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THE MAIRIES OF PARIS.

ALTHOUGH Paris is divided, for administrative purposes, into twenty wards, it is in reality only one single township. But while the Hôtel de Ville, or City Hall, is the municipal center, the local mairie of each ward is the place looked upon more particularly by the inhabitants as their town hall. It is this mairie which keeps track of the Parisian from his birth to his burial, receiving him when he enters the world, recording the most momentous and decisive acts of his life, and accompanying him finally to his last resting place. It is the mairie which intervenes at the citizen's civil and military majority, and it is the mairie which ties his marriage knot. The mairie is in truth—to use the expression of a municipal councillor of Paris, M. Paul Strauss—our social headquarters, the administrative domicil of all the inhabitants of one same zone. This of itself would suffice to give the mairie great importance; but this is not all. The mairie is not merely an office for the registration of births, marriages and deaths. Many other things, of a very varied character, come within its province. Its sphere of action and influence is largely extended by the fact that the mayor is, ex-officio, President of the Board of Charity, of the School Committee, of the Health Committee, etc. Mairies, therefore, serve a double purpose. They are places for ceremonies, and they are administrative establishments. A perfect mairie is one which can be utilized for holding grand ceremonies, and which is at the same time thoroughly adapted to suit the convenience of the officials and of the citizens.

This fact seems at length to have been grasped by the powers that be. It is not so very long since our mairies were mere hovels, built of common materials and poorly decorated in a commonplace fashion, or not even decorated at all. In those days fine edifices were built only for the aristocracy. But this is now entirely changed. Quite a transformation has taken place in the building art—a trans-

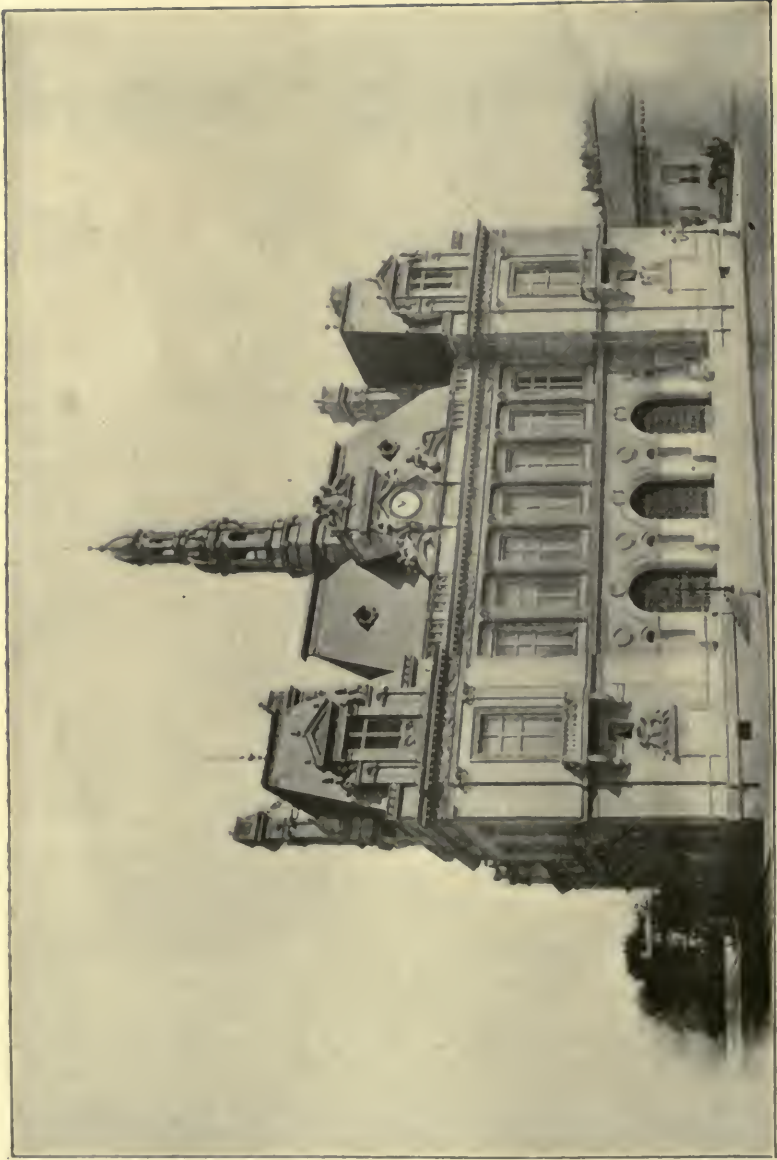


FIG. 1.

formation characteristic of our epoch. Instead of a few scattered châteaux, there are springing up whole streets, in fact whole districts, of elegant houses combining everything that modern ideas of comfort and modern taste can suggest. It is evident that the mairie was bound to symbolize this transformation, for it expresses in a manner the wealth and power of a community of private individuals taking the place of the isolated luxury of a few grandees. From this point of view alone it is an example of the present stage of the building art that is well worth studying.

The mairies of Paris certainly do not resemble one another. They do not sin by a servile uniformity, and although most of them are without a history, they all have their distinctive features, their own particular stamp. We have the convent-like mairie, such as that situated on the Place du Louvre, which M. Pierre Véron called "the double-headed calf in freestone." We have the barrack-like mairie in the rue de la Banque; the bastion-like mairie at Batignolles, and the temple-like mairie with Grecian portico, facing the Pantheon. We have above all the labyrinth-like mairie, where one ascends, descends and wanders round and round without ever finding the office one seeks or the functionary one has come to see. It is needless to say that this article will not deal with any of those mairies. We will say, however, in passing, and this remark, which has been made specially about the Hôtel de Ville, applies in general to nearly all the twenty mairies of Paris—that the majority of our town halls are ill-adapted for offices, which is the purpose they are chiefly intended to serve. The corridors and staircases are too large, and the rooms too small. We have searched among the newly-constructed mairies for those which are best suited to modern requirements, and most fully respond to the double purpose mentioned above—the holding of gatherings, and the convenient transaction of official business. We have chosen the mairie of the Sixteenth Ward and that of the Tenth Ward, adding thereto the town hall of Neuilly-sur-Seine, which is located at the very gates of Paris. We have noted the characteristic features of each of these three structures, so as to enable American architects to form an idea of the manner in which French architects treat this kind of edifice, and even, if necessary, to use them as a guide for the erection of a typical town hall.

The Nueilly mairie (No. 1) is built on a broad avenue. It stands at the bottom of a square of medium size bordered on the right by a block of school buildings, and on the left by elegant private houses. The mairie is detached on all sides. Some general information about the building and the materials employed has been given to us by M. Dutocq, chief architect of the edifice. The soil on which the mairie stands is a compact chalky sand of excellent consistence for building upon. A bed of concrete 60 centimeters deep supports the walls

of the cellars, which are built of millstone grit. For the cellar story, dressed stone has been used only for the summers which bear the arches supporting the walls of the story above. The cellars are excavated 2m. 30 below the level of the public road, and rise 1m. 70 above this level, thus forming a fine basement floor, perfectly ventilated. Their walls, in millstone grit as we have said, are crowned by a plain string course in freestone, marking the level of the ground floor all round. A facing of choice stone, placed slopingly, covers the rough stone wall up to the string course. Above the latter rises the ground floor, the wall of which is based on a stone socle one meter in height. The finest and most durable stones to be found in France have been used for the principal front, for the grand staircase and for all the first story. The inner walls are of hard rubble, and the distributions of Vaugirard bricks. The top story is similar in construction. The entire framework—floors and roof—is in iron. The campanile consists of cast iron. It is built upon two main girders one meter high which support a framework composed of cast iron columns with iron cross-pieces, serving, at the height of the attics, as a base for the campanile. The back staircases are constructed of sheet-iron and angle-iron, the steps being of plain hard stone. They are thus proof against all risk of fire. The roof is covered with slates; the gutters are in lead, but the little terraces of the garrets and wings, as well as the oriels, are in zinc.

The facade of the mairie of Neuilly-sur-Seine is 40 meters wide. The wings have a frontage of 13 meters. A broad flight of steps leads up to the level of the ground floor. The latter is 7 m. 50 high, and the floor above it measures 9 meters high. Above that, the attics rise to a height of 8 meters from their base. Lastly, the cast-iron bell tower, crowning all, is 42 meters high, measured from the street level to the summit of the cupola.

The most striking feature of the facade is the strong contrast between the three arcades which pierce the ground floor and the seven openings on the first story. The three ground-floor arcades are separated from each other by substantial pilasters which support with ease the intercolumniation of the story above. This opening, uniformly repeated seven times, in contrast with the sober piercing of the ground floor, gives fineness and elegance to the upper part of the edifice. The Corinthian order which dominates the composition of this floor is exceedingly effective. It supports an attic, above which the clock tower rises upon a base extending the width of the three central intercolumniations of the story beneath. The central part of the clock is supported by two circular frontons serving as seats for two reclining figures representing: on the left, the Duties, and on the other side, the Rights, of citizens. The central dial is framed by two standing female figures representing Night and Day, while above



FIG. 2.

this part of the clock an attic with fronton is surmounted by two children bending forward and holding an escutcheon. All the statuary just described is the work of M. Tony Noël, a clever sculptor who certainly has a talent for ornamentation. The only reproach we have to bring against M. Tony Noël is that he has not imparted sufficient character to his figures and has not differentiated the symbol of the Rights from that of the Duties, and the image of Night from that of Day.

Descending from the summit of the edifice, the eye falls on the Corinthian frieze, composed of festoons and children, from the chisel of that eminent sculptor, M. Barrias. Further down, we would call attention to the key-stones of the arcades on the ground floor, which are pleasantly conceived and executed.

Let us now pass to the forepart of the building. Foreparts are necessarily similar in arrangement to the central part, and the frieze contains another piece of work by M. Barrias, he having been asked to depict above the large windows, Charity, Economy, Study and Justice (Fig. 2) in the form of recumbent figures. The available space, perpendicularly, was very limited, but the sculptor has happily overcome this difficulty. Finally, on the lower portion of these foreparts, escutcheons ornamented with festoons of flowers and fruits are accompanied by young men and maidens writing and reading various devices. It is true that a few reminiscences of the past are met with in this facade of the mairie, but they do not jar too much on us, being adapted to modern requirements with a preciseness and fidelity which are quite up to date. A specially striking feature is the happy harmony between the architecture in its main lines and the sculpture, brightened and vivified, of the new school of artists. An interesting parallel might be drawn between the tendencies of these two arts—architecture and sculpture—which, receiving their inspiration at the outset from some ancient school, free themselves therefrom by degrees and introduce elements of a very marked “modernism”—elements which are, perhaps, the forerunners of a new Renaissance.

We have said that the cellar floor of this mairie forms a fine, well-ventilated basement. In the center thereof is a large cellar for storing coal. On each side of this is a large hot-air stove. On the right are cellars, storerooms, a prison for men and another for women; and on the left, the choral society's room, a cloak-room, a muniment room, etc. The entrance vestibule on the ground floor (No. 3) is sober, but not without a certain grandeur. The lamps, however, are commonplace to the last degree, and produce an unsightly effect. We are also astonished at the group on the left in this vestibule, representing a man of wild aspect engaged in fighting a lion. What on earth has such a group to do in a town hall? Is it there to incite the peaceable citizens of Neuilly to become savages, or is it intended to teach them the way to wrestle with the mighty king of beasts, in case an animal of this species should escape from a menagerie in the fair which is held hard by every summer? This kind of symbolism is certainly inscrutable to us. We will say the same regarding the amazing statue on the central staircase (No. 4). Why do we find at such a spot this example of the nude—a nudity aggravated by an air of tipsiness? Why was it not remembered that



FIG. 3.

engaged couples pass up this staircase on their way to the room where marriages are solemnized? Every part of a public building ought to contribute to the beauty and harmony thereof. An ill-chosen or misplaced motive is capable of spoiling the whole thing.



FIG. 4

This is a recognized truth, and yet how few of our artists in general, and our architects in particular, take it into account!

The illustrations here presented absolve us from giving a detailed description of the interior of this edifice. We will merely remark that the departments which have the most to do with others are grouped together, as also are those which deal more specially with the public. The fire brigade department, the state tax office, the town dues office, the municipal tax office, the office charged with relieving the poor, the office of the doctor attached to the department of civil status, the police office and the policemen's quarters, occupy the ground floor. On the entresol we find the private room of the chief officer of civil status, the registry of births, the registry of



FIG. 5.

deaths, the office of the controller of the land survey, the general funeral undertaking office, the town architect's office, the streets and roads department, etc. All these premises are spacious, well lighted and easy of access.

The first floor is devoted to those departments which are connected with the holding of meetings and ceremonies of various kinds. The visitor is admirably prepared for the splendor of the rooms set apart for festive gatherings, the town council meetings, etc., by the sight of the magnificent landing (No. 5) upon which those chambers open. We have here a decorative conception exceedingly elegant as a whole, and of remarkable execution. It is even too fine, we think, for the rooms beyond turn out to be less splendid than one is led to expect after passing through such a magnificent ante-chamber. The

private office of the mayor, the town clerk's office, the committee room and the deputy-mayor's office cannot be found fault with, for these rooms may be regarded as reserved for work and study, and we well understand that the architect was not called on to decorate them in an elaborate fashion. But we have a right to be more fastidious respecting the three grand halls for ceremonies, viz., the hall in which marriages are celebrated, the great public hall and the council chamber, and we have all the more reason to expect something fine when the landing which leads to these halls is so superb. What should we say of a princely park whose sumptuous avenues led to a small hovel? In the same way, the three principal chambers in the Neuilly town hall disappoint us by their mediocrity. The Salle des



FIG. 6.

Mariages (No. 6) is so poor in decoration, so miserably ornamented, that it would perhaps be cruel to dwell on the point. We will not dwell on it—we will even carry our charity so far as to pretend that the bas-relief representing the Family, which we see above the fireplace, is as beautiful and artistic as it is morally elevating. Nor will we dwell on the large salon d'honneur (No. 7), but simply call the reader's attention to the fireplace, above which stands a bust of the Republic. This fireplace is a perfect model of what a fireplace ought not to be. It is not only ugly, but vain. It is not provided with a chimney, and consequently no fire can be made there. It is a make-believe, and this make-believe, instead of pleasing the eye, shocks and irritates it. And to think that this fireplace was inspired by the fireplaces of the old Hôtel de Ville of Paris! Yet the latter were su-

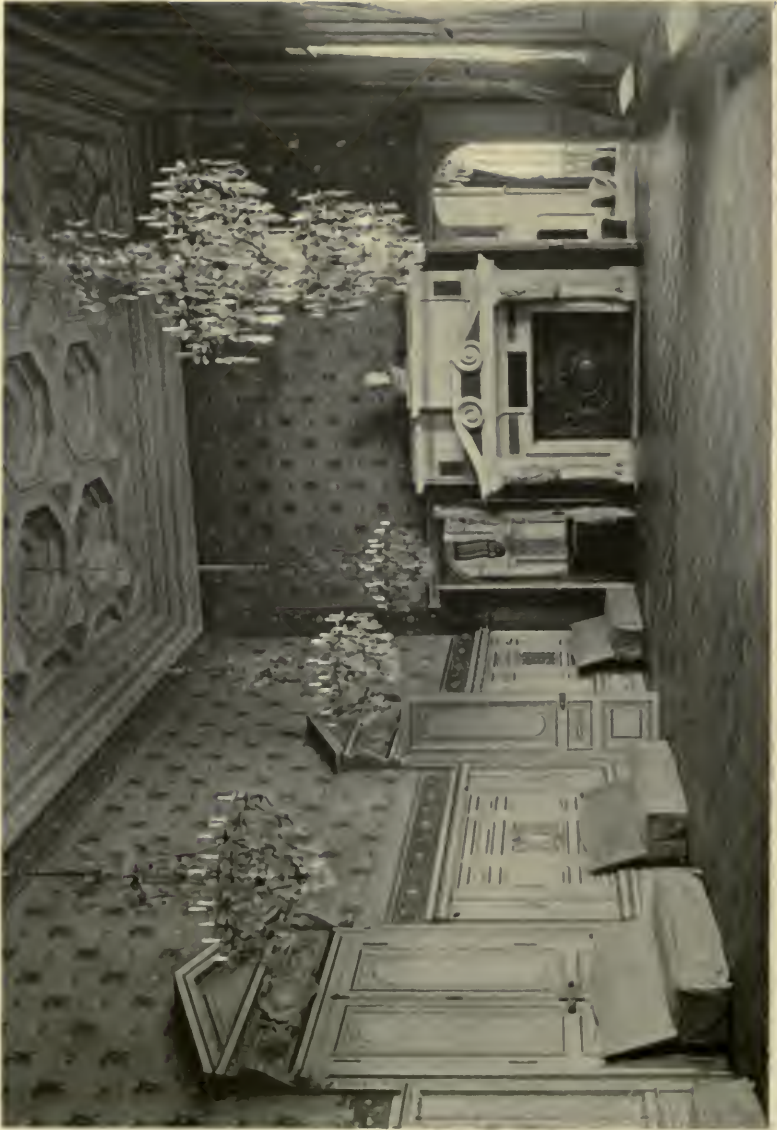


FIG. 7.

perb, which proves again that a thing is only beautiful in its exact proportions and its right place. As to the council chamber, we have abstained from having it photographed. We should not have a single word to say about this apartment if we did not recall to mind Alfred de Mussét's passage:

. . . . Nu comme un mur d'église,

Nu comme le discours d'un académicien.

Let us be just, however. We must remember that the architect was allowed only a limited sum of money, as can be seen from the following list, in which figures the total expense of erecting the mairie of Neuilly-sur-Seine:

Earthwork	13,700	francs.
Masonry	643,000	"
Iron framework	152,500	"
Wood framework	25,500	"
Roofing and leadwork	72,500	"
Woodwork	68,000	"
Locksmith's work	25,000	"
Chimney work	27,000	"
Marble and mosaic work	27,800	"
Painting, glazing and wall hangings	38,000	"
Sculpture	140,000	"
Clock	4,500	"
Lightning conductors and ironmongery of an artistic character	30,500	"
Decoration of the Grand Hall, including chandeliers, etc.	50,000	"
Provisional furnishing and sundries	71,794	"

Total 1,389,794 francs.

To this sum must be added 69,490 francs for architects' fees, being at the rate of 5 per cent. on the cost, which brings up the total expense to 1,459,284 francs, or about 1,216 francs per superficial meter built upon. For such a price as this we must not expect too much; besides, we have only to consider the parts of the edifice that are treated in an artistic and intelligent manner. In commencing its description we dealt with its main front. Its posterior facade (No. 8), which gives upon a lawn, is simple, but very graceful. We find a quiet eloquence in that statue of Parmentier (the man who introduced potatoes into France), surrounded by flowers, roses and potatoes. The useful is thus mingled with the beautiful. The architect who succeeds in reconciling these two terms will be a great architect, and will give us an ideal mairie.

The town hall of the 16th Arrondissement is far from being one of the finest in Paris, and it is by no means the most commodious.



FIG. 8.

The reader will doubtless recall those nursery tales in which the good fairy who is present at the birth of a baby endows it with all kinds of sublime qualities; then comes a wicked magician who, by imparting one bad trait, destroys all the amiable features bestowed by the good fairy. Well, one would suppose that two architects had been entrusted with the erection of the mairie of the Sixteenth Ward; that the first of them had drawn magnificent plans, but that



FIG. 9.

the other came and destroyed them, or what is perhaps still worse, spoiled them. The vestibule of this mairie (No. 9) is spacious, well-ventilated and light. It gives access to a large central courtyard.



FIG. 10.

Around this courtyard, on four sides, rise all the various departments. Our No. 10 represents a part of one of these faces. The arrangement is very good; it would seem to allow of the different offices being grouped in a logical and convenient manner. We are compelled to say, however, that this result has not been attained. The offices are difficult of access to the last degree. The rooms destined for the holding of ceremonies and entertainments are so commonplace that, far from inspiring gaiety, which it is their purpose to do, they make the visitor positively sad. In all this vast building there is nothing



FIG. 11.

that can be called convenient except the stairs and the corridors. The architect must have been endowed with great taste in the matter of staircases and corridors, and so, having a talent in this direction, he has introduced them everywhere, with a zeal and a tenacity truly astonishing. He has managed, however, to arrange for sufficient space for a hall intended for educational purposes (No. 11). This hall, which has a glazed roof, is distinctly handsome. The children sit in rows in the body of the hall; the teacher stands on the small platform at the far end, beneath the head of the Republic, and the little gallery provides room for the parents who wish to be pres-



FIG. 12.



FIG. 13.

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ent at the lessons. Most of the town halls of Paris lack such a school-room, so that this room alone is sufficient to render the mairie of the Sixteenth Ward worthy of notice.

We come now to the mairie of the Tenth Ward. This town hall was inaugurated last year (1896), and is therefore of recent construction. Its principal architect is M. Rouyer, but he was largely aided in his task by MM. Mayeux and Roulet. The great difficulty the architect had to overcome arose from the irregularity of the ground upon which the edifice had to be built. The principal frontage, on the rue du Faubourg Saint-Martin, was sloping. M. Rouyer cleverly got over this by a curvilinear arrangement of his inner vestibule, forming as it were the knee-cap of the broken principal axis. He has made a distinct block of the buildings on the main face, which are occupied by special departments (on the ground floor, the room for marriages and the mayor's cabinet; on the second, the chief clerk's offices); and he has connected this block with the mairie properly called by masking, by a hemicycle opening on the large inner hall, the obtuse angle



FIG. 14.

formed by the slope of the ground. This large inner hall is surrounded by arcades and is very remarkable. It is a sort of Italian cortile covered in the French fashion. We reproduce it here from three different points, viz.: from the ground floor, showing an angle of the entresol and first floor (No. 12); from the first floor, showing the upper part of the edifice (No. 13), and a view of the under part of the staircase on the ground floor (No. 14). Around this large hall, which, as is seen, rises from the ground to the top of the building and is covered by a glazed roof, are located all the divers departments, carefully grouped. On the ground floor,

at the acute angle formed by the main front where it meets the left side face, there has been placed, by a happy inspiration a vestibule where wedding parties can get out of their carriages under cover. Also on the ground floor there is: on one side, the registry office for



FIG. 15.

births, the military service department, the election office and the town clerk's office; on the other side, the Justice of the Peace's court and his clerk's office; opposite, the cash office, the registry of deaths, the office for funerals, and the mutual aid office. The first floor lodges: on one side various committee rooms and the offices of the deputy mayors; on the other side the schools office and the registry

of marriages. At the other extremity is the Entertainment Hall (No. 15), which is decorated with two monumental fireplaces, one of them being ornamented with a magnificent bas-relief by Dalou,



FIG. 16.

representing the Triumph of the Republic (No. 16). We will not pause to describe this hall, which is really fine in its proportions, but will refer, in regard to its immense fireplaces, to a bad French habit, against which our transatlantic readers would do well to be on their guard. In France, every time that a public building is erected, its main front is pushed forward with feverish speed. There is a great



FIG. 17.

hurry to inaugurate the edifice. The inauguration takes place; but a multitude of things are still wanting. Here, it is a hall which lacks its doors; there, it is a room as yet minus its fireplace. The chimney pieces of the Entertainment Hall of this mairie are still incomplete:

their ornamentation is not yet finished. In the Marriage Hall, of which we give a general view (No. 17), a door (No. 18), and the threshold (No. 19), we ran against some locksmiths. We even saw a number of workmen in the mayor's private office (No. 20), which, by the way, is very handsome. In reply to some criticisms which we ventured upon in this connection, we were told: "Have patience, it will be finished — provided the building doesn't crumble with age first!" In the Neuilly town hall, of which we have spoken above, all the rooms are not yet en-



FIG. 18.



FIG. 19.

tirely finished, notwithstanding that the edifice was formally inaugurated more than ten years ago. As to the Paris Hôtel de Ville, the cabinet-makers, plasterers and painters seem to have taken up their permanent quarters there.

The grand staircase (Nos. 21 and 22) which leads from the large hall on the ground floor to the first floor, serves for reaching the Marriage Hall as well as the Entertainment Hall. (The upper stories are reached by two stairs situated behind the principal face, at



FIG. 20.

the parts where it joins the side faces). On entering the mairie, one perceives, through three large arcades: in the center, the grand staircase, extending into the hall, with its porticos; the impression is certainly excellent. At close sight the staircase is not so harmonious as it appeared at the first glance. We understand that there was a question of putting a landing in the middle of the first flight. We regret that this plan was not carried out: we regret it not only on account of the effect, but from the point of view of comfort and convenience. We will mention an interesting detail. This staircase is



FIG. 21.

entirely in stucco and its skeleton all in steel. The galleries of the hall also have a metallic skeleton (piers in riveted iron, connected by fillets or beams trellised) roughly pugged with bricks and plaster, rough-coated with stucco. This is quite new—at all events in France—so new, in fact, that the intransigents of architectonic rationalism jump with indignation at the mere mention of this method of producing something solid and of good appearance at a small cost. But the general public has already shown its appreciation of the result obtained by the architect of this mairie.

On the entresol of the first floor are the architect's offices and the committee rooms. On the attic story are the engineers' offices, the rooms of the treasurer of the Poor Fund, and, above the Entertainment Hall, the municipal library. The top story provides place for



FIG. 22.

various other departments of lesser importance. All along the offices, on each floor, runs a wide gallery paved with glass, which goes round the large hall. On every floor this gallery rounds off, on the right of the facade, in a large hemicycle with columns, thus masking the want of symmetry caused by the irregular shape of the ground.

So much for the location of the various sections. As regards the external appearance of the edifice, we will say that it is sumptuous. The ground floor of the main face, the semi-circular arcades of which are closed by forged-iron gates, the engaged columns which, on the ground floor, separate the large square windows divided by mull-

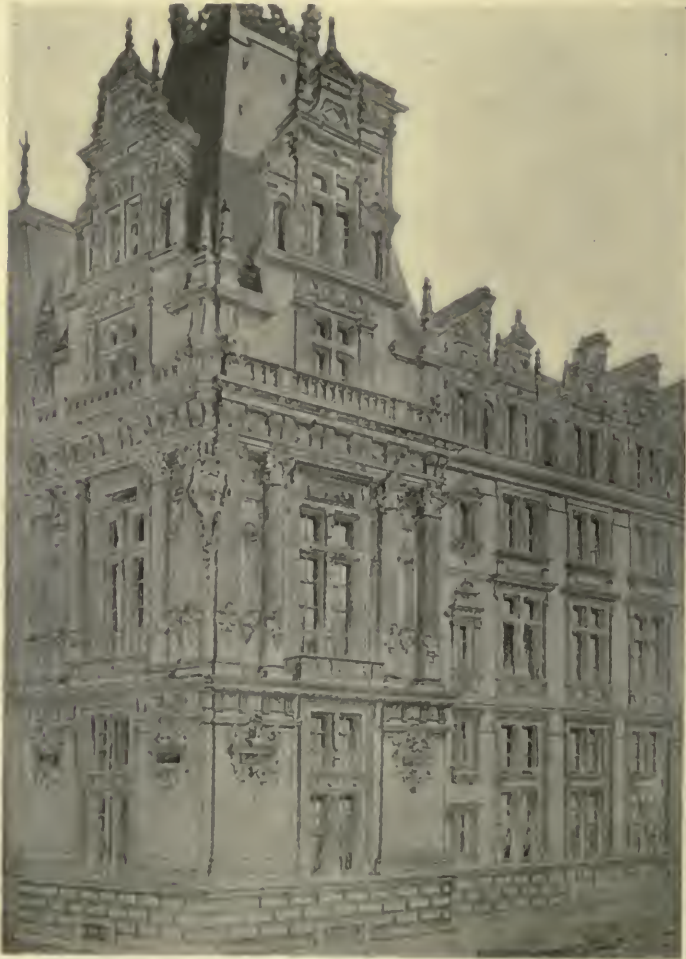


FIG. 23.

ions, the elegant cornice surmounting the first floor, the balcony with open-work balusters which runs above the cornice, the fine, sober pinnacles which rise above the windows of the second floor under the high roof with its light bell tower—all this is inspired by the most delicate Renaissance motives. In No. 23 we give the corner of the principle facade on the rue Château d'Eau. If we do not dwell further on this exterior, it is because the architect has manifestly had in mind

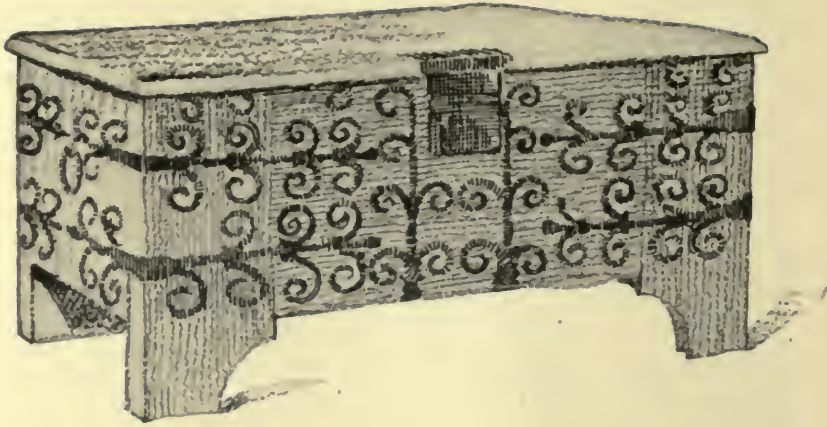
the former Paris Hôtel de Ville and has done little more than produce a reduction thereof. We admit that this copy on a smaller scale is ingenious and seductive, and that it is full of pleasing, brilliant and picturesque details (No. 24); we admit, too, that all the capitals and cartouches are replete with grace, and we are delighted with the motive former under the campanile by the clock, above which a cock in relief is flapping his wings.



FIG. 24.

It may perhaps be thought that in an article intended to point out the most interesting models of French town hall we have indulged rather too freely in criticism. If so, we hope we shall be excused for having thought that it is not enough merely to show what ought to be done, but that it is also needful to show from time to time what ought not to be done.

Fernand Mazade.



THE EVOLUTION OF FURNITURE.

FOR a brief study of the development of furniture we need not begin our search at a period as early as the Greeks or Romans. We have but to recall the condition of Europe at the time of the fall of the Roman Empire to remember that all civilization was general confusion; that there was no social or domestic life. Consequently, furniture, in the sense which we use the term to-day, was almost unknown.

It was in the tenth century that the feudal system first developed itself, and it is this period that we may take as a starting point for a research concerning domestic furniture.

At this time home life was of such an unsettled character that household effects were reduced to their lowest terms.

The most important article of furniture was the chest, packing box, trunk, or strong box in which household possessions were placed either for safe keeping or for transportation. The chest was of so much importance, and played such a prominent part among early furniture, that it has been said to be the piece from which all others evolved. This is much too broad a statement, and not at all true; yet the chest was used as a substitute, on occasion, for many articles of furniture known to-day. Moreover, the form was introduced into every article where possible.

Feudal chiefs moved incessantly from one stronghold to another, taking their belongings with them, and it was this that gave rise to the general use of chests in which property could be transported. On arriving at a resting place, the contents, consisting largely of draperies, bedding, and clothing, were removed from the chests, which were not then stored away out of sight, but were arranged against the walls, or elsewhere, to serve as seats and wardrobes.

The gentleman of this period had no closet, except his trunk, in which to place his clothes. The chest was found in all houses, those of the poor as well as the rich; in the courts, and the church, where it was used to hold valuables and vestments.

At first it was a little more than a strong box, resting directly on the floor, and having a strong lock. It was made of boards, roughly framed together, and bound with iron, sometimes richly forged. As these chests were always in sight, a desire to have them handsome arose, and they were ornamented with painting, which was less likely to be injured when the chest was moved than would carving or relief ornament. Carving of wood was very little practiced at an early date, and painting in different colors was the usual form of decora-



Swing-back bench having chest seat. XV. Century.

tion. It is interesting to note that when carving was first used, it was only the panels sunk below the level of the rail and somewhat protected that were ornamented. This carving, too, was in low relief. The domestic use of the chest was as a seat, and cushions were placed on the top to make it comfortable, for chairs, as articles for daily use, were not known to Europeans until the first half of the fourteenth century.

Benches or settles were used prior to this, and it is quite probable many of these were chests. At all events, we know that at that date chests were provided with a panel back, and arms at the ends. They were thus converted into benches, the common form of seat. It was

the bench that replaced the triclinium of the ancients, when, during the Byzantine period, the custom of reclining at meals ceased; and the term banquets is derived from bancs or benches, thus used. The usual location for the bench-chest was before the fire or against the wall. When used before the fire the swing-back was introduced, enabling the occupant to either face the fire or sit with his back toward it. The paneled back of benches was sometimes quite high and served as a protection from the cold draughts of the large rooms; as did the rude wooden high-backed settle of our ancestors in this country.



High-back bench with a chest seat. XVI. Century.

Thus far we have considered these seats as long, rectangular boxes, but the cubical, or nearly cubical, form was also used; particularly after the introduction of the arms and back. In this form the back was almost invariably high and straight, making the chair of the fourteenth century. These were usually placed at the bedside, where the box forming the lower part was used as a receptacle for various articles; in later days for devotional books, the chair serving as prie-dieu.

When the canopy was added to the high back of the chair just described, it became a large, heavy article of furniture, much too cumbersome to move about the room. This canopy we sometimes see to-day, over the seat of public officials or speakers, where it is an emblem of dignity, as it was during the Middle Ages. Such chairs were not common; there was usually but one, or at the most two, in



Chair with chest seat. XV. Century.

a house. Its great weight and clumsiness soon made it unpopular, and this, together with the introduction of more suitable seats, caused it to go out of use. When the chest was richly carved and no longer used as a packing box for travelers, smaller boxes for clothing only taking their place, they were found inconvenient for the storage of various articles, as the things most wanted were always at the bottom, and to get at them everything else had to be removed.

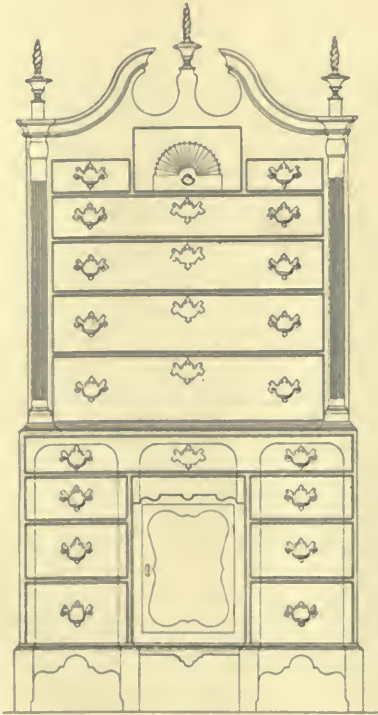
This led to the invention of the drawer, and we read of chests with one, two and three drawers; also chests of drawers. These latter were much used during the eighteenth century.

It does not seem clear which was used first, the chest all drawers or the chest with one drawer. The former were, during the seventeenth century, made low and used as dressing tables, with a small movable glass placed on the top. This was the beginning of the bureau, as we call it, though there were several changes before the article of furniture we know as such was made.

The chest of drawers was raised and placed on a table or another case of drawers, making what was possibly the precursor of the chiffonnier. There usually accompanied this high chest of drawers a six-legged table, with drawers, on which the dressing box and mirror was placed, the whole making a dressing table.

A closet or cupboard fastened against the wall is not very different from a chest turned on end. The first closets were like this.

High-boy.
Double chest of drawers.



Front.



Side and partial section.

Scale 0 1 2 3 feet



DOUBLE CHEST OF DRAWERS.

They were not built in the house, but placed against the walls of the room; sometimes they were fastened on the wall, clear of the floor. Their form was governed by the use to which they were put, which, during the Middle Ages, was to hold clothing and almost anything of value. They were sometimes placed in a special room and numbered or lettered, as we do lockers in club houses and gymnasiums. This cupboard or wardrobe remained a massive rectangular box, roughly made and put together, though, like the chest, it was some-

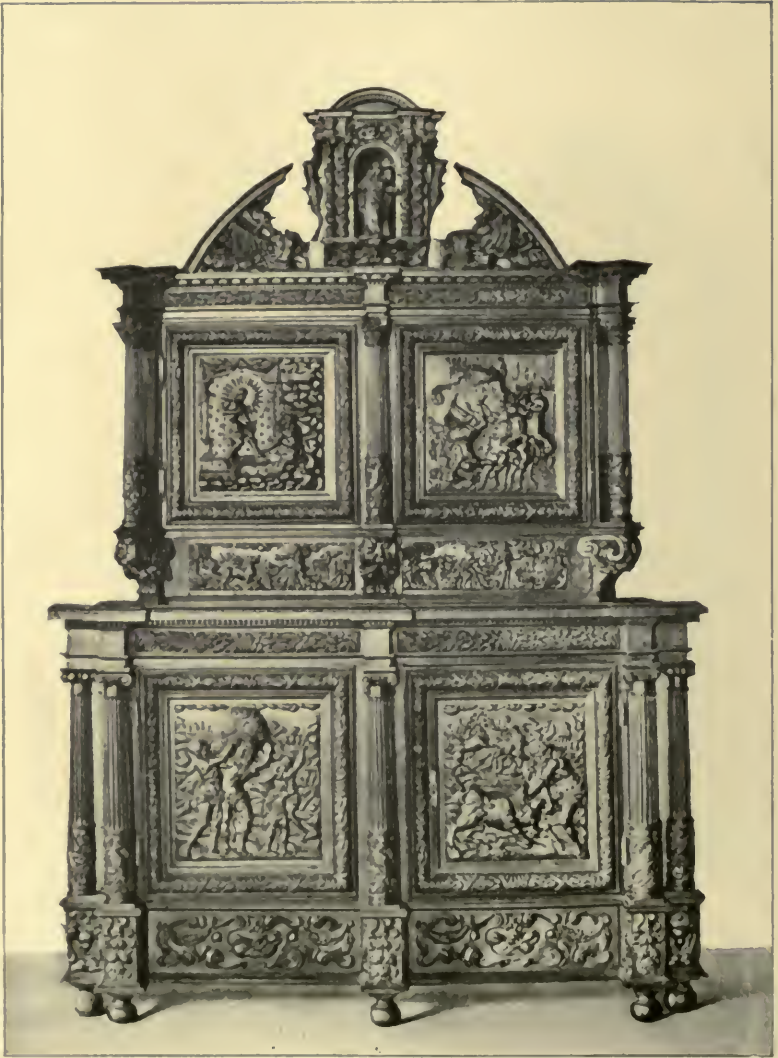


Wardrobe. XIII. or XIV. Century.

times painted to improve the looks, until near the end of the fourteenth century, when the methods of construction were improved. The sides were then framed, paneled, and mouldings more or less rich were introduced. Later, the panels were carved, simply at first in imitation of a sheet of parchment folded, followed by arabesques, and grotesques in low relief. The number of doors and shape depended on circumstances. A not unusual form was that of a rectangular box, somewhat higher than wide, divided into three parts, the upper and lower parts consisting of cupboards, while the third, a narrow middle section, comprised one drawer; or, possibly, two small drawers on the same level.

During the sixteenth century it retained this same form, but the locks and hinges, which previously were large, ornamental and visible, no longer showed. The whole affair became much more architectural in appearance. Columns, niches, cornices, pediments pilasters, and richly carved panels were introduced. It was also somewhat smaller than the one which preceded and followed it.

During the seventeenth century it became extremely large and lost its elegant appearance, though it was elaborated and grew in popular favor until found in nearly every house. Its great size then led to a reaction, and the other extreme was reached. In France, it



CABINET. XVI. CENTURY.

became a piece of furniture, about three feet high, no longer a place for clothing, but a richly decorated article mounted with brass ornaments and a marble top. There was often but a single door (sometimes two), and it held within silverware, china, books, and such articles as we to-day place in a cabinet.

Later, the cupboard assumed its original rôle as a place for clothing and stood in the bedroom or dressing rooms. Its high rectangular form was restored, but not its beauty. There was sometimes



Cabinet, Louis XIV.

one, sometimes two doors nearly its full height, and these were paneled with wood or the panels replaced by a mirror. Such is the wardrobe familiar to us all.

An article closely allied, that is in appearance, with the cabinet is the bookcase. The first bookcase we read of was a chest in which books could be locked and transported, for they were scarce and valuable. When printing was introduced and the number of books increased, it was natural enough to keep them in the cupboards just

described. The step from them to the cases as now made is slight, though the term bookcase was not used till the beginning of the eighteenth century. During the seventeenth century books in public libraries were placed on double reading desks, to which they were chained, and those who wished to consult them passed from table to table.

The sideboard is directly the outcome of two early articles of furniture; the credence, and dresser. The former was, perhaps, essentially what it is now, an ecclesiastical article of furniture, but it was also used in the houses. It consisted of a small closet on long legs. In this closet were kept wines and goblets, and over its top was spread a cloth, on which the decanters and glasses were set when wine was served. At a later period a series of steps or stages were placed on the top for the purpose of showing off the silverware and dishes. At first it was very simple in character, but became more and more elegant until it was finally elaborately ornamented with metal work, carving and a canopy.



Dresser, XV. Century.

The dresser began service in the kitchen as a table, advancing until it was composed of a top and two shelves below, supported by four legs. It was then used not so much as a place for dressing the meats as a serving table on which the dishes were placed before being allotted to the members of the household. At a later period a portion of the dresser became enclosed, and after that an extra shelf with sometimes a hood were placed on it. It was then not an article of the kitchen furniture, but stood in the hall or living room. As a result of the desire to reduce the quantity of furniture in the hall the credence and dresser were combined as one article with a closet and shelf below, and several shelves above, the whole surmounted by a canopy. Then it was like some of our sideboards, though it was not known by that name until the eighteenth century,

when it assumed the long, low table form with drawers and cupboards below. The name sideboard prior to this had, however, been applied to tables as early as the sixteenth century.

The earliest chair of the Middle Ages was not a domestic seat, but a throne for ceremonial occasions. When a chief received his people or assemblies he occupied a seat as a mark of dignity. As there were times when he visited his lands somewhat removed from the



Folding chair. XV. Century.

castle, and desired to have his throne with him, it was constructed so as to be easily carried about.

A relic of the time of the Roman Empire was found to suit the purpose admirably; that is, a folding seat, without arms or back. This seat, often of metal, richly ornamented, was quite high, a footstool being used in connection with it. Such was the early throne, and it was used as such only. Though originally made to fold, as soon as there was no necessity for moving it from place to place it was made heavier and rigid. The general shape and appearance remained the same, though a back was added, and the sides raised

so as to form arms, making what we now sometimes term the "scissor" chair. This, together with the high back, chest seat previously mentioned, was, perhaps, the only form of chair prior to the sixteenth century. Both were arm chairs and equally seats of honor; emblems of dignity. The throne was the seat occupied by the ruler on audience days, and no one else was permitted to sit except on a stool or a cushion.

The lords, and others of rank, imitated the rulers by having arm chairs, like the thrones, for their especial use at home. These seem to have been of the "scissor" pattern, as it was lighter and more easily moved than the chest-chair. Chairs of any kind were rare, however. In the principal apartment there was usually but one, a place of honor reserved for the head of the family or the guest of distinction. In addition to this, as a place to sit, were found only benches, chests, stools, and cushions. In the bedroom was also a single chair and benches.

After the arm chair was made smaller it gradually came into more common use. Then for a time there seems to have been no other kind of chair used; all had arms until a change in the style of dress among women caused a transformation. It was found that the wide spreading dress with hoops interfered with the ladies using the arm chair; consequently it became fashionable to have chairs made without arms. When the hoop-skirt went out of style arm chairs were again used in the houses, but they were larger, wider between the arms, and more comfortable. It was also sumptuously upholstered—previously the cushions were loose—and considered the most noble of all seats. Upholstered chairs were found warm in summer and were replaced by chairs with cane or rush seats, loose cushions being used when desired. The constructive parts of these chairs, the legs, slats, back, etc., were of lathe work, and, as a result of the rush seat, were made smaller and lighter.

But turned work did not remain popular with the rich for any length of time, and the more substantial forms came into use again. In the second half of the seventeenth century the arm chair was a common seat, because of its ease and comfort, though it was still a seat of honor. Havard's "Dictionnaire de l'ameublement," quotes from a book of etiquette, published in Paris, in 1673, containing this rule: If a person of quality make you a visit, it is necessary to give him the arm chair, and take a more modest seat yourself. When the hoop-skirt came into use for a second time the arm chair had become such a popular seat that it could not be discarded entirely, but was adapted to the circumstances. The arms, instead of extending to the front edge of the seat, were shortened and moved back, so as not to interfere with the dresses, as we see in the French chairs of the time of Louis XIV.

When the bench was used to sit on during meals we find it was much too heavy to move up to the table as we do with our chairs, instead the table was moved up to the seat. The table was a rectangular board set on wooden horses, and it remained subsidiary to the seat until the sixteenth century. In early times the diners did not sit face to face on opposite sides of the table, but together on the same side. This left the other free for service. Later, when both sides



Table. XV. Century.

of the table were used, it was necessary that seats of a portable character be provided for those who sat opposite the benches. As these people were of a lower social scale than those sitting on the benches, they occupied stools, though there was also a practical reason for using these, they being the only portable seat, chairs not having been invented. Those sitting on the benches could not readily move in or out after the table was in place. In leaving the table at the end of the repast those left first who sat on the stools, which were then removed by servants, and the tables were next taken down, enabling those sitting on the benches to rise.

Folding chairs took the place of benches and stools, while the table was but a temporary affair removed at the end of the dinner. It was not till the eighteenth century that the dining room with a fixed table and chairs standing about was introduced.

Presumably the bedstead has always been used as such from the beginning, though custom has caused many changes in its shape and the manner of decorating it. Yet, what it always has been is a frame to hold a mattress on which the sleeper can lie.

The chest and the bench were used to sleep on at times, but we

cannot call them bedsteads any more than we can the floor, which was where the mattress for sleeping was placed for a long time. On the other hand, there were bedsteads that had the portion beneath the mattress built as a chest for the express use as such.

In the peasant house of early times there was always an enormous bedstead, on which the man, his wife, his children, and even the stranger who asked for hospitality could easily rest. The habit of sharing the bed with the guest was not confined to the lower classes.



Bedstead. XVI. Century.

Royalty followed, perhaps established, the custom. The guest at a chateau could not receive any greater honor than to occupy the same bed as the lord of the manor.

During the fourteenth century nearly every manor house had three kinds of bedsteads. First, the bedstead used by the lord on special state occasions. This was the best, highest, largest, and most elegant. Great care was taken of it. Second, a smaller bed, suited to the person who used it, was the everyday bedstead where the lord usually slept. Third, the trundle bed which was very low, narrow,

and on casters. This was used by the valet. It was rolled into the sleeping room of the master at night and removed in the morning, or it was made to roll under the larger bedstead. This trundle bed was used only by the chosen servant; the others slept either on the floor or wherever they had a chance. The woodwork of the bedstead was made as simple as possible, which was a great contrast with the decorations of the rooms. To avoid this marked difference they were hung with curtains of the same material that was used on the walls, entirely hiding the framework of the bedstead itself.

Prior to the sixteenth century all bedsteads had the mattress supported on cords or straps attached to the framework. Some time about the beginning of that century a change was made by introducing a separate frame that could be taken out of the bedstead, and to this the straps were nailed. As a result the bedstead became more portable, particularly as the framework was, about the same time, fastened together with screws in place of the mortise and tenons previously used. At the same time the desire for more richly decorated bedsteads increased until we find them inlaid, silvered, and gilded.

Till the sixteenth century the tester or canopy was an independent affair, hung from the ceiling of the room and not attached to the bedstead at all. It was then joined to the bedstead by four uprights, giving rise to the high post bedstead which was elaborated in an extensive way until a reaction took place, when the framework was again simplified and covered up so it was hardly seen at all.

The hangings played an important part of the decoration of the bedstead, and the woodwork did not again come into prominence until mahogany was extensively used. Then the head, footboards and sides of the bedstead attained a size not previously reached. To-day the same forms are used, but they are not so heavy or elaborate as formerly.

From the end of the fifteenth century until the last century bedsteads were so high that each one was provided with steps alongside to enable a person to get in or out.

Alvan C. Nye



ANGEL WITH SCROLL.

Cartoon for Decorative Painting, from the Original in the possession of Mr. C. Fairfax Murray.

THE ART OF WILLIAM MORRIS*.

THESE books contain the record of one of the busiest lives which even this toiling century has seen. The amount of work produced by William Morris, when thought of in its entirety, is simply incredible, and in nothing is this book more valuable than in arraying in some order the records that exist of this extraordinary mass of achievement. Dissatisfied with the dead level of mediocrity into which modern decorative art had fallen and feeling that, in England, at least, there was practically no decorative art, Morris set himself, from an early point in his student life, to find out the secret of happier times, and to see whether any revival of old art was possible. Brought up against an impenetrable wall of impossibilities in the matter of architectural sculpture and of Gothic architecture in its essential nature; feeling keenly the disappointment of his hopes in this direction, as will be explained below, but perfectly aware that there was absolutely nothing to be done to restore Gothic architecture as he and John Ruskin understood it, he lost no heart and no hope and attacked the mystery of the past along other lines. He taught himself wood-engraving in the ancient way, not by learning wood-engraving in a modern shop and then trying to engrave as the XV. century Italian had done, but by cutting blocks himself, after the minutest study of the impressions in old books from the lost wood blocks of the Great Time. His power of analysis was great, and his power of close application unbounded. He would study the prints from old wood-cuts with a devotion of which few men are capable, and with a patience which nothing could weary. So he made himself a wood-engraver, and, in like manner, he taught himself the art of illumination by copying the pages of ancient manuscripts, not as a young woman copies them when she paints mottoes to hang on the Sunday-school wall, with the conviction that she can improve on the XIV. century originals and need take from them only their suggestions—but with the conviction that the old illuminators knew and that he, Morris, did not know yet what decorative design in the adornment of a book really was. He taught himself

*The Art of William Morris: A Record. By Aymer Vallance; with Reproductions from Designs and Fabrics Printed in the Colors of the Originals; Examples of the Type and Ornaments used at the Kelmscott Press; and many other illustrations; also a Classified Bibliography by Temple Scott. Printed at the Chiswick Press and published by George Bell & Sons. Follo, pp. XI., 167, XXX.; 49 plates, of which many are in colors and illustrations in the text. London, MDCCCXCVII. New York: Chas. Scribner's Sons, Importers.

William Morris, His Art, His Writings and His Public Life: A Record by Aymer Vallance; pp. XVI., 462; 34 plates and many illustrations. London: George Bell & Sons, 1897. New York: The Macmillan Co.

weaving and he taught himself wood-carving; he taught himself tapestry working; and he and his assistants taught each other the true secrets of embroidery. He worked out the mystery of carpet weaving of the true Oriental sort; he studied the art of dyeing and began to dye his own wools and his own silks as soon as he had satisfied himself that no well-dyed material could be bought in the market. The firm of Morris, Marshall, Faulkner & Co., and that of Morris & Co. which succeeded it and took over its business, undertook the manufacture of stained glass, of hand-painted tiles, of wall papers, of printed calicoes, of printed velveteen (a specialty), of woven fabrics of extraordinary richness, like brocaded velvet, and elaborate combinations of silk and gold, and, also, of cheaper fabrics; of tapestries made in the genuine way with the high or upright loom; of carpets of the "Kidderminster" make, and others with deep pile; and of embroidery, domestic and ecclesiastical. That he might know how all these things should be made, and in order that the old system of patient, slow, tranquil handwork might be regained, he practised every one of these arts himself, and, indeed, he seems never to have set an employee to work until he could show him how to go to work and how to do so much of his work that advance and improvement would be easy. There were cases, no doubt, when the workman became Morris's fellow-worker and grew as successful as he, or even more thoroughly at home in the work than he, with his many occupations, but there is no case in which Morris was not for much in the actual handiwork undertaken in the orders of the firm except in the matter of furniture. The firm of Morris & Co. made furniture, plain as well as rich, and always on the lines of realistic design studied from that of the Middle Ages; but we are told that this department was never undertaken by Morris himself, whose specialty was flat decoration.

Specimens of this flat-pattern designing are given in the illustrations to this article. It would be unfair to judge Morris's power of designing wholly from these small scale cuts. And yet they suffice to show how mediaeval in character are most of the patterns and also how slight was the designer's power over the human form. It has been asserted frequently that a knowledge of the figure must precede all successful drawing of ornament. This is a hard saying and its general truth can scarcely be maintained, but the limitations as a draughtsman, which two of these cuts make evident, told seriously against Morris's success in the matter of floral and foliated design.

Between 1861 and 1896 this work went on incessantly, the number of employees constantly growing as the demands for the firm's productions increased, and at no time did Morris cease to give minute and almost daily attention to the many handicrafts which were being carried on at once, and all of them, it is to be observed, in ways



VELVET BROCHÉ WITH GOLD TISSUE.

wholly apart and differing widely, from the methods pursued in the trades generally. If there is any exception to this rule it is, perhaps, in the matter of stained glass, for in that, the processes followed by Morris's firm could not have differed greatly from the processes employed by the better class of English makers and workers of decorative glass. In most of the operations carried on by the firm, the rigid exclusion of machine-work and the insistence on ancient methods, so far as they could be discovered, the use, revived for the occasion, of the ancient looms and frames, and the deliberate choice of perfect workmanship above rapid production, made the



ANGELS IN ADORATION.

Cartoon for Wall Decoration, in the possession of Mr. C. Fairfax Murray.

direction of this many-sided manufacturing house work enough for one man. So far, however, from considering it work enough for him, Morris made very many elaborate colored drawings as designs for the workmen, and he was never without the employment furnished him by his studies in illumination. These he carried out even to the extent of copying with his own hands several volumes of his own composition and the "Rubaiyat of Omar Khayyam," and beginning the transcription of Virgil's "Aeneid"—the Latin text—which, indeed, he seems to have half completed. These were generally prepared as gifts for friends, as to the wife of Edward Burne-Jones, the painter, and his close ally. In like manner he designed almost wholly by himself

and drew almost wholly with his own hand the immense number of initial letters and the very considerable number of title pages and page borders included in the many publications of the Kelmscott Press. Nor need we remind the draughtsman that such a mass of published design presupposes the existence of very many drawings which have never been used, their exact place never having been found for them during Morris's life; nor does our biographer, Mr. Vallance, fail to tell us something about these separate drawings and their present whereabouts. Here was avocation enough for a man even less busy than Morris with his manufacturing house. But there is also to consider Morris the poet, Morris the writer of socialistic romances, Morris the active worker, as lecturer and organizer of societies wherever there seemed to be hope for a reconstruction of the good old times of decorative art, and Morris, the active and convinced socialist, working at the propaganda to which he turned his thoughts during the last twenty years of his life.

As poet, although the volume called "The Defence of Guenevere and Other Poems" appeared in 1858, yet his chief work was done between 1865 and 1885. These twenty years witnessed either the completion or the publication of the "Life and Death of Jason," a long epic-like narrative in seventeen books, "The Earthly Paradise," of which the four parts appeared during the years 1868 to 1870; "Love is Enough, or the Fleeing of Pharamond," published in 1873, a translation of the "Aeneid" of Virgil, in 1875, "The Story of Sigurd the Volsung" and "The Fall of the Niblungs," 1877, and many shorter poems, published in periodicals and afterwards brought together in volumes, such as the very recently issued "Poems by the Way." It is not intended here to offer connected criticism of these numerous poems. Opinions, even of sincere lovers of poetry will always differ greatly as to the value of this long series of narratives in smooth and pleasant verse. The naive exclamations of surprise with which Mr. Vallance greets any unfavorable criticism which he has to record, and the comparison he gives us of less unfavorable critical articles taken from English reviews, show at once how great was the divergence, at the time of their publication, among English opinions. No doubt American critical judgment would be more nearly uniform, if the poems were much read in this country, for there would not be here the controversial spirit excited by Morris's position as a member of a much admired and much abused party in art, and as one at first suspected, afterwards convicted of revolutionary socialism. Still, even in America, there will remain irreconcilable differences between those who think the story of "Jason" or that of "The Man born to be King" a simple and forcible narrative charmingly told in truly poetical form and those who find the same poem full of affectations, while they consider many of the other narratives of the same

epoch inferior to these two and too tedious to be read more than once. Mr. Vallance is aware that many English critics think that the rugged savagery of the ballads in the *Defence of Guenevere* was replaced in after years by something not nearly so good. The word "ballad" which has slipped into the last sentence suggests an explanation of these differences of opinion. There are those to whom the old Border Ballad is really valuable poetry; and there are those to whom it is interesting as a piece of folk-lore and as one chapter in the history of the evolution of poetry. Many of the stories in "*The Earthly Paradise*" are really ballads with the true ballad simplicity and also with what Matthew Arnold calls "the true ballad-manner. . . . I was going to say the true ballad-slang."

As worker in the cause of true decorative art, as he understood it, Morris was all that a powerful theorist joined to a practical and constant worker could be. He lectured, he wrote for publication and for private influence over men of his circle; he was never at rest. The Arts' and Crafts' Exhibition Society alone would account for a good part of the life-work of a less untiring man than Morris. He seems, indeed, to have been made without that tendency to grow weary which most men suffer from. It was not that after a busy day's work he could enjoy himself in occupations of the most fatiguing kind, designing, composing, creating, giving out incessantly—drawing in black and white and in color in a serious and workmanlike way all the evening, or writing verse and prose worthy of publication and sure to command readers—it is not merely that he passed week after week and month after month in a steady round of such absorbing occupations as these, but that as the years went by, he did not change in his steady occupation or lose his grip on the work in hand.

As for his work as an active socialist, that must be left uncriticized here even more completely than the poetry. Mingled with the socialistic propaganda to which he devoted himself very earnestly from 1884 until his death, there is the interesting subject of his romances embodying dreams of the future. In the opinion of the present writer "*News from Nowhere*" is a story vastly superior in interest and a vision vastly superior in fascination to the stories which are popular and are selling by thousands, and to the visions which these stories embody. "*A Dream of John Ball*" is probably a more masterly performance even than the other, being shorter, more strictly a work of art, less in danger of being thought too synoptical and too descriptive. It seems that at last, in these later days, Morris's life was found too small to contain all that he tried to crowd into it, and that his practical decorative work had to give way to the claims of the socialistic movement; the societies of which he had become a member, and, alas, their incessant quarrels.

Whether his life was cut short by undue application, whether, in

short, he was overworked, does not appear certain. What is certain is that he did more than one man's work in his life of sixty-two years.

The guiding principle of Morris's life of dealings with fine art was the importance of unhurried, uncommercial handwork. Ruskin's celebrated chapter in the second volume of the "Stones of Venice," entitled "The Nature of Gothic," was, from the time of its publication in 1853, a hand-book for those who were trying to bring about the Gothic Revival. It is, of course, entirely inadequate as accounting for Gothic architecture, for, indeed, the constructional part—which is the essential part of the style—was absolutely unsuspected by the writer, then only thirty-four years old, and wholly without other knowledge of building than his observations as a traveller had supplied him with. In one thing, however, it was most able, most original, most profound; it pointed out the radical difference between the work of the mediæval sculptors and that of the sculptors of some other school.

The statement is not wholly fair as regards the Greek

or the Egyptian. It may be well assured that there was less subserviency in the workmen than Ruskin, never free from partisanship in his argument, had assumed. But the interest of the thirteenth century work was clearly and rightly seen by Ruskin. The fashion in which the thirteenth century sculptor, unversed in anatomy, incapable of producing a work of sculptural excellence, as incompetent to produce a statue like one by Paul de Bois, as a statue like one by Praxiteles, yet found a way to express his sense of beauty, his feeling for form and composition, his gift at the decorative combination of many statues and many figures in relief in one artistic whole, without in any way shocking the spectator, either of his time or of ours by his lack of knowledge of the human form—all that and the admirable effect inevitably wrought upon the workman by the trust in him and the opportunity given him to work out his own artistic thought without the check of the superior science interrupt-



WALL-PAPER.
Specially designed for St. James' Palace.

ing and saying that his art was useless unless it could be scientifically accurate and elaborate in sculpturesque design—all that better condition of the mediaeval workman was admirably seized by Ruskin and expressed in his usual glowing and highly wrought prose. This chapter served as a sort of handbook for the would-be Gothic Revivalist, and nothing in Mr. Vallance's book is more interesting than his account of Morris's grievous disappointment when he found that these, indeed, were the facts, and that unless those social conditions could be reconstructed Gothic sculpture was out of the reach of the modern workman and, therefore, Gothic architecture out of the reach of the modern world. "To William Morris architecture was at once the basis and crowning point of every other art, the standard by which all the rest must be dominated and appraised." This sentence we take from page 9 of Mr. Vallance's larger book, and there follows this, what is really a sad chapter of disappointment which records the conviction of Morris and his associates that nothing could be done in Gothic architecture and that even their chosen champion, George Edmund Street, was going all to pieces in his "Neo-XIII. Century Platitudes": "More particularly . . . his largest and most conspicuous performance, the Courts of Justice in Fleet Street." The assumption that architecture is the essential art without which the other fine and decorative arts can hardly flourish, joined with the conviction that architecture as he cared for it was impossible in England in the XIX. century, might have been supposed to check Morris in his enthusiasm and turn his thoughts in another direction. But this was not to be. Disregarding the warnings of his own spirit, he decided that he could still become a decorative artist in ceramic wares, in textiles, in printing and in coloring, and that he could teach others what true decoration was in many ways. In other words, he was too resolute in his will to re-create ornamental art, as it had been understood in old times, to listen to the warning of his own instinct which told him that without architecture this was impossible. Accordingly he set to work. He was only twenty-three when he had around him "a company of ladies" who "used to meet at the study in Red Lion Square and while he was doing decoration in oil color, they, under his superintendence, embroidered hangings for the adornment of his future home." This was just before his marriage and "the future home" was the Red House at Upton, near Bexley Heath, in Kent. Philip Webb was the architect of this house which is noted here as "remarkable as being the first example of the artistic use of revived red brick for domestic purposes . . . for its time, a bold innovation." The decoration of the Red House seems to have been very primitive, the walls being tinted "with pale distemper and the ceilings ornamented by simple scrolls in yellow on white."



CHINTZ.—THE HONEYSUCKLE DESIGN.

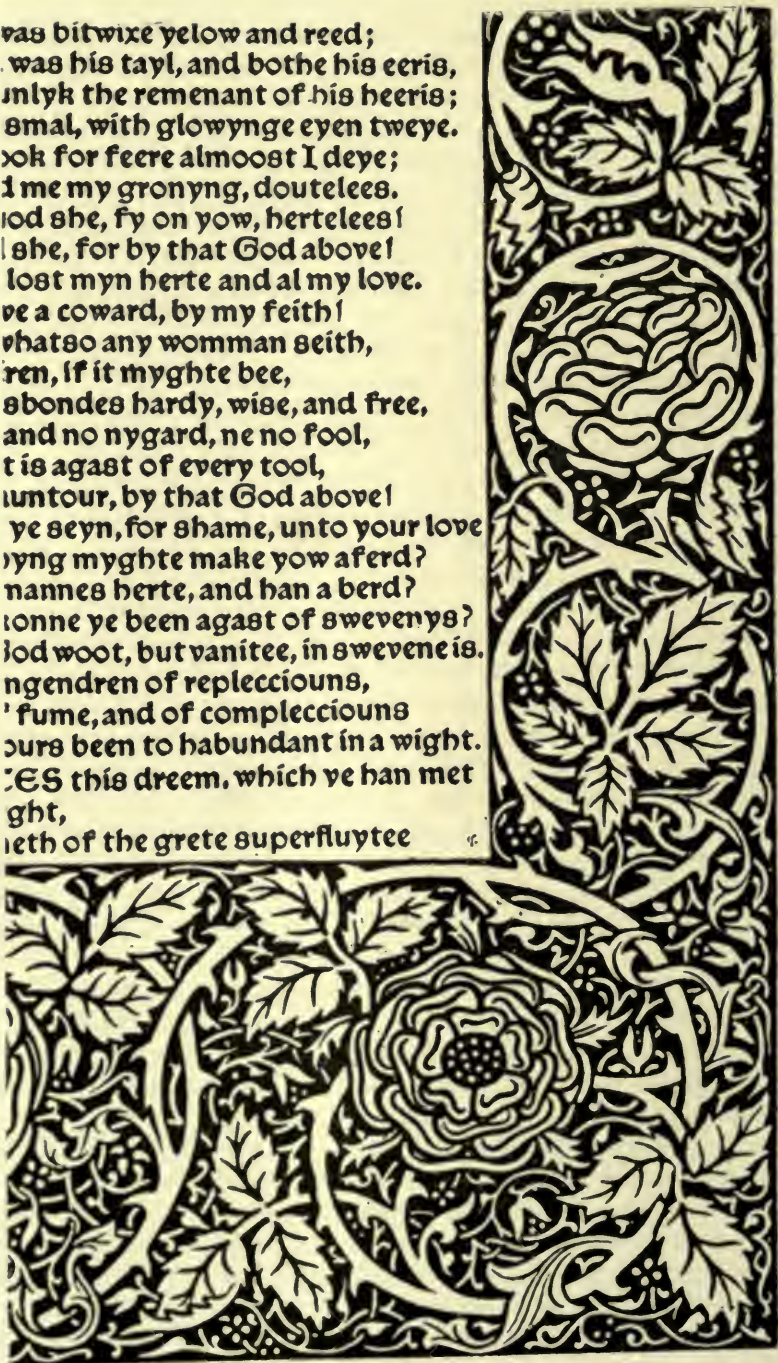
The firm of Morris, Marshall, Faulkner & Company was founded in 1861 and in that firm were associated Morris and his architect, Webb, the four pre-Raphaelite painters, Ford Madox Brown, Dante Gabriel Rossetti, Arthur Hughes and Edward Burne-Jones. There were also "Peter Paul Marshall, District Surveyor at Tottenham, and Engineer; and Charles Joseph Faulkner, an Oxford Don." We know nothing and hear nothing of these two last named members of the firm, although their names were the only ones included in the firm name. Private letters from London, of 1864, describe the work already done and doing by the firm as being chiefly stained glass, though some painted cabinets had been extraordinarily successful. This matter of furniture, richly painted in all of its parts in the early mediaeval rather than a true Gothic fashion, and with Southern rather than French or English wealth of detail, is, perhaps, traceable to Burne-Jones, but was taken up by others, and the London dwelling house of William Burges contained an escritoire in the dining-room, a bookcase in the library, a settle in the hall, a wardrobe in the guest-chamber, another in Burges's own bed-room, a bookcase in the "armoury," a wardrobe in the "day nursery" and a piece called "the dog cabinet," all of which pieces of furniture were covered with brilliant decoration in color in minute patterns, enclosing and setting off paintings by artists who were friends of the designer Burges. The fashion, however, so far as XIX. century England is concerned, must be traced back to the Red House and to the pieces which, whether designed by Burne-Jones or by Morris, stood there as types of what it was thought furniture should be.

The Exhibition of 1862 contained several important contributions from the new firm, of which panels and windows of stained glass formed a large part, and one important unit was a cabinet made for J. P. Seddon, the architect. The great three volume publication devoted by the government to recording the Exhibition of 1862 contains a large colored print of this cabinet which is approximately worthy as a record of its design and the richness of its adornment. The paintings were by Ford Madox Brown and Burne-Jones and illustrated an imaginary honeymoon of King René of Provence, and these paintings covered the panels, which are painted like easel pictures, completely into their corner; but the frame of the cabinet is of polished oak inlaid with different colored woods. Another cabinet in the same Exhibition was painted by Morris, but of this little seems to be known. It is spoken of as being now in private ownership.

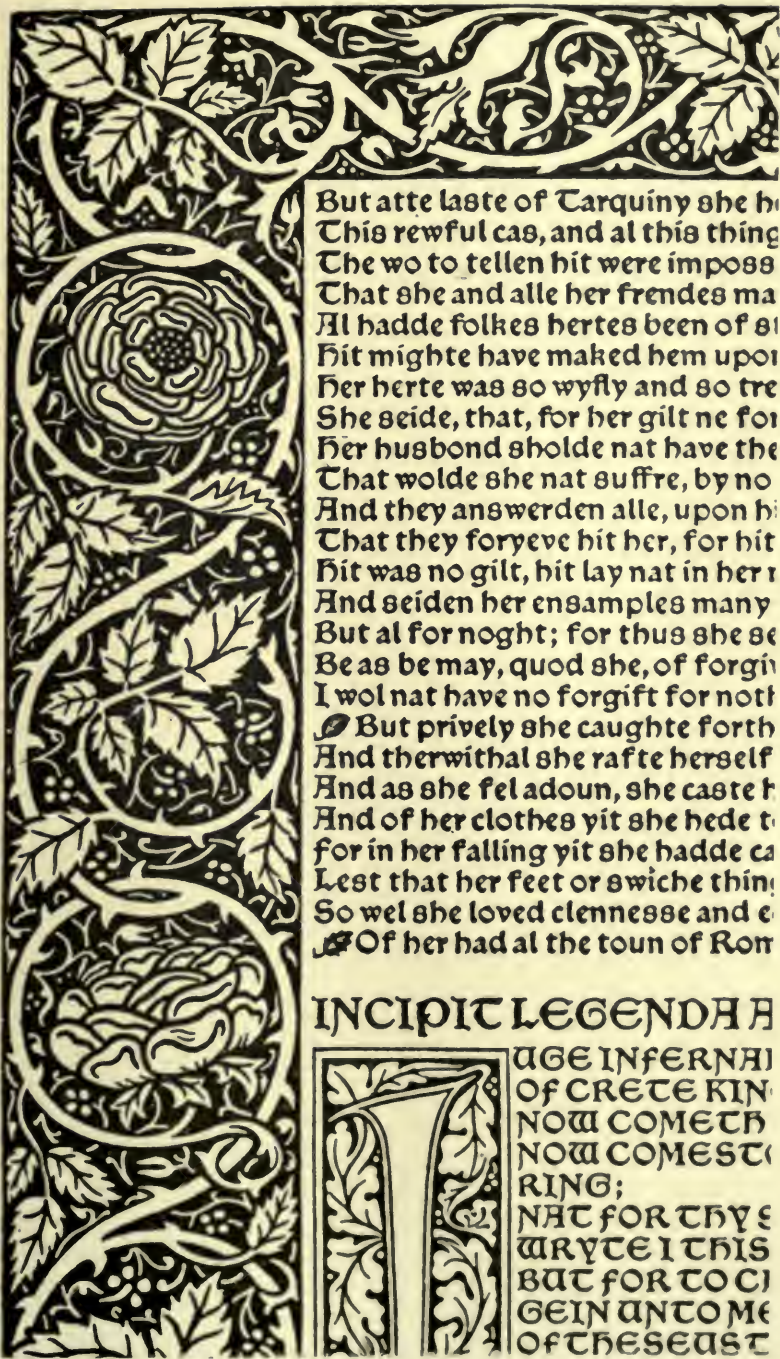
That which is most easy for the world at large to see and to study of all of William Morris's decorative designing is the book-work done by him, or under his direction. The Kelmscott Press was not established until 1891, but before that Morris, who had always in-

terested himself in illumination and decorative writing, and who had frequently designed and seen carried out delicate work in binding and in printing and in illustrating books, had also made a most minute study of "The Ideal Book," its pages of letter-press as well as its illustrations. To our enthusiastic student it was a matter of importance that the proportions between letter-press and margins, and among the four margins of a page and the eight margins of the two opposite pages should all be carefully weighed. As for the typography itself, it does not appear that he ever had type cut for his own work until 1890, but then the three alphabets known to those who have examined the Kelmscott Books were designed and cut. Of these, two are in the modified and more intelligible Gothic style suggested, indeed, by the script of the XIV. century, but not affectedly unintelligible. These two were called at a later time from the names of books first printed in them, the Troy and the Chaucer fonts; a third, the Golden font, was a modification of the earlier Italian type, that is to say, it was what we call a Roman alphabet. A few wood-cuts of pictorial subject decorate the forty-five books which were produced at the Kelmscott Press, but these were, perhaps, invariably drawn by others, chiefly by Sir Edward Burne-Jones. Of these it is not necessary to speak here. The decorative side was almost entirely carried out by Morris himself, and everyone of the Kelmscott books is crowded with initial letters, and most of them are drawn with borders and title pages of considerable display. Some few of the larger books have title pages and other pages made rich by borders two or three inches wide, and, again, some have the whole surface of the page covered with carefully worked scroll patterns upon which the letters are relieved. Mr. Vallance's book includes a reprint of two pages of the great Chaucer, published in 1896, and in these is shown a double border of roses with their leaves and briary stems, within which the text contains nine small and two large and brilliant initial letters, marking the beginnings of the main divisions of the Canterbury Tales. This is not the most attractive, nor should it be called the most successful of the decorative pages of the "Chaucer," but it serves well as an example of the whole. The title page of "Hand and Soul," by Dante Gabriel Rossetti, and that of the tale of "Over Sea," are given as specimens of the octavo size small quartos; the first page of Poems by the Way is given as a specimen of books of next larger size; the title page of "Godefrey of Bolyne" serves to show how the smaller folios are decorated, the Chaucer being larger still and much the largest of all. Of these, the "Godfrey of Bolyne" is certainly the finest design. The contrast of red and black was sparingly used, some of the books having none of it, others having it carried freely through the whole body of the work like no ancient books that occur

was bitwixe yelow and reed ;
 was his tayl, and bothe his eeris,
 unlyk the remenant of his heeris ;
 smal, with glowynge eyen tweye.
 xok for feere almoost I deye ;
 I me my gronyng, doutelees.
 Iod she, fy on yow, hertelees !
 she, for by that God above
 lost myn herte and al my love.
 ve a coward, by my feith !
 whatso any womman seith,
 ren, if it myghte bee,
 sbondes hardy, wise, and free,
 and no nygard, ne no fool,
 tis agast of every tool,
 untour, by that God above
 ye seyn, for shame, unto your love
 yng myghte make yow aferd ?
 nannes herte, and han a berd ?
 tonne ye been agast of swevenys ?
 Iod woot, but vanitee, in swevene is.
 ngendren of replecciouns,
 'fume, and of complecciouns
 ours been to habundant in a wight.
 ES this dreem, which ye han met
 ght,
 Ieth of the grete superfluytee

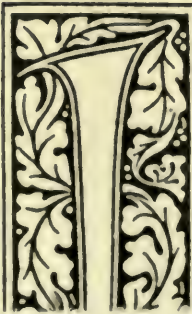


KELMSCOTT PRESS: DETAIL FROM THE "CHAUCER."



But atte laste of Tarquiny she hi
 This rewful cas, and al this thing
 The wo to tellen hit were imposs
 That she and alle her frendes ma
 Al hadde folkes hertes been of si
 Hit mighte have makid hem upo
 Her herte was so wyfly and so tre
 She seide, that, for her gilt ne for
 Her husbond sholde nat have the
 That wolde she nat suffre, by no
 And they answerden alle, upon hi
 That they foryeve hit her, for hit
 Hit was no gilt, hit lay nat in her
 And seiden her ensamples many
 But al for nocht; for thus she se
 Be as be may, quod she, of forgin
 I wol nat have no forgift for nott
 But prively she caughte forth
 And therwithal she rafte herself
 And as she fel adoun, she caste h
 And of her clothes yit she hede t
 for in her falling yit she hadde ca
 Lest that her feet or swiche thin
 So wel she loved clennessse and e
 Of her had al the toun of Rom

INCIPIT LEGENDA



TUGE INFERNAL
 OF CRETE KIN
 NOW COMETH
 NOW COMEST
 RING;
 NAT FOR THYE
 WRYTE I THIS
 BUT FOR TO CI
 GEIN UNTO ME
 OF THESEAST

KELMSCOTT PRESS: DETAIL FROM THE "CHAUCER."

to the memory except some of the Processionals—the small volumes which seem to have been carried by chanting priests as they walked and sang and which, therefore, had need of every device to catch the eye and aid the singer in keeping his place. It is probably a sign of good taste and a certain reserve, that this method of adornment is not more freely used. Certainly it is not the question of expense which prevented its freer use, because there are books which have marginal notes only in red with the body in black; and, indeed, the high price of the books and their appeal to a very limited and wealthy class of book buyers precludes this consideration.

The question how meritorious are the designs which appear as being by William Morris is a hard question to answer until the relation of his work to other modern designing has been considered. All modern designing for the flat surface which is worthy of the name is based upon a very considerable knowledge—or, of what has been called, Science—that is to say, of skilled or instructed draughtmanship. All designing for relief, or for the round, has been based upon much gained knowledge of form and on skill in modelling. The only designs which have any value as manifestations of the modern spirit or embodiment of modern feeling are the work of very able and very highly trained men. It is as true now as it was when Morris and his associates discovered it forty years ago, that the way in which the thirteenth century sculptor worked—the way in which the Chinese decorator of porcelain used to work—the way in which the Hindoo carpet-weaver used to work before the English spoiled his trade—the way in which the Scandinavian wood-carver could work in the tenth century—is no longer open before us. The modern workman having no other instruction than that of the schools and of the shop where he has learned his trade, knows nothing of design, nor of how to approach it; he has no knowledge of how to begin a design, for all his training leads him the other way, that is, towards a careful carrying out of another man's design. This is equally true whether he has artistic work to do or the wholly undecorative work of the machine-shop. Locomotive and piece of decorative furniture alike have to be made on the principle of close following of drawings, to deviate from which is to violate the contract and to spoil the piece of work. Now, in the days and in the countries where decorative design has been easy and plentiful, men could produce patterns in a semi-traditional, semi-original way, and it is in this manner that the Chinese painter of pottery is still able to turn out hand-painted dinner-plates at a price which defies European competition, and which are yet pleasing in design, everyone having something within its little circumference of the old and the great art of China. It was designing of that sort which culminated in the borders of the wall-paintings at Assisi, the inlaid patterns along the bands on the

flanks of the Cathedral at Florence and its bell tower. It was an Eastern culmination of such work which we find in the painted tiles of the Cairene mosques and in the borders of Persian rugs. It is very true that during the last five or six years a revival of pattern designing has begun in what seems a wholesome fashion. It is not concentrated in one place, nor is it the result of any theoretical teaching; it appears at once in France, in England, in Germany and in the United States. What that movement may come to it is yet too early to say, but apart from that, it is certainly true that all the important designing of modern times is just the reverse of pattern designing, and consists in the conventionalizing of the same forms and the same motives which less conventionalized show themselves in paintings on canvas and in sculptured groups for city monuments. In other words, the designing of the second half of the nineteenth century is nothing else than painting and sculpture acting under somewhat greater restraint than usual, nor is there yet any considerable body of good designing except that of the highly trained artist working for a decorative purpose.

Into this world which knew not true decoration stepped William Morris and, guided by the noblest of aspirations, determined to set himself counter to it and to work, not along the lines of least resistance, but to face what he had reason to believe would be the most hopeless inertia possible. He tried, as the more enthusiastic of the Gothic revivalists had tried, to take up mediæval designing where the fourteenth century had left it, in patterns for walls and for textiles, and where the fifteenth century had left it, for book-work. As William Butterfield, Benjamin Woodward, Sir Thomas Deane and James Pritchard tried in all sincerity to take thirteenth century Gothic, English and French and to go on from that high culminating point of achievement to the further evolution which modern requirements seem to make easy; adding to the Northern forms some such modification in the way of simplicity as the Italian practice suggested together with much Italian variety of color—so Morris tried to take flat-pattern designing as the fourteenth century had left it, with a view of working out its natural results. The result in the case of the architects was complete failure in their main attempt, namely, that of bringing into use a style of architecture common, at least, to all British communities and universally recognized by those communities as the style of the time. It was also failure nearly as complete in the production of good single buildings; for although there is here and there a monument of the Gothic Revival which has architectural merit, such monuments are extremely rare, and misunderstood archaeology in copying has been the rule. How, indeed, should Gothic architecture succeed when neither its construction nor its chief means of decoration were or could be employed! In like

manner, Morris must be said to have failed altogether in his attempt to build up a modern system of design, for it is still as true as it was in 1850 that pattern designing is unknown and impossible to the European workman. It appears to the present writer that Morris has failed also as a producer of good designs. Nothing which has been offered to the public in the way of painted tiles, the work of Morris & Company, is otherwise than feeble and most of it is even worse than feeble—it is spotty and does not adapt itself well at once to near and distant view. Nothing in the way of wall-papers or printed chintzes is of exceptional merit; for although there are some really effective designs, these are wholly mediaeval in character; although there are some apparently original patterns in which the surface is well covered, these are always clumsy in drawing, and the only considerable achievement which is to be found in these patterns is the conventionalizing of natural plant forms. This, indeed, must be allowed as a considerable merit. The well known "Trellis" wall-paper in which the simulacrum of a light skeleton of laths with a rose-vine climbing upon it, and birds—which last were drawn by Philip Webb, the architect—is given in the folio volume, properly reduced in scale, in a colored plate. It does not suffer from the reduction and the reader may look at the plate, if he has not a piece of the paper within reach, and satisfy himself as to the quality of Morris's designing. This is as nearly original as any of the successful patterns, and it shows at once the strength and the weakness of the system of design employed. Morris abhorred double flowers, considering them half artificial, and seems to have made but a partial exception in favor of the garden rose. Accordingly, in the design named, the rose, though not absolutely a wild rose of the hedge, is yet so displayed as to show its open corolla and its clump of yellow anthers in the centre. The leaves, too, are all shown flat, and here comes in one of the worst faults of the design, for how a lover of plants could endure to show the five-parted rose leaves ten thousand times repeated as a flat pressed object cut out of tin, as it were is past comprehension. Immeasurably better is the Wey design for a chintz, and, also, the Wandle design and the Honeysuckle design, also for chintzes; but each and all of these is strongly mediaeval in character, nor is it possible to believe that anything like the Wandle design, for instance, could ever have suggested itself to a man whose mind was not full of fourteenth century Flemish and fifteenth century Italian patterns. The carpets are even more frankly Oriental than are the wall-papers and chintzes European of the Middle Ages. Now, it is no shame to anyone that in beginning the study of carpet-making, he should produce designs of Oriental character. By all means let him begin by imitating the Orientals, always with the understanding that he is to deviate from them as soon as he can with



I once a king and chief now am the tree-barks thief :

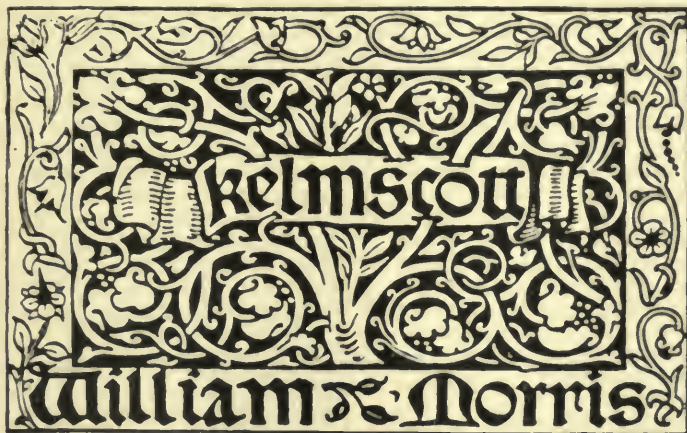
ever twist trunk and leaf - chasing the yew.

ARRAS TAPESTRY. THE WOODPECKER.

safety, but so long as the designs remain visible copies, or, at most, studies of Persian and Indian patterns, so long they do not challenge our admiration as original designs. Easily, the best design shown in this folio volume, and the best design which the present writer has ever encountered as the work of Morris & Company, is the piece of real tapestry called *The Woodpecker*. This is very properly reproduced in the octavo volume, and a clever and spirited design it is. If Morris had produced many such things as that he would deserve to rank as a designer rather than as a student of design, which is probably the rank which the immediate future will give him.

The book work to which Morris had given so much attention during the later years of his life is not more satisfactory than the colored patterns of his earlier days. It is good to possess one or two volumes of the Kelmscott Series, but if a student has one of the simplest and one of the more elaborate, he has enough. The same spirit appears in them all, and while that partial uniformity is perfectly legitimate and familiar—for no designer can be always turning out wholly new things, and the buyer of his work should be content sometimes with agreeable modifications of a design once made—the high cost of the books make it unwise to purchase many of them if they appear to be all worked on the same lines of composition. At two or three dollars a volume one might like to possess the whole shelf full, but at ten or twenty times that price, their relative value seems inadequate. In saying this, one says also, by implication, that the books are not very beautiful. Interesting they are, unusual, frankly mediaeval in many of their appointments and appliances, but really noble designing is as rare in them as in the common-place mercantile books which Morris abhorred and against which he protested. A Christmas book with illustrations by modern artists and “decorations” by another artist, those decorations being generally frank adaptations of plant form, is much more in the modern spirit than Morris’s work and will please the many who are not educated in art much more readily than Morris’s work, but it is not on that account certain that the decorations of the popular gift-book are worse. They have something which Morris’s work does not possess; they have grace. In fact, it is grace, it is the beauty of easy line and simple composition which Morris’s book-work seems to lack. The borders are much too crowded; the scrolls are too rapid and too much involved; the leafage is too contorted and shattered; the composition is uneasy, and one finds himself comparing the borders in the different books with a view to seeing which is the least disagreeable to the eye instead of with a view to comparing beautiful designs with one another. The same criticism applies to the initial letters. They are not unlike their originals of the fifteenth century; they are not

bad as ornamental letters; they show, as the borders show, infinite cleverness in the varying of their forms and in the pattern of their backgrounds; but they are oppressive. They are too large, too numerous, too elaborately over-decorated. In fact, it might be said of the page as Morris conceived it, that it was much overdrawn, having too many fantastical and violently contrasting parts for a single page of a book.



KELMSCOTT PRESS MARK.

As a sincere and conscientious attempt to set one's self against the spirit of the age instead of working with it, the decorative work of William Morris must excite great interest and must command great respect. Nor can any student fail to sympathize with Morris's feeling that much was wrong with the art-spirit and especially with the decorative designing of the age in which he was born. It remains true, however, that nothing is gained by opposing the spirit of an epoch and that the only thing feasible is to work with it and try to influence it slightly. To work against it and to try to influence it all at once and violently to take another direction, is to throw away one's powers no matter how great they may be. William Morris was probably not by nature a great designer or even a designer of original force, but he had his mind full of the fine arts of the past and he had boundless energy, indefatigable resources of body and mind and almost infinite self-confidence. The natural result is the production of a certain amount of work which appears like success to the few and for the time, but which to the many seems foreign and uninteresting, and to the next succeeding brief epoch of time will appear a mere echo from the past.

Of the two books under consideration, the folio, as its title implies, is devoted to the graphic and decorative art of Morris's life while the octavo is a more general treatise, dealing with his literary work and



en in war, and that the Companions who had conquered it were looking for chapmen to cheapen their booty, and that he was the first, or nearly the first, to come who had will and money to buy, and the Companions, who were eager to depart, had sold him thieves' penny-worths: wherefore his share of the Upmeads treasure had gone far; and thence he had gone to another good town where he had the best of markets for his newly cheapened wares, and had bought more there, such as he deemed handy to sell, and so had gone from town to town, and had ever thriven, and had got much wealth: and so at last having heard tell of Whitwall as better for chaffer than all he had yet seen, he and other chapmen had armed them, & waged men/at/arms to defend them, and so tried the adventure of the wildwoods, and come safe through.

WHEN at last came the question to Ralph concerning his adventures, and he enforced himself to speak, and told all as truly as he might, without telling of the Lady and her woeful ending. Thus they gave & took in talk, and Ralph did what he might to seem like other folk, that he might nurse his grief

in his own heart as far as under from other men as might be

So they rode on till it was even, and came to Whitwall before the shutting of the gates and rode into the street, and found it a fair and great town, well defensible, with high and new walls, and men/at/arms good store to garnish them. Ralph rode with his brother to the hostel of the chapmen, & there they were well lodged.

Chapter XIII. Richard talketh with Ralph concerning the Well at the World's End. Concerning Swevenham.



IN the morrow Blaise went to his chaffer and to visit the men of the Port at the Guildhall: he bade Ralph come with him, but he would not, but abode in the hall of the hostel and sat pondering sadly while men came and went; but he heard no word spoken of the Well at the World's End. In like wise passed the next day and the next, save that Richard was among those who came into the hall, and he talkd long with Ralph at whiles; that is to say that he spake, & Ralph made semblance of listening.

NOW as is aforesaid Richard was old & wise, & he loved Ralph much



his socialistic labors as well as his art. It appears that the octavo contains all the text of the folio, with very considerable additions. It also contains a few illustrations which are not in the folio in any form; that is to say, black and white plates of new subjects as well as black and white plates which are the equivalent of some of the colored plates of the folio. In short, the octavo is the more useful book for the general library and it is published at a price which makes it comparatively accessible, while the folio, originally issued at eight guineas and in a very limited edition—so that the price is already enhanced—is much richer in illustration of Morris's designs.

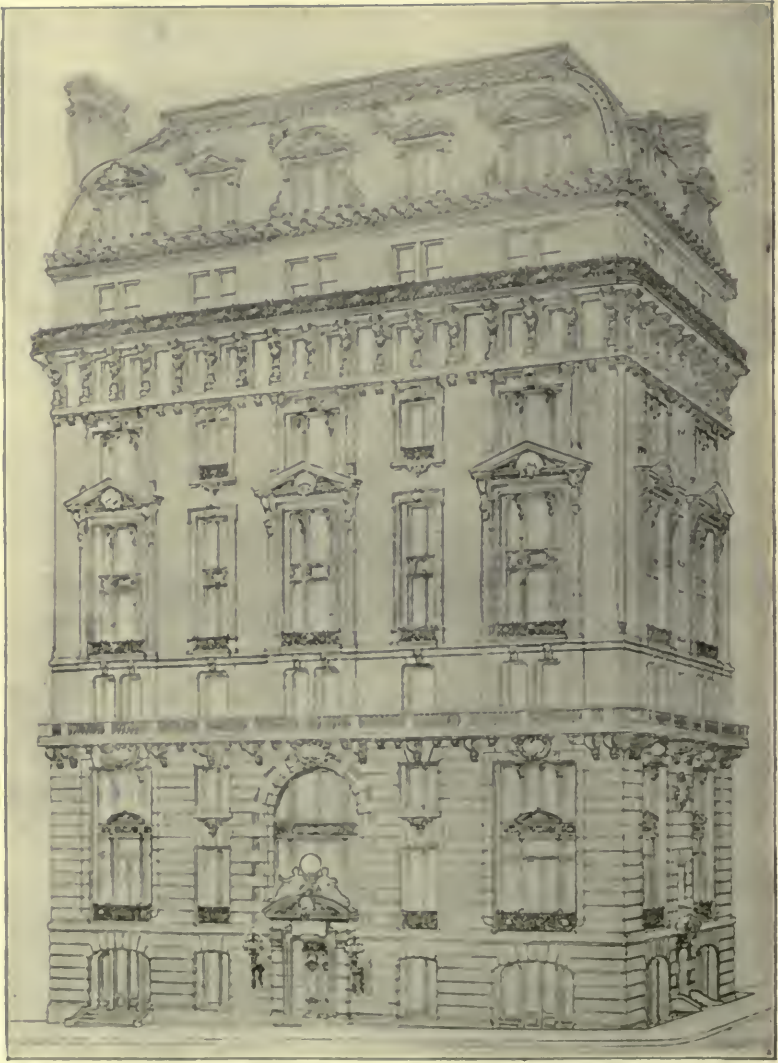
Russell Sturgis.



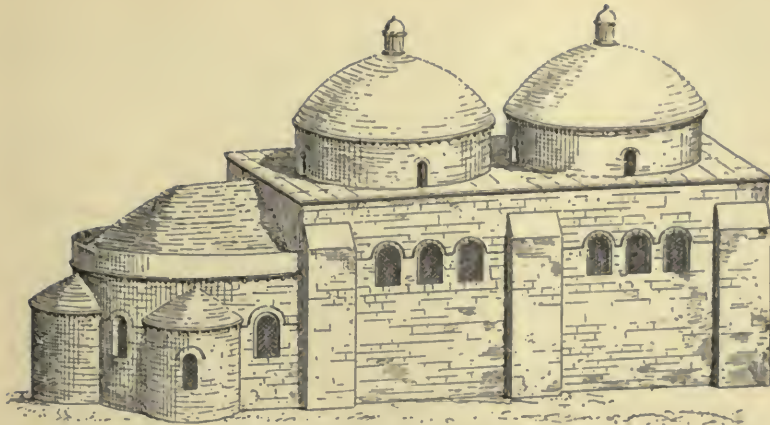
RESIDENCES, NOS. 15-17 WEST 54TH STREET.
McKim, Mead & White, Architects.



RESIDENCE, NO. 31 WEST 54TH STREET, N. Y.
Heins & LaFarge, Architects.



SINGER BUILDING.
Northwest Corner Broadway and Liberty Street. Ernest Flagg, Architect.



Cahors Cathedral in the Twelfth Century.

FRENCH CATHEDRALS. Part XIV.

THE DOMED CATHEDRALS.

I.

THERE is no more interesting problem in French architecture than the development, in the west, of a group of churches with the dome as their predominating feature. Four cathedrals are essentially domical in their architecture: Cahors, Angoulême, and the two at Périgueux S. Étienne and S. Front; the cathedral of Le Puy, which is also a domed church, stands apart from these. Notable types, each of them, of the twelfth century domed church in France, they by no means exhaust the list of great domed churches of this period. These cathedrals, with their sister churches built in the same way have long been the archaeological wonder of western Europe. Apparently they arose spontaneously from the soil, without hint of origin or connection with other structures. Yet their period was not given to sudden outbreaks in building experiments, and the history of all mediæval architecture teaches no more important lesson than continuity and evolution. So it happens that the striking individuality of this group is due chiefly to the magnificence of their dimensions. For as a matter of fact the dome was an essential characteristic of all churches in Provence in the XI. and XII. centuries, and a series of domical churches runs across the map of France from the extreme southeast up to Angoulême, and, in a modified form, as far as Poitiers, Le Mans and Angers.

The dome is of common occurrence in early French churches, though the dome of Provence has little enough in common with those of Cahors, Périgueux and Angoulême. In Provence it is

small, rising from a square by means of small pendentives thrust into the corners; and it nowhere shows itself externally as a dome, though at Avignon and Cavaillon it appears as a lantern, and at Arles it is embedded in a vast tower. The western domes are of a very different class. Real pendentives, filling in the entire spandril between the arches, convert the square into a circle, without the intervention of the octagon of Provence. The domes are large and massive, covering a succession of bays, instead of a single bay, with an outward form that transforms the exterior of the church, giving it the strange exotic character that, in S. Front, at least, makes one wonder if one is in France at all.

And so these churches stand alone, notwithstanding the smaller domes to the east and south; for they were being built while the latter were still in construction. The progression is geographical rather than historical. Their individual interest is, therefore, very great, though strangely enough of no churches in France is history so silent; of their origin nothing is known, and even their more important dates are a matter of controversy; and no one can say with certainty that any one man was their builder.

Fortunately it is possible to fix their period at least approximately. The cathedral of S. Étienne at Périgueux was dedicated in 1047; the cathedral of Cahors in 1119; the great abbey church of S. Front was burned in 1120, and the rebuilding of the present edifice begun soon after; the cathedral of Angoulême was dedicated in 1128. The last is the most complex in its architecture, and is manifestly the latest in the series; the progression is the natural one, from the simple little cathedral of S. Étienne at Périgueux, to the complex cathedral of S. Pierre at Angoulême. It will, however, be convenient to begin this survey with the cathedral of Cahors.

II.

The cathedral of Cahors is a comparatively small church of about 180 feet in total length. It has no aisles or external side chapels, and consists of a nave of two great bays, each with a dome, and a great seven-sided apse. Its chief periods are readily distinguished. The body of the church, the nave, the apse, and two of the apse chapels, are all that remain of the building dedicated in 1119, though their actual date may go back some years into the preceding century. In 1285 Bishop Raymond de Cornil began the building of the upper part of the choir, which was thus transformed into a Gothic structure. Lesser changes followed, including the complete rebuilding of the apse chapel to the right in 1484. The west front, with its two towers and massive facade, dates from the XIV. century, and the cloister was built under Bishop Antoine de Luzech (1494-1509).

The construction of the nave is very simple. Each bay is enclosed within four great broad pointed arches, the triangular spaces between which are completely filled with the pendentives. The transverse arches form the division between the bays, while under the longitudinal arches are small chapels beneath a gallery just below



North Portal, Cahors Cathedral.

the windows that serve as a clearstory to light the interior. The general effect, as one descends the steps within the west door—for the ground outside has risen several feet above the level of the cathedral floor—is of that general tawdriness that seems inseparable to church interiors in France where towns, as Cahors, once important, have sunk to the level of the inactive provincial city. The frescoes that once adorned the domes, and adorned them notably, are

now only partly visible in the first bay, while the second one, and most of the walls, are covered with the whitewash that in evil days became the favorite style of church interior decoration.

The chapels on the sides, under the tribunes, project externally in a blocked-up strip of wall and scarce call for mention. On the north side, in the first bay, is a two-story gallery, with square piers and shallow Corinthian and Composite pilasters, each story and each bay separately vaulted; in the second bay a plain pier supports two round arches, with ribbed cross vaults within. On the south side the space in the first bay is unequally divided; a vaulted chapel opening out of



Cloisters, Cahors Cathedral.

a pointed arch, and then the pulpit; in the second, two pointed arches admit to small vaulted chapels. The fenestration over the tribunes is irregular and has been changed more than once. Each bay has, on each side, three round arched windows; but in the first bay, on the south side, two of these have been replaced by a large circular window, whose irregular situation is one of the curious pieces of construction in the cathedral.

The Gothic apse is very much loftier than any part of the nave, though unfortunately it was built at so late a time and by men so unfamiliar with Gothic construction that it possesses little delicacy of design. Its seven sides are alternately large and small, with two series of windows, the lower much larger than the upper. The small



West Front, Cahors Cathedral.

semicircular chapels opening from the second and fourth bays belong to the original construction; a larger late Gothic chapel opens from the sixth bay. A singular irregularity in the position of the large clearstory windows should be noted. Beginning on the north side the window is in the centre of the first and second bays; in the third it is placed to the east of the centre; but in the three remaining bays it is distinctly to the west side. The wall in which these windows are placed is recessed somewhat behind the lower wall, with a passage-way before it. All of the wall and vault surfaces are tinted or decorated.



Interior, Cahors Cathedral.



North Side of Cahors Cathedral.

The most notable external feature of the cathedral is the famous north portal, which dates from the last years of the XII. century, and which is one of the chief monuments of its time. It is a significant commentary on the later work at the cathedral of Cahors that this ancient portal should still remain its most interesting decorative part. Its lower portions have long been buried beneath the earth, and its two doorways are walled up; but its upper part is free, and while much worn by time and otherwise defaced, is an imposing and beautiful structure.

The porch is a rectangle applied to the flank of the western bay of the nave. Its centre is filled with a majestic pointed arch, cutting deliberately through the decoration of slender applied columns carrying small round arches, with which the walls are treated. The outer decorations of this arch have nearly all disappeared, as have the capitals of the wall columns and most of the wall ornaments; but it is still possible to distinguish the singular border of small figures of men and animals carried just within the outer moulding. The arch is very deep and not recessed as Gothic arches are. It is absolutely without ornament; but it is supported on either side by three small round arches carried on slender columns, whose bases are not now visible, and whose capitals, well preserved on the whole, are amazing compositions of twisted animals and birds, men and foliage. The wall within these arches is decorated with a series of large bosses or rosettes of great variety and beautiful design. Just above them are the remains of a spandril decoration too defaced for interpretation.

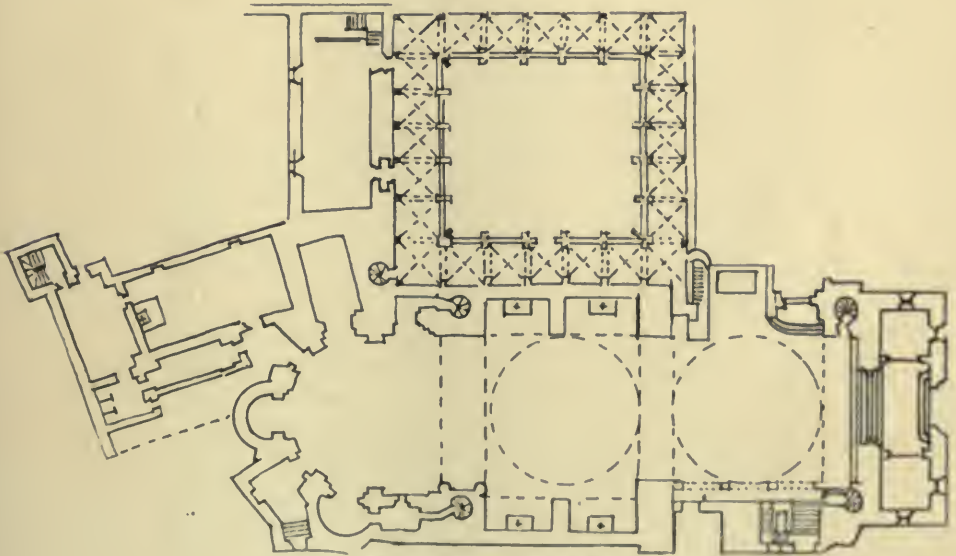
The archways of the doors and the column between them are greatly injured, but the tympanum, with its remarkable sculptures, is complete, though much worn and considerably injured. In the centre is a figure of Christ, standing in an aureole, one hand raised in benediction, while the other, also extended, holds the Book. On each side is a large adoring angel, while others float down from above. Below is a series of arches containing the Virgin in the centre and the Apostles in the others. The remaining parts, on each side of the central figure, are filled with several small groups, the Stoning of Stephen, Jesus and the Woman of Samaria, the life of St. Genou, etc. The whole is surrounded with a richly interlaced band.

Of the other portions of the exterior it is sufficient to refer briefly to the domes and the west facade. The former are built with plain circular drums carrying the low rounded domes without ornament. They have been restored in our time, their structure having long been hidden under a wooden roof. The west front is a singular structure, rising high above the church behind it, the wall being carried up in the centre and surmounted with a pyramidal roof, with wings slightly recessed near the top and treated as towers. There

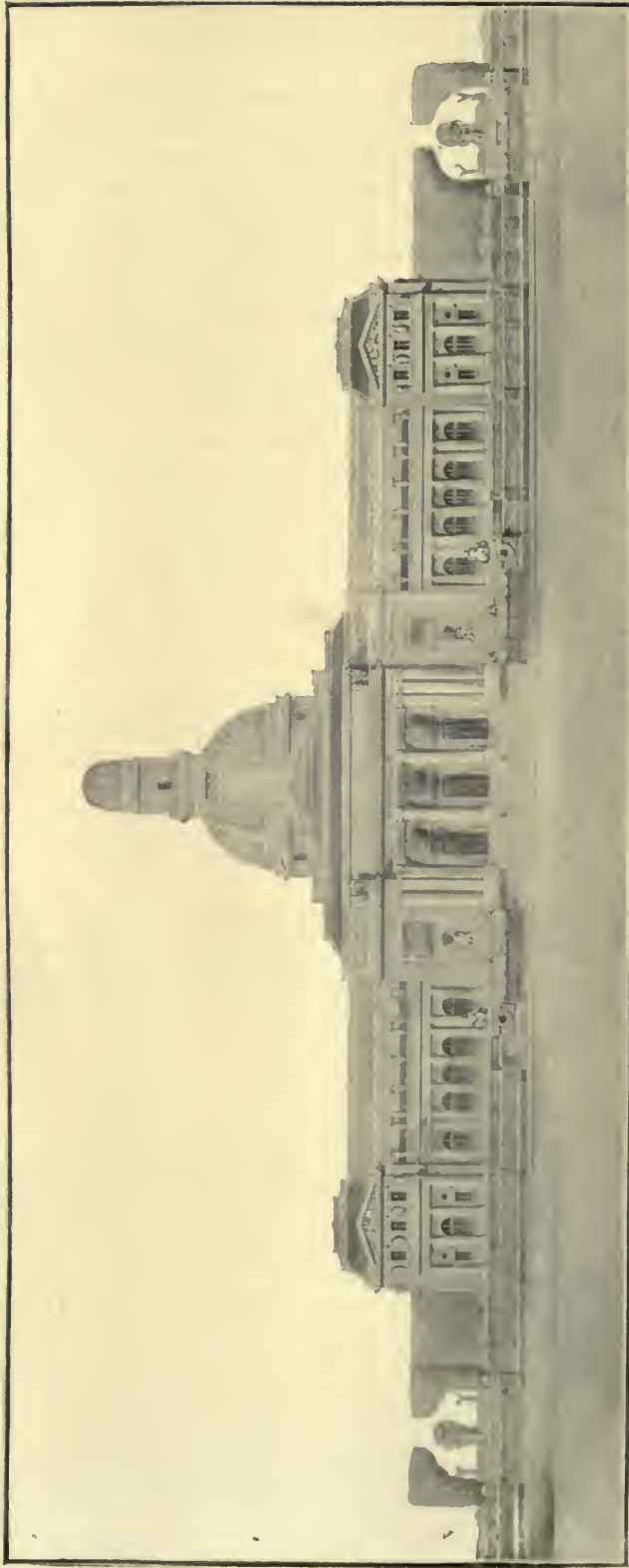
is a single high pointed portal with a small rose window over it, and a small arcade continued on each side in a rather awkward manner. The Rev. J. L. Pettit, one of the earliest English writers on French architecture, in speaking of this front, says that it has "if I remember, rather a heterogeneous appearance." It would be difficult to describe it more aptly, nor more vividly to reproduce the impression, it makes on the spectator.

But the Gothic work at Cahors is considerably redeemed from this charge of inefficiency by the cloister on the south side of the cathedral. This is a structure altogether charming; very rich in details; not greatly defaced, and offering, with its canopied piers, its elaborate mouldings and its splendid vaulting a striking contrast to the solemn grandeur of the older parts of the cathedral, as well as with the less perfectly designed and very much less ornate later portions. It is one of the few Gothic cloisters attached to any cathedral in France, and it happily warrants the most attentive study by reason of its own merits as a work of art.

Barr Ferree.



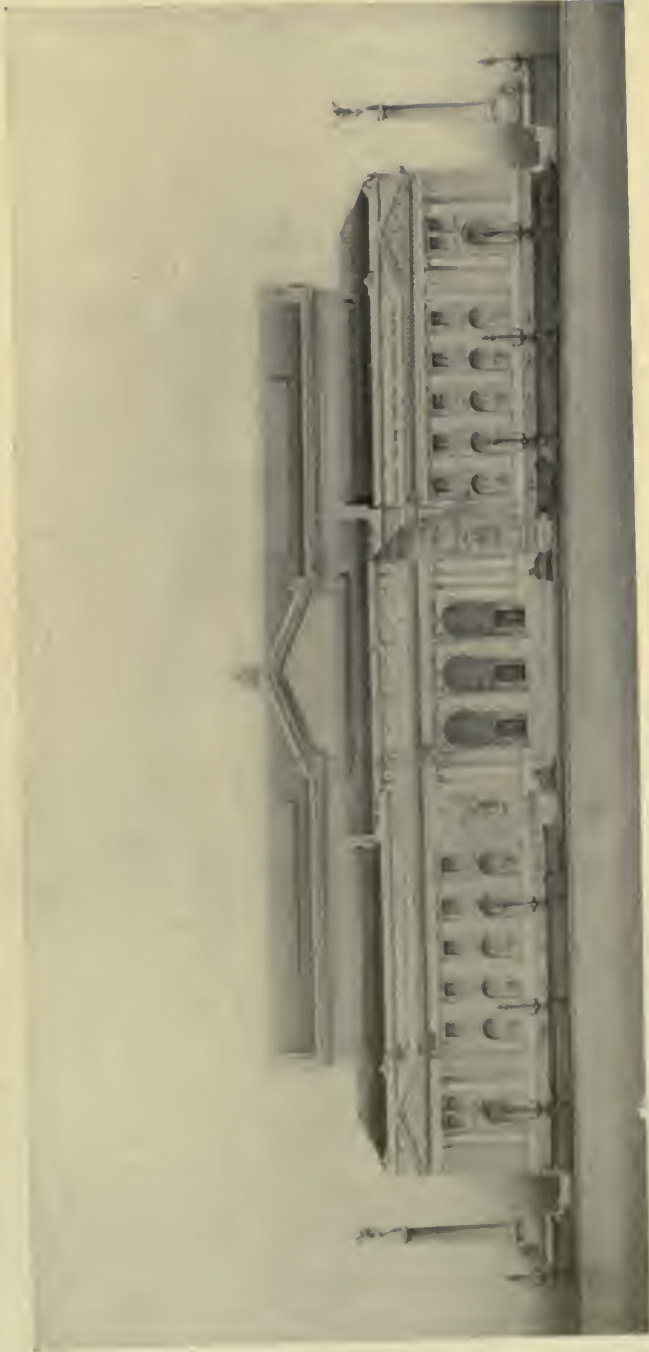
Plan of Cahors Cathedral.



Grand Prix, 1893.

PROJET POUR LA SOCIÉTÉ DES SAVANTS.

M. Chansseniche, Architecte.



ACCEPTED DESIGN FOR THE NEW YORK PUBLIC LIBRARY.

Carrère & Hastings, Architects.



THE SHERRY BUILDING.

5th Ave., Corner 44th St.

McKim, Mead & White, Architects.



WASHINGTON LIFE BUILDING.

Broadway, S. W. Cor. Liberty St., New York City.

Cyrus L. W. Eldlitz, Architect.



QUEENS INSURANCE CO.'S BUILDING.
N. W. Cor. Cedar and William Sts., New York City. Harding & Gooch, Architects.

THE WORKS OF FRANCIS H. KIMBALL
AND KIMBALL & THOMPSON.

FRANCIS H. KIMBALL entered the office of Louis P. Rogers, in Boston, in 1867, but for five years before had been in the employ of a relative who was a builder, and who, according to the rural practice, made such simple designs for buildings as were needed in his business. This gave his assistant valuable practice in plain drawing, which became available in an architect's office. Within a few months after the beginning of his apprenticeship Mr. Rogers formed a partnership with Gridley J. F. Bryant, and in their office Mr. Kimball took service. After 18 months of this service he was sent to Hartford by the firm to prepare the working drawings for the building of the Charter Oak Life Insurance Company, a granite building of some 275 feet of frontage. During the two years in which this building was under construction the firm was employed to build another business block for the Connecticut Mutual Life, which was to be fire-proof. For this also Mr. Kimball made all the drawings, residing in Hartford, subject only to occasional visits of supervision from the firm, and remaining until the completion of the building, having served an apprenticeship of three years and a-half. He was then engaged by James G. Batterson, of Hartford, and employed upon the competitive design for the capitol of Connecticut. At this time Trinity College had appointed Mr. Burges, of London, to design new buildings for it, and employed Mr. Kimball to report to Mr. Burges, so as to familiarize himself with the plans as they were making, and to be able to supervise the execution of them after they should be completed. The year in London was an apprenticeship in Mr. Burges's version of French Gothic, and an endeavor to give his American assistant such a knowledge of his way of working that he could meet the exigencies that might arise during the construction. This was fortunate, because not only was the actual construction confined to one of the four quadrangles included in the stately project, but even this was much modified in execution. While it was building Mr. Kimball was employed upon other works in Hartford, of which the most important was the Orphan Asylum, of which the design is not yet completely executed, a wing which is architecturally an integral part of the scheme, remaining to be added.

In 1879, Mr. Kimball came to New York under an engagement to remodel what was then known as the Madison Square Theatre, and is now known as Hoyt's. In the same year he formed with Thomas Wisedell, an English architect of Gothic predilections and

training, a partnership, which lasted until Mr. Wisedell's death in 1884. The Madison Square Theatre, Harrigan & Hart's old theatre in Broadway, long since destroyed by fire, the Casino at Broadway and 39th street, the Yonkers Opera House, the Goodwin Building, in Hartford, and a new building for Trinity College were the most important works of the firm.

From 1884 to 1892 Mr. Kimball practised alone, excepting one year, 1886, in which Mr. Henry S. Ihnen was his partner. The works of this period included the Catholic Apostolic Church, in West 57th street, a large church at Nashville, the Emanuel Baptist Church in Brooklyn, the Montauk Club in Brooklyn, the Corbin Building at Broadway and John street, the Fifth Avenue Theatre, Harrigan's Theatre, now the Garrick, the façade of the main station of the Reading road in Philadelphia, a chapel at Spuyten Duyvil, a theatre in New London, another in Middletown, and a number of country houses.

In 1892, Mr. Kimball entered into partnership with Mr. George Kramer Thompson for the building of the Manhattan Life, which the new firm gained in competition. Mr. Thompson, born at Dubuque, in 1859, received his general education at Fairbault, Minn., and Lancaster, Pa., directing his studies with special reference to the profession of architecture, which he had already chosen for himself, and in 1879 entered the office of Mr. Frederick C. Withers as a student. After three years with Mr. Withers he engaged as a draughtsman with Kimball & Wisedell for a year, and in 1883 entered into partnership with Mr. C. P. H. Gilbert for a year and a-half, and after that practised independently, his work consisting chiefly of private houses, until the formation of the firm as already explained. The principal works of the firm are the Manhattan Life Building, the Standard Building for the Standard Oil Company, the Empire Building, not yet completed, extensive alterations in the store of Messrs. B. Altman & Co., an extensive and costly mansion at Madison avenue and 72d street, a store in Philadelphia and a pumping station for the Indianapolis Water Works.

* * * * *

Victorian Gothic begins to seem very remote, the more to some of us is the pity, and it may at least be regarded in an undistorted historical perspective. By Victorian Gothic I do not mean especially that Italianized mode of mediaeval architecture, which was distinguished by the free introduction, in exteriors and interiors alike, of as many colors as could be found in available building material, and as could be harmonized in a design, and very often more. This was what is specifically known as Victorian Gothic, and it was introduced largely through the eloquent enthusiasm of Mr. Ruskin, who really cared more about the mediaeval building of North Italy than

about the French Gothic of which it was a picturesque degeneration. On the technical side such works as Streets' "Brick and Marble in Italy," gave impetus to the movement, which, however, was but an episode of the Gothic Revival. What I mean is the Gothic revival which indeed had been begun, on archaeological and ecclesiastical rather than on artistic considerations, before Queen Victoria's reign, but which during that reign attained to a much higher degree of historical accuracy and scholarly competency than before, and also to a much more just comprehension of what the root of Gothic architecture was, and that this root was adequate not merely to have produced the forms which the early revivalists set themselves to reproducing, but also to grow new forms in a new material and moral environment. If this truth had been apprehended clearly enough and by practitioners numerous enough, there would by now be no longer a question of "style," but architects would be doing architecture.

Failure as we have to own that it was, the Gothic revival showed enough of the promise and potency of life to attract a great majority of the ambitious young architects of England and America during the sixth and seventh decades of the century, say from the London World's Fair of 1851 to the Philadelphia World's Fair of 1876. What there was of life and progress in English and American—nay, in European architecture—during that third quarter of the century came from it.

It will be agreed that a young American practitioner could not have served a more valuable apprenticeship to his craft at that time than that which Mr. Kimball was privileged to go through in the office of William Burges. Nobody will dispute Mr. Burges's claim to a place among the leaders of the Gothic revival in England. In the archaeological part of his equipment he had his equals, and possibly his superiors, but many of the Gothic archaeologists were actually burdened with their knowledge when the question was of designing, and the result of their labors was apt to be more in the nature of a reproduction than of a revival. Mr. Burges differed from most of his coworkers in starting neither from the English Gothic, which patriotism induced so many of them to adopt, nor from the Italian into which others were led by Mr. Ruskin's eloquence, but from the parent French Gothic. "Only primitive sources furnish the energy for a long career." In this he really attained freedom and individuality. Cardiff Castle and the Cork Cathedral are likely to be admired as long as they stand, as among the most fruitful results of the Gothic revival. But to many students, including the present writer, the high-water mark not only of Mr. Burges's own work but of the Gothic revival, was attained in his unexecuted design for the Law Courts, which, although it remained on paper, furnished the



Hartford, Conn.

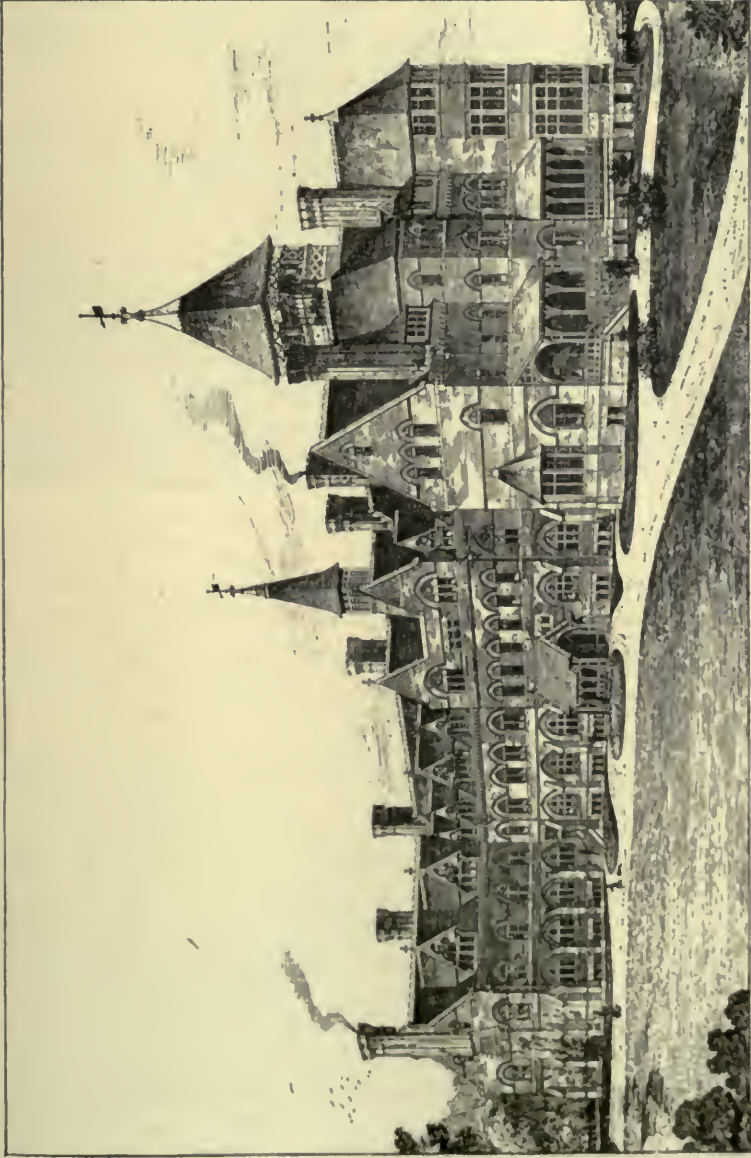
Trinity College.—1875.

W. Burges, Architect.

F. H. Kimball, Supervising Architect.

inspiration for some admired buildings on each side of the Atlantic. A sojourn in his office, followed by the supervision of an important work of his, was nearly as good a course of professional preparation as a young American architect could have obtained at that time. Certainly it was a wholesome corrective after a course of the entirely commonplace American commercial Renaissance of that time, in detailing and supervising which Mr. Kimball had already familiarized himself with building operations. Its influence is to be detected not only in the work which Mr. Kimball did in Gothic, but in that which he has done in classic. Certainly his own "commercial Renaissance" has more affinity with Mr. Burges's French Gothic than with the commercial Renaissance of his earliest apprenticeship. And, indeed, there is this to be said for the real study of any style, as a preparation for the practice of architecture, that it does confer a perception of proportion and relation and scale which is as valuable in one style as in another. It is indispensable when one comes to deal, as it is to be hoped that the architects of the future will be bold enough to deal, with constructions which are as yet "ferae naturae," and for which they have to find artistic and expressive forms, constructions which have not yet been reduced by the labor of generations to that assorted set of forms which we call a style. Certainly in Mr. Kimball's work the influence of Mr. Burges may be traced in works which in purpose and style have no relation to anything that Mr. Burges himself ever had occasion to undertake.

A detailed consideration even of the important works of the architect is quite out of the question with the space at my command. It



HARTFORD ORPHAN ASYLUM.

F. H. Kimball, Architect.

seems most convenient to arrange them in groups comprising first those which betray most directly the results of his studies in Gothic, including those which he did in association with Mr. Wisedell, then the miscellaneous work of an architect in general practice, and finally the sky-scrappers, which are the works of Kimball & Thompson, and the most costly and conspicuous with which he has been connected.

Mr. Kimball's first independent work of any importance, the Hartford Orphan Asylum, was designed while he was still employed at Trinity College, and might be expected to be an extreme example of Gothic. Possibly it was for want of money that the style is not more distinctly designated. The buttresses of the wing, and the arcuation of a few of the principal openings are to a casual inspection almost the only badges of the style. Otherwise the work is simply an example of artistic building; that is to say, it aims at such a disposition in mass and such a treatment in detail as to express the arrangement, the material and the construction. That was the gist of the Gothic revival, only unfortunately its practitioners were not able to convince the public of that fact. They introduced into their work in all kinds features of historical Gothic which not only enabled the wayfaring man to designate the buildings as Gothic, but forced him to associate them with ecclesiastical architecture. He declined to accept them as either modern or secular, and small blame to him. The fault was not his, but that of the revivalists, with the repertory of irrelevant quotations with which they insisted upon garnishing their ordinary conversation. If all the secular work of the Gothic revival had been as straightforward and expressive, and as successfully designed as this asylum, the wayfaring man would not have perceived it to be Gothic, while it would have been more truly Gothic all the same. The same praise belongs to a house in Waterbury, in which a superstructure, hung with red tiles, surmounts a brick basement, and in which the style is designated only by the two lancets that might have been lintelled or round-arched without detriment to the effect. This work is straightforward in its treatment of material, and really happy, considering the practical exigencies to be met, in the proportion and the relation. Its success in this respect even makes us overlook the painful weakening of the angle pier by its openings. But for these lancets which classify it as Gothic one would have to classify it merely as artistic building, as a work which is of no style and which yet has style, and that is a one of the rarest and one of the most desirable attainments of the modern architect.

Another country house, or at least detached house, a dwelling in Hartford, has the same attraction of appearing to result from a consideration of the end to be attained and the means to be employed,



Residence of Dr. C. S. Rodman.—1879.

Waterbury, Conn.

F. H. Kimball, Architect.

rather than a recollection of what has been done elsewhere. This is a roof-structure of timber, set upon a two-story rectangular of rough masonry. The rectangle is so modified by truncation and projection and recession as to get rid of the look of being a box,



Residence of Mr. Franklin Chamberlain.—1881.

Hartford, Conn.

Kimball & Wiedell, Architects.

and as to account for the difference in the roofing, which enables the designer to crown it very effectively. Here there is no designation of a style. There is nothing which at least might not have proceeded from consideration of the requirements of this particular edifice. One can imagine an inspired mechanic doing it without knowing that there were such things as styles, or such a thing as historical architecture. It is true that he might have been better inspired if he had been less afraid of repetition and had not insisted upon so widely varying the forms of the two gables upon each front, which seem to perform exactly similar functions. A capricious departure from symmetry is no more to be commended, when there is not a real difference to be expressed, than a rigid adherence to it in spite of such a difference. It is also true that there is no such mechanic now extant in the world, nor has there been for some generations, common as he was five centuries ago. But the signs of the lost architecture of craftsmanship are none the less welcome, even where we know that they must have been exhibited not by a craftsman at all, but by a book-learned architect over a drawing board.

Another work of a very different destination which has this same character is the brick warehouse in New York, of which the architecture is the expression of the simplest possible construction. A ground floor with entrances at the sidewalk level, into which wagons can be driven, five stories of lofts for storage, undivided or equally subdivided, an office in the corner of the ground floor, with enough glazed holes in the wall to light it, a stairway at the back, giving access to the upper floors; nothing can be simpler, and nothing can be more frequent, nothing better within the capacity of the common craftsman. To him, indeed, the design of structures of this class is commonly intrusted, with the most depressing results. The real reason why they are so depressing is, of course, that he does not know how to dispose the features required by the bare necessities of the case so as to combine them into a countenance, and hence the aspect of his work is dull and inexpressive. What makes it not negatively unattractive, but positively repulsive is that he does not know how to let his bald building alone, but adds to it something that he dimly imagines to be architecture. What makes such a work as this now under consideration so welcome is that the designer is aware of the desirableness of disposing his openings, and know how to dispose them, so as to get the effect of massiveness where it is most needed, in place of the equal alternation of pier and opening. There are few street fronts of the same dimensions so impressive as the narrow front of this warehouse, by dint of the sheer power of the flanking piers. But also he has confined himself absolutely to the structural necessities and made his effect by his abstinence. The thickening

of the lower walls in pilaster-buttresses is plainly reasonable, and it has the effect of seeming powerfully to load and hold firmly in their places the piers of the arcade, while the rounding of these piers, which adds so much to their effect is an expedient to diminish the danger of chipping. The terminal piers are kept very broad at one end by diminishing the office lights, and at the other the staircase



Warehouse.—1886.

Hudson and Beach Streets, New York City.

Kimball & Ihnen, Architects.

lights, to their lowest terms. The anchor strips, which so happily punctuate the expanse, are structural expedients employed in the most straightforward way. Perhaps the effect of the building would be as good without the one piece of conscious architecture the designer has introduced in the gabling of the upper wall over each bay of the substructure. This is one of the many devices that have been resorted to for mitigating the baldness of a flat roof, in the absence

of a heavy protective cornice, and is discreetly handled. Over the end, where it suggests a pitched roof, it is undeniably effective, but on the longer front it looks a little capricious, and is thus inconsistent with the hard utilitarianism to which the designer has elsewhere restricted himself. There is something of caprice, too, in varying the fenestration of the two upper stories from what is below. The uppermost, as a crowning story, might very properly have been distinguished in treatment, and even marked off by a slight string course such as is so effectively introduced at the angle, and the four stories below treated alike. But whatever abatements are to be made, the beholder has to say that here is a building of no style



1885.

Manhattan Beach Amphitheatre F. H. Kimball, Architect.

which yet has style, and he may very well reflect that if our buildings of bare utility were all as good as this, and were confined as closely to bare utility, our architecture of ornament would soon grow itself, and be as plainly indigenous as it is now plainly exotic.

Much the same praise may be given to a much larger and a properly much more pretentious work, the band stand at Manhattan Beach. This is in fact a permanent tent, reared upon a base hung with parti-colored wood shingles, open to the air above that, and covered with a roof which is merely a velarium. If one looks closely he may detect Gothicism in the decorative detail in wood with which as a festal place it is properly provided. But upon the whole it is a piece of free ar-

chitecture in which the picturesqueness of the result is not only appropriate and unforced, but proceeds from the special conditions of the problem. It is not often that one finds such a series of works by one architect, which, being of no style, yet have style, and possess that idiomatic and vernacular air which pertains to the architecture of craftsmanship. While they are not Gothic, except in principle, I think it may fairly be claimed that those of the Gothic revivalists who went beyond a knowledge of Gothic forms to an apprehension of Gothic principles gained thereby a facility for doing them which is not supplied so well by any other training. It is not very risky to say that it was to his apprenticeship to Mr. Burges that Mr. Kimball owed much of the power of producing works superficially so unlike any of the work of his master as the dwelling in Hartford, the warehouse in New York, and the band stand at Coney Island. It is quite certain that such works, proceeding not from the application of fashionable architecture but from their own respective requirements, will not come to look antiquated or ridiculous when the fashion had passed away.

But, of course, it is plain enough that the mode of design which these buildings illustrate is applicable only to comparatively slight and simple buildings. Where it is a question of a large and ornate and urban edifice, the designer must invoke some system of ornament. As a system of ornament is neither invented by one designer, nor is vernacular in this or any other modern community, this means that he must, for such a purpose, work in a style. In church building it is pretty well agreed still that, obsolete as the mediaeval styles have become for secular work, it is in Gothic or its parent, Romanesque, that he must work. An attempt in any of the classicised styles handicaps itself at the beginning by having to most beholders the air of a joke, which is to say, of a profanation. In Mr. Kimball's churches the influence of Mr. Burges is naturally to be detected most strongly, but decidedly the pupil brings something of his own. Perhaps Christ Church in Nashville does not bear out this remark. There is more than a trace of Mr. Burges's manner, especially in the treatment of the gable window and the picturesque hooded bell-tower, although the lancets in the tympanum of the entrance recall English rather than French examples and carry even a suggestion of Perpendicular. But upon the whole it would not be unfair to describe this work as Gothic working *in vacuo*, the kind of architecture which we have a right to expect of a trained designer who has no artistic individuality in particular. But nobody would make such a description of the Emmanuel Baptist Church in Brooklyn or of the Catholic Apostolic Church in New York. In the former it is necessary to point out that the architect was ham-

pered by the previous erection at other hands of the chapel in the rear, of which the detail is mercifully screened in the photograph by foliage. The body of the church is evidently a very rich, scholarly and well considered design, in which the triple porch, with its stilted arches, and the treatment of the towers especially recall Mr. Burges's work, and in which the mullioned windows both in the aisle wall and in the centre of the front are very admirably designed and detailed, and of which the deep reveals are so modelled as to get the utmost advantage of their depth. All this is by no means Gothic *in vacuo*, and much further from that is the interior. In this the



Entrance, Emanuel Baptist Church.—1885.

Brooklyn, N. Y.

F. H. Kimball, Architect.

"nuance" of the denomination, so to speak, offered one of those opportunities for distinctiveness of expression which architectural copyists shirk, and which architectural artists welcome. The "font" is the central feature of a Baptist church, and the scene of its most distinctive rite, but it is completely ignored or dissembled by the designers of Baptist churches, whose pleasing and ingenious practice it is to conceal it under the platform, and open trap-doors when it is to be used. Occasionally a Baptist congregation falls into the hands of an artist and some appropriate and expressive modes of treatment have been proposed or executed. That carried out by Mr. Kimball is very successful. The font with its pool is the central and most con-

spicuous object in the church, walled in by an enclosure of sumptuous marble and flanked by open arcades which enable the converts to make their exits and their entrances with decorum. The enrichment of its details is the more effective from its being strongly and simply framed between plain walls of stone work, opened above



Emanuel Baptist Church.

Brooklyn, N. Y.

F. H. Kimball, Architect.

into the arches that enclose the organ. In fact this end of the church, it will be agreed, is an extremely pretty and successful competition. At the opposite end, the effect is somewhat weakened by the impinging of the two arches upon a single pier which they tend to thrust outward, and which is not visibly adequate to withstand their thrust. But the arrangement enforced by the omission of the clere-

story—the single girder which carries the main roof and the manner in which the lunetted ceiling of the aisles is terminated against it—all this is skillful and well studied, and the detail everywhere is refined.



Emanuel Baptist Church.

Brooklyn, N. Y.

F. H. Kimball, Architect.

Another noteworthy work of Mr. Kimball's in Gothic is the Catholic Apostolic Church in West 57th street. I do not know whether the ritual of this denomination, of which I believe this is the only church building on this side of the Atlantic, has any peculiarities which might become the basis of a distinctive architectural treatment, such as the baptismal rite offered in the last example. At any rate the interior is merely a well-behaved, well-proportioned and well-detailed piece of Gothic, except for the deep apsidal chancel,

with unusually small openings, and unusually large wall spaces, and a domed roof, which gives it a Byzantine air, though quite congruous with the rest. The church has, indeed, its peculiarity, but this proceeds rather from its situation than from its destination. It is a church on an "inside lot," or rather on two inside lots, and the problem attacked in the plan is that of securing for it a sufficient lighting,



Emanuel Baptist Church.

Brooklyn, N. Y.

F. H. Kimball, Architect.

which shall not be interfered with, whatever may come to be built alongside. From the aisle and transept walls it can receive no light, since these may abut upon solid buildings. The clerestory becomes a necessity, and the interior must be abundantly lighted from its openings. This primary requisite determines the design, and the close adherence to it and the artistic expression of it make the design very characteristic. A symmetrical treatment, with a low porch on either side masking the aisle, detaches the central nave into a tower-like structure, developed into an actual tower, of the square of the front, with a saddle-back roof, and a pinnacle at each corner. Behind this appear the two gabled windows of the clerestory of the nave, and on each side the window of its respective transept. The arrangement is expressed in a clear and edifying way, of which the effect is immensely heightened by the excellence of the detail in design, and its perfect adaptation in scale. There is no more scholarly Gothic work in New York. The charm of it is heightened



1885.

Catholic Apostolic Church.

West 57th St., New York City.

F. H. Kimball, Architect.

by the fact that, although the ornament is in terra cotta, and is or might be for the most part a substitute for stone-carving, there is yet in some of it, as in the main offset of the front and the gabled offsets of the buttresses, a recognition in design of the material which adds the raciness of idiom to scholarly diction.

But in this respect, in the recognition of the capabilities of terra cotta, an earlier work, the Casino, surpasses not only this church, but every other building in New York. This was the chief work of Messrs. Kimball & Wisedell, and the conjunction was so perfect that probably neither partner could have picked out his own share in the completed result. One never tires of praising this admirable work, though in looking at it in its present degraded and vulgarized estate



1882.

THE CASINO THEATRE.

Broadway and 39th Street.

Kimball & Wisedell, Architects.

one may feel not only weariness but resentment. The former proprietor, however, appreciated and respected it, and recurred to the advice of its authors in maintaining it, so that even the injury of an outside fire-escape was mitigated to the minimum. To put a thea-



Casino Theatre.

Broadway and 39th Street, New York City.

Kimball & Wisedell, Architects.

tre at the acute angle of Broadway and a cross street, with the least waste of room, was one of the problems, the difficulty of which the incompetent designer finds impossible, while it adds zest to the labors of the competent designer. It was a singularly happy solution which the designer of the Casino attained. The symmetrical and elaborate front on Broadway, which contains the dependencies of the theatre, is counterparted by the front, in which the swinging curve of the auditorium is boldly shown and emphasized, and the

difficulty of harmonizing the two is triumphantly overcome by the massive tower which occupies the angle and mediates between them. The mixture of styles which the building shows is done with such skill that there is only an academic violation of the architectural unities. And the mixture has real reason. So expressive a mode of treatment could scarcely have been carried out except in Gothic. But the ornamentation had to be in baked clay, and there is no other style which contains anything like such a repertory of surface ornament as the Saracenic in its various modes. More than one of them is introduced here, for there are features which recall the Mahometan architecture of Egypt in the wealth of detail that is directly or ultimately derived from the Mahometan architecture of Spain. The building exhibited a prodigality of detail in terra cotta which had no precedent here at the time of its erection, and has not had many equals since, and none of them has equalled it in the idiomatic treatment of material, which in these latter years of open or disguised copying it has been forborne even to attempt. The exterior of the Casino is almost as unmistakably of baked clay in the photograph as in the fact. The adjustment of the ornament in place and scale is not less successful, nor does it imply less study than its design. And the interior is as carefully and successfully detailed as the exterior, and it shows the same fusion of styles, inasmuch that the combination of Moorish arabesques with English fan-tracery does not affect the beholder with any sense of incongruity. No building in New York bears more evidence of intent and affectionate study, and the "professional services" implied in it are not at all commensurable with those involved in the mechanical reproduction which the reproducers try to persuade us is architectural art. Such a building as the Casino of itself entitles the authors to public gratitude.

The Montauk Club in Brooklyn is an essay in that Venetian Gothic of which we have, considering our tendency to try all things architectural, surprisingly few examples. It is a style especially appropriate to a club house, first by reason of the undeniably festal aspect which it wears more strikingly, perhaps, than any other mode of mediæval architecture, and also, and more specifically, because the Venetian palazzo resembled a modern club house in the simplicity of its division into few and large apartments, a division naturally expressed by its exterior architecture. The present essay suffers in comparison with its prototypes, from the fact that in the Venetian palaces—excepting the Doge's, where the solid upper story is made the object of a treatment quite unique—the upper story is the lightest and richest. The traceried arcade of the loggia takes its proper place at the top, as the flower of which the substructure is the stalk. The practical requirements, in the case

of the Montauk Club, prevented this disposition. The arcades have ample abutment and enclosure in the solid flanking masses of wall, and they are successfully studied in their relation to each other. If they formed the crown of a building, over a wall much more solid, the arrangement would leave little to be desired. But artistically they lose much of their point when the solid part of the build-



Montauk Club.—1890.

Brooklyn, N. Y.

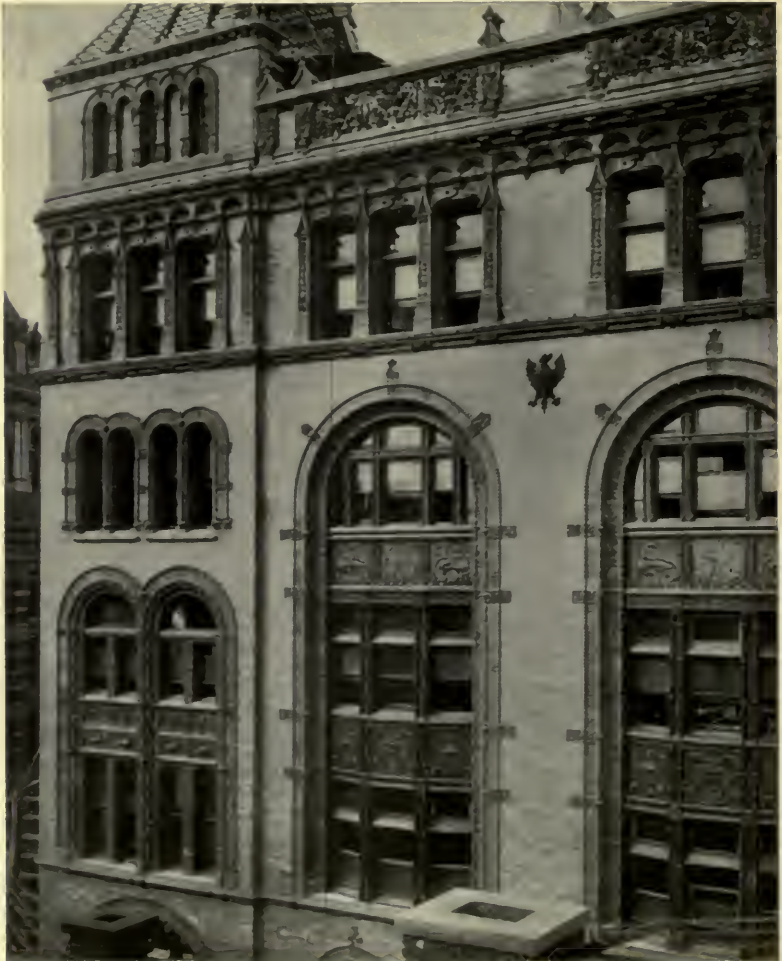
F. H. Kimball, Architect.

ing is superposed upon them. There are no precedents in Venetian architecture for the arrangement actually adopted, and there is, accordingly, a pretty distinct incongruity between the three principal stories and the two additional stories above the balcony, in addition to the incongruity already noted in the arrangement of these three stories themselves. In truth the plan does not naturally work out into the architecture adopted, and it seems a likely conclusion that the designer chose



CORBIN BUILDING—1888-1889.
Broadway, Northeast Corner John Street. F. H. Kimball, Architect.

his style first and fitted his building to it afterwards, in a rather Procrustean fashion, of which the structure bears the marks. In a word, the building lacks unity. One cannot blame an architect for being enamored of the rich and brilliant effect of the superposed arcades, which are not only disposed with skill, but



Upper Stories of Corbin Building.
Broadway, Northeast Corner John Street.

F. H. Kimball, Architect.

detailed with successful care. The two lower stories by themselves constitute a very satisfactory piece of work, and the detail throughout is refined and well adjusted in scale. But none the less the main structure and the two upper stories do not belong to each other, and the main structure does not altogether belong to itself. One cannot help wishing that the designer, in working out his plan,

had forgotten his Venetian Gothic, or had adjourned it to a more convenient occasion. And yet it seems ungrateful to quarrel with so picturesque and effective a feature as these superposed loggias make in our street architecture. If it had been practicable to erect them over a plain basement, or even to roof them over, with a light and open attic, as they stand, the Montauk Club would have been as successful as it undeniably is interesting.

Equally interesting and more successful is an example of commercial architecture, the Corbin Building. This belongs to the intermediate stage of our commercial architecture, before the steel frame had come to complete the work begun by the elevator, and to remove the limit upon altitude imposed by the necessity of actual walls. It seems odd that only a decade ago architects were struggling to "keep down" into some proper relation to their other dimensions an altitude the maximum of which did not exceed ten stories. The attempt has now been given over altogether, but it is always manifest in such of the intermediate buildings as were done by artistic designers, and it is very obvious in the Corbin Building. An architect weary, except for pecuniary reasons, of skyscrapers, who should have a chance to do a building on Broadway, 160 feet long by "only" eight stories high, would think himself artistically in luck, and would not give himself much concern about dissembling the excessive height. Perhaps it would have been better if Mr. Kimball had given himself less, for his solicitude induced him to divide his building into two virtually equal parts of four stories each. This equal division is always a misfortune, and the misfortune is rather emphasized here by the repetition of parts, each half having an enriched upper story, or frieze, consisting in the lower of an arch filling each terminal bay, while each intermediate bay is occupied by an arcade of two or three openings, and in the upper of a series of groups of segmental arches. The equality is somewhat palliated, however, by the fact that the upper story of the lower half, the fourth of the building, is in the material of the upper half, tawny brick and dark brown terra cotta, while the three lower stories are in dark brownstone. But if the upper half had been extended a story downward, and the intermediate story made the third, the appearance in the front of being "divided against itself" would disappear, and a harmonious relationship of parts would be established. The actual arrangement no doubt tends to keep the building down, though scarcely more than that suggested; but it could only be justified if it were accounted for by an evident change of function in the parts which here, of course, cannot be made evident, since it does not exist. The effect is of two complete buildings one superposed upon the other, rather than of one building, and this is incompatible with the entire success of the design. The lower four stories, or the

upper five, taken by themselves, have more the air of a complete and single building, than the aggregation of eight.

In spite of this drawback, the work is of a very high interest. If the vertical disposition of parts leaves something to be desired, the lateral division is entirely satisfactory. The width of the narrow front taken from each end of the longer, makes a pavilion which supplies a frame and apparent abutment for the openings of the interval, and the effect of abutment is enhanced by the slight recession of the intermediate wall. It is still further promoted by the difference in treatment of the pavilions, the large arches of the lower division flanking the groups of openings of a single story, while the arches that enclose the arcade of three stories are lower in height and multiplied in number. At the Broadway end, the pavilion works out naturally and effectively into a tower, and the tall arcade is a very impressive feature.

The detail is throughout of the admirable quality and accurate scale to which the other works of Mr. Kimball have accustomed us. The difference of material gives occasion for an excellent object lesson in the appropriate differences of treatment. The stonework is austere plain, except in the entrance at the rear to the upper stories. Even this is rich only by comparison, and the detail is plainly masonic. On the other hand, the greater plasticity of terra cotta is fully recognized and taken advantage of in the detail of the upper stories, where such a plainness as that of the basement would indicate that the designer did not know the capabilities of the material. We can scarcely see elsewhere in New York, except in Mr. Kimball's own work, so idiomatic and characteristic a treatment of terra cotta on so elaborate a scale. The upper story in particular, with its groups of segmental arches, the panelled pilasters sharpened to take the skewbacks, the shell frieze and the rich incusted panels of the parapet, constitutes a model of design in baked clay.

I have not mentioned, and even now I can barely mention the theatres which constitute so important a part of Mr. Kimball's work. They are so important a part of it, indeed, that if an architect whose practice has been so varied could be described as a specialist, theatrical architecture would be his specialty. His experience has been recognized by the application to him, in view of it, to prepare those sections of the New York Building Law which deal with the special precautions enforced upon the owners of theatres. As has been said, it was the remodelling of the Madison Square theatre which brought Mr. Kimball to New York, and which occasioned his partnership with Mr. Wisedell. The reconstruction of that theatre produced one of the most attractive and artistic interiors of its kind, in the "bijou" class, that New York then contained, and it is still



Harrigan's (now the Garrick) Theatre.—1890.

35th St., East of 6th Ave., New York City.

F. H. Kimball, Architect.

remembered with pleasure by its old frequenters. Harrigan & Hart's was a red brick and terra cotta essay in the Queen Anne that was then the fashion, and a favorable example of the fashion, having that air of domesticity and quaintness, of "a comfortable bourgeoisie," that was the highest expression attained, or perhaps, attainable, in the adopted forms. Then came the Casino, and after the Casino the theatres of Mr. Kimball's individual design, of which the most important are Harrigan's Theatre—now the Garrick—and the Fifth

Avenue. The architectural effect of the latter is injured by the retention from the old building of a quite characterless and commonplace portico, so that the architecture really begins only above the first story. That may in part be said of the other also, for though the design is all of a piece, the necessity for ample entrances and exits has necessitated the attenuation of the supports of the lower



Upper Stories of Fifth Avenue Theatre—1891-1892.

New York City.

F. H. Kimball, Architect.

story much beyond the massiveness proper to a basement, and the use of metal for their material. It is the old problem of the shop-front which must stand upon a wall of plate-glass, and the problem is really insoluble. The architect has here done his best with it, and made the most of the architecturally inadequate dimensions of his supports. The deep and rich frieze of the basement, continued through the projecting portico, is a happy expedient for suggesting a more sufficient substructure than exists. The superstructure is very satisfactory, as is that of the other theatre, in which practically the same motive of composition is very differently carried out. In each case the result is a rich and festal front appropriate to a place of public pleasure. Each front shows not only that felicity and facility in detail, and that successful adjustment in scale, which the architect's other work has led us to expect with confidence. It shows also that appropriateness to the material, that idiomatic use of baked clay, as not a mere imitation of stone carving, but a material to be



1893.

MANHATTAN LIFE BUILDING—EXTERIOR.

Lower Broadway.

Kimball & Thompson, Architects.

wrought with respect to its own qualities, of which the Casino gave the first and most brilliant example, and which Mr. Kimball continues to have much more to himself than is creditable to the general run of designers who dabble in terra cotta.

The "sky-scrapers" to which these latter years of Mr. Kimball's work have been devoted, and to which the work of Kimball & Thompson has been pretty exclusively confined, come next to be considered. We move so very fast, in the way of commercial building, that we are apt to forget that the Manhattan Life Building was a pioneer. That is to say, although it has not yet been finished four years, it was one of the first examples of the possibilities of altitude afforded by the steel-frame construction, which removes the walls altogether and with the walls the necessity of considering the thickening of the walls as so much of a deduction from the available area of the building. This necessity, as has already been pointed out, fixed a limit upon the altitude practicable to an elevator building when the elevator was the only heightening factor to be considered, and that altitude was fixed, approximately, first at eight stories, and afterwards, as builders grew bolder, at ten, which remained the maximum of buildings constructed with walls of masonry adequate to carry themselves. But the Manhattan Life was very nearly, if not quite the first of the office buildings to be erected after this restriction was removed, and when the practicable limit of height, in the absence of any legal restriction became an open question. It is an open question yet, and nobody would be very greatly surprised, in view of what has been done already, if the announcement of a thirty-five or even of a fifty-story office building were now to be made. "Es in dafür gesorgt," says Goethe; provision is made that the trees shall not grow into the sky. But really it is difficult to discern the provision which has been made that sky-scrapers shall not grow into the sky, or the limit upon their height that is imposed by the law of supply and demand, which is the only law that has thus far been invoked in the premises. The project for the Manhattan, with its modest sixteen or seventeen stories, was much more startling when it was broached, than a project for twice that number of stories would be now. It was to be "the tallest building east of Chicago." What I wish to point out is that this sudden enlargement of the vertical dimension let in an entirely new system of design. The seven-story buildings with which elevator building began, or even the ten-story buildings in which the elevator building culminated, so long as they were built with real walls, did not bring about an architectural revolution. It was still possible to follow the analogy of the three-story, or of the five-story building, by making the architectural stories multiples of the actual stories. But when the actual stories grew into their 'teens this



MANHATTAN BUILDING.
Broadway Entrance. Kimball & Thompson, Architects.



MANHATTAN BUILDING.

New St., Entrance,

Kimball & Thompson, Architects.



DIRECTORS' ROOM, MANHATTAN

BUILDING.

Kimball & Thompson, Architects.

treatment became no longer possible. In order to prevent variety from degenerating into a riotous miscellany, it became necessary to ignore the stories in the architectural composition, or at any rate to give over the idea of individualizing either each story, or a group composed of a few stories. After a good deal of experimentation, the solution of the new problem was found in a separate treatment of the bottom and the top, and a uniform treatment of the centre, without any fear of monotony, no matter of how many stories it might happen to consist. There were no precedents, I believe, in New York for the treatment of the problem when the Manhattan Life was erected. I do not recall whether the Home Life, which was an intelligent summation of what had been ascertained up to the time of its erection, in the design of very tall buildings, in spite of the irrelevancy of its picturesque crowning hood, was a little earlier or a little later in date. At any rate a New York designer who had not attended to what the architects of Chicago had been doing found himself thrown upon his own resources when the question was of fifteen stories or more. Now there would be no doubt in his mind. He would, as a matter of course, divide its height into a low basement and a low attic, neither of them of more than three stories, and a main wall between them, which should not be so subdivided as to compromise its singleness as a principal member of the building, no matter how high it was or of how many stories.

But it by no means follows, because this is now the accepted scheme of a sky-scraper, upon which different designers give scope to their individuality only in matters of detail, that the designers of the earliest sky-scrappers were to blame for not anticipating it. Simple as the scheme seems, it is the result of a good deal of experimentation crowded into the last decade. However that may be, it is plain that the comparative failure of the Manhattan Life building, as an architectural work, has come from the deviation from this general scheme, or rather from the failure to arrive at this general scheme. As a matter of fact the building lacks the unity in variety that comes from an assemblage of related and interdependent parts. The spectator is left in doubt which is the beginning and which the middle. As to the end there is no question. The building above the cornice culminating in the slender and graceful belvedere, is in itself a well-studied and effective composition, scarcely surpassed in its own kind by anything that has been done since. But below the main cornice the subdivision of the front is such as to reduce a confusion and uncertainty fatal to unity. If the architects were doing it over now, in the light of what has been done since, they would probably build above the massive two-story entrance a single story of openings equally spaced corresponding to the story under the cornice, and treat uniformly, as the shaft of the building, the ten stories included between

these two. But with the actual treatment, it is hard to say where the basement ends or what it comprehends. It may be of two stories, of five or of seven. The most emphatic horizontal member of the front is the heavily moulded cornice above the seventh story—much too emphatic to be overlooked in the general view. If we accept this as the main division, then the building above the two-story basement has two virtually equal middles, one of six stories and one of five. No art in the management of detail could bring into unity a front thus composed, or discomposed. If the architects had been less afraid of monotony and plainness in this shaft—for it is too ornate, as well as too diversified—the variety and the enrichment they have permitted themselves above and below would have been much more apprehensible and effective. For, as has been intimated, the massive base and the rich and harmonious capital leave in themselves very little to be desired. The detail throughout is as well studied and as well adjusted as we had reason from Mr. Kimball's previous works to expect that it would be. Especially exemplary is the difference in treatment between the stonework of the Broadway front and the more elaborate and fantastic treatment of the terra cotta of the New street front—one of our architect's happiest essays in that kind.

The Standard Building is very important by reason of its magnitude and capacity, but, architecturally, it is neither here nor there. Messrs. Kimball & Thompson's work has been to frame a pre-existing building, above and on one side, and also, I believe, to extend in a steel frame construction, a building which was originally of masonry and carried upon walls. The bracketing necessary to accomplish this extension in this way accounts for the huge projecting cornice which masks it, which bounds the new work, and which constitutes the chief, almost the only feature, of the front.

The Empire Building is, architecturally, upon a very different footing. The dimensions and the site opened a very unusual opportunity for a commercial building. The owners are not the first projectors of a sky-scraper to owe an obligation to the piety which has received from secular uses the churchyards of Trinity parish, for it is the churchyard of St. Paul's that has made feasible the building of that name, the value of which is immensely enhanced by the open space opposite. But Trinity churchyard itself secures a much ampler lighting and outlook to the huge pile of white granite that is rising to overlook it, and it ensures to the new structure also the certainty of being well seen. Upon the whole the new building, so far as it can be judged in its present incompleteness, is worthy of its conspicuousness. The unusual frontage upon Rector street "keeps it down" much more effectively than any architectural devices



EMPIRE BUILDING,
Broadway and Rector Street, New York City. Kimball & Thompson, Architects.



Dobson Building—1895.

Philadelphia, Pa.

Kimball & Thompson, Architects.

could do. Even with its twenty stories it has not the spindling look that the Manhattan could not help having, spindling rather than towering. And the design makes the most of the horizontal dimension. It shows a clear understanding of the special conditions of the problem in hand. The four-story basement, and the detached single story above it, give both a sufficient and an unmistakable substructure, and the two stories signalize by the order an appropriate capital. The single story with which at intervals of three stories the shaft is banded, is not emphatic enough to confuse the general division, and, indeed, has scarcely so much importance in the fact as in the drawing. The long arcade of the base—
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1891-'92.

PHILADELPHIA & READING R. R. TERMINAL.

F. H. Kimball, Architect of Exterior of Office Building.
Wilson Bros., Architects and Engineers.

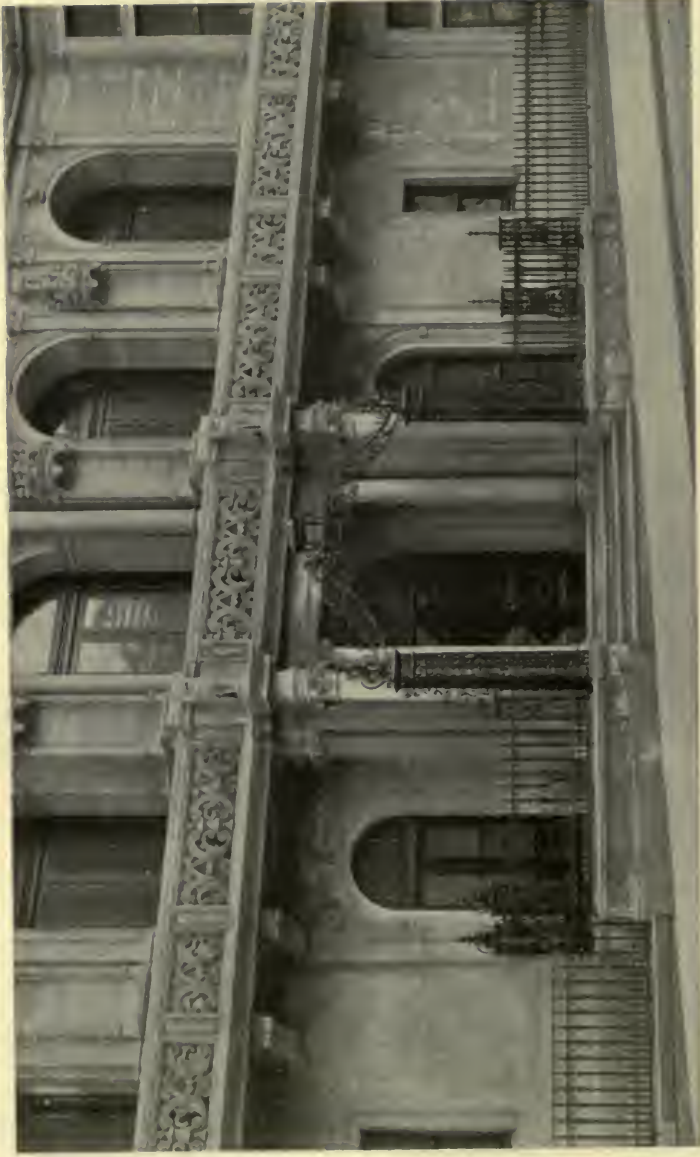
Philadelphia, Pa.



72d St. and Madison Ave., New York City.

WALDO RESIDENCE—1897.

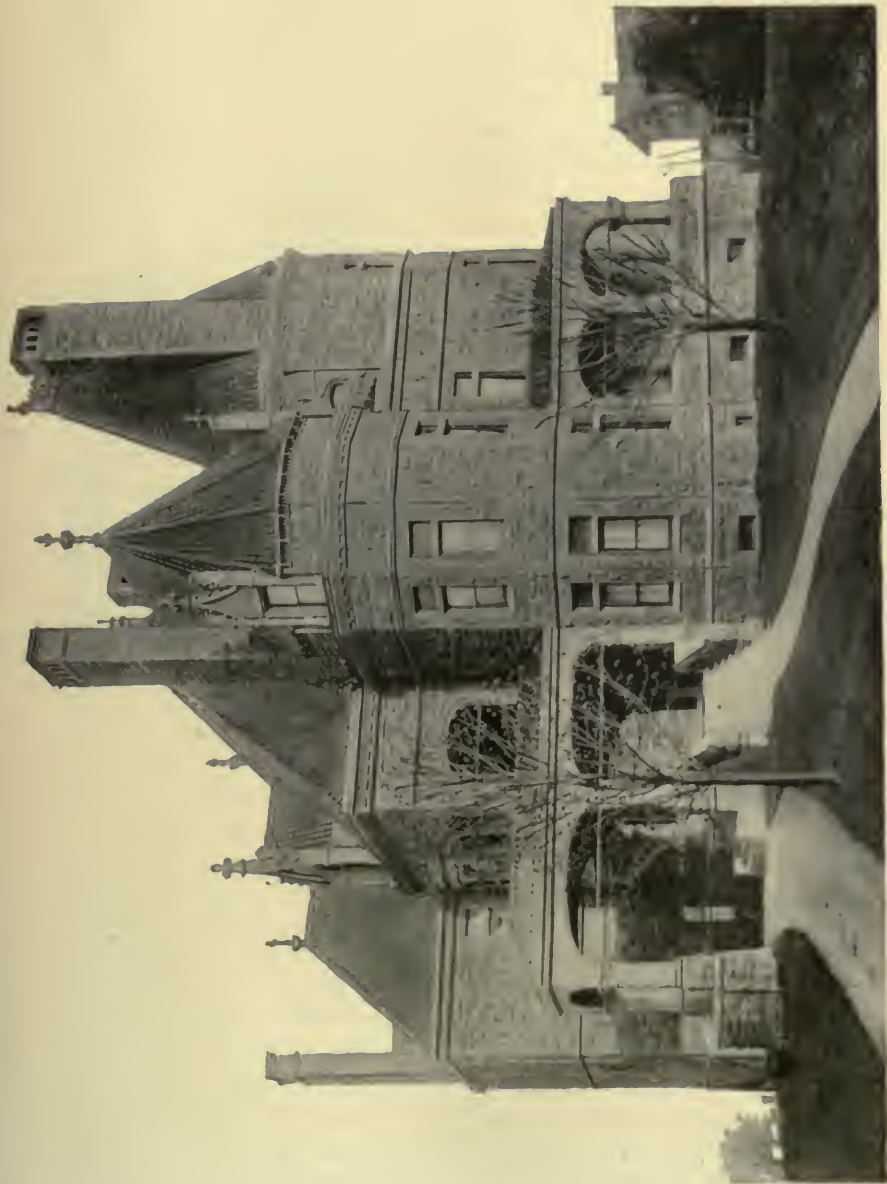
Kimball & Thompson, Architects.



72d St. and Madison Ave.

WALDO RESIDENCE—1897.

Kimball & Thompson, Architects.



COL. FELLOWS' RESIDENCE.

Montclair, N. J.

Francis H. Kimball, Architect.

ment is one of the stateliest features of our street architecture, the more effective for being confined to the centre and flanked by the more massive pavilions. The detail is excellent in its kind, and as appropriate to the intractable granite in which it is executed, as are its author's designs for terra cotta to that more plastic medium. The Empire is one of the best of our commercial buildings, and with it we may properly close this survey. But I cannot conclude it without saying that the effect of a detailed study of Mr. Kimball's work upon the writer has been to increase his appreciation of the architect's achievement. I hope that may also be its effect upon the reader.

Montgomery Schuyler.

NEW DEVELOPMENTS IN BUILDING.

AMONG the possibilities developed by the necessity on the part of owners of valuable property in New York of keeping their holdings up to the requirement of the times, is that of increasing the size of their buildings (which are except in point of size up to date)



without interfering with the use of the building and the carrying on of their business. A few years ago this would have been considered an impossibility, but necessity teaches us many things.

The most remarkable example of what can be done in this way is the Standard Oil Building.

This was a nine-story, absolutely fireproof building of the highest class in every respect, and when built a few years ago, considered the finest type of its class in the city; but the requirements of the vast corporation owning and occupying it had grown so rapidly and enor-

mously as to make it absolutely necessary to largely increase its size. How to do this without in the slightest degree interfering with their business was the problem. They could not move out, and, of course, their business could not be stopped for a single day. The problem was placed in the hands of Messrs. Kimball & Thompson, architects. They made the plans and designed the construction by which it was made possible to add six stories to the existing building and a fifteen-story addition to the north side, and incorporate it with the existing building.

The builders were Geo. Vassar & Son, 111 Fifth avenue, an old established firm. They successfully completed the work under very trying circumstances, the winter of 1896-97, during which much of the work was done, being an unusually severe one; but the Standard Oil people were able to carry on their business as usual without the slightest interruption or difficulty, and the merging of the new part into the old was accomplished without friction and almost imperceptibly.

The business was founded by Mr. Geo. Vassar, Sr., in 1850. It would be useless to go into an enumeration of the various works which they have erected in that time. It has covered every branch of the building business, including churches, schools, public and private buildings and residences.

The above is not the only unusual piece of work put through by this firm.

Another example is the handsome residence of Mr. August Zinsler, which stood for a number of years on the northwest corner of 58th street and Tenth avenue. When this house was built, it was the only house in the vicinity, and the owner expected the neighborhood would be built up with residences of a similar character. In this he was disappointed, as it, unfortunately, became a tenement-house district. Not wishing to sacrifice so valuable a building, he asked the above firm of builders what he could do about it, and they suggested his moving it to a more desirable location. He questioned the possibility of doing this; but they assured him they could do it; so he ordered them to go ahead. They took the house down, piece by piece, and rebuilt it exactly as it was before, both inside and out, on the corner of 68th street and Central Park West.

These are samples of what are attempted and done in the building business in New York to-day. Mr. Geo Vassar, Sr., is not only a very large builder but a successful one, so much so that he practically gave up active interest in the business some four or five years ago, during which time the business was conducted almost entirely by Mr. Geo. Vassar, Jr. He absolutely retired on the first of the present year. The firm is now continued under the firm name of Geo. Vassar's Son & Co. The members of the firm are Geo. Vassar, Jr., Jules J. Vatable, Harry P. Robbins.

The best proof of the manner in which the business is conducted is the list of very strong indorsements they possess from many of the best and most prominent architects of the country. They have a number of large contracts on hand at present, and are one of the busy firms of New York in the building business, and their prospects for continuing to be busy are extremely good—for as one of the firm remarked to the writer the other day they never have any difficulty in continuing to work for anyone from whom they have had one contract. The only difficulty they have is in working for them the first time, after that the task is an easy one.



BED-ROCK FOUNDATIONS.

IN no way better have Messrs. Kimball & Thompson shown themselves to be entitled to the appellation of "progressive architects" than in their search for improved methods of construction, and in their adoption of those which are distinctly meritorious. That their work, so well designed, and so well executed,



might be equally well-enduring, they have taken care that the foundations of the many tall structures which they have fathered, the very bases of their stability, have been made supremely adequate.

When Messrs. Kimball & Thompson were confronted with the problem of providing the necessary footings for the Manhattan Life Insurance Building, they encountered a condition practically without precedent in the building world. It was found that no system of foundations among all those which had ever been used for buildings would be sufficient or safe to sustain the enormous loads which

had to be cared for. Consequently, our architects promptly began to look for a system which would be adequate. The result of their investigation was the selection of the pneumatic caisson method of deep foundations. This method had long been used in founding the piers of bridges all over the world. When its feasibility as applied to the foundations of buildings, and its necessity in this particular case were explained to the architects by their engineer, they, with rare perspicacity and courage, decided on its adoption. Thus the construction of the foundations of the Manhattan Life Insurance Building became the precedent which has been followed by most of the architects of the very heavy buildings of lower New York.

The pneumatic caisson system is the third important step in the development of the modern tall building. It ranks scarcely second to either the elevator or steel skeleton construction, the other two important innovations, without which the sky-scraper would not exist. Prior to the introduction of the pneumatic caisson system the foundations were the weak spot of the high buildings. Conservative architects never had much faith in piling for structures of more than moderate altitude. As to grillage foundations, they were out of the question, so far as the sky-scraper is concerned, as it was not possible to get spread enough. The problem puzzled architects for many years, and numerous experimental solutions of the difficulty were attempted. None, however, were thoroughly scientific or satisfactory. The problem really was to carry the foundations of very heavy buildings down to bed-rock. That was accomplished for the first time by the pneumatic caisson system. The successful working out of this idea is one of the greatest achievements of this century. It eliminates all danger, even that arising from future operations in the neighborhood of a high building, the foundations of which are constructed on the pneumatic principle.

The complete success of the pneumatic caisson system, in the case of the Manhattan Life Building, of course, settled the question as to the proper way to treat similar problems.

Messrs. Kimball & Thompson used this method in the foundations of the new addition to the Standard Oil Company's Building, where it received an ingenious application. These architects also founded the massive Empire Building on caissons sunk by pneumatic pressure.

The engineers and contractors who have designed and executed these foundations for Messrs. Kimball & Thompson are SooySmith & Company. This firm also designed and built similar foundations for the lastly built portion of the Johnson Building, for the American Surety Company Building, and for the Washington Life Building.

THE FUTURE OF GRANITE.

THE race is not to the swift" might, in the light of recent events, be amended to read, "The contract is not to the lowest bidder," for one of the most important municipal contracts ever bid for in New York has been awarded to the highest bidder, Mr. John Peirce. Not only is this award a compliment to Mr. Peirce's ability and integrity as a builder but is an evidence of the important part stone plays in modern buildings, for the award was based upon the mention in the bid of the use of Hallowell granite. This granite is widely known at the present time on account of its hardness and durability, but its successful introduction throughout the United States is due to Mr. Peirce's personal efforts. As the largest stockholder in the Hallowell Granite Co., he has made the market for this stone what it is to-day. Mr. Peirce comes naturally by his knowledge of building stone, as his father was one of the proprietors of the Mount Waldo quarries. He is interested, also, in the Bodwell Granite Co., of Rockland, Me.; the Mt. Waldo Granite Co., of Frankfort, Me., and the Stony Creek Red Granite Co., of Stony Creek, Conn. He is President of the New York and Maine Granite Paving Block Co., of 5 Beekman street, New York City. The growth of granite as a building material has been remarkable. It has, it is true, had its ups and downs, like any other building stone, but it is gradually returning to general use, not only for public buildings, but also for private residences, where its appearance, after being exposed to the weather for several years, is a strong consideration with the owners. It is generally conceded that Mr. Peirce has played a large part in this restoration and increase in favor of granite. Its increased use at the present time is not ephemeral, but is a steady and unyielding growth.

In the first place, architects are beginning to recognize its monumental character. For the tall building particularly, an artistically heavy material is necessary because of small piers and slim wall-spans, inevitable in structures where light is of prime importance. With the use of skeleton construction, the piers of buildings have been reduced more than ever until they are now scarcely more than narrow pilasters. When these are built of brick, even in combination with terra-cotta, the general effect usually has a certain thin and cheap look about it, particularly if the building is one of great altitude. An appreciation of this defect has restored stone generally to favor again, so that it now occupies the old-time pre-eminence

whence it was ousted some years ago by the great popularity which clay products acquired. Granite particularly has been restored to favor where solidity and mass are required. Unquestionably it is artistically superior to any other stone for the architectural sub-structures of tall buildings, and it has been used both rough and dressed in many of the most successful designs built in the last few years, as may be seen by the list given below. Let anyone compare, for instance, the Union Trust Co.'s Building, the Times Building, the new Empire Building, or the American Surety Building, all built entirely of granite, with other buildings of, perhaps, as artistic design, but carried out in brick. It will be seen at a glance how much is gained architecturally by the use of the heavier and more monumental material.

The list of buildings subjoined may be used, not only to illustrate this point, but to show how the leading architects of the country have recognized the necessity for the use of granite for the complete realization of their designs. Mr. Peirce has heartily co-operated with the profession to supply them with granite answering all their requirements, structural and artistic.

Mr. Peirce has built or furnished the stone for the most expensive buildings in this country. The United States Postoffice in Chicago, Henry Ives Cobb, architect, now building, at a cost of two million dollars; the Washington Postoffice, W. J. Edbrooke, architect, at a million and a half, and the Buffalo Postoffice, W. Martin Aiken, architect, at one million. Among the prominent buildings erected by him are the Madison Square Garden, Sherry Building, and Columbia University Buildings, of McKim, Mead & White; the Union Trust Co., the Times Building and the Erie County Savings Bank, of the Architect George B. Post; the Empire Building, of Kimball & Thompson; the Mutual Life Building, the Bank of America, and the Mechanics' National Bank, of C. W. Clinton. Other buildings include the American Surety Building, Bruce Price, architect; the Bank of Commerce, and the Johnston Building, of Jas. B. Baker; the Hotel Martinique, Henry J. Hardenbergh, architect; the Cushman Building, C. H. P. Gilbert; Cathedral of St. John the Divine, Heins & LaFarge; Carnegie Library, Allegheny, Pa., Smith Meyer & Pelz; Methodist Book Concern, Edward H. Kendall; and the Macy Building, Schickel & Ditmars. Mr. Peirce's work as a general contractor and builder has been confined chiefly to the municipal and government buildings in the above list. These are among the handsomest and costliest in the country. In all the other buildings this stone has been used entirely or partially. The contract for the Hall of Records is a most important work, and its completion will establish Mr. Peirce as a builder in the front rank of not only New York but American contractors.

ARCHITECTURAL IRON AND BRONZE WORK IN AMERICA.

IT is a well-established fact that all nations which have been made the subjects of geological or antiquarian research have been users and founders of bronze, and later of iron for various purposes. Among the most prized relics of prehistoric days found in museums and in the private collections of antiquarians are found bronze articles, mainly consisting of weapons of defense and offense and other specimens of bronze articles of adornment and religious ceremony. Scientists tell us that primitive man was a skilled bronze worker many centuries before the Iron Age arrived; that the Bronze Age, it is agreed, lasted until 200 years before the Christian era, when the Iron Age, which continues to run its course, began. Since that time architectural and artistic bronze and iron work in countries both European and Asiatic has been no mean criterion of the advances in civilization made by that country. Thus we find the armorers of France at the time of the Crusades hammering out artistic devices which excelled in design and workmanship those of any European country. Japan in the East attained a high degree of proficiency in artistic iron and bronze work several centuries ago, far outstripping any of her Eastern compeers in technical skill, modeling and designing.

In America the growth of in the development of architectural and artistic iron and bronze founding may be said to have begun about thirty years ago. Before that date but little of the now old-fashioned hammered wrought iron work was done in America. Italian and French wrought iron designs were greatly copied in the work done, and but few of the skilled workmen were native-born Americans. The wealthier class of people imported most of the ornamental iron and bronze work from Europe, for the class of work done was greatly inferior to the transatlantic work in handicraft and design.

The first step in the growth of architectural iron work in America was not considered extremely radical at the time. It consisted in the use of a series of iron columns in imitation of stone work. Gradually the treatment became more ornamental and grill work was introduced. Another opportunity came with the circling stairs, and finally with the advent of the elevator. The enclosures for the elevator shaft were originally constructed of wood and afterwards sheet iron when the demand for more safety against fire was made, for it was found the elevator shafts proved like flues to a fire carrying the flame and consequent destruction throughout the whole building. The building laws were so framed soon after the advent of the elevator that they regulated the enclosures of the shaft to metal casings. One of the late examples of architectural iron work completed in this city is that of the stair and elevator work in the Empire Building, Rector street and Broadway.

The stairs and elevator enclosures in modern office buildings now form one of the main features of the building, and a great deal of attention is given by the architect to design this work so as to harmonize with the surroundings, which are frequently of richly colored marbles, and highly decorative plaster work. In designing the elevator enclosure for the Empire building, the architects, Kimball & Thompson, were careful, owing to the large space to be enclosed, to so design the work as not to appear too massive; consequently a new feature was introduced in making the columns a combination of cast and wrought iron, which enabled the manufacturers, Messrs. Richey, Browne & Donald, to produce a much lighter effect than would have been the result had the design required that these columns should have been made of cast iron alone. One of the special features of the elevator enclosures is the ease with which the doors are moved, owing to a special device just discovered, and for the first time used in this building, in the way of an anti-friction trolley, which is a great improvement over similar devices now in use, owing to its simplicity and durability, and creating less noise than any other. In order to produce the best results in constructing the stairs, and this applies to the elevator enclosures also, the construction was so arranged as to avoid the use of any visible screws or bolts, which is a very great advance over any work, previously produced, in its final appearance. The elevator cars in this building are well worthy of the attention of those who are interested in architectural design, as they depart very largely from the ideas which have prevailed in reference to the design and construction of iron elevator cars. In this connection it may be remarked that Mr. R. B. Browne, of Richey, Browne & Donald, made working drawings for the first modern iron elevator car used in America or Europe. This enterprising firm has also succeeded in developing an imitation of bronze for finishing purposes. The finish of the stair work in the Empire building so closely resembles real bronze that to the uneducated eye it appears to be the solid metal.

Messrs. Richey, Browne & Donald, as an architectural iron working firm, has contributed in no slight measure to the development in recent years of artistic iron work in America. The members have proven themselves to be most enterprising in securing the best facilities for carrying out the most elaborate designs and in completing the largest contracts for architectural iron and bronze work in America. Among the many important contracts performed by this firm may be mentioned the Astoria Hotel, Henry J. Hardenbergh, architect; Empire Building, Kimball & Thompson, architects; Manhattan Life Building, Kimball & Thompson, architects; United Charities Building, R. H. Robertson and Rowe & Baker, architects; New York Life Building, McKim, Mead & White, architects; Mrs. E. F. Shepherd's residence, McKim, Mead & White, architects.

ART WORK IN HARDWARE.

A WALK up Broadway, from the Battery, at the present time will show the results of the great activity which has prevailed during the last half-dozen years, and is still prevailing, in the construction of large office and mercantile structures in or contiguous to that thoroughfare.

The entire appearance of the main artery of the city has been changed, and the "skyline," which is one of the most marked traits of the physiognomy of any city, has been so altered as to be scarcely recognizable by one who knew what it was a few years ago, but has not witnessed the reconstruction that has been carried on so energetically in the last few years. It is not necessary to go very much further back than 1890. There were, indeed, tall buildings prior to that date, but they were rarely of more than ten stories, that being practically the limit set by constructional difficulties. The true skyscraper was ushered in by the system of steel skeleton construction.

While it is true that the introduction of the skeleton frame made these mammoth structures possible, it is also equally true that the skill and energy of a comparatively small circle of men has made them a practical success. The buildings on Broadway, below City Hall Park, which are about completed, include the Empire Building, Kimball & Thompson, architects; the Washington Life Insurance Company, Cyrus L. W. Eidlitz, architect; the Singer Building, Ernest Flagg, architect; the Park Row Building, R. H. Robertson, architect, and the Franklin Building, Clinton & Russell, architects, which is just off Broadway, on Murray street. An enumeration of the architects of the greater part of the large office buildings down-town would result to a great degree in a repetition of the names of the above architects.

If this is true of architects, it is still more true of the contractors. For instance, in the five representative buildings mentioned above, where we find five separate architects, the hardware for all was furnished by one firm, P. & F. Corbin, of Nos. 11, 13 and 15 Murray street, in the new Franklin Building.

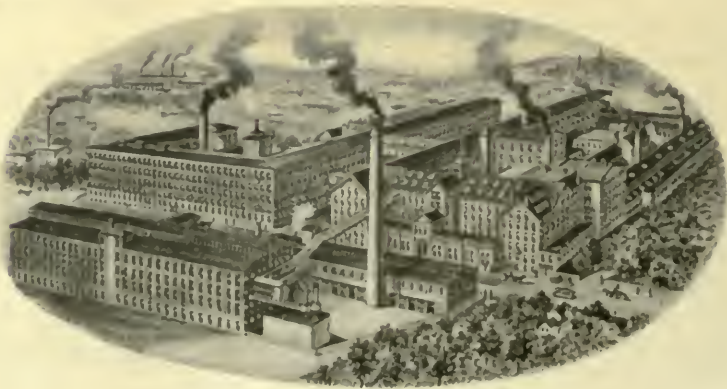
In addition to the above, this firm has also done the Park Building, Pittsburg, Pa., George B. Post, architect; the Dakota Apartment House, Henry J. Hardenbergh, architect; the Edison Building, Carrère & Hastings, architects; the Shoe and Leather Bank Building, Cady, Berg & See, architects; the Lakewood Hotel, Schickel & Ditmars, architects; Columbia University, McKim, Mead & White, architects; and for Messrs. Kimball & Thompson, the Standard Oil Building and the Garrick Theatre.

Artistic working in metal has been a development of the last twenty years. Previous to that time the metal work in buildings

was merely a necessary evil, generally totally out of keeping with the character of the architecture and seldom possessing any artistic merit. It was in very few cases that the general scheme of the architect was carried out in this smaller work. The aberrations of this kind which we see in the old buildings at the present day are familiar to us, and the contrasts are often so glaring as to forcibly attract our attention. The change within a few years, however, has been marked. The metal work in the modern building has become a subject for serious consideration and often of large expense. For instance, the locks and lock plates in a large building recently erected uptown cost a small fortune in themselves. The elimination of everything not absolutely essential in the new office buildings has made artistic hardware a large factor in making these structures attractive to the eye.

Improvement, of course, has not been confined to the artistic side of hardware. Great attention has been given to the mechanical qualities. Architects have learnt that there is no economy in equipping a building with cheap hardware, for it is this part of a building that receives by far the greatest amount of service. It is constantly being operated and handled, and, therefore, should be of the most substantial character in point of mechanical construction and weight. This is particularly true of the fixtures needed in the large modern office building, the perpetual traffic through which gives the hardest possible usage to door fixtures. Experience has demonstrated to architects that nothing but the best is really cheap.

The firm of P. & F. Corbin is one of the largest hardware manufacturers in New York, if not in the United States. Their works include many of the largest and finest of the modern structures which are making New York architects and builders famous. How large a part they have played in the development of artistic hardware is readily seen from the fact that in each of these buildings the hardware is made from special designs, and that they are the representative buildings of the last few years.



SOME FACTS ABOUT PORTLAND CEMENT.

IT is gratifying to know that we are at last producing cement in this country which is equally as good, if not better, than that made abroad. Twenty-five years ago the only first-class cement which we were able to get came from England. A few years later, however, the Germans began its manufacture on an extensive scale, and commenced gradually to supersede their English neighbors. This result was obtained by paying careful attention to the minute details of manufacture, and by applying scientific methods to the production of what seemed to be a somewhat crude and common article.

The first Portland cement which was imported into this country was far too expensive to render it practicable for general use. But its superiority over the domestic quality was quickly recognized, and it began to be imported on a scale which speedily brought a reduction in price. The Germans were beginning to show the world the fallacy of the belief that Portland cement could be made only in England. It now only remained for American enterprise to enter the field and compete with the foreign manufacturers.

Among the first companies to begin the manufacture of Portland cement in this country on a large scale was the Atlas Cement Co. It was established in 1889. It built large mills at Copley, Pa., and Northampton, Pa., and was soon one of the largest producers in the United States. It has a present capacity of four thousand barrels a day, which will shortly be increased to ten thousand. For Kimball & Thompson this company has done much work. Two of the latest for which they are supplying the cement are the Empire Building and the Standard Oil Building. The following list includes the major part of the important buildings built in New York during the past few years, as well as some in course of completion. The frequency with which the names of the architects of world-wide reputation is repeated here is the highest credential which could be given:

Besides the buildings of Kimball & Thompson, the cement of the Atlas Cement Co. has been used in the St. Paul Building, Havemeyer stores, Equitable Building, Weld Estate Building and Coe Estate Building, for all of which George B. Post was the architect; the Sherry Building, the New York Life Insurance Building, and the University Club, of McKim, Mead & White; the Exchange Court Building, Clinton & Russell, architects; the Singer Building, Mills Hotels, Nos. 1 and 2, and Scribner Building, of Ernest Flagg; the American Surety Building, Bruce Price, architect, and the Hart-

ford Fire Insurance Building, Cady, Berg & See, architects. Other important buildings are the Townsend Building, the Fidelity and Casualty Building, and Washington Life Building, Cyrus L. W. Eidlitz, architect; the Gillender Building, of Berg & Clark, and the Johnston Building, the Presbyterian Building, and Bank of Commerce, J. B. Baker, architect.

The tensile strength of Atlas Cement, established by impartial tests, has been found to be greater than any other cement, domestic or imported. Its use is not confined to buildings. It is employed by engineers, because of its excellent qualities, in lighthouse work and in the construction of docks and bulkheads, and many of the great railroads of the country specify it for their heavy masonry in preference to any of the imported cements.

The users of Atlas Cement include all the great architects and engineers of the United States.



Northampton, Pa.

THE WORKS OF THE ATLAS CEMENT COMPANY.

Daily Output, 4,000 Barrels.



A REVIEW

OF THE

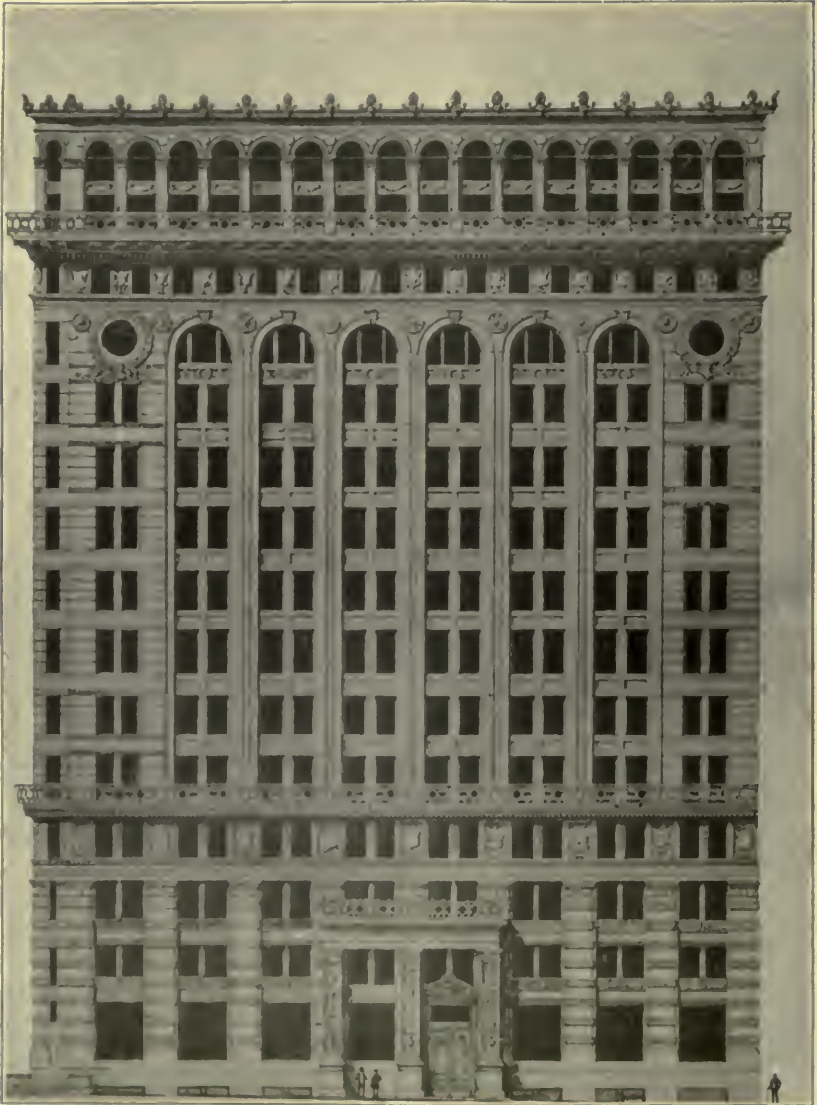
WORKS

OF

CLINTON & RUSSELL

BY

RUSSELL STURGIS



DESIGN FOR CHESEBROUGH BUILDING.

Pearl and State Streets, New York City.

Clinton & Russell, Architects.