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No. 2

THE QUAI D'ORSAY STATION, PARIS.

THE time is gone when a railroad station was a mere utilitarian edifice, planned exclusively to meet the requirements of the service. With the growing taste for luxurious things railroad stations have become most comfortable places. In the spacious waiting-rooms the tired passenger can recline in a soft arm-chair, unless he prefers the enticements of a sumptuous refreshment room, where his eyes can rest upon paintings by members of the Academy and where dinners of five or six courses are served. Immense glazed halls cover the platforms, reached through well-lighted subways. Adjoining the station there is a first-class hotel, so that in a few steps one passes from the car into one's bedroom and vice versa. Our modern railroad depots also have handsome exteriors. The necessity of suiting the convenience of the passenger has obliged the companies to bring their termini as near the center as possible. Consequently, being now situated in the rich districts, the stations contribute to the beauty of the capital; they have become monuments, and rival the national palaces, the great hotels and the museums. The immense glazed roofs extending behind the ornate fronts alone indicate the true utilitarian character of these structures and prevent confusion.

The recently built Quai d'Orsay Station in Paris exemplifies better than any other the transformation of which we speak. The Orleans Company, which has erected it, had a depot far away in the east of the city. To reach it from the fashionable districts meant a drive of three-quarters of an hour. There seemed to be no remedy for this serious defect. Available ground in the center of Paris is scarce and extremely dear. Besides, the municipal authorities, being anxious to preserve the beauty of the capital, forbade the construction of any railroad above ground. It appeared as if the Orleans Station was doomed to remain forever at one extremity of the city, near the fortifications on the east side. However, a solution of the problem was found. In the very heart of Paris, on the

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FIG. 1.

QUAI D'ORSAY STATION.—THE LONG RAILROAD FACADE FACING
THE QUAI D'ORSAY.

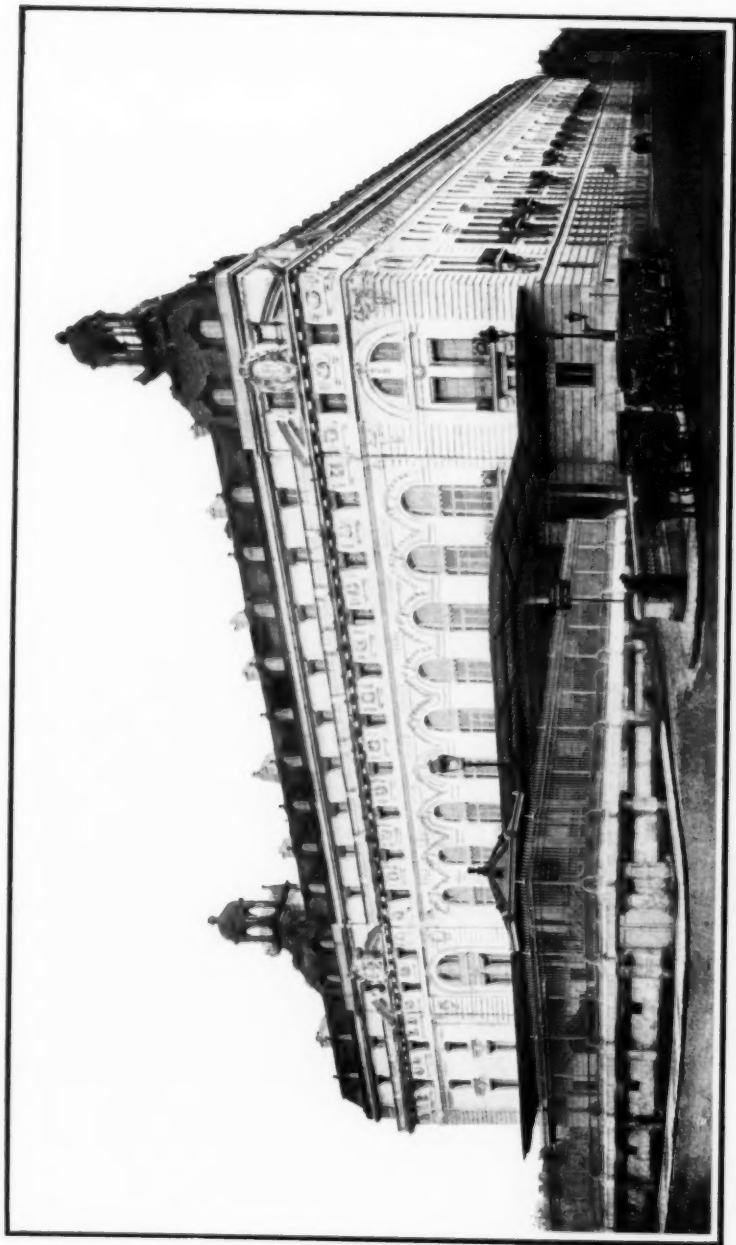


FIG. 2.
QUAI D'ORSAY STATION.—GENERAL VIEW OF THE BUILDING, SHOWING HOTEL FACADE.

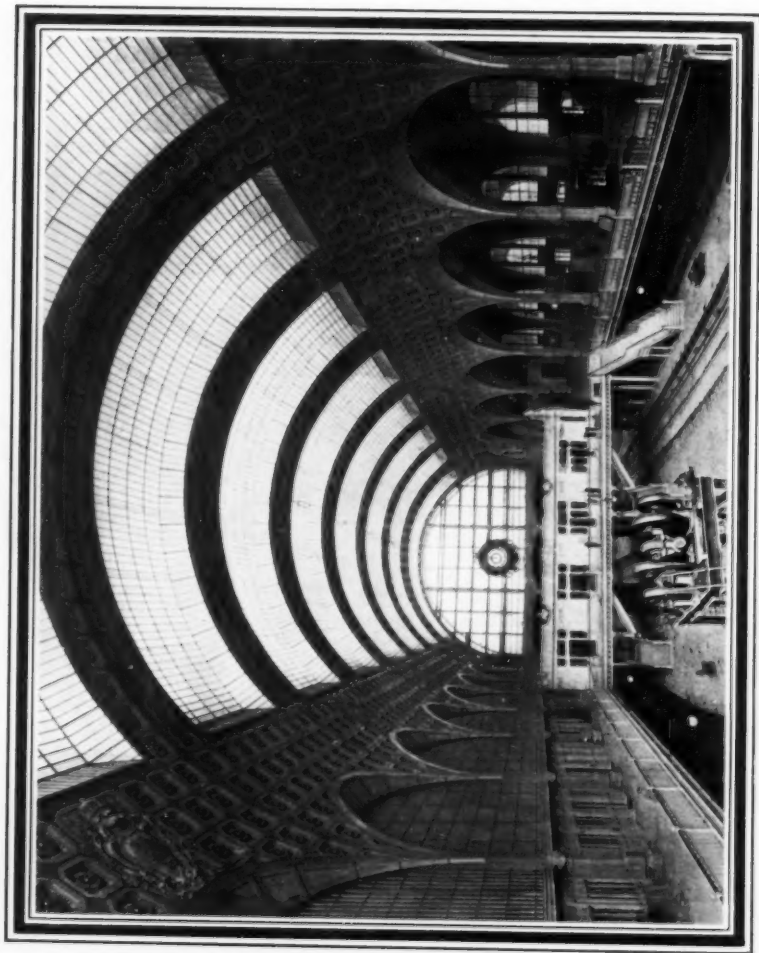


FIG. 3.
QUAI D'ORSAY STATION.—INTERIOR OF STATION.
(SEE FIG. 4.)



FIG. 4.

QUAI D'ORSAY STATION.—SHOWING IRONWORK IN PROCESS
OF CONSTRUCTION (SEE FIG. 3).

south bank of the river, facing the Tuileries and only a few minutes' walk from the Louvre, the Place de la Concorde and the Palais Bourbon, there was a large rectangular piece of ground covered with ruins. These ruins were the remains of the old Imperial Cour des Comptes (Audit Office), which was burnt by the insurgents during the Commune, in 1871. For nearly thirty years the remains of this splendid building stood in the center of Paris, a mass of crumbling walls, with gaping holes where windows had been. The roof and the interior had been utterly destroyed by the fire. The only things spared were some fine frescoes by the great painter Chasseriau. These were exhibited at the Centennial Exposition of 1900. I appeal to all Americans who have lived in Paris, and especially to those who have studied at the Ecole des Beaux-Arts, to say whether they ever saw anything more picturesque on the banks of the Seine than those ruins of the Cour des Comptes; those red tones acquired by the stones under the action of the heat; those walls, made 2,000 years older looking by the fire; those arches become antique; those columns and capitals seemingly belonging to another age. An astonishing variety of vegetation had sprung up amidst those ruins—fig trees, planes, beeches, shrubs and plants of various kinds, whose seeds, mingled with Paris dust, are carried hither and thither—had found a rich soil in this abandoned spot; rigorous foliations had thrust themselves through the yawning windows, while magnificent shoots displayed their vivid green against the patina-covered walls. Assuredly no place in Paris presented a more striking mixture of life and death, of new and old, of civilization and nature, than those wonderful ruins of the Cour des Comptes, regarding which one of our contemporary writers has justly said that in our day he preferred "cooked architecture to raw." Birds built their nests there, and were far more at peace than are those whose home is in the public parks. In the spring one heard there the cooing of turtle-doves, and all the year round the croaking of crows. Strange noises were heard there, and it used to be said that the cats had returned to a wild state in that wilderness, and that the paradoxical concierge of those paradoxical premises dared not quit the little hut which had been put up for him between two walls.

But the picturesqueness of those ruins was a standing offense to the city authorities, and after long discussion as to the means of utilizing the ground they finally accepted the proposals of the Orleans Company, which wished to bring in its terminus to that point.

The enterprise was a considerable one. It was necessary to build an underground road three miles in length along the river embankment, and to build it in such a way that it should be safe from over-

flows of the Seine. However, while fully guarding against this danger, it was found possible along the whole distance to make openings in the external wall looking upon the river at a height of one meter above the level of the highest floods ever known. By this means the railroad is well ventilated throughout its entire length. For the portion of the journey inside the city electric engines are employed. These are hitched on at the old station, taking the place of the steam locomotives, and thus the trains are hauled, without noise, smell or smoke, to the new terminus on the Quai d'Orsay. This is a great improvement, and, as we shall presently see, it has had a direct influence upon the architectural designs for the station itself.

The piece of ground upon which the station was to be erected presented certain difficulties. It was sufficiently long, but somewhat narrow. Moreover, the tracks were below the level of the ground. The architect, M. Laloux, taking advantage of these features, was able to provide a more spacious station than would otherwise have been possible. The waiting-rooms, baggage-rooms, ticket-office and refreshment-room are all situated on a level with the street. Short flights of stairs lead to the basement, each staircase corresponding to a platform. As a few of the tracks are underneath the thoroughfare which runs between the station and the Seine, the sidewalks of this road have been paved with opaque glass. Other tracks are situated exactly below the floor of the station, while others again are in the open air, if one may say so, or, rather, are beneath an open vault, as is shown by one of the illustrations.

The transport of the baggage inside the station, between the basement and the ground floor, is effected in the most ingenious manner by means of an apparatus designed on the principle of the "moving sidewalk." A wide endless belt of leather runs on an inclined plane around two drums, one of which is placed in the basement and the other in the baggage-room above. These drums, which are driven by electricity, are only started at the arrival of the trains. The trunks are discharged directly from the baggage-car on to the leather belt, which carries them to the upper floor. This has done away with the encumbering hand-trucks. In a few minutes the car is cleared and the trunks are ranged in the baggage-room. Fig. 7 shows how this apparatus is set up in the Quai d'Orsay Station.

Fig. No. 3 represents the great hall, with its glazed roof, which covers the greater part of the depot. Here iron stands forth in its true colors. No attempt has been made to hide iron columns beneath a casing of imitation marble, or to make a style colonnade out of iron piers. The hall, as can be seen, is boldly conceived. We



FIG. 5.

QUAI D'ORSAY STATION.—SHOWING DECORATIVE TREATMENT
OF IRON BAYS.



FIG. 6.

QUAI D'ORSAY STATION.—SHOWING FRESCOES AND DECORATIVE
TREATMENT OF INTERIOR.

have purposely chosen two views, one representing it in course of erection, when only the ironwork had so far been put up, and the other showing it in a complete state, with its glass and decoration. In the first of these views (No. 4) it seems wildly complicated and entangled. The finished work, on the contrary, proclaims that it was the architect's wish to produce a decorative effect. All the part of the tympanums between the arches is filled by coffers, each similarly ornamented with a rich rose. From distance to distance in the hall a double band of roses passes over the vault and falls on the exterior wall, which is pierced also through and through and is formed solely of iron piers supporting the truss-work. The iron arches between the two bands of roses appear as they actually are, and the rivets fastening them are visible.

It is certain that there was reason for glazing the whole of this immense hall, and that the bands of roses accompanying each of the big transverse arches emphasize the impression of strength. Light enters in abundance from all parts. Thus this hall consists of iron, decorated tiles, and glass. Each of these three materials plays its natural role: there is no disguise or deception. The general effect is in light colors, and is very pleasing to the eye. It is a case of a definite conception resolutely carried out. The deep relief of the roses denotes a sound notion of decorative effect. It is true that one might take exception to the use of that antique rose for such a modern purpose. We are also inclined to think that it would have been better to look for newer forms than that Roman-like coffer for a twentieth-century railroad station, but alas, all present-day architecture is of the same sort, and as things are going, we are a long way from the end of it.

The view of the unfinished structure also shows how the architect has conceived the small cupolas in the room which precedes the great hall. Here again an iron framework is filled in with large squares of decorated tiles, of which Fig. 5 shows the arrangement and the ornamental detail.

My description of the decorative part of the great hall would not be complete if I failed to mention the two large canvases at the two ends of the entrance-hall, one representing the sea shore at Biarritz, and the other (Fig. 6) the celebrated banks of the Loire. They are both painted by one of our best-known artists, M. Cormon, Member of the Institute.

We give two views (7 and 8) of the clock, which is located at the bottom of the hall. It has been executed by MM. Kulikowski, ornamental sculptors, as has also the whole of the decorative sculpture of the station. The model is exceedingly rich. We like the artists' conception of relief—the defined masses and the deep shadows. The drawn figure of a man gives the scale of the work.

The hands are six feet long. The foregoing illustrations show **what an important part is played by decorative sculpture inside the Quai d'Orsay Station.** It should be observed here that this has been made possible by the exclusive use of electric traction, and the total absence of coal smoke. What would become of M. Cormon's paintings, the coffers and their rose-work, the garlands and the deep carved work on the clock, in an ordinary railroad depot where smoke and dust cover everything with a coating of filth? These remarks having been made, we must add that the architect and the sculptors have profited too freely by the liberty accorded to them to decorate the interior of the structure. The decoration is profuse; there is too much of it. Every tympanum, every keystone, every doorway and every bay has been the subject of embellishment of some kind or other. There are escutcheons of cities, festoons, bandelets, dentils, beads, ovolos, rose-work, shields of all shapes, consoles and modillions, lions' heads and bows of ribbon, oak-branches and laurel-leaves. There is positively too much decoration. One looks in vain for a plain piece of wall, and sighs after a fine, unadorned arch; but such a thing is not to be seen within the Quai d'Orsay Station, and, as we shall show, it is not on the outside that we shall find it.

The Quai d'Orsay Station comprises not only the railroad depot but a hotel as well. Hence we find the exterior treated in two entirely different manners. Looking on to the Quai there is one of the lateral faces of the station proper, and behind there is the hotel. The result is that there are two fronts of an opposite character. Fig. No. 1 shows the long front facing the Quai, a series of wide bays between two corner pavilions whose roofs recall those of the neighboring Louvre. Each pavilion has a monumental clock, which is decidedly a characteristic feature of the station. The bays are separated by two projecting pilasters, which support a cornice with ressauts. Above the cornice there is a much-adorned attic, on which are immense escutcheons of the different cities situated on the Orleans Railroad, alternating with statues which are still more monumental. I consider that there is an absence of logic in this arrangement. The pilasters, which are the solid parts of this façade, rise in vain; the pile is further accentuated on the attic—and all to support what? A ball. It is an instance of the mountain bringing forth a mouse. On the other hand, all the big empty spaces are surmounted by enormous blocks—statues or escutcheons, the result being that the voids have great solids weighing upon them, while the solid parts of the ground floor uphold nothing. This jars both on the eye and on the mind, two things which in architecture are inseparable.

Another feature which we cannot refrain from criticising is the



FIG. 7.

QUAI D'ORSAY STATION.—SHOWING MOVING BAND FOR HANDLING
BAGGAGE.

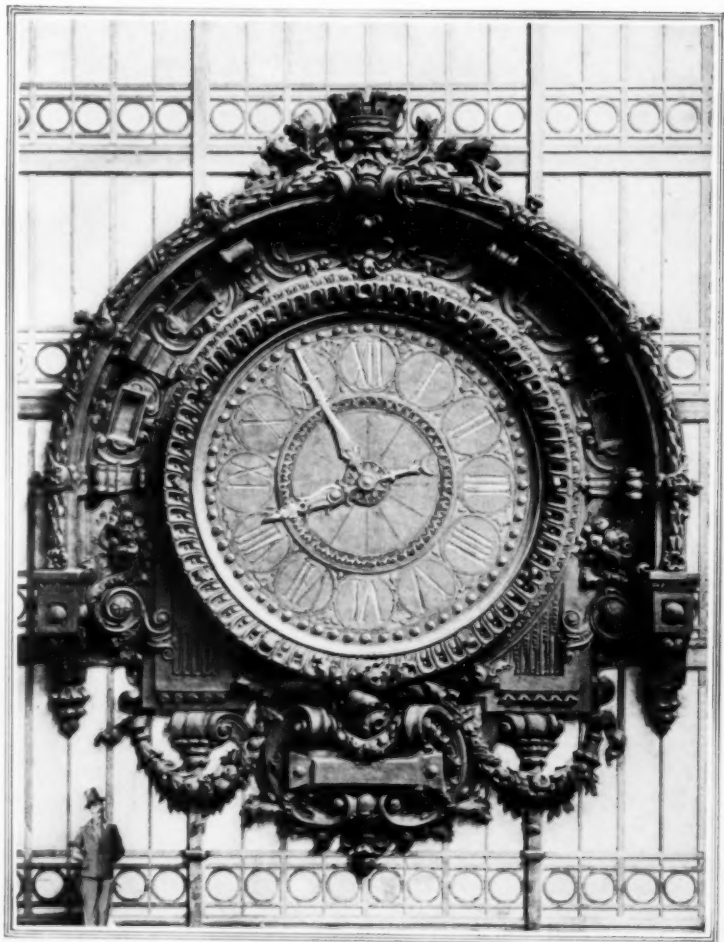


FIG. 8.
✓ QUAI D'ORSAY STATION.—SHOWING DECORATIVE TREATMENT
OF CLOCK. 24 3 51

elevation of the roofs of the terminal pavilions, which is insufficient, and the unfortunate obelisk crowning them, which loads them unnecessarily without carrying them to a proper height.

With these reservations, and putting aside for the moment the ornamental sculpture, we are of opinion that the general arrangement of this façade is satisfactory and well adapted to its purpose. One is favorably impressed by those large bays, wide and high, with which the whole front is pierced. It is certainly an excellent plan of façade for a railroad station. The facilities for ingress and egress are ample, there being half a score of doors; and there is plenty of air and light in every part. Comparing this terminus with the other stations in Paris, and those abroad, one is struck by its superiority.

From the western end of the façade on the Quai we perceive the windows of the hotel, which is called the Palais d'Orsay. Fig. 2 shows the whole of the hotel front, on the Rue de Bellechasse, with return on the Rue de Lille. The entrance is on the Quai d'Orsay. The ground floor on the Rue de Bellechasse serves as the arrival courtyard of the station. A big marquee covers the place of arrival and prevents the noise of the vehicles from ascending to the upper floors. On the façade the central arches are the windows of the large saloon of the restaurant, the rest being taken up by smaller saloons and bedrooms. Here again the two pavilions with roofs à la Mansard are lacking in elevation. On the other hand the chimneys are neither dissimulated, nor monumental, and this is a great pity. In the case of the Louvre hard by, a distinctly decorative effect was obtained from the inevitable chimneys. Furthermore, it is impossible not to condemn the wretched cut-frontons on the balcony floor of the two pavilions. These frontons are the most unfortunate and most controvertible inventions of the baroque school. Shall we never be able to get rid of the encumbering inheritance of the Italian Decline?

The hotel has been very carefully isolated from the station to which it is attached. Glass partitions completely cut off the station hall from the hotel building, as is seen in Fig. No. 3. Besides, it should be remembered that steam engines are not employed, and that consequently the station is less noisy than is usually the case.

Two illustrations lead us insensibly from the architecture to the decoration. One (Fig. 9) gives a view of one of the large pavilions of the station front, with the first windows of the d'Orsay Palace Hotel. Architecturally, it is a fine example of stone construction. One is struck by the relief of each member of this façade—piers, pilasters, archivolts (each stone of which is accentuated), string-courses and cornices. The layers of stone can be read at a distance. Everything is strongly salient, and the modillions are specially so.

The other view (No. 10) shows in all its amplitude one of the large bays, which, I repeat, are most happily imagined for a station façade.

Both of these illustrations permit of an examination of the decorative statuary of the Quai d'Orsay Station. It is necessary to remark in the first place that it is extremely fine work, and that MM. Kulikowski, who were entrusted with it, are true artists in the sense which is attached nowadays to the word. It could not possibly have been executed with greater care, conscientiousness, firmness and delicacy. Their foliages are, when requisite, studied from nature; their garlands are as full and round as could be wished. Notice in particular the detail to scale, Fig. 11. Everywhere the statuary stands out in bold relief from what remains of the walls. The lettering, too, testifies to epigraphic talent. Not a single point has been neglected; everything has been done with art and with enthusiasm by men who thoroughly know their business and possess taste.

And yet—and I am now the more at ease that I have freely praised all that is laudable in this decoration—the decorative part of the Quai d'Orsay Station, brilliant as it may be, is intrinsically bad, and instead of embellishing this façade, spoils it. Once more I say that the fault does not lie at all in the quality of the ornamentation, but in the fact that the ornamentation itself has no *raison d'être*. Our argument may be summed up thus: The richest and finest decoration, if it has not architecturally a purpose, if it does not express by its beauty the functions of the structure upon which it figures, will be bad. As an illustration of what we mean we will cite the station before us, as it affords the most striking example, among many others, alas, of decoration applied to an edifice without thought. I have already pointed out how absurd it was to load that part of the wall above the arches with enormous statues, whilst the piers and pilasters supported nothing. This is contrary to common sense. But, passing now to the statues themselves, we may ask with equal reason what those colossal masses have to do on that attic. I know very well that this bad habit is an old one, and that the whole of the French School, a few architects excepted, have used and abused this factitious manner of ornamenting their palaces. They have thought that they were producing richness, pleasing to the eye, by so doing, but as a matter of fact they have merely succeeded in destroying the principal lines of the edifice, those which should stand forth clearly, and in producing confusion instead of light.

So is it with the façade of the station; a luxurious ornamentation covers and stifles it. I forget what critic it was who jokingly said that when an English architect was at a loss for a means of



FIG. 9.

QUAI D'ORSAY STATION.—AN ENTRANCE TO STATION—ONE OF THE
LARGE PAVILIONS.

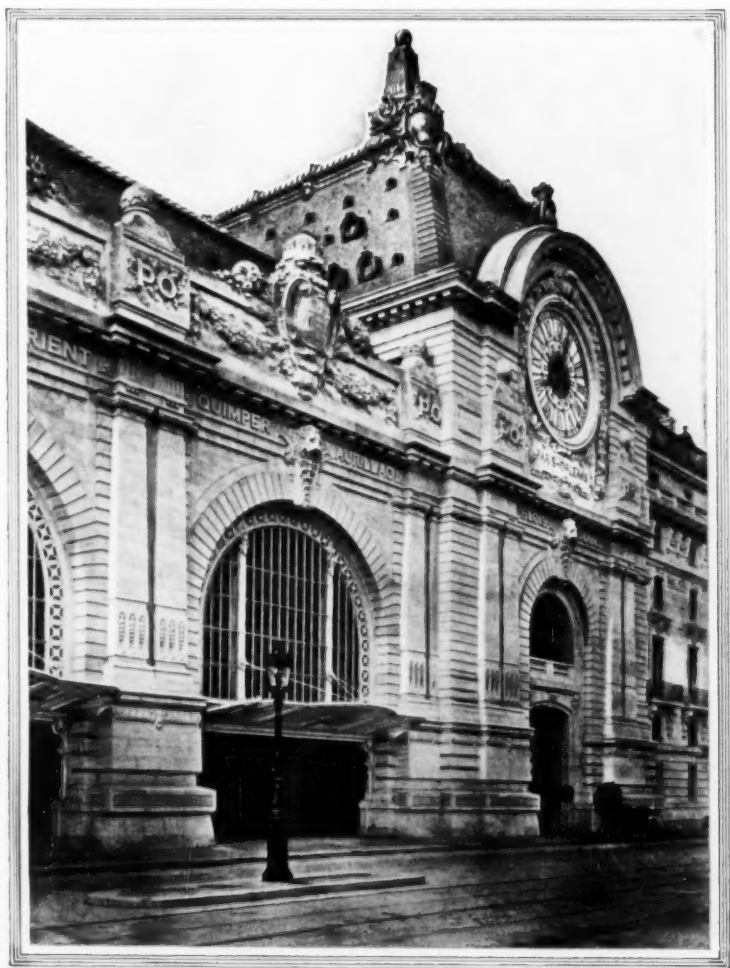


FIG. 10.

QUAI D'ORSAY STATION.—SHOWING TREATMENT OF BAYS AND PAVILIONS.

joining two walls or toning down an awkward angle in a country house, he said: "No matter, we will cover this part of the building with ivy, which will have the most picturesque effect." In France we use a similar subterfuge. Instead of covering the structure with growing ivy, we put on a lavish amount of sculptured decoration. The effect is the same; the edifice itself disappears. One looked for fine lines, well constructed; one finds flowers and festoons, and masks, and lions, and women—of edifice not a vestige.

It would be useless to labor this point. Let the reader look at the collection of photographs accompanying this article, and he will see one of the most glaring defects of the major part of the French School, namely, the abuse of statuary, so-called decorative, which has not the remotest relation to the decorative statuary of the great architectural epochs—the Greek and the Gothic. In those days the smallest ornament had a meaning, a justification, in the general scheme, a *raison d'être*. In our time all these flowers are put upon the edifice at hap-hazard, and instead of ornamenting it, mar it. I saw the Quai d'Orsay Station in course of erection, before the statuary had been put in place, and really the scheme of this façade, its big, bare bays between the two pavilions, the fine treatment of the stone, and those robust piers, all charmed me. There was something clear, strong, logical and pleasant about the structure. But alas, I reckoned without the fashion. When the building operations were finished, the mason gave place to the sculptor, and the result at the end of a few months was disheartening.

It would be well if a good many French architects cultivated a quality which, in numerous other domains, is truly French: I mean sobriety.

I have gathered together, in termination of this article, a few photographs of the interior of the d'Orsay Palace Hotel. The first one (Fig. 12) shows the restaurant saloon, on the Rue de Bellechasse. It almost goes without saying that the apartment is in style. The ceiling and door-piers are from the brush of M. G. Ferrier, another notable painter. The present fashion, I am glad to say, is for lively, light-toned pieces. We have finished with sombre wainscotings, stained oak and walnut and dark-colored hangings. Next is the ball-room, which is also to be used for big banquets (Fig. 13). It is of an extreme, in fact a superabundant richness, but here the opulence is more appropriate. The gildings and the marble rival each other in splendor. The photograph speaks for itself. I will simply single out the garlands of flowers with electric lamps interspersed. At night, when a festivity is going on, the effect of these is exceedingly brilliant, and graceful as well. Finally, we reproduce two details (14 and 15) of style ornamentation of the in-

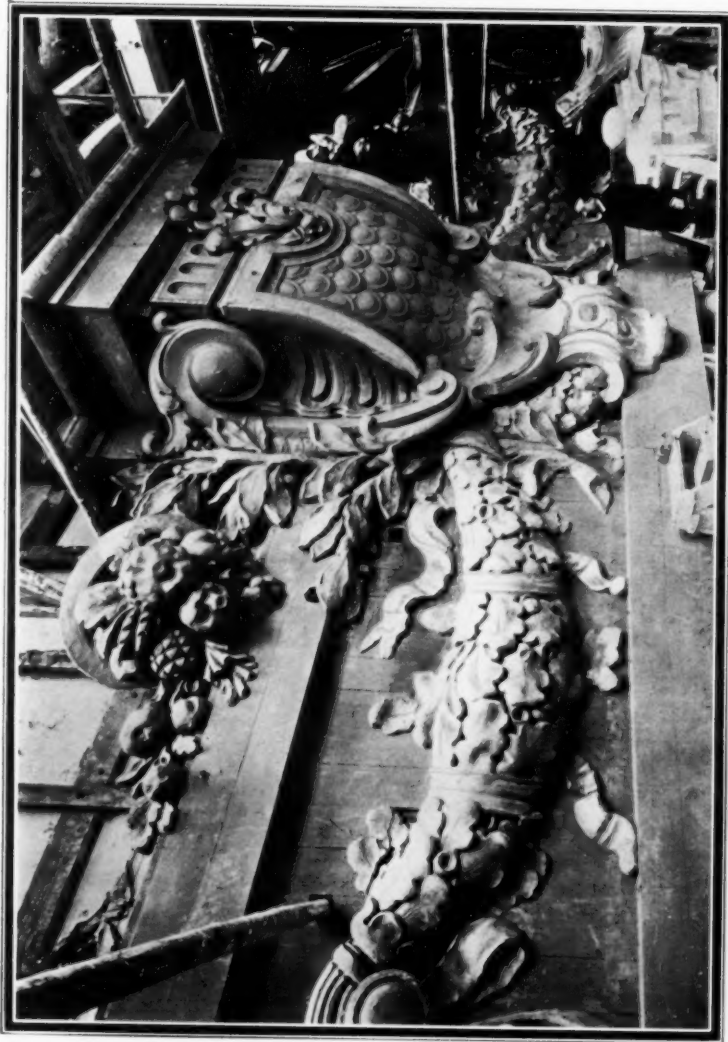


FIG. 11.
QUAI D'ORSAY STATION.—A DECORATIVE DETAIL.

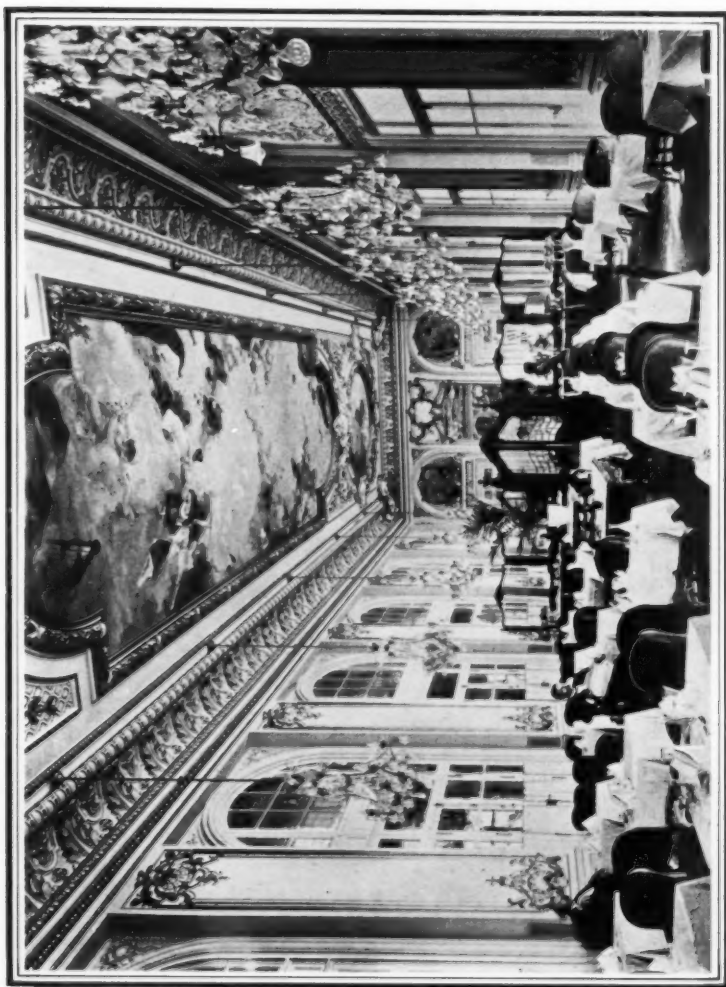


FIG. 12.
QUAI D'ORSAY STATION.—THE RESTAURANT OF THE D'ORSAY PALACE HOTEL.

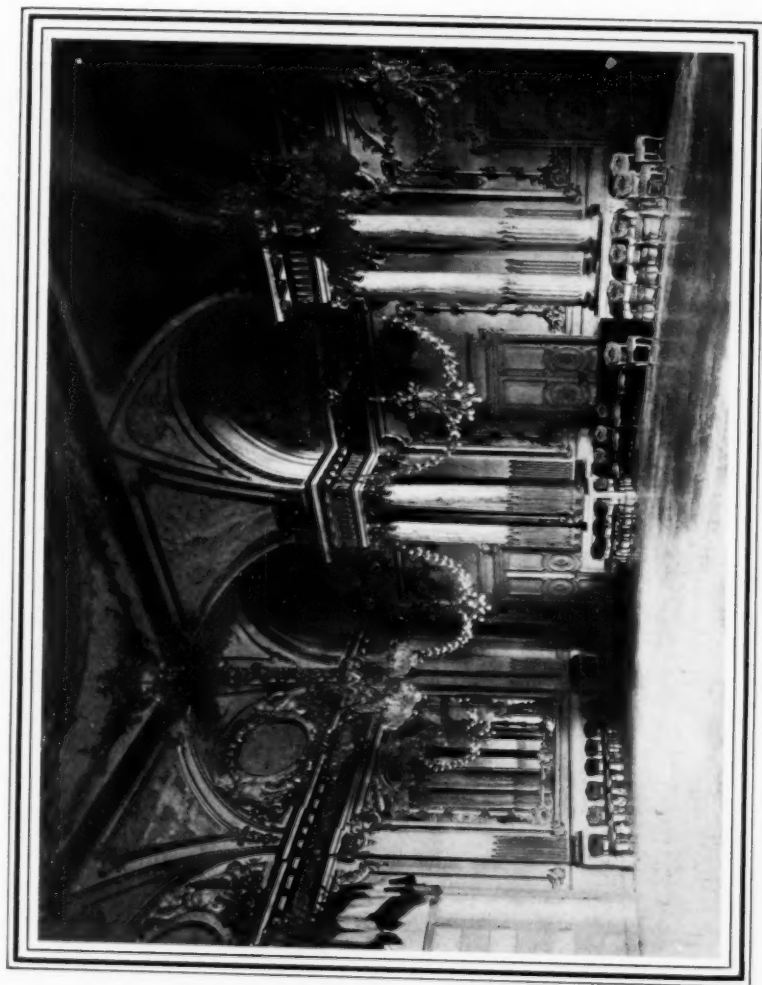


FIG. 13.
QUAI D'ORSAY STATION.—THE BALLROOM OF THE D'ORSAY PALACE HOTEL.



FIG. 14.
QUAI D'ORSAY STATION.—A DECORATIVE DETAIL.



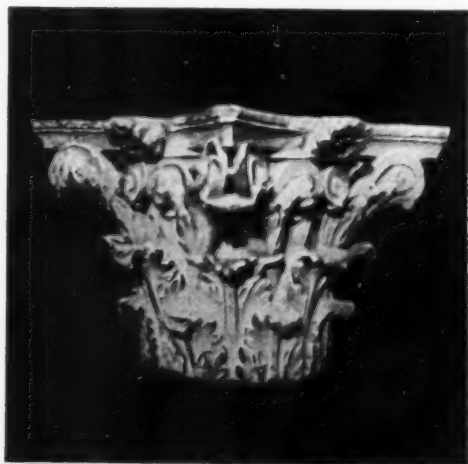
FIG. 15.
QUAI D'ORSAY STATION.—A DECORATIVE DETAIL.

terior of the hotel, showing how carefully even the minor parts of the decoration have been treated.

There is no dearth of sculptors, nor of ornament-makers; what is lacking is an architect who knows how to utilize the resources of their art, and who will not let himself be stifled under their weight. What we need is a conception of ensemble, and a just view of the relations which existed in the good old times between architecture and decoration.

I persist in believing that our architects are wanting in historical culture. In the schools of the past they see nothing more than inexhaustible mines whence to extract motives. Of the styles, they possess only an anecdotal knowledge, if I may be allowed to say so. They do not realize that a style is an organism, a whole, which cannot be mutilated without suffering or without its beauty disappearing. Our architects, in their desire lavishly to ornament the edifices which they construct, make the same mistake that a painter would make who should paint a woman with three or four legs, on the ground that the two legs of the model before him were superb and that one could not have too much of a good thing.

Jean Schöpfer.



CAPITAL FOUND AT POMPEII.

Photographed by Reginald Sweet.

THE FIRST GOVERNMENT ARCHITECT.

JAMES HOBAN, OF CHARLESTON, S. C.

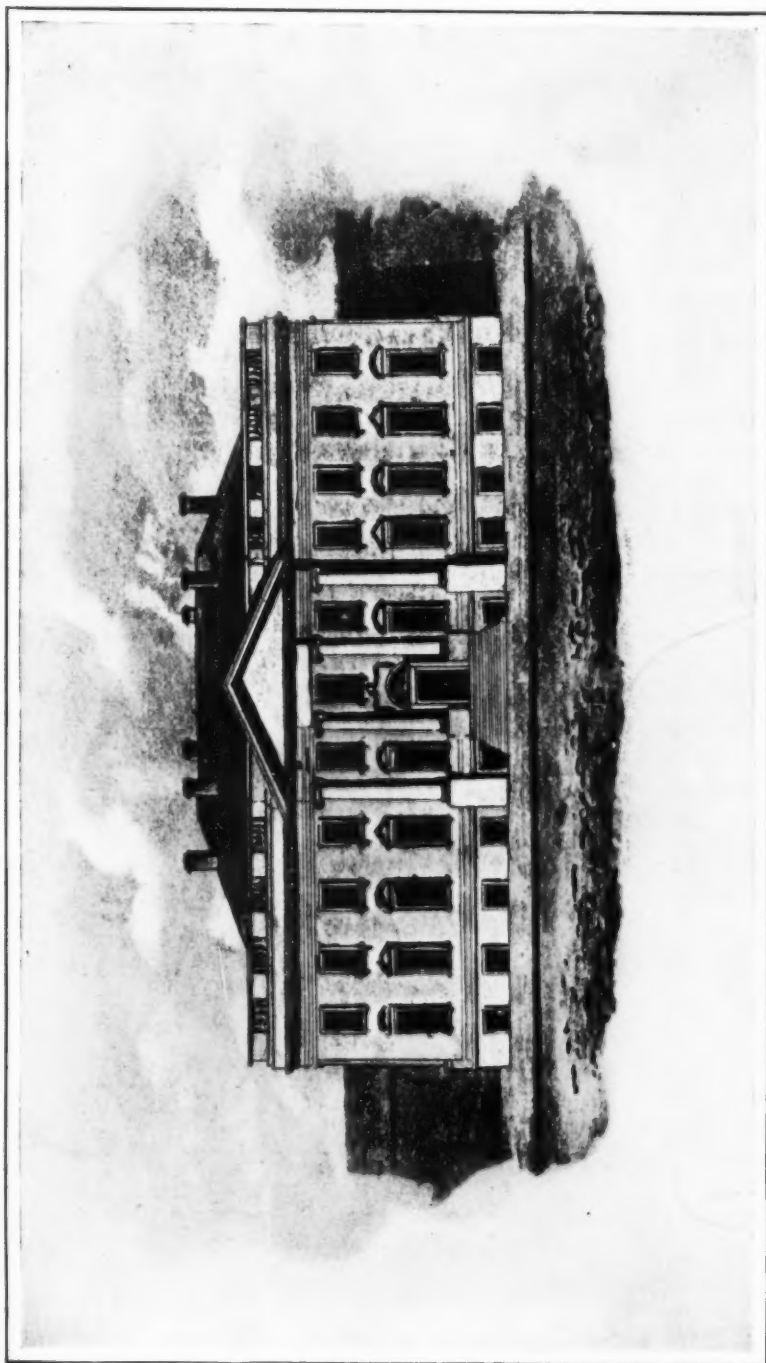
IN considering the events immediately connected with the occupation of the permanent seat of government of the United States one hundred years ago, we should not overlook certain antecedent facts quite as important and indeed indispensable to those that followed.

The Congress of the Confederation conceived the idea of a territory under the exclusive jurisdiction of Congress. They kept the subject well to the front in all their parliamentary deliberations. The Constitutional Convention of 1787 took it up and made the project a fundamental part of the machinery of the new government. Therefore immediately after the installation of the Vice-President, the organization of the two houses of Congress, the inauguration of the President and appointment of the Chief Justice, the question of the location of the Federal territory was revived as the first measure to give permanency to the form, under which the three co-ordinate branches were then formulating a system of national administration.

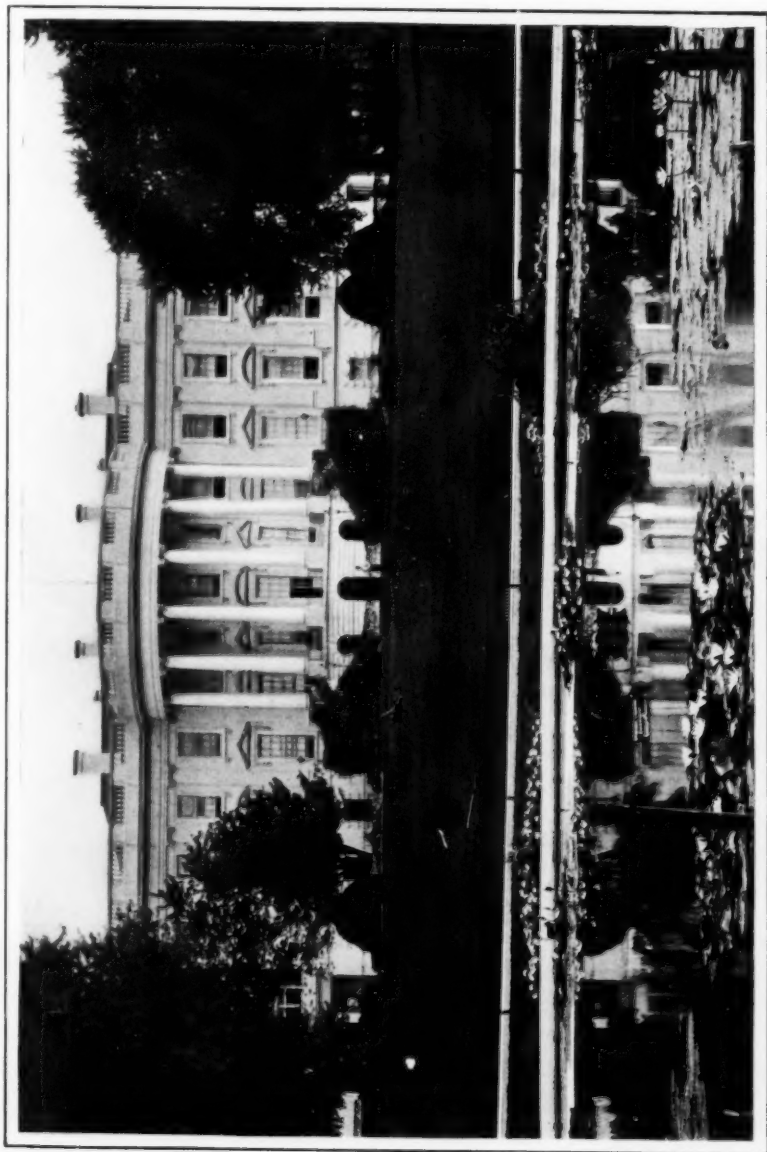
A study of these parliamentary contentions affords a very practical illustration of the not over disinterested motives then in evidence, which have been forgotten in the progress of time.

After about fifteen months of the bitterest debate, during which the disruption of the union, not then out of its swaddling clothes, was repeatedly threatened, and after an exhibition of log-rolling worthy of a modern River and Harbor Bill, the first Congress finally settled the question at its second session. New York was deprived of the honor for which she had struggled so hard; the associations of Philadelphia with the birth of the nation were ignored, except to establish there the temporary seat of government; and a permanent national capital to be ready by the first Monday in December, 1800, was provided on the Potomac River.

In bringing about this final result, after seven years of discussion, President Washington was conspicuously instrumental. His personal preference naturally favored the region of his own home. But the manipulation of the political end of the bargain which led to the reconsideration of the already adopted and preliminarily surveyed site on the Delaware opposite Trenton, New Jersey, and the substitution of that which we recently commemorated in the matter



THE EXECUTIVE MANSION, WASHINGTON, D. C., IN 1800.—BEFORE THE NORTH PORCH WAS ADDED.



THE EXECUTIVE MANSION, WASHINGTON, D. C.—PRESENT STATE.

of occupancy, was the clever handiwork of Alexander Hamilton, Secretary of the Treasury.

The act of July, 1790, conferred upon the President supreme control, and he was not slow to improve the opportunity by the appointment of three Federal Commissions to bear the brunt of the difficult task in hand. They had, however, able assistance. The versatile genius of Thomas Jefferson had not alone been applied to the establishment of diplomatic relations with the states of Europe and humoring the Jacobin notions of the people of France. With the same prescient instinct which impelled his sagacious advancement of free institutions during the Colonial and Continental struggle, we find him studying the plans of celebrated cities and buildings and collecting drawings in the various places visited in the course of his travels among the countries of the world. Thus it was Thomas Jefferson, Secretary of State, who fostered the infant Capital into vigorous babyhood. It was he who gave the Federal Territory the name of the great Navigator, robbed of the honor of his discovery in the naming of the western hemisphere. It was he who named the Federal Capital after the man unanimously conceded "The first in war, first in peace and first in the hearts of his countrymen," the glory of whose patient struggle and final triumph receives renewed lustre in the reminiscent glories and splendid realizations of this our capital city.

The selection of Major Pierre Charles L'Enfant, whose military services and engineering skill had attracted attention on the field of battle at Charlestown and in the adaptation of the first home of the American Congress in New York was another of those master strokes so characteristic of the methods of Washington; and the city, as we have it today, is a development upon the exact lines laid down by L'Enfant and approved by Washington in July, 1791. Finally James Hoban, the architect and superintendent, completes the roll of men distinctively associated with the conception, exploitation and development of the earliest beginnings of our magnificent "permanent seat of government."

Two incidents attract particular notice in those early events in the history of the city. The first, that historic gallop of Washington and L'Enfant in the summer of 1791 when, reining their steeds upon the brow of the hill overlooking the stretch of not very inviting lowlands, Washington gave sanction to the site for the permanent seat of legislation. Then on the plateau rising gently from the shore of the Potomac, with the heights of Georgetown on the former soil of Maryland to the west and north and Alexandria in the foreground of the hills of Virginia to the south, Washington ratified the choice of the Engineer for the seat of Executive residence. The other, the arrival at Georgetown in the summer of 1792 of

James Hoban, supported by credentials of ability and experience, among them one from Henry Laurens, who had been a member of the Congress of 1775 and one of the negotiators of the peace with Great Britain.

In the examination of plans for a Capitol and a President's House, Dr. Thornton and Stephen Hallet received the same award, \$500 or a medal for the Capitol. The plan for a President's House submitted by James Hoban answering every requirement of design and adaptability, was accepted and received a like premium. In the consideration of these plans Secretary of State Jefferson took an active interest. He not only produced the drawings of celebrated public buildings of Europe which he had gathered, but suggested as a general basis of selection that the Capitol should reflect the style of some model of antiquity and the President's House should be modern in design, in which he was sustained by Representative James Madison who was also present. The plans were examined at Georgetown on July 15-16, 1792. The same month James Hoban was employed at 300 guineas a year as architect and superintendent.

On October 13th following, the Federal Commissioners accompanied by the Freemasons of Alexandria and Georgetown, Architect Hoban and the inhabitants of Georgetown, Alexandria, Funks-town, Hamburg, Carrolton and the surrounding region marched to the site selected, and with appropriate ceremonies laid the corner stone of the present structure, which was the first public building commenced. The absence of President Washington on that occasion was unavoidable, owing to the demands of public business at Philadelphia. He inspected the site, however, with Mrs. Washington three days before on his way north and gave directions to the Commissioners, Major L'Enfant, the Engineer, and James Hoban, the architect and superintendent. In order to correct the persistently repeated statement that President Washington was present on the day of the ceremonies, it is only necessary to quote the following from Dunlap's American Daily Register of Philadelphia, Monday, October 15, 1792: "The President of the United States, his lady and family arrived here on Saturday afternoon (October 13th) from Mount Vernon."

It is not necessary to recount the perplexities which had to be faced during the period between the appointment on Jan. 22, 1791, of the three Federal Commissioners to superintend the affairs of the city followed two days later by the President's first Proclamation, directing them to "lay down the four experimental lines of boundary," and the first meeting of Congress in the unfinished Capitol November 17, 1800, and the occupancy of the "President's House" the same month by President and Mrs. John Adams. It

is true the mansion was far from finished at the period recently commemorated, which was no fault of James Hoban's; but it was wholly completed by him subsequently and was also repaired from the original drawings under his direction (1815-16) after the burning of the interior by the British in 1814. The south portico was added in 1822 and the north portico, which was not his, in 1829.

Of all the engineers and architects employed during the nine years and ten months struggle, the name of L'Enfant, first engineer, and Hoban, the first architect, alone merit distinctive commemoration. The plans which they designed in their respective lines of duty and which were adopted and carried into execution have met the government's requirements during a century of national expansion from a Union of fifteen to forty-five commonwealths besides territories and colonial dependencies, from a national area of 830,000 to 3,840,000 square miles, and from a population of 6,000,000 to 76,000,000.

The original L'Enfant plan of the city will accommodate at least double the present resident population. The Hoban plan of the Executive Mansion has on the other hand, reached the limit of its capacity to meet the official, social and domestic necessities of the President. Although James Hoban was at first employed to make plans for the President's House, his excellent taste and sound judgment as an architect and practical skill as a builder so impressed the President that his services were in general demand. On April 5, 1793, the President approved of the Capitol plan submitted by Dr. Thornton. Later Mr. Hoban was called to consult with Secretary Jefferson, Mr. Hallet and others about its adaptation. On July 25, 1793, the President by letter informed Mr. Hoban that the foundations would be begun on the plans as exhibited by Mr. Hallet. At the laying of the corner stone on September 18th following, which was under the present Law Library, President Washington, in concert with the Grand Lodge of Maryland and the lodges under its jurisdiction and Lodge 22 from Alexandria, Virginia, personally conducted the ceremonies.

In the list of names placed in the corner stone, that of James Hoban precedes that of Stephen Hallet as architect. Owing to the defections in the work the first contractors were dismissed and the Superintendence of the Capitol together with the President's House was turned over to Mr. Hoban. Under these instructions he laid the foundations of the old north and south wings and center of the original structure. Owing to the objections of Hallet to the Supervision of Hoban as Surveyor or Superintendent of Public Buildings, a controversy was cut short by his retirement in 1794, leaving Hoban in sole control.

In 1797 Hoban was made Superintendent of all the Executive

Department buildings to be erected and known as the northeast (State), southeast (Treasury), northwest (War), and southwest (Navy), these points of the compass representing their relations to the President's House as the center of the group.

It may be interesting to mention that early in 1800 the architrave, frieze, cornice and roof of the original north wing of the Capitol were finished. The Supreme Court and offices and Law Library were fitted up for the two Houses of Congress. It was here that Congress first met on Nov. 17, 1800. The President's House, which was first occupied by President John Adams, his nephew and private secretary, William S. Shaw and later in November by Mrs. Adams joining them, was far from completed; the present private portions of the structure, however, were habitable.

But for the energy of James Hoban in carrying the public buildings forward in face of insufficient funds, scarcity of labor and other obstacles almost insurmountable, the second session of the Sixth Congress would have been obliged to meet in the open air, and the President and his family might have found lodgings in Georgetown. In 1800, upon the arrival of Congress and the President, the only person left connected from the beginning with the work of the city to welcome them was James Hoban. It may be added that this faithful officer during the next two years completed the four original Executive buildings on the sites occupied by the Treasury Department on the east and the architectural group of the State, War and Navy Departments on the west of the Executive Mansion.

James Hoban, a native of Ireland, settled in Charleston, South Carolina, before the American Revolution. He had gained local repute in the colony and state of his adoption as a builder of plantation houses. The chaste architectural features of the official residence of all the Presidents since the elder Adams were personally inspected, admired and approved by General and Mrs. Washington but a few months before the General's death. It can therefore be truly said that the Executive Mansion as it stands today is associated with every President of the United States. The President's House when erected was the finest structure of the kind in the Western Hemisphere. Today it loses none of its reputation for simple effectiveness in comparison with the modern ornate adaptations of the classic styles.

The names of L'Enfant and Hoban are as indelibly impressed upon the present magnificence of the Nation's Capitol today as they were upon the beginnings amid the cornfields of the former proprietors of the soil. A critical study of James Hoban professionally from the examples of his art as we find them carried out in the Executive Mansion, reveals a delicate sense of the beautiful

in decoration and of form and proportion in design. His interpretation of the classic orders was aesthetic as well as scientific. In every respect his work equals and in some features surpasses the designs of other colonial architects. This may be said of the Executive Mansion. In it we find the richest and purest forms of the adaption of the classic styles during our colonial or Georgian period. In closely studying his capitals where the sense of the order is generally crystallized, Hoban displayed sentiment as well as art by introducing the American rose as a crowning feature in the center of the Grecian Ionic. The volutes, egg-and-dart and bead, all partake of the deep and clear cutting shown in nature by the setting of the leaves of the rose.

The base rectangle or ground plan, height of first story, and of the order, seem to have been worked out after careful study and preparation. The number thirteen figures conspicuously in much of the work and seems to have been the first instance of the significant and historic number being used in architecture. In comparing and drawing out the base, plaster, shaft and capital, the thickness of walls seemed to correspond with their development in plan or section. The entablature and balustrade are well designed and constructed, and are in better harmony than most work of that day. The placing of the corner brackets and dentils is most ingenious and interesting. The main entrance doorway and trimmings, and the south, east and west central windows are beautifully proportioned and designed. The small columns found by these openings are more beautiful than would be expected, and if drawn out in detail by any good artist in the present school of rendering they would not only be a surprise but would show most beautiful work both in designing and in execution on the part of the original architect.

His interior decorations are also artistic in conception and harmonious in execution. The mouldings, trimmings, baseboards, panels, window frames and shutters all give evidence of most careful attention to minute detail. Some of the smaller mouldings are particularly chaste and might well be copied for style even in comparison with the best types now in use. Some of the old hardware still may be found in service and is of special interest and value, as much of it was hand-made probably after Mr. Hoban's designs. Of course much new hardware has been added as occasion required.

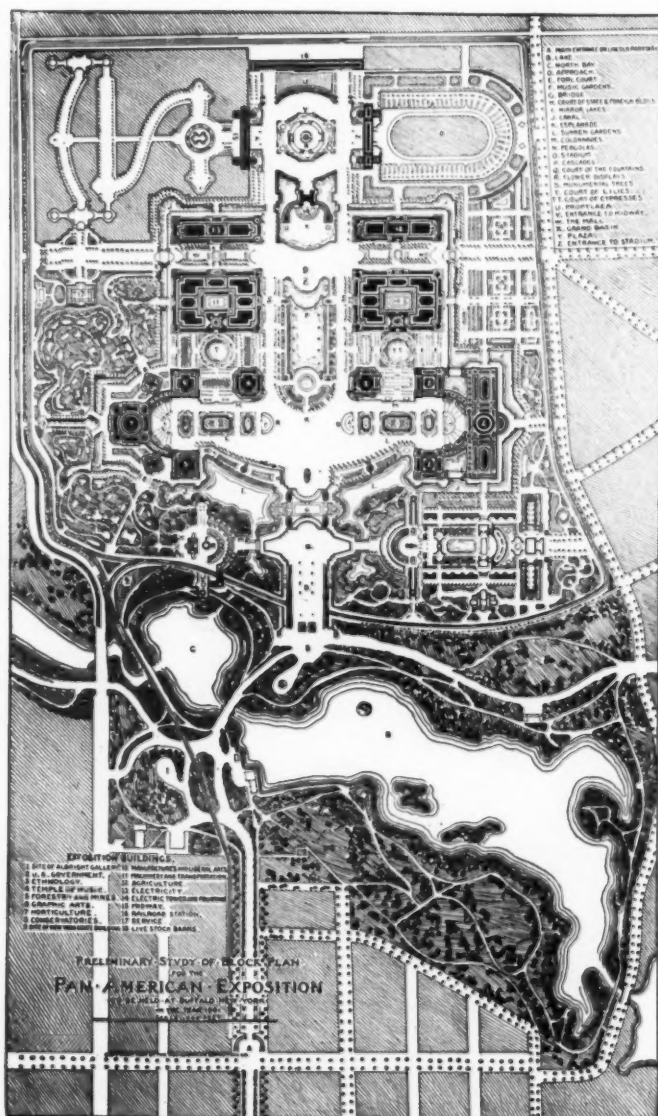
These conclusions have been reached after a careful examination, and measurement of Mr. Hoban's work, from the applied forms in the building itself under direction of Col. T. A. Bingham, Corps of Engineers, U. S. A., who is in charge of the Office of Public Buildings and Grounds, especially of the Executive Mansion. This office is the oldest under the government, having been established

by President Washington 1791, and many of the early records, deeds, letters and early correspondence relative to the Federal building at that time are still on file.

Taking this beautiful Ionic official home of the Presidents as the evolution of the taste and skill of James Hoban, the first architect, it may safely be said that a century of experience in the building of classic styles has produced no purer results, nor does this long lapse of time in the slightest degree lower the exalted standard which it presents today.

Frederick D. Owen.





SOME NOVEL FEATURES OF THE PAN-AMERICAN EXPOSITION.

Impressions and Opinions.

I.



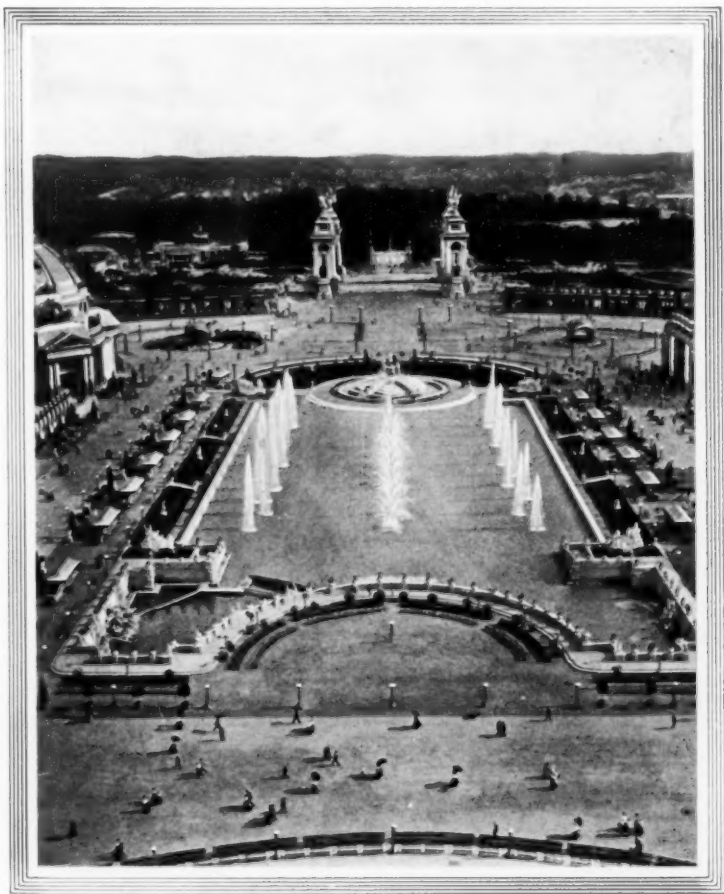
TO hold an exposition, Pan-American by name and nature, in a city of the size and situation of Buffalo was not in itself a happy idea. Buffalo is the creation of the great lakes in general and specifically of the Niagara River. Its peculiar prosperity is derived partly from internal commerce and partly from its proximity to Niagara Falls. A Pan-American Exposition, on the other hand, so far as there is good excuse for its existence, should have been held in some city looking outward over the waters that connect the two American continents—in a city like New York, possessing actual business and social affiliations with the southern continent. But it may be doubted whether there is a good excuse for its existence. Pan-Americanism is neither a sufficiently desirable ideal in politics or a sufficiently important fact in commerce to deserve celebration in an exposition. The business, educational and sentimental ties of the Spanish-Americans bind them to their blood relations in Europe, and not to their domineering protectors under the Monroe Doctrine; and in precisely the same way our own sympathies and interests are both very much more engaged in England and on the continent than they are in Ecuador and Peru. Pan-Americanism is at bottom the political aspiration of a group of American statesmen, who believe that in some indefinite way American nationality will find a securer foundation and a larger scope by intensifying artificial relations with the insignificant minor states of South America than by cultivating perfectly natural relations with the people in Europe, who buy our products and advance us their culture. This I take to be an error; and to judge from their general behavior and their representation at the Exposition, the South-American states take it to be an error also; but for good or bad it is a very popular view in this country, and such a noisy one that, following an advertising map freely used at the exposition, it may fitly be called not Pan-Americanism, but Tinpan-Americanism. The strength of the Buffalo Exposition consisted not in the least

in its being Pan-American, but in its being genuinely and typically American; and it is genuinely American, because it has made such an intelligent use of the peculiarity and strength of its local position. Let it be set down as a most remarkable and memorable fact that a city, no larger, no wealthier, and no more centrally situated than Buffalo, has succeeded in creating an exposition that possesses the merits both of power and distinction. It is a striking example of the local energy, the faculty of organization, and of the ability to conceive and execute large enterprises, so characteristic of American industrial achievement. It is also a striking example of the readiness of a minor American city to put aside on an important occasion its provinciality in matters of taste, and to make its triumphal constructions embody something like the best ideals and training of American art. Considering that the United States are necessarily a decentralized country, and that decentralization in matters of taste generally leads to crudity, the co-operation between local initiative and the best existing standards of artistic taste, of which the Buffalo Exposition is an instance, promises well for the future of the fine arts in this country. Altogether Buffalo deserves enormous credit for having tried to maintain the level of achievement, which had been set by Chicago, and which was difficult to maintain with the resources at her disposal.

II.

Gayety was undoubtedly the dominant note struck by the Exposition architecture and grounds, and this gayety had its contagious effect, not only on people ordinarily sensitive to those influences, but also upon those ordinarily torpid. It was a place in which many good Americans were beguiled without knowing why into forgetting the familiar preoccupations of their workshops and offices, and allowing their natural good humor a responsive expression. They were suddenly transported into surroundings, as different as possible to those by which they were ordinarily accustomed, and every aspect and suggestion of which were festive and entertaining. Here was a city of generous spaces and far-reaching views, whose pleasant perspectives provoked a similarly expansive feeling within; a city whose buildings exhibited the utmost variety of line, mass and color, and spoke plainly of the easy-going, careless, and exuberant life of the southern peoples; a city of lagoons as well as of footways, whose long vistas of sparkling water offered to an overheated body placid and cooling suggestions; a city that was also a garden, in which tired eyes could find an abundance of shaded corners, and the refreshing relief of green foliage and grass; and, finally, a city that did not need the sunlight in order to keep its gayety, but as it was lively during the day, so

was it brilliant by night—brilliant yet mysterious. In short, everything about the Exposition, but particularly the color and the illuminations, by intensifying to the average visitor the difference between this city of color and light and his familiar surroundings, did much to sharpen the impression that they had passed for

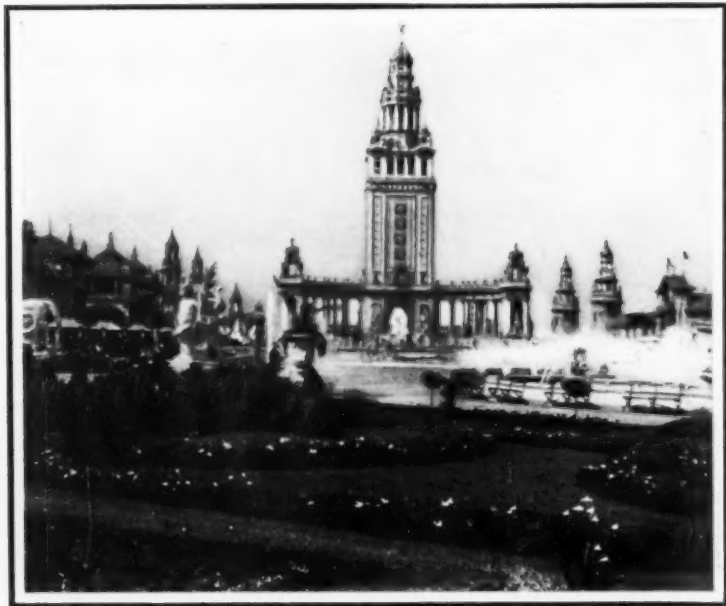


THE COURT OF THE FOUNTAINS FROM THE ELECTRIC TOWER.

a moment into a new world, in which all one had to do was to look around and be merry.

Unless I am very much mistaken, a very large number of Americans, if influenced by anything in the Exposition except the Midway, were influenced in something the way described above. Whether they realized it or not, they were under the spell of unusual and highly stimulating surroundings, and to have cast that spell upon them was an admirable and useful achievement. Ordi-

narily their surroundings have little or no effect upon them, and they can laugh and be merry in streets and rooms that to more sensitive people would be utterly depressing. It requires, consequently, the strongest sort of a contrast and the most vivid and insistent suggestions to awaken them to any sense of essential difference between one place and another, and about the only contrast that seems in most cases to be sufficiently strong is a trip to Europe or a visit to an Exposition such as that at Buffalo. Of the two the Exposition has some advantages, because, however fantastic and



THE ELECTRICAL TOWER. A DIAGONAL VIEW.

John G. Howard, Architect.

unreal it is to them, it makes its appeal as a native product, which somehow cannot be altogether alien. The cathedrals, castles and palaces of Europe belong to the past of a foreign people; they are interesting, but out-of-date. An Exposition, on the other hand, is as contemporary almost as a daily paper, and as American as electricity and Niagara Falls can make it. Hence its effect in stimulating popular appreciation of the relation which may exist between a feeling of exhilaration and a beautiful environment, is likely to be more immediate and telling than the effect of a European pilgrimage; and it is telling, because it comes upon them, if at all, in a natural, insidious, and half-unconscious fashion.

It is scarcely necessary to add, however, that the unquestionable success, which the Exposition has achieved in suggesting to

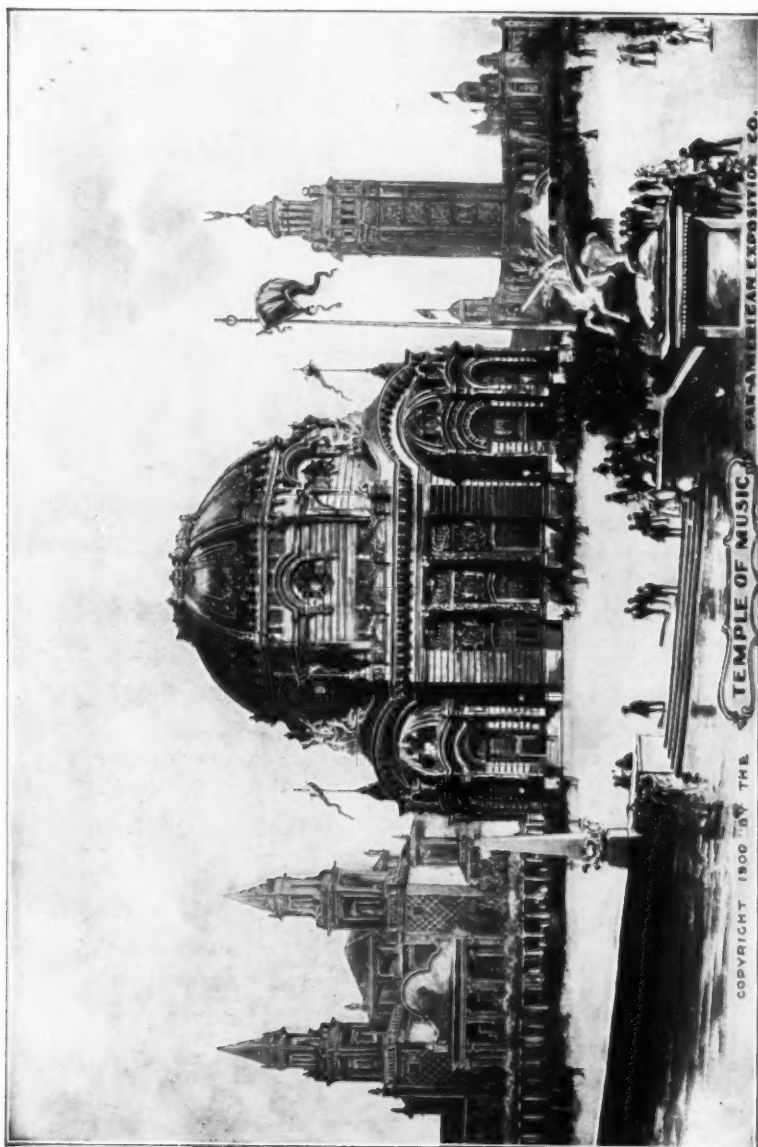
some good Americans that seemly surroundings may be an element in happiness must not be confused with an indiscriminate approval of the means taken to reach this result. The current magazine criticism has for the most part made altogether too abruptly the transition between a cordial recognition of the gay-

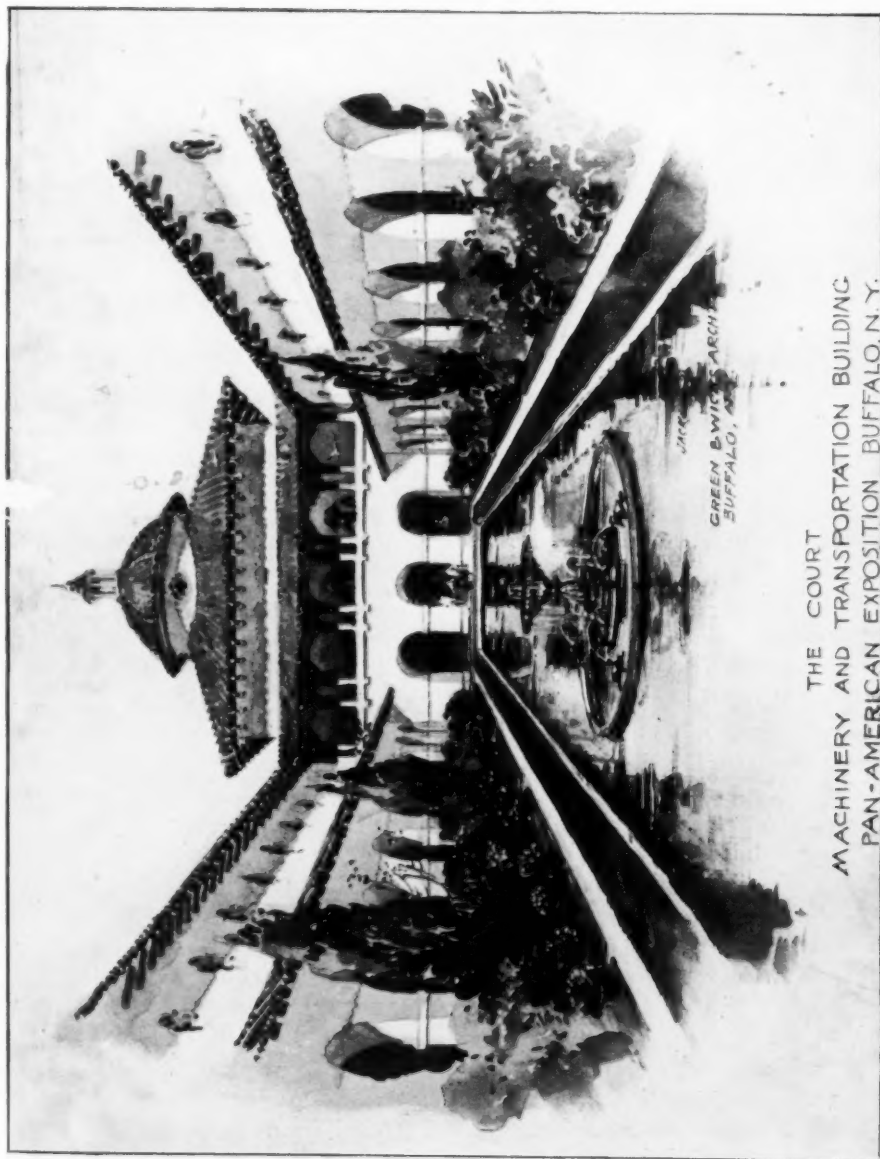


THE ELECTRIC TOWER. A LATERAL VIEW.

John G. Howard, Architect.

ety of the general effect, and an unqualified acceptance of the actual plan. Many of these commentators have followed too much in the wake of the generous official interpretations supplied by the management. They have been content to point out that a careful attempt was made to work out a consistent and elaborate plan, in which each separate feature should have its proper place, and in which every available means should be used to obtain a con-





THE COURT
MACHINERY AND TRANSPORTATION BUILDING
PAN-AMERICAN EXPOSITION BUFFALO, N. Y.

summate effect; but they have passed lightly over the actual integrity and adequacy of the plan itself. Yet notwithstanding many obvious and considerable merits, the plan possesses several very important defects, which prevent it from being a consummate success, and which will always leave our memories of Buffalo tinged with the regret that so good a thing could not have been better.

From one end to the other, the design shows more fertility in ideas than success in carrying them out, or in putting them properly together. The idea of the Court of the Fountains, with the Electric Tower as its culminating feature, with the most important buildings grouped along its sides, and with the main approach across a Triumphal Bridge, and through an Esplanade that offered interesting lateral fountains, arcades and buildings—this arrangement had some of the earmarks of a big architectural idea. It had the advantages of a bold central feature, built for a purely symbolic and decorative purpose, and expressive more than any other structure of the actual motive of the Exposition, of a court and square which could be flexibly used to accommodate many different buildings, and of very generous spacing which both across the water, and along the axis of the design, offered numerous opportunities for surprising and charming views. Moreover, many of these advantages were realized to the full. The Electric Tower came near to being at once as light and yet as dominant and impressive as its situation and function demanded. The effect of the Court and the Esplanade was sumptuous and imposing, and some of the prospects across the water of the buildings on the other side were altogether charming and delightful—this being particularly true of a diagonal view of the towers and broken lines of the Machinery and Electricity Buildings, and also a similar view from a point at the opposite side of the simpler outlines of the Ethnology Building.

But successful as the Court in some respects is, it is far from being an unequivocal success. For one thing, the Electric Tower, while it looks well from the distance, becomes less satisfactory, according as it is more nearly approached. The Tower itself is a well-tempered and graceful structure, although it would have been better had it been taller, as it was designed to be; but it can not be said that the colonnade makes a well-proportioned effective base. From a near view, it is too narrow, and the pavilions are too thin. A more serious criticism must be passed upon the great monumental and decorative feature of the opposite end of the court. The Triumphal Causeway does not look badly from a distance; but whenever its pylons are brought by the eye into any immediate relations with the neighboring structure, every other object is dwarfed by their imposing dimensions. As you enter the Court

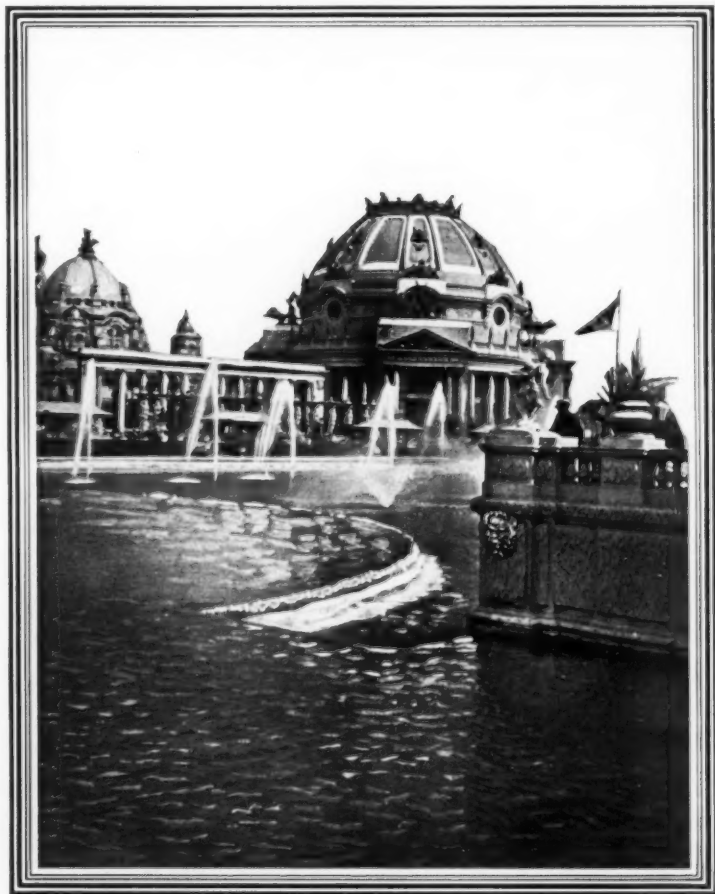
and look past the pylons toward the buildings beyond, even the Electric Tower itself becomes insignificant beside their looming masses. Instead of a proper subordination of this most spectacular incident to the scale of the other buildings, a visitor is confronted by a manifest over-emphasis of a purely decorative feature, whose only reason for existence was its fitness to complete and



TRIUMPHAL BRIDGE FROM THE WATER SIDE OF ONE OF THE PERGOLAS.

intensify a general effect. But not only are the pylons too imposing for the Causeway, but the Causeway is too broad and spacious for the water it has to span. Although treated as a monumental bridge with a footway that rises gradually to the center of the arch, it does not make upon a person who enters and crosses it the actual impression of a bridge. The water is the only possible excuse for the whole structure, but that water is entirely concealed by the bridge and its huge towers. In order to find it you have to go in search of it, and insist that it shall not escape you. Where-

ever the Causeway can be seen across the water, as it can from the outer sides of the Mines Building, it looks comparatively appropriate, but from all ordinary points of view it presents the appearance of a wide passageway, and not a bridge. If as the designer evidently believed, the large area of the Esplanade and the Court



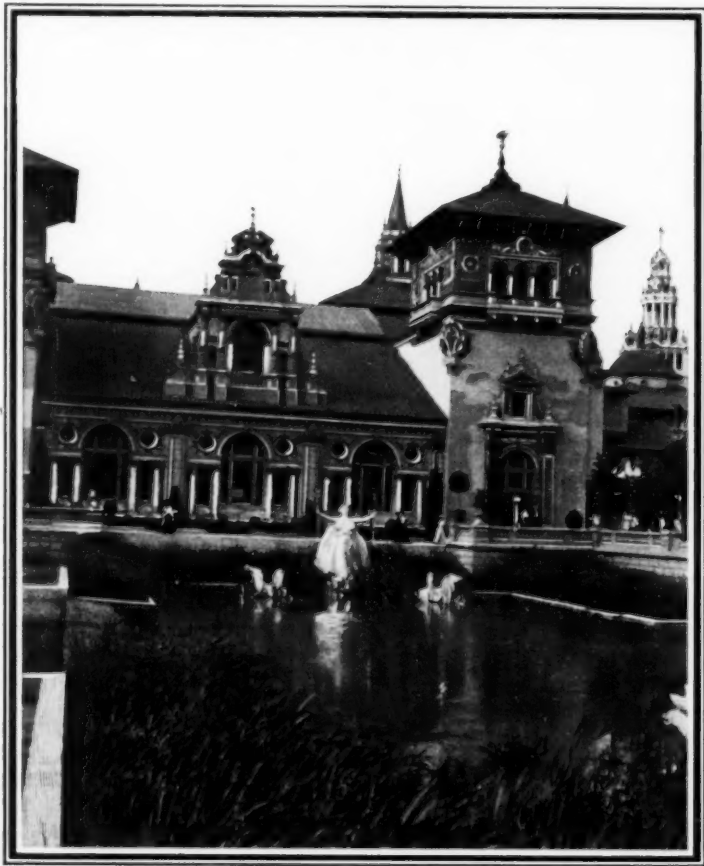
A WATER VIEW, LOOKING TOWARD THE ETHNOLOGY BUILDING.

George Cary, Architect.

beyond demanded an approach correspondingly spacious, the demand could have been satisfied by the construction of a more logical and less pretentious structure.

An equally if not more serious defect in the general plan is the lack of an effective approach from a direction actually employed by the public. Unless a visitor selected an entrance, so inconvenient as hardly ever to be used, he would not have been led to the splendid effects of the Court of the Fountains by successive and

inevitable stages, but he would have stumbled upon them un-awares. This is particularly true of the people who entered by the most popular of all the gates—that which was served by the electric cars. Probably two-thirds of the visitors made their approach from this direction, and as they strolled up the path diverted only by an uninteresting building, some extremely energetic sculpture,

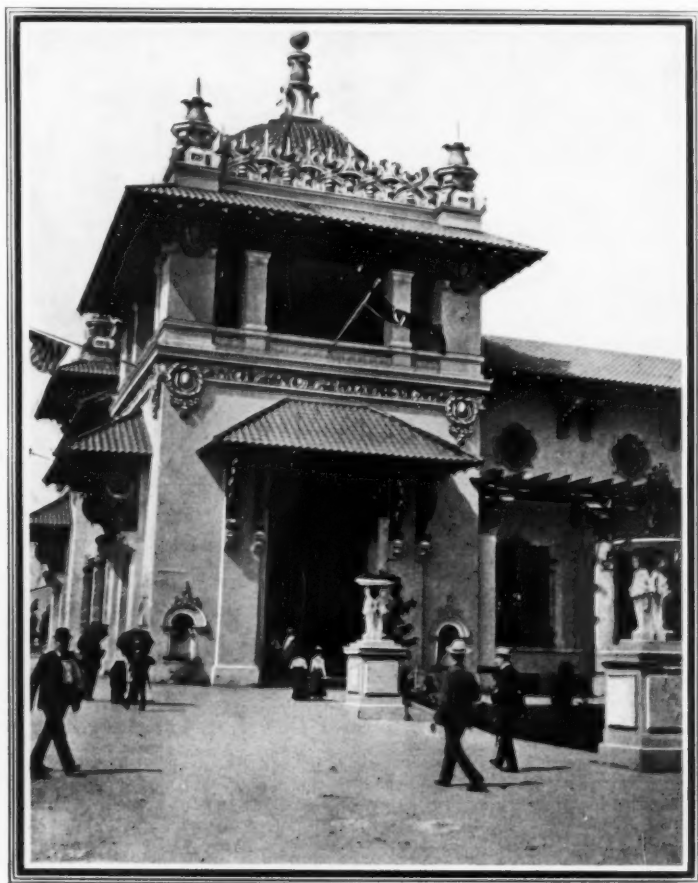


THE GRAPHIC ARTS PAVILION.

R. S. Peabody, Architect.

and some stupid and ineffective beds of flowers, they would have no reason to suppose that they were approaching anything more important than, say, the Central Park Casino. When, however, they reached the forecourt and faced around, they would suddenly find themselves upon the edge of the Triumphal Bridge, which, according to the plan, was supposed to have been approached from the Park and Lake. But it is absurd to design a chief approach, which, as a matter of fact, people rarely use, and

the general plan should either have been rendered more independent of the Park, or the Elmwood Gate and the pathway should have at least received an interesting special treatment. A criticism, different in details, but something to the same effect may be passed upon the entrance through the Plaza at the other end of the grounds. Of course the designer of an elaborate expo-



A CORNER OF THE MACHINERY BUILDING.

Green & Wickes, Architects.

sition plan can scarcely be held responsible for more than one logical entrance, while for the convenience of the public there must and should be a number of gates, which cannot pretend to lead gradually and inevitably to the central features of the plan. Consequently, in spite of the fact that all the people, who reached the grounds by the railroad, entered through the Plaza, it need not be objected to that very interesting enclosure, that a square is not

properly an approach. The trouble rather is, that situated as the Plaza is, behind the Electric Tower, people are conscious while there that they are in the backyard of the Exposition—that everything of the utmost importance is on the other side of the Tower. It seems a pity that the buildings around the square, which were



BACK OF THE MACHINERY BUILDING, WITH A VIEW OF THE CANAL.
Green & Wickes, Architects.

all of them very effective, much more so than the square itself, could not have been used to contribute their quota to the rich and splendid effect of the Court, the Fountains and the Tower. Indeed, the design as a whole may be criticized from this same point of view. Considering the lavish expenditure of space and money upon the Court it might better have been used even more than it was as the center, around which the buildings were grouped. As it is any episodes in the design, such as the Plaza, appear insignifi-

cant beside the Court, and might as well have been made in some way more directly contributory to the general effect.

In addition to the Court of the Fountains, the designers are to be credited with two other happy, and in this connection original ideas: the electric illuminations, and the use of color to enhance the architectural values. The first of these has undoubtedly the great popular "card" of the Exposition, and probably did more to advertise it than any other single attraction. But since its association with the architectural design was only accidental, it can be left to the critical approbation which it is receiving so abundantly at the hands of the popular magazines. The effect of the illumination was startlingly novel and brilliant, but if it is possible for any future exposition to use the same amount of light, perhaps better results can be obtained by freeing the plan of the illuminations from such a scrupulous adherence to architectural outlines. The use of color was a novelty of much greater architectural interest. If the Buffalo Exposition can stimulate American architects to pay more attention to color values in their designs, it will have made at least one valuable contribution to American architectural progress. The designers of future expositions will make an error, if they do not repeat the experiment of the past summer, for it is evident that under the peculiar conditions of exposition architecture, proper coloring is of enormous importance, both in intensifying the general effect, and in increasing its gayety and picturesqueness. It must be added that so far as its use at Buffalo was concerned the idea was happier than its realization. Even as it was, it did increase enormously the gayety and picturesqueness of the general effect, particularly in the case of all those buildings the coloring of which followed most closely the coloring actually used in similar buildings in Southern Europe. In regard, however, to the general color scheme, we may adopt the views of one of the official critics of the exposition—Mrs. Schuyler Van Rensselaer: "The color does not run, as many people feared it would, in the direction of crudity and gaudiness. It errs in the opposite way. Under our strong blue summer sky, such colors as were used in ancient times around the Mediterranean, and are still employed there might safely have been applied—stronger, clearer reds, pinks, yellows, greens and blues—laid on in more telling masses, and pure white might have been used more largely in their background." The application of color, however, to the architectural masses was successful compared to its application to the details. Nearly all the buildings, except those around the Plaza were overloaded with coarse, tedious ornament in high relief; and these ornamental details, in themselves altogether too prominent were further emphasized by the application of various tawdry colors. It



THE STADIUM AND THE PROPYLAE.

is in detail of this character that American architecture is seen at its worst. The decorations seem in many cases to have been poured on with heavy-handed indiscrimination, whereas wherever such detail was to be made more emphatic by color, it should have been in low relief, and should have been used with the utmost discretion.

Although the use of sculpture at Buffalo was less of an innovation than the illuminations and the color, an energetic attempt was made to emphasize its importance and to distribute it effectively throughout the grounds. To this end the Director of Sculpture was given a place with the Director of Color on the Board of Architects, and by the help of a central studio in which the models of the different sculptors could be enlarged by a regular staff, it was found possible to produce a large amount of original work at a comparatively small cost. It is, perhaps, for this reason that, very decidedly, there was an excess instead of a dearth of sculpture scattered throughout the Exposition grounds. It was made altogether too cheap, so that at times the rows of statues seemed to claim one's attention in almost as insistent and tiresome a manner as they would at a sculpture exhibition. It follows, of course, that far from being situated only in spots, made appropriate for their use by proper landscape gardening, they were in many cases placed in an ineffective background or in spots which would have been better off without them. The difficulty partly is, of course, that in all Exposition work, the landscape gardening necessarily lags behind the building and the sculpture, because it is impossible in so short a time to get the full effects even of extremely generous and intelligent planting, and nothing is more necessary for the effective placing of sculpture in the open air than the proper distribution of foliage. But it is to be hoped that in subsequent expositions sculpture, because it is cheap in price, will not be made cheap in its effect. This was all the more to be regretted, because, while some of it was very bad and much of it had a tendency, particularly disastrous in sculpture, to be too expressive and popular, much of it, also, was carefully studied and extremely interesting work.

III.

Unless the popular temper changes, it is manifest that we are going to have a great many of these expositions within the next twenty-five years. Probably every great section of the country, such as New England, the Far West and the Southwest, will find or make a good opportunity to celebrate some past event or some present achievement. There are many signs that even New York

is itching for the notoriety of a World's Fair, and that within some few years, she will effervesce in an exposition commensurate with her metropolitan importance, and determined in its nature by her extensive relations with foreign countries. In view of this prospect, the probable effect of these transient cities of plaster upon



THE FOUNTAIN OF ABUNDANCE.

Philip Martiny, Sculptor.

American architecture and the allied arts is a matter for serious consideration. As to the importance of the effect and the reality of the problem there can be no doubt. The chorus of surprised and delighted criticism, which was provoked by the Chicago Fair, and the manifest influence of its beauty in assisting the popular success obtained by that Exposition during the last few months of its opening, taught exposition managers that in this business artistic effectiveness is the best possible advertisement. Buffalo

has claimed approval even to a greater extent upon the same grounds, and, according to all accessible information, St. Louis will follow carefully in the footsteps of her predecessors. The whole logic of exposition development in this country tends to an even greater concentration of attention upon the artistic opportunities of these structures—at once so elaborate and so frail, so expensive and so unsubstantial. Indeed, it is not too much to expect that they will become one of the most important single influences in the transformation of American architectural art and in the technical training of American artists. Will this influence be upon the whole good or bad? And, if either good or bad, how and under what conditions?

Exposition work has the manifest of advantages to the artists that participate in it of being both stimulating and disciplinary. It affords them a magnificent opportunity for the creation of a really big piece of imaginative architecture—an opportunity in dealing with which they are emancipated, to an unusual extent, from restrictive practical considerations; and this opportunity is at the same time a discipline, because the design is conceived and carried out in association with other architects and artists, who have more or less considerable rights of participation and criticism. The chance to produce an elaborate and complete work of merely formal beauty, to control to a very large extent the conditions which affect the work for good or ill, and at the same time to be subjected to the necessity of meeting the requirements of other architects, of sculptors, colorists, and landscape gardeners—all this is a most valuable contribution to the experience of American artists; and its value is not limited to those who actually have a share in the work. For architect and sculptors who merely inspect the completed design will be stimulated to think what they might have done with the same opportunity, and the consequence is that an amount of technical comment is generated and is passed around which cannot fail of value to all concerned. In short, an exposition under present conditions exists chiefly for the purpose of being artistically interesting and effective; and the same statement can scarcely be made of any other typical work of American architecture, or of painting and sculpture so far as they are closely allied with architecture.

These advantages are in some measure offset by several obvious disadvantages. The work of preparing an exposition is so vast and so intricate that it requires an organization equally elaborate and correspondingly efficient. But in such an organization the individual cannot count for as much as he should; he becomes to some extent the victim of the machinery, which the completion of such a vast undertaking within sixty days of the



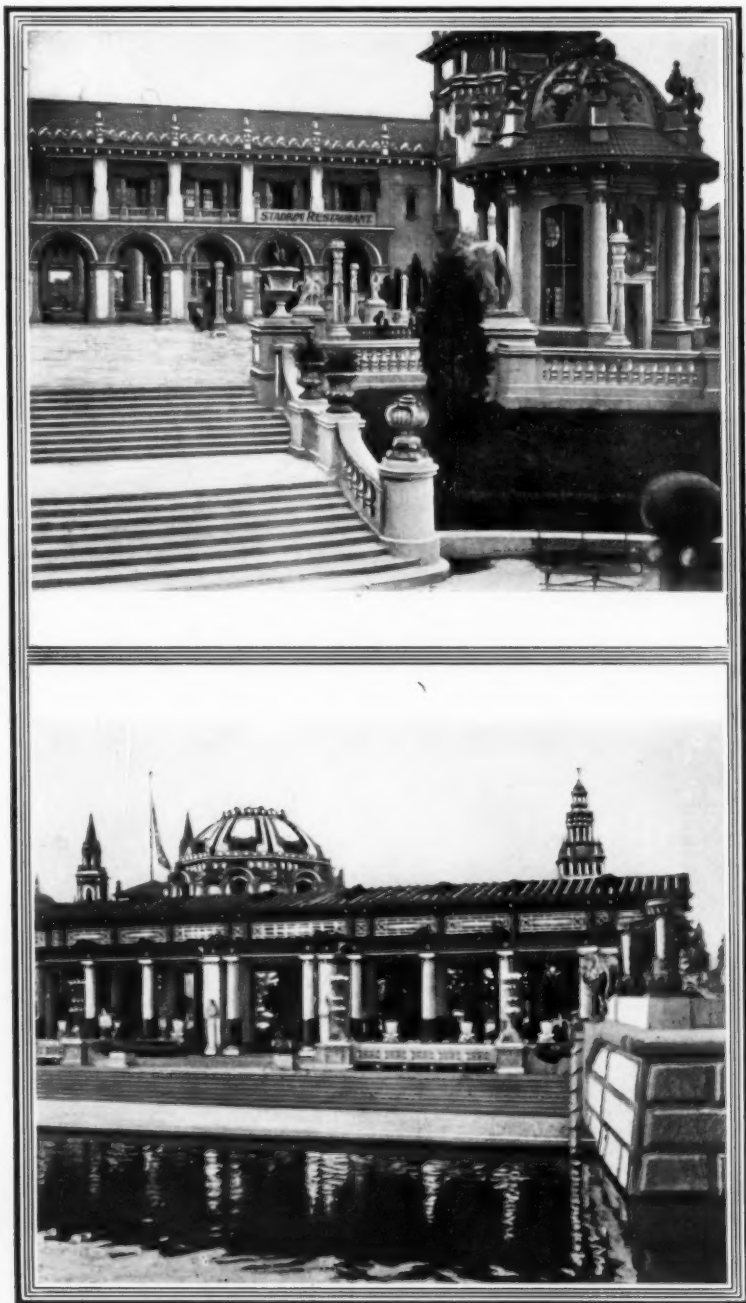
THE MALL.
THE WATER SIDE OF ONE OF THE PERGOLAS.
John M. Carrère, Architect.

specified time demands. Things about his special work, which he most values, are crowded out by the constant pressure to obtain immediate results—results, which, consequently, represent not the man's finer moments, or his careful and finished conceptions, but the best that he can do in a few months of hurried labor. The consequences are that the artist frequently fails to obtain the experience, which alone induced him to undertake the job, and that the observer is constantly disappointed by pervading evidences of good ideas that are badly realized, of excellent architectural motives not consistently developed, of obvious errors partly concealed by equally obvious devices, and of frequent carelessness and shiftlessness in the management of detail.

It must be added that these drawbacks are superficial symptoms of a more radical trouble. An exposition is after all only a show, and what is worse, a very temporary show. The curse of ephemerality hangs over the whole undertaking—of an ephemerality, the effects, of which are only more baleful, because the undertaking itself is vast and pretentious. To create a great work of the imagination, not for as long as stone shall last, but for six months of the year 1903; that is in artistic enterprise, which has its logical as well as its practical disadvantages. The mere fact that exposition buildings are so largely independent of the ordinary structural necessities, and that they exist merely for the purpose of creating a temporary effect subjects the architect to a constant temptation of sacrificing over much to the prime object of making his plaster walls attractive and interesting. He obtains the discipline of being obliged to work in association with other artists; but he loses the equally important corrective and ballast of being obliged to erect a sound, permanent, and serviceable structure. Exposition work seems to become demoralized in proportion as it becomes self-conscious—in proportion as it realizes its peculiar advantages; and it is a question whether American architects, although they really desire to maintain the standard of dignity set by Chicago, can resist the temptation to seek effectiveness on each successive occasion by more startling and meretricious means. The Chicago Fair was productive of nothing but good for American art generally, but obviously a number of attractive experiments one after another may have a very different effect from the first and happiest of the series. While novelty, when prompted by originality and corrected by good taste is one of the most wholesome and delightful things in the world, a succession of novelties might easily become one of the dreariest and least wholesome things in the world; it might continually tend to become more sensational and experimental. If one may judge from the gaudy display in Paris in the summer of 1900, French expositions have

already reached the stage, in which frivolity becomes a virtue; and while the Buffalo Fair is by comparison a model of good taste and self-restraint, yet as compared with Chicago, it is plainly designed to be something both different and livelier; it is intentionally novel and gay. The desire for advertisement, the necessity of creating a sensation may well drive subsequent expositions still further in the same direction; and should this be the case, these expositions might easily become more powerful influences for evil in American architecture than they have yet been for good.

There are, however, considerations from another source, which may be brought to bear on the problem. Hitherto we have been discussing the effect of expositions upon American artists; but what of their effect upon the American public, who pay for them and enjoy them? For my part, I cannot help thinking that their value to the public is much less open to dispute than their value to the artists—and for the reason that expositions are the one popular expression of American art—the one expression that millions of people in some measure enjoy—the expression that tends most powerfully to awaken popular realization that American art may have a place near the center of American life, and not on its margin. I have registered my own impression in the foregoing pages that at the Buffalo Fair, people ordinarily torpid, seemed to fall under the spell of their surroundings, and my opinion that no work of art any less elaborate and complete could produce such an effect. It only remains to insist upon the importance of this effect. Expositions from their nature offer an opportunity, altogether unique in this country, of making large numbers of people feel at home in attractive and interesting surroundings. In an aristocratic society the upper classes are the natural patrons of the fine arts, and what with their wealth and a high standard of taste are almost always able to make things of some beauty and distinction actually contribute to the happiness of their lives, and in this way to the wholesome domestication of art in their midst. In a democratic country, on the other hand, the rich cannot by any amount of patronage really domesticate and nationalize the fine arts, because the standards of domestication are necessarily more inclusive and popular; and in such a country, where the home surroundings of most people are bleak or tawdry, expositions are peculiarly adapted to the purpose of bringing objects of some beauty and distinction into association with popular pleasures and even popular utilities. In this way they will surely increase that fund of national artistic self-consciousness, which must both be increased and be more widely distributed before American democratic society can attain any very considerable vitality of artistic achievement.



THE STADIUM RESTAURANT AND THE PERGOLAS.
The Architect of the Stadium Restaurant was Walter Cook.

Unfortunately, however, the popularization of an art, which was meretricious and frivolous would scarcely be a desirable or fruitful service, and consequently we must return to a consideration of the possible demoralization of exposition work in the direction of

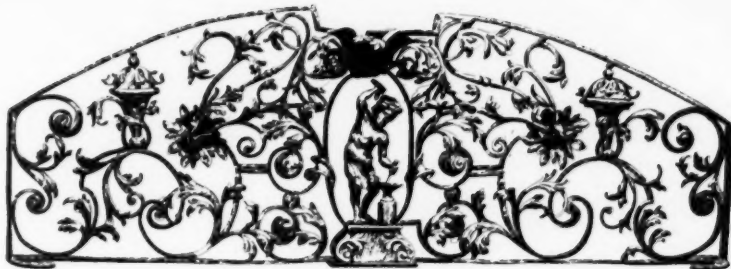


THE CANAL FROM THE ELECTRIC TOWER.

mere novelty. In the long run there is only one possible safeguard against such demoralization. The architects, and other artists employed upon future expositions, instead of seeking for merely new and startling effects must be content to adopt good ideas which have already been used, and simply try to use them better. The design of the Pan-American Exposition is full of original and suggestive conceptions, which are capable of being much more thoroughly and successfully worked out; and if they should be

taken over in subsequent expositions and worked out to better advantage, then American architects will have gained an experience which will be useful to everybody who follows closely the improvement of the second attempt over the first. But, on the other hand, if the successive experiments remain nothing but experimental, and are subsequently dropped for newer experiments, the issue can hardly fail to be unfortunate in its effect both on the architects and upon popular standards of taste. Moreover, if good ideas, developed in exposition work, are pushed to a more successful treatment in subsequent expositions, this progressive experimentation will enormously assist architects in dealing with opportunities for permanent architectural improvements. Nothing is more certain than that within the next two or three generations, the various public bodies of this country, municipal, state and national, will undertake a series of gigantic public works—such, for instance, as the proposed improvement of Washington—and that these public works will offer American architects opportunities to design a series of noble and beautiful public buildings. The experience obtained in exposition work ought to be of immense assistance in enabling architects to rise to these chances. This assistance would be unquestionable in case every city holding an exposition were sensible enough to plan the erection of one or two buildings, which would serve as permanent memorials of the event, and which might tend to increase the seriousness of the whole performance. But at any rate that indicates the great end to be sought. If exposition art and architecture can be kept in close and fruitful relations with what is progressive and normal in American art and architecture its effects will be wholly beneficial. If on the other hand, exposition art and architecture becomes too self-conscious and aggressive, its effects will be almost wholly deleterious. The outcome is for the most part in the hands of the architects themselves.

Herbert Croly.



"MONUMENTAL" ENGINEERING.



NE of the queerest anomalies in the present condition of the fine art of architecture is that the designers of certain classes of structures are in practice exempted from taking any pains about the appearance of the structures they erect. And this not because these structures are the least conspicuous, for they are very apt to be the most conspicuous. Here in New York, for example, if one were asked to pick out the most conspicuous and far seen of all our buildings, as well as the most enduring, and therefore that by which we are likely to be judged by the furthest posterity, he would have to name the Brooklyn Bridge, or at least the towers of that edifice, which in virtue of the massiveness of their masonry may be expected long to outlast the web of metal that swings between them, and also the metal cages, veneered with irrelevant masonry, that constitute the "skyscrapers" which in point of conspicuousness are their nearest rivals. Nobody will maintain that the towers are worthy of their conspicuousness, as good as they ought to be or as they might have been made. To many observers, indeed, the grim utilitarianism of the skeleton towers of the newer bridge, now rising stark on the opposite shores, is more impressive, although, perhaps, because, the art in them is unconscious. But their design is at least an exposition, which is more than can be said of the older.

Since the building of the future is evidently to be increasingly the work of the engineers, it behooves the rest of us, as well as themselves, that it should become worthy of its conspicuousness. The only way in which this can really be accomplished is to add some training in artistic expression to their training in practical construction. Modern engineering is a very modern thing. With the enormous advantages it has brought to the world, it has brought this disadvantage, that for the first time in human history a broad line has been drawn between scientific construction and artistic

construction, and that the designers of one class of constructions do not hold themselves responsible, nor does any one, for the looks of their work. If an engineer builds safely and cheaply, in a word scientifically, his work may be as ugly as it will, without any impairment of his professional reputation.

As we say, this is a novelty in history. The times in which scientific building was carried to its highest pitch have been those in which artistic building flowered. Every mechanical advance made during the Middle Ages was at once translated into terms of fine art, so that, when the culmination of the work of many generations was reached in the fully developed Gothic cathedral, it is impossible to separate our admiration of the scientific skill of the builders from that of their artistic skill. The work is artistic because it is the artistic expression of what the artist was doing in his capacity of scientific constructor. That one man should devise a construction and another make it presentable was a proposition never heard in the world till within a generation. Evidently, except to a veritable Gradgrind, it is a deplorable condition when that is the rule.

Evidently, also, the only real remedy for it is to give the scientific constructor an artistic training. In this country, where engineering has already achieved some of its greatest triumphs, and where, visibly, "that which it has done" is but "the earnest of the things that it shall do," no attempt is made, I believe, in any school of engineering to teach its architecture. I have been looking through some volumes of the "Proceedings of the Society for Engineering Education." They cover a very wide range of subjects, but I have failed to find a single suggestion in them that there was any occasion for educating engineers in the art of giving artistic expression to what they were doing. In France there is a professorship of architecture adjoined to the Department of Roads and Bridges, and it is fair to suppose that it has had something to do with the vast superiority of the bridges across the Seine, for example, over the bridges across the Harlem. One of the latest of the Parisian bridges is also one of the most exemplary, the Pont Mirabeau, away down at Auteuil, and therefore beyond the range of ordinary tourists. In this we may see how a modern bridge, which is not only of metal but a "cantilever" can be made as beautiful as an arched structure of masonry by taking thought for its beauty. A later work, by the same engineers, and a much admired work, is by no means so successful. The Alexander III. Bridge is admired, we must suppose, by those who have considered only its broad roadway, the bronze group at the summit of its flat, low arch, and the groups of marble that adorn the piers at the entrances. For nothing could be more ineffectual as an example of artistic engineering than the detail of the actual construction, as it is seen from the river

or from the shore underneath. Here are such meaningless and ugly solecisms as a riveted metal post, which is of course, constructionally, a continuous and connecting member, turned into the shaft of a pseudo-classical column, with a capital and a base of carved stone which merely conceal, and even deny, the essential facts of the case.

But nevertheless a comparison of the bridges across the Seine with the bridges across the Harlem, including the modern bridges of metal in the older city, cannot be satisfactory to the American engineer. Making every allowance for the swing span which no engineer has yet found entirely tractable in an artistic sense, and making allowances also for the differences in artistic merit among the bridges across the Harlem, it is overwhelmingly evident that the French engineer is, artistically, a far better trained man than the American engineer. For it is not only in the architectural adjuncts of his bridges, of which the American bridges are commonly devoid, and for which architects and sculptors have been invoked, but in the engineering conception and the engineering details that the artistic superiority is manifest. And it is impossible to see how this defect is to be removed except by the artistic training of the engineer himself. Not only is there no such provision made for such instruction in his schooling, but there is next to nothing about it in his text books. A technical handbook of "Modern Framed Structures," issued in 1894, contains a chapter on "The Aesthetic Design of Bridges," which is declared by the editor to be an essay "in an entirely new field." Its precepts, though doubtless generally sound and sometimes even striking, seem rather too vague and general for practical purposes. There is an architectural chapter in the manual on "Highway Bridges," by Mr. A. P. Boller, whose own works are honorably distinguished, among those of his profession, by the evident and generally successful pains taken with respect to their appearance. And, in a still later manual of bridge building, there is a chapter by Mr. Henry Van Brunt, but this is avowedly, and in the circumstances almost unavoidably, written rather for reproof than for instruction. With these exceptions I know of no attempt to set forth instruction in artistic design expressly for the use of American engineers.

But evidently such things must be too slight or too vague to supply the place of systematic training in the art of expression. Evidently the modern engineer will not be on the same plane as the ancient builder until, like him, he seeks and finds the appropriate and artistic expression for every mechanical device he employs. And even the desirableness of such an expression does not, as we see, appeal to the engineering profession, but only to here and there an exceptional engineer. It is even expressly denied by some

engineers. One of them maintains that a bridge, being a "tool of transportation," it does not matter how it looks, which is as if one were to maintain that a house being the supply of the need of shelter, it did not matter how that looked. And, to some considerations adduced by the present writer, in another magazine, to indicate the need of a higher training in artistic as well as scientific construction, a journal which aspires to represent the engineering profession observed that the criticism was entirely irrelevant since the engineer was commonly willing to hire an architect to make his work presentable, whenever his employer was willing to go to that additional expense.

The avoidance is in effect a confession. Evidently it is the author of a construction who must express it if it is to be well expressed. "It is difficult for a man to give expression to an idea of which he is not possessed." By reason of the modern divorce between scientific and artistic construction it has come about that in the skyscraper we cover up the engineering with a mask of irrelevant architecture, and in the metal bridge leave it in a nudity which often seems to be an indecent exposure.

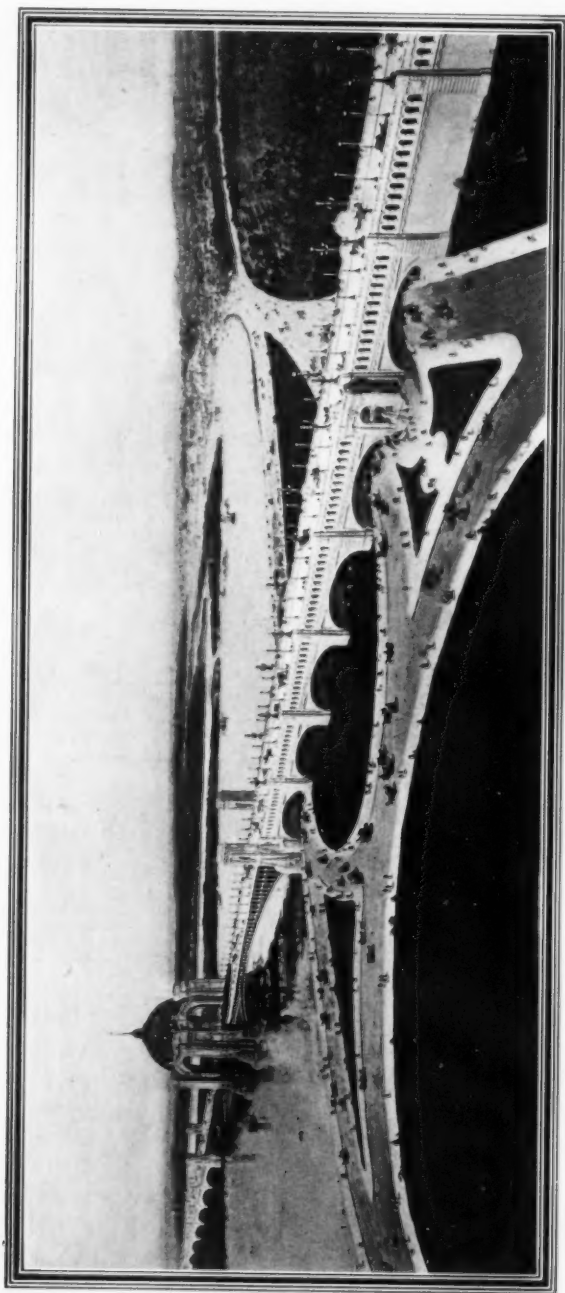
Meanwhile, when, in the language of an engineering author, "the artistic appearance of a structure is imposed as a necessary feature," it is to be expected that the engineer, untaught in such things, will invoke the aid of an architect. This is the course which has been pursued in relation to the proposed Memorial Bridge across the Potomac from Washington to Arlington. The project is some fifteen years old; and an actual design for executing it, about which we shall have something to say later, bears date 1887. It has been dormant, but never quite dead, during the interval. But the immediate revival of it has been due to the actual appropriation of \$5,000 in the sundry civil act of 1899, "to continue the examination of the subject and to make or secure designs, calculations and estimates." In accordance with this instruction the Chief of Engineers invited four engineers of undisputed eminence in their profession, the authors of important works, to submit designs, leaving it to them to employ such architectural assistance as in their judgment they might require. The resulting competition is worthy of a good deal more attention than it has received from the general public, having been buried from the knowledge of that public in the pages of "H. R. Doc. No. 578, 56th Congress, 1st Session," from which it seems worth while to exhumate it.

It will be seen that there is much variety of treatment obtained within the conditions of the problem, and in the nine designs submitted by the four competitors. Mr. Buck's two designs are identical in their general treatment, the second being merely a cheapening of the first (the third prize design) by narrowing it and omit-

ting all provision for street cars. It divides the 4,000 feet included in the whole length of bridge and approaches into a series of granite arches of moderate span for the approaches, and, for the bridge proper, a steel drawspan of 125 feet, flanked first, by a steel arch of 355 feet span, and secondly by two granite arches, each of 100 feet. Mr. Burr's first design proposes a bascule draw of 213 feet span, flanked by four steel arches, each of 283 feet. His second, the adopted design, has a central draw of 159 feet, flanked by six arches, three on each side of steel-coated with concrete and faced with granite voussoirs, each of 192 feet span. His third reverts to the division of the first, but in this the 283-foot arches are faced with masonry and constructed of steel and concrete. Mr. Hutton's No. 1 proposes a draw span of 126 feet flanked by single steel arches of 550 feet. His second (the second prize design), a draw span of 134 feet flanked by two steel arches on each side of 272 feet. Mr. Morison's (the fourth prize) proposes five masonry arches of an average of 180 feet, with no central draw but with a single bascule at each end.

No limit of cost seems to have been made in the instructions to the competitors. They were commissioned to prepare what they respectively might judge that the Government ought to have at its capital by way of a "memorial to American patriotism." The very wide diversities of estimated cost shows how differently they viewed their problem. In very round numbers Mr. Buck's prize design was estimated at \$16,000,000, Mr. Burr's at \$4,000,000, Mr. Hutton's at \$6,000,000, and Mr. Morison's at \$3,000,000. But although economical considerations were absent from the instructions, it seems clear that they must have been very present in the minds of the judges. It does not seem possible that the mixed system of steel and concrete, faced with stonework so as to make it apparently of solid masonry could have been recommended for a monumental work, in comparison with a structure of solid masonry, upon any other ground than that of its cheapness.

It will be admitted that the competition is very interesting. Perhaps it is the more interesting because the conditions of the problem did not allow the competitors to make engineering "records." The one possible exception is the 550 foot steel arch in Mr. Hutton's design No. 1. Even this is far short of the "record" of 840 feet for the later steel arch across the Niagara. The earlier is but of 520 feet, while the arches of the St. Louis Bridge, so long the record, are of the same span, and the arches of the Washington Bridge across the Harlem ten feet less. The work with which this project of Mr. Hutton's will most naturally be compared is the Alexander III. Bridge in Paris, but not on account of the span, for the arch over the Seine is but 354 feet, so much as on account of its

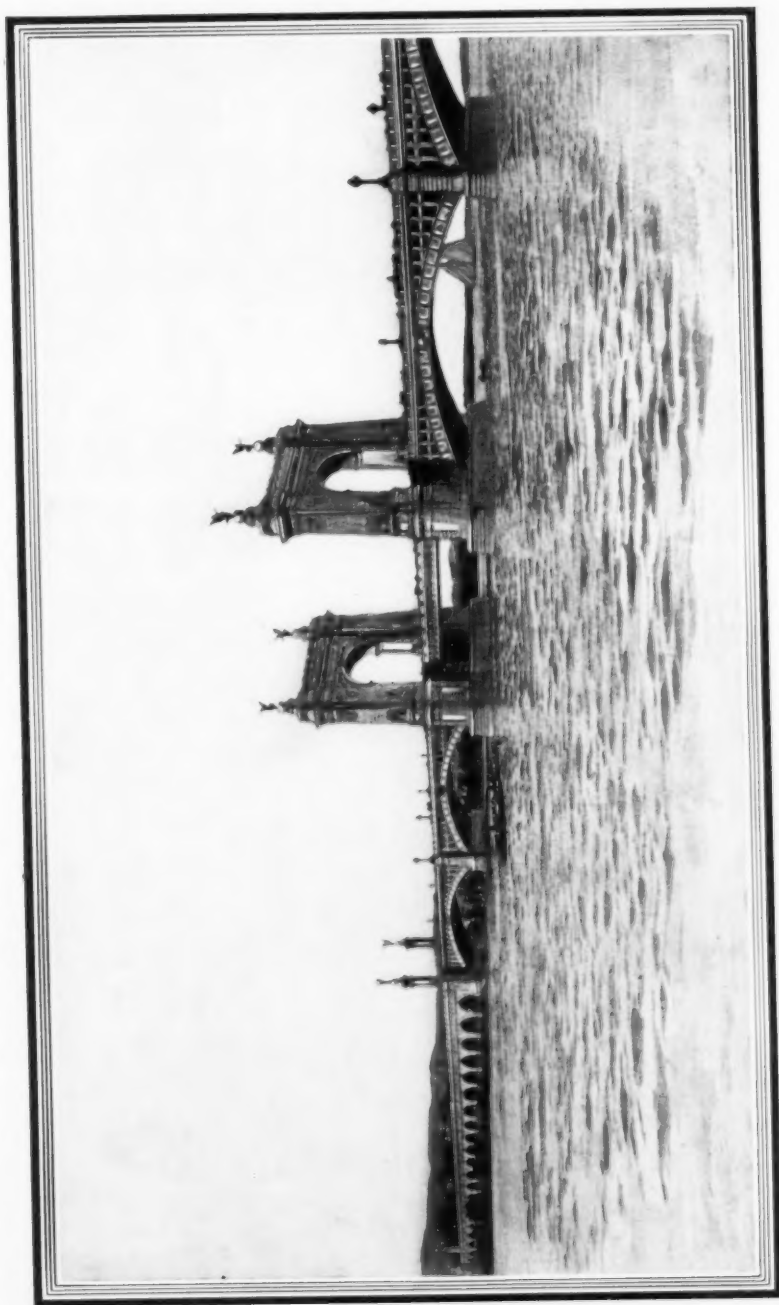


PERSPECTIVE OF DESIGN NO. 1.

W. R. Hutton, Engineer.

Ernest Flagg, Architect.

extreme flatness, and even in this the newer example is the more striking. It must be owned that the Alexander III. does not look so flat in fact as it does on paper, and that the outline of the span itself is graceful as well as impressive. It was artistically a very daring feat to undertake, as has been done in this instance, an arch of 550 feet with a rise of only 37. Mr. Hutton's temerities are certainly not the product of artistic insensibility; and it may be possible that he could have made such an unprecedented performance acceptable. But we cannot blame the board for preferring the alternative design in which two arches of 272 feet are substituted for a single span of the same rise and twice the width. And it seems quite clear that the reduced openings are much more harmonious with the treatment of the masonry arches of the viaducts of the approaches, and with the smaller metal arches that span the lesser arm of the river. Indeed, one is almost forced to conclude that the engineer was influenced by the desire not, indeed, to "make a record," but to produce an engineering achievement rather than a monument in the distinctive feature of the first plan. The architectural treatment of the central feature also seems to have supplied the board with a substantial reason, quite apart from the economy, for preferring the second. It seems to be of the essence of the design that the draw span shall be clearly and vigorously expressed. As Mr. Hutton says, in his descriptive memoir, since any form of draw, except a swinging span required high towers on each side "artistically there was but one position possible for such a structure, the middle of the main river," but it is by no means so clear why, as he also says, being the central feature, it should be "further accentuated by connecting the piers by arches which carry a rectangular dome of open work in copper." For the towers, which do "constitute" the central feature are yet in plain fact, two separate features, of which it is essential to the expression of the structure that the separation should be emphasized and not dissembled, as is done when they are connected in the direction of the axis of the bridge. Each pair is the end of the bridge on its respective side of the central opening, and the ultimate abutment of the system of arches. The architectural exposition of this function requires great massiveness on the part of the piers, and renders suitable the further loads of pinnacles at the summit of each of which may of course be works of sculpture without impairing their architectural function, and of a transverse arch between them. But it does not require, on the contrary it seems evidently to exclude, a longitudinal connection. The introduction of such a connection, and of a metal crown supported equally by all four piers "has nothing to do with the case." It is a manifest example not of "decorated construction," but of constructed decoration, and has necessarily, even to the ob-



PERSPECTIVE OF DESIGN NO. 1.

Edward Pearce Casey, Architect.

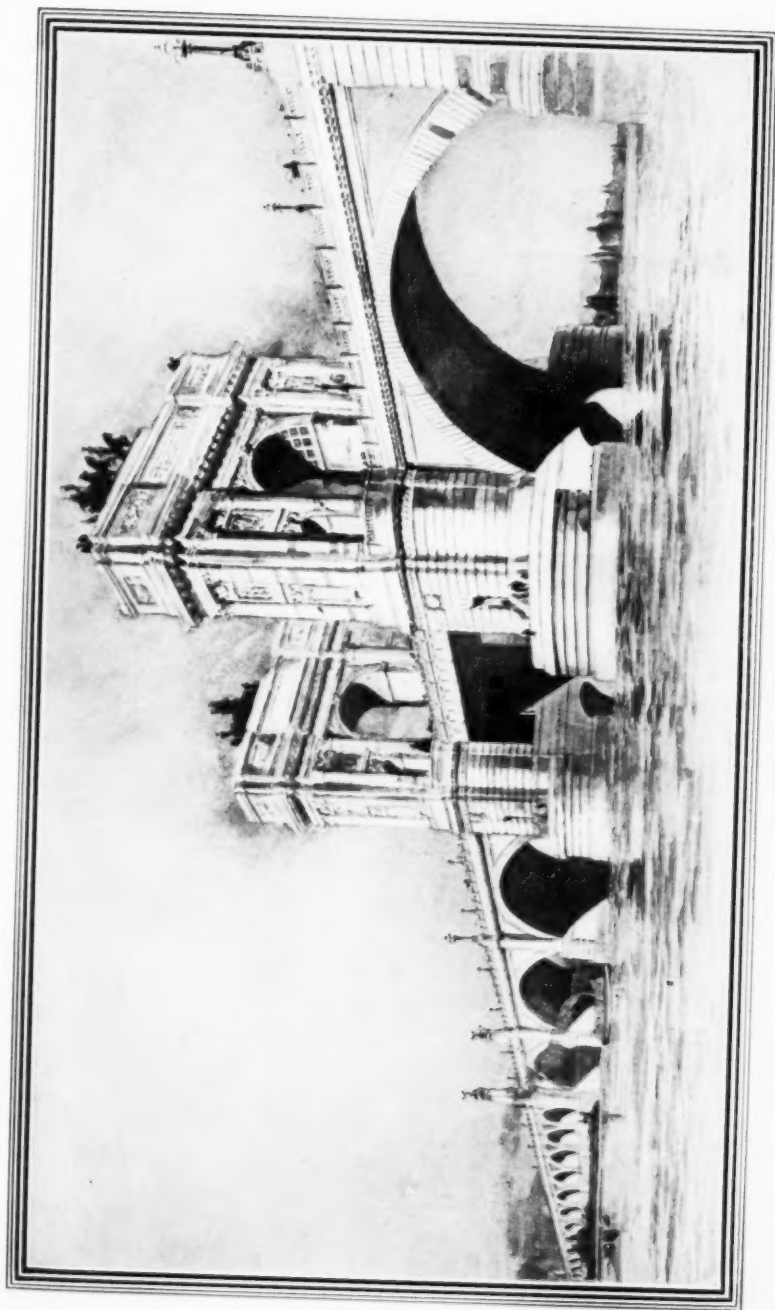
Professor W. H. Burr, Engineer.

server who does not stop to analyze it, something of capricious and arbitrary. If the great span of the metal arches in this design is due to the desire to make an engineering tour de force, the central feature is even more plainly due to the desire to make an architectural tour de force, and to make it out of something else than the conditions of the problem.

These criticisms are obviated by the second design, that one which was premiated. It is a pity that it should not have been as advantageously shown as that which we are compelled to agree with the board in finding inferior to it. But, even in a plain elevation, the double arches on each side of the central span have distinctly more of ease and consequently of grace than the single arch in positions where there is no opportunity to give that arch a rise of such proportion as will satisfy the eye of its security. The piers of the draw span are, so far as can be judged from the drawing, treated so as to enhance the massiveness which comes from their dimensions and belongs to their function. The shape of the draw itself is more easily tractable than that of the first design. That was a double-deck bridge, the lower deck being intended to accommodate the street cars, which seems to be the only way in which they can properly be accommodated on a monumental bridge, especially seeing that the ceremonial occasions when the main roadway is required to be used for processions are the very occasions when the street cars will be at once busiest and most intrusive and incongruous. For this purpose, the engineer chose a lift bridge, of which the lift is necessarily a heavy trussed girder, with top and bottom chords parallel or nearly so. The omission of the lower deck enables the designer to substitute for the lift a double bascule, of which the under surface, when the draw is closed, conforms more nearly to the lines of the flanking arches than that of the parallelogram. Still that is rather a dark saying in the report of the board that "the substitution of a curve for a right line for the lowest part of the draw is regarded as desirable." A continuous curve can scarcely be the natural expression of form for a double bascule which is in fact a double bracket when the draw is closed.

Upon the whole, however, it will be agreed that the second design of Messrs. Hutton & Flagg is much superior to the first in that straightforwardness and expressiveness which belong to monumental as well as to utilitarian engineering, and that it promised a very worthy and dignified public work. The preference of the board for the second design of Professor Burr and Mr. Casey over their first is not so readily intelligible. The general arrangement of their design No. 1, it will be seen, is virtually that of Mr. Hutton's No. 2; that is to say, two metal arches on each side of the central draw, the span of the draw being 213 feet against 134, and

that of each arch 283 against 272. The most obvious differences in treatment are the substitution of the straight truss for the curve in the draw (although the designer's description explains that the draw is to be a double bascule and not a lift, neither has it any indication of the form of a bascule, nor can a juncture be made out from the drawing) and that the "solid web" of the steel arches is much more conspicuous than in Mr. Hutton's design. This impression comes only in part from the fact that the latter is shown only in a small scale elevation, against the elaborate perspective by which the author indicates his preference for what the official judges and the present commentator regarded as the less eligible of his two projects. In fact, the solid web is in Mr. Hutton's scheme but six feet deep, while in Professor Burrs it is ten, and is so far more conspicuous a detail as to raise with greater insistence the question, why a "solid web" at all. Most likely the true answer is that because the great arches of the Washington Bridge over the Harlem show the solid web, and that is the most admired of modern engineering works in this country. There is no question that the admiration is deserved. But there may very well be a question whether this detail has anything to do with the admiration, and still more whether it has anything to do with the admirability. The very word "web" denotes a mesh rather than a plate, and the solidity denotes a massiveness which in the first place does not exist. The web of the Washington bridge arches is but three-eighths of an inch thick, and its sole structural function, as I am instructed, is to prevent the deformation of the arch under moving loads, a purpose which would obviously be as well accomplished if each voussoir were a frame instead of a plate. In the next place, the massiveness, if it did exist, would be unsuitable to a material of great ductility, which shows at its best when it is attenuated according to its own nature, and not massed in the way proper to masonry. Every beholder of the Washington Bridge must be conscious of a certain incongruity between the solid web of the arches, of which the real structure is the enclosing ribs, and the gossamer lightness of the spandril bracing, of the same material. If the one treatment is right, he must be moved to say, the other must be wrong. In the present case, the designer has avoided this contradiction. The masonry-like massiveness is substituted for the metallic abstraction of line in the spandrels as well as in the voussoirs. A facility for doing this has offered itself, in the production through the spandrel of the roadway of the lower deck, which was not present in the design with which we are comparing it, since that is for a single deck bridge. Granting the premise, which we have declined to grant, that metal should be treated as massively instead of as tenuously as possible, and it will be admitted that the facility has been



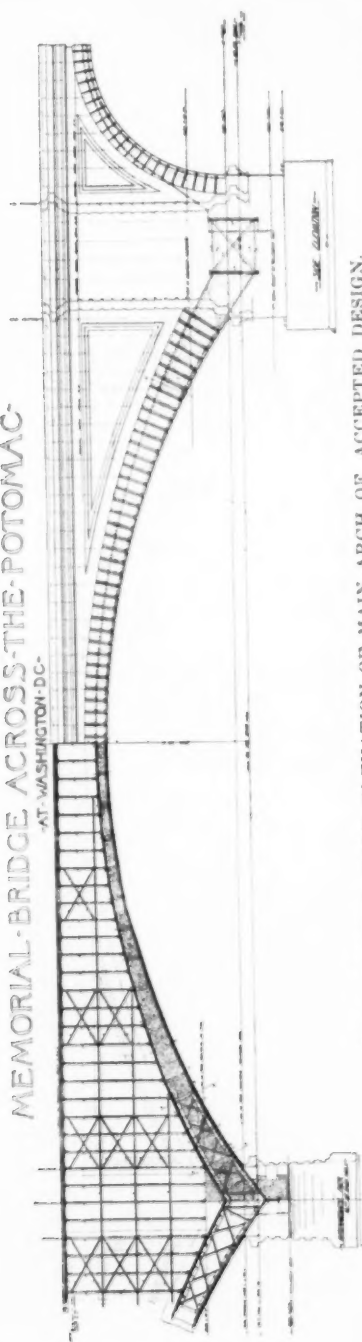
Professor W. H. Burr, Engineer.

CENTRE OF DESIGN NO. 2.

Edward Pearce Casey, Architect.

MEMORIAL BRIDGE ACROSS THE POTOMAC

AT WASHINGTON, DC.



HALF SECTION, HALF ELEVATION OF MAIN ARCH OF ACCEPTED DESIGN.

Edward Pearce Casey, Architect.

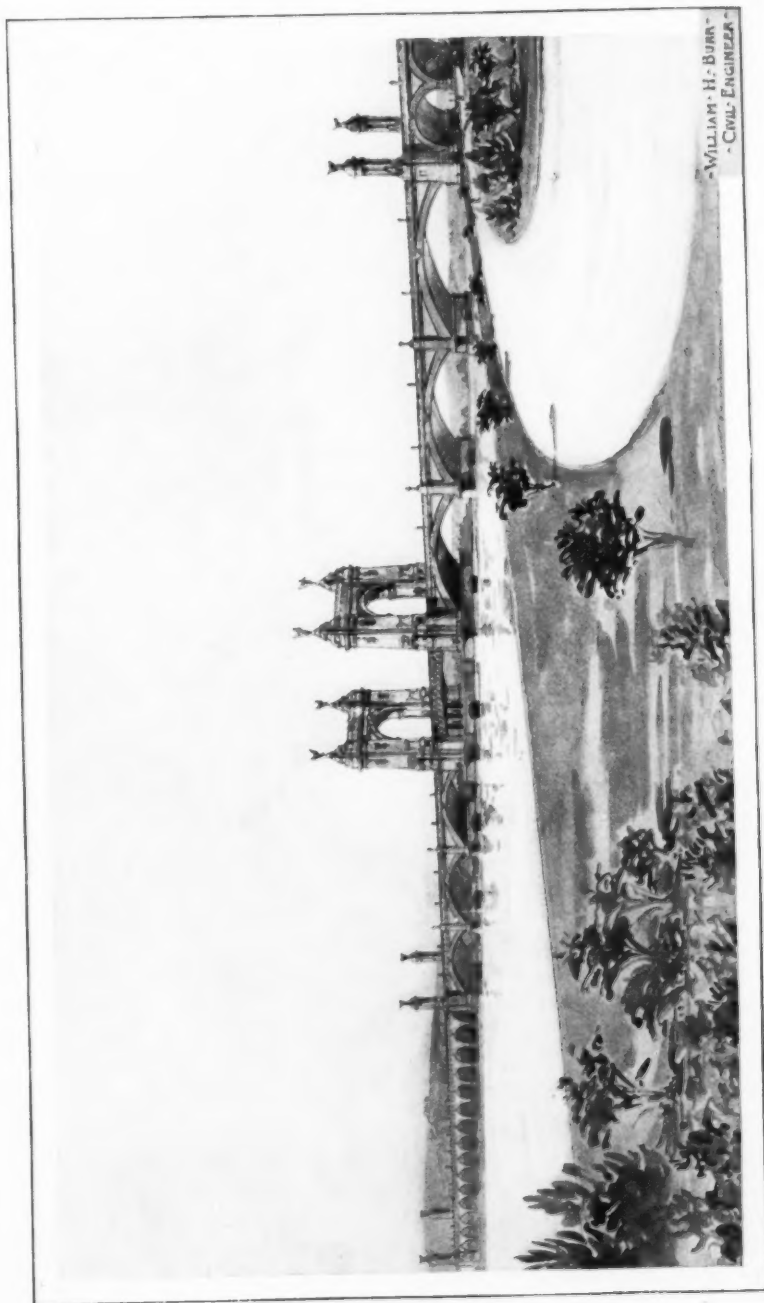
Professor W. H. Burr, Engineer.

turned to very good account, and that the treatment is throughout consistent with itself. The piers and their arches are both impressive and expressive, impressive because they are expressive. They mark, quite unmistakably, that each of them is not an intermediate feature, but the end and abutment of its respective structure, and their disconnection is emphasized, instead of being denied as in the central feature which we found the chief blemish upon Mr. Hutton's design No. 1. This also would have been accepted as worthy and adequate.

One can readily understand, upon aesthetic grounds, the preference of the board for the central piers of this design over the corresponding features of the design which in general they preferred to it. The Roman triumphal arches have indeed a massiveness which fits them so far for the purpose to which they are here applied, and the modelling of them is very well and studiously carried down from the roadway to the water's edge, in a substructure in which the designer was thrown more upon his own resources. But to copy a Roman arch in the abutment of a modern bridge is a confession of national incapacity which one would not like to see made in a memorial to American patriotism. And besides, the Roman triumphal arch is not appropriate to the present purpose. It is an entrance, which, if it had any place in such a structure would find it at the end, possibly at each end, but certainly not in the middle where not the entrance but the "load" is the main thing and the opening a detail instead of the prime object of design. And certainly two arches of Constantine, Titus or Dewey would be intolerable in the middle of a modern memorial bridge, confronting each other across its draw span.

It is not so easy to find aesthetic grounds for the board's preference of the second to the first design of its authors for the bridge proper. For the accepted design is, in effect, a combination of the piers of No. 1, with the bridge of No. 2. The practical ground of preference becomes plain enough when it is stated that there is a difference of half a million in favor of this design over the first of its authors, and of two millions over the corresponding design of Mr. Hutton. But then economy and stability were by no means the only qualities to be taken into consideration. Nobody doubts that a "tool of transportation" could be provided which would enable men and other animals to cross the Potomac at this point, in sufficient numbers to supply the demand, for very much less than the estimated cost of the cheapest bridge in the competition.

Superficially and apparently, the accepted design is noteworthy in the competition, and unique, except for one other to which we shall come presently, for not being an example of modern engineering at all, excepting the draw span. This is manifestly enough a modern



-WILLIAM H. BURR-
-CIVIL-ENGINEER-

THE ACCEPTED DESIGN.

Edward Pearce Casey, Architect.

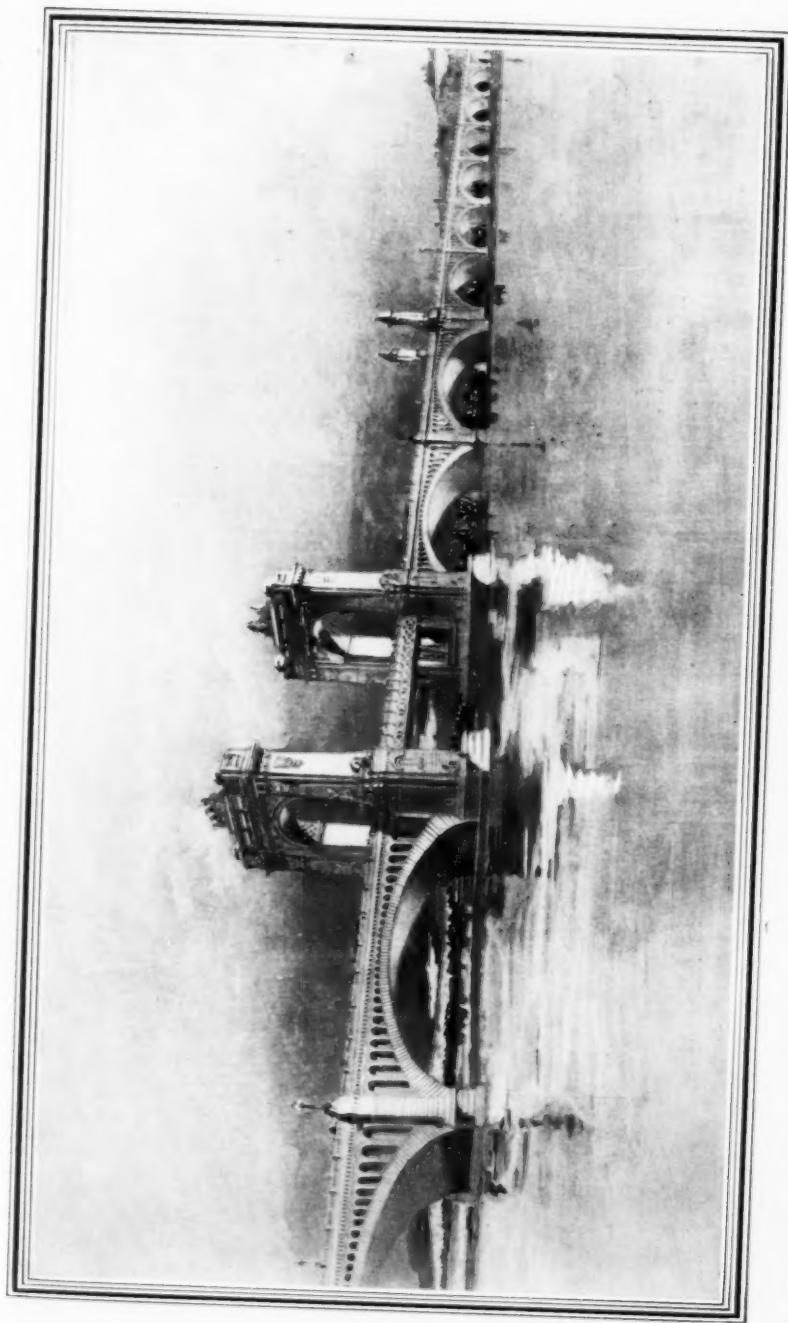
Prof. William H. Burr, Engineer.

metallic construction. But the six flanking arches appear as works of solid masonry. Merely to look at them, they might have been built seven centuries ago by the methods then in vogue. Their span of 192 feet would always have been unusually large, but by no means constitutes a "record." It is inferior to that of the stone arch across the Adda (251 feet) which was built in the fourteenth century, and stood until it was wilfully destroyed in the fifteenth. It is inferior also to that of the Washington aqueduct over Cabin John Creek (220 feet), and to that at Chester (200 feet), which are works erected within the era of modern engineering. Of course it is no discredit, but contrariwise, to the designers of the Memorial Bridge that they established their spans with a view to convenience and appearance, undisturbed by the desire to make or break a "record." I mention the dimensions simply to show that there is apparently nothing in the arches of the bridge at all beyond precedents, both structural and architectural, nothing apparently experimental. It is only when it is explained what the actual construction is that one sees that the bridge is an example of the most modern engineering; is, indeed, like the familiar "skyscraper," an example of "steel-framed construction," with a veneer of masonry and of architecture. The half-section, half-elevation, clearly explains the construction, the practical sufficiency and durability of which are, of course, technical questions for engineers. They have been favorably answered by the board, which explains, that the "Melan system" of combining steel and concrete has been employed in like structures with satisfactory results, though the widest span hitherto constructed on that principle in this country is but of 125 feet, against the 192 proposed for this work.

The question which remains is purely one of feeling, whether, in a monumental work, a construction should be asserted, for architectural purposes, which is not the actual system. There does not seem to be any insuperable obstacle to the architectural expression of the actual construction, although, of course, an attempt to express it would put the designer much more upon his own resources, and disable him from following the precedents of purely masonic construction, as he is enabled to do by assuming that the stone arch is not merely skin deep, but extends from face to face. To make the system of combined steel and concrete presentable and attractive would without doubt be an ambitious and arduous attempt, and one does not wonder that the designers should have shrunk from it. There is, of course, an alternative. That is to resort to the actual construction which is used in the visible mask. Evidently that course presents no insuperable obstacles, since the design judiciously stops so far short of the record for actual stonework. It is merely a matter of expense. And the question may

very well arise whether the United States, in erecting at their capital a "memorial to American patriotism," in the form of a bridge, cannot afford to make it what it seems.

One result of the adoption of a structure apparently of masonry is that the work ceases to be a monument of artistic engineering, as we commonly understand the term, and becomes an example of conventional, in the sense of abundantly preceded architecture. The common distinction between architecture and engineering according to the purpose of their respective works is evidently conventional. There is no reason why a bridge should not be a work of architecture as well as a house. A truer distinction is rather that an engineer works in metal and an architect in timber or masonry. In these bridges it is plain that the engineers are the designers of the steelwork, and their respective architects of the stonework, and it is only by the metallic structure that the artistic qualifications of the engineers can be appraised. Apparently the architect is the sole "artist" concerned in the production of the accepted design for the Memorial Bridge. At least it is the training of an architect and not of an engineer that is concerned in the appearance of the work, in which the function of the engineer is the same as in the commoner steel-framed structure of the skyscraper, to provide a sufficient skeleton which the architect thereupon proceeds to pad out and fill in with flesh, or rather to cover with integument, and as in the case of the skyscraper, it is only the architect's work that appeals to public attention, that of the engineer being of an esoteric and technical interest merely. The one piece of evident engineering is the design of the draw span. The recommendation of the board for "the substitution of a curve for a right line for the under lowest part of the draw" has been observed, and the bascule arrangement is thus more clearly indicated than in the straight truss of the competitive designs, which, as has already been suggested, seems much more appropriate to a vertical lift than to the actual device. The fact that the bridge proper and the approaches are all of apparent masonry gives the work undoubtedly a more homogeneous aspect than belongs to the evidently mixed constructions, while the bridge proper is yet carefully and successfully distinguished from the approaches. The number and span of the great arches have apparently been determined by architectural considerations. At any rate they are architecturally successful. To have reduced the number to two on each side, as was proposed in the third project of their authors, would have been to flatten them to a degree that would have made them less expressive and less effective. The actual proportions are very satisfactory. Distinctly another improvement over the third design is the omission of the attempt to lighten the spandrels by rows of arched niches, shortening with the rise, a



Professor W. H. Burr, Engineer.

CENTRE OF DESIGN NO. 3.

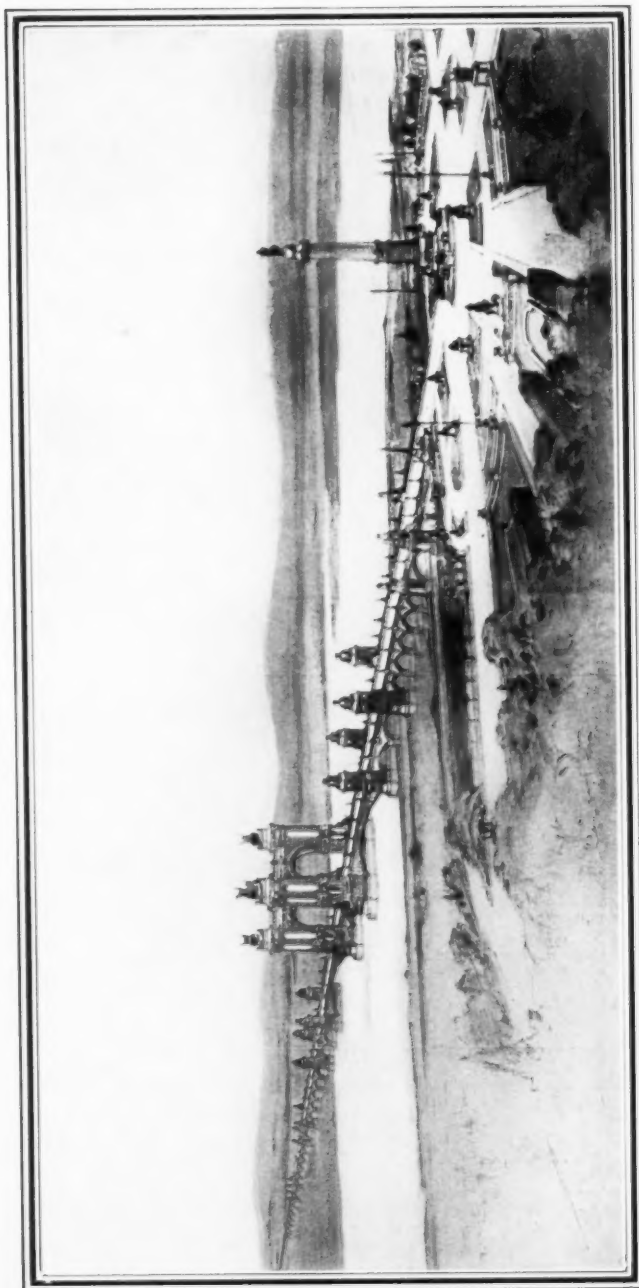
Edward Pearce Casey, Architect.

method which diminishes the apparent importance of the arch ring itself. Equally judicious is the omission of the irrelevant and meaningless panelation of the spandrels shown in the diagram that expounds the construction. Upon the whole, it will be agreed that the adopted design, as modified, promises a satisfactory result. The only question that remains is that we have already raised, whether in a monumental work, and national work, the United States could not and should not afford the actual structure of masonry which the adopted designs simulates. In this case, however, it would remain true that the bridge would be an example of historical architecture rather than of modern engineering. Of course that would be nothing against it. But it would deprive the structure of the particular interest which has induced us to give so much space and study to the competition, the interest of an essay in what can be done towards raising the works of modern building in metal to the rank of works of architectural art.

The design of Mr. Buck and his architectural associates shows little of peculiarity in its main dispositions; little, that is to say, which does not appear in one or the other of the designs we have already considered. It agrees with Mr. Hutton's No. 1 in proposing a single arch on each side of the draw span. The designer, however, includes in the bridge proper the two flanking granite arches on each side of 100 feet span. By introducing these intermediate features and by advancing somewhat towards the centre the outer piers of the large arches, he has contrived, with the same width of draw span, to reduce the span of these to 355 feet against the 550 feet of Mr. Hutton's proposal, and, as they are of practically the same rise, they become, architecturally, more tractable. But this advantage is not gained without a sacrifice. The intermediate feature of the two arches in granite is divided with equal emphasis, and by identically the same device, from the bridge proper and from the approaches. This device consists of a pair of massive towers on each side of the roadway, at each end of the intermediate feature, repeating, on a reduced scale and by way of "imitation," the form of the great piers which flank the draw span. The repetition is judicious and effective. But the double repetition gives only the same abutment on one side for the great 355-foot arch, as is supplied on the other for the arcade of 75-foot arches of the approach. There is thus a confusion as to the actual end of the bridge proper. Doubtless it would be possible to treat the whole intermediate feature as the ultimate abutment of the bridge; but this cannot be said to have been achieved here, the wider granite arches being no more massive than those of the approach, and being even, by reason of their greater span, less massive in appearance. There is another very questionable feature in the proposal to make the

spandrel bracing of the great metal arches with web plates, instead of the more usual skeleton. The designer's explanation sets forth that this is done in part "because it is thought to harmonize with and carry out the substantial character of the masonry arches." We have already given our reasons for holding that this consideration is illusory, and that a massiveness which is only skin deep cannot be a suitable treatment of a metal construction, in combination with masonry any more than when employed by itself. In this case, it has the disadvantage of foregoing all the effect derivable from a frank expression of the nature of the material, and of the attenuation and articulation proper to it, by which the structure is represented and emphasized by an abstraction of the lines of its actual forces and their working. Nothing of equal value to this can be obtained by covering the whole surface with an equal sheathing of metal, which to the spectator must be meaningless in comparison. On the other hand, the central piers and the reduced reproductions of them at the ends, are appropriate as well as impressive. These piers are the structure and their function as abutment, as "load," is powerfully expressed. The decorative adjuncts proposed and shown in the drawing, are evidently not parts of the design, and could be equally introduced with any other of the competing designs. When we consider that the estimated cost of this bridge is over three times that of the adopted design, and more than twice and a half that of Mr. Hutton's No. 2, and compare the probable effect of the three in execution, it becomes evident why the board should have declined to award it a higher place than third as a solution of their problem.

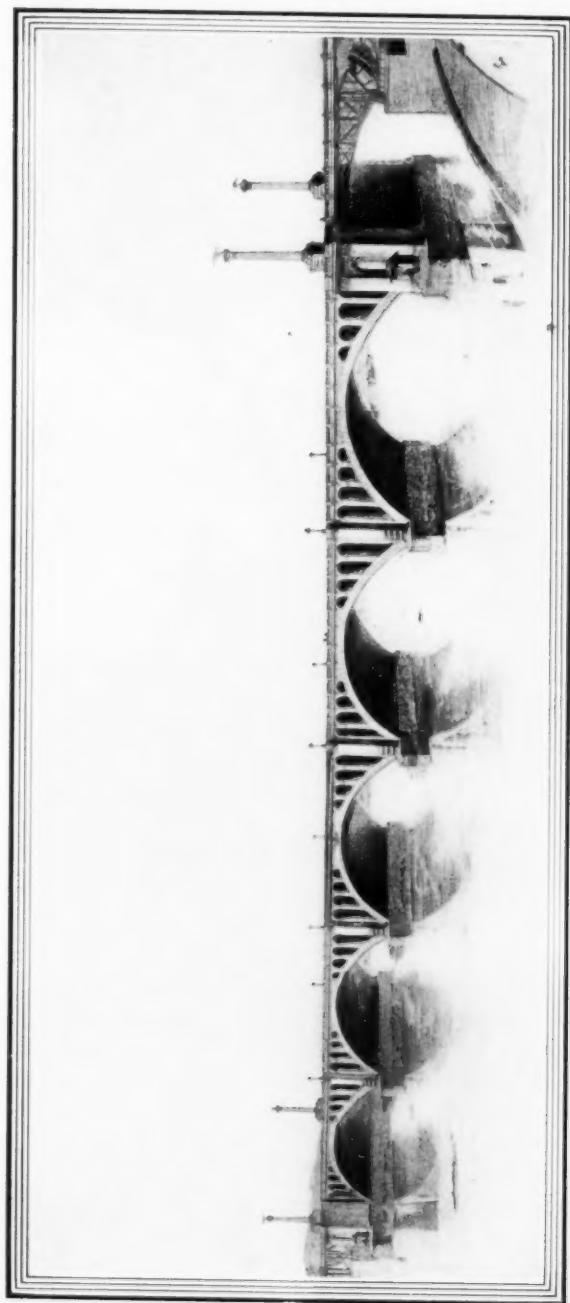
It is even more evident why they should have declined to give a higher place than last to the remaining design, that of Mr. Morison. The author of this design happens to be the engineer whose dictum we have been citing that a bridge is merely "a tool of transportation," with its corollary that, so long as it "functions," it does not matter what it looks like. He repeats it in this explanation of this design: "A bridge, in the common acceptance is a commercial tool built to convey traffic across a river." If it incidentally disfigures a landscape, and gives pain to every sensitive beholder, the consideration is irrelevant. So might a dealer say who disfigures a cliff with proclamations of his wares. The advertisement is a "commercial tool" erected to convey traffic to his establishment. The law, in enlightened communities, is beginning to restrain the advertising vandal, but there is nothing but the growth of enlightened public opinion to restrain engineering vandalism. There are peoples who decorate their tools. The Polynesian savage decorates not only the canoe which is his "tool of transportation," but also the war club which is his tool of controversy. Why an engineer who



PERSPECTIVE OF DESIGN NO. 1.

L. L. Buck, Engineer.

Carrère & Hastings, } Architects.
Walker & Morris,



DESIGN OF GEORGE S. MORISON, ENGINEER.
(4th Prize.)

takes the grimly and exclusively utilitarian view of his art should be invited to design a bridge which is also a memorial is not very clear. It cannot have been from any reasonable expectation that an engineer who had persistently maintained, and devoted by word and deed, his right to produce bridges without any reference to art, should suddenly blossom out as an artist. It may have been mere idle curiosity on the part of the Chief of Engineers, to see what he would do about it: "Do you know," as Mr. Pecksniff observed on a famous occasion, "I should very much like to see Mrs. Todger's notion of a wooden leg, if perfectly agreeable to herself." The curiosity, if it existed, has been abundantly assuaged by a demonstration that a long course of indifference to art is not a good preparation for the production of works of art.

The aesthetic basis of Mr. Morison's design is his two propositions that "the one material suitable for monumental work is masonry," and that "the condition of a draw, which is necessarily a mechanical contrivance, is entirely inconsistent with the restful ideas of a monument." These propositions are not exactly axiomatic. The first would lead to the evasion rather than the solution of the problem of artistic engineering in the modern sense, and like the accepted design, would result in an example of well-precedented architecture, rather than in the development of forms suitable to a new material and new modes of construction. As to the second, a flying buttress is "necessarily a mechanical contrivance," but that it is on that account "entirely inconsistent with the restful ideas of a monument" will be a startling and novel suggestion. Moreover, who ever thought before that the monumental effect of a castle was destroyed by a bridge which was also a draw crossing its moat, and another "mechanical contrivance" to protect its entrance:

Up drawbridge, grooms! what, warder, ho!
Let the portcullis fall!

But the adoption of these two dicta certainly would make the task of the designer of a memorial bridge very much easier. The combination of them has resulted in an unbroken bridge which completely closes the navigation of the Potomac River at this point. Five masonry arches span the channel, each of 180 feet span, cross the river and occupy the channel, with a headway of only sixty feet under the central arch. If the navigation of the river were of no account, doubtless a very impressive and even beautiful bridge could be erected on these lines, with massive and visibly adequate abutments at each end. But what makes the chief absurdity of this design is that after closing the traffic at the centre in the interest of the monumental character of his bridge, the visible sufficiency of abutment upon which the whole effect would have depended should have been withdrawn at each end, the massive arcade left "in the

air," a new channel been proposed to be dredged out at either end and this new channel spanned by the draw," which is entirely inconsistent with the restful ideas of a monument." Without any dispute this draw is so. Nothing could show a more complete and hopeless architectural helplessness and ineptitude than the whole combination. Even the author seems to have felt that something was required to express that his arcade exerted an outward thrust at its extremities, and that this thrust should be visibly met. But the means he has taken to meet it show the same almost pathetic and altogether comic helplessness as the general scheme. The terminal piers are somewhat more massive than the intermediate piers. But in the first place a parallelopiped is not the form of a mass which is to act as a buttress against thrust. In the second place, the most conspicuous increase of mass in these terminal piers over the intermediate piers, is not in the direction of the axis of the bridge, and so of the thrust, but in the form of lateral projections which are only indirectly efficient as abutments and not at all expressive of that function. The architectural benefit of an unbroken structure of solid masonry is thus denied and nullified by the introduction of draws at the very points where the structure should be most of all solid. But it is not worth while to go on criticising in detail an attempt so obviously crude and inept. It is quite hard enough to make good architecture when one devotes his life to it. Here is a conclusive, though superfluous demonstration that it cannot be attained by a designer who, for once in a lifetime, drops into architecture in an unfriendly way.

The designs which deserve consideration all follow the same general scheme. It does not seem likely that all the designers should have arrived at it independently, especially when it appears in a design that long antedates them. This is the design prepared fourteen years ago by Captain Symons and Mr. Pelz. It is, perhaps, a pity that this design should have been precluded from the consideration by the restriction of the competition to the four invited engineers, and by the appointment of the engineer-author as a member of the Board of Award. Certainly it would have been entitled to very serious architectural consideration if it had been entered in the later competition. Engineering advances so rapidly that it is possible enough that some part of the construction it contemplates may have become obsolete in the interval, and the architectural fashion in which it is composed has certainly passed away. But the force of expression in it is undeniable. In one respect, upon the importance of which we have been insisting, it seems clearly superior to any of the competitive designs, and that is in the functional modelling of the towers which flank the draw span. They may, perhaps, be unduly exaggerated in height, although the drawing in-



MEMORIAL BRIDGE PROPOSED 1887.

Capt. T. W. Symons, Corps of Engineers, U. S. A.

Paul J. Pelz, Architect.

dicates that they have interiors which it is proposed to put to some practical purpose. But that their chief function is that of "load," and that the archway is a mere detail and not the main object of design, is expressed, as artistically as unmistakably, in the harmonious accumulation of their masses. The draw itself, too, is very successfully treated and has unmistakably what the board calls "the bascule form," more unmistakably than any one of the competing designs. Certainly this central feature is highly impressive and successful, and goes well with the flanking arcades. Comparing it with the corresponding features in any of the competitive designs suggests inquiry whether the functional modelling of the masses, which gives it its expression and its effect, can be so effectively done in the more formal styles which have succeeded as in the free architecture which reverts to mediæval prototypes. Much of the superior picturesqueness of the towers, for example, in this design comes from the emphasis given to the ice breakers, and to the difference between the treatment of the "up-stream" and the "down-stream" faces of the piers. This is an obvious and logical source of architectural effect of which the later designers have forborne to avail themselves, preferring, it would appear, the maintenance of formal symmetry to the irregularity which an expressive treatment would have involved.

However all that may be, the competition has certainly been interesting and ought to be fruitful. In one respect, the view taken of it by the deciding body may be a disappointment, and that is in the choice of a design which belongs rather to architecture than to engineering. Not that the view of the board was not a perfectly legitimate view to take, but that the special purpose of artisticizing modern engineering, which to many students gave the competition its chief interest, is not promoted by the adoption of a design which superficially is not an example of modern engineering at all. Such works as the St. Louis Bridge and the Washington Bridge across the Harlem are at once equally works of art and unmistakable examples of modern engineering. May their tribe increase! But the competition should have its chief value in bringing about an increasing attention to the appearance of bridges, and in forcing engineers to consider the artistic element of design. This very competition shows us that eminent engineers may be entirely helpless when that element of design is introduced. It is not beyond hope that the looks of municipal bridges will come to be regarded of as much importance as the looks of other municipal erections, and even that railroads will come to consider the appearance of their bridges as well as of their stations. For these works the engineers cannot resort to the architects, but must rely upon themselves. When this happy state of things comes about, the question of the artistic

training of engineers will settle itself by resolving itself into a question of supply and demand. And then it will no longer be possible for a professed vandal to remain an eminent engineer.

Montgomery Schuyler.

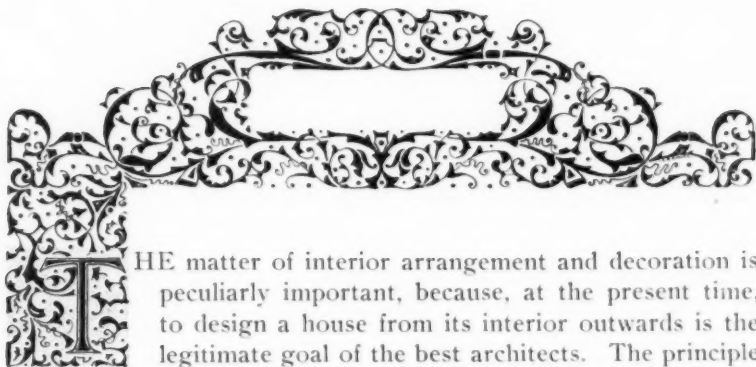


The Decoration
of the
Smaller Suburban House
In England

BY
BANISTER FLETCHER



Interiors and Their Decoration



THE matter of interior arrangement and decoration is peculiarly important, because, at the present time, to design a house from its interior outwards is the legitimate goal of the best architects. The principle that "houses are built to live in, not to look at, wherefore prefer use before uniformity," was enunciated some three centuries before it has become an accepted axiom, and even now to many it remains a hard saying. It requires a high knowledge and perception of architectural effect to carry out the true ends of house-building, because unless the architect is able in imagination to, as it were, reside in each room marked out in his scheme, he is unable to realize what the internal effect of the whole will be before it has been built. Not many designers, however, seem able to carry the section as well as the plan, in their head, as it is at times only too obvious in the result, for it has happened that one side of a room is perhaps agreeable enough in its treatment, from having been the reverse of the principal elevation, while the other being only that of some back front not intended to be seen, is correspondingly maltreated.

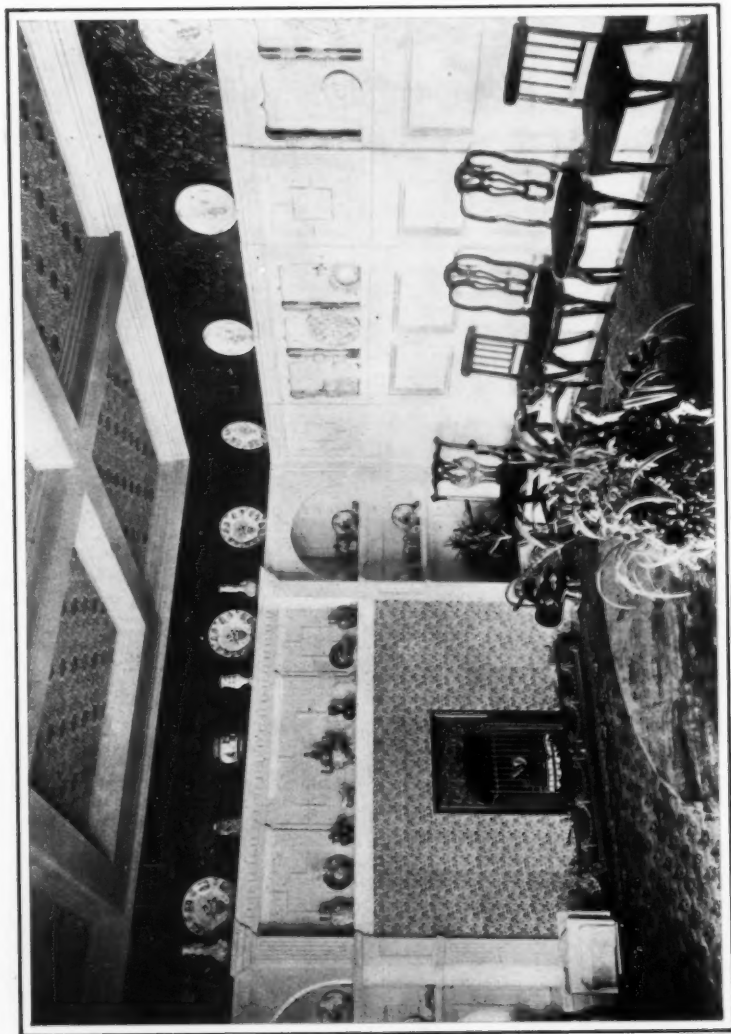
To take an instance, it is very disagreeable to see one side of a room with mullioned lights and casements, while another has, perhaps, sash windows of the cheapest kind. Another case is where the style of glazing has been equally neglected, some windows being all leaded while others are in large sheets of glass, etc. To aggregate together a number of rooms each consistent and well-treated in itself into a complete effect—such as a work of architecture must possess—argues very great capacity on the part of the designer. It is, moreover, to enter into a region above the heads of the client and the amateur, whose criticism can rarely extend beyond the perspective and the simplest of plans. It will be a good training for the serious student always to cultivate the habit from early days of putting on, alongside his sketch plan or section, a slight idea of the elevation of each side of the room. This will

constitute an admirable check on the design of the façades, and will help the architect to realize his work.

It is, of course, only in the exceptional cases that such treatment is accorded to houses of the class that we have to deal with, but it represents an ideal that is not altogether unattainable. The immense increase in the number of architects has a tendency to render each work of more importance, while the pressure of rivalry tends to raise the standard of execution in all parts of the design. The elaboration of houses is now carried far beyond the pitch of, say, the early part of the century, because it is no longer a case of bestowing special treatment upon one or two reception rooms only but of planning suitable decorations for the bedrooms and often the offices also. The accompanying illustration of a kitchen is, for instance, by no means an isolated example, for in one great mansion it happened that the offices were the most delightful part to the student, because there only had the architect a free hand. House work is, and particularly so in the interiors, subjected to more interference than perhaps any other class of artistic work, surpassing in that respect even portrait painting! "Why, if it is my house, cannot it be as I like it?" and "I have to live in it," are the constant arguments of the client, and though Mr. Ernest George once said that the clients whims were a source of effect, still that dictum must, we may venture to assume, have been the veil that good nature draws over many past disagreeables. When the public appreciation of architecture develops, as it may be expected to do, with an increase in the number of houses built by architects, there will doubtless be effected some working compromise between the wants of the client and the artistic aspirations of the architect.

A preliminary point of difference may be mentioned in dismissing this aspect of the question. It might not be popular with the obstructive class of client, but it would be necessary in some cases with a house of this class, that all the other rooms should be treated extremely simply, in order to make, say, the staircase hall the notable feature in the house. Conversely, it might be the drawing room, or dining room, or, perhaps a studio-study that should be honored in this way. Concentration of effect will be found closely allied with economy in a successful design of a small house.

Interior treatment to-day in England largely resolves itself into joinery of the highest class. The bare stone and brick ideal of the revival has given way to the greater comfort and homelier character of plastered surfaces, except where some special effect is to be obtained when panelling is resorted to. A few ill-advised attempts at marble work have been made, but principally in clubs, and the general feeling is distinctly against such cold surfaces in our damp climate.



DINING ROOM, COLDHARBOUR WOOD, HANTS
(Residence of Sir T. Sutherland, M. P.)

T. E. Colcutt, Architect

Since the best joinery belong to the Queen Anne and Georgian periods (when in point of time joinery was first developed as a trade distinct from carpentry), it is natural that a later style has often been adopted in the interior of the house to that nominally followed in the exterior; and the effect is by no means always displeasing. We see it in many old houses, which at a later period were lined inside with the new joinery, the older mullioned windows being often replaced by sash frames shutters. The result is infinitely better than that obtained in the average Gothic revival house with its barren walls and meagre carpentry style of finishings. It was overlooked that in the Middle Ages the lining of the room was carted about from one castle or palace to another, in the shape of the splendid arras, that wholly draped the walls inside—even the door being covered. At Haddon Hall, the tapestry rooms are quite a lesson in the use of hangings. The art of joinery is to some extent a practice of economy; and to use the material to the utmost extent and not to waste it in heavier scantlings than are needed involves some acquaintance with workshop methods and considerable study of old examples.

A prejudice against steam joinery must, we think, be abandoned in the case of houses of this class, and it will be desirable to vary no more than is absolutely necessary the designs of the doors. The design of a really good paneled door is quite worth repeating to the extent that one house requires, and if there is no occasion to make the widths and heights of the openings different, there is in most cases no special call for a fresh design. To design, however, doors in relation to their openings, their uses, or to some peculiarity in their position adds an extraordinary interest to the interior of the house. Service doors, for instance, are too often disguised as part of the wall in which they occur, whereas they may afford a chance of giving importance to the chief door in the room by their subordinate treatment. Wide panels are at present decidedly in favor, and the chance of their splitting is apparently accepted with equanimity.

The American woods, now so freely imported, have enabled us to obtain much excellent and cheap joinery, both the white and yellow pine and the walnut being in every-day use. For large panels cedar and sequoia are excellent materials, though rather soft for rough usage. In wide-panel panelling, the backs can, of course, be canvased, which is a great protection.

Shutters are a great source of expense in small houses, and very difficult to dispose of, where the walls are thin. Rising shutters are really only fitted for a cottage, they are very ungainly, troublesome to work, and extremely noisy. There is much to be said for outside shutters if some protection is insisted upon. In old cot-



DINING ROOM IN RESIDENCE OF HERBERT PETO, ESQ.

(Westgate-on-Sea.)

Ernest George & Peto, Architects

tages the two-panel folding outside shutter is a familiar feature, and it would be quite as suitable for a house of this class, while the French outside louver shutter is also available.

If solid frames of wood or stone are used, it is often best to carry round the plaster without any lining at all, and if the walls are to be papered all mouldings on angles should be abolished, and the paper surface carried as a sheet throughout the room without breaks. Arches and girder beams in particular should be so treated, which is as mosaic is used in Byzantine church, for example, and this principle avoids many difficulties in the junction of the paper and any plaster mouldings where these have been used either on angles, on the soffits of arches, etc.

In the same way, in rooms of low height, the cornice and skirting may both be dispensed with. In panelled rooms, the skirting is particularly unnecessary. In fact the importance given to skirtings is a relic of the former predominance of the classical style with its now discarded system of subdivision in the treatment of walls. The picture moulding is a great enemy to the cornice, which it necessarily supersedes in many cases. In a small room, it should be fixed about two inches down from the ceiling line, where it will form a perfectly adequate substitute for the heavy plaster cornice and a good stop for the wall papers. We have had such an orgy of plasterers' coves, cornices and hollows, that a square edge against the ceiling strikes us as quite an effect.

Ceiling treatment is naturally rather limited in small houses, but we may in passing protest against a vulgar assault, lately made by an advocate of decorative plaster work, on the ceiling paper as an exclusively suburban joy. Except where the ceiling paper pretends to be otherwise than what it is, a papered surface, it is to be prized from its capabilities for both design and color. In cool tones it will effectively aid a strong hued paper or vice-versa, while in rooms lit from one end only, ceiling papers printed with reflecting metallic grounds will often be found of great service. In our view it is a mistake to paper the small panels of a much-divided ceiling. A ceiling cut up into an elaborate pattern by moulded ribs as in, say, an Elizabethan manner, is sufficient ornament in itself for the room, without the added decoration of the surfaces between being filled in with additional design in the shape of a patterned paper. It is in the mass that a paper tells, for smaller surfaces stencil or painted designs are required. In ceiling treatment, division by mouldings is a difficult matter because scale and flatness in section are so rarely observed. For mouldings in plaster with a slight projection are essential, and the same remark applies to the large beams, which will probably be visible in some of the larger rooms owing to subdivision in the floor above. Too often ana-



BILLIARD ROOM, BEDFORD PARK CLUB.

Bedford Park.

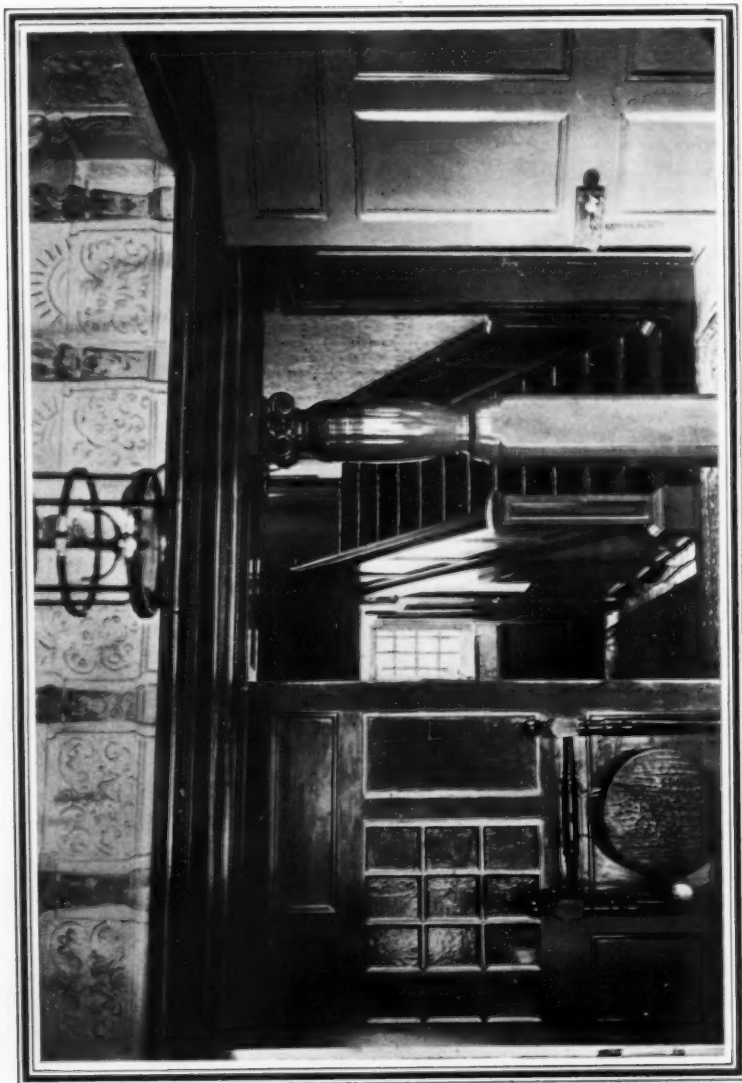
R. Norman Shaw, Architect.

glypta or some other composition wall hanging is used to imitate the effect of such moulded ceilings, especially now that these fabrics are produced in high relief. Machine-stamped hangings are unobjectionable when patterns can be obtained that are in harmony with the method of manufacture and are not merely cheap imitations of a superior material.

In mechanically produced decoration, extreme conventionality is required, as illustrating the remoteness from the pleasure of freely executed hand moulding or carving. The whole range of ornament based on geometric design seems specially applicable to cast or stamped machine-made goods. For instance, a grating in cast iron of such a pattern is infinitely preferable to the floral scroll designs that are not only unsuitable to the material, but also displeasing to any one possessing sufficient knowledge to be acquainted with the origin of such styles of ornament.

It seems a digression, but this is a place to add a remark that nowhere is it to be observed so much as in small houses, that artistic effect is independent of the wealth of the materials employed. Consistency in design and the use of harmoniously simple materials will make a small house, within the limits of cost laid down, more pleasing to the artist than all the costly display of the millionaire's palace. No one need, therefore, despair of producing a good result in spite of the apparent inadequacy of the materials and money available. Cheapness may be a merit but must not be an excuse.

We have touched upon joinery and plaster work as affecting the interior, for masonry there is nowadays not much scope. It will probably be limited to one or two chimney pieces of some elaboration for which a colored stone is desirable if hard limestone or marble cannot be afforded. The difficulty of using stone in the interior of a small room is great, unless the architect has the courage to do as was done in the Middle Ages and decorate it. In Cardiff Castle, the late Mr. Burges has produced an extraordinary effect by his highly colored mediæval interiors. There the masonry is all painted, the sculptured mantelpieces having the figures colored after nature, to the extent that in the larger heads glass eyes are even inserted. In Mr. Bodley's interior work the masonry is nearly always painted, and it is certainly very difficult to do otherwise with stone in the highly-finished rooms of modern houses. The coarse texture of stone is unpleasing against a modern wall paper for instance, besides which as a material it is very apt to be absorbent and thus will soon become what the housewife will call dirty; after which that chimney piece will certainly retire behind a cloud of drapery. Probably for some such reasons wood mantels have become so universal as to add still further to the large share taken by joinery in the interior treatment of the house.



ENTRANCE HALL, "WATERSIDE," WESTGATE-ON-SEA.

Ernest George & Peto, Architects.

Brickwork still more rarely enters into internal house design. The brick in the nook fireplace is rather discredited just now, and if any brick material is used, it will be either rubbers set with putty joints, or hard semi-glazed or full-glazed bricks that approximate in nature to tile work and faience that will be preferred. Fireplaces in these latter materials are often accompanied by wood mantelpieces, to which they usually play a subordinate part. Faience is too closely associated over here with restaurants to be used extensively, and for its own sake, in its own characteristic way as a general lining of the wall surface; but in restricted panels as in the jambs of fireplaces and in hearths, etc., it often affords a strong note of color to the interior. For such a purpose as this last the really good tiles in the style of the old Persian and Italian majolica produced by De Morgan hold the highest place, but their relative expensiveness is likely to restrict their use to one or two rooms at the most. Of the great flood of cheap tiles produced for such purposes, modern Dutch copies of the old Dutch hand-painted examples and the self-colored tiles are by far the most attractive, and being comparatively cheap these latter can be used extensively as wall linings in passages, bath-rooms, and the offices generally.

Nothing probably is more marked at the present time than the tendency to introduce the metals into interior decoration, copper being at present a favorite. The extension of the electric light has created a demand for light hand-wrought fittings in metal, from which the use of that material has been extended to fire screens, stands or trays, flower and lamp standards, and to all the hundred and one small objects that crowd the modern drawing room. So far as the architect is concerned he is affected by the increased use of metal in the furniture of doors, in the fittings of all kinds of windows, in grilles in and about the fireplace, as in hoods, blowers, basket grates, firedogs, etc., as well as in the use of metal mouldings to enclose marble or tile linings. Occasionally small doors are cased in beaten plates of metal, and in fact there is no reason why, with the constantly increasing means of cheap production and working of the metals, the practice should not be further extended as in the coverings of piers, jambs between ranges of small windows, ceilings and other suitable places. We know that in the age of Homer, great effects were obtained by the metal-lined interiors of the Halls of the Chieftans, while from Assyrian excavations have been recovered wonderful specimens of metal applied to doors. Metal used for casing purposes in the present day requires to be very thin, and is best mounted on a wood foundation.

Glass is by no means the least important element in the interior treatment of a house, and is the one on whose discreet use much of the effect depends. We venture to think stained glass is rarely



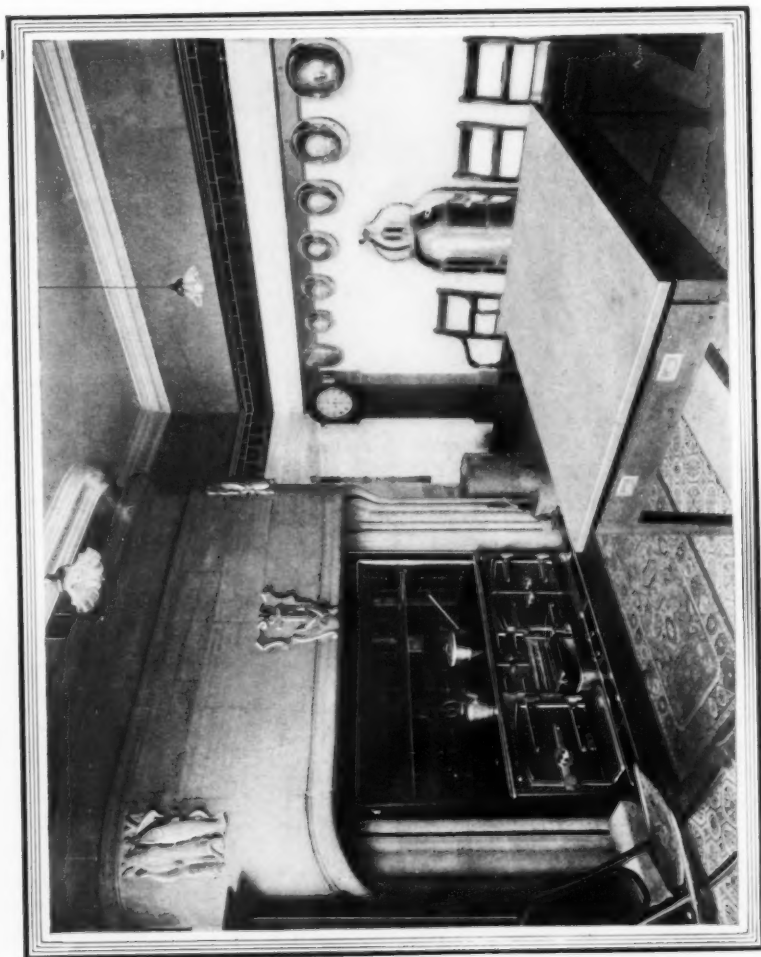
OAK-PARLOR AT GOLDINGS, HERTS.

George Devey, Architect.

in place in a small house, while the cheap variety window in mixed tints of cathedral glass is happily nearly extinct. If a tone is required in leaded glazing of white glass, shades of green in a few squares will do all that is required, while for the purpose of obscuring the outlook, where required, many excellent forms in wavy, rough, rolled, or muffled glass can be obtained. Better still, but more expensive is the revived form of old glass known as Prior's antique. Where strong color is required in some hall, or staircase window, or such special position, coats of arms in glass enamel leaded up in the white background as in the old cottage halls are of a suitable and domestic character. Where sash windows are used the sash bars should divide the panes, and leaded lights are prescribed by the common sense of artistic fitness. White glass is practically universal in sash windows, and if plate glass is used bevel edges and moderate size squares are very effective, as in the work of Sir Christopher Wren at Hampton Court Palace.

Glass enters also into the ceilings, in case skylights, which are best avoided, should be used. The stained glass dome and lay lights, rather too common in poor examples of this class of house, can only be described as vulgar. A license in that direction was an amber-colored glazed lantern in a brilliant room, to which, on account of its position, a bright aspect as of sunshine was required to be imparted. Here, however, the beams of the roof had been lacquered in gold, which helped to carry off the effect. As a rule, to give a permanent tone to a room by some trick in the glazing, is so artificial that it is apt to pall and become exceedingly wearisome when the first novelty has worn off. In the leading of plain glass, few things are so permanently satisfactory as the simple oblong pattern. Intricate glazing becomes tiresome in a room that has to be lived in; it seems wantonly to shut out the ever-changing aspect of nature, for even in a suburb trees and clouds are still visible. Moreover the source of light in a room is a point to which the eye instinctively turns, and there seems to be some artistic reason against intricacy of design at such a point.

Mosaic is a kindred means of effect for which there is little scope in these houses, being a material which needs to be applied upon a large scale in order to produce its special qualities. It would need to be applied almost exclusively in an apartment and at some height above the floor, as well as in conjunction with its kindred materials, such as marbles for the lower parts of the walls within reach. The smoking room of a millionaire would be a more likely field for its employment. In floors, however, as to the hall staircase and porch there is more scope, and if used in small scale work and in ceiling after the old manner and according to the old methods, may prove very effective. Marble floors, however, in such positions are to be



KITCHEN IN CURLING HALL.

Wylie & Lochhead, Decorators.

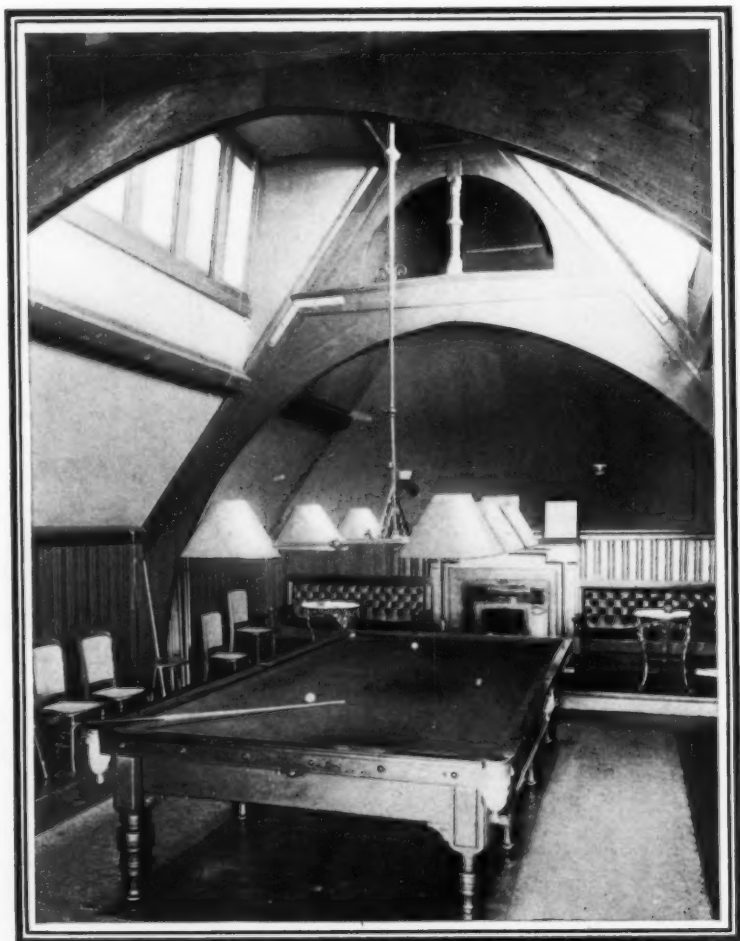
Lares, N. B.

preferred if such display is contemplated; and few things in the way of patterns are better than the old style of black and white in alternating squares as a foil to good joinery.

If we look for a moment at the general question of flooring for the best rooms, we shall find that parquetry, hardwood, and stained deal floors divide the field between them. Parquetry seems to us inferior to hardwood, which with us generally means oak flooring in narrow widths, say three inches, with grooved and tongued joints. Block floors are rarely used except for the kitchen and some offices in houses of this type. Stained deal floors are, however, in request because the old-fashioned Brussels carpet cut to fit into every corner has been displaced by the modern art square, which is woven with a border and can be obtained in most ordinary sizes. Better in many respects than the art squares is the self color homespun that can be made up and leave any margin required, and which, by its absence of pattern, is often a very agreeable relief in the highly decorated rooms of to-day.

We are not desirous of plunging into questions of furnishing except to the moderate extent to which an architect is likely to be concerned in the average house; but there is one important question to which he can hardly remain indifferent, namely, that of the limit of pattern in an interior. We think that a silent revolution is taking place upon this subject at the present time. We suppose that the late Mr. William Morris would have declared in favor of pattern throughout, for a characteristic interior in what for convenience we might call the Morris style would in fact have in ceiling paper walls, curtains, blinds, furniture covering, and carpet as many varied conventional designs; owing their harmony to a great extent to the fact of being the work of one designer, or at least of his school. But although such harmony can be and is obtained by the choice of good coloring, to particularize one most important condition of success, still it remains an artistic problem whether such an extensive use of pattern is really good. There seems very little artistic justification for such a prodigality of invention as all these different designs demand. Of course they are easy to obtain, thanks to printing, but imagine a house in this style as the outcome of a man's own work! Why, one room alone would take years of an artist's life.

To-day at any rate the reaction seems to have set in, for materials in self-colors as they are called are in demand for wall papers and fabrics, so much so that even the deep wall frieze which is usual in such interiors is often only a plain paper in another color. Design, too, takes the form of highly conventionalized patterns on an open field with an effect almost like old stencilling, a sufficiently striking contrast to the luxuriant foliage of the last decade. Work of this kind is honorably associated with the name of Mr. Voysey.



BILLIARD ROOM, ROYAL CLYDE YACHT CLUB
Hunter's Quay, N. B. T. L. Watson, Architect.

In modern interiors of this severer type, you can at any rate hang your pictures, which is very difficult if not impossible in the highly-patterned rooms. No doubt interiors are generally over-pictured, and it is pleasant to see interiors furnished in effect by the walls themselves, as are old tapestried rooms in which in fact pictures could not be hung; at the same time the Morris style of paper is apt to be sometimes a trifle aggressive, if you do happen to have some cherished trifle of a picture to hang upon your walls. It is a curious note of the times that for bedrooms crockery can now also be obtained in self-color, in place of the once universal printed ware, so that with plain tiles also available a bedroom interior can be made quite a study in flat tints.

Throughout we have assumed the joinery to be painted white, as that has become usual in small houses, in the composition of which very little hardwood enters, while the deal woodwork is practically always finished in paint, except in such instances as where the lately fashionable green or vermillion stains have been preferred. The use of white paint in these interiors is really necessary in the face of the strong and usually contrasted colors employed, and it is as well for the architect to realize this at the outset, otherwise he may find himself deprived of the essential white element in his scheme by the prevalent strength of modern coloring.

This characteristic of modern English houses has struck French critics, thus Monsieur Sédille, who has made a study of color in relation to architecture, spoke of the "*tous éclatants*" of our interiors, and to any one familiar with the tone of color used in average French houses, the contrast must seem sufficiently striking. It should be said that at the present time, particularly in the Glasgow school, owing probably to the influence of some great French painter, a cold tone of coloring for decorative work is being revived and may probably be extended, carrying still further the reaction against the work of the last decade.

A further element of white enters into the design of the interior where fitted furniture is employed. Fitted furniture is well within the province of the architect, for nothing so spoils an interior as a large and badly designed fitment, quite out of scale with the details of the room. It has, too, a permanency that makes its character less discounted in a survey of the interior than would be the case if it were but a piece of movable furniture in the ordinary way. But there is a good deal to be said against, as well as for, such fitments. After having been somewhat special they are now the province of the trade upholsterer, who is specially great at combining the fireplace with a seat, a washstand with a wardrobe, in one expansive piece of cheap joinery, lumbering up the whole side or angle of a room. Fitments in an artistic sense seem limited to recesses,



A DINING ROOM, BEDFORD PARK.

R. Norman Shaw, Architect.

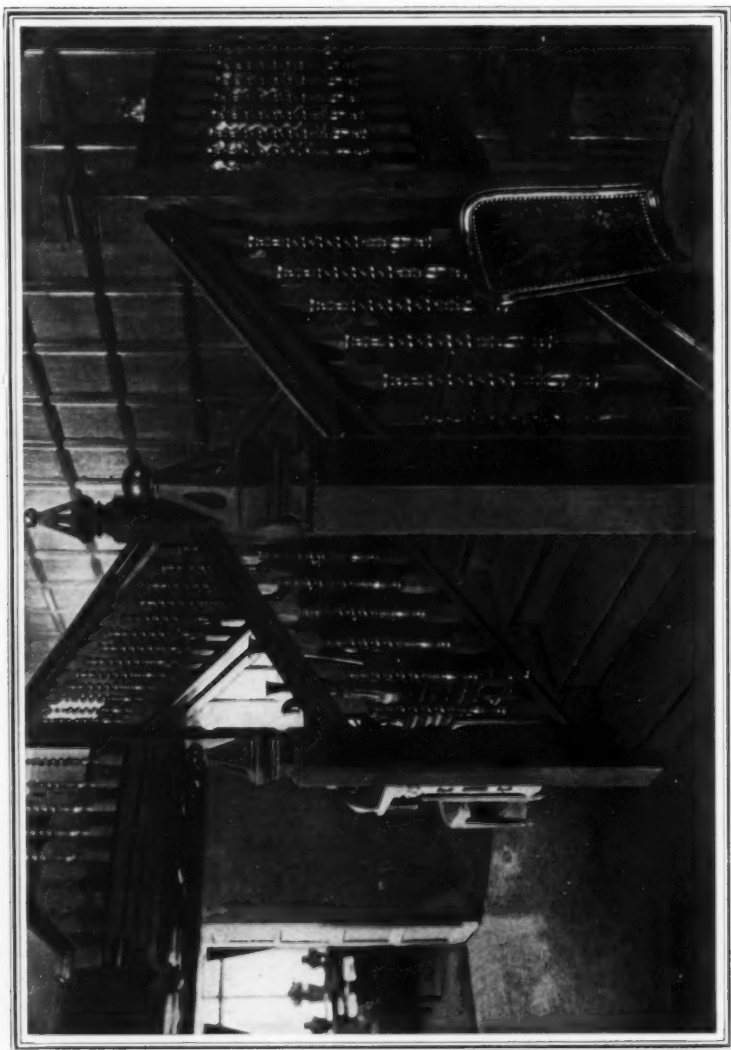
Bedford Park.

it seems logical to carry through the plane of the wall rendering useful any space obtainable behind.

Another limitation seems to be that of a severe test of practical utility. Thus a tiny cabin on board ship may look very well from an instinctive feeling we have, that every part has its special need and purpose, but a large room partially fitted up in such a way will seem absurd because the motive of restricted space is obviously non-existent. In old large panelled rooms of a fairly late date excellently contrived cupboards often exist, accessible by opening the panelling itself, when the recesses are perhaps seen treated in niche form with shells in their heads so that if the panelling chances to stand open a pleasing appearance is still retained in the room. The modern fitment, however, is too often contrived, not for the special needs of the owner and uses of the room, but merely to dazzle a purchaser with the apparent cleverness and convenience of mixing up a few of his books with the bulk of his clothes, while an impracticable wash stand is to be found stowed away in a corner beneath. To be effective, the whole room should be fitted and from that derive its architectural treatment, leaving only chairs, say, one table, or bed, if in a bedroom, in the centre.

It is a question moreover if the ordinary person is sufficiently neat to make effective use of elaborately fitted furniture. It is essentially a personal matter and seems for success to require a client with an exceptional knowledge of his wants. Overmantels are fitments on a small scale, now fortunately in a state of decline. In the original idea, as in the angle fireplace by Mr. Norman Shaw, illustrated, they may be excellent where carried out with a sense of the limitations of the chimney piece and some perception of architectural fitness of design, but they have long since become the joy of the art furnisher and fitter and hence need no further comment. The peat mirror over the fireplace, the chief feature of the interiors of the first half of the century are also under a ban, and for very good reasons. Mirrors on that scale are for salons for the reception of the company perhaps, but not for rooms to live in. Nothing, for instance, is more annoying than reflecting surfaces in front of a reader with an overhead light behind him. Deadness of surface is one of the reasons why a panelled room is so attractive and pleasant to live in, and to-day some of the best chimney pieces executed are modelled on the tall type of ancient Jacobean examples in wood, where all the space above the fire arch is disposed of in delightful panelling. See the panelled room by George Devey, illustrated.

Coming now to the house interior in separate detail and bringing together the ideas of treatment suggested, we might commence with the entrance, regarding, however, the porch as part of the interior. Of all the difficulties that the interior treatment of such

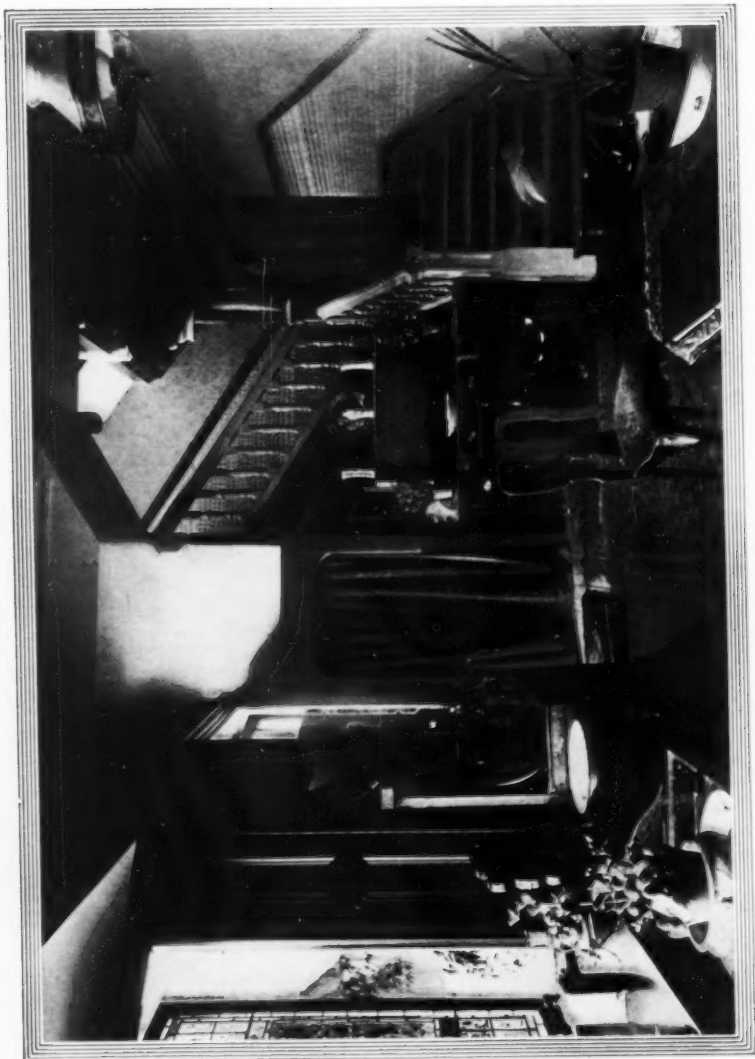


STAIRCASE, COOMBE COTTAGE.

George Devey, Architect.

houses presents the small size allotted to the entrance and staircase is the greatest. We illustrate a hall staircase, a staircase on a large scale, and a more restricted stair and passageway as showing some modes of treatment that might be aimed at. It is to be understood, as before explained, that elaboration is not to be adopted in all rooms alike, but that without beggarly and careless plainness in the rest of the interior some one hall or room might be selected for treatment as the feature of the house. If the hall is used as a room and furnished, a wood floor would be preferable to any form of paving in this climate, and wood for the staircase is also practically the rule. "Close" strings have taken the place of the "cut" form with the returned nosings, but occasionally the latter form is used for the sake of the old style of carved scrolls or console brackets that may be seen occupying the spandrel end of each step. For the balustrade turned balusters are usual, though a preference is sometimes given to cut, and perforated patterns in, say, $1\frac{1}{2}$ ins. to 2 ins. thickness, of wood, and 3 ins. to 6 ins. width, but wrought iron work and carved wood solid or perforated panels are rather excluded by considerations of expense. A small detail in connection with the hall is that if the position of the house borders sufficiently upon the open country, it may be pleasant to have the outer door hung in two heights, of which the upper will generally be left open, which often proves very pleasant in summer time. In the hall and best rooms adjacent, high class furniture is effective and small brass cased rim locks with curved lever handles are attractive. Here, too, should be one of the best fireplaces the house can afford, and if the plan provides an angular position an added opportunity for effect is secured. One of our illustrations shows an admirable angle fireplace. The opening to the staircase from the hall where the same is not comprised within its area, affords a chance for a screen or arcade in wood, or, perhaps, for some original arrangement, such as the dwarf column on the high shaft pedestal shown in the illustration.

The drawing room is usually an affair of wall papering, of large window areas, with a general atmosphere of furniture and flowers. It is the ladies' room, and architects are not always admitted. The fireplace, however, will probably be of importance, and here marble and tiles are likely to be in evidence, the ceiling also may well be treated if plaster work can be afforded. The dining room more often receives a special treatment, if panelling be used it is likely to be found in this room, and the higher it can be carried up the wall the better. If, however, this is not possible, the upper part may be formed into a frieze. In the dining room more than anywhere else the recessed fireplace, if there is to be one, should be placed. It adds greatly to the facility of service in the room, and often be-



ENTRANCE HALL—RESIDENCE AT BEDFORD PARK, LONDON.
R. Norman Shaw, Architect.

Bedford Park.

sides, to the comfort of the guests, if the fireplace is thus set back, outside the working area of the room.

In regard to the treatment of the ceiling, in the case of a well panelled room, absolute plainness can very well be adopted, but if plaster work is used, all-over Elizabethan designs, as of strapwork, are more effective, we think, than subdivision by wood mouldings where there is so much woodwork below. Exposed floor joists require more material than may be available, because wide, flat, close-set beams are essential to success.

Wood-lined ceilings, however, are feasible and effective, if divided out by suitable mouldings and set with occasional well-carved bosses. In the dining room, moreover, hardwood is desirable for the floor, a border being nearly always shown, as Turkey carpets retain their preference for this apartment. The old sideboard recess is not much used, and where it exists is usually very simply treated; if, however, a late Georgian style prevails, the old flanking columns and classical treatment retain their characteristic effect and are worthy of adoption. If much brass work is found in drawing room, copper may well prevail in the dining room on the lines suggested above, while if any color is introduced into the windows coats of arms will be highly proper in this apartment.

The third reception room may well have been the furnished hall already described, but if it be a separate room much will depend upon its proposed uses. If it is to be a boudoir, deal panelling painted white, with some special cupboard fittings will prove attractive, while if it is to be the library, the bookcases you expect to find there might call for some elaboration. If the owner has an obliging painter friend it is in this room that the decorative subject frieze should find a place; coming above the book cases, it completes the scheme and carries out the idea of a room with special characteristics. The books suggest subjects for treatment in the paintings, or if the painter be an opponent of the literary influence, his frieze may be made to afford a counter attraction, pitting the ideas of action against those of thought.

A billiard room, however, may be preferred to any study, and we illustrate an example possessing a special character as being practically in the roof. Billiard rooms have become far too stereotyped in arrangement and construction for which, as far as we can see, there is no real necessity. The method of lighting adopted in this example also suggests that the somewhat intractable lantern is not always indispensable.

After the reception rooms come the offices, and here the architect's artistic powers are to be tested, because by the greater or lesser extent to which the small opportunities that they offer are turned to account, we can estimate his capacity of creating some-

thing out of next to nothing. Many can shine with ample means, but few are able to dispense with the trappings of wealth and charm by simplicity alone. We illustrate a special kitchen interior which, though part of a far larger house, still suggests what can be made of such a room when it is a subject of consideration.

The upper floors will find their central attraction in the head of the staircase which needs the most careful attention. Lanterns and skylights we have deprecated, but if the house be in a late style, a coved ceiling approaching to a square dome will have much character, while in an elaborate example, a domed interior on a small scale with upper gallery, etc., might be attempted. In old city houses of classical type some very clever examples of such features may be seen, adding great interest to the interior. Mr. Norman Shaw has done some work of this kind in some of his later houses as in the revived Queen Anne house in Queen's Gate, London. This sort of thing demands great care, because on a small scale it has a tendency to become ridiculous.

In relation to the staircase head, the passages here and elsewhere ought not to be neglected. A happy proportion of width and height in section and a clever disposition of the windows lighting it may often make an interesting feature of this too often neglected part of the interior. The bedrooms ought to be very attractive, for it is such a point in the present day to possess an interesting bedroom that the house will be sadly lacking if these apartments are neglected.

The wall papers are likely to be the chief feature of the decoration, unless fitted furniture be added on the lines already suggestively laid down. The fireplace demands attention and a wood mantelpiece enclosing tiles and a metal fronted grate will be usual. The tile hearth requires to be ample both for effect and safety, a point which is often neglected. Cast iron mantelpieces and grates, if of good design, will be advisable for the less important rooms and are of every-day use. The bedsteads in the best rooms may well be a feature; for this purpose nothing can be better than the revived wood pattern, as made nowadays it is quite unobjectionable on sanitary grounds, all the underneath part being of iron frames and springs with head and foot framework only in wood to design. There has come to be somewhat of a hospital look about the French iron or brass bedsteads and others in a good room, such a bedstead rarely looks equal in importance to the place it occupies and the area of the room that it takes up.

Generalizing bedroom treatment we should add that stained margins to the floors are desirable, and enamel-white woodwork. The ceiling may well be plain and much ornamental work is to be deprecated. It might easily be necessary at very short notice to efface all

the decorative work by a thorough cleansing process. Health in the house to some extent centres in the bedroom. This concludes our tour through the house and winds up a subject which, however inadequately we may have treated it, seems to us one of the first importance for the extension of artistic methods, and the treatment of our smaller houses is one of the most pressing needs of the time.

The small house must be rescued from the hands of the merely commercial speculator and receive some treatment according to the characteristics of the individual who is to be its inhabitant.

Banister Fletcher.



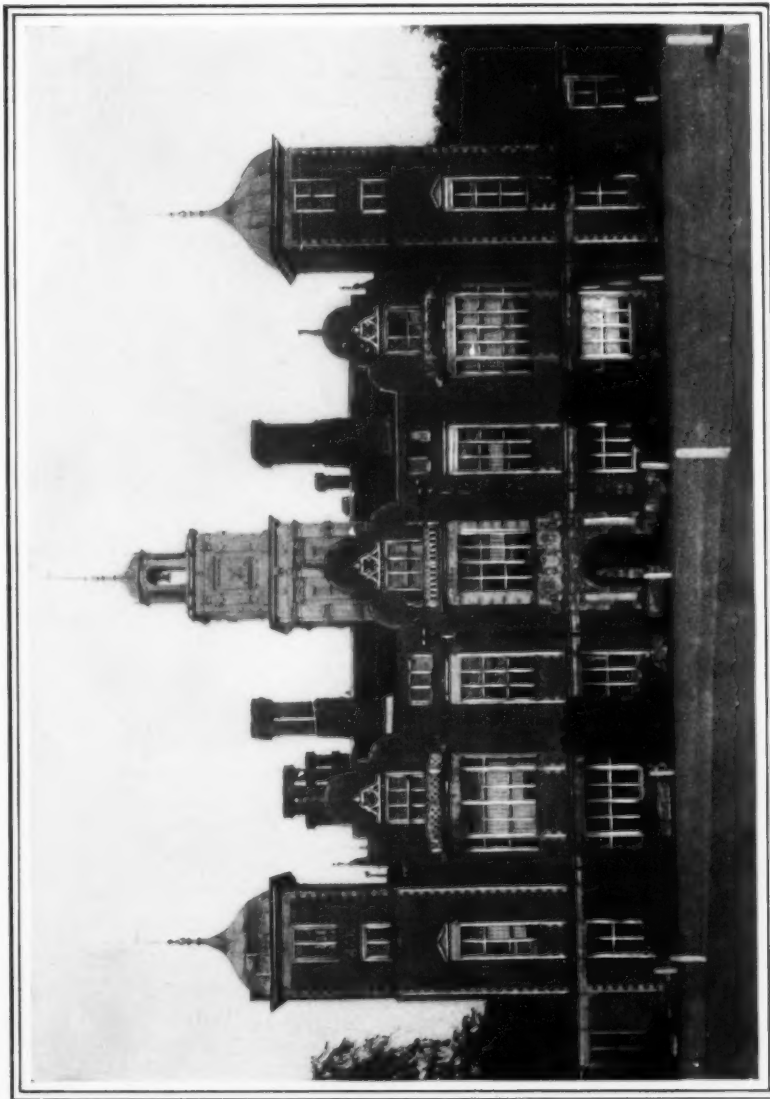


PLATE I. BLISSING HALL.—West Front, looking on the outer court. Of the porch itself there will be further mention below. The general character of the west front is so far successful as a facade that with a belfry tower strictly in style and of workmanlike material it might be very imposing. The width between the square towers is about eighty feet. This space is occupied by the great staircase hall with a double stairway of great splendor, with magnificent Jacobean carving and interesting statuettes on the newel-posts, and on each side of this a room between the great chimney stack seen in the photograph and the corner tower. It will be noted that these towers project by more than half their width from the front and by nearly their whole width (see Plate VI.) from the flanks of the house. The considerable length of the bridge (see Plates II. and IV.) can hardly be judged from the Plate before us, but the rounding projections on both sides where the bridge widens can be seen, and the amount of foreshortening partly judged.



✓ A JACOBEOAN MANOR HOUSE.

Blickling Hall.

BLICKLING HALL, Norfolkshshire, England, is situated near to the small town of Aylsham, thirteen miles north of Norwich and nine miles from the sea at Cromer. The land is flat thereabout, and the house lies low, as do the neighboring mansions, some of which are of almost equal importance architecturally to this curious Jacobean manor house. The lake seen in Plates V. and VII. is stated to be a mile long, but the size of the park would hardly seem to allow of so large a piece of water. In spite of the low level, no attempt was made by the builders to raise the building out of the ground. A broad moat originally encircled the hall, much of which is still in existence and filled with water; it can be distinguished in Plates I. and II. This moat separates the principal (west) front from the outer court, and a bridge is carried on two low arches to the principal entrance doorway. The ground floor of the house is seen to be on exactly the same level as the lawn and drive, which occupy the outer court, without even a door sill making one riser at the doorway itself. All of this is in strict accordance with the custom of the seventeenth century in England; a custom which has not lost its hold upon the builders of village

houses even to this day, and which controlled the building of the houses on the streets of our older towns, such as Kingston, New York; and Charleston, S. C., where there is not even a moat to separate them from the footway in the street. The outer court is enclosed by the one-story buildings seen in Plate I., the arcades seen in Plates IV. and V., and the higher buildings of which a very small detail appears on the extreme right in Plate V. and on the left in Plate VII. There is, of course, an inner court, upon which there open windows from the great rooms, in some cases, or from staircases, corridors and subordinate chambers.

The house seems to have been built entirely in the reign of James I.; the guidebooks say that it was not finished until 1628, soon after the death of Sir Henry Hobart, who died in 1625 and who had been Chief Justice of the Court of Common Pleas; (for all of which see the Dictionary of National Biography). Of the older house in which the Boleyns lived and where it is thought that Anne Boleyn, second queen of Henry VIII. was born, no part remains or can be identified. It is probable that the whole house was built in the present style during the life of Sir Henry Hobart, although there is some legend of a rebuilding of the principal front after a fire in the eighteenth century. This rebuilding must have been confined to interior work and perhaps the replacing of some shattered stones; but the belfry tower which rises above the main entrance and which is entirely of wood and of a rather clumsy design may well be of the eighteenth century.

Except for that clock tower, the whole is Jacobean; and an admirable specimen of that peculiar style which, avoiding gabled roofs, used gables to replace dormers. Other characteristics are the abundance of glass in very large windows and groups of windows; the frequency of projecting bays, each occupied by a large window, and the free use of so much classic detail as the plain structure of walls and roofs would allow. Further remarks about this building will be found accompanying the plates.

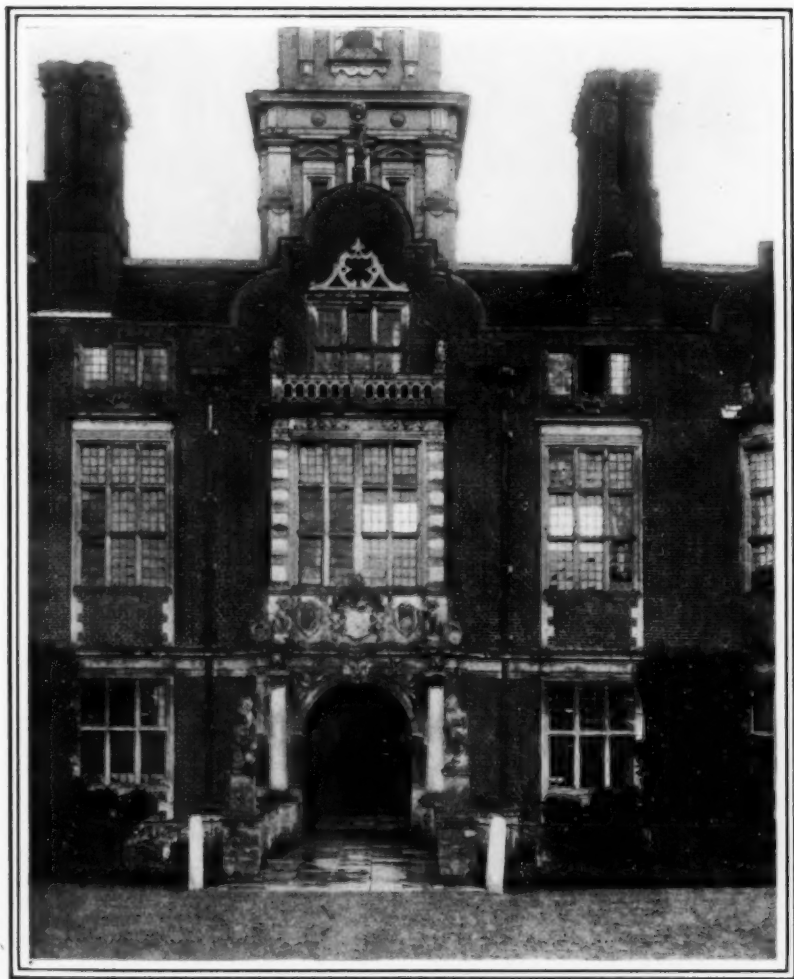


PLATE II. BLICKLING HALL.—The principal entrance on a larger scale than in Plate I., and it is interesting to see how the great bay-window over the entrance doorway, while it projects only a foot, more or less, from the brick wall, is given special consequence by the treatment of its stone flanking pieces as pilasters with a semblance of Ionic capitals and a decided frieze with swags above them, introduced in order that the window-head may have all the appearance of a full classical entablature. The two statuettes which occupy the corner pedestals of the parapet above the central bay-window have been introduced chiefly as echoes or repetitions of the heraldic monsters below. The free treatment of the heraldic creatures, their position being different, two attitudes used for each supporter, is characteristic of the days when heraldry was a real "power in the state," or at least in social matters.



PLATE III. BLICKLING HALL.—This is a view on a still larger scale of the doorway taken by itself. The armorial bearings over the front door are stated to be those of the builder, Chief Justice Hobart, and this is highly probable; the escutcheon in the middle is charged with an inescutcheon bearing the open left hand which indicates the rank of a baronet; that is to say, of a wholly new order of honor, especially founded by James I. The quartered field, though much defaced, can still be made out in its more important features. The decorative escutcheons at the two sides are almost wholly defaced. The monsters set upon the two ressauts above the columns are bulls supporting escutcheons, presumably the supporters of Sir Henry Hobart's arms; and they are repeated with slight modifications on the two pillars which flank the bridge. The crest seen above the carved stone helmet is a bull's head and neck.



PLATE IV. BLICKLING HALL.—This illustration shows the west front from the northwest in steep perspective, and here we understand better the form of the bridge as well as the amount of projection of the columns and door-piece, and the bay-window above. There is certainly a very successful piece of proportioning in the gradual retreat of these projections and in the placing of the statuettes above to correspond with the heraldic supporters below, the whole leading gradually to the wall of the gable. The success in obtaining an architectural treatment of considerable importance, and sure to strike the eye of every beholder, while yet the materials are of the simplest and the expense incurred in stone-cutting proportionally very slight, is certainly worthy of great admiration.



PLATE V. BLICKLING HALL.—Here we see the west front viewed nearly as in Plate IV., but in still steeper perspective and from a point beyond the arcaded masonry which corresponds to the one seen in Plate IV. on the right, and which is seen in the present illustration between the foreground arches. These two arcades enclose the outer court on the south and north, and the buildings of which a little is seen on the right completed the enclosure of that court. These are good two-story buildings, strictly Jacobean in style, but probably much modified or rebuilt in the nineteenth century.

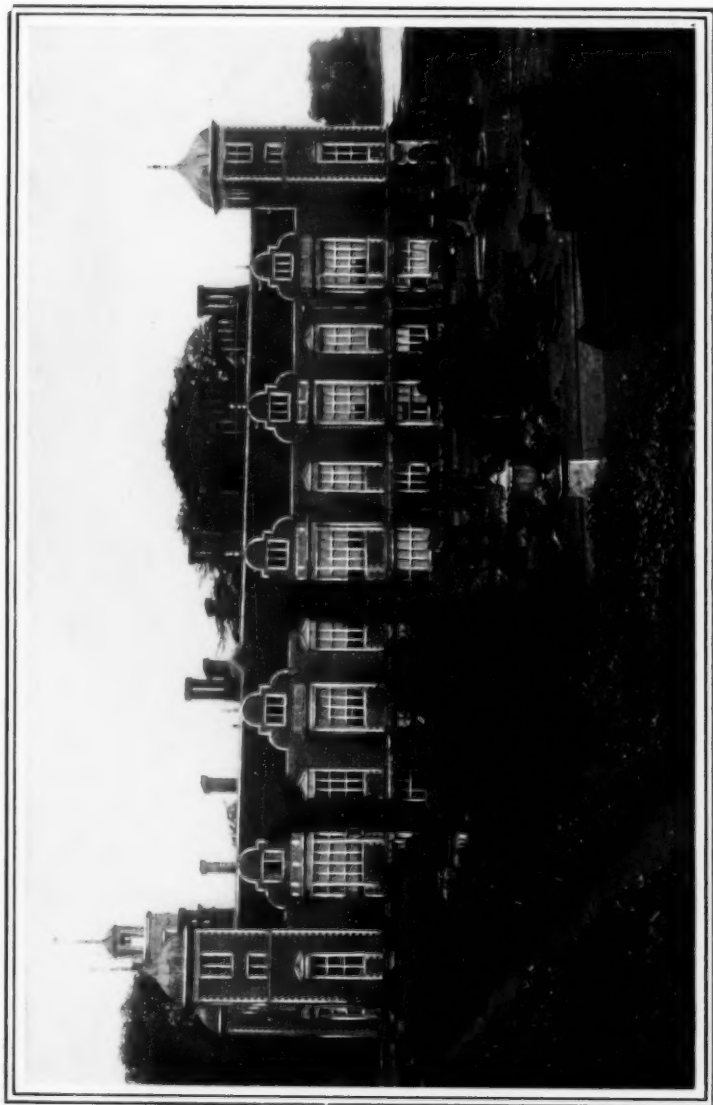


PLATE VI. BLICKLING HALL.—View of the south front with the private or reserved garden. The high-raised path on the left bordered by densely packed masses of ivy is made upon the flat roof of an extension of the arcade seen in Plates IV. and V. The garden, therefore, is not sunk; its level is that of the outer court, but the raised platform of the arcade separates it from that court. It seems indeed as if the natural level of the land rose nowhere more than two or three feet above the lake, and was not altered artificially; only broken by these arcades and raised paths.

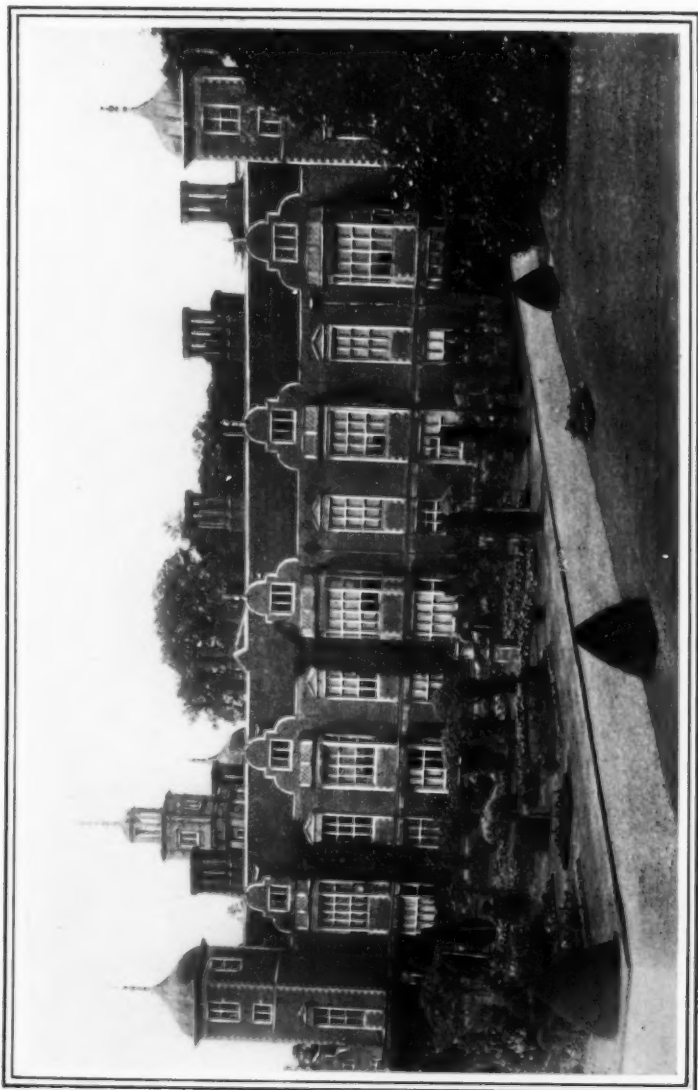


PLATE VII. BLICKING HALL.—This illustration shows the south front again; but seen from a point much further toward the east, so that the wooden clock tower above the main entrance is shown for nearly its whole height. This front is occupied by the great gallery in which the library is preserved; see Plate X. A fair idea of the garden may be had by comparing these two views. With all its antique simplicity and real half-domestic charm, the design of the garden seems to lack significance.

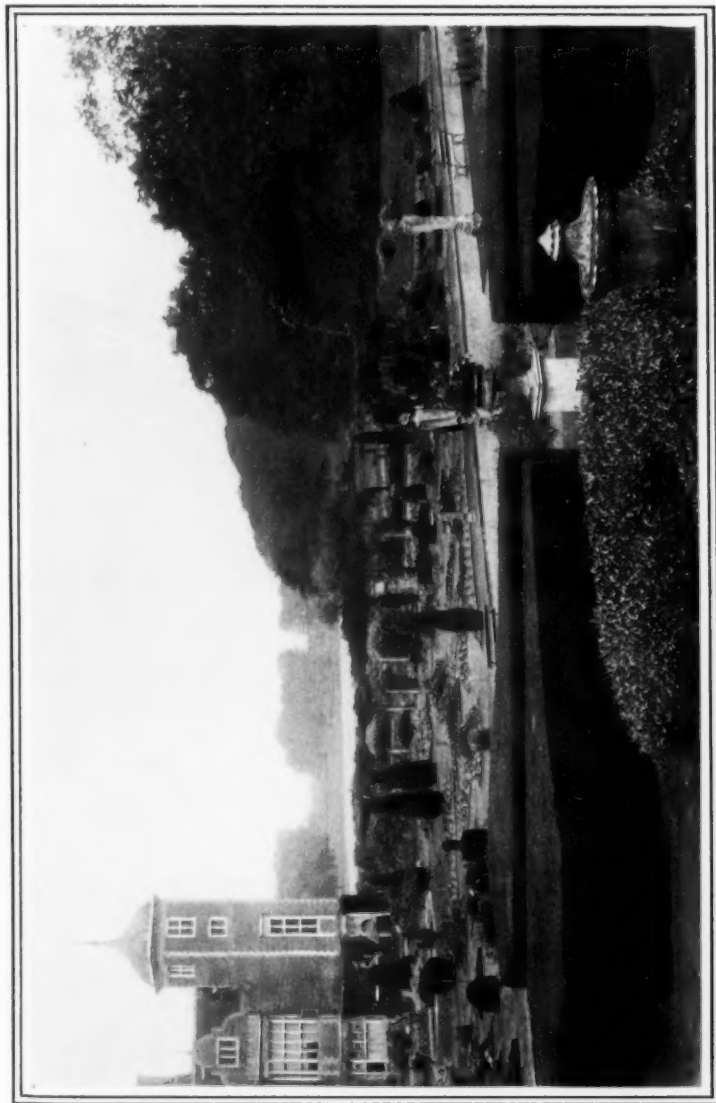


PLATE VIII. ELK-KLING HALL.—This view shows the extreme eastern end of the south front; we are looking across the private garden towards the northeast and away through the park for a distance of perhaps two miles. The backs of some very interesting terminal figures, which are not seen in the other views of the garden, are plainly seen here. There is an ancient sundial exactly in the middle of the picture. The tranquil beauty of the garden is marred by the ugly modern wrought-iron benches with wooden backs and seats seen in the near foreground. It will be noted that two doorways afford entrance to the southeastern corner tower; these are the garden doors leading to the private stair.

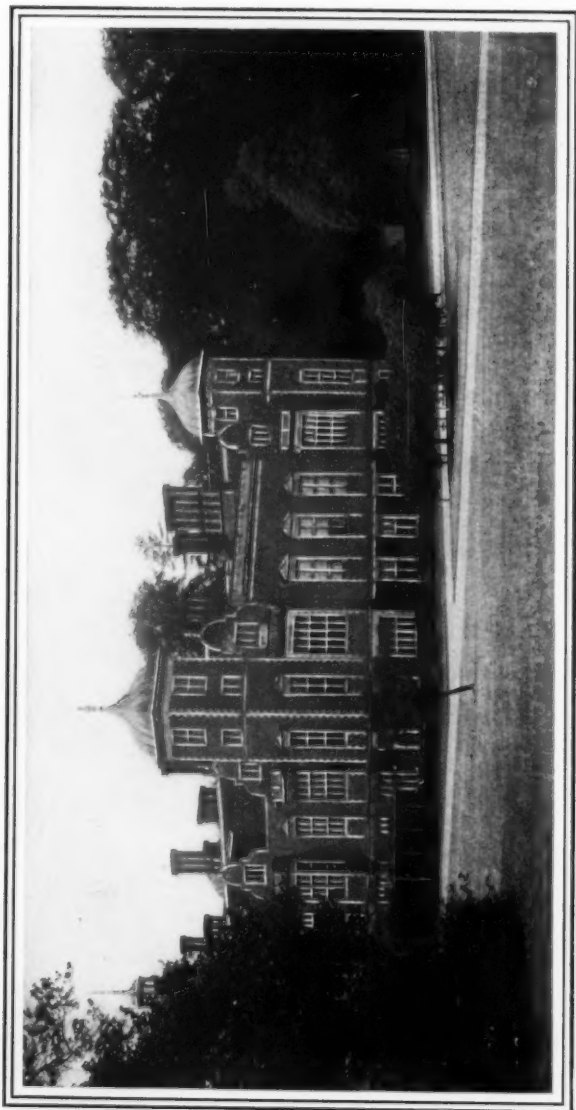


PLATE IX. BLICKLING HALL.—In this plate we show the house from the southeast with the lawn and arbor which accompany that side of the house. The solid wall of green seen on the left and the lattice walk beyond it separate this lawn from the garden, but, as will be seen in Plate VII., there is no change of the level of the ground here, there is merely a hedge and fence separating one part of the grounds from another. The comparison of all these pictures will show that the house occupies a parallelogram of about 85 x 125 feet, without including the projection of the corner towers. The outer court on the west, with its enclosing buildings and the moat occupies nearly as much space, being nearly square and wider than the house proper.

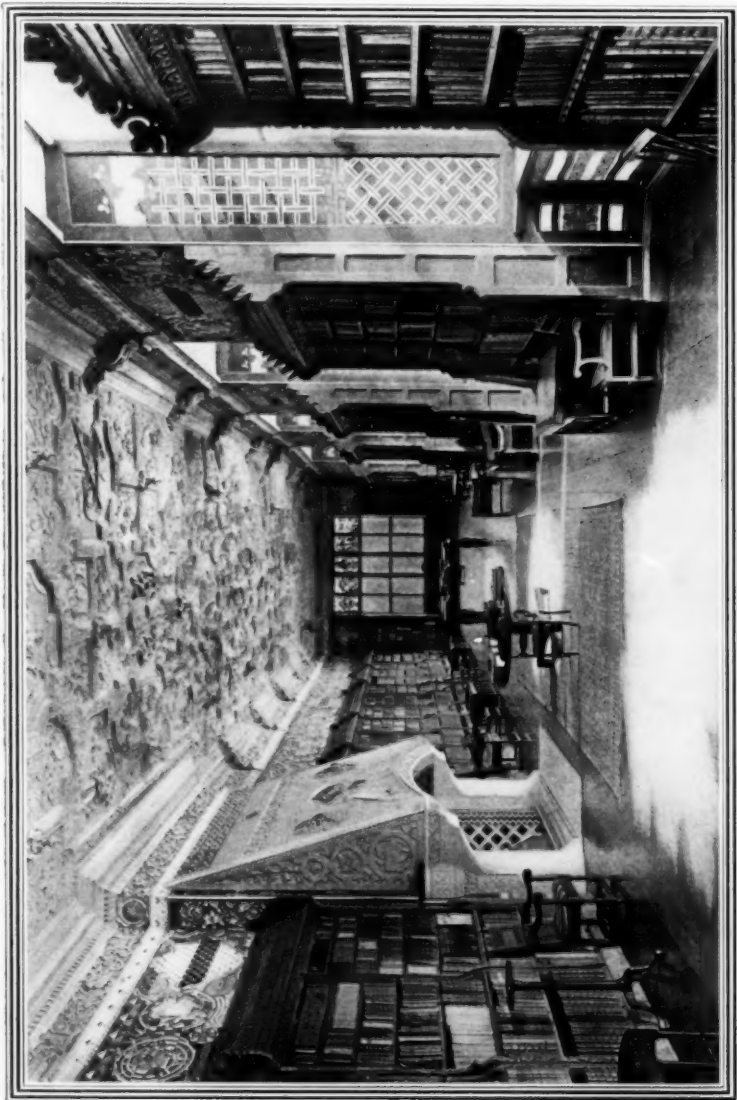


PLATE X. BLACKLING HALL.—This is a picture of the great gallery generally called the Library. This room stretches along the south front, the windows on the right looking out toward the garden, and the broad window at the end being the same which shows in Plate IX., immediately to the right of the nearest square tower. The ceiling is one of the finest pieces of Jacobean plaster work in England, the design including bas-reliefs of figure-subject as can be seen in the near foreground, and great ciphers and emblematic compositions. Thus, if the near panels are examined by reversing the picture, the one on the left is seen to be a composition of scythe, rake and other implements, and the one on the right, matching the last, a purely heraldic composition; while the panel with figure-subject is probably a Bacchus with his attributes, and the large one next nearest to the spectator contains the same heraldic escutcheon which we have seen over the doorway. The armorial design is that of the family of the Blacklings. The window is ancient, but the great chimney is not of the original structure. The very elaborate blind frieze, though fine in design, is not of the epoch nor strictly in accordance with it, and the wooden cases of inferior interest. The library itself is famous, consisting almost entirely of ancient volumes, many of which are of priceless rarity.



PLATE XI. BLICKLING HALL.—This illustrates the staircase with fine double stair of the same epoch as the house. The modern carpeting interferes with its dignity. There is no stair in England which is more rich in composition or in detail. Moreover, there is no instance of the raking or sloping capitals more agreeable and less of a solecism than the present one. The whole order of gables with Ionic capitals, now horizontal, as at the landing on the left, now sloping, as in all the ramps of the stair, is a remarkable achievement in conventional design. How far the statuettes on the newels are of the original epoch it is not safe to say, but they are strictly in keeping. The great window on the right looks out on an inner court. The large Oriental rug on the floor has been cut so as to fit around the foot of the stair, which seems a piece of vandalism; but it may be that the piece has not been removed but merely folded under, in which case it can be with partial success put in place again and repaired.

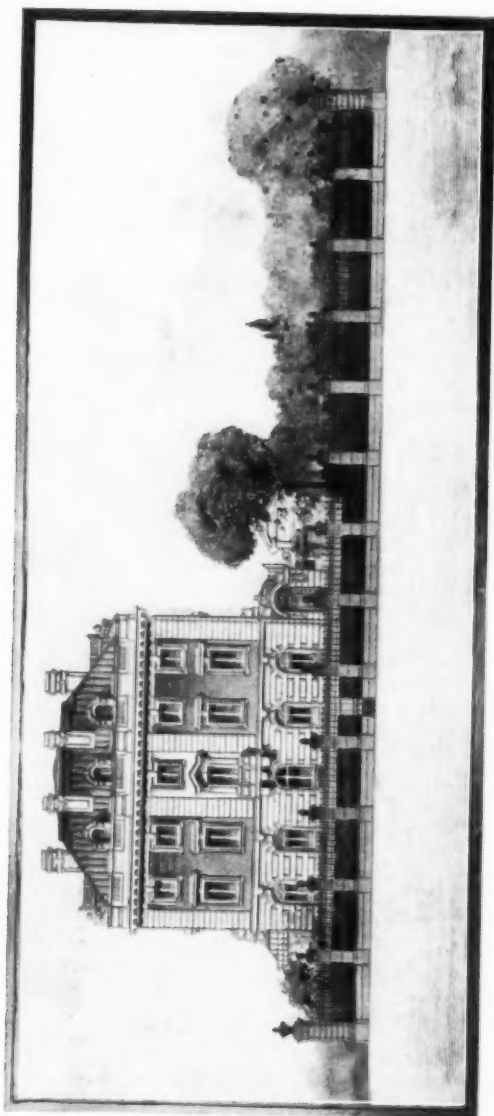


✓ ARCHITECTURE IN THE BILLIONAIRE DISTRICT OF NEW YORK CITY.



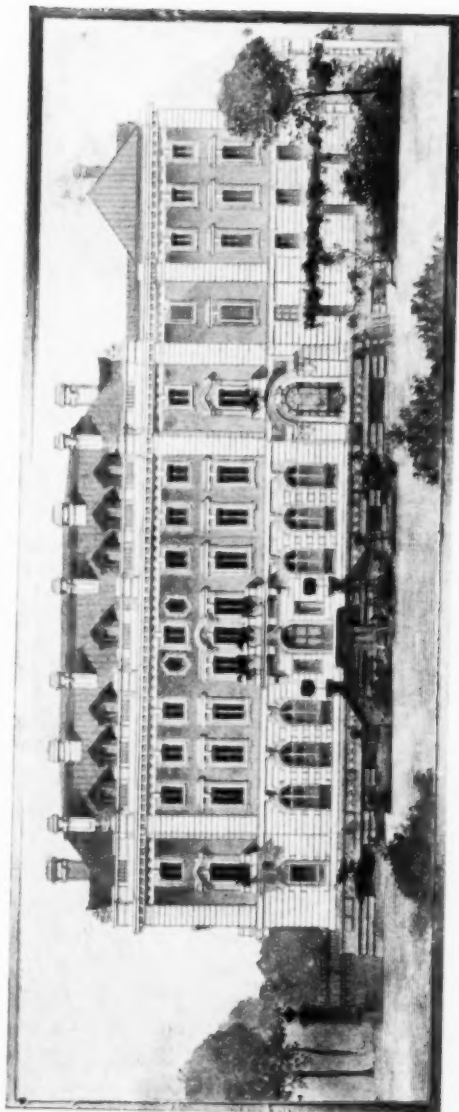
SIR, let us take a walk down Fifth avenue." To be sure, Dr. Johnson never said that. But neither did he say "Sir, let us take a walk down Fleet street," as has been confessed by the person who for many years imputed that invitation to him on the cover of a London magazine. And the more modern formula is the more attractive, as will be admitted by all who have seen both thoroughfares in recent years. In fact, it is only this year that that part of Fifth avenue to which I shall direct your attention has become really and unfailingly amusing, the part from Ninetieth street down to Seventy-ninth. Hardy pioneers have, indeed, been building themselves houses there, at intervals, for pretty well a decade, and very good houses some of them are. But they have been coming, these early settlers, as "single spies." Now they are coming "in battalions." It is Mr. Carnegie's settlement at Ninetieth, which seems to have determined the movement and enabled the owners who have been holding on for all these years, in spite of taxes and assessments, to "unload." They ought to be very much obliged to that billionaire. If he had chosen to mingle business with pleasure, he might have made an uncommonly good thing of it, if, when he determined to establish himself at Ninetieth, then occupied by a "taxpayer" of a riding school, he had bought all the vacant Fifth avenue lots down to Seventy-ninth, and held them for the rise inevitable when it should transpire that he was to grace the vicinage with his personal presence.

Beyond Ninetieth the movement has not yet gone. The castle of the hardy brewer who settled at Ninety-fourth or thereabouts,



WEST ELEVATION, CARNEGIE RESIDENCE.
Fifth Avenue, 50th and 51st Streets, N. Y. City.

Babb, Cook & Willard, Architects.



NORTH ELEVATION, CARNEGIE RESIDENCE.
Fifth Avenue, 90th and 91st Streets, N. Y. City.
Babb, Cook & Willard, Architects.

ten years ago or thereabouts, remains an almost solitary fastness. In fact, Ninetieth street is at about the summit of the long rise from the Southward and at the beginning of the sharper decline to the Northward, and as to the avenue towards Harlem, it doth not yet appear what it shall be, nor to what class of "improvement" it shall be given over. From the map, one might say that Upper Fifth avenue, or "Central Park East" in the sense of fashion, would terminate only with the Park itself, at One Hundred and Tenth. But then the topography is also to be considered, and the fact that "the Flats" at the northeast corner of the park are already occupied with dwellings which cannot be called fashionable. Where the line may finally be drawn we cannot be sure. But, for the purposes of present fashionable architecture we may safely draw it at Ninetieth street, and begin our downward course from there.

The Carnegie mansion itself which has so stimulated the development of the neighborhood and so "created values" falls first to be considered. The boardings are still up on all three fronts, but one can make out the mansion pretty well behind them. And one of the first emotions of the beholder ought to be of gratitude to the owner for allowing himself so much elbow room that he need not go into the street for a breath of fresh air, but even in Fifth avenue can establish himself under his own vine and fig tree. He has set an example to other billionaires which it is to be hoped some of them may follow. Thus, in time, may we have a fashionable quarter of New York with something of the charm of the fashionable quarters of smaller cities, where a rich man may show his riches in the unobjectionable way of refraining from building his house to the limit of his ground in all directions, may provide for it a setting, and secure for it the appearance as well as the fact of spaciousness. In fact, the detachment of the Carnegie house gives it a grateful look of suburbanity which has been much enhanced by the architectural treatment. Not by any means of the American suburb as we know it, attractive as that often is, but of the English "House" at the edge of its town. It might be a great house at Kensington, not the artistic and modern "South" of that name, but that of the eighteenth century, or of the Regency at latest. There is not much pretence of architecture about it. But its length and its "lowth," to revive a good obsolete word, would make it imposing in spite of itself. It must be close upon 175 feet in extreme length, omitting the stables that are apparently to come on Ninety-first, but including the picture gallery of perhaps forty at the east end by some 60 in breadth, and three moderate stories in height, not counting the roof story of which the metal dormers emerge over the heavy stone balustrade. Nothing could be simpler than the composition, a solid stone basement, and a superstructure of an excellent and sufficient-

ly varied rough red brick. It is worth noting that the house has been very considerably varied in execution from the published designs. But one story of the annex at the east end has been built or apparently is contemplated. Each of the long fronts still consists of a central feature, a doorway below, a triple window above, flanked on each side by three windows, and again by a wing of one bay and one opening, strongly demarked from the centre not only by a recession, but by a broad quoining of masonry. But the detail of the long fronts has been changed, including the general treatment of the central feature, and the composition of the end, the Fifth avenue front, which is of some sixty feet, and this much for the better, by leaving out the triple division altogether, equally spacing the five openings, and introducing, at the top of the basement, a notably vigorous and successful corbelled balcony. The detail of all this is also Georgian in effect, if not all in origin, all except the annex, the picture gallery, where a frieze of triglyphs and disks, and a bristling cresting give an air more Hellenic, or more Gallo-Hellenic, than quite comports with the rest. But the heavy quoining, the heavy window framing in stone, the heavy cornice, the huge urns, give the whole the air of "comfortable bourgeoisie" at which the architect seems to have aimed, and which is enhanced by the heavy granite urn-crowned posts that are the stanchions of the fence not yet in being that is to screen or guard the garden. The usual heaviness and the somewhat excessive scale promote the "robustious and periwig-pated" aspect which has apparently been quite meant, and which is characteristic of the eighteenth century. It is reported that the owner instructed his architects that he distinctly "did not want a palace." Well, he distinctly has not got it. But he has got a very comfortable-looking and gentlemanlike and rather handsome house, with the suggestion of a *rus in urbe* carried throughout. That is a considerable success, as town-houses go.

For how they do go! Walk down the next block front, from Ninetieth to Eighty-ninth, and see. Here are four twenty-five foot fronts still unfinished and therefore of the newest fashion, which all exhibit the swell front which has suddenly invaded all the fashionable quarters and which is so apt to get the unskilful or the unwary into trouble. Three of them, in brick and stone, carry the swell down to the ground, with an awkwardness almost inseparable from the scheme, which does not admit of sufficient breadth of flanking pier fitly to frame the front on a twenty-five foot lot, unless the swell is reduced to a mere bay window. These are in brick and gray stone, and offer nothing very salient to the commentator. The fourth is in white marble, and the swell is of two stories only, under a recessed attic, and resting upon a projecting rectangle at the base, an arrangement liable to extreme awkwardness except in very skil-

ful hands, more skilful, at any rate, than have here been concerned in it.

There is nothing now to detain us until we come to the block front between Eighty-sixth and Eighty-fifth, which is in large part occupied with a row of "classical" English basement brownstone fronts that look primeval, Venerable things! they have come down to us from a former generation, far antedating all their neighbors, and being, at a guess, of the vintage of 1870 or thereabouts. But after the sprightly polychromy we have been looking at, one cannot help wondering whether these dingy, dull old fronts, which are quite innocent of art, but equally of the pretence of it, do not constitute as eligible a type as any of those which are "struggling to be born." Refine the detail, one is tempted to say, pull off the sheet metal and replace it with stone, and why would not these unpretentious fronts be as good to live behind as all but the very best of the modern varieties of which none has as yet established itself as a type, nor seems likely so to do. Curiously and luckily, the architect of the corner house next to the row seems to have taken this view, and has produced a well-behaved front which, indeed, runs the risk of not being noticed, but which, when you do look at, is entirely inoffensive, "not a headache in a barrel of it," and that is more than you can say for any but here and there a very exceptional one of the novelties. The view has been taken, still more strikingly, by the architect of the reconstruction of the house at the corner of Eighty-fourth. Because this is a most typical brownstone front of the more expensive, a full sixty-foot front, apparently from the actual atelier of the late Griffith Thomas who bordered lower Fifth avenue and Madison square with so many of the same kind. Here a modest cornice and parapet in cut stone have taken the place of the undoubtedly bloated projection that preceded it, the "stoop" and the portico and the front door have been replaced by a bay window, and the entrance moved to the side. The addition of the protrusions, it is true, mars, if it do not destroy, whatever effect the original box owed to its proportions, and was doubtless made for the accommodation it gained inside, without sufficient care for the exterior effect. But the detail is much more scholarly than the old, and in much better scale, and the total effect here also, is entirely inoffensive.

And yet, to raise the question we raised just now is to settle it. What can be drearier than a walk through any typical and unchanged brownstone district. Suppose the sheet metal were all replaced by stone and the swollen detail reduced, still nobody would walk through the district for the pleasure he found in looking at the outsides of the houses. Our present promenade, on the other hand, is brimful of interest and amusement on just this account, and



NO. 1009 FIFTH AVENUE.
(The Duke Residence.)

New York City.

the frequent failures are scarcely less amusing than the rare successes. Continue we to the corner of Eighty-second, and contemplate the corner house. You cannot help looking at it and experiencing some sort of emotion, whereas on Murray Hill, in the untouched parts, you may undergo a complete architectural Nirvana. This house, to begin with, is agreeable in its color, a combination of red brick with a brown gray limestone, and in the main, the combination is fairly well managed, and the proportions of the two tints effective. The solid stone basement, and the solid stone attic, and the three variegated stories between,—that is all very good, and tends to produce a repose which the color-treatment, at least, of the central part does not destroy. There is something to be said, too, for the design of the central feature of the long front, the small segment of a large circle occupying the central three stories and, in the upper two of these, having its wall space emphasized by the single small opening at the centre of its face. But it is very inadequately supported by the narrow pier, faced with a column, which divides the entrance, to the detriment if not destruction of the dignity of the same. And, indeed, the whole basement is visibly inadequate as a base for the superstructure. It is all very well to express that the “premier” is the premier, and the ground floor inferior in importance as in place. But, all the same a millionaire should not enter his abode on all fours, and through a tunnel, as the Eskimo his snow hut. The rasing of the basement, say, by a distinct subbase and plinth, and the impartment of more importance to the principal entrance, seem, in the present instance, to be powerfully indicated. And the pediments that give importance to the premier, and the huddling of openings at the far end, together with the color, give an unpleasant air of busyness and fussiness to the front. But still it is “ower good for banning” up to the cornice line, at and beyond which it is not too good for anything. We hold this truth to be self-evident that, when a man goes into “six figures” for his dwelling house, he ought not to make its upperworks of sheet metal. That is a cheap pretence which nothing can distinguish from vulgarity. Happily it does not deceive anybody. In the present case, whether from stern conscientiousness or mere color-blindness, the very housepainter has exposed the false pretence so that the wayfaring man cannot err therein; for he has failed, by several shades, to match the tint of the stonework. And the design takes on that dropsicality proper to the sham material. Presumably the designer flattered himself, when he had completed the balustrade tin parapet, and the pedimented tin dormers peeping over it, and the metal work (which here, by the way, is honest metal work) of his crowning pavilions, that his work would look “Paris-



NOS. 1007 AND 1008 FIFTH AVENUE.
New York City.

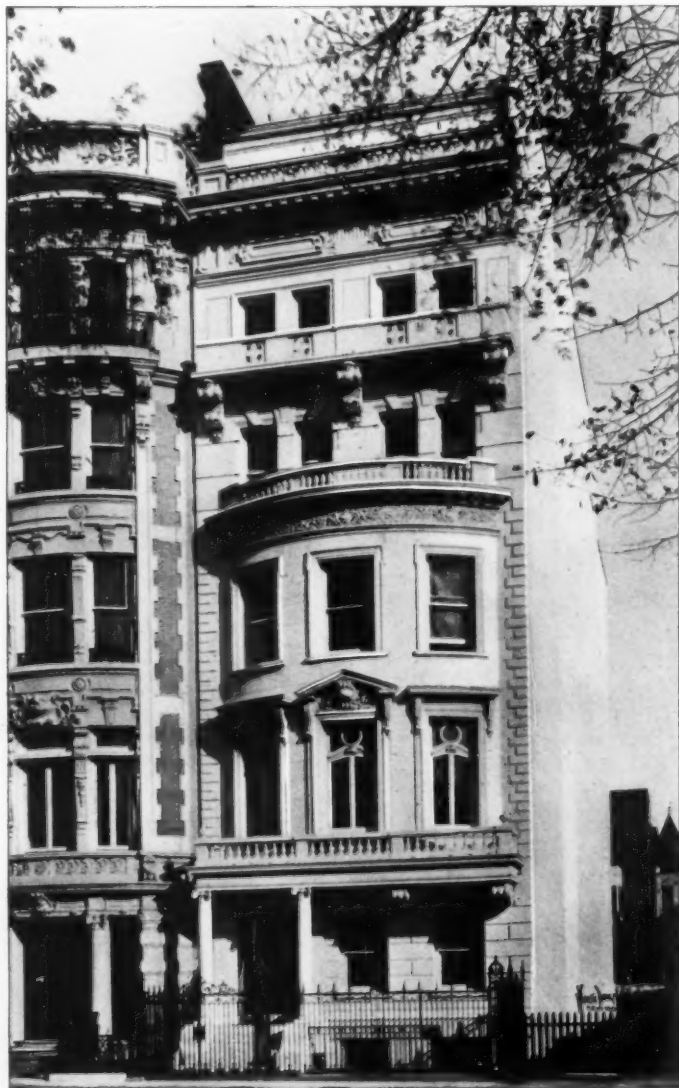
ian." But he can no longer deceive himself; still less can he deceive anybody else.

The end of this house (1009 Fifth avenue) seems to have been composed in conjunction with Nos. 1008 and 1007, and to be meant to be considered in relation to them, as a composition of three house fronts. We have to retract, as to this, even such carefully qualified praise as we bestowed upon the long side. The end has the advantage of no entrance in the basement which it was therefore easily practicable to make adequate as a support. But it is evidently inadequate, architecturally. Moreover, there is no detail on the long side of such badness as some of this, especially the festoons under the third story windows, and the sheet metal parapet that crowns the four story bay. It is insensitive, slovenly and reckless. To be sure, it is not so bad as the middle front of the three, but very few things are. We know of nothing worse. And yet, in this central front, there is a glimmering of an idea. That is in the manner in which the two-story oriel is set upon the rectangular porch. It is really a good notion. The solidity of the wall in which the doorway is cut makes it a suitable substructure for even the greater area of the superincumbent bay, and the corbelling of the overlapping ends needed only to have been better more studied to become very good. But that is the trouble with all these things. Nothing is studied through or carried out, but the designer rushes from one-half done thing to half-do another. Above the basement, we defy anybody to find anything to praise. The oriel would evidently be better off without any of the decorative detail which has cost so much of the owner's money and of the time of a carver who must have had trouble to keep himself awake while he was doing it. How much better the thing would look if it were all planed down to the face of the wall. But this is not the worst. Look at the top. How positively distressing it is. Could anything be uglier, is anything in the "fancy tops" in sheet metal of the tenement houses of the Lower East Side uglier, than this feature? How deplorable is that niche, how distressing those gaunt flanking pilasters, how much to be regretted that arched canopy, that parapet, those ornate dormers! Could anything of the official architects of this municipality themselves show less of architectural scholarship, nay, more of architectural illiteracy? One comfort, to be sure there is. Above the cornice line it is all sheet metal. What a wicked waste it would have been to set a carver at work doing all this in actual stone, to say nothing of the effect upon his mind and his immortal soul! It would ever have been a distinct gain if the pendant festoons down the flanking piers could have been done in sheet metal also. It would have been so much easier and cheaper for the owner to have them pulled off, when he was educated up to not standing them

any longer. And, as for the artistic sensibilities of the worker in sheet metal, they are negligible. If he has any, he had better go into some other business. It is true, one is sometimes tempted to say this of the architect who feels himself bound to follow the fashion.

This central member of the "group" is in monochrome, which is probably a mercy in itself, and is at any rate a suitable arrangement when the sides are bichromates. The third, No. 1007, is, in composition, naturally the counterpart of the first, excepting for the necessity of an entrance at the base, and for the further fact that the swell is carried up through the fifth story, which was here judicious. The entrance is fairly well managed, and its treatment sufficiently massive. Another variation is that, for the sheet metal parapet above the swell of the corner house, this substitutes a balcony of honest stonework, with an honest iron railing, to its great advantage, for this corbelled and railed balcony is in itself a studied and successful feature. The cornice and parapet, however, are again in sheet metal. But again the trouble is with the decorative detail. Has any one of these things given, or can any one of them give pleasure to any human being, from the pendant bulbs of the cornice against the tops of the flanking piers to the whittling of the window-mullions? Do they serve any purpose except to show that they cost money? In the old brownstone days, when the centre of fashion was at Madison Square or below, a millionaire, or more likely a mere five hundred thousandaire, who had his house front profusely decorated with the carving of the period, was admonished that, if he would hang a statement of his bank-balance on the front of his house, it would serve the same purpose and he would keep the money. It is not intrinsically different now, when the cartouche and the palm and the festoon and the rope of bulbs have succeeded the "ornaments" of those old days, to become, two generations hence, equally ridiculous.

The speculative builder, as we know, will have his way, and, even if he be driven to employ a competent architect, will so harry and hurry the poor man that the poor man cannot do good work. One of the odd things about the speculation houses we are now considering, and which constitute so large a proportion of the recent additions to Upper Fifth avenue, is that, in regard to so many, it appears that the architect of record is one person, and that quite another is the architect "for the interior." This must mean that the buyer is not satisfied with the interior the speculative builder provides him. It looks a wasteful way of doing business for the buyer. The profit on the land, it seems, is not enough for the speculator. He finds that there is another profit to be had on the house, and he secures it accordingly, hiring an architect whose works he



NO. 1006 FIFTH AVENUE.
(Residence of W. Gelshenen.)
New York City.

proceeds to cheapen, first by hurrying the architect so that he cannot do himself justice, and next by translating cut stone, say, into terms of sheet metal. It is very obvious that good domestic architecture cannot grow out of this state of things. It grows out of houses carefully and affectionately and at leisure designed to meet the needs of particular individuals, and not out of a pot shot at the requirements of "the average man." Inasmuch as there is no average man, and as the houses are bought by individuals, why should not the individual have a house built to suit him? The answer seems to be, because the speculative builder has preëmpted the desirable sites, and will not sell one unless the buyer will take with it a house that does not suit him, and pay a builder's profit on the same. Paul Bourget says the American will spend anything but time. It looks so. For rather than take time to get himself a proper house the millionaire will buy a house which does not suit him, and thereupon hire an architect to tear up the interior and turn it into a house that does suit him as to the interior. The next step should be to hire an architect to tear off the exterior, and turn that also into something that does suit him. In that case, the purchaser of No. 1007 Fifth avenue should be rather favored. All that he really needs to do to turn the front into something that a gentleman need not be too much ashamed to live behind, is to throw away the cornice and parapet, replacing them with masonry, and then to plane all the ornament from the front. He will not have such a bad house.

Next to this group comes a single house, No. 1006, in white marble, which forces itself upon notice, if only by reason of its material in contrast with the soft, warm gray and rather hot red of the "group." This also is a swell front, and the swell is noteworthy for several things. One of them is the infelicity of its proportions. It is evidently either too important or not important enough. A two-story oriel in a five-story house is comprehensible enough, but it should then be a subordinate feature. When it constitutes, for its two stories, the whole front of the house, and there is one story of basement below it, and two of superstructure, it seems impossible to make such an arrangement rhythmical. The balcony under the fifth story is an unsuccessful attempt to dissemble the awkwardness of the disposition, which need have no awkwardness if another story had been included in the swell front, and that had been made frankly "the" front. The straight line of the balcony, over the curved platform of the projection, is in fact an additional awkwardness. But a more important infelicity is the manner in which the projection is supported, or left unsupported, upon a rectangular balcony, carried for two of the three bays into which the front is divided, or for one and a-half, upon corbels, and for the other

half upon two columns which bound the stoop, and which are apparently very weak for their function of support. (Compare them in the illustration with the comparatively exemplary treatment in this respect of the basement and entrance next door.) That is also a meaningless and ineffectual device for giving more apparent framing to the bay window, whereby the outside piers opposite this are laid up in little quoins, whereas the wall above and below is of ashlar of great size. Having said this, however, and having duly repeated our protest against the use in a palatial mansion, of sheet metal in imitation of masonry, and especially of the panelation of the frieze under the main cornice, it behooves us gratefully to acknowledge that the detail in masonry is much better studied in itself, and much more successfully adjusted in scale, than in the fronts we have been considering.

Continuing down, we find at the end of the next block, three houses designed in absolute, and we should be inclined to say, if there were any reason to suppose that any one of the designers had had notice what either of the others were doing, in ostentatious independence of each other. Why should such things be? In cities in which the municipality charges itself with appearances, other than political, these three designs, which must have been submitted at about the same time, would have been returned by the aedile to their owners, with instructions to "get together," and submit things which did not swear at each other. Why should not educated architects do of their own accord what they would, and should, be forced to do in such cities? It is a frequent question, and very seldom gets in New York a satisfactory answer. And here it is evident that the designer of the first of the row, No. 992, would violently have resented any attempt to make him conform to anything in his surrounding. It has been his purpose to assert himself by the widest difference from any thing that was, or that might be, in his neighborhood. It is inconceivable that any other architect should be inspired with the bright idea of using a combination of white marble and brick of the brightest lemon chrome for a house front. When he had hit upon this, he was already sure of getting his work noticed. That he was sure of getting it equally resented does not seem to have troubled him. To insist upon being taken notice of, *quand même*, is now recognized as the main motive of criminals like Guiteau and Czolgosz. It is, of course, more desirable that this craving should be appeased by making defiant and notorious house fronts than by assassinating presidents. But the less mischievous expression may still be highly offensive, where, as here, it spoils a whole block front, and nullifies the efforts for peace of the adjoining designers. Perhaps, with his paralyzing combination of material, it would not much matter what the present anarchist did with it. But in fact, in the upper stories, where the

combination appears, he has aggravated it. There is an exasperating puerility about the two superposed pediments at the centre of the front and about the festoons, and about the detail in general. And yet he, too, has notions. The white marble basement is really good. The stout coupled columns at the entrance look adequate to the work of support they have to do, and the feature is in itself effective and pretty. But the superstructure is quite insalvable, even by paint. "A decent respect to the opinions of mankind" will compel whoever buys the house to pull off the front even before he tears the inside to pieces.

The next house, No. 991, deserves much more respectful consideration. The material is warm gray limestone and "Harvard brick." As may be seen in the narrow strip of the front that is visible at the left of the photograph of the next house, that at the corner of Eightieth street, it is a swell front for three stories, while above that there is a single story under the cornice, which is here of actual and refreshing stonework, and an attic above with dormers frankly of copper. Though the material is frankly shown, the design of these is lithic, and one wishes that the architect might have attempted to exhibit a construction more suitable to his material. Neither can one quite acquiesce in the keystones of the apparent lintels, of the third story, nor in the "festoons to taste" of the same. Though they are both designed and cut with spirit, and especially with "chic," it seems that the skill and labor might have been more appropriately applied elsewhere, where they might have had the meaning they here lack. All which does not prevent this from being an interesting and scholarly front, much the best of the twenty-five-foot fronts we have thus far been considering. The material and the treatment of these two stories, including particularly the second with the three arches, give it a pleasant flavor of "Old New York," while it is yet quite unmistakably of its own time, which is to-day. The basement is excellent, with reservations again respecting the cartouche and the palm over the entrance. But the device is very effective by which the lintel of the porch interrupts the curve of the swell and gives the superstructure visible means of support. The house is not pretentious and it is not "thingy." It has no more "features" than can be put into one countenance without crowding it, and they are adjusted to it, in place as in scale. Upon the whole, it is exemplary.

In point of quietness, the next house, the house at the corner of Eightieth, with its longer front on that street, is also exemplary. It is true that the designer of a corner house has the advantage, as we have just seen in another instance, that he need not disturb his basement with the entrance, which is the principal trouble of the designer of narrow fronts, but can keep it unbroken as a support



FIFTH AVENUE AND 80TH STREET.
(Residence of F. W. Woolworth.)

New York City.

and basis. But this designer has made the most of that advantage, and his shallow three-sided bay looks broad and reposeful. The detail is, perhaps, a little underdone in scale, and thus lacks emphasis and tends to flatness, especially in comparison with its neighbor, in which the scale is perhaps a little excessive. But this detail is so good in itself, and so thoroughly studied as to make the recklessness of much we have been looking at all the more evident. On the long front, too, the wall is of a grateful restfulness and solidity, while the design and distribution of the dormers and chimneys animate the sky line and prevent the quietness from becoming monotonous.

On the block below, No. 987, insists upon our attention. This may very well have come from the drawing board of the same overworked speculator's architect whose works we have examined, and whose avidity of mordication so evidently exceeds his capacity for mastication. Upon the whole it is better than any of them, excepting, perhaps, No. 1007, which it violently resembles. This detail is better than that, though far enough from exquisite, and denotes less urgency on the part of the employer, though even here "closure" seems to have been voted at an early stage. On the other hand, this lacks the comparative repose which that derived from its strong horizontal lines. They are entirely superseded here by the projection of the window framings which result virtually, in vertical channels running through three stories, and what good they do him is more than we can tell. This is a good notion of an entrance for a swell front, marquise and all, though on the other hand, this front breaks out in a perfect revel of tinware at the top. Compared with this dishevelled profusion, how comparatively respectable the almost blank front adjoining, tin top and all; not that is any great thing either, though it looks better in fact than in the photograph.

But here we are at Seventy-ninth, and out of the terra incognita into known regions. We have seen many things, and more bad than good. But haven't we had a good time? Isn't it an amusing walk? Hasn't there been, every few steps, something to look at and to talk about? And is not this, so far, a good thing? Moreover, compared with the riot a speculative building which broke out after the abandonment of the brownstone front, all this work, even the worst, has an educated look. All this is an incontestable benefit. On the other hand, the moral is impressed upon us that the best way for a man or millionaire to get a house is to get a good architect to build it for him at leisure, and not to put up with the "ready to live in" article from the speculative builder's bargain counter. There can be nothing of "the still air of delightful studies" about this latter edifice. We have confined ourselves strictly to the upper half-mile



NO. 987 FIFTH AVENUE.
(W. B. Leed's Residence.)

New York City.



NO. 876 FIFTH AVENUE.

Front remodeled by C. P. H. Gilbert, Architect.

New York City.



FIFTH AVENUE AND 77TH STREET.
(The Clark Residence.)

New York City.

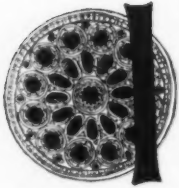
Lord, Hewlett & Hull, } Associate Architects.
K. M. Murchison, }

of fashionable Fifth avenue, and resisted constant solicitations to turn down the side streets, and see the same morals written equally plain. If we had followed these beckonings, the Architectural Record would not contain the things that should be written. Neither, with regard to many of the things, would the editor thereof print the language in which the emotions they excite would most readily clothe themselves.

Franz K. Winkler.



The New York Family Hotel.



Is it proper to speak of a whole class of buildings as aberrations, simply because they fly in the face of art and reason? Does not a freak, of art as of nature, cease to be a freak when it propagates its species and increases and multiplies and replenishes the earth? These are questions which force themselves upon the reflective observer of some very monstrous and repulsive erections which are now disfiguring and beginning to disfigure Madison avenue in the neighborhood of Fifty-ninth street. They are all apartment houses, or perhaps more properly, "family hotels"; and they are conspicuous by their sizes and sites, each of them occupying some four city lots, or an area of 100 feet square, and rising not less than eight and sometimes to ten stories.

We give a cut, from the so-called design, of one of these structures, of which some three stories in masonry veneer and some five or six in steel frame, may actually be seen "in situ," at the southeast corner of Madison and Sixty-third. We admit that this is an invidious operation, because we are not prepared to hold this particular effort up to any more public odium than several of its neighbors, than that at the southeast corner of Madison and Sixty-sixth, for instance, or than that at the corresponding corner of Madison and Sixty-first. The aberrancy which they all three have in common is that they are crude, unstudied, "thingy," and uneasy. The prototype of the edifice which we are enabled to illustrate seems to be "Sherry's," at Fifth avenue and Forty-fourth, done by architects of name and note. They had, in fact, an insoluble problem, and are entitled, artistically, to commiseration upon it. An architect of experience once observed that it was difficult enough to design a monument, but when it came to be complicated with an observatory and a boarding house, the difficulty rose to impossibility. So here. How can a fashionable restaurant interconvertible with an apartment house or a department store, attain an architectural success? It is a kind of contradiction in terms. It is related that a stranger in the city, standing at the corner of Fifth and Forty-fourth, inquired of his cicerone what the building at the northeast corner might be, and, being told that it was Delmonico's, made answer. "Oh, yes; it looks like Delmonico's. And what is that?" wheeling to the southwest corner. "Oh, that is Sherry's." "Oh!

What's Sherry's?" For which it would be quite unjust to blame the architect whose instructions bound him to make a building which should not be, nor yet look like anything in particular, and in which even the primary division of low and lofty rooms which



AN APARTMENT HOUSE—A TYPE.

Southeast Corner Madison Avenue and 63d Street.

the immediate purpose required had to be foregone in the treatment of the exterior, and with it all the promise and potency of expression that the arrangement contained, in view of the possibility that it might be destined to different uses. Perhaps the evasion

of the insoluble problem presented to the designers was as eligible as any, seeing that they could not look, in the requirements of their building, for the data of its architectural expression. At any rate what they did was to emphasize and signalize, as strongly as possible, the separateness of the stories which were not all separated in the "first intention," and to produce that incrustation and projection which are the characteristics of the building. And these characteristics reappear, in even exaggerated forms, in the family hotels just now in question. Logically, of course, these bold projections "have nothing to do with the case" in a steel-framed building of which the masonry is but at once a protective wrapping and a decorative veneer. A bold stone cornice, in a real wall of masonry, is supported by the wall it overlaps. When there is no real wall to overlap, its form should be modified and its projection diminished accordingly, instead of being retained and increased and left to be supported by unseen and inscrutable expedients. Now, the present building, the one we illustrate, is simply a box, "built to the limit" in all dimensions. All that it has of architecture are the exaggerated projections of cornices, the portico at the base, and the amazing top. Neither the portico nor the top is yet in being. It is only in the ferocious projections that the architecture on view consists. This, the profiling of the mouldings, the shapes and detailing of the corbels, and so forth, is not only irrelevant, but it is painfully ugly. It would not be impressive or appropriate in a building of real masonry with walls as many feet thick as these are inches. If not beautiful, it purports at least to be "chic," the genuine Parisian article at not more than two removes. But the impression given by the accumulation of it, by the rows of banded columns in the drawing, by the rows of corbels and pediments huddled together in the fact, is simply of a prodigious "thinginess," destructive of repose and quietness. And when that terrible top comes to be superposed, unless that crowning calamity is averted, the thing will stand a monument of ugliness and vulgarity and insincerity. Insincerity. That is really the point. It is incredible that anybody concerned could have done any of these things because he really believed in them himself and liked them. They were done because they were supposed to be the correct thing for the autumn of 1901, according to the lights of the promoters. For the author of the scheme is evidently not an architect, good or bad, but a "promoter," whose agent and instrument the architect is. Hence, perhaps, most largely, is the dead and apathetic look of the whole work. Nobody concerned gives evidence of any pleasure in his work or of any desire in respect to it, excepting to get through it in the shortest time and with the least trouble. It is a comfort to recognize that it must have

bored the man who did it almost as keenly as it bores the spectator of his efforts.

And, yet, bad and dead and hopeless as this is, it is no worse than several of its neighbors. This seems to be intended for a monochrome of white stone, and in that respect it has an advantage over the edifice at the corner of Sixty-sixth. This has a two-storied marble basement, with a porch which is quite a miracle of ugliness, two pairs of distressingly lanky columns, carrying a baroque broken pediment, and hung, as to their capitals, with foolish festoons. The absolute want in this of any sense of proportion, the wanton defiance of even the traditional and conventional sense of proportion give a sense of pain which is also a sense of insult. Above is a single striped story in glaring red brick and glaring white marble, and above that four stories mainly of brick, with marble trimmings" (a word as appropriate here as it would be affronting if applied to the work of an architectural artist in this kind), and, finally, an attic again in marble. All this strewn about, fitfully and casually, with balconies and pediments, triangular and curved, closed and open,—in short, with "things." The one thing the detail has in common is that it is all bloated, aggressive, too big for the building, and that the thinginess is destructive of repose.

That is also not an edifying edification at the corner of Sixty-first. One of the few interesting points about the design of the first illustrated building is the fact that the shapes of all the openings are allowed to come frankly square. This looks like a fair and frank treatment. But, in the building at Sixty-first, the openings are all elongated, much beyond what is customary even in buildings not subjected to the limitations of the steel frame, elongated, in fact, until they become mere slits. This is a monochrome of light limestone, but the two lower stories are again united in treatment, are very heavily incrustated, and are fronted with a feature which closely contests the palm of ridiculousness with the marble portico just described. It offers the distressing arrangement of three banded and incrustated columns, and, in the mezzanine above of five caryatic figures. The work of the journeyman sculptor in these betrays the same hopeless weariness and apathy which we have noted in the others, as if the sculptor, as well as the architect, had been thoroughly tired out before he began. But above this the designer has had the luck or discretion to refrain from incrustations so that, for the central part of the shaft of six stories, there are no projections beyond the plane of the wall. The effect is so far good. There is something for the eye to rest on, some expanse and sense of repose which we have quite missed from the others. In revenge, however, the author has reverted to incrustation in his two-story attic, which is not by any means a happy or competent perform-

ance, and has done his best to lose the comparatively good effect he had derived from the moderation and eventlessness of his shaft.

But, indeed, it is absurd to take any of these designs more seriously than they take themselves, or to impute to them any other than a strictly commercial purpose. The proof is that a stupid old building, the Madison Avenue Hotel, at the corner of Fifty-eighth, which is simply a dull and empty work of the builder's "architecture" of the brownstone period, actually takes on dignity and respectability by contrast with the more flaunting and really more vulgar works of recent builders' architecture we have been considering.

It would not be fair to pass without saying that in this region there is at least one family hotel which it would be damning with far too faint praise to say that it is well and easily out of this particular competition. This is the hotel at the northwest corner of Fifty-sixth and Madison, built of grey stone and Harvard brick, and showing a considered design. There is some dignity and force in the solid stone basement, some expanse and some repose. The implication of the two materials above is well managed, and the skyline is effectively and picturesquely broken by the double dormers united under a single curved pediment. We do not mean to overpraise this work, but we are bound to say that, in marked contrast to the things we have been talking about, it is really a work of architecture. But what saddens us, in view of all the talk about the advance of artistic culture and appreciation, is the glaring fact that people who have much money to spend in the rearing of fashionable apartment houses do not find it worth their while, as we have seen in three conspicuous instances that they have not found it worth their while, to employ an architect rather than an "artchitect" to design those habitations and to make them fairly presentable to people who know the difference between the fine art of architecture and the very coarse art of "artchitecture," as that is practised by contractors' "artchitects" in the city of New York.



OVER THE DRAUGHTING BOARD.

Opinions Official and Unofficial.

I.

The newest business buildings of New York invite study, because many of them are so very unaffected, in an architectural way. No pretence about conforming to artistical tradition or fidelity to

**The Design of
Our Tall
Office Buildings—
The Latest
Phase.**

style:—those beginners in art-study who always begin by asking what style the building is in will be baffled by these huge constructional piles. He must be even less than a beginner—he can't have begun,—who would think of associating Greco-Roman or Romanesque, in any form, with these new towers of commerce. No sculpture; no columns except a pair at the entrance; no broad string courses made into entablatures by the familiar grouping of mouldings; no forced submission of the exterior design to a recognized ordonnance or an ideal proportioning of its parts; the new office building is a severe, four-square, flat-roofed, many-windowed thing, presenting to the gazer from without as little splendor—as little sumptuosity—as may go with fine material and good building, and that in spite of the millions spent upon them. And the visible cause of all this is remarkable. Buildings begin to be built (not by the owner, any more, but) by some company organized especially to “finance” such big undertakings. Such a company takes the plot of ground into its charge, employs an engineer and an architect, and goes on to build. It has no enthusiasm, no sympathy, and no bowels; it cannot be bullied or persuaded by the architect because it has no ears to hear him with, nor eyes to which artistical sketches can appeal; it objects at once to anything in the floor-plans but economical distribution, and quarrels with every festoon offered for exterior ornamentation. Only that which the would-be hirer of an office is found to demand—only that is allowed; and that is not a part of the exterior design. (See illustrations herewith.)

II.

“The aids to noble life are all within,”

and so are the essentials of office life. The modern lawyer does not ignore his office floor and walls, the look of dusty litter, of hud-

dled bookcases and paper-littered tables, as his predecessors did. If the contemporary historian will read about Sergeant Buzfuz, in the proper place, "and when found make a note of" it; and if he will then go visit his legal adviser in some tall building of Broad street or William street or lower Broadway, he will have had an object lesson. The smooth and hard flooring, mosaic or Terrazzo Veneziano, laid on cement; and that on a solid floor of masonry and iron; the dado of polished marble: the perfectly fitting sash, and the doors which do not "bind" nor "stick:" the locks and latches which go safe "home" and go on doing their work and giving nobody any trouble: the permanence of everything; and the assurance it gives of permanence, resulting from the quasi-fire-proof construction: the exclusion of dust and smells and noises, resulting from the abandonment in this modern way of building of hollow floors and hollow partitions and big pockets behind wooden furring: all this, with a steady supply of warmed air, to which is added a bright fire for its beauty and its look of cosey comfort, except only in cases where considerations of fire insurance (for these buildings are not wholly fireproof) forbid that luxury: these are the "notes" of the modern lawyer's office. And the modern office building offers all these things, with swift elevators and well-paved and well-lighted halls and passages to match. No saving of first cost will be allowed to mar the attractiveness or diminish the renting facility of these offices. Beauty and artistic treatment will be disregarded; but when money will draw money it shall be freely spent.

**The Building
Within—
Its Equipment.**

III.

It is a coincidence, in a way, that the two old buildings which were the most carefully wrought exemplars of old hopes—old ambitions—old gospels of art, have been swept away in these latest years to make room for two such buildings as are described above. The American Exchange Bank is already housed anew on the very plot of ground which once held the thoughtful study of Eidlitz in his earlier days—1857 and 1858. The Academy of Design Building, which Wight built in 1865, is gone; but in this case its successor is to be seen only by the mind's eye—there is [October, 1901,] a dust-filled hollow where those marble walls arose. Eidlitz had built the Continental Bank in Nassau street, not as it was before demolition, but with four stories of windows only; and of this he had

**Old and New
Methods—
Reminiscences
and
Coincidences.**



THE BATTERY BUILDING.

State Street, New York City.

Clinton & Russell, Architects.

To Illustrate "The Design of Our Tall Office Buildings."



THE BROAD-EXCHANGE BUILDING.

S. E. Cor. Broad St. and Exchange Pl., New York City.

Clinton & Russell, Architects.

To Illustrate "The Design of Our Tall Office Buildings."



ATLANTIC MUTUAL BUILDING.

Cor. Wall and William Streets, New York City. Clinton & Russell, Architects.

To Illustrate "The Design of Our Tall Office Buildings."

made a curious and instructive work. It was massive, in the true sense, with heavy walls and with floors of iron and brick, and fire-proof beyond what is now called by that name: and its front was a combination of familiar elements of German Romanesque and German Gothic detail, treated with great originality. The American Exchange Bank followed; and here the German round-arched work alone was followed, and a design of severe simplicity, with deeply set windows, the moulded jambs and intrados of each far more effective in light and shade and more telling in the general effect of the exterior than had been seen before. The cornice was a marvellous thing, too, and anyone who has a good photograph of it should study it, now and then, to see what a very heavy and high corbel-course may be in the right hands. The interior of the bank was walled with cut stone like the exterior; and its flat ceiling was of slabs of the same stone deeply cut with German Gothic tracery, for Eidlitz held the theory that a business building should have no leaf-sculpture, no efflorescence of natural form; while mere combinations of mouldings might, of course, be allowed.

The Bank building above cited was important in its time, or would have been important had the architects been willing to turn their attention to rational ways of design. And the Academy of Design building also was important in that way; but of value, too, as a historical monument. It was the one American structure which embodied the principles of the British would-be restorers of mediaeval principles of design. Never, even in Great Britain itself, were those principles more fearlessly or more resolutely carried out.

We know, now, that the Gothic Revival was a vain thing, and that the much changed conditions forbade any such hope of a revival of the past. The world is drifting blindly through an evolution which we cannot control, whose course we cannot foresee, whose state of development a century hence might, perhaps, horrify us all could we get a peep at it. The work of the different reformers of many different schools has gone whither the work of the political prophets has gone—into the limbo whence return only disappointments and broken promises. Still the history of the Republicanism of 1840, and thereafter, and the history of the German—the French—the British Gothic revivals, are all interesting; and Wight's sincere and partly successful efforts to design architectural sculpture afresh, by means of independent studies made from natural plants by his carvers themselves under his close personal superintendence was as gallant a piece of work as every artistic reformer was privileged to carry through. Unsuccessful as it may have been in many ways there was at least a chance of using its example and developing more perfect works of art out of it; but that was not to be.

The new business building has a vastly different genesis, as we have seen. No artistic ambitions are embodied in that monument of the modern builder's art; it is as commercial as an advertisement, or, let us say, as an express-wagon or a push-cart. Let us see whether, like them, it may not be capable of artistical results. For the well-built express-wagon is often a very comely object, indeed, having even some detail of purely decorative purpose and of not bad design.

It has been noted how hopeless are our conditions as long as even the good men take their ornament ready-made from their photographs of old sculptures. It has been preached, as a saving doctrine, that carved ornament ought to be forbidden to the architects, say for twenty years—forbidden till they cry aloud for permission even to design their own ornament if they may have some. It is thought to be like Mark Twain's "appetite cure;" recover your appetite by going without food till you are ready to tackle almost any kind of substance that can be eaten; and, even then, take no more meals a day than you have an appetite for; only two—only one—if that is your stint. Perhaps the bare and yet imposing exteriors of the new business buildings, 1898 to 1901—perhaps that total abstinence from indulgence in ornament, may yet save the situation. Suppose that, after twenty years of a still more general abandonment of all builders together to the no-ornament regimen, the world should wake up to the fact that, here and there, some bold experimenters had really tried to ornament their buildings according to the requirements of the case; working in some sculpture that really was not to be found in the books! Such a thing might be.

It is interesting and encouraging to note that the 25x100 lot, which, since 1807, has had such an unfortunate influence upon wholesome, comfortable and comely building in New York, is gradually being almost entirely superseded.

**The Passing of
the
25 x 100 Lot
in
New York City.**

Within five years probably the only houses ordinarily erected on an area of that size will be a residence of modern design, built in the upper Fifth avenue region, upon the former site of some high-stoop, brownstone relic. Yet in the beginning almost every class of building in the city—residences, tenements, lofts and offices—were tightly placed upon the 25x100 lot—a lot, which is for purposes of good building, at least fifteen feet too narrow and twenty-five feet too deep. Changes were first introduced in the dimensions of lots used for residences. As land became more expensive, it became customary to put five houses on four lots or four upon three lots, or three upon two lots. In not a few instances the process of reduction was car-

ried still further, and on a number of streets in the middle East Side brownstone houses four stories high and less than fifteen feet wide can be found. But it was only in the matter of residences that the modification of the 25x100 lot proceeded in the wrong direction. Naturally, buildings devoted to business of all kinds soon came to be erected on parcels with a wider frontage than twenty-five feet; and the desirability of using these larger plots increased just in proportion as the height of the structure tended to increase, until now when office buildings from fifteen to twenty stories high are the rule, strenuous efforts are made, too often without success, to obtain an area of at least 100x100, whereon to place them. But the 25x100 lot, thus more and more discarded for business purposes, was universally used for tenements and flats without elevators, and unfortunately fully five New Yorkers out of six live in such buildings. But unless all signs fail it will soon be superseded in these classes of buildings also. So far as non-fireproof flats are concerned, a great change was introduced, when it became possible to obtain electric power from the streets wherewith to run an elevator. This possibility led to an immediate and large addition to the number of elevator apartments, and to a diminution of their rentals, while at the same time it made it more profitable for builders to erect them on plots much larger than 25x100. The consequence is that for the last few years this class of seven-story non-fireproof flat has been erected on an area never less than 50x100 and generally on an area 100x100. Finally, the new tenement house law promises to complete the good work, for not only will it necessitate the building of tenements proper on a frontage of not less than forty feet, but it will also put a similar necessity upon the builders of flats which are a little better than the ordinary tenement, but which are too cheap for an elevator service. Except in the case of the buildings affected by the new tenement house law these changes have all been made under the influence of economic conditions, and there is but little danger that even in those sections of the city yet to be improved that there will be much if any reversion to the 25x100 lot. The beneficial character of the change in providing comparatively light and airy rooms in which to live and work is obvious, while the advantage which the architect obtains in the architectural opportunities offered by the larger area is equally plain. The 25x100 lot has been one of the most baleful conditions of metropolitan architecture; and no one will regret its supersession—except, perhaps the small real estate speculator.

One result of better architectural opportunities should be and will be the employment for several important classes of buildings of better architects. The stereotyped building erected on a ster-

**An
Opportunity
for
The Trained
Architect.**

eotyped lot, called, of course, for only a stereo-typed set of plans, and the architects, so-named, who drew these plans, could turn them out by the wholesale. One designer of tenements, in the two weeks previous to the taking effect of the new tenement-house law filed plans for about a hundred dumb-bell tenements, erected on lots of the ordinary size. It was merely a matter of duplicating blue-prints. And this was true, not merely of tenements, but of the cheaper grade of flats. When, however, tenements and flats begin to be erected upon plots of larger dimensions, much greater ingenuity in planning is required and a correspondingly higher order of ability in the designer. Moreover, the cost of these larger buildings is so much greater absolutely that their builders can better afford the fees of a good architect. It would doubtless be too much to expect that the speculative builder of tenements will immediately begin to employ architects to whom he would have to pay full fees, in spite of the fact that several such architects such as Ernest Flagg, and Howells & Stokes have successfully designed model tenements for the City and Suburban Homes Company; but it is not too much to expect that the builder of middle-class apartment houses will gradually employ an increasingly better class of designers. Several new seven-story apartment houses recently erected on the West Side, in particular those owned by the Astor estate, have been marked by a quiet and unobtrusive dignity in marked contrast to the crude and violent handling of the "French style," shown by some of the neighboring buildings. These neighboring buildings, it must be admitted, tell against the contention of this paragraph; but it is not claimed that a nice sense of architectural propriety will forthwith descend upon the speculative builder of apartment houses and their designers. The encouraging fact merely is that the way has been opened for the gradual improvement in appearance of a class of buildings which have hitherto been unutterably monotonous and dreary and that some few builders have already ventured upon this straight and narrow way.

In connection with the review in the body of this number of the Architectural Record, of the designs submitted in competition for the Memorial Bridge at Washington, it is satisfactory to remark

**Artistic
Bridges.**

that there is much stirring of heart going on among the engineers themselves on this subject. This is especially satisfactory, since it is evidently only from the interest of the engineers as the scientific designers that there can come any real improvement in artistic design. The interest of the engineers, especially of the English-speaking

engineers, is attested by the appearance of a special publication, by the (British) "Institution of Civil Engineers," consisting of a paper by Mr. Joseph Husband, Associate Member, on "The Aesthetic Treatment of Bridge Structures," with an abstract of the discussion on it before the institution. In this discussion some eminent French, German, Belgian and American engineers took part by correspondence, and the result is worthy of a wider, at least of a more general, publicity than it can attain in the pages of an avowedly technical publication. The oral discussion was also taken part in, by special invitation, by many members of the Royal Institute of British Architects, including its President. One of the things that was developed, as perhaps might have been expected, was a bewildering variety of views among those who took part in it. Mr. Husband had divided bridges, for his purpose, into those of masonry, those of metal, and those of a combination of the two materials. By taking admired examples of each class, or examples which he thought worthy of admiration, he had endeavored to arrive, not at æsthetic principles so much as at partial working hypotheses in regard to structures of each kind. Such and such forms have been found in practice to be pleasing, such and such others to be unpleasing. Imitate those and avoid these, says Mr. Husband.

Evidently this does not carry us very far. In masonry it is well enough, because the forms of masonry have been settled by an experience of millenniums and no new structural methods or principles have been devised in modern times. Indeed, the design of masonry bridges is, according to the classification which has come in within a generation or two, a matter of architecture rather than of engineering, and offers no other or greater difficulties than any other matter of architectural design. But engineering has devised for metal new modes of treatment, resulting in forms never seen in the world before; repulsive, many of them, by reason of their novelty, and possibly repulsive because sufficient, or at least successful pains have not been taken to make the construction intelligible. At any rate, nobody ventures artistically to admire such results of modern scientific construction as the cantilevers of Poughkeepsie and Niagara, and the nondescript Sukkur bridge in India. Nobody can imagine any modifications of detail that would convert them into beautiful or even presentable objects. To the layman, they are "dreams of a sick man."

There are other engineering forms about which the opinion of British engineers differs from that of the rest of mankind. One reads with surprise that the Britannia tubular bridge of Stephenson is regarded with artistic pride as a work of art by most of the symposiasts, architectural as well as engineering, and suspects that

scientific admiration has usurped the places of artistic appreciation, and that there is even some Chauvinism concerned. One of the points which the symposiasts agreed in admiring in that structure is the prolongation above the tubes of the piers which carry it, and in this the architects seemed to concur. Sir Benjamin Baker, as the author of the Forth bridge, which has not won favor among architects, had his fun with this suggestion by showing, historically, that the prolongation of the piers above the roadway was made because it was expected to use them as towers for suspension chains. That is to say the "stiffening truss" which is an auxiliary in modern suspension bridges, was the chief thing in this design, and the towers and chains the auxiliary. When it was found that the tubes were strong enough to stand alone, the chains were omitted. Stephenson, intending engineering, as they say in billiards, "scratched" architecture. As Sir Benjamin put it: "He had heard a great deal of abuse of castellation, and of mediæval contrivances for pouring down molten lead upon the heads of enemies; but here he found architects and engineers holding up as a model a bridge designed for suspension chains which had never been erected!" Naturally, the little historical showing was a complete *reductio ad absurdum* of the admiration lavished upon the bridge by the previous speakers, whether upon the ground that it was pure engineering, or upon the ground that it was architectural, and both grounds had been taken.

There were a good many useful and suggestive things said in the course of the discussion, useful for reproof or for edification, which deserve to be pondered by architects as well as by engineers. For

Engineering Aesthetics.

the fact is that any real inquiry into engineering æsthetics tends to bring current and conventional architecture as much into contempt as current and unæsthetic engineering. Perhaps the most intelligent summation of the whole matter the report discussion contains was that contributed by Professor Pite, an architect, "but not a bigoted one." Some extracts from his remarks ought to prove interesting:

He might urge upon engineers that to a lay mind there was beauty in a beautiful machine, as such, and he did not know why a different meaning should be attached to the word beauty, apart from the beauty of workmanship, of fitness, of power, and of directness of expression, beauties which were recognized now in the most unaffected locomotive, and which were beginning to be recognized in the most hideous ironclad, which expressed its fierceness, its strength and its purpose, in the very want of æsthetic quality in its

lines. * * * He would like earnestly and heartily, as a practical designer, to press home the fact that artistic simplicity would be achieved by dissociating from the mind all architectural phraseology, all architectural ornament, all architectural traditions, and by aiming, in metal bridge building, at exactly the same beauty of workmanship, beauty of economy of material, beauty of accomplishment, that pleased the mind in any form of mechanical effort. In that way engineers would keep clear of the changing whims of artistic fashion; keep clear, in metal, of the traditions of an architectural art of stone, of the conditions of an architectural art in wood; and would work out in iron, with its different qualities and stresses, an æsthetic style based on the absolute scientific necessities of engineering practice, which would without doubt give infinite satisfaction to generations to come.

Doubtless, that is the way to do it. Moreover, it is the way in which it has been done, in those works which to their builders were essays in engineering, but which to posterity have become models of architecture. The interior of Westminster Abbey is the example taken by Professor Pite, and he calls it very properly, "a sanctified form of engineering." But, quite apart from the specific merits of this or of any other contributions to the discussion, the most gratifying thing about the discussion is, we repeat, the fact that it was held, the fact that engineers themselves recognize that their mechanical triumphs are so apt to be artistic failures, and that an engineer must look for appreciation exclusively to the members of his own profession, since what his work conveys to laymen is, in so many cases, only that it is ugly in proportion to its conspicuousness.

THE ARCHITECT'S
PORTFOLIO
OF
RECENT AMERICAN
ARCHITECTURE
A CHRONICLE IN BLACK & WHITE



SPENCE SCHOOL.
West Fifty-fourth Street.

James B. Baker, Architect.

A recent addition to the already enormous list of buildings in New York City which exhibit the influence of the French mode. In this case, contrary to the usual, the peace is kept with sobriety. The composition is orderly and obvious, on which account one is inclined to wish that the stone basement, now of two stories, could have been restricted in some manner. As the design stands the central brick section is hardly bold enough, and thus in some measure the division of the front into three parts is obscured. The grouping of the windows by the simple device of an emphatic wall space at the two extreme sides is one too frequently overlooked.



Rhode Island Avenue, Washington, D. C.
RESIDENCE OF GIFFORD PINCHOT, ESQ.

Helms & La Farge, Architects.

This design comes perilously close to a wasted opportunity. The ample dimensions of a free-standing building such as we have in this case constitutes a "chance" more frequently sighed for in the profession than obtained. That the opportunity here was thrown away—be it innocently—will be the general verdict. There is unfortunately enough of design in the work to challenge attention, and yet too little of it to satisfy even the most moderate expectations. Every feature, perhaps the upper story and cornice, misses completion. A more decisive division of the basement floor from the central two stories would have added emphasis to what there is in the existing scheme.



OFFICE BUILDING.

105-107 Fifth Avenue, Southeast Corner 18th Street, New York.

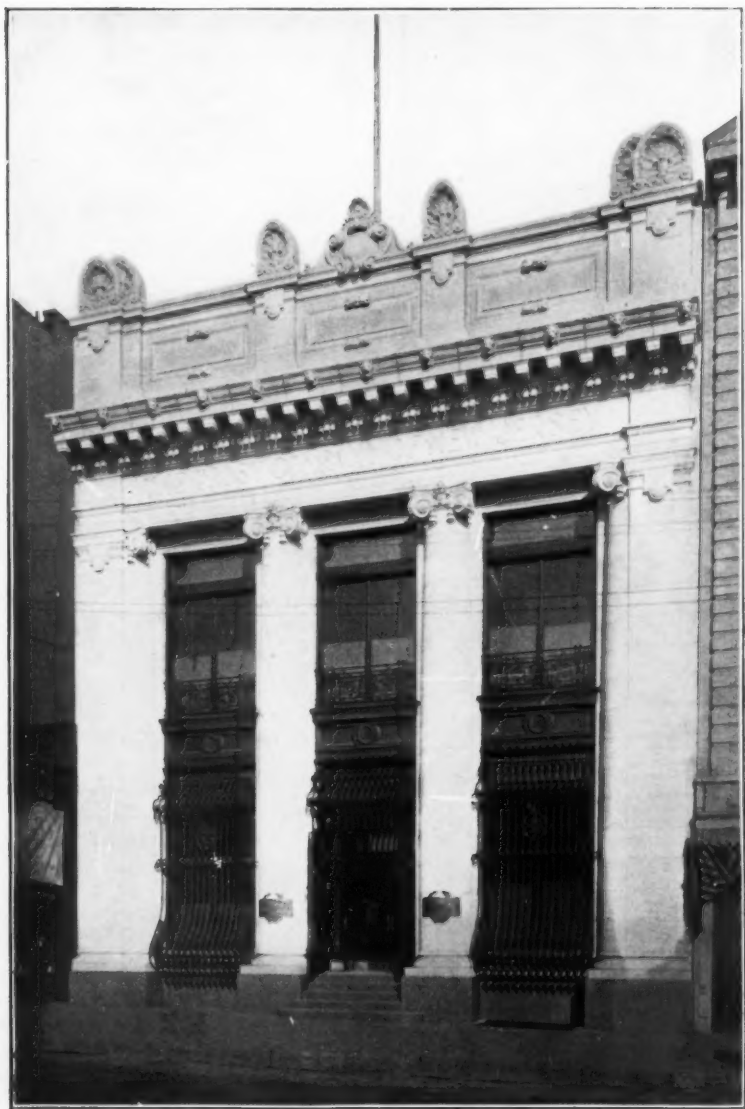
Robert Maynicke, Architect.



STABLE AND ARTIST STUDIO.

121-123 East 63d Street, New York.

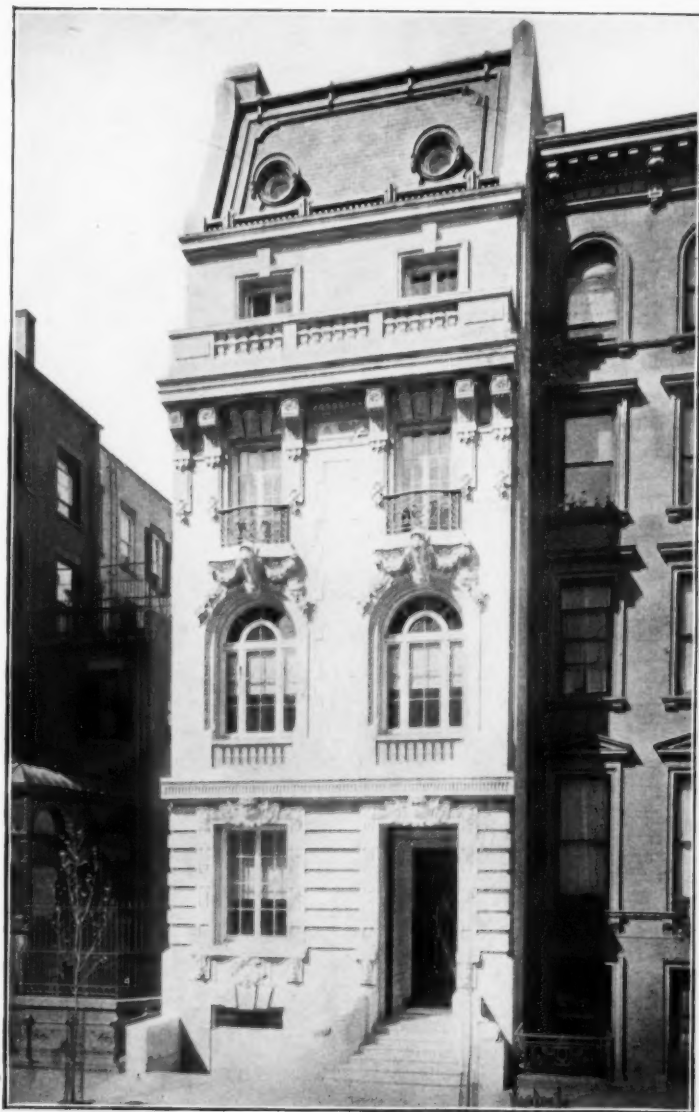
Trowbridge & Livingston, Architects.



THE TRUST COMPANY OF NEW JERSEY, HOBOKEN, N. J.

Mowbray & Uffinger, Architects.

Hoboken, N. J., attractive as it is in so many other respects, seldom delays the footsteps of the returning voyager from Europe by the charm of its architecture. We can therefore understand why the building here illustrated represents not only an important addition to its list of commercial structures, but is regarded by the native as highly and notably artistic. The building is a respectable bit of work—provided, of course, that we accept the current architectural standard. The colossal order, throughout its details, possesses in all its force the charm of familiarity. The attic, presumably, is "pure architecture," and innocent of structural significance. If these be sins, the architects of the building are in good company, for the professional leaning at present is decidedly "historic," and the free borrowing that results is rarely conditioned by structural realities. Could not something better than the acroteria have been placed on the attic against the skyline? Perhaps here the architects' means were insufficient to allow sculpture of a more salient character.



RESIDENCE, 35 EAST 68TH STREET.

Carrère & Hastings, Architects.

This is a recent addition to the district of fine residences east of Central Park, New York City. Its dimensions are moderate, if not for the region modest, but the design is florid, and the building is likely to arrest an amount of attention it would not receive but for the "pretentiousness" of its architectural treatment. In this case, however, the exuberance of ornament is handled with skill and discretion, and very clearly avoids defects of over-muchness inevitable in this sort of work when produced by designers of less experience. Indeed, there are only a few architects in the United States who have acquired an idiomatic mastery of this style. The designers of this Sixty-eighth Street residence are evidently of the few—shall we say "select?"—who have attained to vernacular ease. Every detail of the design is obviously "placed" and shows an amount of study that itself deserves study. The strongly characterized, solid ground floor, the well-marked string course above it, the charming and refined treatment of the first floor windows admirably suited to receive the hood-like festoons crowning the arches, the careful subordination of the higher story cleverly framed by the bracket supporting the balustrade—all of this is recommended to the attention of the large tribe of bunglers who are busy disfiguring our streets with crude extravagances of the "French Style."

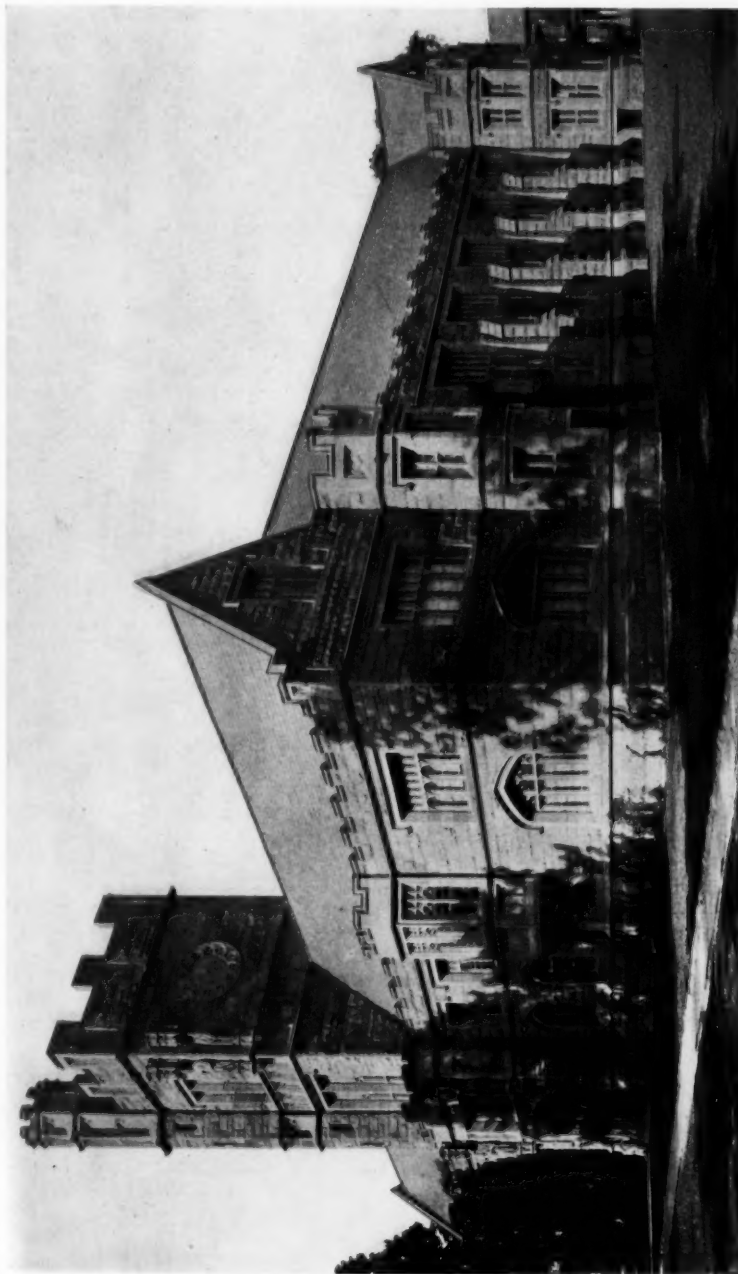


East Orange, N. J.

RESIDENCE.

Ludlow & Valentine, Architects.

This design indicates the greater ability and the far greater amount of careful architectural study that is to-day going into the production of the "average" better-class suburban dwelling. The central feature is well conceived from the picturesque point of view. Of course, in a sense it is mere cabinet work, but then it will not do to hold our timber architecture to the test of construction; indeed, the thesis might be maintained that the constructional sense for the "real thing" in architecture has been blunted from the beginning in the United States, by the cheapness and abundance of lumber. We began by imitating in wood the forms that naturally belong to more durable material; and in turn this imitation, by popularizing decorative details at the expense of constructional verity, reacted upon work done in brick and stone.



Princeton, N. J.

← LIBRARY, PRINCETON COLLEGE.

This is one of the most delightful bits of Gothic work produced in many years. The architect shows a true sense for the spirit of the style he adopted; and whilst he has not produced a medieval building, but one that is as it should be, essentially modern. The disposition of masses, the relation of solids to voids, the grouping of parts, the treatment of details are admirable. The building is noticeably free from the chief defects of modern Gothic work—hardness of line, stiffness of form, mechanical coldness. The designer has shown discretion in the limitations he has imposed upon himself for it is doubtful whether it is possible or desirable in these days to incorporate in our secular buildings, even those devoted to collegiate purpose, any more of the Gothic elements than we have in this building before us.

THE ARCHITECT'S LIBRARY

POMPEII: Its Life and Art. By August Mau, German Archaeological Institute in Rome. Translated into English by Francis W. Kelsey, University of Michigan. With numerous illustrations from original drawings and photographs. New York: The Macmillan Co.; London: Macmillan & Co., Ltd. 1899. Pp. XXII.; 500.

The full value of Pompeii as a place of study for architects has hardly been felt. It has been considered too ruinous and also too small and humble in its parts and its appointments. The student of architecture has desired his Greek or his Greco-Roman buildings more nearly intact, and, therefore, has studied the temples at Paestum in Sicily, and at Athens; in Rome, Nimes, and Vienne; his separate columns of later type from the Roman Forum, Assisi, Milan, and the Athenium Olympieum, and his vaulting from various amphitheatres and halls of *thermae*. Some of these are, indeed, ruinous enough; but some part has remained sufficiently intelligible for use; whereas in Pompeii the ill fates have ordained that the buildings are everywhere shorn off at ten feet or thereabouts from the ground level. This came of the inadequate work done here by the volcano; for the shower of ashes never reached much above the ceiling of the low-pitched ground-floor rooms, and everything that was above them was left in the open air, like a town half submerged by a watery flood, and was thereafter gradually pulled to pieces and carried off; while the owners of property, and even those who were not its owners, dug down into the still soft mass which concealed and embedded the buildings, cut through walls and dug horizontal tunnels through the half-hardened mud, and carried off not only the precious movables, but even some things which might have been thought as fixed as the walls themselves. And as for the small scale and generally provincial simplicity of the buildings, Pompeii was, of course, a town of the third class, and nowhere was there a gigantic forum, portico,

or basilica like the unparalleled structures of the Roman emperors and their great captains in the central and the provincial capitals.

This characteristic of minor importance, cost, and dignity is not, however, a serious hindrance to the student. If our classical revivalists were in earnest and really cared to know what the people of classical antiquity have left for their consideration, they would have formed a society long ago to study Pompeii and what little is known of Herculaneum. The book we are considering shows the way in which this was to be done—the way in which it still may be done—the way in which we hope to see it done—whether the building of the twentieth century is to be inspired more or less by classical examples or not. The history of art is equally important whether we propose to draw from it lessons of immediate application or not. And the secret is judicious restoration; not in the way of irremediable and generally ruinous changes made in the buildings themselves, but in the way of drawings and models multiplied as far as may be necessary and capable of comparison one with another. Now, in this matter of restoration, it is to be observed that our only means of access to Greek architectural art is through just such restoration, executed or imagined. No man of our time has ever seen a Greek building as the Greeks saw it, or as they meant it to be seen. The Parthenon is a beautifully picturesque ruin, that is to say, an accumulation of forms and a mass of soft color which are delightful to the eye guided by memory and imagination, but it is, as it now stands, not architecture nor the embodiment of an artistic thought of any kind. It is fine as a weather-worn cliff is fine. Even the most perfectly preserved Doric temple, the *Thesalon* in Athens, or the great temple at Paestum, has lost its sculpture, its crowning members, all or part of its roof, the ceiling of its *pteroia*, the sequence of steps to its *stereobate*, its

pavements and its investing polychromy which made of it a hard thing for us now to imagine to ourselves. When we talk together of the glory of Greek art, or sit down alone to write something concerning its magnificence, we draw upon our informed imagination to an extent which it is a little difficult for the writer and the speaker himself to believe. And so if we are to get out of Pompeii what Pompeii has kept for us we must restore! We must fill up the plan of the triangular forum with the Grecian Doric temple which fronted upon it; we must study the four square and simple outlines of the great forum with the temple of Jupiter a little askew at one end, and the two memorial arches on different lines and not even parallel lines each with the other. The plan of the basilica and of the adjacent temple of Apollo with its enclosure and colonnades must be studied, and, the obvious and inevitable columns and piers being in our imagination reared again where their substructures show them to have stood, the only less obvious superstructures are to be put in place still by means of our mental processes. It is not so very hard! Even before Wellesch's folio of proposed restorations appeared it was not hard to form a mental picture of the Temple of Apollo raised on its podium with six Corinthian columns in front, with a long flight of steps, a veritable New York stoop, leading the visitor up from the pavement of the forum to the temple floor, with the great square altar in front of this, and the colonnaded portico two stories high enclosing the building and its fore-court within a peristyle one hundred and fifty feet long in clear open space, and a bounding wall which encloses nearly half an acre. It has been said that it is not hard to form such a mental picture; some preliminary information is necessary indeed before the student will begin to allow his reconstructive imagination to work; no doubt he must have information as to the reasons why certain fallen columns are ideally placed without hesitation in the colonnade of the second story. The more information one has the better one's imagination works in anything wholesome and reasonable, but it requires only a few days' work in the public quarters of Pompeii, and a very limited acquaintance with the documentary evidence which has been made accessible to everyone, to enable the student to think for himself swiftly and without serious danger of error.

For such a student, then, Pompeii has that which nothing else in the world, except the little explored ruins of Herculaneum, can give, namely, the daily habit of architectural work among the Italic peoples of a very early time—among the Greek colonists of the fifth century B. C., and the following years—among the Roman settlers of the Republic, and among the united populace, the subjects of the early Empire. Four periods, as Herr Mau has accurately described the chronology of the place—four periods are distinguishable, and these are perfectly differentiated each from all the others by the materials used in building, the construction, and even more notably by the systems of architectural and purely decorative design which are employed. Walls built of solid blocks of stone were as common, even in the small houses of early periods, as brick-faced rubble masonry was of later work. Even the rubble walls are faced now with bricks now with reticulate work of small, shaped stones and by these means dates can be approximately fixed.

Part II. of the present book, which is entirely devoted to the houses of the town and a villa or two outside the walls, gives a chronology, easy to follow and easy to accept, of 400 years of domestic architecture on the shores of the Bay of Naples. Even the repairs made after the earthquake of 63 A. D., and the more deliberate changes of design where a rich man decorated his house in a more modern taste, aid our studies of architectural evolution by showing the completeness of the modification which had come to men's ideas of adornment. The history of the change of styles is always attractive, and has lessons in it for the designer as well as for the archaeologist. In any one of half a dozen great mansions of Pompeii this history is in the most interesting way made clear and easy for every one to read. Moreover, the requirements of a family in a warm climate with a short winter are found to have been in the two centuries ending with 79 A. D. very nearly what they are now in the same regions of the earth. It is a little surprising to find the author of this most valuable book commenting especially upon the comparative indifference of the Pompeians to preparations for artificial warming. Every person who has lived for awhile in Italy knows that not only the people living around Naples, but even the people living in and around windy Florence, and even the inhabitants of the

moist and far northern lagoons of Venice are not merely indifferent, but even hostile to the warming of their houses in winter. With ice forming in the streets the Florentine shopkeeper sits in the open room which forms the emporium and adds more overcoats or more shawls as his or her sex may be and as the weather grows colder. The Venetian, with a sea fog filling the court outside his windows, and the thermometer at 35 degrees F., works quietly at his task in his fireless room with his feet muffled up and a cap pulled well down over his forehead. It is the people of the north, the inhabitants of climates where the cold is rigorous and long continued, it is they and not the southerners who warm their houses, and the distribution around courts of the Pompeian mansion differs from the arrangement of the modern house of central Italy chiefly in the fact that from some cause not now in question, land is more valuable to-day than it was under the Empire, and, therefore, third stories and fourth stories are piled upon the building which the ancients would have made partly of one high story and partly of two less high.

As for the public buildings, the basilica, the long stretches of portico which enclosed the different public squares, the cloth hall (Eumachia's building), the market, the three simple blocks which together make up the City Hall, the lesson each of these has for the modern architect in the very frequent cases of insufficient space, is hardly necessary to urge. The simple appliances, the inexpensive devices, the admirably efficacious ways of adornment of these halls and porticoes, requires only the brief hints of those who have put this and that together and thereby discovered the real significance of the remains to recommend them to all modern students. And the reason why this latest book on Pompeii is of peculiar importance is because here, for the first time, all this valuable matter has been treated systematically. The table of contents at the beginning, and the index at the end, lead directly to a continuous study of the subject or to any part of it. The only fault to be found with the book in this way is a singular indifference to the references by means of figures and letters which the different plans and topographical maps contain. It is a puzzling business to locate the different parts of a plan where half of the letters inserted are ignored in the legend or where the figures are arranged in the legend in any way

except the usual sequence. With this exception the book is almost faultless as a work on the antiquity of Pompeii, and one is ready to believe what the Preface says of its being the result of twenty-five years of almost constant labor.

OLD COLONIAL HOUSES OF THE CAPE OF GOOD HOPE. Illustrated and described by Alys Fane Trotter. With a chapter on the origin of old Cape Architecture. By Herbert Baker, A. R. I. B. A. London: B. T. Batsford, 94 High Holborn. New York: Chas. Scribner's Sons.

There are but few real Architectural Byways remaining to-day. The kodaker is everywhere, so is the searcher for novelties—even novelties in the forgotten aspects of familiar things. Probably we are indebted to the Boer war for this volume, by which we are really taken upon an excursion out of the beaten tracks and carried before a phase of architecture of which few are cognisant. At the first sight of the illustrations in this volume one is almost instantly struck by the historical relationship that exists between New York and the Cape of Good Hope. The high-pitched roofs, the fantastic gables, the invariable "stoep," promptly recall the parent from whom at practically the same period the two colonies sprang. The old houses that remain at the Cape speak graphically of the earlier settlers sent out from the Netherlands by the Dutch East India Co. to Table Bay. Not many "originals" remain. The major part of them have been either pulled down or burned or destroyed by time. Those that remain reveal the Dutch sense for the homely, the quaint, the picturesque. Many of the houses are of imposing dimensions, and indicate no little taste and a high degree of comfort, if not of wealth. The homes of these early settlers were constructed by the aid of slaves brought over from Madagascar. The roofs are heavily thatched, and the exteriors are constructed of mortar. The colonists were provided with brick and tiles, some being manufactured at the Cape, and others being sent over from Holland, but in either case, no doubt, they were dear, and the preference was given to the more plastic material. Within the houses teak and ebony were used, these woods coming from the Dutch East India Company's possessions in India. Colonial woods also were employed—yellowwood, stinkwood, ironwood. In building, the style of architecture prevalent in the mother country

naturally was adopted, but soon with modifications, due to new conditions, new materials and new requirements of the new country. With plenty of land the plan of the home was extended and its altitude diminished. One story became the rule. The scroll-framed gable of forms familiar in the principal streets of Amsterdam and the houses in the Heerengracht were copied and some of the survivals at the Cape now preserve for us shapes lost at home. Indeed, Mr. Baker reminds us that the commonest types of gables surviving at the Cape are seldom seen to-day in Holland or Belgium. Curiously, however, they are common in the southeast of England, in farm houses built there by French refugees. This book is well worth perusal by our architects. It contains abundant illustrations.

A LANDMARK HISTORY OF NEW YORK.
By Albert Ulmann. New York: D. Appleton & Co.

In form this is a book for children. In substance it is likely to be quite as interesting to their elders. We are sorry the author adopted the conversational form of telling his story, introducing an imaginary professor and a lot of impossible children to carry along his tale. The essence of simplicity does not lie in these devices. The author might still have given us the great deal of valuable information that he has accumulated in a shape that would have interested the junior reader without confining the book to the nursery. That it is really possible for an adult to read the book in the form it now possesses is a high tribute to many sterling qualities of the work.

THE PRINCIPLES AND PRACTICE OF LINEAR PERSPECTIVE, developed along original lines, etc. By Herman T. C. Kraus, C. E. New York: Norman W. Henly & Co., 132 Nassau St. 1901.

There is apparently no end to the production of books on perspective. A great deal of pains, labor and patience have been given to the subject by numberless authors. The fact that books are still produced year after year covering precisely the same ground, must be regarded as evidence that it is felt that there is something lacking in the methods of presentation. Certainly, the subject is not one that permits of perpetual research and new discoveries. As a matter of fact, we believe that the greatest evidence of an author's power of exposition would be furnished by his ability to make clear, to the

uninitiated, the simple principles of perspectives. Nearly every volume that we know of, dealing with this subject, tangles up the beginner at the very outset in a mass of confusing descriptions and technical phrases, the meanings of which have not been made clear beyond all peradventure of misunderstanding. Why cannot some one provide us with a book on perspective similar in its way to Viollet-le-Duc's "How to Become a Designer?" The thing surely can be done, and it is surely worth doing. The only simple book on perspective that we know of is the one produced by L. W. Miller, and so far as the practice of perspective is concerned, G. A. T. Middleton's work, "The Essentials of Perspective," published originally in these pages and reprinted by B. T. Batsford of London. Mr. Kraus's book is not exactly to be classed among the many hopeless, obscure, tangled and distracting books on perspective. On the other hand, it lacks clearness. It is not at all likely to seize the student's mind at the beginning and carry it along to a full mastery of the science. However, to those who already know something about the practice of linear perspective, the volume will be valuable. It will establish them on the strong ground of legitimate practice.

SCHOOL ARCHITECTURE. By Edmund M. Wheelwright. 350 pp., 250 illustrations. Boston: Rodgers & Manson.

This is a sound and valuable work, the nucleus of which was a series of papers on the American schoolhouse printed in "The Erick-Builder" some time ago. The matter then published has been recast with large additions. For instance, in the book a great deal of space is devoted to the treatment of schools abroad, a subject slurred in the periodical. As it stands, the bound work sets forth the general requirements and features of schools; it illustrates the elementary institutions of Germany, Austria, Switzerland, France, Great Britain and the United States; the secondary schools here and abroad; the manual training and Mechanic Art Schools in this country, and those training schools for teachers termed among us "Normal" schools. Heating, ventilation and sanitation also come in for observation, and a complete set of specifications for American schools are included. The author, it is hardly necessary to mention, is the well-known city architect of Boston. Mr. Wheelwright's own work is of a high char-

acter, and his experience in the designing and construction of schools has been, we judge, as great as that of any other architect in the country. Consequently, in treating of contemporary productions, and when discussing contemporary requirements in this country, he writes as an authority. In his pages he has illustrated some of the finest schools, private and public, in the largest cities in the country, and it is pleasant to observe how high the average of architectural work is. As to equipment the American school is by general consent decidedly ahead of buildings abroad. Mr. Wheelwright's work is a solid addition to the architect's library. It is to be regretted, however, that the illustrations, in most cases, are but reproductions from half-tones. The result is a blurred effect which almost precludes a close inspection of detail, but there are plenty of plans in the book, and these are of prime importance.

STURGIS'S DICTIONARY OF ARCHITECTURE. A Dictionary of Architecture and Building, Biographical, Historical and Descriptive. By Russell Sturgis, A. M., Ph. D., Fellow of the American Institute of Architects; and many architects, engineers, painters, and other expert writers, American and foreign. In three volumes. Vol. I., A-E. Vol. II., F-N. New York: The Macmillan Company. London: Macmillan & Co., Ltd. 1901. All rights reserved.

The need of a new dictionary of architecture will be admitted by all students of that art. Even the "general reader," whoever he may be, if he be an intelligent and inquisitive reader, must often feel the need of fuller explanations of architectural terms or facts than even the most elaborate of general dictionaries supply. And, as Mr. Sturgis points out in his preface, there is no provision in English at all adequate to these needs. One interesting beginning of an attempt to supply it seems to have escaped his notice, and that is the "Dictionary of Architecture and the Allied Arts," of which the publication was begun by Messrs. Audsley about twenty years ago, but never carried further than the letter B. The three volumes published are perhaps arranged on too much the encyclopaedical plan to be available for the uses of a dictionary, and indeed this may be said of Viollet-le Duc's famous "Dictionnaire" so called. That is to say, it does not fulfil the essential requirement of a dictionary which Mr. Sturgis rightly defines as "fitness for ready consultation." A small particular fact cannot always be easily found from a work which consists of a series

of monographs, even interspersed with briefer definitions. Nevertheless there is some very good work in the fragment of the Audsley "Dictionary." Such important titles as "Arch," "Apse," "Basilica" and the like are treated with a very satisfactory amplitude and accuracy. One will look almost in vain for equally exhaustive monographs in the present work. The editor's preface gives a sound explanation why, and in doing so lays down the plan upon which this dictionary has been compiled. It seems to us the correct plan, and the only one which can be made to combine fulness with "the fitness for ready consultation," which is proper and indispensable to the idea of a dictionary. That is to say, there must be an elaborate system of cross references. The reader who desires to know simply the meaning of an architectural term must be able to have his single curiosity assuaged by turning to that title. On the other hand the reader who desires a treatise upon a subject must have his needs consulted. The only combination that will meet both requirements is the division of a complicated subject into a series of short articles, in the nature of definitions, each under its own alphabetical title. As Mr. Sturgis explains in his preface:

By the use of these references the student may, at his pleasure, enlarge the description or the discussion before him by consulting two or three or perhaps a dozen articles. The possibility of such reference from one article to another may be increased indefinitely by the insertion of articles serving primarily as indices to other articles in the same work. Thus, in the book now presented, the article "Aboriginal American Architecture" refers to a great number of terms under which treatment of that general subject will be found; under "Columnar Architecture" will be found a number of terms, each of which will be found is defined in its alphabetical place, and by comparison of which the whole subject may be thought to be adequately presented. The value of this feature will be recognized by those persons who have ever thought how much we need a reversed dictionary—a book which shall tell us the names of the things which we know of and cannot "put a name to." Thus, in the matter of Columnar Architecture, it is sometimes desirable to find out quickly the proper term for the colonnade of seven columns; but no dictionary, unless elaborated in the way above suggested, will do that. It will only tell you that "heptastyle" means having seven columns, which is a different thing.

The Encyclopaedia Britannica is the most conspicuous example of the cyclopaedical, or monographic, as opposed to the lexicographical treatment, and everybody who has used it knows how different it is, how impossible

often to get from it a particular fact in a hurry. A British critic illustrated this drawback by pointing out the inutility for the consultative purposes of a curate straitened for time and preparing a sermon, of one of the Biblical monographs of Robertson Smith. The index which would be needed to make the stores of the encyclopaedia available for ready consultation would itself need to be of monumental proportions, and to be prepared with a diligence and an intelligence which would almost amount to genius. For the purposes of an encyclopaediacal dictionary there does not seem to be any fair question that the method pursued in the new work is the more available.

And certainly there can be no question, in the mind of any American student of architecture, that precisely the fittest editor for the country affords has been chosen for the new dictionary. Mr. Sturgis's knowledge of the history of architecture is known already, as encyclopaediacal, to the readers of this magazine and still more to the fellow students who, in the Johnsonian phrase, have found in him "copiousness of information enhanced by facility of communication." Mr. Sturgis might, indeed, almost say for himself respecting his subject, as Johnson concerning his, that he "did not find that what he had not of his own was easily to be obtained." But he has also the advantage of knowing the most likely sources to invoke for parts of his subject which are as yet undescribed, at least in any popular or accessible form. Such, in the present volume, are Mr. Dellenbaugh's contributions, which, as the editor observes, comprise a somewhat complete essay on American antiquities cut up into short articles. The information they contain cannot be said heretofore to have been accessible to the general reader at all, so scattered has it been in special reports and monographs. Certainly, one would have to seek for a long time for the information what he finds here compendiously put under such titles as "Casa Grande," "Cliff Dwellers," "Communal Dwellings" and the like.

One's real estimate of the value of a work of this kind comes from the readiness and satisfactoriness with which it answers the questions he has occasion to put to it from time to time, and requires habitual consultation for its basis. In default of that test, he can only try it here and there and report the results. One of the first requisites of an architectural dictionary, as of an architectural work, is that of due proportion. It is in this that the skill of the editor is mainly seen, after, or in con-

nection with, his choice of contributors and apportionment of the work to them. The necessity of conciseness being assumed at every point, what is the minimum of space for each title in which what the reader has a right to demand of it can be imparted? In these volumes the space varies from a line of definition to what may almost be called monographs upon important titles which cannot be subdivided. So far as can be judged from the process already described the apportionment has been made with successful pains and good judgment. The mere definitions are clear as well as brief, and, where it is necessary or desirable, are elucidated still further by the citation of examples. The detached essays extend sometimes, as in the case of Mr. Clipston Sturgis's article on "England" to fifteen pages. But such papers as those of Professor Hamlin on "Byzantine Architecture" and "Egypt," are models of concise exposition. One feature of the work which is to us a novelty in architectural dictionaries, and as useful as it is novel, is an explanation, under the title "Architect," of what that term actually denotes and connotes in modern practice in the leading building countries. Professor Sabine has introduced another novelty by preparing a paper on "Acoustics," in the architectural application of that science, which is so clear that the lay reader cannot find any difficulty in understanding it, and which the architectural practitioner will be likely to distrust on the very account of its clearness, considering how his counsel has been darkened before by obscure treatises which he recalls with shudderings, as also he is likely to recall his own attempts to understand and apply them. In short, the reader is likely to find in this "Dictionary" explicit answers to all the questions he has a right to ask of it. And that is the highest praise that can be given to such a work. To say so much is to say not only that it has no rivals in the English language, but that it is not likely to have any. It is quite necessary to the intelligent architect and the intelligent student of architecture, and while it is likely to be supplemented by the lapse of time and the accumulation of knowledge, it is not likely to be superseded.

It would not be fair to pass over the illustrations without pausing for particular praise. They are very profuse, and comprise well-printed half tones, in reproduction of actual buildings, as well as woodcuts of plans and details and of complete buildings of which photographs are not available. But they all have the primary merit of being illustrations. The editor seems to have laid under contribu-

tion all that has been done in architectural illustration, so far as it was applicable to his purpose, not only the familiar works of Viollet-le-Duc and Fergusson and Street and Parker and the like, but much more recondite sources, unknown to the ordinary student. The result is that it very seldom happens that any definition is not elucidated by cuts when these are more elucidative than the text. Famous buildings are expounded by plan and section when there is occasion for these as in the Erechtheum, St. Sophia, St. Paul's and Chambord, but less familiar views are given when it is in these that much of the interest resides, as in the view of the Certosa from the cloister, the cloister terrace of Mont Saint Michel, the magnificent apse of the Abbaye aux Hommes (frontispiece), so much less known than the so much ruder and worse composed West front. So that, besides being primarily illustrative, the illustrations are secondarily and incidentally very instructive and entertaining on their own account. Nor is the illustration by any means confined to ancient buildings. Along with all the old favorites "which no dictionary of architecture should be without," we have such examples of modernity as the Bourse and an apartment house in Paris, the latter apparently of the last decade; the Museum of Natural History at South Kensington and the City Hall and the Academy of Design in New York. So well chosen and so well presented are the illustrations, indeed, that it is a pleasure to turn over the pages of the handsome volume, even for a reader who has no immediate occasion to consult it for information.

EARLY CONNECTICUT HOUSES.—An Historical and Architectural Study. By Norman M. Isham, A. M., Architect, and Albert F. Brown, Architect. Providence, R. I.: The Preston & Rands Co.

We have no hesitation in saying that this is the best book, from the architect's point of view, that has been produced dealing with Colonial life. The region covered by the author's investigations was, if we may say so, one of the most truly "Colonial" in the country, embracing as it does the old settlements at and around Hartford, Windsor, Westfield, New Haven, Quinnipiac and New London—in other words, the Connecticut colony and the New Haven colony. The period covered extends from the years 1635 to 1750. The authors have been diligent in searching for survivals, but apparently nothing remains of the habitations of the first settlers. For these they have, therefore, been obliged to have

recourse to documentary evidence. As to the structures that still exist or that still existed when the authors had their work in hand, these have been subjected to a thorough structural examination, and the results form the substance of the volume—sketches, plans and elevations, while each house is also the subject of historical and analytical notes. Details are freely pictured and the views, showing the system of constructions adopted, are particularly interesting and valuable. Indeed, in scope and method this is precisely the book the architect needs.

OLD COTTAGES AND FARMHOUSES IN KENT AND SUSSEX.—Illustrations in one hundred plates. Printed in collotype from a special series of photographs taken by W. Galsworthy Davie, with some descriptive notes and sketches by E. Guy Dawber, Architect. London: B. T. Batsford, 94 High Holborn. 1900. New York: Chas. Scribner's Sons. \$7.50.

Some of the most picturesque survivals of "Old England" are to be found in the smaller towns and villages of Kent and Sussex—those two thoroughly rural counties, which contain on the byways so many cottages and farmhouses of a particularly quaint and picturesque type, mostly half timbered, thatched and gabled buildings dating sometimes from the sixteenth century. The purpose of the authors of this volume has been to gather together some of the best examples of these "antiquities." Mr. Davie is an excellent amateur photographer as well as a professional architect, and the photographs he has taken for illustration are all of buildings of sterling merit, likely to be of interest to architects and artists generally. He has done his work exceedingly well, and the volume he has produced is a mine of suggestion for the practitioner in the United States dealing with country houses. The book happens to be particularly apposite at this moment when there is a decided attempt in progress to introduce the old "half timbered" work.

MILL BUILDING CONSTRUCTION. By H. G. Tyrrell, C. E. New York: The Engineering News Publishing Co. 1901. Pp. 40.

This book contains a great deal of good sound sense. All that the author says makes for solid and safe construction, but, the volume is professedly only a series of notes and illustrations dealing with a subject that would require much greater space for adequate presentation. The author confines himself to the common ground of every-day

experience, so that the perplexed and distressed seeking for a guide out of their difficulties need not apply here; but any one who wishes quickly to refresh his memory regarding information that he once grasped firmly will find this thin volume a very handy one to turn to.

ENGINEERING STUDIES. Part II., Roman Stone Arches. By Charles Evan Fowler, M. Am. Soc. C. E. Part III., English Stone Arches. By Charles Evan Fowler. New York: Engineering News Publishing Co.

These are pamphlets containing a number of well-made and well-printed photo-engravings, to which short notes, historical and descriptive, have been appended. But the letter-press is of very little service. Fuller and more accurate notes, we judge, would be welcomed by engineers and architects. It is right, of course, to include among Roman Stone Architecture, bridges, such as: Sant' Angelo, Rome, that of Augustus at Rimini, or that at Alcantara, but what business has the Bridge of the Rialto or the Bridge of the Trinity at Florence among Roman arches? By the way, in the notes the editor assigns the year 1750 as the date of the construction of the Trinity Bridge. The bridge was built by Amminati, who died April 14, 1592.

RIPON. By Cecil Hallett, B. A. With 53 Illustrations. London: George Bell & Sons. 1901.

THE CATHEDRAL CHURCH OF WORCESTER. A description of the fabric, and a brief history of the Episcopal See. By Edward F. Strange. With 53 Illustrations. London: George Bell & Sons.

These two volumes are late additions to Bell's Cathedral Series, one of the most satisfactory sets of recent monographs. We have referred in these pages to previous issues, which now provide us with information concerning nearly all great Cathedral Churches in England, and put a deal of accurate information at the hand of the Architect and Archaeologist—in these days too often one and the same person. Each of the volumes contains the history of the cathedral treated of, a description and history of the exterior and of the interior, usually with a final chapter touching upon other historical buildings in the neighborhood of the Cathedral. The illustrations are abundant; but too often many of the half-tones are poorly printed.

THE WINSLOW TABLES. Diagrams for calculating the strength of wood, steel and cast-iron beams and columns. By Benjamin E. Winslow. New York: The Engineering News Publishing Co.

So much of the engineer's work consists of calculations, that it is little wonder that so many devices, literary and otherwise, are supplied to lighten this inevitable drudgery. In these tables the author provides a graphical method for computing the sizes of beams and columns. We have tested the work and find that its use effects a great saving in both time and labor, and the book, we are sure, will be a very welcome addition to the "assistants" in any busy engineer's or architect's office. This volume is said to be the first attempt of its kind aimed to cover the whole ground of ordinary practice.

OUTLINE OF ART HISTORIES. Vol. I., Architecture. By James Fred Hopkins. Illustrations. 242 pp. New York: Educational Publishing Co.

This is the first of a new series of art histories. The author, we believe, is a teacher, and he intends his book, as he says, for the "use of the teacher and for her boys and girls." This is the keynote of the book. After hearing it, we know what to expect—usually something superficial, and of course flowery in language. Superficial in a certain sense, Mr. Hopkins' work is. It is evidently the work of some one dealing almost entirely with his subject at second-hand. One can, indeed, follow the author's reading between the lines. There is also to be found in the book, particularly in the opening chapters, that tendency towards "afflatus" that marks, and in our judgment, mars so many books dealing with art produced by the dilettante. It would not be just, however, to Mr. Hopkins' book to leave it in this way. The work as far as it goes is solidly done, the commonplace facts of the history of architecture are well-given in an elementary sense, and the book is a decidedly valuable addition to the list of school-room art books. The illustrations are numerous, well-chosen and well-produced.

A. B. C. OF THE TELEPHONE. By J. E. Homans. New York: Theodore Ansel & Co., 63 Fifth Ave.

As a sarcastic person once put it, "In these days, when the architect is called upon to know so little of so many subjects," it is interesting to note that an elementary treatise on the telephone has been provided.

There is much good reading in this book, and a deal of useful and practical information, likely at times to be needed within an architect's office. The book contains a chapter on Telephone Apparatus, another on the Theory of Sound, another on Electrical Principles, another on Electrical Quantities, and another on the History of the Telephone, followed by a chapter devoted to the different parts of the telephone, such as, the switch-board, party lines, telephone wire, automatic exchange, etc., etc. Of course the telephone and electrical construction companies relieve the architect of most of the trouble involved in the installation of the telephone apparatus; but, particularly in designing large buildings it is important that the architect should know at least something of "current" possibilities. This book will bring one well up to date.

FURNITURE, DESIGNING AND DRAFTING, and Notes on the Elementary Forms, Methods, Construction and Dimensions etc., etc. By Alvin Crocker, Instructor in Furniture Design, Pratt Institute, Brooklyn. New York: Wm. T. Comstock, 23 Warren St.

Our readers are well acquainted with Mr. Nye, whose articles on furniture have appeared from time to time in these pages. This new work of his is a text-book for classes seeking an elementary knowledge of the forms and principles of sound design

and construction. The author treats the subject very clearly, dealing in separate chapters with the chair, table, bed, etc. Methods of construction and design are illustrated. We are glad to find the author, in all cases, leaning towards rationalistic forms. The book can be recommended without qualification to the student, the architect in search of information, and to the experienced draftsman.

NEW BOOKS.

THE MYCENAEAN TREE AND PILLAR CULT, and its Mediterranean Relations. With illustrations from recent Cretan finds. By Arthur J. Evans, M. A., F. S. A., Keeper of the Ashmolean Museum, etc. London: Macmillan & Co., Limited. New York: The Macmillan Co.

THE FARMSTEAD. The making of the rural home and the layout of the farm. Isaac Phillips Roberts. New York: The Macmillan Co.

THEATRES. Their safety from fire and panic; their comfort and healthfulness. William Paul Gerhard, C. E. Boston: Bates & Guild Co.

SOME OLD MASTERS OF GREEK ARCHITECTURE. Harry Douglas. Great Barrington, Mass.: The Quarter Oak.

HERBERT VON HERKOMER, R. A. A Study and a Biography. By A. L. Baldry. London: George Bell & Sons. New York: The Macmillan Co. 1901.