discussion on this matter they refer to the Municipal official as a Surveyor; the inference being that he has no greater knowledge of construction than that possessed by the ordinary surveyor and estate agent. This is not ingenuous. We have before now stated that much building done by Municipal Engineers and Architects is very bad, but on the other hand a good deal of the work done by members of the Royal Institute is even worse, and these pot-and-kettle compliments are not likely to redound either to the credit of the Institute or to the cause of architecture.

At the same time, the strength of the Municipalities in Parliament makes any crusade against them on the part of the Institute foredoomed to failure. While all architects are agreed that they alone should be called upon to design public buildings, the majority are agreed that the time is not ripe to attempt to enforce this view.



OUR contemporary, *The Builder*, puts forward a suggestion that it would be better to do away with the Institute scale of charges, and declares that the whole five per cent. system "is a mistake, and is always leading to conclusions, on the part of the outside public, injurious to architecture." At first sight one is apt to endorse this whole-heartedly. Legal recognition of scales of payment should be abhorrent to the artist, and, as our contemporary states, seems like letting architecture down to the level of a mere pro-



Photo: Topical.

THE REPARATION OF SELBY ABBEY.
FINDING AND FITTING PIECES OF STONE TRACERY.

fession—which is the level at which many members of the Institute put their work.

A little reflection, however, will show that the abandonment of the scale should be contingent on certain other desirable arrangements. Undoubtedly, the more eminent the architect the better terms he will be able to make for his work, but big public works which bring men into prominence are by no means always allotted to the right men, nor are they equally distributed among the general body of architects. It follows, therefore, that men whose artistic attainments are as great or greater than those whose practice, in extent, entitles them to the term "eminent," might, for want of the publicity which the latter obtain, have to give exceedingly good work for very poor fees. This, of course, would not occur where the general public had a respectable knowledge of architecture or the faintest sympathy with architects; but as both these traits are lamentably wanting at the present time, it would be a little rash to embark on a course which could only conceivably end in the rich men becoming richer and the poor men becoming poorer.

Among the necessary preliminaries to the abandonment of the scale of charges is the passing of the Registration Bill. We are not enamoured of registration, except in so far as it will limit the number of architects and ensure

that they all have a certain standard of education, though this necessarily cannot be a test of their artistic abilities. The limitation of the number of architects will at any rate ensure that there shall not be cut-throat competition in the matter of remuneration in order to obtain a livelihood; this would be bad for architects and fatal to architecture.

The production of good art demands a certain amount of leisure, and reasonable comfort in surroundings; and although a work of genius may be produced under the stress of adverse circumstances, the artist cannot turn out work at a satisfactory level if he is involved in a perpetual struggle for a bare living.

The particular advantage which our contemporary apparently has in view is the elimination of the purely commercial man who has no other end in view than the making of money, and who, disgusted with the few commissions that come his way, will throw up the practice of architecture for some more remunerative calling. But this argues a discriminating taste in architecture on the part of the public, of which we do not see any convincing proofs at present. Until the public is in a position to judge between the good and the bad in the art of architecture, they will not necessarily employ the good architect, but the one who has most notoriety or the one who is cheapest.



THE Rev. H. W. Macklin's book on monumental brasses, reviewed in this issue, makes us reflect on the present condition of such work, both old and new, as far as it concerns architects to-day. The brasses of England present few opportunities of fresh research, but the potential number of palimpsests (*i.e.* of brasses mostly of post-Reformation date, with earlier work engraved on the reverse side) gives an agreeable touch of uncertainty to the labours of students. When churches are undergoing repair, it will be a good thing if architects engaged on the work will have post-Reformation brasses removed from their casements, provided always that it can be done without risk to the brass. ("Casement," it may perhaps be usefully explained, is the word which the cognoscenti in brasses use, where the ordinary person would say "matrix.") Palimpsests, when removed, should not be allowed to lie about, as loose brasses have too often proved an incitement to theft.

There are four safe ways of dealing with a palimpsest when found:—

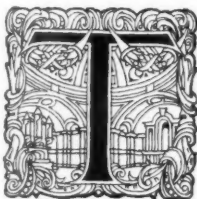
1. To refix it permanently: this is a pity, as it hides the earlier work.
2. To refix it, but with removable screws: a not very satisfactory method.
3. To surround it with a wooden frame, and hinge the frame to some convenient post, door-fashion, so that both sides can be seen: this is convenient, but in the case of a brass intended to be seen on the floor, improper.
4. To have an electrotype made of the reverse side, refix the original brass as found, and hang the electrotype on the nearest wall. This is the method adopted by the late Sir Wollaston Franks; it is entirely admirable, and not very costly.

There is another point as to the care of existing brasses worthy of mention. When for any reason a floor brass needs to be moved, its casement (or matrix) should be moved with it, and both refixed elsewhere, but on the floor. A brass of a recumbent figure, as are practically all the early examples, looks ridiculous if nailed on a wall. Too many have been treated in this thoughtless fashion.

As to new work, it is surely odd that with all the revived interest in the various metal-working crafts, so little attention has been given to brass engraving. Monumental brasses a-plenty are made and fixed, but they seem to be supplied chiefly by clerical tailors (brasses are a curious by-product in tailoring), and the character of such sartorial designs, to do it justice, needs what the

A.A. Play called "vermillion-worded" description. The mediæval brass was essentially a tomb slab to be fixed on the floor over the actual grave of the person commemorated. Any copying of the floor brasses of mediæval times would be foolishness, now that churches, save such as Westminster Abbey, are no longer used for burials. For wall memorials engraved brasses are, however, suitable. They are more fit than the slovenly "art" *repoussé* copper memorials, which are among the lesser evils that followed the Boer War. So long as perspective portraits and the like follies are eschewed, there is a wide range of proper treatment. Interest and colour can be added by inlaying jasper and the less expensive sorts of precious stones, and by enamelling. The idea to follow is that of goldsmith's work, in large.

Probably the ideal memorial plate is one of cast bronze with raised lettering, but it is costly. Engraved brass, moreover, lends itself to a legitimate freedom and delicacy of line treatment, and offers interesting possibilities.



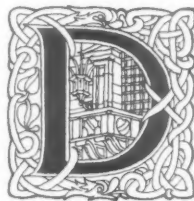
THE Dublin Press is awaking to the unhappy condition of many of their most famous buildings. Only recently some of these interesting works were illustrated in THE REVIEW, with a commentary by Mr. Godfrey Pinkerton. The *Dublin Evening Telegraph* has instituted an examination of the exteriors of the Custom House, the Four Courts, and the Post Office, and finds them all in "a very shameful state of dirt"; questions have also been raised in Parliament on the condition of these and other notable buildings in the Irish capital.

We have before now drawn attention to the want of foresight which allows the accumulation of soot to lodge on the carvings and mouldings of our city buildings. Even when an annual cleaning is undertaken, it is generally found that the carvings and mouldings have been injured by the action of the sulphurous acid which the rain brings down from the atmosphere. The effect, truly, is bad enough in ordinary cases, but when the dirt is allowed to accumulate, and form as it were a sponge which absorbs the acid and keeps it continually working on the face of the building, it is not surprising to find, when the dirt is cleared away, that nothing remains of the carvings and mouldings that happened to be underneath it. Our Dublin contemporary states that the Four Courts is in a shocking condition, the stonework in many cases crumbling away and requiring immediate renovation.

In sharp contrast to the conduct of the Board of Works, in whose charge the buildings about which complaint is made are placed, is that of the civic authorities, who keep their buildings and the public monuments carefully cleaned down.

Unfortunately, Dublin is not the only city in which neglect of this primary duty of cleanliness leads to the gradual destruction of some of the most cherished masterpieces. St. Mary-le-Strand, one of Gibbs's finest efforts, is still thickly coated with soot in places, and other buildings too numerous to mention are in need of the services of the cleaner. It is a thankless duty, calling attention to a matter which should be sufficiently obvious to the authorities in charge of our buildings, but unless someone reverts again and again to the topic, nothing is likely to be done.

* * * *

UM VIVIMUS, VIVAMUS. Put this fresh motto under the Association crest. With *gaieté de cœur* the members foregathered—was not Gaiety the very place of meeting?—and perpetrated a play. *Meo periculo*, I went to see it.

Purple it was—in patches; for now it was reminiscent of Imperial Rome, and anon the vernacular and kilts of Caledonia monopolised the senses. *L'amour et la fumée ne peuvent se cacher*. Possibly, but the latter went far to conceal the former on the night of our visit. For the Association had assembled *dare pondus fumo*, and right well they did it. Amid the clouds a love tragedy proceeded to its appointed end. Shade of Inigo Jones! Competition among architects—yes. But competing in an *affaire de cœur*, and with a speculative builder, too! *O tempora! O mores!*

First appears your Assessor, *ami de cour*, resplendent and stealthy; on his folly shall depend this battle of the hearts. With chalk upon a black-board he marks the items of their fates. And on his introduction we view others of the cast. Your architect—he is *triste*, wears the badge of a liberty he ne'er enjoys. Perhaps the position, *in loco parentis* to two *petits-maitres* of pupils, doth make him sad. He casts his gaze heavenward, in the manner of Forbes Robertson, and sighs for the ever beauteous and always invisible maiden—and for ten per cent.—but principally for ten per cent. At least, so I think. And your builder, of sullen visage, slow of gait, South-Eastern in speed of speech—*parbleu!* he, too, is, as you say, up to the eyes—*Hélas!* sighs to build a love-nest, with a damp-course. *Ma foi*, what devotion! Then your foreman, red-whiskered—a very Cockney he,

for is not Clapham part and parcel of the town?—discoursing with strange fluency and point upon

“Mysteries of sewerage,
So awfully alluring.”

Voilà your clerk of works! a braw laddie from Caledonia, ye ken, with wise saws, a disposition to “argy,” and some lightness of foot; in fact, a Scot—a great Scott! Item, the two *petits-maitres* aforesaid, pert, captious, and quarrelsome. All these revolve around the bay-fronted bastion of Balbus, whereon has descended the Blaring-Blight. And unto them add, by way of chorus, a motley throng, hied thither on the early trams of the Roman Corporation. To them, *labor ipse voluptas*. Mark you one for special praise, gross, jovial, and of countenance rubicund; *entre deux fins*, he questioneth his likeness unto a Vaudeville goddess. *Hæc olim Meminisse juvabit*.

And ever and anon sweet strains the orchestra discourses. To it a double portion of merit, and to him who has woven the complicated score.

But to our tragedy; if ye have tears, prepare to shed them now. The love-lorns wait the coming of their love—the lady client; and truth would have us say that the lady client has but dolts for her advisers. There impatiently they stand; to each the presence of the other is *de trop*. Like Moderate Councillors upon the rates, they watch; anon they rate each other, and at intervals harangue the throng in song. But the Assessor! *A bas l'assesseur! âme de boue*. Creeping stealthily away, he intercepts the maiden on her journey, he bespeaks her for himself—and he in motley clad! O ingrate, lacking even in tradition—that you divide not the object of contention between conflicting foes. At the dreadful truth the swains swoon back upon supporters, but, “putting the best face on it,” recover, and dance and sing the curtain down. And the villain Assessor, does he triumph? *Mais non*, he lives in the house designed and built by his rivals. *Ha, ha!* But of this there is no mention in the play—

THE EDITOR (*on telephone*): Hurry up the rest of your copy, and stop trying to imitate Monsieur W y.

THE DRAMATIC CRITIC: *O, mon ami!* Think of those arid wastes of expressionless English—I have yet to work in the Greek.

ED.: It is all Greek to me now. What about the play?

D.C.: Oh, *très jolie!* a little thin; but the chorus—*ma foi!* the chorus—

ED.: If you don't hurry up—I'll get F . . . k R n to write about their whiskers!

D.C.: *Sapristi!* Chin fittings—and in my notice—!

La critique est aisée et l'art est difficile.

Notes from Paris.



PARIS is daily transforming its appearance, and large structures are replacing predecessors of more modest design.

So great and so rapid is the transformation that before long quite a section of the old metropolis will be but a memory! The smaller shops are vanishing, and in their place immense structures of iron and cement arise, to supply needed room for trade and industry.

The cutting of new streets becomes an absolute necessity, and therefore old Paris is being violently attacked, its old houses demolished, and its streets enlarged.

From an æsthetic point of view, certain of our buildings will be the gainers. One of our gems, Saint Séverin, will manifestly be much improved by being relieved from its present sordid surroundings. Thus, while the city may lose something of its picturesqueness, the projected improvements cannot but enhance its position as a modern metropolis.

It will be interesting in our first note to review two of the recent metallic constructions, "La Samaritaine" and "Le Bazar de la rue de Rennes," for they represent a new type of building that is becoming popular here. Twenty-three houses were demolished on the ground where now stands the new Magasins de la Samaritaine. This building, of considerable size, has given a new light and very modern tone to this old quarter, and has necessitated a widening of the street. Its two vast blue cupolas, which will ultimately be terminated with electric search-lights, tower above the neighbouring houses. The intention of the architect, Monsieur Frantz Jourdain, was to arrange for the easy and rapid circulation of the public and staff, and to provide as much light as possible in a building destined to be constantly thronged. Thus he inclined to the use of a material which, while possessing great strength, takes up a minimum of space. The whole of the constructive portion of the Samaritaine is in iron—the beams, the floor girders, etc., all are of metal.

The floorings are uncommon, being, with the exception of the ground floor, formed of glass slabs, giving the minimum of thickness with the maximum of light. The ground floor is paved with sawdust and cement composition without

seams, not slippery, and easily cleansed. The ventilation shafts are formed by the hollows in the iron stanchions, thus utilising the very peculiarities of the construction. Between the flanges on one side of these the steam heating pipes are carried, and on the other the down pipes from the roof; these latter are in copper, to avoid as much as possible any chance of leakage. As regards the façade the design may be defined as daring, the bays are of very large dimensions and convey distinctly the impression of a spacious, well-lit interior; the pilasters rise straight up through the seven stories and are terminated by volutes of foliage, which serve to tie together and make a whole of all the different parts of the roofing. At the upper part of the building, forming a frieze, are panels of enamelled lava, washable and immune against atmospheric action. The lower parts of the pilasters are ornamented by plates of copper hammered in relief and backed with cement. These plates are framed in by sculptured panels made of very hard wood, the whole standing on stone bases. One of the great difficulties to be surmounted was the difference of level in the construction, consequent on the slope of the streets. This was utilised for the erection of a lower ground floor; in point of fact, along the "rue des Prêtres Saint-Germain l'Auxerrois" this lower ground floor is lit by large bays.

It may be mentioned that the two buildings, the original one and the new, are separated by the rue de la Monnaie, and communicate with each other by means of a two-storied subterranean passage running under the whole length of the street. To construct this it was necessary to remove and transfer the sewers to the neighbouring streets.

The whole of the revolving shutters, worked by electricity, rise or descend on the simple pressure of a button. The closing of the ground-floor shutters is worked from the interior, and as through want of thickness in the floorings there was no room for the boxings, the shutters are arranged to rise from the basement.

Another metallic edifice is "Le Bazar de la rue de Rennes." Here, too, the architect, Monsieur Gutton, has been able, thanks to the materials employed, to suppress to a very great extent the use of cumbersome beams and supports. Air and light gain ready admittance by bays of large proportions. The front elevation shows the intention



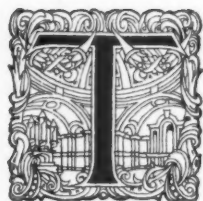
of the architect: tall metal pilasters supporting horizontal stories; frieze ornamented by the application of entablatures of "new style" design; at the summit of the edifice no roof is perceptible, and to complete the outline each upright pilaster ends in a pylone, united one with the other by means of ornamental work in wrought iron.

The use of steel in Parisian construction is becoming daily more frequent, the demand arising from its utilitarian advantages. But it is not to be doubted that steel may yet become a source of beauty when combined with materials destined to constitute plastically a work of art.

ROBERT MALLET STEVENS.
JACQUES ROEDERER.

The Royal College of Science.

Sir Aston Webb, R.A., Architect.



THESE new buildings form a portion only of the accommodation provided for the Royal College of Science at South Kensington, and furnish quarters for the Science Library, now located in the Victoria and Albert Museum, and for the chemical and physical branches of the College. The site faces the Imperial Institute, and has a frontage to the Imperial Institute Road of 850 ft. As will be seen from the plans the great library on the first floor forms the central motive of the design, and this is accessible to the general public. The chemical department is situated on the east, and the physical department on the west side of it.

The site on the south, east, and west sides is bounded by the Science Museum, and is connected at the east and west ends to the new building by the apparatus museums, which it is intended should be available to both the students and the public.

On reference to the plan it will be seen that the two great lecture theatres are placed right and left of the central axis of the site and in the rear of the main buildings to ensure quiet, special preparation rooms and diagram rooms being provided for each.

The main chemical and physical laboratories are also provided in isolated buildings in order again to ensure quiet and complete lighting, and, in the case of the physical laboratory, comparative freedom from vibration.

Great care has been taken in the physical laboratory block to secure as complete isolation as possible not only to the building, but also to the fittings. Ironwork, as far as possible, has been entirely eliminated from the construction, which is therefore composed of brick, wood, and concrete. The technical arrangements of the interior are largely due to the suggestions of the professors of the chemical and physical sides respectively.

In all modern physical laboratories it is necessary that various types of electric current should be available in the different rooms of the laboratory, and that the system of distribution should be so arranged that any desired voltage should be obtainable in any particular position where experiments may be in progress. The installation at the Royal College of Science has been designed

by G. A. Steinthal, of Bradford. The source of supply consists of several batteries of accumulators, erected in a special room detached from the main building, and three dynamos fixed in a room on the lower ground floor. This room also contains the main switch and plug-board, which feeds the various circuits throughout the building, and enables current to be obtained in any of the laboratories at any desired pressure. It is only necessary for the attendant in charge to be notified of the requirements for any particular circuit, and he can in the space of a few minutes, by means of an arrangement of plugs and switches, supply that circuit with current at any voltage between the limits of 2 and 110 volts. The system employed is a great advance on anything that has yet been installed for the purpose, though a somewhat similar system is employed at the National Physical Laboratory, Teddington, and for the University at Manchester. Mr. Steinthal is personally responsible for the design of the installation in consultation with the professor of physics, Prof. H. L. Callendar, F.R.S.

The exterior façade is faced with Portland stone and Fareham red bricks. The Hazelwood Brick Co., of Cranleigh, Surrey, have supplied bricks for the building generally, and the yellow Burham bricks on the back elevation were supplied by the Associated Portland Cement Manufacturers, Ltd. In the interior white semi-glazed faience, supplied by Alfred Whitehead, of Leeds, has been largely used in the central halls and main staircase. The walls of the laboratories throughout are lined with white glazed bricks with salt-glazed brick dadoes.

The slate roofs are covered with Delabole roofing slates supplied by Bingley, Son, and Follitt, and the flat roofs are covered with rock asphalt by J. Smart & Co., who have paved the areas with similar material. The skylights and roof-lights are glazed with Rendle & Co.'s patent roof glazing. The heating and ventilating installation is carried out on the Atmospheric Steam Heating Co.'s system. The heating chamber is across the road at the Imperial Institute, the boiler house being for the two buildings, and the steam pipes are conveyed in a subway under the road to the College buildings. The terrazzo paving of the corridors is by the Art Pavments and Decorations, Ltd. W. B. Wilkinson & Co. have supplied the artificial stone paving, and Joseph Brooke and Sons (branch

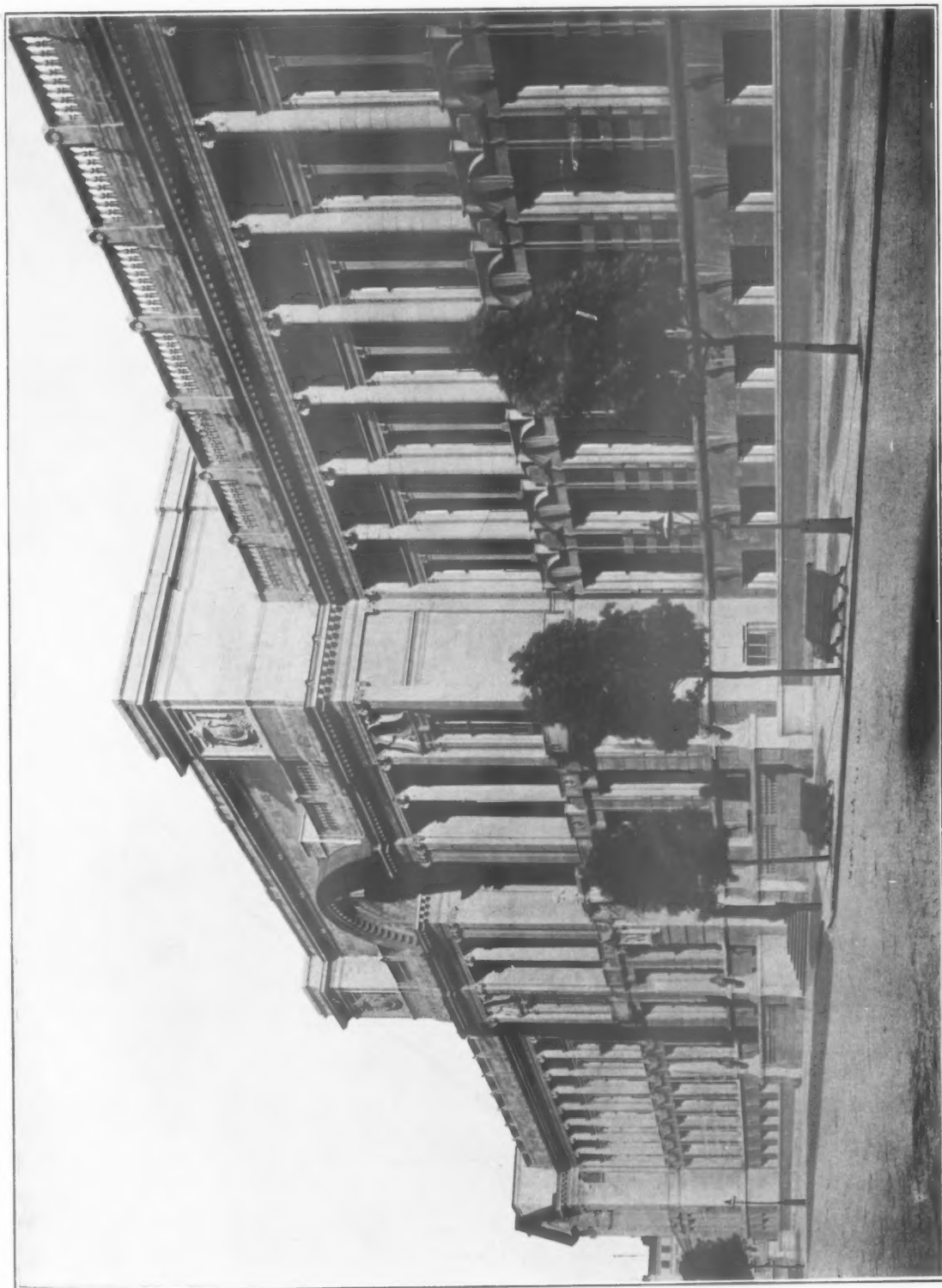


Photo: Arch. Review Bureau

GENERAL VIEW FROM IMPERIAL INSTITUTE ROAD.



ENTRANCE HALL, LOOKING TOWARDS LECTURE THEATRES.

Photo: Arch. Review Bureau.

of Brookes, Ltd.) supplied the Silex York stone paving.

The iron spiral staircases and rain-water goods were supplied by Walter Macfarlane & Co.; the stoves are by the Well Fire Co.

The sinks, stoneware, pipes, traps and other sanitary goods are of Doulton & Co.'s manufacture, and the special laboratory fittings in the various rooms were supplied by Brown & Son, of London.

Of the lifts, the special one in the tower was supplied by Messrs. R. Waygood & Co., Ltd., and the others by the Otis Elevator Co.

The expanded metal lathing for ceilings, &c., came from Messrs. Potter & Co.

Mr. W. S. Frith executed the sculpture over the main entrance. The central bust above the keystone is symbolical of Science. The figures in the spandrels to the left and right represent Chemistry and Physics respectively, the child figures in the niches supporting shields upon which are shown apparatus used in these two branches of science.

The electroliers on the main staircase and in the larger rooms, the external lamps on the obelisks, the main entrance doors and the balusters on the



THE PHYSICS LABORATORY.

east and west staircases, are the work of the Bromsgrove Guild.

Mr. R. H. Harry Stanger, A.M.I.C.E., inspected and tested the steel and iron work used in the building, the whole being tested at the rolling mills, and again after erection at the steel works.

The approximate weight of the material was about 1,100 tons.

The general contractors for the work were Messrs. Leslie & Co., Ltd., Kensington, who also carried out the laboratory and library fittings, which are in teak.

ROYAL COLLEGE OF SCIENCE, LONDON.

SIR ASTON WEBB, R.A., Architect.

CORDEROY & CORDEROY, Quantity Surveyors.

W. S. FRITH, Sculptor.

R. H. HARRY STANGER, Assoc.M.Inst.C.E., Steel-testing Engineer.

J. G. PEACOCK, Clerk of Works.

LESLIE & CO., LTD., General Contractors.

SOME OF THE SUB-CONTRACTORS.

Principal Electroliers, External Lamps, Main Entrance Doors, &c.—THE BROMSGROVE GUILD, BROMSGROVE.

Faience—ALFRED WHITEHEAD, LEEDS.

Terrazzo Paving—THE ART PAVEMENTS AND DECORATIONS, LTD., LONDON.

Laboratory and Library Fittings—LESLIE & CO., LTD., LONDON.

Bricks—HAZELWOOD BRICK CO., CRANLEIGH, SURREY.

Burham Bricks—THE ASSOCIATED PORTLAND CEMENT MANUFACTURERS, LTD.

Delabole Roofing Slates—BINGLEY, SON, & FOLLITT, LONDON.

Patent Roof Glazing—RENDLE & CO., LONDON.

Dynamo and Wiring for Experimental Purposes—G. A. STEINTHAL, BRADFORD.

Lifts—OTIS ELEVATOR CO., LONDON.

Special Lift in Tower—R. WAYGOOD & CO., LTD., LONDON.

Rock Asphalt Paving to Flats and Areas—J. SMART & CO., LONDON.

Expanded Metal Lathing—POTTER & CO., LONDON.

Artificial Stone Paving—W. B. WILKINSON & CO., LTD., LONDON.

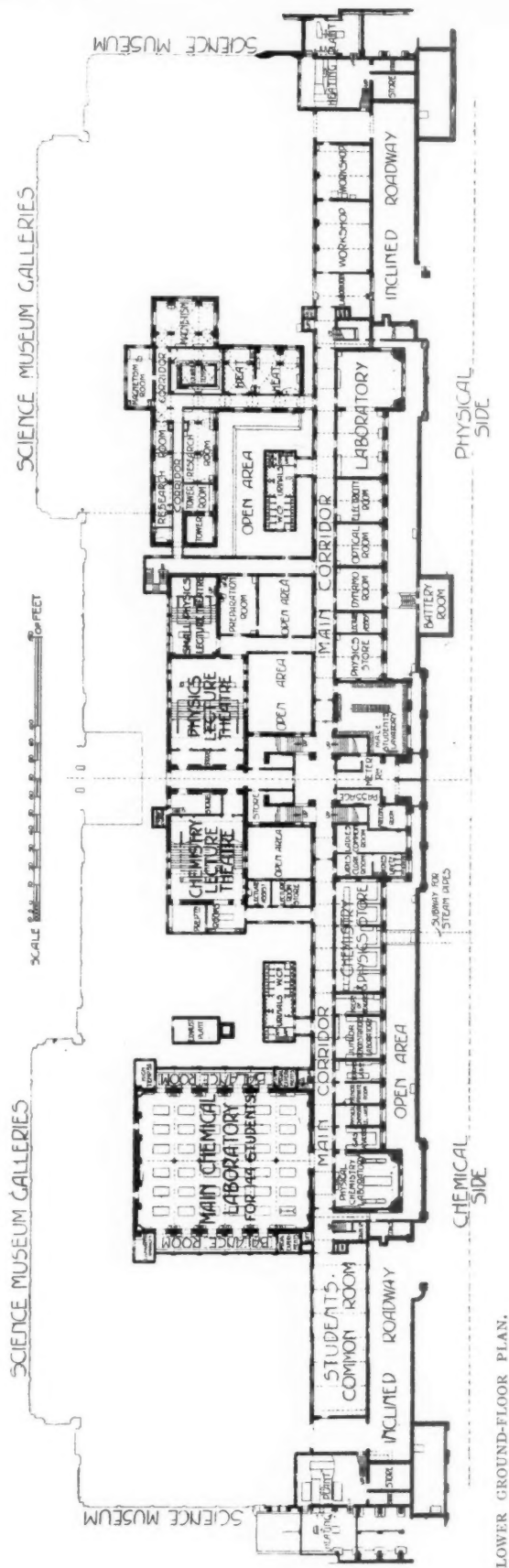
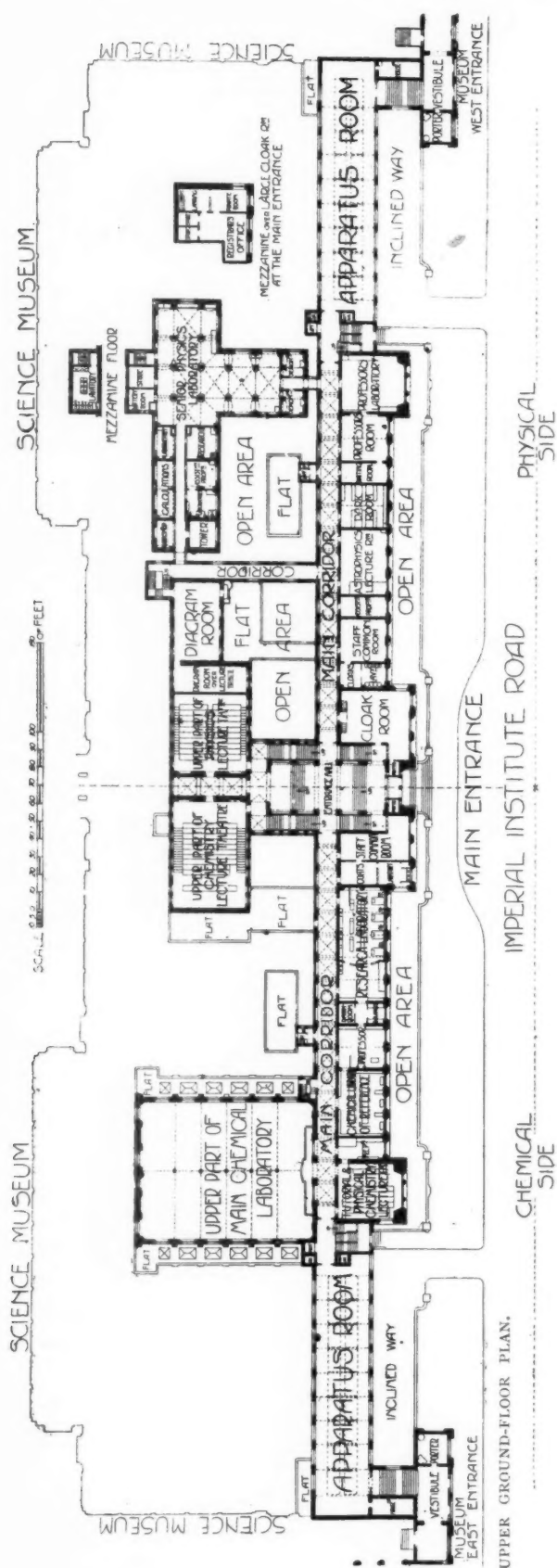
Silex York Stone Paving—JOSEPH BROOKE & SON (Branch of BROOKES, LTD.), HALIFAX.

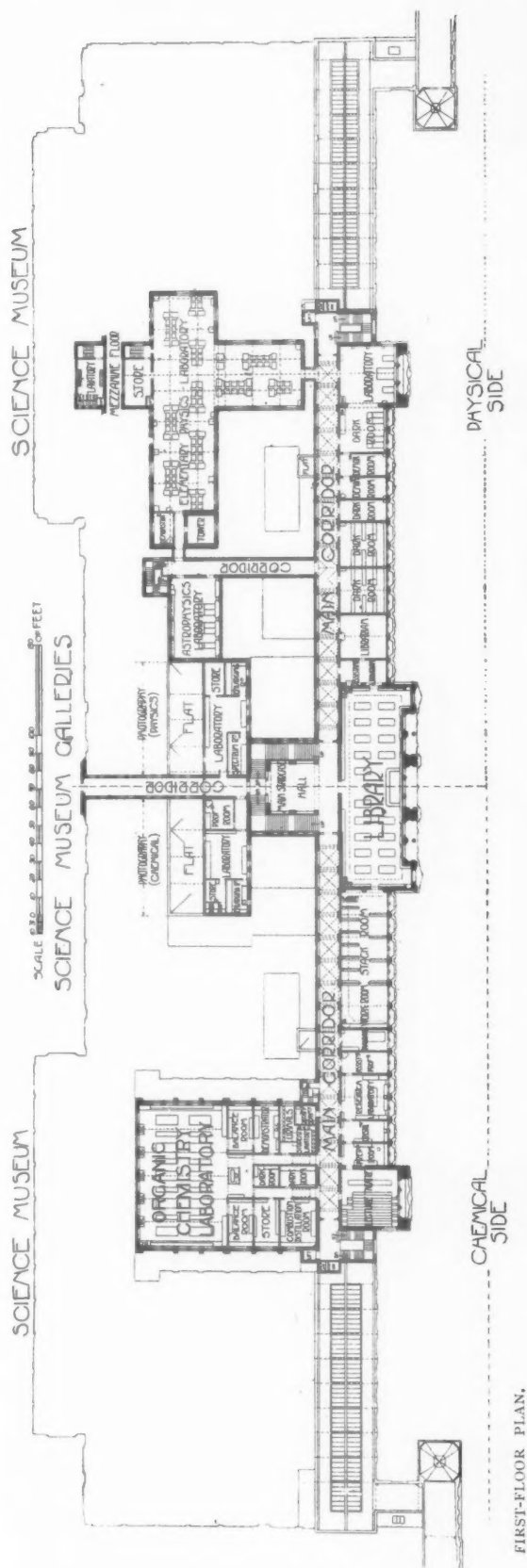
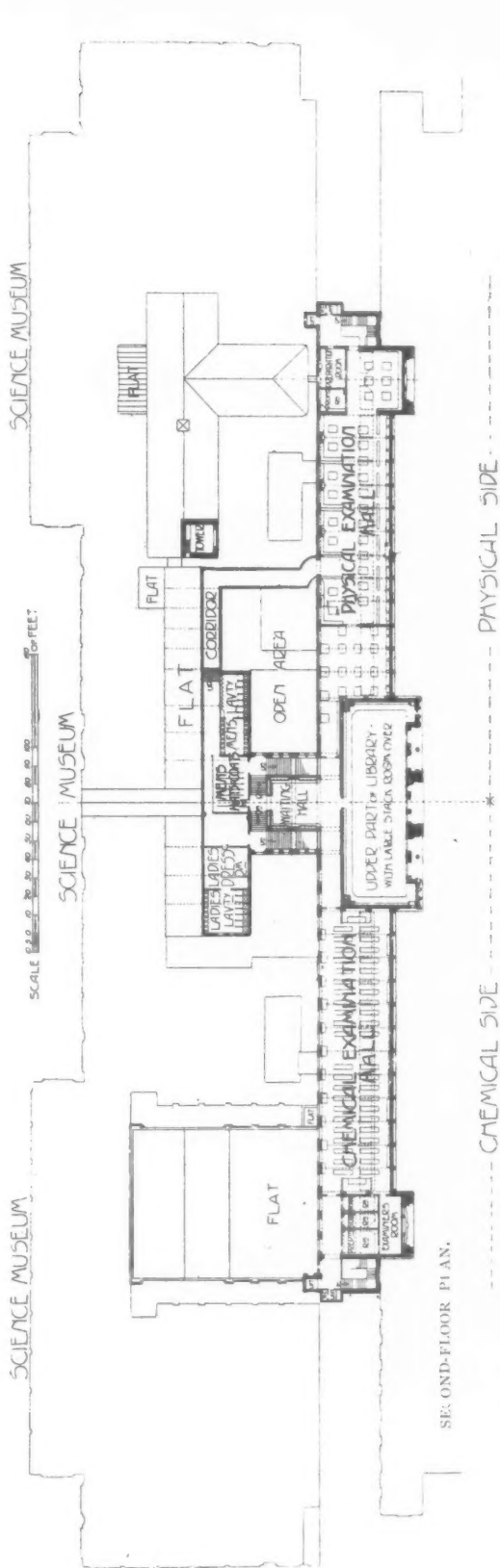
Iron Spiral Staircases and Rainwater Goods—WALTER MACFARLANE & CO., GLASGOW.

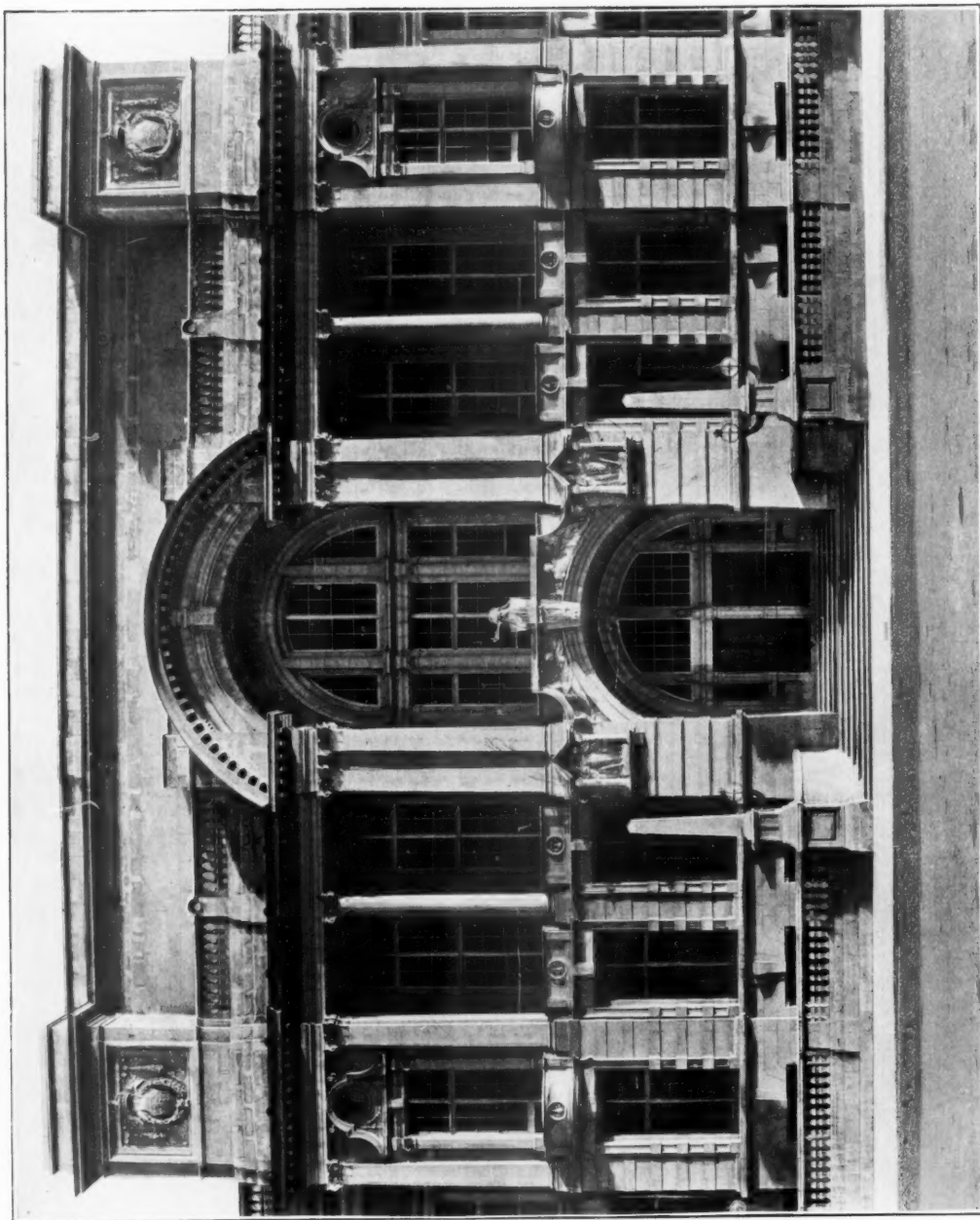
Special Laboratory Fittings—BROWN & SON, LONDON.

Sinks, Stoneware Pipes, Traps, &c., &c.—DOULTON & CO., LONDON, &c.

Stoves—THE WELL FIRE CO., LTD., LONDON.







DETAIL OF CENTRE BLOCK.

Photo: Arch. Revue Bureau.

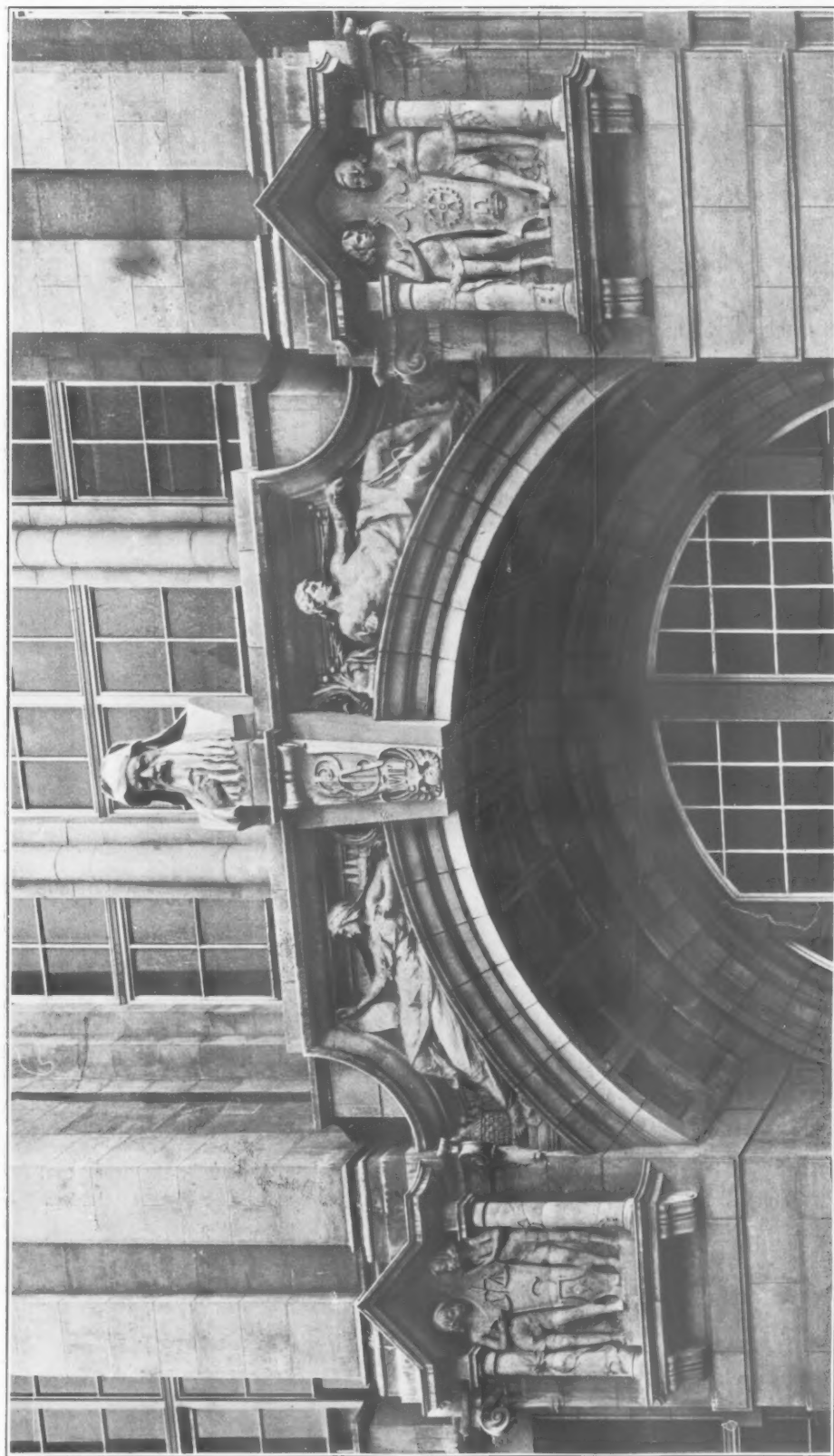


Photo: Arch. Review Bureau.

DETAIL OF SCULPTURE OVER MAIN ENTRANCE. W. S. FRITH, SCULPTOR.

The central bust is symbolical of Science; the figures in the spandrels represent Chemistry (on the left) and Physics (on the right). The Child figures in the niches support shields whereon appear apparatus belonging to the respective branches of Science.

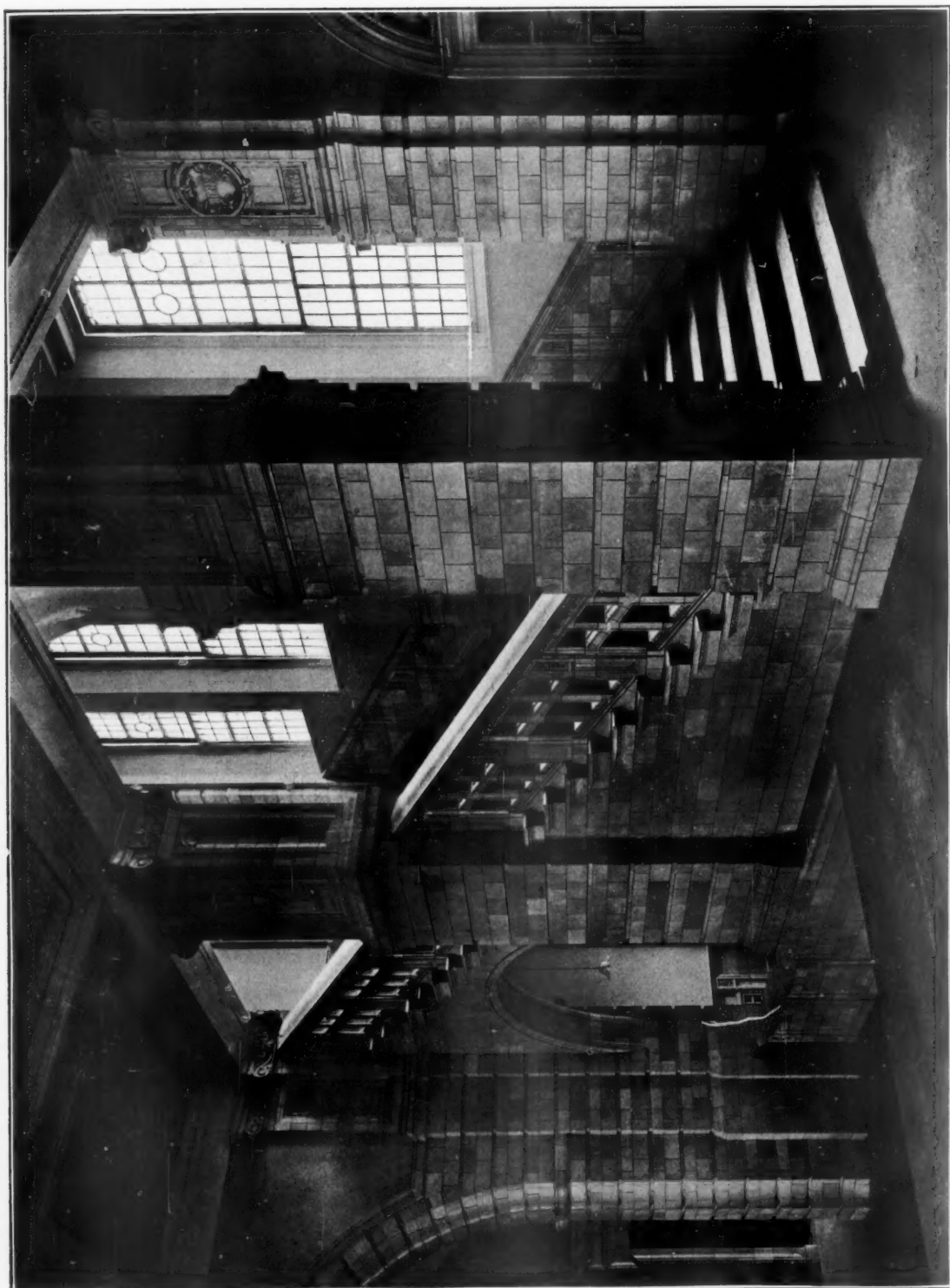


Photo: Arch. Review Bureau.

MAIN STAIRCASE: WEST FLIGHT.

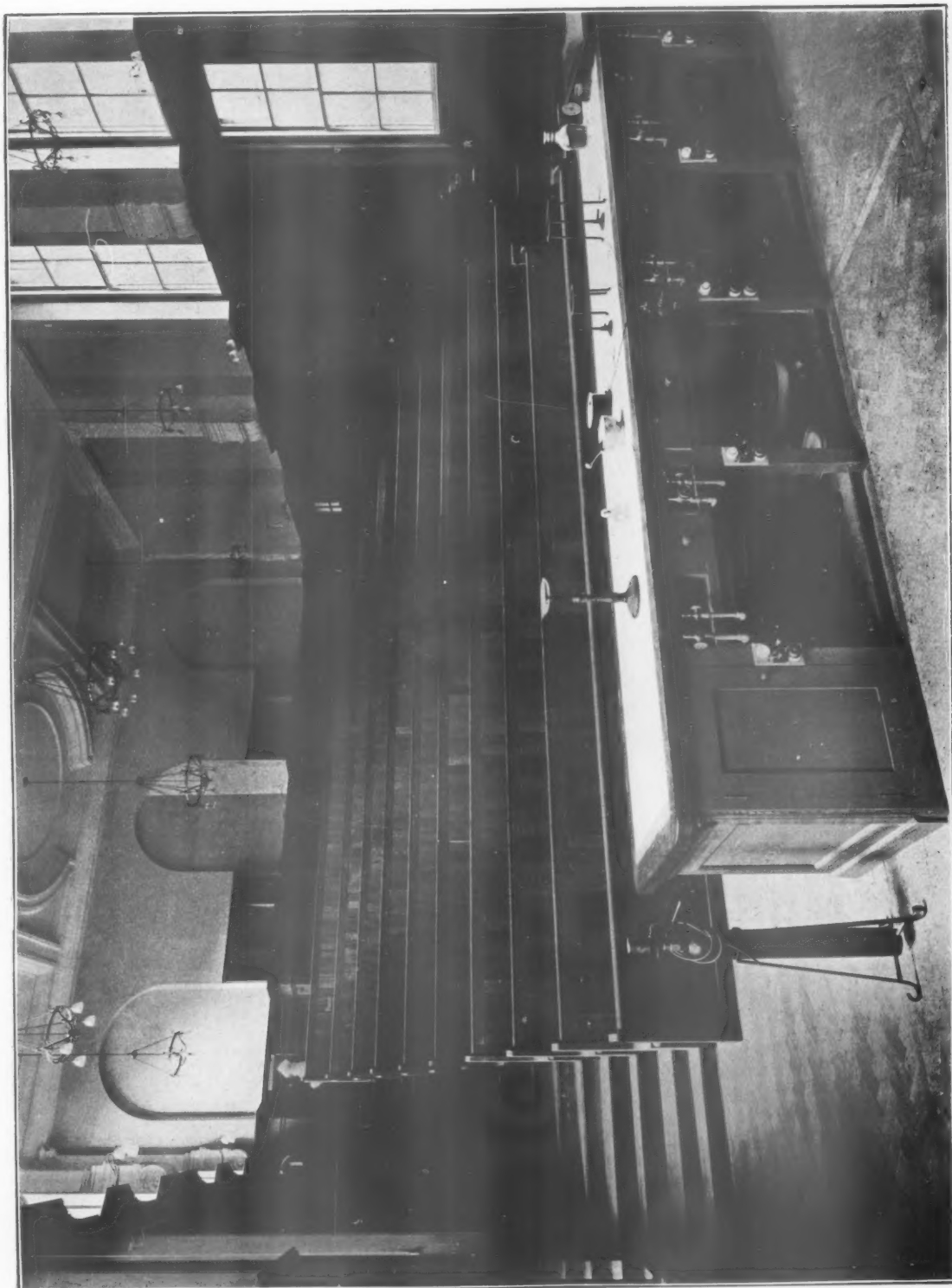
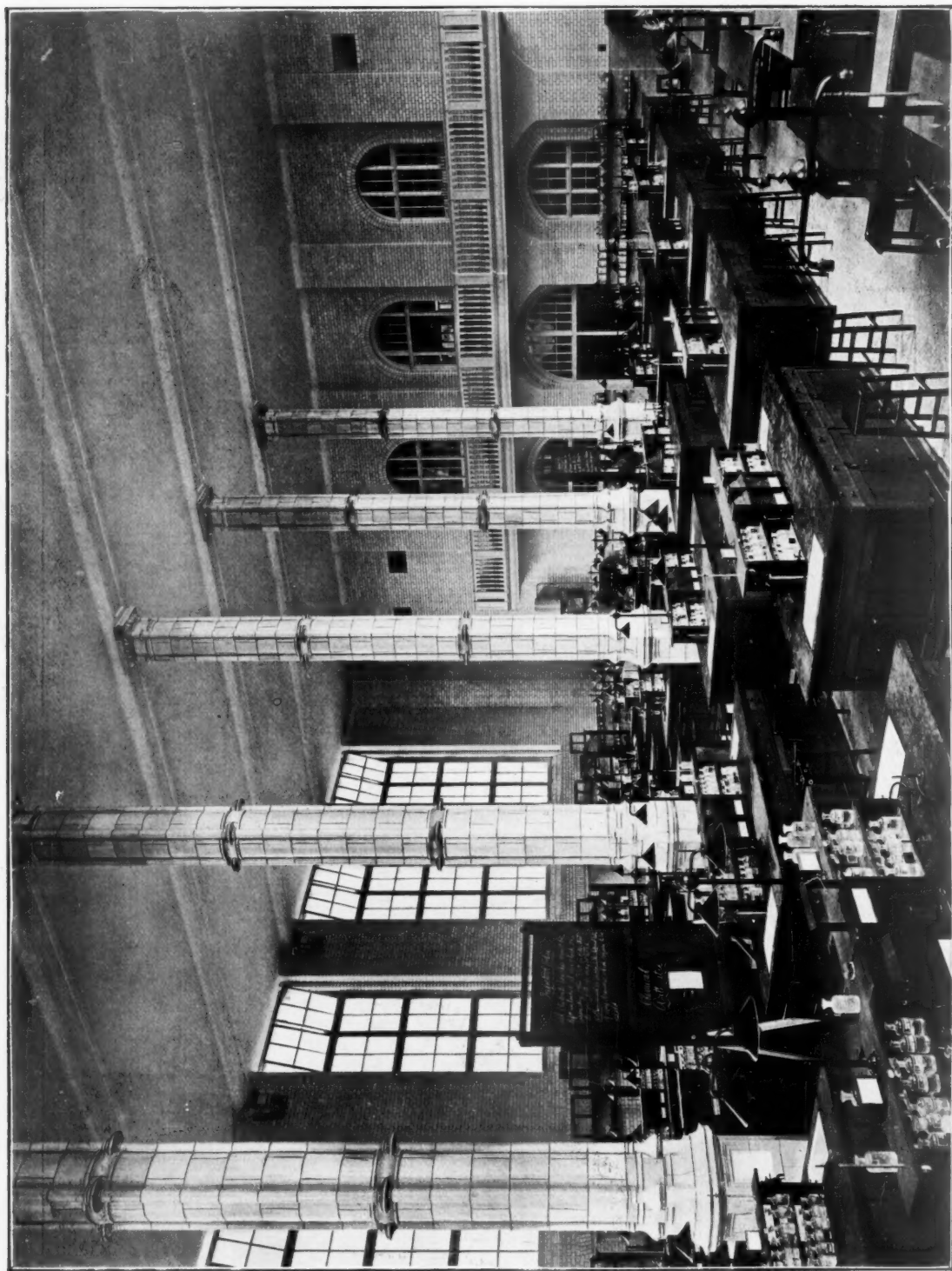


Photo: Arch. Review Bureau.

THE CHEMISTRY LECTURE THEATRE.



THE MAIN CHEMICAL LABORATORY.

Photo: Arch. Review Bureau.

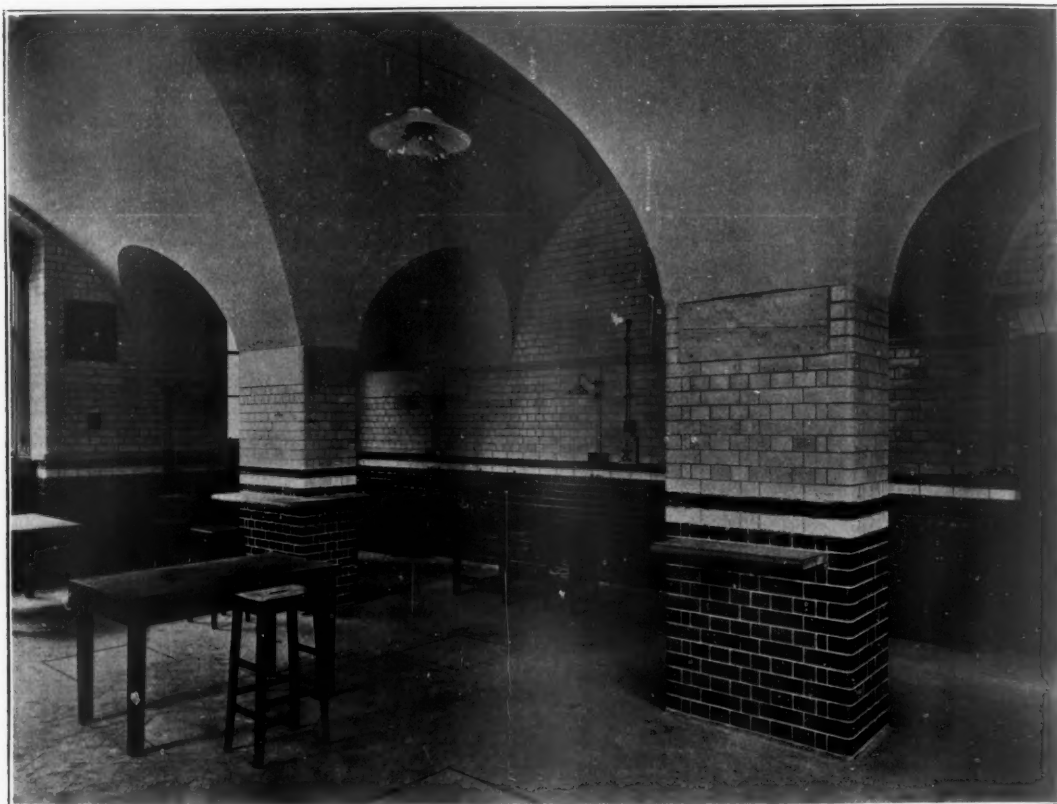


Photo : Arch. Review Bureau.

ROOF OF ELEMENTARY PHYSICS LABORATORY WITH GANGWAY FOR EXPERIMENTS.

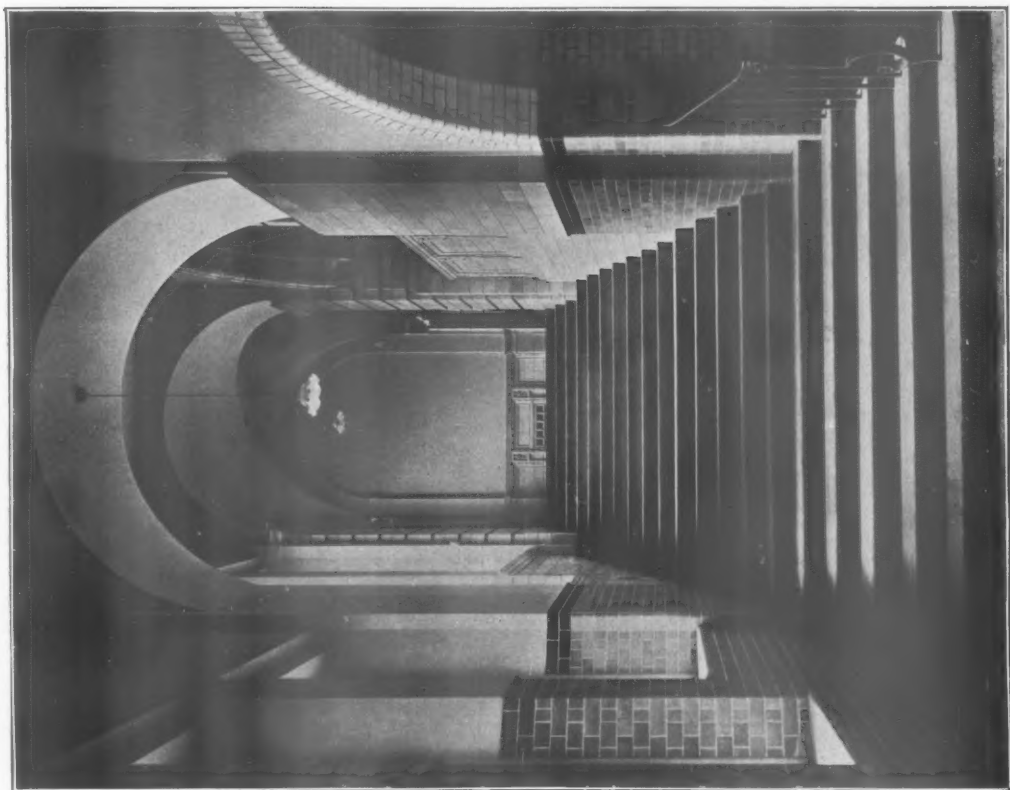


STAIRCASE HALL, LOWER GROUND FLOOR



A LABORATORY, PHYSICS SIDE.

Photos: Arch. Review Bureau.



PHOTOS : Arch. Review Bureau.
VIEW OF STAIRCASE FROM LOWER GROUND FLOOR : EAST FLIGHT.



MAIN CORRIDOR, GROUND FLOOR.

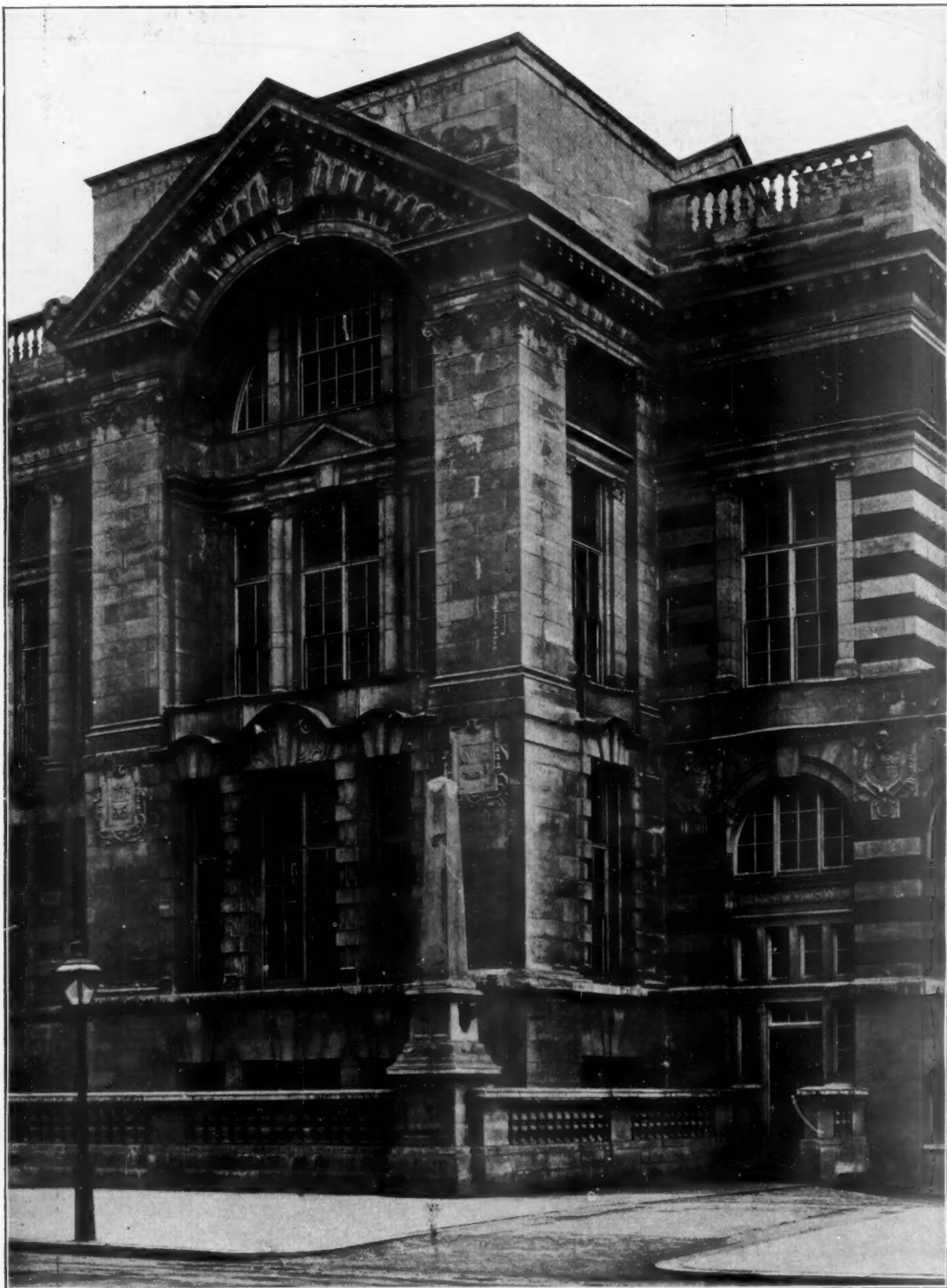


Photo: Arch. Review Bureau.

DETAIL OF WESTERN WING.

"Origine Anglaise du Style Flamboyant,"

Par C. Enlart.



FRENCH archæology has of late been showing itself kindly to the investigation of the English styles. We have had visits from some distinguished savants, and not only is it being allowed that we in England did some things in the Middle Ages which were not directly inspired by the French art, but that moreover these English facts were important in the development of mediæval architecture—that the French art cannot indeed be satisfactorily explained without them. M. Camille Enlart is the well-known author of the "Manuel d'Archéologie Française," and his contribution under the above heading to the *Bulletin Monumental* is a significant outcome of this newly aroused French appreciation. In some points it almost makes an epoch in French writing about England—for here are English names rightly spelt, and further, the facts of our mediæval building are given with accuracy and discernment. I cannot find even small errors, except that the tomb at Wells commonly but erroneously called that of Dean Husse is assigned to the date c. 1300, whereas it is an alabaster monument of the fifteenth century.

M. Enlart's argument for the English origin of Flamboyant is put with all the customary neatness and lucidity of French archæology. After somewhat naïvely acknowledging the strangeness of his position as a French writer proposing to allow any part of French Gothic style to be of foreign origin, and the incredulity with which this position has been received by some of his friends, he proceeds to detail the characteristics of Flamboyant:—(1) its vaults with accessory ribs ("tiercerons" and "liernes"); (2) its arches of changing curve, particularly the ogee arch ("arc en accolade"); (3) its undulating traceries which make the shapes called "soufflets" and "mouchettes"; (4) its continuous or wreathed imposts and peculiar base-sections in the form of bottles; (5) its ornament and use of crockets; and (6) its interpenetrations of moulding. He shows that if some of these forms were not completely unknown in the French art before 1375, yet they have occurred almost as isolated freaks; but that on the other hand in the English architecture, from c. 1300 to 1350, the above constructions and shapes were continually found, and were the usual decorative equipment of our fourteenth-century buildings.

Seriatim he gives the particulars of the English examples—a large number of which he argues are actually dated by record. As to others, whose fourteenth-century dates have to be inferred, he very pertinently observes, in view of French incredulity, that their rejection would be that of practically the whole body of fourteenth-century architecture in England.

The ogee arch-curve is one of the most interesting of these marks of English style, and M. Enlart is probably right in suggesting that the slight appearance of it in the Eleanor Cross at Northampton (1291–1293) is one of the earliest uses. He does not allow so early a date to the somewhat similar example on the south porch of St. Urbain at Troyes. The "arc en accolade" is to be noted, however, as most distinctly occurring in goldsmith's work—in the shrine of St. Gertrude at Nivelles, Brabant, made by Colars of Douai and Jacquard of Nivelles, c. 1275. Abroad these were sporadic examples—but in England the use in the Eleanor Cross does not stand alone. The "New work" of Old St. Paul's was building c. 1275, and its east front as etched in Holbein's print shows the ogee arch in the tracery of the great rose window.¹ In woodwork the example which M. Enlart notices from the chancel screen of St. Mary's Hospital at Chichester is probably as early as this. The chancel there would appear to have been begun shortly after 1285, and it is to be seen in the screen that the ogee curves are on one side only, the other keeping to geometrical tracings. We have here, it seems, the actual stage of transition; and it is to be observed that in woodwork the change of form made a somewhat easier construction.² In the embroidery of English make "Opus Anglicanum" the ogee shape is characteristically shown in arcades in work that seems dated before 1300.

To return, however, to the problem which M. Enlart's argument has so successfully disclosed. In his final summing-up of this he is careful to admit that the Flamboyant style, as it appears in French architectural history, is not really the "Decorated" style of England, but an art that had a genius and achievement of its own. This, of course, is true as to the details to which our author refers—it is still more true as to the proportions and feeling of Flamboyant art, which with its lean skeleton of construction and lofty cylindrical piers had none of the broad low effects of the English art. Indeed, there is really more of the essential

¹ The chancel of Winchelsea Church—certainly a work for the most part anterior to 1300—has many small ogee curvatures.

² M. Enlart does not accept as early examples the peculiar ogee-niches that occur in the voussours of the doorway to the Norwich cloister. He thinks the date of this door c. 1310. The chapter-house, however, and the three or four bays of the cloister to which this doorway enters from the church nave, are recorded as built from 1289 to 1297, to which time the naturalistic crockets of the canopies should be dated rather than to twelve years later.

origins of Flamboyant art in the thirteenth-century building of St. Urbain, Troyes, than in any part of our "Decorated." M. Enlart, too, is scrupulous to explain that certain Flamboyant developments—as, for example, the flattened door-heads, the bottle base-sections, and the multiplication of counter curves in the mouldings, &c.—though these occur first in the English style, need not be actually borrowed from it, since they were the natural sequel of the earlier French details. These sagacious reservations should be noted, lest English writers swallow too greedily³ the idea that the French art was just the English taken over the Channel. Still, his contention remains, that somewhere about 1380 French architecture can be found making its native style with the peculiar forms of an alien mason-craft, and, moreover, forms that had had their genesis in the English mason-craft pretty well a hundred years earlier. To sustain his point he brings forward examples of exchanges of style, such as those claimed for Lombard architecture—that it was brought into north Europe in the eleventh century "grace aux abbés Guillaume et Lanfranc"; and then the return by France of the Cluniac and Cistercian building into Italy; and finally the wholesale expansion throughout western Europe of the French Gothic style in the thirteenth century. In conclusion he assigns to the Conquest of France in Edward III's reign the political occasion that favoured, in the second half of the fourteenth century, the apparent export of certain English forms to France.

Now all this is gratifying to insular vanities, yet I am not sure that the striking facts which M. Enlart so cleverly marshals can exactly explain themselves on the ground of the analogies he offers. If in the one case Lombard architecture, and in the other French, were conveyed to strangers, in each case it was the immediate, practically contemporary, expansion of a great building faculty that had obtained a widespread reputation. No such prestige for our English Decorated style has been adduced, and yet it is alleged that the transference of its details was a posthumous honour paid to it. M. Enlart, indeed, offers us a precedent for such a tribute to the cast-off fashions of another country. He points to the fact that the French Renaissance of the sixteenth century was based not on "cinquecento" but "quattrocento." A similar instance might be taken from the history of our English Renaissance, for the Classic of the latter part of the seventeenth century avowedly took its models from Palladio, who had died in 1580. In these cases, however, there was an admitted cult of

certain masterpieces, which were copied on account of their classic elegance and as the established canons of style. Indeed, the Italian Renaissance was responsible for the ideas which sent artists to school in Italy. But such a thing would be quite out of ken of the fourteenth-century mason, whose architecture was not a learned designing or a taste for the antique, but a building. Had a mason, therefore—supposing the occasion—been sent to England to learn architecture in 1380, would he not have brought back the highly efficient mason-craft of the Gloucester masons whom William of Wykeham had organised in the King's service at Windsor? One can scarcely conceive our travelling French mason as an artistic eclectic making a selection from the details of the Decorated building.

Indeed, somewhat of a misconception lurks in the abundant representation of English examples, which is part of M. Enlart's argument. It is true, no doubt, that certain of the prominent decorative motives which are found in our "Decorated" style appear also in Flamboyant. It is true that in France they had a longer life and a more exuberant manifestation. But these particular forms were far from being in England the whole story of our architecture, nor did they make its expressive character. For example, the vault arrangement of the branch ribs (tiercerons) and ridge-ribs (liernes) which the Flamboyant architects adopted was but one of many varied types of vault that the first half of the fourteenth century saw elaborated at Exeter, Lichfield, Wells, Gloucester, and Tewkesbury. As to the oggee arch in England, our author incautiously admits a dictum of Mr. Francis Bond's, that "when once introduced there was a mania for it. Late English Decorated and French Flamboyant are simply a glorification of the oggee arch: the builders could not have enough of it." So Mr. Bond; but there is over-statement in this sentence, and the coupling of Decorated and Flamboyant is misleading: for never really were Flamboyant ogees the mania in England. Out of some seven or eight hundred Decorated traceries that the industry of Professor Freeman collected from English churches, he could only call Flamboyant some half-dozen, and these with reservations. He had to go to the Channel Isles for anything he could really call Flamboyant, as indeed M. Enlart's illustrations make obvious. Only for a few years after 1325, and in a limited district—that of the "Ancaster" and "Tadcaster" stones—was there a decided approach to the Flamboyant flux of geometrical forms. So passing was the fashion, even in Yorkshire, that before 1350 curvilinear

³ *E.g.* in Mr. Bond's "Gothic Architecture in England," M. Enlart is credited with the opinion that "between 1325 and 1349 we had worked a style so beautiful that it was adopted by France."

traceries were straightening their lines. Elsewhere than in north-east England the notable works of the second quarter of the fourteenth century—*e.g.*, at Exeter, Tewkesbury, Wells, Winchester, Gloucester, and at London (as far as we have records⁴)—show the ogee only as a decorative incident freely employed among many other expedients for varying arch and window forms. In the English art geometrical traceries as well as regular arch forms were always in use along with the curvilinear—the "mania for the ogee," at any rate, left the main lines of building unaltered.

Now these considerations only increase the strangeness of the story of an English influence appearing as a consequence of the English occupation of North France. It can, of course, be conjectured that the conquering English of Edward III.'s reign introduced bodies of masons. But Crecy was not till 1346, and the suggested conveyance must have been between that and the Treaty of Bretigny, 1360. During these years the Black Death in England had been deadly enough to extirpate the English masons—at any rate their style was practically brought to an end, though there were survivals in East Anglia and the remarkable one at Etchingham in Sussex. Shall we say, then, that the imported masons survived in France while they perished in England? and, further, that these escaped English stylists shut themselves up from all contamination from their native island, and handed on just their peculiar selection of Decorated forms to the Flamboyant architects of 1380? It is possible—but where are the architectural works in France dated from 1350 to 1380 that bear out such a history? M. Enlart seems to think the front of Rouen Cathedral, building from 1370 to 1421, a sufficient vehicle for the English influence. But the work at Rouen is far from English Decorated in date and style alike. The transmission of continued life from the English seed to the developed plant of Flamboyancy would seem to want something more than this. There was required an intermediate culture-ground—a "host" as it may be zoologically called—in which Decorated masoncraft might be absorbed as the nutriment for after development. Some years ago I ventured to suggest that such a culture-ground may have lain in Brittany, the ally of England in the war with France. In the last quarter of the thirteenth century and up to 1350—that is, all the while that Exeter Cathedral was building just opposite the Breton ports—the Breton churches show Decorated details of English types. The

quires of Dol,⁵ for example, Quimper,⁶ and Tre-guier⁷ can be cited.

Now, at Exeter, the geometrical motives of English Decorated are as prominent as the curvilinear, and the Breton architecture of the fourteenth century has the trefoil and quatrefoil traceries of Exeter, with ogee-arched niches that are singularly like those of Devon and South Wales, and moreover a tendency to the square-ended plans and polygonal apses of the English type. On the other hand, the elaborate English vaultings are not found, nor do the window labels of English work occur. English style has not been imported, but there have been noteworthy absorptions of English detail. Now, this Breton "Decorated" style did not come to an end in 1350: it can be seen in many churches of 1350 to 1410, *e.g.* Lamballe, St. Pol de Leon, Folgoet, &c. It carried on the style while Perpendicular was establishing itself in England, and while in France proper but little was being built. I am of opinion, from my own observation, that in touch with this Breton building Normandy developed an architecture which, gradually dropping the geometrical forms, in the last years of the fourteenth century exhibited more and more the Flamboyant types. In his "Manuel" M. Enlart gives among his Flamboyant examples works of the fourteenth century at Caen and other places in West Normandy, and the masters of the works at Rouen Cathedral from 1359 to 1398 were from Bayeux and its neighbourhood. So this way the chain from Exeter to Rouen seems capable of being traced complete.

But I am by no means arguing for the Breton as the only culture field in which English ideas were disseminated. In close connection with that eastern district of England where from 1325 to 1350 curvilinear forms were most in vogue, were the great trading Flemish cities, and in the churches of these towns in the last quarter of the thirteenth century, and all through the fourteenth, absorptions of English details can, I believe, be traced. The splendid metal shrine of St. Gertrude at Nivelles has been already mentioned. It is shaped in the form of an English church of the last quarter of the thirteenth century, and has figure-work and ornament much as on the tombs of Aveline and Crouchback in Westminster or the cloister-doorway at Norwich. Later, in the fourteenth century itself, not a few Flemish churches show the English style of the first half of the fourteenth century, *e.g.* the north porch of Notre Dame, Bruges, and later the Hôtel de Ville there. At Hal, in the church

⁴ The choir-screen of old St. Paul's was, like that built by Prior d'Estna (1304) at Canterbury, more geometrical than flowing. Nor was the St. Paul's Chapter-house, built in 1332, at all in the Flamboyant style. See Hollar's prints.

⁵ Enlart gives date of quire 1231-1265, but the east window and those of the side chapels have advanced tracery, with which compare windows at Coutances also showing ogee-headed lights between quatrefoils and trefoils.

⁶ Quire begun 1239, but much of it is clearly much later.

⁷ Enlart gives 1296 and 1333. The cloister is a fifteenth-century work.

of St. Martin at Ypres, and in the church of St. Mary Magdalen at Goetz, are traceries of the fourteenth century which seem links connecting "English Decorated" with the French "Flamboyant."

The above ideas are derived from a far too limited personal observation to be more than suggestions as to some of the ways by which English forms had become the property of the Continent before the splendid exuberance of the French fifteenth-century building. I cannot believe that the "Decorated" details of the early Flamboyant masons were really scraps of style and belated fragments of Decorated usage obtained directly from England in the way that the Italian detail

and the classic porticoes of the Renaissance came into northern building. It would be more natural, when building became brisk again in North France after the expulsion of the English, that the mason-crafts to the east and to the west in Flanders and West Normandy should give French art certain decorative forms, whose origin was remotely but not immediately English. At any rate I may be allowed to suggest to English readers that, kind as are M. Enlart's contentions to our conceit, and correct as is his analysis of our Decorated style, yet there must be more discovered before we can mother on it the picturesque Flamboyant art.

EDWARD S. PRIOR.

Mr. Blomfield's Academy Lectures.



ON February 21 Mr. Reginald Blomfield, A.R.A., the new Professor of Architecture at the Royal Academy, delivered the first of his four lectures: "The Study of Architecture." He advised the study of architecture to be approached in two ways, both of which were important. The first was the study of buildings, with a due appreciation of the practical conditions which led to their erection. It was necessary to thoroughly analyse a building in order to appreciate the architect's work. They must approach it from the standpoint of practical conditions, bearing in mind what the architect set out to do, what were the limitations of the problem in hand, and taking account of any extraneous matters which had a bearing upon the design. It was to be remembered that an architect's work called for qualities and practical considerations which were absent in the other arts.

In studying a building it was necessary to analyse the development arising out of constructional and other needs. If they failed to acquire this habit they would be driven back on an architecture which was merely the exploitation of fashionable expression. They must approach their work as artists, but with the proviso that the manner of their approach must be practical; they must be on their guard against sentimental considerations. Historical and sentimental associations with regard to buildings should be disregarded, for, though these were interesting to the historian and the archaeologist, they had no bearing on their work as architects. They must guard against a waste of time on unessentials, and study wholly the means by which beauty was attained.

The relations of art to the morals of the builders, and the age of a building, were not factors in their study. The student should clearly grasp the meaning of what he saw. He should clear his mind of what was irrelevant, and analyse a building with sympathy; criticism must be sympathetic, and needed to take into account what the building was for, what the architect set out to do, and how he arrived at his solution.

The keynote of Gothic architecture was its frank expression of construction. Once they had got this into their minds they could understand and appreciate Renaissance architecture, which never accepted this rule and was never to be judged by it. Dogmatism in first principles was a snare. The one first principle an architect disregarded at his peril was that his building should be structurally sound and in conformity with its requirements. They should approach these studies with an open mind and without preconceived ideas, and they must put

aside anything which would bias their ideas. He instanced Pugin's advocacy of Gothic as the only true Christian style as an uncandid description, inasmuch as Christianity existed 1,200 years before the style which Pugin advocated came into existence. It was merely an expression of like and dislike. There was good work in all ages, and if the Renaissance architects had accomplished some works of greater magnitude, the Gothic masters had left their record in very beautiful detail. It was essential that the student before attempting to embark on original ideas should have a thorough knowledge of his art.

They saw how in the art of painting the older conventions of colour and drawing had been largely abandoned in an endeavour to secure effects of lighting; and in sculpture, beauty and purity of form had been set aside for effects of symbolism. They must not be too ready to abandon the older conventions until they had thoroughly studied them.

This brought the lecturer to his second point in "The Study of Architecture"—namely, a knowledge of the history of their art. They must trace that history in its developments and see how the architecture of Egypt influenced that of the East, how it proceeded from the East through Greece to Rome, and how, on the decline of Rome, architecture developed into the Byzantine and Lombardic styles: how the Byzantine died and its influence passed on to mediæval work; then through the phases of mediæval work to the Classic revival, later the Gothic revival, and lastly to the present Classic revival again.

Reading, however, would not make an artist: they must study buildings, using their brains and avoiding too much use of the sketch-book. Sketch-book architecture was one of the disastrous results of the Gothic revival. It was a notable trait of the Renaissance architects that they studied and analysed the buildings of ancient Rome. The lecturer instanced the manuscript notes of Inigo Jones in Worcester College Library, Oxford, where an account of his travels in Italy was almost entirely in the shape of studies and analyses of the buildings he had visited. Sketching should be regarded only as the handmaid of their art.

For study Mr. Blomfield recommended the City churches of Wren, not only because they were close at hand, but because they showed what good effects could be obtained by simple means. St. Paul's Cathedral was a worthy object for study. Here was a great church covering an area about 500 ft. in length and 245 ft. in width. The architect's problem was to build a great edifice that would hold about 10,000 people, with liturgical arrangements in conformity with the rules of the Church of England. They should study Wren's method of covering an immense space about 145 ft. square, and study the

transition from the square to the hexagonal, and from the hexagonal to the round of the dome. They would then proceed to study how the dome was supported, and the manner in which the thrust was taken up. Following this, they could study the area of the dome supports, the proportions of solids to voids, and windows to wall space. They could then proceed to the study of other matters, such as the inner and outer dome, the screen walls of the choir, etc.

Besides this study of buildings, they must also remember the study of historical development, remembering that the resemblance of the modern church to the ancient basilica was merely accidental, and that the entirely different arrangement of the Byzantine church showed that our modern arrangement was not due to any liturgical necessity.

History was also necessary to show them the connection between the dome of St. Paul's, St. Peter's at Rome, and the various other domes of Italian masters of the Renaissance with their original prototype in the Pantheon. They must endeavour to understand the personal temperament of the designer.

With systematic analysis of fine buildings and wider studies they could hope to obtain an accumulation of knowledge on which to base their personal expression.

The lecturer quoted in conclusion a passage from Walter Pater, showing the power of the subconscious self in imitating the little acts of daily life. He pointed out that if this were so in the small matters, how much more likely it would be to operate in the practice of their life's work. The accumulation of great knowledge on which that subconsciousness could draw would bring its reward in later years.

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For his second lecture, given on February 25, Mr. Blomfield took as his subject "Design and Temperament." He recapitulated the points of his first address on approaching the theory of architecture free of preconceptions, and the necessity of habitual and systematic analysis of buildings. There was another side to the story, however, and that was the analysis of the buildings studied with an appreciation of the temperament of the artists who had created them. The technical side should not alone possess them. Though it had to be mastered, the Art of Architecture was something more than technical proficiency. Temperament and imagination were essential elements, and temperament he defined as a force or passion within a man which impelled him to do things differently from other men. Architecture, as the greatest of the arts, must mean translating human wants into visible forms of beauty. A study of the lives and works of representative architects would show the intimate connection between their designers and their temperaments. This was not always possible, owing to the lack of knowledge of the personality of the architect. In such a case one could but interpret the temperament from the work, though this was only feasible when there existed sympathetic contemporary criticism, and thus a sympathetic study was practically impossible prior to the Renaissance. The monuments of Egypt were full of character, though not of individual character. They expressed an unswerving tyranny over millions of slaves. Much might be learnt from such buildings, but not the individual expression that differentiated modern from ancient architecture. The architect, not being a man of leisure, was regarded by the Greeks with contempt. To the Romans this feeling was transmitted, and it required a new vitality from the East to create the individualism that brought about such a tremendous architectural development as was witnessed in St. Sophia. Our methods of life were too remote from those of Justinian to understand, from the building, the temperament of the man who designed it. Early mediæval work was a collective effort rather than an individual one, and the history of the

men concerned was very obscure. Not until the Renaissance did the physiological study of architecture begin. As an example take Alberti; born of a noble Florentine family, a gentleman and scholar, a man of great accomplishments, both mental and physical, one who found delight in every side of life. This combination of qualities was reflected in his work. He had the austerity and reserve of the scholar and the fastidiousness of the gentleman; but he also possessed the adventurous instincts of the sportsman. The first group of qualities led him to a scholastic view of architecture, and a wrong beginning by working deductively from other scholars, like Vitruvius, instead of inductively from the construction of the buildings themselves. But the adventurer spirit led him to attack the problems of construction, and to find solutions outside the beaten track. His work showed the distinction of his mind. The value of it was more clearly shown by remembering what other men of his time were doing. While they were occupied by detail, Alberti alone was thinking in terms of architecture, developing its qualities, and making his appeal by beauty of form, refinement and scale. One other man of the Renaissance was instanced—Peruzzi. From the study of Roman antiquities he drifted into architecture. His antiquarian researches were evidently more thorough than those of his contemporaries; but few things were more surprising than the truthfulness of the Greek spirit he revived, and in which respect he stood alone among the Renaissance architects. He brought the competent freedom of the master to bear on the traditional forms of Classic architecture, not merely in details but in his whole attitude. The lives and work of both these men showed the intimate connection between the artist and his work. Mr. Blomfield referred, in conclusion, to the privilege of being able to study these men, and to the duty of emulating them in steadily considering the finer qualities of life.

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Mr. Blomfield's third lecture was delivered on Thursday, February 28, his subject being "Architecture and the Craftsman." He said the modern theory that in mediæval times the architect was a workman was an engaging one, for it gave rise to the idea of the architect producing his art at the end of his fingers, but it did not necessarily follow that a good craftsman was necessarily a good architect. The actual function of architecture in its relation to the arts must be understood. The early Italian Renaissance was also a period of craftsmen, and it was not until the middle of the sixteenth century that men began to specialise in architecture. It was not until the latter part of the seventeenth century that there was an immense advance in technique.

Towards the end of the eighteenth century there were momentous developments. The neo-Classic tradition breaking down and giving place to the dilettante, architecture became a literary fashion, which is a different thing from scholarship, and one of the leaders of the attack on Classicism was Horace Walpole, whose efforts resulted in Strawberry Hill Gothic, and "Capability Brown," who produced the landscape gardener as a worthy successor of Le Nôtre.

Kent and Adam both showed a capacity for arranging the old traditions in a new manner, but, in the absence of any vital development, left the way open for the fads and revivalisms of the nineteenth century, though our thanks must be accorded to Chambers and Cockerell, the last of the old guard, for their endeavour to stem the tide which engulfed English architecture.

English architecture had sunk to the lowest depths of degradation by that somewhat remarkable year, 1851, the year of the Great Exhibition. But this year also marked a turning point in the history of the art, for it was about this time that the pre-Raphaelite Brotherhood made its appearance. Its influence on the current ideas of architecture

was all for good until the movement, which was not exclusively artistic, came under the sway of the *littérateur*, and at once lost strength.

Morris, who revolted against an architectural training, first brought forward a new theory of the art to which he devoted half his life. A building he regarded as a vehicle of decoration, and architecture he defined as the art of ornamenting buildings. These ideas were due to his being both a craftsman and a socialist. As a craftsman the decoration was more important than the building, and as a socialist all craftsmen were equal; no one was above the rest, and there was no architect with supreme control. But this theory entirely overlooked the real art of architecture, the power of thinking in great spaces, and possession of a broad sense of rhythm and completeness. No architect could afford to ignore details, but the primary and fundamental purpose of his work was that a great thought should be expressed. Details should never be studied for their own sake. Modern architecture, however, owed much to Morris for his advocacy of good work, good material, and good colour, though the relationship between architecture and the crafts had been lost, and was at present lost, between the Scylla of mediævalism and the Charybdis of *l'art nouveau*. Nature in no case furnished evidence of construction, nor was architecture merely ornamental building. Architecture had been defined as a science and an art, which was a somewhat unhappy definition, because it appeared to divide Architecture into two separate functions, those of a scientist and those of an artist. It was scientific to a certain extent, as it involved the applied sciences and the study of materials. It had to conform to the facts of nature just as a sculptor had to conform to the facts of anatomy. If anything it was a plastic art.

That science alone was not the essential feature in architecture was evidenced by the career of Wren, who left Oxford probably the most finished science scholar of his age, but his early architectural work was far inferior to that he did thirty years later. There was a quality difficult to define possessed by all great buildings, which was not to be compassed merely by attention to details or the strict observation of physical laws. The Pantheon would not be less impressive if stripped of its ornament.

Where architects so frequently failed was in concentrating their attention on details or ornament instead of on the larger question. The great conception of architecture had been lost during the past fifty years; in the Gothic revival it had no part. The revivalist was merely interested in the knick-knacks and gee-gaws of the antiquary. They must dismiss from their minds the craftsman theory.

He could best find a comparison to the architect in the art of music, likening him to the conductor of a great orchestra or to the musician who weaves the music of the instruments into one fine score. It was not necessary that he should be able to play every instrument in the orchestra, though he must have a knowledge and appreciation of the capabilities of each. The quality of a great artist was his capability for eliminating the unessential, and for this a certain mental aestheticism was needed.

Mr. Blomfield's fourth and concluding lecture was given on Monday, March 4. Taking as his subject "The Limitations of the Arts," he said there were few problems more difficult than the elucidation of ends and aims of the different arts. The critic of 1850 was concerned with the moral qualities of the artists, or with the literary possibilities of their work. Since then much knowledge had been expounded in the minute discrimination of technique and the appreciation of the value of paintings which had profited the connoisseur at the expense of the artist. There still seemed some ground, therefore, for attempting to ascertain, on the old lines, the

attitude an artist was justified in assuming towards his work. Some attempt, on the other hand, had been made to grapple with the scientific study of aesthetics; to determine the ultimate grounds on which æsthetic emotion was based. The results were not encouraging. The theory was that our æsthetic pleasure was derived from imagining ourselves in the place of the objects of our regard, and fulfilling their functions. Thus, our sense of delight in a well-proportioned column was supposed to be satisfaction derived from imagining ourselves adequately discharging in our person the duty of a column.

Shortly, this æsthetic sense was only one phase of man's anthropomorphic instinct. He did not think this theory would be of material value to their work. He would start with the fact that certain human creations created a thrill within us. "They set ringing within us that little bell of emotion that responds to the touch of genius." He would attempt to give some account of the teachings of great thinkers of the past in regard to the relations and differentiations of the arts, and to draw some conclusions for their own guidance.

In doing so he limited himself to the writings of Plato, Aristotle, and Lessing. Plato had an ingrained suspicion of Art. With Plato Art was a matter of imitation, and therefore to be eliminated from his ideal state.

Art did not appear until the tenth book of the Republic, and there the message of the artist was dismissed as appealing to the lowest elements of our being. "Imitative Art," says Plato, "is far from the truth when it discharges its function; and for no true or healthy purpose it attaches and devotes itself to that element in us which is far removed from wisdom." This conclusion was either superb irony or the result of too unyielding logic. But then Plato subordinated all Art—even music—to his passion for perfecting the soul. He banished all arts from his ideal state except such as had an ethical value. He feared their seductive influence. But this conclusion was inimical to his other opinion that each art should be perfect within itself. If a picture were true to its intention it was illogical to reject it on ethical grounds.

Whatever value might be attached to Plato's opinions, they could not satisfy artists.

Aristotle was far more sympathetic, and he was the first to admit that, under certain aspects, Art had its proper place in the scheme of life. But when we came to details his view was disappointing, for he was occupied almost entirely with poetry.

The aim of Art was to show human emotion in action. Sculpture and poetry might do this in a limited sense; Architecture, to Aristotle, did not, and was therefore disregarded. Moreover, the impression made on the spectator was, in his view, the end of Art. Thus there was a wide difference between the ancient view that the artist simply contributed to the wealth of life, and the modern one that the artist, in addition, might attempt a realisation of himself.

It was fortunate that in succeeding ages literature left the arts severely alone. Artists made mistakes, but they were at least undisturbed by hasty generalisations on the relations of poetry to the arts. In the eighteenth century, however, the literary man arose and annexed the whole domain of the arts, laying down the laws for the artist to carry out. But Lessing, a literary man and a philosopher, once and for all disproved the idea that poetry and the arts were convertible terms. He was not much interested in the arts, except poetry, but the fallacious thought of his contemporaries exasperated his active and intensely logical mind into writing the famous *Laocöon*. His position was two-fold: (1) that the arts differed in subject and treatment; (2) that the end of Art was pleasure. The artist employed forms and colours in space; the poet articulated sounds in tune. The right objects for painters and sculptors were objects which co-existed side by side, whose

impression on the senses could be rendered at one given moment. The poet had to give consecutive impressions—he could employ only a succession of sounds or words to make us realise action. From this Lessing argued that poetry and literature and the plastic and graphic arts were not synonymous terms; that before subjects were transferred from one to the other they must be mentally recast with a realisation of the limits of the art in which they were to be newly expressed. Mr. Blomfield instanced last year's Soane prize competition, wherein the palace of Bacon's *Essay on Building* was set a subject for design. This was wrong in principle, for what might be legitimate in a prose picture became unintelligible and unworkable when literally translated into architectural design. It was for its insistence on this point that Lessing's work was so valuable to artists. Lessing took little account of the passionate emotion that was the mainspring of fine work in all the arts, but given the impulse he supplied certain leading principles by which the artist was to observe the limits of his art. As Aristotle had it, the pleasure to be derived from tragedy was that peculiar to tragedy.

What was then the peculiar pleasure of the arts? The object of Art was a somewhat complex affair. It was:—

- (1) Partly to give pleasure.
- (2) Partly the irresistible impulse of the artist to express his emotions.
- (3) Partly, in architecture at least, to fulfil certain definite needs and conditions.

Somewhere along the lines of these objects would be the end of Art, but it was material how the object was attained. The pleasure obtained in Art was the pleasure of beauty—of form, colour, light and shade, rhythm and proportion. There was no standard and unalterable form of beauty—rather there was an inexhaustible reserve—to be seen only by the seeing eye, and made visible by the skilful hand. Truth might be at the bottom of a well, but beauty was everywhere for those who can see it. Still, the existing state of our faculties could not conceive everything as beautiful. We could hardly realise pleasure on the stage of Mr. Wells's imagination. Our conception of beauty with limitations and imperfections, the result of innumerable associations during countless generations, would probably regard certain things as beautiful

always, and other certain things as ugly. The power of selection and rejection was at the root of the matter. Sculpture and painting rested on a convention—we were prepared to accept this as representing the objects purported to be represented—but as they approached direct and literal realism they approached the destruction of the convention. Madame Tussaud's figures were more like the originals than any marble figures; but their appeal found us cold. They were not the result of artistic thought, and they had no comparison with reality. The difficulty was to know when to limit realism. Coloured sculpture seemed to the lecturer outside the province of that art. Selection was obviously needed in sculpture. One would hardly select it as the art in which to narrate a story. The elaborate carved scenes outside the choirs at Amiens and Chartres might be adduced as an instance of melancholy failure. The carving was extraordinarily skilful; but the value as surface ornament in the architectural scheme was considerably less than a piece of good diaper work or a rusticated surface. Architecture was the Cinderella of the arts, and there was no doubt it stood somewhat apart from the other arts. Firstly it was in no sense imitative. Secondly the architect did not select his subject, he had to conform to the conditions of the problem, of the site and materials. He was there to produce an organic composition—not details, but a whole in which those details united to give an impression on the emotions. Details were not in themselves of value; they were merely the notes which a composer uses. Architecture was not cabinet-making or goldsmith's work, but a masculine art—the handling of masses of material. An architect should always have before him the effect of his building as a whole. All his skill and energies, and those of his colleagues, were wasted unless unity of effect was kept in view. There was another limitation in the fact that during the course of ages certain aesthetic instincts had grown up which were not to be set aside. Architectural forms were old just as were the words of a language. Still, no one asserted that the possibilities of the English language were exhausted, and it was equally so with architecture. The architect's invention and originality were shown in the use he made of accepted forms. They could not expect the public to understand their art until they had clear ideas themselves about its limits and possibilities.



ENTRANCE GATE, MINLEY MANOR, HANTS.

ARTHUR CASTINGS, ARCHITECT.

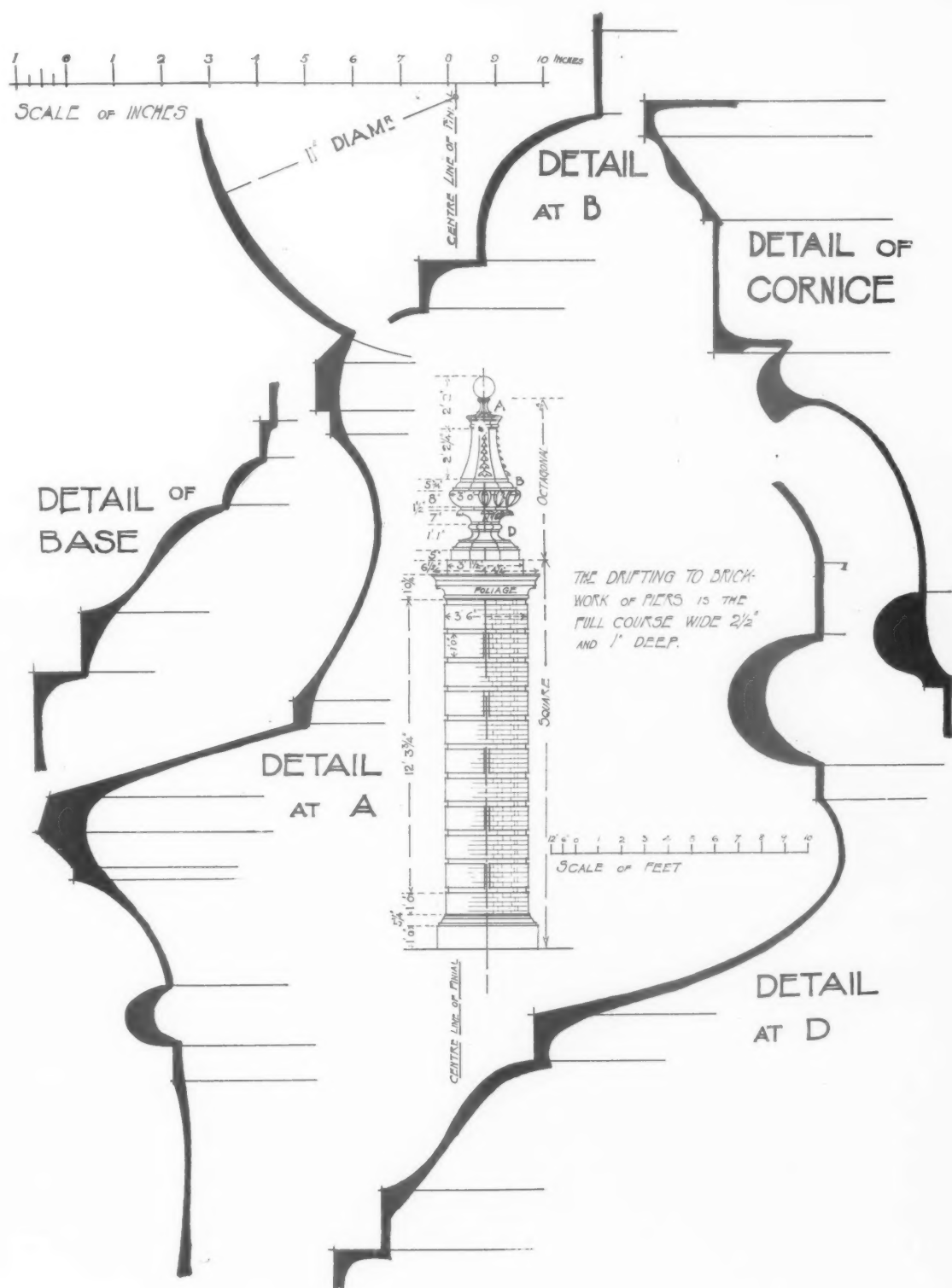
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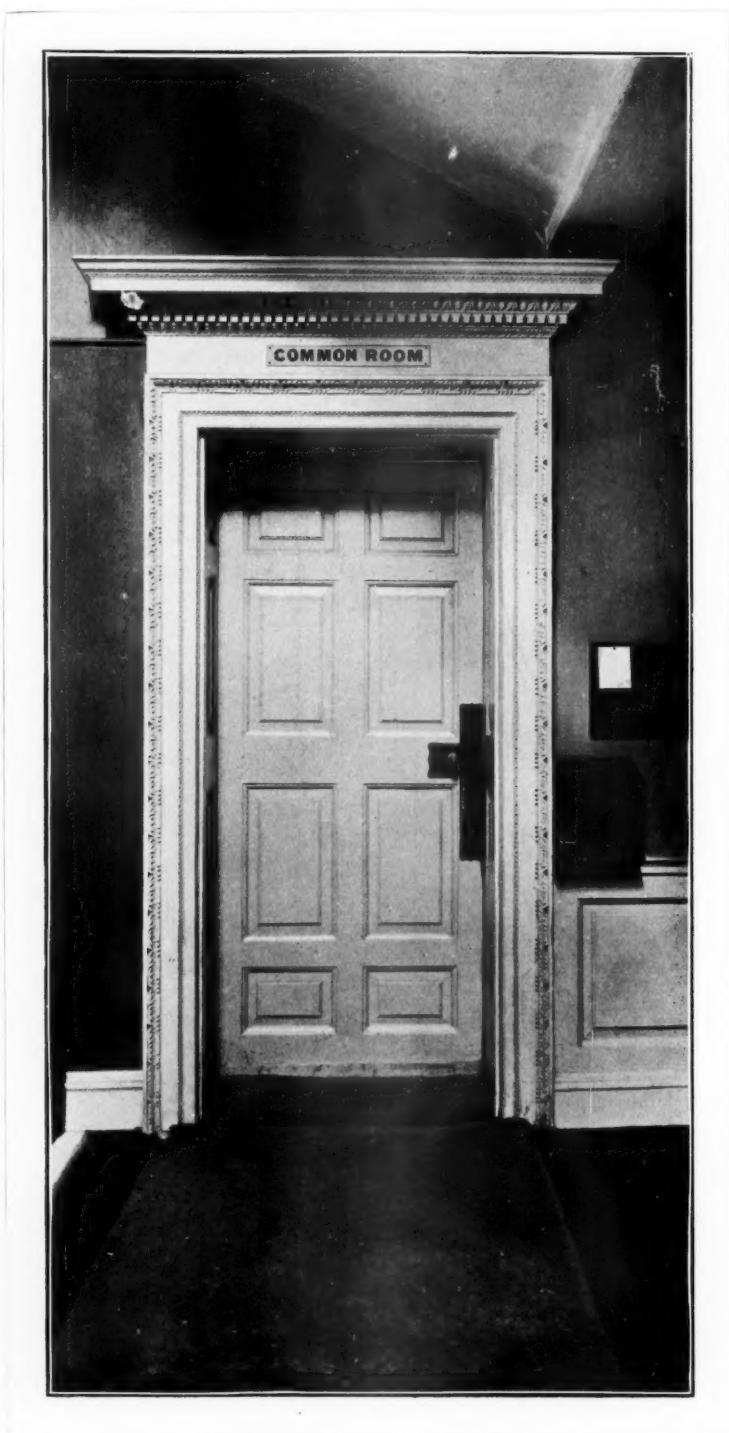
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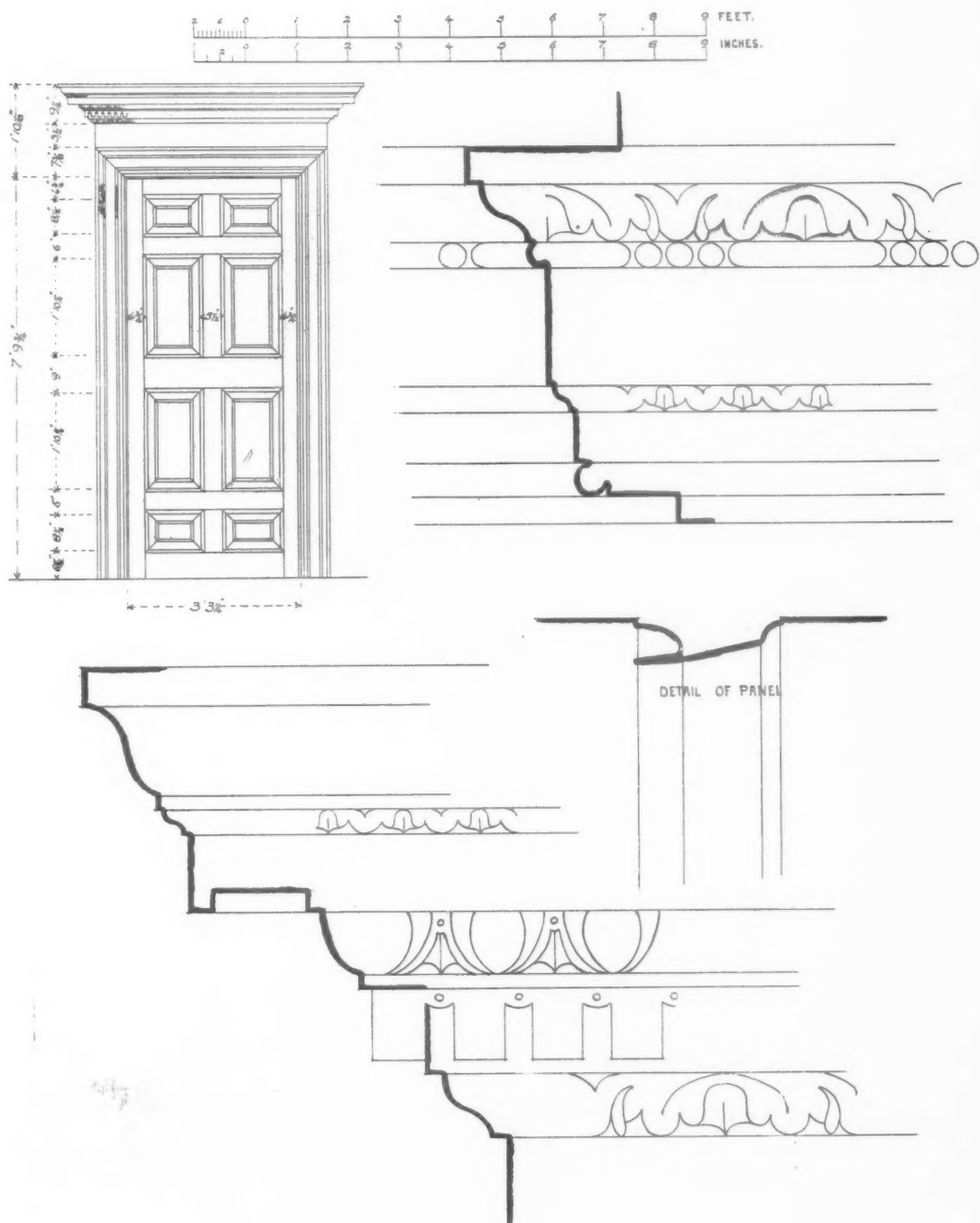
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GATE PIER, NO. 60, LINCOLN'S INN FIELDS, LONDON.
MEASURED AND DRAWN BY FRANCIS BACON, JUNR.



DOOR TO COMMON ROOM, MARLBOROUGH COLLEGE, WILTS.



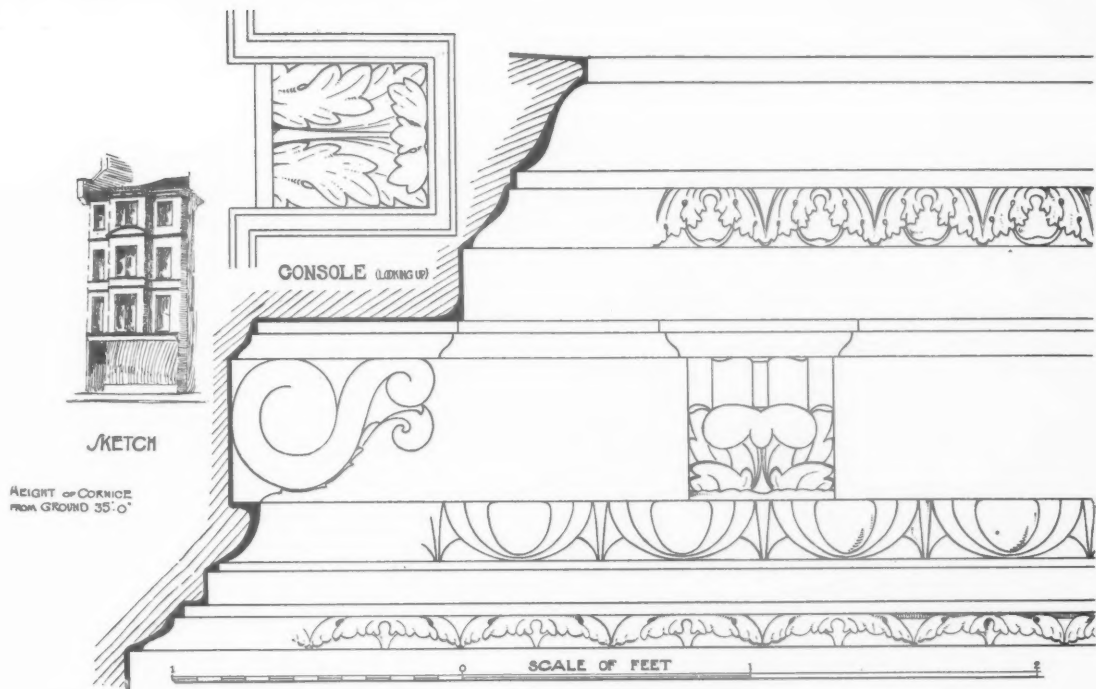
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STONE BALUSTRADING, THE GUILDHALL, STIRLING, N.B.



WOODEN CORNICE, NO. 164A, STRAND, LONDON,



WOODEN CORNICE, NO. 164A, STRAND, LONDON, W.C.
MEASURED AND DRAWN BY H. A. MCQUEEN.

Here and There.

IRON AND STEEL AND MODERN DESIGN.—I.

THE ADVENT OF IRON AND STEEL.

"Perhaps the most fruitful source of corruption which we have to guard against in recent times is . . . the use of Iron. . . . The art of architecture is independent of its materials. Nevertheless, that art having been up to the beginning of the present century practised for the most part in clay, stone, or wood, it has resulted that the sense of proportion and the laws of structure have been based, the one altogether, the other in great part, on the necessities consequent on the employment of these materials; and that the entire or principal employment of metallic framework would, therefore, be generally felt as a departure from the first principles of the art. Abstractedly there appears no reason why iron should not be used as well as wood, and the time is probably near when a new system of architectural laws will be developed, adapted entirely to metallic construction. But I believe that the tendency of all present sympathy and association is to limit the idea of architecture to non-metallic work, and that not without reason.

"For architecture being in its perfection the earliest, as in its elements it is necessarily the first, of arts, will always precede, in any barbarous nation, the possession of the science necessary either for the obtaining or the management of iron."

("Seven Lamps of Architecture," Ch. II.)



It would be difficult to find among modern writers on architectural subjects a more unsparing, a more bigoted criticism than the above paragraph written some fifty years ago by a man whose brilliant gifts of picturesque phrasing, of vivid imagination, and, to a great extent, of discriminating apprecia-

tion of art, caused him to be implicitly believed by an immense number of general readers in this country. It is an admitted and a lamentable fact that the British public, although abounding in connoisseurs of sports and politics, is by no means so richly endowed with those who are capable of understanding or judging architecture.

Hence it is not surprising that Ruskin's genius, so often entirely to be admired and followed, should in his more fanciful flights carry with him many of these well-meaning, though ill-informed, folk who honestly believed, when he told them, that iron was a thing to be distinguished from architecture; that so far from being exposed or mentioned, it should be hidden carefully away, and that its name should be whispered only with bated breath among the faithful.

But now the times have changed. Much water has flowed under the bridge since the days when the middle-classes mistook themselves for mediævalists, and revelled in gentle dabbings in archæology. These words of Ruskin's would be read with much more caution by any thinking man to-day, and with something less than blind faith by even the most unobservant architect.

It is, then, my duty to attempt to indicate the stages by which iron has emerged into the forefront of modern constructional materials, the reasons

which have led to its almost universal adoption, and, above all, the wide and far-reaching influence which it has had upon the art of architectural design.

It is true that America is far ahead of us in this branch of construction, and it is barely possible to regard the introduction of structural iron into England as history. Although there is nothing new in iron itself as a building material, although Wren used it in his dome at St. Paul's, and Brunelleschi at Florence, although the spire of Salisbury depends on it for part of its strength, and although in the remoter past it was used in great girders at the baths of Caracalla, I am dealing with modern and not with historical architecture, and it is only within the last fifty years that iron has had any appreciable effect on English construction.

So far back as the late eighteenth century two large bridges had been erected in cast iron, at Coalbrookdale (1777) of 100 ft. span, and at Wearmouth (1790) of 230 ft. span. These have resisted rust very well and are still in good condition.

Fifty years later (in 1833) Dr. H. H. Fox of Bristol invented a floor of cast-iron joists and concrete. The joists were deeper in the middle than at the end and were placed 18 in. apart. On the bottom flanges were laid laths about $\frac{1}{2}$ in. square with a rough coat of plaster above. On this the concrete was deposited and the surface plastered over with lime-ash mortar and highly trowelled. This system was patented by Dr. Fox in conjunction with Barrett, a builder, in 1844, and was used at Guy's Hospital, the Grosvenor Hotel, and other well-known buildings. A strike of Parisian carpenters in 1840 was an incentive to the progress of iron and concrete floors, and rapid progress in French design soon had a corresponding effect in England.

More improvements in flooring methods are next to be noticed, some buildings of iron framework and plates were sent out to Mauritius in 1844-5, and in 1850 there was introduced into this country a most important invention in the shape of the rolled-iron joist. These had first been made in the preceding year at the Providence iron-works in Belgium, and an English firm (the Butterley Works, Derby), with commendable promptitude, laid down rolling plant and commenced operations at once.

Previous to this date cast-iron beams had been used, even so early as 1801, when Messrs Boulton and Watt had employed them in a cotton mill near Manchester; but the increased advantages of the new invention were immediately recognised. Messrs Fox and Barrett substituted rolled iron for cast iron in their patent floors, and all work of the kind received an impetus.

It was not, however, until 1865 that the use of rolled joists became general, when tests by Mr. Zerah Colborn were published which aroused great attention among architects, especially as his results were endorsed by the editor of the *Builder* with enthusiasm.

In the meantime another considerable event must be recorded. In the building erected for the Great Exhibition of 1851, now converted into the Crystal Palace, Sir Joseph Paxton developed a type of glass and iron structure which he had used before in his house for the Victoria Regia at Chatsworth. The result even now must be regarded as one of the most striking examples of daring design in this country. It will be useful, at a further stage in this paper, to compare the design of this wonderful building with present-day examples, but its effect on architects and architecture was naturally great, for it now became apparent that iron could be used on the grand scale.

The history of the last forty years, as far as our subject is concerned, has been the gradual development of steel (which has displaced wrought iron just as wrought iron displaced cast iron), the progress of investigation into methods of fire-prevention, and the consequent rise of ferro-concrete as a valuable combination of building materials. All these points are treated of in the following pages, to which these historical remarks serve as introduction.

REASONS FOR THEIR ADOPTION.

In contemplating this rapid rise in favour of a material which has always had to meet a fierce opposition from the archaic and the artistic schools, it naturally occurs to one to consider the inherent advantages which it must possess to explain its almost revolutionary influence.

When the metal was first introduced, it was generally believed that it was absolutely fireproof. A long series of fires enables us after sixty years' experience to prove the fallacy of this statement. Heavy timbering is almost as reliable as light unprotected steelwork, which is liable to twist into all manner of weird and fantastic shapes, and which is not improved by showers of water from an engine. It is an accepted maxim that, to be fireproof, constructional steelwork must be encased on all sides with good concrete, as set forth in the new rules of the Fire Offices Committee. When this is properly done there is no form of building known to compare with it.

At San Francisco the buildings which escaped with immunity from destruction were almost entirely of this type, and it must be remembered that seismic disturbance was an additional

factor in the terrible havoc, a factor which was counteracted by the rigidity of the steel-concrete structures.

Another advantage which is apt to be overlooked is that these modern buildings afford no harbour for rats, vermin, or microbes in quantity, as do the older buildings where wood is largely employed, and where brickwork joints form the most inviting of homes.

It may therefore safely be stated that a properly constructed steel-framed block is fireproof, earthquake-proof, and vermin-proof. It might be asserted with almost equal truth that it is damp-proof. It is true that in basements and other damp places cast iron may be used with impunity, whereas wrought iron or steel will rust immediately; but it must also be remembered that if properly encased the latter materials are perfectly safe. There is, however, much exposed steelwork in roofs, &c., which cannot be encased thus, and which is therefore liable to rust if not subjected to constant periodical painting. Paint used as a preservative is generally believed to have a life of two years only, so that a considerable sum must be allowed for maintenance in a building of any size. There are other methods of preservation, notably galvanising—Dr. Angus Smith's process, and the Bower Barff process—in each of which the metal is immersed in a solution or an atmosphere which produces a waterproof coating. Rust is caused by the combined presence of carbon dioxide and water in the air, neither of these substances having a deleterious effect unless in combination. When painting, it is much better to remove all existing coats of rust and paint before commencing work. The better the quality of iron or steel, the more it rusts, and, generally speaking, steel rusts more regularly. Iron rusts in flakes, and the rust falls off in thin sheets. Sulphurous acid in the air of towns causes rust to make more rapid headway.

The "Man in the Street," who invariably is at hand to give the *Daily Mail* and other exclusive papers a scientific explanation of a great disaster, was not at a loss when the roof of Charing Cross Station fell last winter. He naturally enough attributed it to the gradual rusting through of the tie-bar which snapped, and its consequent failure. The Board of Trade expert, on the contrary, stated that failure was due to a flaw in the welding, liable to occur in any roof of this type, which was gradually increased by the tension always on it, slight as that tension always was. Modern steel is, however, more carefully designed and tested, and may be regarded as a safe building material.

More than anything else, there is one feature in particular which recommends the use of iron and

steel to the architect as well as to the engineer. The great "skyscrapers" of American cities, the enormous spans of such roofs as St Pancras Station and Olympia in London, the marvellous dimensions of the Forth Bridge, are standing witnesses to its gigantic possibilities. I say this in spite of the fact that there is a masonry bridge over the Potomac which covers two hundred and fifty feet in one colossal arch, in spite of the fact that Salisbury spire is fully half the height of the Eiffel Tower. These are isolated and costly efforts, and do not in any way affect my point, that if a building is to be carried to a great height, or if a great span is to be covered, it is more simple, more economical, and more effectual to do it in steel than in any other known material.

THEIR EFFECT ON BUILDERS.

Having now passed in review its principal advantages and defects due to its nature and composition, it is worth while to consider what effect the modern use of iron has had on those very important personages—the builder and the architect.

It is perhaps to Americans that one should look for the most modern methods in labour and in construction, for more especially in their great city offices, hotels, and stores the new science of skeleton construction has reached a higher stage of development than in the Old Country. In America the builder occupies an entirely different position from the English builder. Practically the whole of his material is manufactured by large specialist firms, and he does little more than provide the labour. It is said that he acts as the architect's agent in seeing that all material supplied is of good quality, though one could doubt the advisability of such an arrangement. There is one point which used to be considered a distinctive difference between the methods of London and New York, and that is in the varying requirements as to time exacted by clients in the two cities. We have all heard of the typical feverish Yankee who dashes into his architect's office and tells him (without allowing a word of protest) that he wants an eighteen-storey store run up on his block in 853rd Street in seven weeks. Yet there is some justification for his impatience. The fabulous value of "town-lots" in New York and Chicago causes rentals to be so high that every week beyond the minimum time which is occupied by building means a heavy loss to its prospective owner, whether private individual or syndicate.

In England, however, there is now to be observed a growing tendency towards "hustling," and this

has naturally an effect on builders' methods. Nevertheless it will serve our purpose better to observe the systems in vogue in a country which has, so to speak, passed the experimental stage and blossomed out into a full-blown style of its own, whatever the merits of that style may be; for it is certain that there is an inclination to Americanise large building concerns over here, just as there has been in the case of underground rapid transit. The Waring-White Building Company is an example of this tendency, which is of fairly recent growth.

As to labour there is a fundamental difference. The American method is to have a foreman over every twenty-five men or thereabouts, all of these men being highly paid, and for the most part skilled operatives, on the principle that by this means the maximum amount of good work is obtained from each man and no time is wasted. Most of the builders employ their own engineers for steelwork, heating, and sanitary work, who calculate from the architect's skeleton plans these details and buy all girders, hot-water fittings, &c., direct from the makers. The builder invariably takes off his own quantities, keeping expert clerks for the purpose, and is rarely allowed more than a fortnight for the work.

When, however, the actual construction of the building is commenced it is easy to see in how many ways the use of the steel frame expedites matters. The whole of the framework is figured on the plans and can be obtained from stock, care always being taken to design from stock sizes. Thus the structure really comes complete from the manufacturer's, only requiring fitting together on the site. Stanchions can be had in lengths up to eighty feet, but are usually built up in lengths of only two or three floors at a time. But when a building is being "hustled," the stanchions are frequently fitted as fast as is possible, and the roof constructed before many of the floors beneath are even commenced. The stanchions and floor-beams for any storey having been completed, it is possible at once to begin terra-cotta wall-filling, concrete or tile flooring, casing for stanchions and actually interior joining, without any regard to the state of other parts of the building. When it is remembered that men may be working on ten floors at once while the steel framing is still proceeding above their heads, it becomes plain why speedy erection is in this case such a simple matter.

A recent writer on American construction contends that this hectic hurrying is by no means detrimental to the quality of work done, since the time saved is not saved by "scamping," but rather by a highly-organised and scientific system of labour and transport of material.

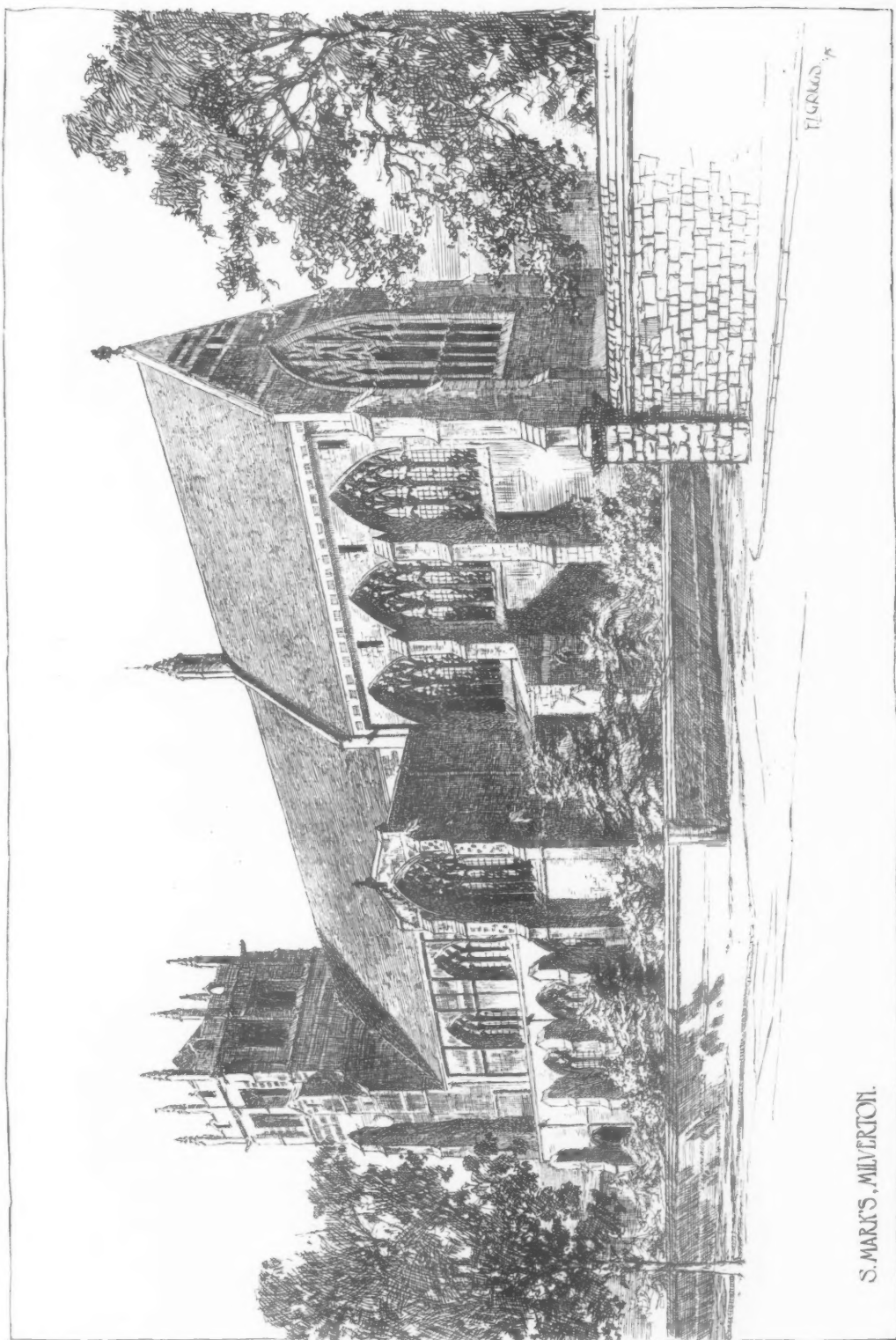
AND ON ARCHITECTS.

Having briefly reviewed the general tendency of iron and steel construction to alter builders' methods, it is with a feeling of anxious curiosity that one turns to that variable and uncertain quantity known as the British architect, who by the superior gifts with which a kind Providence has endowed him is held to be superior to the mere hewer of wood and handler of tools. How has he responded to the cry for new methods from across the Atlantic? and how does he fit himself for the ever-increasing responsibilities and requirements of his position?

There is a sentence somewhere in Macaulay's "Essay on the Earl of Chatham" in which, as the type of all that is conservative, he refers to "a row of fox-hunting squires, ponderous with Worcestershire ale," who represented various rotten boroughs in Parliament. But what are these time-honoured Tories to many of the architects of to-day in London, architects whose life has been devoted to a studious policy of copyism, of slavish imitation of old work, which has often nothing to recommend it beyond its antiquity? Blind to the progress of modern science, such an one erects his cottages or his mansions with one eye on the past and the other furtively watching a restive client. He tears down an old barn to denude it of its richly-tinted tiles, he is careful to preserve intact the moss or lichen which adheres to them, and he fills up the end of a roof-ridge to give it the appearance of having sagged for centuries.

He offers nameless sums for old oak timbers to strengthen the illusion, and builds them proudly into his walls with a core of angle-iron to support their worm-eaten sides. Scouring the countryside with the keen scent of a connoisseur, he rescues from impending oblivion old bricks of every conceivable shape and size and flagstones of every conceivable thickness and colour. With these materials, tenderly put together with a loving care and with the best of cement mortar, he at last has the pure satisfaction of having erected from a motley collection of cast-off materials, collected at considerable expense, and glued together with great difficulty, a building as like an old example as a bad chromo-lithograph is like one of Turner's masterpieces. Set him in the midst of his work, surround him with old panelling, old clocks, old silver, old tapestry, and literally with the very odours of antiquity, and there you have the type of a certain section of English architects of the present time. This is the "Modern Home of To-day," forsooth; the sacred temple of the "Simple Life."

Thus one wing of our profession exhibits absolute



S. MARK'S, MILVERTON.

FROM A DRAWING BY F. L. GRIGGS.

unpreparedness for anything in the nature of change.

We ought to study the influence of iron just as we study the influence of Garden Cities. It is an economical force in the country, as is electric traction, and girders should receive as much attention from thinking architects as any other practical question.

Far be it from me to decry a reasonable and thorough study of old work: my only fear is that in many cases it swamps all thought for the economic needs of our own day. It is regrettably certain that a large number of the present generation are growing up who know not steelwork. The Institute does well to include in its syllabus some knowledge of the subject from a theoretical point of view, though little account is taken of practical working details. But this is not enough. The thorough knowledge which is desirable is not obtained by hasty cramming for any examination.

The result is that in almost all cases where elaborate steelwork enters into an architect's design he has to employ an engineer, who is responsible not only for the calculation of sizes of members, but also for their arrangement and details. Therefore, unless the architect himself has some considerable knowledge of the subject, the engineer is presented with a drawing which takes little account of the all-important steel frame, and he consequently has to make his steel frame fit into the design. Obviously this is contrary to the elementary rules of architecture. And if the position be reversed, and the architect follows the engineer's skeleton plan in designing his elevations, the elevations are bound to suffer.

Look at it as we may, there remains only one conclusion, that a joint production of this sort cannot be the complete success, or even the economical triumph, that the sole conception of one master-mind would be. It is not of necessity true in this case that "two heads are better than one."

In America every large architect's office has a staff of steelwork experts, but even this method is not quite satisfactory if the principal himself is unacquainted with the subject.

Theoretical design of this nature is so complex and so scientific a study that it is impossible to acquire it in the ordinary routine of an architect's office and difficult to master in the little spare time which an architectural student has at his disposal. With the annually increasing demands of an overstocked profession, where a man has to be an artist, a scientist, a mathematician, and an economist all combined, it is not surprising that few of its members have the opportunity of becoming experts in every branch. The only solution seems to lie in some form of short course

at a college or technical school, short enough to leave time for a full term of articles, but in which, instead of the ill-arranged time-tables prevalent at so many institutions of the kind, an efficient syllabus of theoretical subjects could be taught. Whether this course should be preparatory or subsequent to pupilage, or whether it should be concurrent with it, somewhat on the lines of the "half-time" system in elementary schools, is a matter for doubt. The last course seems the most feasible, but in any case the expense of an architect's training is increased.

In whatever way the result be achieved, it is to be hoped that English architects will soon realise that the future of our subject, the influence of steel on modern design, lies with them, and that the full force of that influence can only be turned to good account when they have fitted themselves by patient study to competently handle this at present ill-used material.

MARTIN SHAW BRIGGS.

THE RUSKIN EXHIBITION OF SKETCHES.



IN his preface to "St. Mark's Rest," our Art-critic commences with the words, "Great nations write their autobiographies in three manuscripts—the book of their deeds, the book of their words, and the book of their Art . . ." and adds ". . . of the three the only quite trustworthy one is the last." Collingwood and Bruce have shown us how forcibly this combination is expressed in the personal life of Ruskin himself, and the happy sequence of his art now on view at the Fine Art Society's Gallery in Bond Street confirms the opinion that if any man sincerely and truthfully endeavoured to practise what he preached, that man was John Ruskin. It is, however, a very characteristic collection that greets us on entering, and rather what one anticipates from the writings of such a versatile genius. The painstaking and persevering detail, the truth of delineation both in proportion and perspective ability, combined with the notorious inability to *finish* any one thing entirely or grasp the whole of a subject effectually, is just exactly what one expects of Ruskin; but indolence was in no wise the cause of this failure at completion: it was due to an over-active brain combined with irregular early training, from which he never wholly recovered. From the examples exhibited the influence of Runciman, Cruikshank, Prout, Turner, Canaletto, Harding, Claude, Holman Hunt, and others is very marked, but the Ruskinian interpretation is

nevertheless inseparable. The predilection for Chinese white, high lights, tinted paper, and a frequent use of sepia or blue wash recurs at intervals. Ruskin had a horror of too soft a pencil, anything woolly or heavy was objectionable to him; but he emphasised his foreground in all landscape work with that sensitive touch which his natural poetic fervour prompted in the truthful portrayal of a subject.

The architectural sketches will probably appeal to our readers most, and the many familiar illustrations from "Modern Painters," "Seven Lamps of Architecture," and "The Stones of Venice," which are to be seen here in the original texture and colouring.

Ruskin's fight against convention in art, and his plea for sculpture as being the only true means of the development of and the sister-art to architecture proper, as advocated by him in "The Two Paths," is supported by many studies, and his analytical methods of treating subjects both botanically and anatomically are expressed in a number of the exhibits originally drawn to illustrate his lectures at Manchester, Oxford, Long Acre, and Bloomsbury.

Without a knowledge of the purpose for which many of these sketches were made it would be wholly unjust to criticise them; indeed, in many an instance the work is beyond criticism. About eye-level to the left as one enters are a number of architectural examples done in Ruskin's early travels with his parents from Edinburgh, Melrose, Oxford, and Eton in England, and Avignon, Rouen, Naples, Florence, Rome, and Verona on the Continent. The Ducal Palace dated 1835 (No. 3) shows as exceptional a knowledge of perspective as the first exhibit does of printing for the ages of their respective execution, and No. 24 is quite a clever drawing of Santa Maria del Pianto, Rome, while the Prentice Pillar, Rosslyn Chapel (No. 27), is a most painstaking example of his detailed style.

It is perhaps rather disappointing that the numbering of the works is not in order of date of execution, and that in certain instances several drawings taken from the same building are not grouped together. A little system of this sort would give a much better idea of the progress and skill acquired as experience was gained. The catalogue is misleading with regard to Vercelli (No. 31), the description referring to a small sketch of detail in the corner of the drawing. No. 29 is out of order, but is a delicately executed profile of the head of a girl in pencil, when this artist was 41 years of age. The two drawings of the sculpture "The Sons of Noah," from the Ducal Palace, might have been placed next each other with advantage, and the Nos. 49 and 62 of

St. Mark's, together with the various capitals from the same building, would have been interesting if grouped. No. 62 is a fine example of coloured decoration, and No. 76, not described in the catalogue, is named by Mr. R. Phené Spiers as the Gambia Corti Palace at Pisa. In No. 191 we trace the influence of Canaletto, and No. 199 is another example of the architecture of Venice illustrated in "The Stones of Venice." Of scenery painting, the mountains, rocks, and landscapes are very varied in choice of subject. The earliest are views of Vesuvius, done in 1840, which have been questioned as to their authorship, but Mrs. Joan Ruskin Severn, writing to the *Daily Telegraph*, reserves the glory to Ruskin.

There is a dash about "The Thunder Clouds of Turin" (No. 63), in striking contrast with the subject "Evening and Morning" (No. 70), showing what a wide range of knowledge and application Ruskin possessed. When one also compares such examples as "Part of Grindelwald Lower Glacier" (No. 69), of the next year, and the blue and purple sketches (No. 74), with those (No. 98) in imitation of Turner, the variety of execution from one hand is quite astounding. Moreover, his still-life painting of animals and birds, plants and trees, is equally remarkable; "The Pheasant" (No. 90) and "The Dead Teal" (No. 106) are quite accurately detailed and beautifully coloured. The three examples of his work at Lucca, Nos. 96, 97, and 101 (the last of which is reproduced in the new library edition), although executed as late as 1882, show the cunning of his earlier work.

Although Ruskin's theories are not universally acceptable, it must be admitted that few men have done as much for Art—to elevate, inspire, and ennoble design; and by his methods of self-contradiction and "snubbing" he has effectually convinced many a student to face obstacles which on purely academical principles he might have been tempted to shirk, while sincerity and freedom in Art have always been advocated by this prophetic apostle.

With regard to Turner, it must be remembered that Ruskin was by no means the pioneer to excite public appreciation, for his qualities were observed by the Royal Academy long before. Sir John Soane possessed three of the most perfect examples Turner ever painted, which alone are sufficient to substantiate his claim to a niche in the wall of fame; but while both Turner and Ruskin irritate many by their eccentricities, neither will ever be surpassed in those essentials which go to make the true artist.

It is to be hoped the best of these works will be retained by the nation and deposited for public exhibition at the Ruskin Park, Denmark Hill, that posterity may see his handiwork.



WE have received the following excellent suggestion from Mr. Matthew J. Dawson, A.R.I.B.A.:—

"I should like to make a suggestion as to the possibilities of improving the exhibition of pictures and other objects under plate-glass, and the resultant reflections therefrom. All art-loving people, artists, and especially students from the Continent, find it quite impossible to properly examine any work of art under these trying circumstances, unless the work happen to be very light in colour or the glass removed for copying, when the contrast may be seen with those under glass. The Continental galleries, fortunately, not having the same difficulties to contend with from the atmosphere, are almost all without glass protection. Again, with these galleries the comparison is very striking to one returning from abroad, and depreciates greatly from the value and renown of our collections. Moreover, the present time seems opportune, since the National and Tate Galleries are under new directorship, where revision has already begun, and the Victoria and Albert Museum is about to rearrange many of its exhibits.

"The two expedients that I beg to propose are as follows (putting aside all æsthetic reasons): (a) by blackening all the frames and any object that is reflected, such as the brass guard-rails; or, better, (b) by suspending black or very dark curtains lengthwise through the centre of the galleries,

or opposite the works, leaving intervals between to examine the larger works from opposite sides of the rooms, also for hanging smaller works which usually occupy the cross screens in centre of room.

"The system of hanging the curtains would not present any difficulties; they could be simply hung to strong black metal rods or standards supported on back of a central seat, all of which should be black; their height depends on size of work *vis-à-vis*, and could be obtained by experiment. The same method would serve for galleries artificially lighted, on condition that the lamps were placed high, and that light is thrown in same direction as the natural lighting, and should be well distributed.

"This latter method only wants a trial; its success is already proved by photography, where the black screen is used to keep off reflections in taking objects covered by glass, and the camera is the most sensitive judge of tone.

"It seems, in conclusion, opportune to refer here to the Mantegna cartoons at Hampton Court, which are the worst instances of the case in point. One cannot see the *ensemble* of even one cartoon, let alone that of the whole frieze as it was originally designed; this makes them impossible to study or copy, and their grandeur of scale is entirely lost. In this case the only way is to heavily curtain the windows and form ceiling lights that could not be seen from the exterior, or better perhaps, put them in a larger gallery, as they well deserve."

Books.

MR. LETHABY'S "WESTMINSTER ABBEY."

Westminster Abbey and the King's Craftsmen. By W. R. Lethaby. 9½ in. x 6½ in., pp. xvi, 384, photogravure frontispiece and 124 illustrations. Published by Duckworth & Co., Henrietta Street, Covent Garden.

EVERYTHING from the pen of Professor Lethaby is of value to those concerned in any way with architecture. He has the gift not only of informing, but, better still, of stimulating. One feels, as one reads, that he writes because he has something to say that interests and delights him. There is a freshness and a gusto almost boyish running through his story of Westminster Abbey that makes the book altogether readable, a quality conspicuously lacking in most architectural literature. Of histories and memorials of the Abbey there are plenty. In it, as in a frame, we see the greatness of our national life: it is the crystal of English history. For all that it was the church of a monastery, its traditions are essentially lay. It is the witness that the nation, through its kings, has given to the need of religion in the national life, it is the place where the English people have honoured and still honour God for the gift of their illustrious men. In it, as in a microcosm, we can read the philosophy of English history; but we can read more. "From its crowded associations, and the many lovely minor works it contains, as well as its

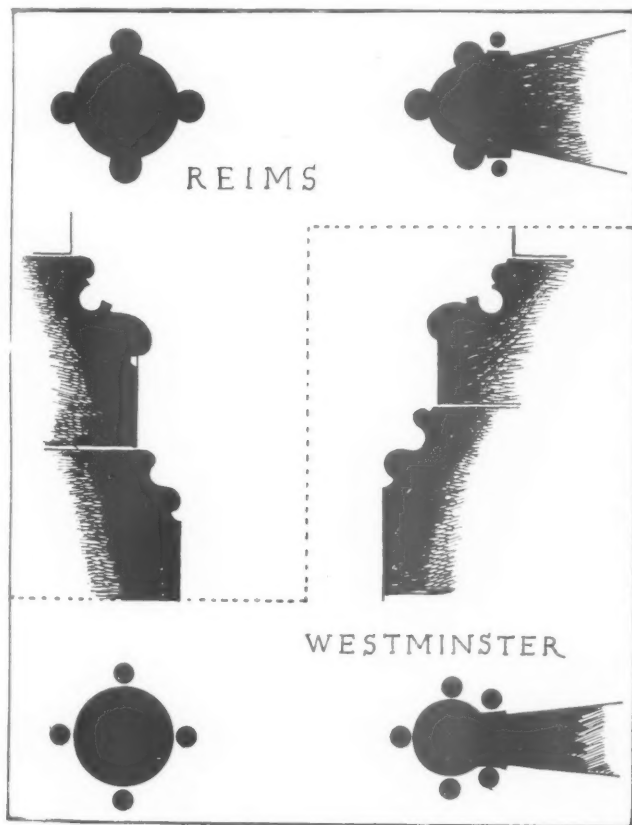
own intrinsic beauty, this Church must be held by Englishmen as the supreme work of art in the world."

The outstanding merit of Mr. Lethaby's book is the convincing fashion in which he has made familiar to us the generations of craftsmen who created the "supreme work of art in the world." It is this which singles out the book as of peculiar value. We are introduced behind the scenes of mediæval building. We meet Master Henry of Westminster familiarly. Chaucer was clerk of works to the Royal Palaces, and doubtless entertained with the Pardoner's Tale and the like his friend Yevele the master mason, who built the nave of the Abbey. Henry the Third's instructions as to building and decorative works were full, precise, and, in the event of slow compliance, threatening, as we may read in the Close Rolls. This association of the great historical characters whom we know with the builders of Westminster brings the personality of the craftsmen into a perspective that we realise. Robert de Beverley and Alexander the carpenter move along the pageantry of familiar history. We see mediæval art in the making. About these enchanting records there lingers the fragrance of the golden age of Christian architecture. Mr. Lethaby was, of course, fortunate in his material. The Abbey works were royal works, the monastic control did not extend far. In consequence, the orders and accounts are amongst the national papers, and so escaped the destruction which largely befell the similar papers of other monastic churches at the

Dissolution. We may be grateful for this as well as for the years of patient work which Mr. Lethaby has given to sorting the facts of vital interest, and for his judgment in not overloading the text with an excess of extracts, which would have confused the story.

Amongst many delightful ideas running through the book is the endeavour to disentangle the authorship of design and to establish the professional relationship of the men who were concerned in building.

It seems that the King's mason was often regarded as the superintending architect. In the middle of the thirteenth century a letter regarding lead is addressed to "Master John le Mazun." An order of 1259, addressed to Master John, Cementarius Regis (King's Mason) instructs him to have prepared the King's iron lectern for Master William to paint.



PILLARS AND BASES AT REIMS AND WESTMINSTER.

Here are things for the cementarius to do which do not concern his proper trade of mason, and he is obviously over the King's works in a general way.

But he was not alone in this supervision, but rather *primus inter pares*. In 1256-7 certain works are done "by the view and counsel of Master John of Gloucester, our mason, and Master Alexander, our carpenter," and Mr. Lethaby neatly calls them "this ideal firm of architects."

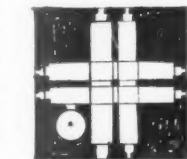
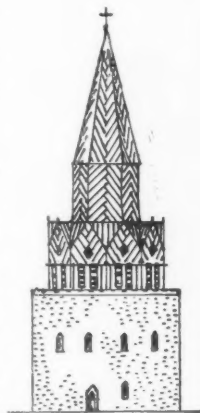
The Ingeniator is a rather mysterious person. The word literally means engineer, and the ingeniators were doubtless masters of works, but whether also designers it is difficult to say. It may be that ingeniator is another rendering of master mason, for in 1245-6 the Constable of the Tower was ordered to deliver materials to the master of the works at Westminster, and to Edward. Mr. Lethaby points out that the master of the works, other than Edward, must be the chief mason, and Henry of Westminster was cementarius at this date. Edward is elsewhere described as "Dominus Edwardus,

Clericus," and he was apparently something like our modern clerk of works and employed in checking materials and accounts.

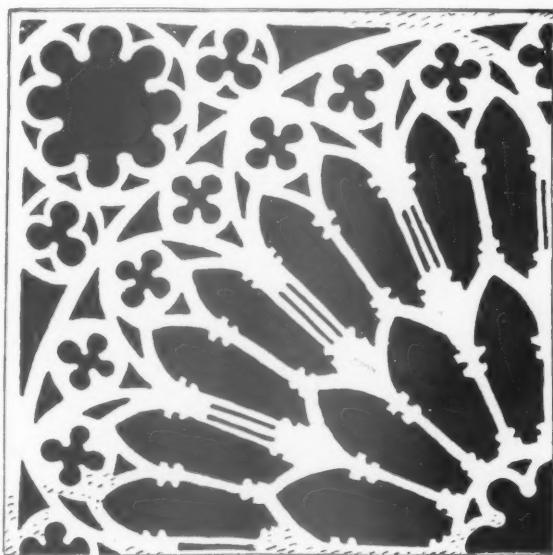
In 1362 Henry de Yevele was described as "deviser of masonry," in 1371 simply as "cementarius," and in 1378 "Director of the works in the Art of Masonry." We make these extracts as disposing of the idea that there was some kind of designer behind the scenes, some artistic monk who drew for others to execute. There is no trace of such a person. Indeed there are extremely few references even to craftsmen who were also monks. The chief was Master William, a monk of Westminster, and "Our beloved Painter." From his hand came the painted altarpiece in St. Faith's Chapel, of which exquisite work Mr. Lethaby makes special note. On the method of employment and payment much light is thrown. Apparently some work was done by direct labour employed by the chief mason, and other by piece-work. A contract of 1395 relating to Westminster Hall, between the King and two masons, sets forth that the masons shall make well and loyally "a table" surmounting the ancient walls of the *Grand Salle* according to the purport of a *Fourme e Molde* made by counsel of Mastre Henry Yevele, and delivered to the said masons by Watkin Waldon, his warden.

Here we have the architect Henry Yevele designing, the client entering into the contract, and the clerk of works (Waldon) giving the contractor his details. Further they are to be paid on a schedule of prices, and so paid "by the survey of Master Henry and Watkin." Watkin here doubles the part of quantity surveyor. By 1395 things had become very modern. Space does not allow more than a passing reference to the delightful records printed of the sculptors (*imaginators*), plumbers, whitewashers (*dealbators*) and other craftsmen.

With regard to the architectural history of the Abbey, Mr. Lethaby sets out the evidences of foreign influence, and shows clearly how

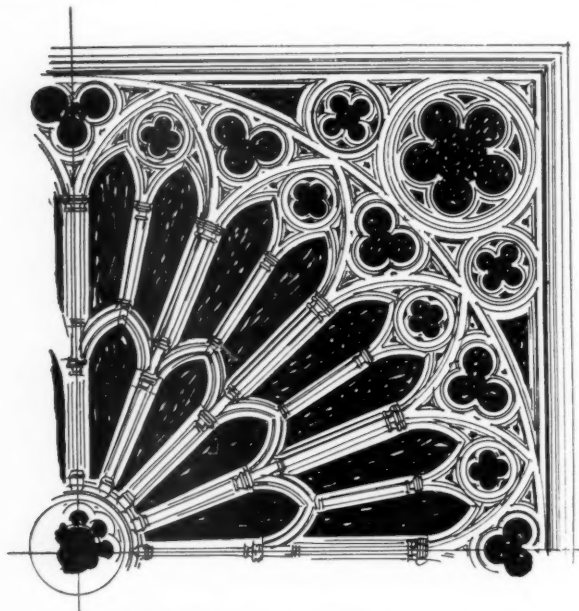


ANCIENT BELFRY WHICH STOOD ON THE N. SIDE OF THE CHURCH.



ONE OF FOUR TILES FROM CHAPTER-HOUSE FLOOR, REPRESENTING A ROSE WINDOW

greatly the Abbey is indebted to Reims (note the comparative details of mouldings), the Sainte Chapelle, and Amiens, but after reviewing them all says: "We may readily make the fullest allowance for



ANCIENT ROSE WINDOW OF N. TRANSEPT, FROM A DRAWING BY WREN.

French influence at Westminster, for so entirely is it translated into the terms of English detail that the result is triumphantly English."

The most savagely English outlook on the Gothic architecture of this country should be satisfied with this acceptance of the English character of the result, whatever the influences.

Of the Westminster belfry Mr. Lethaby has much to say of great interest, and we reproduce his conjectural detail of the immense massively-built tower and the great leaded spire on which plumbers were engaged from 1249 to 1253. It is doubtful whether the belfry ever belonged to the monastery. It may have been a civic building.

On the question of the many restorations Mr. Lethaby is lucid and moderate. He naturally and justly has strenuous things to say about the 1884 rebuilding of the North Transept, but his references to the late Mr. Pearson are studiously courteous, and he wisely takes the view that bygones must be bygones. As to the rebuilding of the Rose-window, however, damning evidence is produced to show Pearson's blunder in not piercing the upper spandrels of the square. Scott by ingenious deduction had claimed that the Rose was originally as shown on the Chapter-house tiles. Mr. Lethaby now produces the drawing prepared for Wren before his alterations of 1719 were



MASONS AND CARPENTER, c. 1270. FROM MS. "LIFE OF THE CONFESSOR."



HEAD OF A LAY MASTER, HIGH UP IN N. TRANSEPT.

undertaken, and this entirely confirms the pierced spandrels theory. The result of the solid spandrels is to throw the Rose out of its proper historical place, a misfortune that might easily have been avoided.

For rescuing a priceless word from oblivion we offer our thanks. In 1808 Carter described the state of the thirteenth-century bays just west of the crossing as having been "havocked" by Wren. Some day a history may be written of the "havocking" of the last three centuries. It will be a gloomy book. But there is another book, and a cheerful and noble work, which remains to be done.

The perishing of Westminster, the fading of painted work, and the scaling of carved stone proceeds apace, and much is unrecorded whether by photograph or measured drawing.

Will not Mr. Lethaby take in hand the preparation of a complete and monumental history of the greatest of English churches, a history which shall gather up the vast mass of material scattered in forgotten pamphlets, in unpublished drawings, in fading photographs of beauties which are dead or dying?

Surely there could be no finer monument to his Surveyorship of the Abbey.

We have one small grumble to make, a grumble dear to the heart of the reviewer who is popularly supposed to read but one part of a book, the index.



ARMS OF HENRY III, FROM THE CHAPTER-HOUSE FLOOR.

This index is meagre, and perhaps Mr. Lethaby in future editions will multiply his entries greatly.

Finally we commend this book to our readers as altogether delightful, and with the straight injunction—

Read it!

ENGLISH BRASSES.

The Brasses of England. By Rev. Herbert W. Macklin. 8½ in. x 6 in. 7s. 6d. net. London: Methuen & Co., 36, Essex Street, W.C.

"THE ANTIQUARY'S BOOKS" form an excellent series, and the contributors are writers of authority on their subjects. The literature of monumental brasses is chiefly scattered through the proceedings of archaeological societies, and most of the larger books are out of print or too costly for the average purse. We therefore welcome Mr. Macklin's book, which deals adequately with a subject of wide interest. He has made a departure in the method of classifying, dividing his chapters into historical periods instead of grouping brasses by their subjects. From the point of view of the architect and craftsman this is a distinct advantage, as it enables the reader to trace the development, both of the architectural ornament, which is so important a feature of brasses, and also of the changes in the technique of the engraving. It may be doubted,

however, whether the student of armour and costume is so well served by this arrangement. Mr. Macklin deals very fully with the changes in armour, and in his descriptions follows Boutell in the main, though he also acknowledges indebtedness to Mr. Starkie Gardner. We are not very convinced of the wisdom of pinning faith to Boutell. He is a classic in the matter of brasses, but, like some other classics, rather out of date. We rather miss in Mr. Macklin's pages any reference to the conclusions (in matters of armoury) of Viscount Dillon, to whose wisdom and knowledge, displayed in the care of the armour at the Tower of London, all antiquaries owe a lasting debt. On the question of the great foreign brasses at Lynn and elsewhere, which have generally been known as Flemish, Mr. Macklin is admirably full and clear. "Flemish" is a misnomer. The place of origin of these magnificent examples he proves to be Lübeck. They are Hansa works, and the product doubtless of Baltic Hanseatic craftsmen, not of the Flemish Hansa which dominated Bruges. They are, therefore, Teutonic, not Flemish, a distinction which it is well to establish.

The will proved in 1558 of a chantry priest of London, which gives full directions for a brass to be laid down to the testator's memory, incidentally throws a delightful side-light. "I will that there be a large plate of copper laid and made lyke a tablet of Antick facion." These be cheering words for Gothic revivalists, but they show how surely the Renaissance was making its way. The traditional art of brass engraving had become "antique" by 1558.

Mr. Macklin emphasises the insular character of our English brasses, in that the complete design is made up of separate brasses, whether of figures, canopies, coats-of-arms, etc., let into separate matrices. In fact, the gravestone is the unit. On the Continent the brasses are almost invariably great rectangular sheets of metal, and the spaces between the figures and inscriptions are treated with diaper work. Abroad, the brass is the unit.

The author also demolishes the tradition, dear to so many romantic minds, that the depicting of a knight with crossed legs indicates that he was a Crusader. It is merely a testimonial to conspicuous piety. There is a human personal touch in some of those brasses which show a dog lying at the feet of knight and lady. Occasionally actual pets are depicted. At Deerhurst Lady Cassy's dog has a collar of bells with its name, "Terri," attached. Sir Bryan de Stapleton's brass has not survived, but Cotman figured it, and it showed the worthy knight's dog "Jakke." Altogether Mr. Macklin has earned the great gratitude of brass lovers and rubbers. Perhaps we may direct a small grumble to the address of the publishers. There are 85 illustrations, but, like Oliver, we want more. Haqueton and vambrace, tace and coudière, are enchanting words, but when one is poor at armoury, and there is no picture, they do not mean much.

Of all the books of this series we think that this one most needed the maximum number of illustrations, which we take from the general prospectus to be 150.

When we consider, however, the excellence of the classified lists and the fullness of the index, we are mollified, and can cordially recommend a book which was needed and will fill the need.

SIR E. BURNE-JONES.

Sir Edward Burne-Jones (Second Series). In the series of Modern Master Draughtsmen. 9½ in. by 6¾ in. pp. xvi. 49 plates. 3s. 6d. net. London: George Newnes Ltd.

OF the publication of series of art books there seems no end, but none are more justified than those issued by Messrs. Newnes. The publishers have rightly thought that the place of Burne-Jones as a master draughtsman is so lofty as to deserve a second volume, illustrating his work. We greatly welcome the volume, for the artist's pictures have a peculiar value to the architectural eye, and for two chief reasons. Burne-Jones was lavish and original in his introduction of architectural motives in his work, and his sense of pattern is a liberal education. As M. Arsène Alexandre very happily says in his introduction to this volume, "A great poet, a great painter (and

Burne-Jones was both the one and the other) ought, above all, to be a solid constructor, an architect logical and vigorous. On a building so unshakable he may then bestow all the varied treasures of his fancy, all the velvety caresses of colour and of love."

Herein is one of the chief charms of Burne-Jones's work. For all its delicate beauty there is sound and sane construction. The *Pygmalion* series is a good illustration of this.

Among the examples reproduced, which are especially notable for their grasp of design, are the companion pictures of *The Nativity* and *The Crucifixion*. The easy pleasant lines of the first and the grave rigid feeling of the latter make a contrast at once symbolic and convincing.

The series of *The Story of Orpheus* are a miracle of arrangement, and yet there is no sense that the subjects have been forced into their circular treatment. The design for a *Lid of Pianoforte* is a delightful blend of gravity and gaiety, with the latter uppermost. The reproductions from Mr. Hollier's photographs are, as always, admirable.

M. Arsène Alexandre's fore-word has a special value, as a French appreciation of an artist and an art typically English. When the art world of Paris depreciated Burne-Jones in an ecstasy of fear lest by praising him they should appear less than loyal to Whistler, M. Alexandre had the courage of his beliefs, and he has now recited them with a vivacious enthusiasm.

A HISTORY OF ARCHITECTURE.

A History of Architecture. By Russell Sturgis. Volume I. Antiquity, 25s. net. London: B. T. Batsford, 94, High Holborn, W.C. New York: The Baker-Taylor Co.

A "HISTORY OF ARCHITECTURE" written by one man can never be final. It is plain that education, experience, and natural bent are bound to direct the sympathies of architect or archaeologist to the study of a special period or place, rather than to the wide consideration of the world's architecture as a whole. The subject is too vast for a single human mind to grasp or to present to others in a lucid form.

But we know of no one better qualified than Mr. Russell Sturgis to attempt such a work. He is an assiduous reader and industrious compiler, and is frank enough to lay no claim to an originality he does not possess. Architect, not archaeologist, his personal qualifications for the work consist of wide travel and keen powers of technical observation. Construction rather than architectural beauty appeals to him. Proportion, and especially proportion in terms of the stupendous, is more to his mind than grace or the self-contained harmony of the individual members of a composition. His feeling for ornament is slight—so slight that the subject is entirely neglected in the present volume, and his delight in any process of vaulting is so keen that he completely lacks sympathy for the trabeated glories of Greece.

On the archaeological side he has been content, wisely enough, to rely wholly upon the knowledge of others, and by close and careful study of his authorities, combined with his knowledge of architectural limitations (often a mystery to archaeologists), has been able to present a reasonable and lucid picture of the growth of architecture in the earliest times. The arrangement of the book is admirable, being at once geographical and chronological. The five "Books" into which the volume is divided treat of (1) Egyptian, (2) Western Asiatic, (3) Greek, (4) Pre-Roman Italian, and (5) Roman, architecture, so that the relative positions of the "Books" themselves is in part chronological as well as their separate contents.

But it would have been as well if Mr. Sturgis had devoted a few lines to a clear definition of "Architecture." For want of such a definition we are soon confronted with a difficulty. According to this history, architecture did not begin in Egypt until the twelfth dynasty, with the rock-cut tombs of Beni-Hasan. Yet the preceding pages are filled with the description of the pyramids of Khafra and Menkaura, the granite temple of Ghizeh, and the marvellous

wall decorations of Sakkarah, all of which were age-old ere the chisel ever violated the virgin rock of Beni-Hasan. Surely there is some confusion of ideas here? The author is happier in his treatment of the columnar architecture and surface decoration of Egypt. But here he has first-hand evidence to offer. Edfu and Thilae are all but complete, and Abu-Simbel is imperishable. Karnak is sufficiently easy of reconstruction, in colour and every detail, to carry conviction to the most modern mind. And Mr. Sturgis seems to be in harmony with the grandeur of Egypt, for his appreciation of decorative values in the case of these monuments is judicious and sympathetic.

Nor is it otherwise with the monuments of Chaldæa and Assyria. Here are skilful methods of construction, obvious limitations of material, and Mr. Sturgis lays the powers and limitations of the Mesopotamian architects clearly before the reader. Especially does his discussion of the Assyrian systems of vaulting leave a clear impression on the mind. It is the best article on the subject in a limited space that we have seen. His remarks on decoration in brick and alabaster, though simple, are to the point.

Persian architecture is treated almost exclusively from the constructional point of view—in fact, throughout the volume, the author displays a complete disregard for the evidence value of ornament, where he does not betray a misconception as complete. For example, when he mentions the frieze at Persepolis, of "lions tearing bulls or other large animals, the favourite subject of the Semite peoples of antiquity," does he seriously think that the Persians were a Semitic people? And does he forget the predominance of the same type in Greece?

On the other hand, his analysis of the bull-fork capitals of Persepolis is admirable, and his account of the process of vaulting at Firougabad is lucidity itself. In fact, it is not till we come to the Book which treats of Greek architecture that we begin to experience the feeling which dictated the opening words of this review. But here we feel it strongly. For some reason or other Mr. Sturgis is not interested by Greek architecture. He may be unconscious of the fact, but it is apparent in the nature of his work. In the prehistoric section, slipshod chronology, misreading of authorities, actual ignorance of Homeric testimony (see the reference to the "Palace of Alcinoüs" on p. 116), and the ready acceptance of an Asiatic origin for certain well-known "Mediterranean" decorative types, are sufficient evidence that the Greek section is a task for which Mr. Sturgis had little love. His photograph of the Treasury of Atreus must be well-nigh thirty years old, for it was taken before the excavation, and shows only the uppermost ten feet or so of the doorway; and worse still, an illustration is given of a genuine arch of vousoirs, said to be Greek and "estimated at 900 B.C." and we are not even told where it is.

The temple architecture of classical Greece is very fully treated, but with little more success. Mr. Sturgis has not read his Thucydides carefully enough to know that the old Heraeum of Argos was burned down in 423 B.C. He describes the temple of Assos as peculiar in that there was only one entrance to the naos, namely, at the east end, whereas this was the normal arrangement of the Greek temple, as the plans in this very volume amply attest. In dealing with the Sicilian temples he is much happier, and far more reliable. But the two succeeding chapters, the Perfected Doric Temple, and Exceptional Doric Buildings, are full of irritating errors, which a little care would have obviated. The Parthenon is called the temple of *Pallas* Athene, which it never was. The plan of the Theseum is hopelessly incorrect, that of the Parthenon shows two doorways between the cella and the opisthodomos, which were not made till Christian times. The comparative elevations of the Parthenon and the temple of Zeus at Olympia are wrongly referenced. But the Propylæa and the Bassai temple are both treated very successfully, as is the short chapter on building construction.

The most startling feature in the whole book is the reiterated opinion that the Greek was unable to produce "what we call architectural sculpture!" What then does Mr. Sturgis call "architectural sculpture"?

The chapter on the Ionic order is short but good, the evolution of

the Ionic capital being particularly well worked out. But the photographs of the Erechtheum are poor and much distorted.

There is an extraordinary slip in the chapter on the Corinthian "style" (why does Mr. Sturgis reject the well-established and more correct word "Order"?). The Bassai temple is described as having "the curious subdivisions in the naos treated with *Corinthian* capitals on half columns"! In the same chapter a photograph of two Corinthian capitals appears upside down. It does not matter much, as the two capitals are piled one on the other neck to neck in such a way as to destroy all their effect, but it is indicative of the half-hearted spirit in which Mr. Sturgis has treated the whole of his Greek section.

The chapter on architectural sculpture and painting is poor. The following ridiculous statement from page 241 gives us its measure: "The sculpture was of the right scale and the right disposition for the place it had to occupy; but almost nowhere (*sic*) in these well-known types of Greek work is there reference to the architectural requirements of the space."

Indifference has become open hostility to the genius of the style and in the last Greek chapter, that on Disposition and Grouping, we find Mr. Sturgis hastening to "polish off" a distasteful task. The Greek theatre is huddled in under this heading, and suffers accordingly, while the author in his haste has not been able to ensure that his illustrations shall be what their titles proclaim. On page 265 the *unrestored* plan of Epidaurus from Defrasse and Lechat is described both in text and title as the *restored* plan, and while reference is made to "the exact shaping of the curious triglyphs" of the gate of the Agora of Athens, no attempt is made to indicate in what this peculiarity consists.

It is a relief to turn to the Italian section. Here Mr. Sturgis is at home with his beloved vaulting, and admirably he treats it. From this point onward the book is all that a history of architecture should be—lucid, definite, enthusiastic. Especially interesting is the account of the little-known buildings of caved brick, and the chapter upon surface decoration shows some motives which it is hard to believe are not Renaissance work. The only slip that we have been able to discover in this portion is one of scholarship, not architecture, by which the Roman Thamugadi is transformed into Thamugas. The Flavian Amphitheatre is described in a manner almost brilliant, and the chapter upon the columnar buildings reveals the puzzling fact that Greek orders in Roman dress have the power to arouse interest in Mr. Sturgis where their prototypes have failed to do so; and at the same time it is almost a revelation to the lover of the purer Greek genius to find to what a great extent the Hellenic spirit subsisted in the general outlines of the Roman Corinthian order.

In some ways, as we have indicated, this book is terribly disappointing. In others it more than vindicates a claim to a high place among histories of the external art. *Non omnia possumus omnes.*

PRACTICAL WOOD CARVING.

Practical Wood Carving: A Book for the Student, Carver, Teacher, Designer, and Architect. By Eleanor Rowe. 8½ in. by 6 in. 213 pp. London: B. T. Batsford, 94, High Holborn, W.C. 1907.

MANY admirers of Miss Rowe's work, and many students to whom she has given instruction at the School of Art Wood Carving at South Kensington, will be glad to have a copy of this exceedingly interesting and useful work. The book fulfils its title, which is more than can be said for a good many of the *practical* works which come under our notice, and the very full directions given therein should be very valuable for a proper understanding of this interesting craft.

The illustrations given are remarkably clear and sharp, which is only another way of saying that Mr. Batsford has bestowed unusual care upon the book. Many of the examples shown are of exceedingly beautiful pieces, and we are glad to note that Miss Rowe has not depended alone upon museum specimens. We can thoroughly recommend the book.