THE

Architectural Record

PUBLISHED QUARTERLY,

WITH ILLUSTRATIONS

VOLUME III. July, 1893--July, 1894

PUBLISHED BY

THE RECORD AND GUIDE,

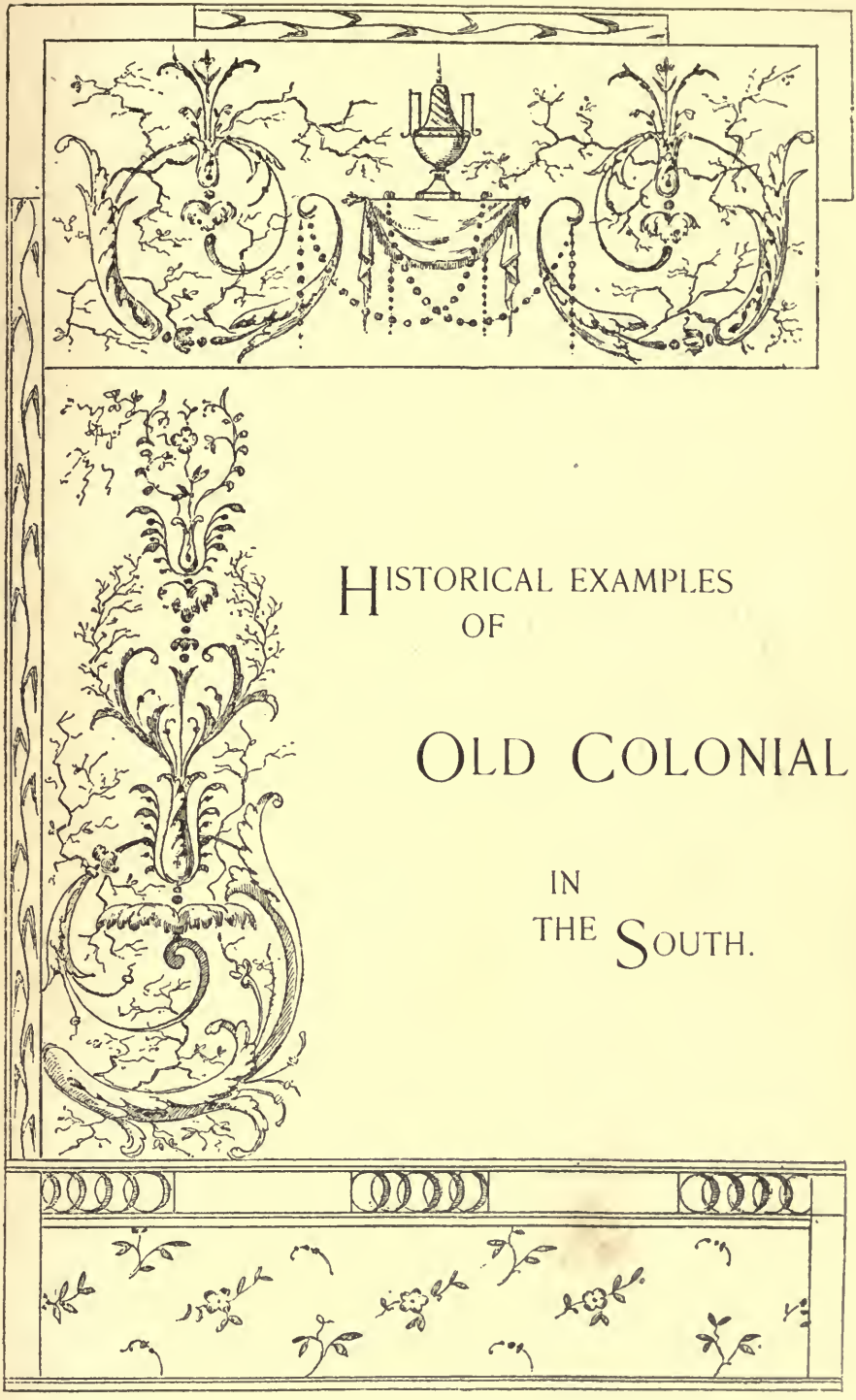
NEW YORK CITY.

CONTENTS

OF

THE ARCHITECTURAL RECORD.

VOLUME III. JULY, 1893—JULY, 1894.



HISTORICAL EXAMPLES OF OLD COLONIAL IN THE SOUTH.

SUGGESTED COLOR SCHEME FOR BED ROOM.

The
Architectural Record.

VOL. III. JULY-SEPTEMBER, 1893. NO. 1.

THE CHURCH OF THE SACRED HEART AT MONTMARTRE.

ITS ORIGIN AND CONSTRUCTION.

TOWARDS the end of the year 870, when France appeared exhausted and ready to succumb under the weight of the dreadful misfortunes which were befalling her, two ardent patriots and earnest Christians made a vow to erect a monument to the glory of the Sacred Heart of Jesus, in order to obtain the divine protection for their unfortunate country.

In spite of the unfavorable ending of the war, they did not consider themselves released from their vow and continued to intercede for their native land. Their prayers were answered, for, though France was vanquished, we cannot but recognize the intervention of the Almighty in her wonderful recovery from so many disasters.

The opponents of this National monument have declared that it had a political origin, which is a great mistake on their part; its inception is entirely due to the irresistible impulse which urges Man ever to seek Him whose power is infinite.

From the beginning, the Work has not changed, either in object or sentiment, and the great majority of believers have rallied round it.

It has been remarked that these same believers are far from numerous in certain French political parties; but whose fault is it? Have these parties done anything to attract or keep believers? Some of them, on the contrary, have done all in their power to drive them away.

In reality, the National Vow to the Sacred Heart of Jesus rests upon the two fundamental principles which have in all ages been the making of great nations and the inspiration of the noblest actions:

God and Country.

DESCRIPTION.

As soon as peace was declared and communication between the different parts of France was re-established, the originators of the Work commenced actively to obtain adherents and to collect subscriptions. They were completely successful in this double mission, for, at the beginning of 1873, when the foreign military occupation was still costing the country heavy sums of money, several thousand subscribers and 600,000 francs in cash had been secured. This result left no room for doubt as to final success, and therefore, in March of that same year, the Archbishop of Paris, Monsignor Guibert, who had accepted, on his own behalf and that of his successors, the high patronage of the work, selected the summit of the hill of Montmartre as the site of the new church.

From three points of view, the picturesque, the religious, and the histori-

THE CHURCH, FROM LA RUE DES MARTYRS.

THE PRINCIPAL FAÇADE.

cal, this choice was the best that could have been made; in fact, Napoleon I., whose eagle eye was so marvellously keen in distinguishing good sites, chose Montmartre for the erection of a Temple of Peace. Events did not allow him to execute his scheme, and shortly afterwards the place thus selected was occupied, first by a battery of French guns, and subsequently by thousands of English soldiers.

It is now thoroughly established that in the time of the Gauls the druids possessed a temple on this hill. When the Romans took possession of the country they constructed on Montmartre an altar to Mars; there also Saint Denis and his companions were beheaded, and on the spot where they were executed the faithful erected a chapel, then a church, and finally a monastery, which were, until 1793, among the most frequented shrines for pilgrims in France.

The position of the hill of Montmartre, dominating the capital, caused it to be often chosen as a camping ground by the French and foreign armies that fought around Paris. Lastly, in 1871, the defenders of the Commune made it their fortress and carried there the guns which they had seized. On this account Monsieur Thiers, remembering how difficult it had been to dislodge them, wished to construct on Montmartre a fortress capable of resisting either internal or external enemies. The choice made by the Archbishop upset his plans. The venerated prelate, however, succeeded in convincing the Chief of the Government that, for the maintenance of order, the pious rampart which he desired to raise would be more effectual than cannon-lined walls, and on the 25th July, 1873, the French National Assembly passed a law by which the construction, on the summit of Montmartre, of a church dedicated to the Sacred Heart of Jesus, was declared to be a work of public utility.

Shortly after the passing of this law, a public competition was held for the erection of the proposed church. This competition was open to foreign as well as to French architects. The plans of M. Paul Abadie were chosen from amongst those of seventy-eight competitors. This design consisted of a crypt, or underground church, surmounted by a basilica, or upper church, the principal feature of the latter being a great central dome 16 metres in diameter and pierced with large windows to permit of the free diffusion of light inside. Around the base of this great dome there are four smaller domes, upon which the principal one appears to lean, as it were, in order to reach upward to the sky. The belfry, or campanile, is situated quite at the apsis of the structure.

This design, conceived in the Romano-Byzantine style, was, immediately after the close of the competition, subjected to various criticisms. The greater number reproached Mr. Abadie for not having adopted the Gothic style, of which there are so many masterpieces in France. Gothic is, in fact, at the present day the style in fashion, and it would appear impossible to construct a fine religious fabric without copying, from a distance, a church of the fourteenth or fifteenth century. The admiration which exists for this epoch is perfectly justified, but this infatuation must not hide from the sight of worshipers of Gothic architecture the fact that the shape of the ground is not always adapted to this style, and that the first duty of an architect is to utilize the whole of the space placed at his disposal. It is well also to remark that modern constructors are placed in circumstances entirely different from those in which their confrères of the Middle Ages found themselves. At the latter period transport was extremely difficult, while labor cost scarcely anything; indeed, the artists and workmen employed in church building at that time were often contented with food for their bodies and the prayers of the faithful for the salvation of their souls as the reward of their toil. The architect was therefore naturally led to employ, as far as possible, materials small in size and easily transported, and to make large use of labor, for mouldings and sculptures. Now, however, at the end of the nineteeth century, enormous masses are transported with ease; builders are consequently led to use

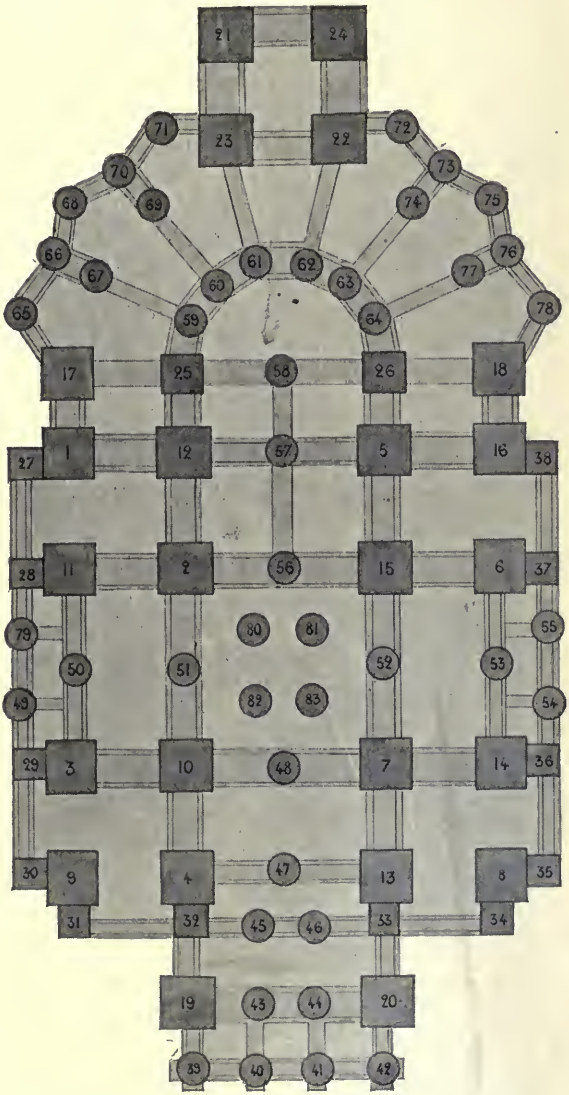
VIEW OF WEST FAÇADE.

blocks of great size, which hastens the completion of the edifices, and they restrict as much as possible the use of mouldings and sculptures, as these demand much labor, the cost of which is exceedingly high at the present day.

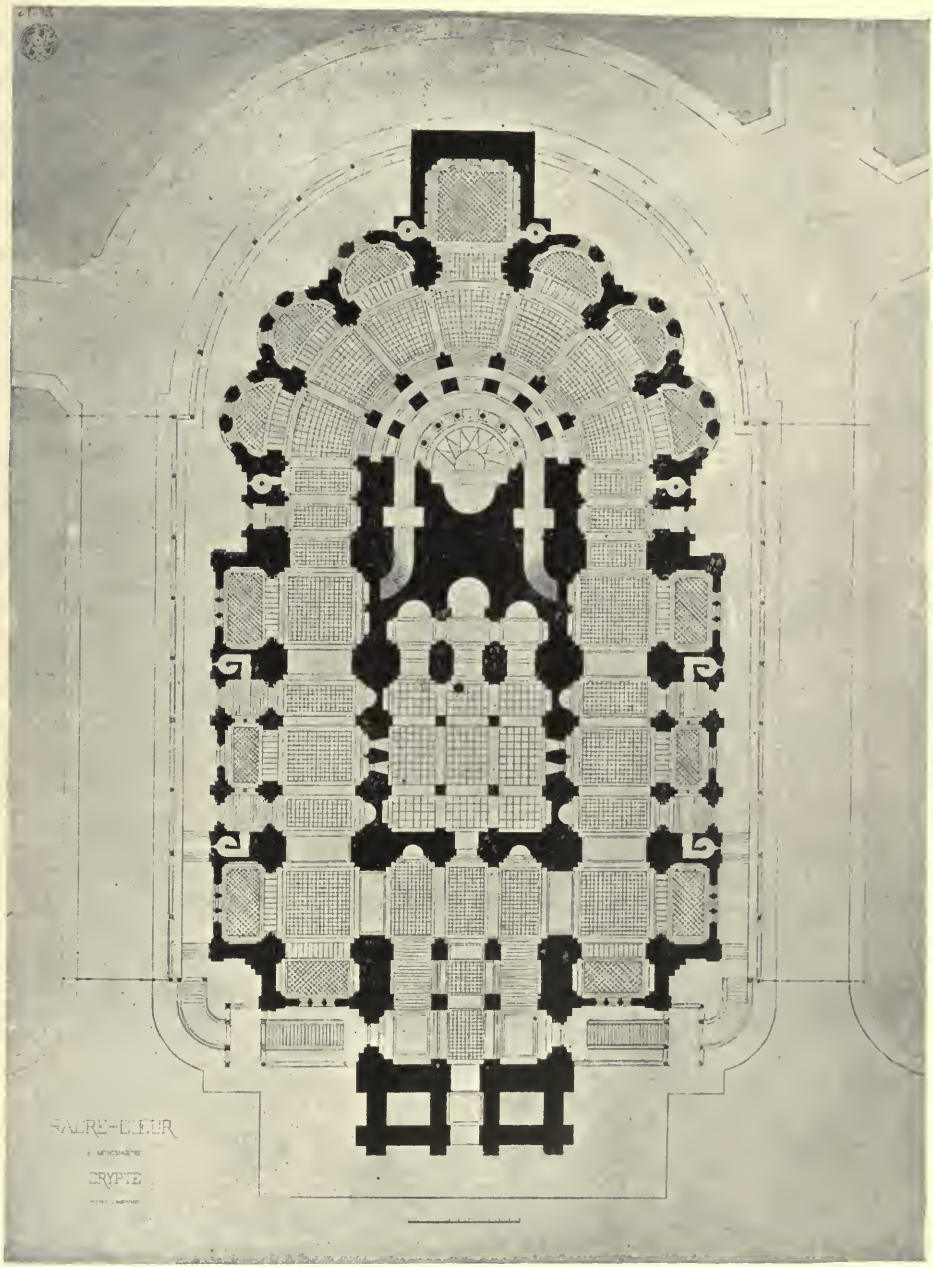
THE FOUNDATIONS.

In spite of the criticism, more or less prejudiced, directed against the design, the Archbishop persisted in his determination, and about the middle of 1875 he gave the order to commence the work of construction.

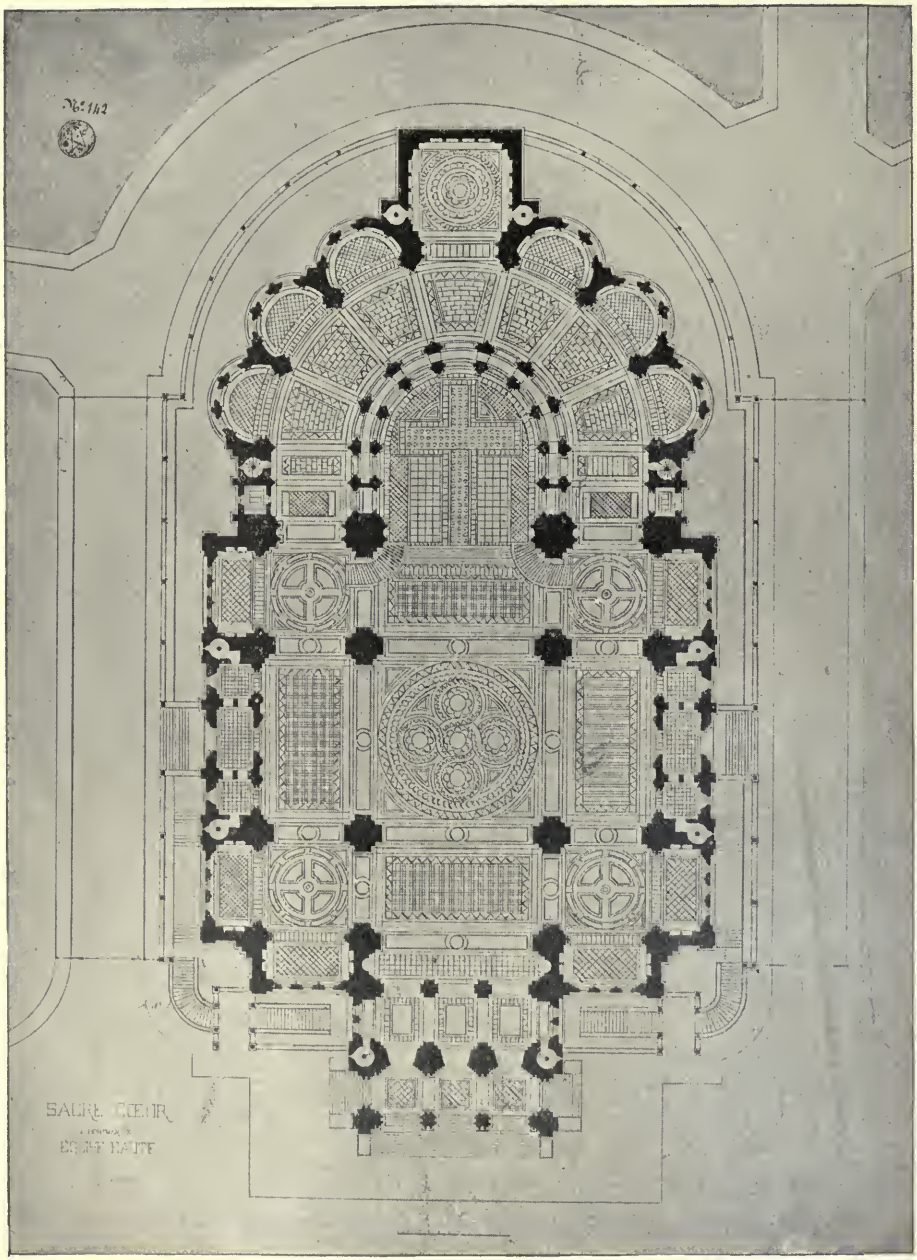
In digging the soil for the foundations of the future edifice, beds of clay were discovered, which, owing to the proximity of a steep slope, might have caused landslips, carrying the church with them. This was all the more to be feared, as the entire hill consists of sand, marl, clay, etc., in formations varying in thickness and without any cohesion between them. The architect cast about him for some effectual means of assuring the stability of his work, as, notwithstanding all these difficulties, it was still determined that the church should be erected on the summit of Montmartre, the finest site in all Paris. After repeated trials, the following plan was decided upon: Abandoning the idea of letting the structure rest on the ground of which the hill is formed, it was resolved to seek a foundation at the base of the butt upon the thick stratum of gypsum which underlies the greater part of Paris and whose crushing resistance is almost without limit. To obtain this result shafts were sunk at each of the principal points of the edifice. These shafts, which passed through the layers of clay and marl down to the gypsum, were then filled with rubble-work consisting of millstone grit and a mortar made of hydraulic lime and river sand. At the top, a little below the floor of the crypt, these shafts were connected together by arches made of dressed freestone, thus forming a series of bridges on which rest all the parts of the building except those bearing upon the shafts



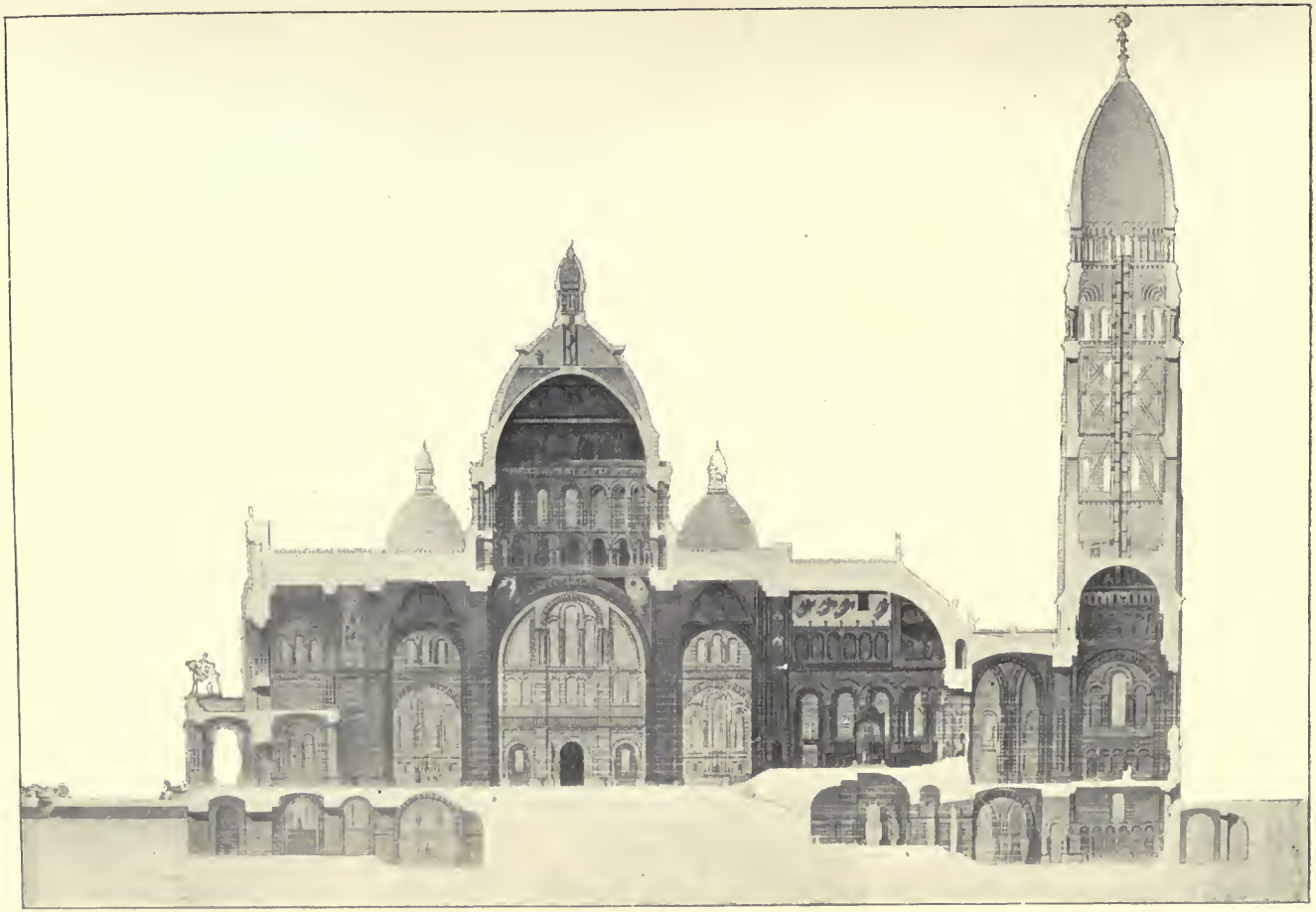
Plan showing arrangement of the foundations. The lighter tint indicates the arches, the darker tint the shafts.



GROUND PLAN OF CRYPT.



GROUND PLAN OF CHURCH.



LONGITUDINAL SECTION.

TRANSVERSE SECTION.

themselves, so that no portion of it lies directly on the ground of the hill. The execution of these foundations was a work of some magnitude, as it was necessary first to dig out and then to fill with masonry:

Twenty-four large square shafts with sides measuring 5 metres.

Two large square shafts with sides measuring 4 metres.

Twelve large square shafts with sides measuring 3 metres.

Forty-five round shafts measuring 3 metres in diameter; in all, eighty-three shafts, each of them having a uniform depth of 33 metres 60 centimetres below the bottom of the large excavation made for the crypt. To sum up, the bottom of the shafts were 41 metres 22 centimetres below the surface of the summit of the butt. The digging of these shafts, not including the arches, involved the removal of 37,000 cubic metres for each. The work was difficult, inasmuch as it had to be done in somewhat loose ground, necessitating the lining of the shafts as fast as they were driven with jointed planks solidly held in place by means of wooden frames in the square shafts, and iron hoops in the round ones. In view of the friable nature of the earth and the nearness to each other of some of the shafts, it was decided, in order to avoid falls, not to commence excavating any shaft until the neighboring ones were completely filled with masonry. Notwithstanding all these difficulties, the work was executed without accident, and, in the early part of 1878, the shafts and arches being finished, the construction of the crypt was commenced. Here the unknown, so to speak, was left behind, and operations were begun upon work which, while more finely wrought than ordinary buildings, was of a kind that had often been done before. This was not the case with the foundations, which were certainly the most important and the most complete of their class hitherto made.

THE CRYPT.

Crypts, or underground churches, exist in a certain number of religious edifices of the Middle Ages, but in every case these crypts only extend underneath a small part of the structures to which they belong, whereas in the case of the Church of the Sacred Heart at Montmartre the crypt extends under the whole surface of the basilica; it is, therefore, properly speaking, a second church. This is at present the only part of the monument that is entirely finished, and all visitors praise it enthusiastically. This crypt has a mean height of 9 metres to the keystones.

The most remarkable part of the crypt is undoubtedly Saint Peter's Chapel, situated directly under the choir of the upper church. This chapel, the floor of which is 1 metre and a half higher than the surrounding aisles, is constructed on the semi-circular plan; its arched roof, forming the quarter of a square, is supported by a first row of short columns, beyond which there are two rows of solid square pillars connected together by a series of wide arcades.

The seven side chapels which compose the apsis of the lower church radiate from the centre of Saint Peter's Chapel, so that the visitor, standing at this spot, embraces at a single glance, through a beautiful arrangement of columns and pillars, the whole of this part of the monument.

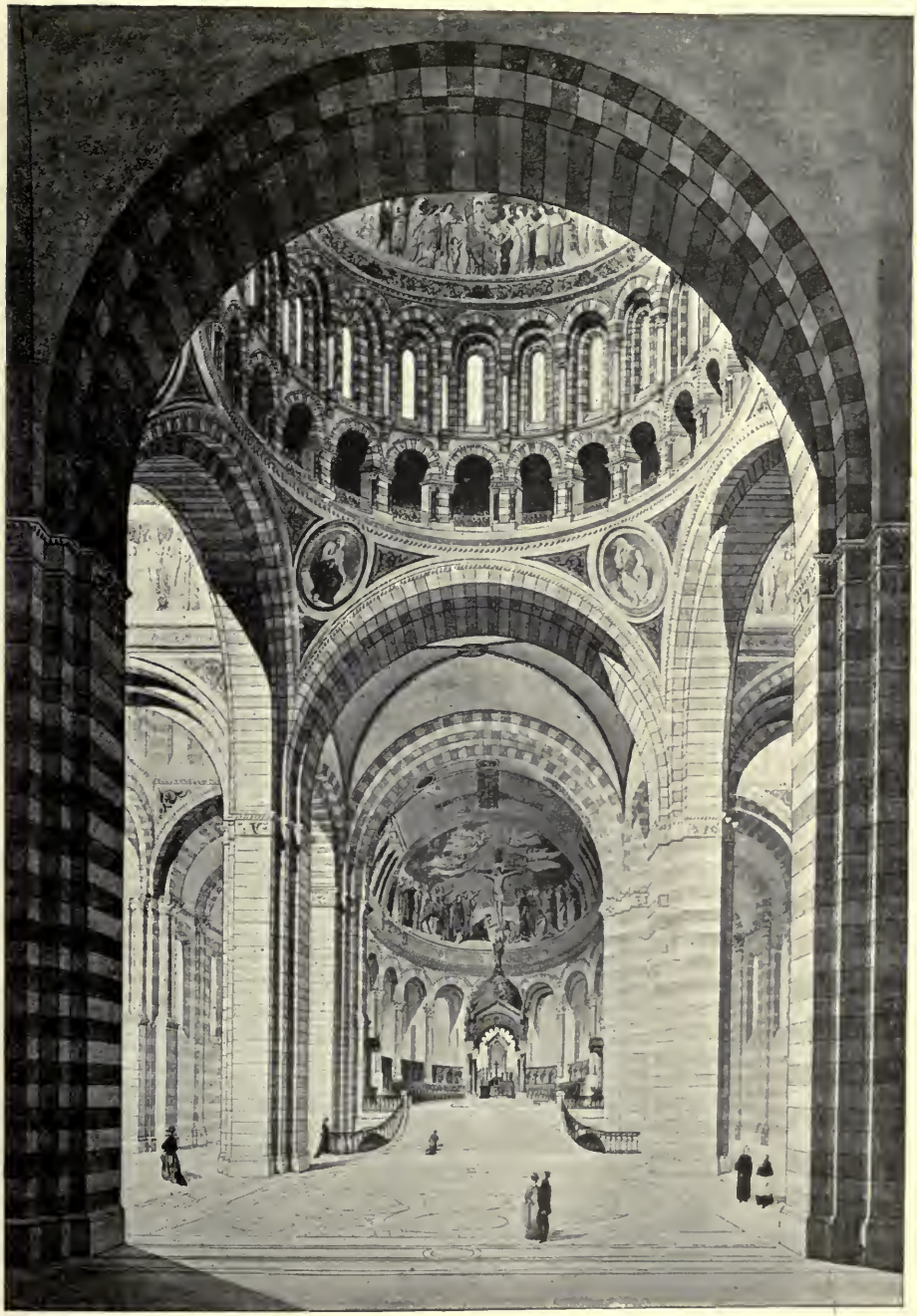
From the ends of Saint Peter's Chapel two fine staircases ascend to either side of the communion table, placed at the entrance to the choir. These staircases enable processions starting from the upper church to defile into the crypt.

The "Reliquary," or place where relics are kept, is at the back of Saint Peter's Chapel. It is situated between the four massive piers on which rest the pillars supporting the great central dome of the upper church. This is the only obscure part of the crypt. When finally fitted up it will be lighted by lamps of a design harmonizing with the purpose of the chapel. Light reaches the other parts of the crypt by means of an area or dry moat cased with masonry and about three metres wide, the bottom being only a few steps higher than the floor of the crypt. This moat is composed of two similar parts, each beginning at the apsis end

THE CRYPT, UNDER THE APSE.

VIEW ALONG THE NAVE.

THE DOME DURING CONSTRUCTION.



UNDER THE DOME.

VIEW OF APSE.

VIEW OVER APSE, SEPT. 27, 1885.

of the edifice and terminating on either side of the porch by a wide flight of steps which comes out at the level of the streets surrounding the church.

Eight doors give easy access from the different parts of the crypt to the surrounding passage-way or moat; therefore overcrowding, which is so difficult to avoid in places where many pilgrims congregate, need not be feared at Montmartre. Furthermore, communication with the upper part of the church is provided for not only by the large staircases leading up from St. Peter's Chapel, which are mentioned above, but also by eight other smaller flights of steps.

THE FAÇADE.

The principal façade of the monument looks upon the city. In front there is a small open space, extending to the steep slope of the hill. From this open space, situated 92 metres above the level of the ground on which the Eiffel Tower stands, the porch is reached by ascending fourteen stone steps. This porch is, in reality, only a sort of veranda, or covered approach; it has therefore been made small in comparison with the remainder of the edifice. It is surmounted by a terrace, easy of access and overlooking all Paris. From this terrace it would be possible for a prelate, in imitation of what takes place in Rome, at Eastertide, to bless not merely the city, but the entire diocese. From the porch one enters the basilica on the same level.

THE BASILICA.

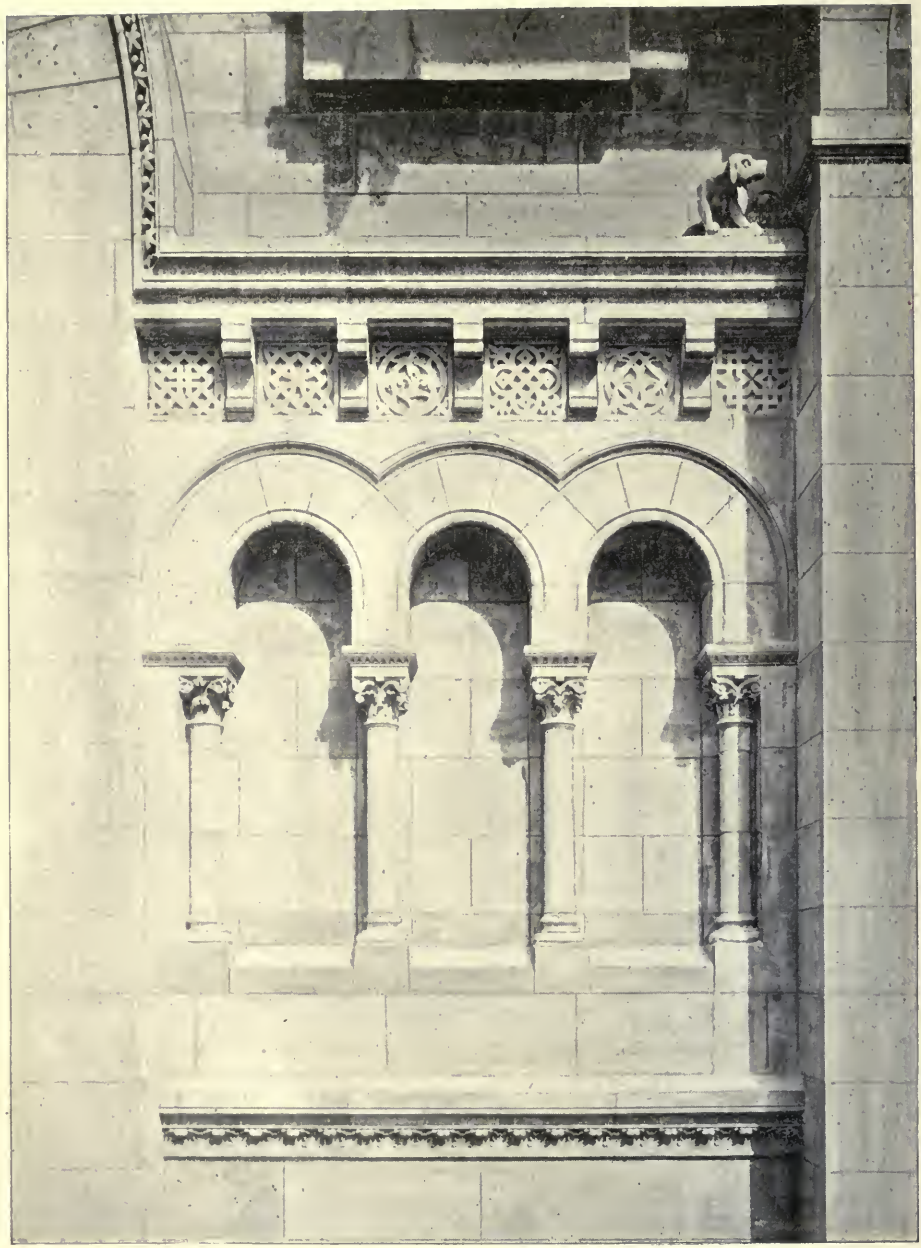
The general plan of the upper church is a square, joined on the apsis side by a semi-circle, whose diameter is equal to the side of the square. From the centre of the square rises the great dome, which is 16 metres in diameter and 52 metres high inside. It is flanked at the angles of the square by four small domes, 8 metres in diameter, connected two by two, parallel to the sides of the square, by full-centered arches of 16 metres span and 8 metres in width. On one side, towards the apsis, in continuation of one of these arches, and having the same span, is the choir. This is semi-circular at the rear, and its floor is raised 1¼ metre higher than the rest of the church. It is surrounded by a double line of pillars supporting the vaulted roof, which will later on be ornamented with rich mosaics. A semi-circular aisle or deambulatory, 8 metres wide, runs around the rear of the choir. There are seven chapels on the side of this aisle that is furthest from the choir. Six of them are semi-circular, with roofs in the shape of a quarter of a sphere, the seventh, placed at the back of the altar, in the axis of the structure, is square. This chapel is surmounted by a small dome, built inside the belfry, or campanile, which rises to a height of about 90 metres above the chapel. Six rectangular chapels open upon the two other sides of the upper church.

Besides the entrance by the porch, the basilica is reached from each of the two lateral façades by large doors, in front of which are wide flights of steps in the form of bridges thrown across the moat surrounding and lighting the crypt. In the interior there are galleries above these doors.

THE DIRECTION OF THE WORKS.

During the first few years the works were under the direction of Monsieur Abadie, the eminent architect who planned the church. But the buildings had barely risen a few courses above the floor of the upper church when he died, at the age of seventy-two years. The Archbishop of Paris then appointed for the continuation of the work an architect possessing talent, but who, too deeply imbued with the principles of Italian architecture, could not appreciate the beauties of any other style. The modifications which he attempted to make in the original plans having been rejected he was obliged to retire. It was then that the writer was chosen. From the commencement he had been connected with the work of constructing the Church of the Sacred Heart, and he was acquainted with the thoughts and desires of Monsieur Abadie who had appointed him his surveyor; that is to say, the second in

DETAIL OF APSE.



ARCADE ON WEST FAÇADE.

command. As the writer was considered rather young to have sole charge of such important works, Monsieur Laisné, a former professor at the "Ecole des Beaux Arts" of Paris, one of the veterans and most highly esteemed of French architects, was appointed as his colleague. The latter died at the beginning of the year 1891, and upon the writer then devolved the honor of continuing alone the work of the Master.

GENERAL CONSIDERATIONS.

At present the whole of the church is used for religious services. It is, however, far from being finished; to say nothing of the decoration, which is scarcely begun, there still remains to be built all that part of the great dome which rises above the roof. Now it is precisely this dome that constitutes the principal feature of the monument and which gives it its special character. Consequently the public cannot form a just opinion as to what the church will be like when completed. The Church of the Sacred Heart is constructed upon a novel plan. There is nothing else resembling it in existence and it cannot be judged by comparison. However, even at present, connoisseurs admire the boldness of the idea of the four pillars, which by themselves support the great dome, the fine arrangement of the chapels and vaulted roof, and the conception of the whole plan. Builders, architects, engineers, contractors, etc., unite in praising the beautiful execution of the parts already finished and the judicious selection of the materials. No wood or iron is used in the construction of the monument. The walls, the arches and the roof are in dressed stone. The stone employed comes from Château Landon, or rather from Souppes, a small district situated beyond Fontainebleau, 97 kilometres from Paris. It is very hard, of a yellowish white color, and, far from blackening when exposed to the weather, it has, on the contrary, the advantage of becoming whiter. All dressing and moulding is done at the quarries; when the stones arrive at Montmartre they only have to be sculptured. This mode of execution, which is very economical, as the country workmen receive lower wages than those of Paris, requires numerous and very careful drawings. Each stone is sketched in the offices at Montmartre and all particulars are sent to the quarrymen, who make drawings of them to full scale. Notwithstanding this complicated system mistakes are extremely rare and those made are always unimportant. In addition to this there are no corners broken off, as the transportation takes place by boat.

The dressed stones need to be handled with care in order not to damage them in the frequent manipulations which they have to undergo before they are finally put in place. However, almost all risk of accident has been avoided by the use of the ram's head for lifting the stones. In fact, this method is very simple and easily worked, and prevents all risk of accident. Out of the 160,000 blocks of stone, each of which has at various times been hoisted in this way in the building of the Church of the Sacred Heart, scarcely half a score have dropped, although some of them weighed four tons. It should also be remarked that these accidents always happened at the moment when the stone was just being lifted, at one or two metres from the ground, so that the falls never had any disastrous consequences. On the other hand, the use of the ram's head requires fewer men to put the stones in place, but necessitates the construction of solid timber scaffolding, at a heavy cost, to carry the cranes employed in lifting. On this account, up to the 1st January, 1893, the amount expended for timber from the commencement of the work was 2,200,000 francs. This figure, while rather high in itself, is not at all unreasonable, considering that to the same date the amount spent on masonry was 16,000,000 francs. These two sums, added to that of 1,650,000 francs spent for excavations, represent the largest part of the total cost of construction properly called, which amounts to 20,640,000 francs. If to the last-named figure is added the cost of buying the

DETAIL OF WEST FAÇADE.

IN THE CHAPEL OF THE CHEVET.

CAPITAL ON WEST FRONT.

CAPITAL ON WEST FRONT.

ground, managing expenses, etc., we reach a total of 25,482,000 francs. Up to the same date of 1st January, 1893, the receipts were 25,873,000 francs, gathered in the following manner:

1. Collections which at fixed periods, on an average twice per year, are made in the greater number of the churches in France.

2. The gifts of from 20 to 500 francs, each donor of which can have his initials marked on a stone set apart for him in the edifice.

3. The gifts of from 1,000 to 100,000 francs, to the subscribers of which are conceded columns and pillars, in the capitals of which they can have their names or arms sculptured.

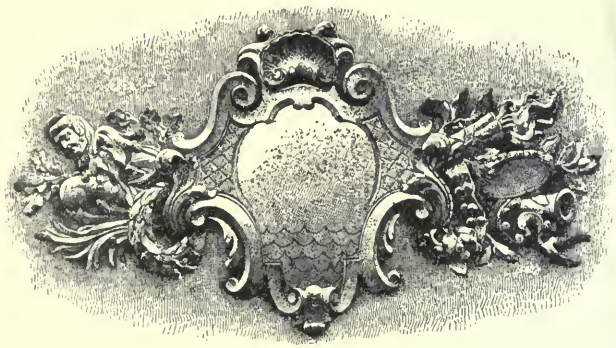
4. The cards of the Sacré Cœur, which are a little larger than ordinary visiting cards. These cards, for the use of poor people, are divided into 1,200 small squares. Each square represents 2 cents, and the complete card corresponds to the price of a stone. Several persons can thus unite together for one single gift. In a large number of pious families, the children have cards of this kind, which they present to the parents and friends of the house, who are pleased to take at least one square.

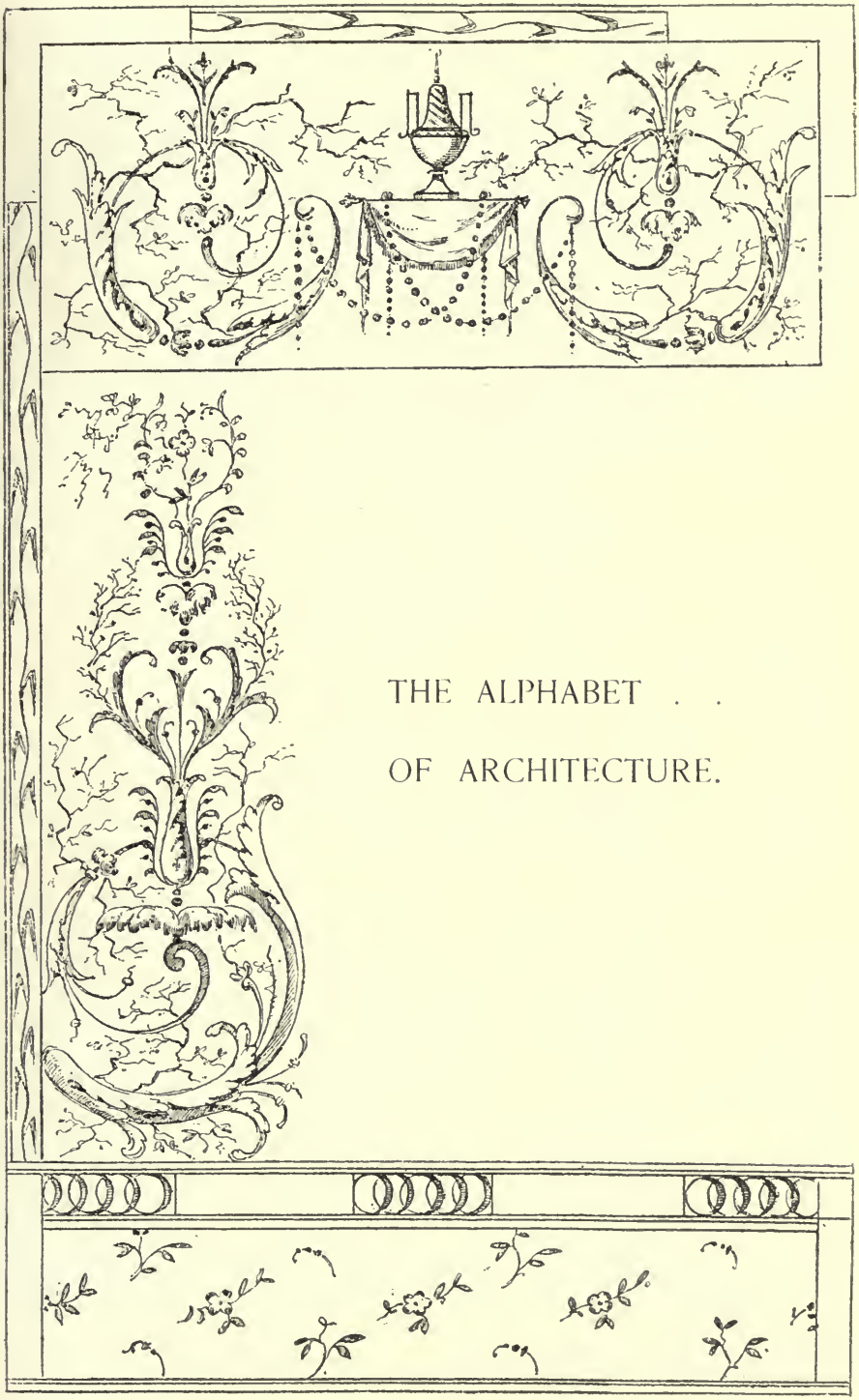
5. The gifts made without any special destination being indicated, but which are none the less always applied to the erection of the Church.

The different methods above named bring in on an average, from 1,200,000 to 1,400,000 francs per annum.

The greater part of the sums thus collected come from France, yet many foreigners have desired, by their offerings, to indicate their pious feeling towards the Church of the Sacred Heart, and to testify their sympathy for France. Their gifts are received with all the more gratitude as it is the rule in our day for numerous friends, whom we had in prosperity, to abandon us in adversity.

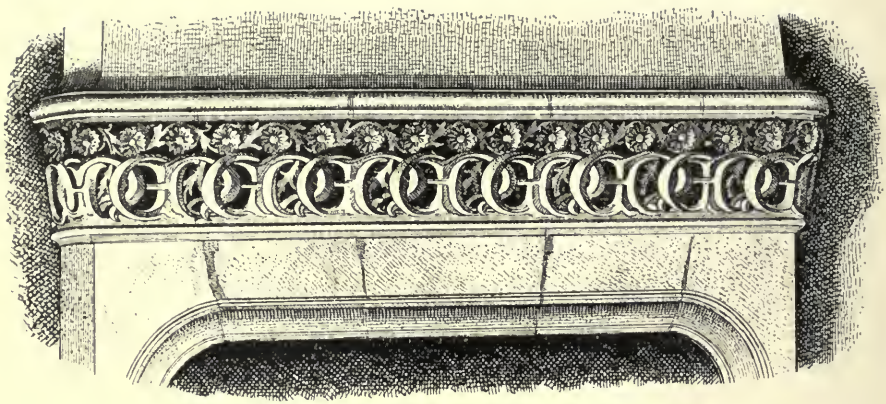
Henri Raûline, Architect.





THE ALPHABET . .

OF ARCHITECTURE.



THE ALPHABET OF ARCHITECTURE.

EXCLUDING from consideration our far off ancestors that lived in caves, Man has always been a builder, and it is with the products of man's efforts as a builder that a history of architecture deals.

But, architecture is not merely building, the result of purely constructive or mechanical skill. To plant a number of stakes side by side in the ground, to set stone upon stone, or to pile up a mass of plain brick wall is not to produce a work of architecture, no matter to what purpose the structure may be put. Before building becomes entitled to the dignity of being regarded as architecture it must be expressive of some degree of beauty. It must tell us something of the thoughts and feelings of the man or the men who produced it; and the thoughts and feelings which it reveals must be of the kind that we recognize as beautiful. Indeed, all the Fine Arts—sculpture, painting, music, as well as architecture—are *modes of expression*, means which some men adopt to speak to their fellows. And, just as words are charged, or as it were filled with the state of the mind of the speaker, so that we perceive always something more than their literal meaning, so in a work of architecture (or in any other work of art) a condition or frame of mind is revealed.

The accompanying illustration of a covered stone passageway erected at Bagneux, in France, in prehistoric days, represents a considerable effort of construction, particularly for a time when mechanical skill was very primitive, but it is expressive of little more than a desire for an inclosed or protected means of communication. It reveals no search on the part of the builders for beauty, consequently it cannot be classed as architecture. The same may be said of the Egyptian pyramids, the most stupendous of the works of man. Strictly speaking, they are but buildings which impress us by their magnitude measured in human labor—huge mounds of masonry piled up like large ant hills—displaying, certainly, much mechanical and constructive skill, but no beauty. We may read in them purpose (they were the burial places of Egyptian kings) and a desire for stability (they were intended to protect for an enormous length of time the regal mummies laboriously hidden in their mysterious recesses), but form, arrangement, material, all alike are pressed to do service to a sombre and

Bagneux, France.

PLATE I.—STONE PASSAGE-WAY.

Remains from Pre-historic times.

Erdeven, France.

PLATE II.—ANCIENT DOLMEN.

Remains from Pre-historic times.

Near Cairo, Egypt.

PLATE III.—THE GREAT PYRAMID.

(Showing the Sphynx and the Temple of the Sphynx in foreground.)

grandiose utility, and nowhere on the vast structures can one discover the slightest attempt at a disinterested expression of beauty.

One of the very first subjects which a student of architecture encounters upon beginning his work is that of "styles." As soon as he opens text-book or more voluminous history of art he finds himself confronted by a perplexing classification. He glances from chapter to chapter, and discovers, in successive order, that there are Egyptian, Assyrian and Persian styles, the Greek style with its sub-divisions, the Roman, the Romanesque (and here again there are many sub-divisions), the Gothic with its several "periods," and finally the Renaissance with its many diverse manifestations in many lands. Little wonder that his first impression is somewhat one of confusion, or that he vaguely concludes that the history of architecture is the story of a great number of disconnected efforts.

But, starting in this way, the student commences at a false beginning. He sets out with an erroneous conception of the nature of the road before him. The first fact which we desire to insist upon here is that the history of architecture is rather the history of one long continuous effort, like the growth of a tree, of a checquered but unbroken development, than of a number of independent original beginnings. In truth, there are no absolute beginnings in architecture. Strictly speaking, it is impossible to point to any one building or any one year and say there and then such or such a style began. Every style has been developed from, or, as it were, has been constructed of some preceding style. In architecture nothing has ever been stationary. No two buildings are quite alike; the wants of people are forever changing; their ideas and tastes change; their circumstances and conditions change; the individuality of men change, is modified, indeed, in the progress of one generation merely from youth to old age; one generation differs from its predecessor; new methods of working are invented; new materials are brought to hand; and all of these changes, no matter how slight they may be, creep into architecture, modify it little by little, at times almost imperceptibly. Thus we have transition; change is added to change, until pronounced divergence from some former point is observable. When these differences become so marked that they are distinctly separative we get what is called a new style.

The extent of the inter-relation of the styles will be made clearer as we proceed, but at the outset the reader must banish from his mind completely any idea that styles are "invented," created or commenced by deliberate, purposeful effort. Grecian architecture would have been impossible but for the work of the Egyptian, the Assyrian, the Phœnecian and other peoples of Asia Minor. The Greek, in turn, transmitted to the Roman the style he had developed—not the whole of it in one act of transmission, but parts, certain elements as examples, suggestions, precedents—and the Roman, using and modifying what he borrowed conformably to his own peculiar requirements, handed on his practices (again, as in the case of the Greek, not by any direct act) to the Romanesque builders scattered all over Europe, who developed in time a new style—the Romanesque. The Romanesque, advancing along certain lines, resulted in the Gothic. The latter passed through many stages until in the fourteenth century it reached what is to us its culmination at almost the very moment when a prodigious turn in the affairs of mankind was directing the attention of Europe to a new style—the Renaissance—derived from the old Roman style which had really never quite died out in its home in Italy, where there remained to engage the attention and prompt the imitation of prelates, princes and architects so many splendid buildings from Cæsarian times.

On the accompanying pages illustrations are given of typical buildings in the several chief styles; and, in order to bring out clearly what we mean by "styles," let us ask: Upon what principle would we expect to find the classification of these buildings based? Why, for instance, is the building in Figs. 1 and 2 assigned to one style and

The Temple of Zeus,
at Olympus.

PLATE IV.—GRECIAN TEMPLE.

From Laloux and Monceaux's
"Restauration d'Olympie."

the buildings in Plate IV. and Figs. 3 and 4 to others? Wherein does the difference between one and the others of the three lie? There is certainly a general identity shared by each of them—an appearance of kinship which is striking and would lead the observer at first rather to group them together as members of one family than to separate them as distinct. Again, the buildings given in Plates V. and VI., are they not like brother and sister—one, the heavier, masculine manifestation, the other, the lighter and more graceful, feminine development of the same type? In both edifices there is the threefold vertical division, in the centre section of which is the main door with a small arcade above it, then higher still a single window sheltered under a large arch that bears up the gable termination of the façade. Why should not these buildings be classified as, broadly speaking, of the same style? Once more: why should we make a stylic distinction between the buildings shown in Plates VII. and VIII., for are not practically the same forms exhibited in both structures?

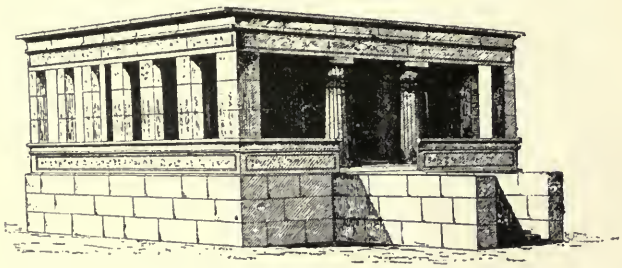


FIG. 1.—AN EGYPTIAN TEMPLE.
(Built by Amenophis III. at Elephantiné.)

The primary purpose of every building is to *inclose space*, which is accomplished by means of (1) vertical partitions (that is, up-and-down partitions), and (2) horizontal partitions. The first of these gives us walls and pillars and piers—the solid space-occupying parts of our buildings; the latter gives roofs, the space-covering parts of our buildings. Every part of a building is either a wall or a roof; that is, it incloses space or it covers space. For instance, a pillar is but a piece of

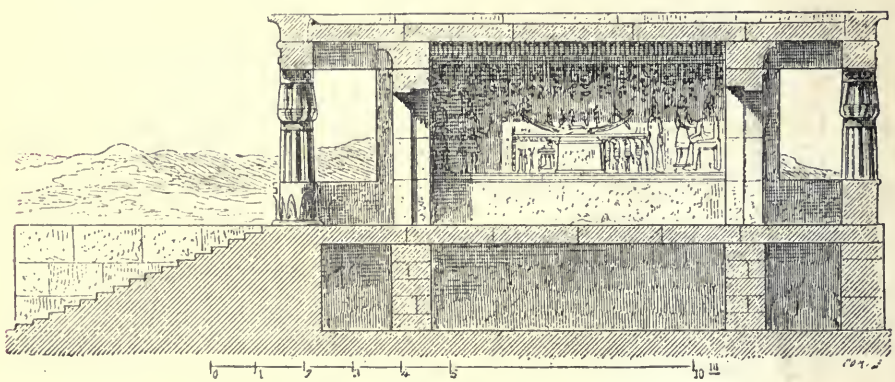


FIG. 2.—SECTION OF EGYPTIAN TEMPLE AT ELEPHANTINÉ.
(From Perrot and Chipiez's "Art in Ancient Egypt.")

FIG. 3.—ROMAN TEMPLE. Vienne, France.

a wall made round in shape, and an arch, as over a doorway or a window, a small roof. So with all parts of a building; it matters not to what purpose they be put, they are primarily either walls or roofs. Now, in all wall-forms—flat screens of masonry, round pillars and square piers—the constructive principle involved is the same. Brick or stone rests upon brick or stone, receiving pressure from above, transmitting it to what is beneath.

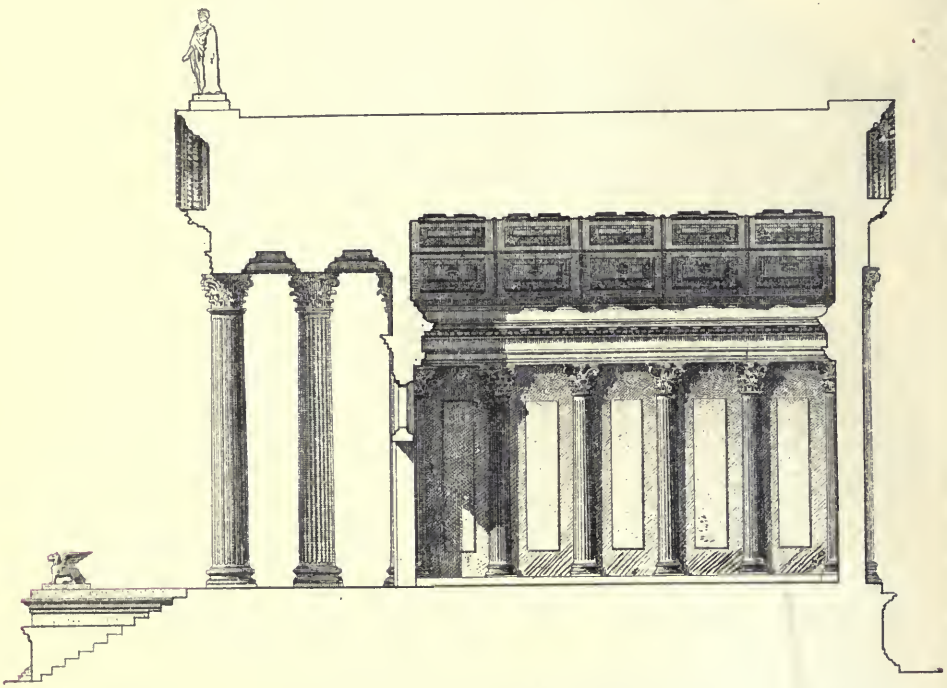
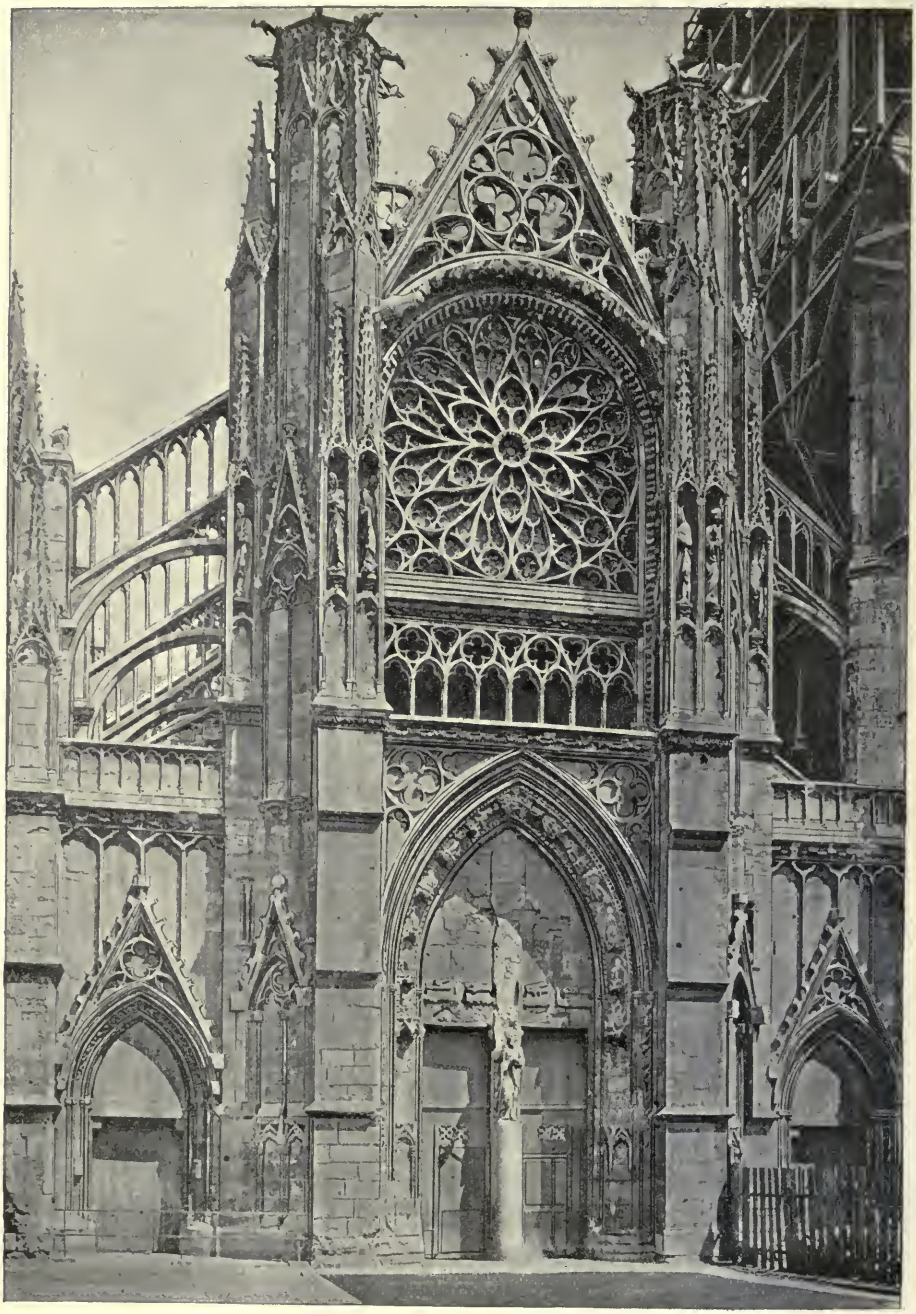


FIG. 4.—SECTION OF ROMAN TEMPLE. Vienne, France.

In roof-forms, however, it is possible to employ two principles, but only two principles — 1. The lintel-principle, as in the horizontal roof or square-headed window opening; 2. The arch-principle, as in the vaulted roof, be the shape of the vaulting what it may, and the domed roof. Now, plainly, as all buildings that man has yet erected are either "lintel-roofed" or "arch-roofed," we could proceed to classify our structures into two styles, according to the method of construction adopted in their erection. The "lintel" style would include the buildings of ancient Egypt, Assyrian, Persia and Greece; the "arch" style, the Roman, the Romanesque, the Gothic and, in part, the Renaissance. (See Figs. 5, 6, 7, 8 and 9.)

But, obviously, this classification is too wide, it admits too many differences. The similarity of construction between the Egyptian and the Grecian temple goes a very small way toward establishing identity. Some writers have made construction the basis of their classification and, for instance, define the Gothic style as the style of the pointed arch or the style of a peculiar system of vaulting, but classifications of this nature are inadequate, for this reason: the essence of style is not a mechanical principle, a method of building. Indeed, at the outset did we not in a way separate building from architecture? We found that architecture is the revelation through building of a *certain condition of mind*. Construction is to the architect what words are to the poet. Words in themselves are not poetry, neither is building, pure and simple, architecture. Words become

Church at Chatel-Montagne, PLATE V.—ROMANESQUE BUILDING. Allier, France.



St. John's Church, PLATE VI.—GOTHIC BUILDING. Dieppe, France.

The Arena, PLATE VII.—ROMAN BUILDING. Nimes, France.

Chateau at Larochefoucault — PLATE VII.—RENAISSANCE BUILDING. — Charente, France.

poetical only where they are so arranged that they indicate, are the indexes, the outward and visible signs, the voice of a poetical mood; and in turn, building becomes architectural only when it reveals a certain frame of mind, certain

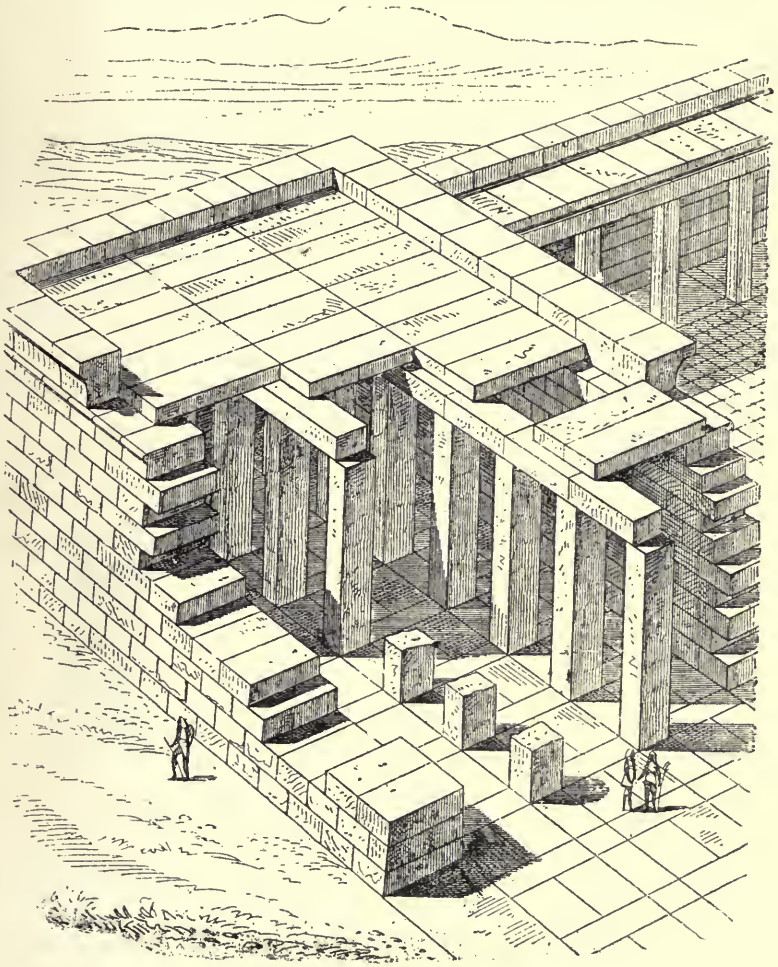


FIG. 5.—LINTEL CONSTRUCTION.
(Employed wholly in Egyptian, Assyrian, Persian and Grecian styles; partly in all other styles.)

artistic ideas and feelings. The difference, consequently, between styles lies chiefly in the fact that each is the expression of a different state of mind. The Egyptian constructed his temples upon the same principle and in some cases almost in the same form as the Greek. But the one reveals to us the Greek mind and the other the Egyptian mind, and no similarity of construction can possibly bridge the enormous difference between the genius of the two peoples. So, too, between the Roman style and the Romanesque, there is very much less constructive difference than artistic difference. There is nothing *constructive* in a Romanesque building that would have been very novel to a Roman architect, but the style, the expression as it were, of the building would have been like a new language to him.

The foregoing remarks about style have been prompted by the consideration that usually the student classifies buildings *exclusively* according to some

marked constructive feature, and entirely overlooks the really vital fact which the construction reveals. In his eyes a building is Gothic *because its arches are pointed.* This is a false conception, and though at first it is not likely to lead the student into very grave errors, it is better to start at once with as exact ideas as possible. It is true, of course, that when men's mode of thought or feeling change, forms of expression change also. We could not know that there had been any inward change unless it were indicated outwardly. But these changes may be expressed—and indeed most frequently have been expressed—rather by subtle modifications in the relation to one another of parts of buildings, by changes in proportions, by the increase or the decrease of the emphasis of decoration than by new methods of construction. Between the latest Romanesque buildings and the earliest Gothic buildings there is less difference than there is between the earliest Gothic and the latest Gothic edifices. At first, Gothic buildings were simple and severe, sparingly ornamented. They were expressions of taste and temperament very closely allied to the taste and temperament of the Romanesque builders. But with the course of time the genius of the Gothic architects became fanciful and exuberant, and before the close of the Gothic period the severity of the old architecture was quite superseded by an extravagance of ornamentation. Yet there had been no radical change in the methods or the principles of construction employed. Let us remember that in architecture as in literature—*le style c'est l'homme*—style is individuality ; and style really changes as men change. So, to keep to our example, it is not merely the use of pointed arches or a system of vaulting that is the essence of the Gothic style, but the temperament of the people who erected the Gothic buildings. This temperament found expression, not only in methods of construction as in pointed arches, but in the entire building—in sculpture, in carving, in disposition of masses, in proportions, etc. The student, then, should endeavor to read "style" in the whole building. A single constructive feature is only a clue, even though a clue sufficient to warrant certainty of classification. Indeed, some merely mechanical building methods enable us to roughly assign to an edifice its place in the history of architecture, but a practice in the stone mason's trade is

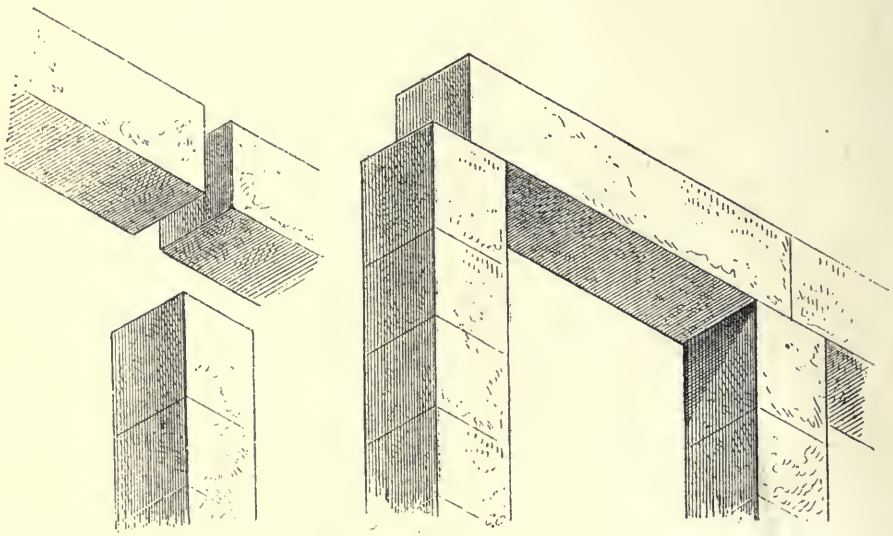


FIG. 6.—THE ELEMENTS OF LINTEL CONSTRUCTION.

not one of the elements of "style." And yet, that very practice might be necessary to an adequate expression of the "style."

tion and style are totally independent of one another and completely unrelated. Certain methods of construction are necessary to the expression

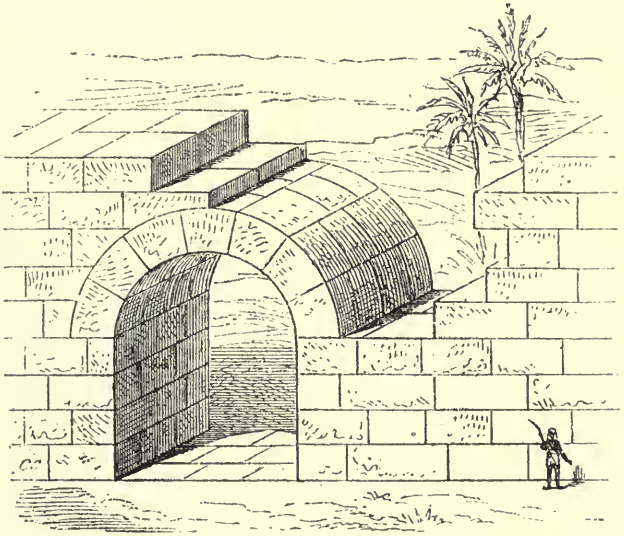


FIG. 7.—ARCH CONSTRUCTION.
(Employed chiefly in Roman, Romanesque and Gothic styles. Also used partly in Renaissance and modern buildings.)

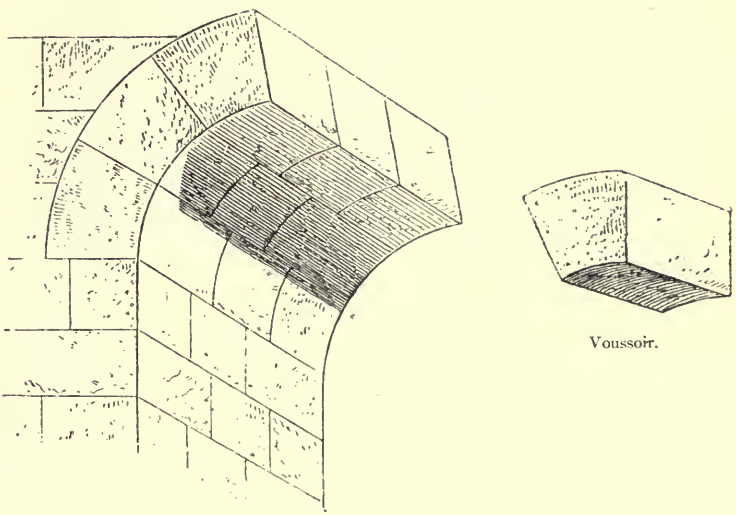


FIG. 8.—THE ELEMENTS OF ARCH CONSTRUCTION.

In reading the foregoing the reader must be careful not to adopt *any* partial view of the subject. Because style is not essentially the use of some single prominent constructive principle or form, it does not follow that construc-

of a style. Not infrequently men have hit upon new methods of construction in endeavoring to meet utilitarian necessities and these new methods have stimulated new artistic expressions. But, after all—and this is the point for

the student to keep in mind—while giving due attention to methods and principles and forms of construction, they are not the essence of style. Style is manner, be it an individual's manner, the manner of a people, the manner of a period. The Greek, consequently, though he possessed all the technical knowledge of the mediæval builders, could not possibly have produced a Romanesque or Gothic building. Knowledge of forms and principles would not—nothing of the kind is quite the case. Their temperament may approximate to the temperament of a past age, but they do no more than approximate to it. As Goethe says, "The Past is a book seven times sealed." Our architects are using the phraseology of another age; they cannot possess its spirit. All modern buildings, whatever their form or semblance may be, are in the modern style.

How essential the spirit is to style

FIG. 9.—ARCH CONSTRUCTION, SHOWING DOME AND ARCH.

have assisted him little when the right spirit was lacking. We may find analogies to the foregoing in literature. The spirit of the writer is what we read behind the words; and the writer shares the spirit of his age and country. To make use, for instance, of Elizabethan phraseology would not put a writer in possession of the Elizabethan style. The mind of the age would be missing and *that* is the soul of the style. From this it follows that, strictly speaking, though the architects of our day assert that their designs are in the Gothic style or the Romanesque style or what may be exemplified by another example. In painting, one artist may copy a picture done by another artist, but no matter how faithful he may be to the original he cannot quite reproduce it. There will be something more or something less in the copy than in the original. The style, the individuality of the creator, in its most subtle manifestations, will not be present in the reproduction.

So, while accepting certain forms or methods is roughly indicative of style, the architectural student should endeavor, as it were, to read through

the building to the mind that produced it. Only in this way can architecture be fully appreciated and thoroughly understood.

As a lesson in "style," from this point of view, we affix to this chapter some examples of sculpture of different periods. Each of the examples is an attempt to render, in whole or in part, the human form, and here no consideration of method, no difference of "construction" intervenes to distract the observer's attention from "style" as an expression of temperament.

H. W. Desmond.

PLATE IX.—EGYPTIAN SCULPTURE OF THE ANCIENT EMPIRE.
(The famous statue known as The Sheikh-el-Beled.)

PLATE X.—EGYPTIAN SCULPTURE OF THE NEW EMPIRE.
(Bas-relief of Seti I. in Temple of Abydos.)

PLATE XI.—GRECIAN SCULPTURE.
(The Hermes of Praxiteles.)

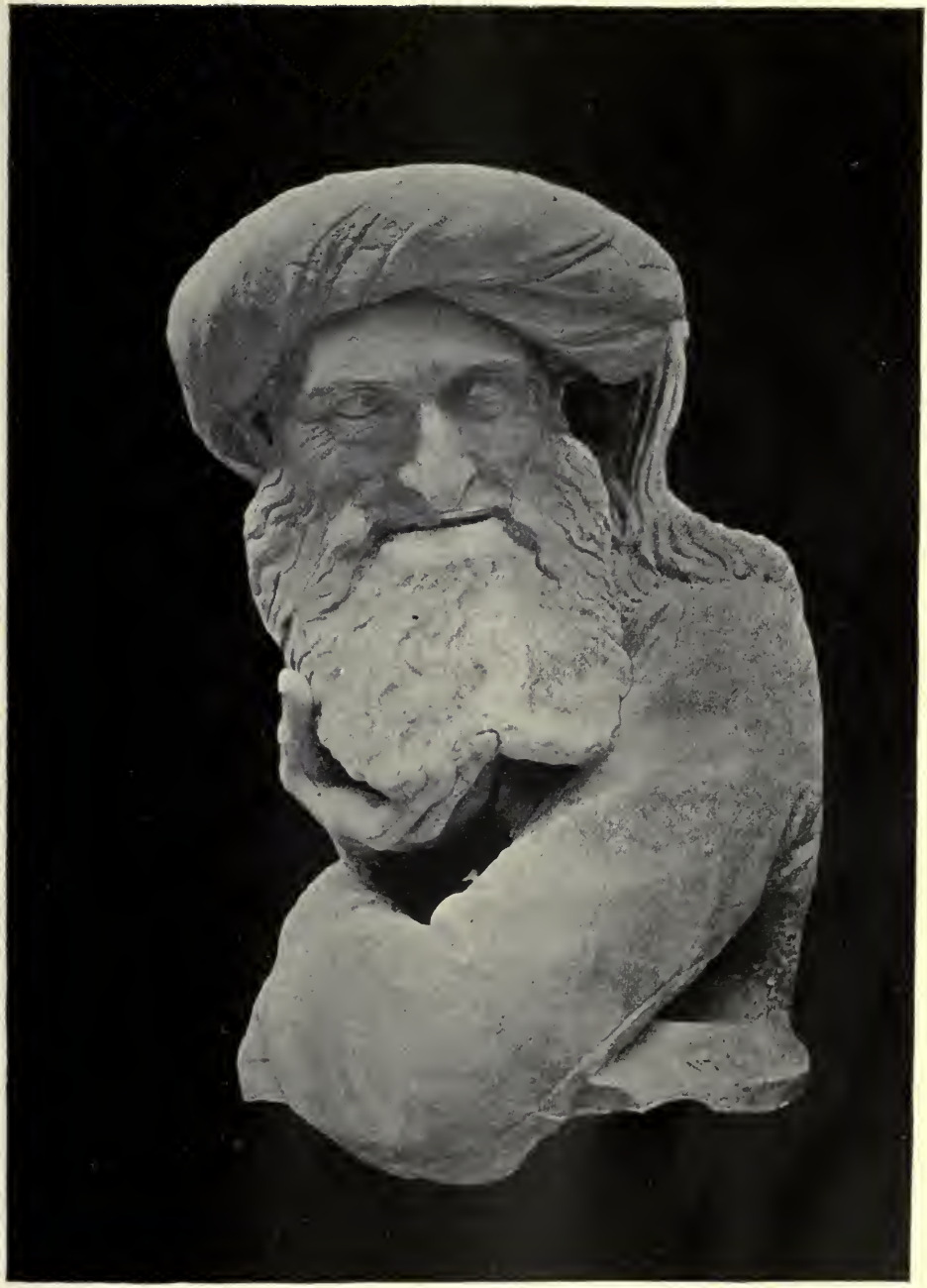


PLATE XII.—MEDIÆVAL (XVTH CENTURY) SCULPTURE.
(Bust of Jacques de Lichtenberg, Strasbourg.)

PLATE XIII.—MEDIÆVAL (XVTII CENTURY) SCULPTURE.
(Bust of wife of Jacques Lichtenberg, Strasbourg.)

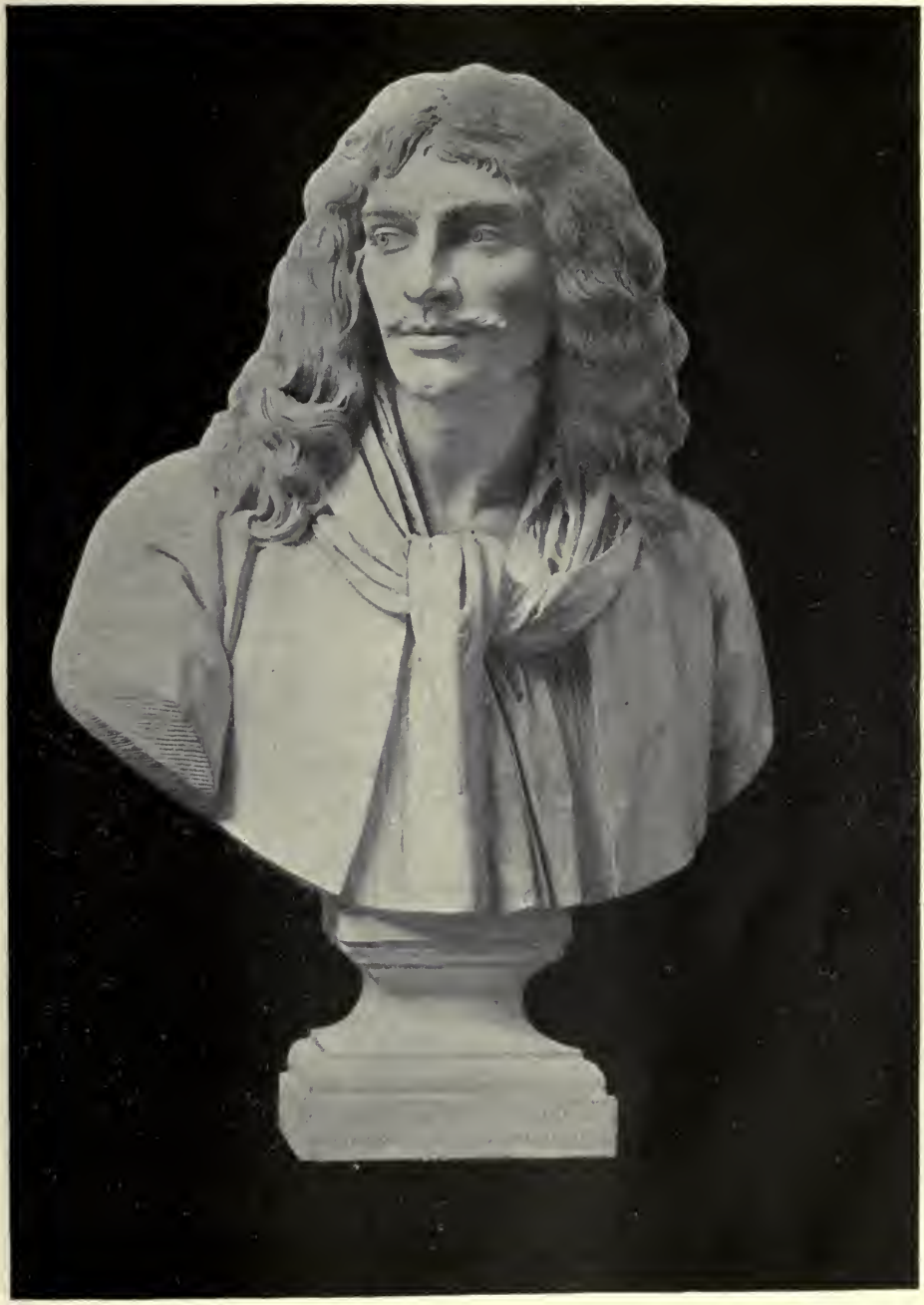


PLATE XIV.—RENAISSANCE SCULPTURE.
(Bust of Moliere, by Houdon.)

PLATE XV.—RENAISSANCE SCULPTURE
(Bust of Colbert, by Houdon.

NEBRASKA STATE BUILDING. Henry Voss, Architect.

STATE BUILDINGS AT THE WORLD'S FAIR.

THE very great success of the main Exhibition buildings at Jackson Park, designed and erected under the supervision of the Director of Works, makes the architectural failures of the Exhibition all the more conspicuous and all the more lamentable by making it plain that they might have been avoided. The great architectural success of the Fair is not the merit of even the best of the buildings so much as it is the unity and the majesty of the group they compose. The unity has been obtained by the symmetrical plan adopted for the main water-court and its borders and by the agreement of the designers upon a very few simple and general rules of treatment.

Doubtless, picturesque irregularity is, or may be, an attractive architectural quality, as legitimately as formal stateliness and symmetry. If another symmetrical court had been provided at the opposite end of the grounds from the rectangular water-court, and the architects of the State buildings had been subjected to even the few conditions to which the architects of the main buildings on the basin subjected themselves, we should probably have had a monotonous and uninteresting repetition, on a smaller scale, of an effect once attained with a success of which a great part is due to the greatness of the scale. But on the other hand there was a great danger in leaving the States free to design and erect each its own building upon as extensive and conspicuous a plot as it was able to secure, and at as great a cost as it chose to incur, without trying to establish any general disposition by which each building should enhance the effect of its neighbors and contribute to the effect of the entire group. To do this with success, considering the wide range of the State buildings in magnitude and in costliness, would have been a problem worthy of the highest architectural skill, and demanding such skill. A general scheme adopted by the architects in consultation, and loyally followed out by each, might have given the impression of an ensemble while leaving to each designer all the liberty that in such a conjunction any reasonable and artistic designer would claim. It would have made a quarter of villas, as the architects of the water-court have

made a quarter of palaces, of which, as in the other case, the highest excellence of each individual building would have been its contribution to the general result.

That is not the way in which we manage such things, but it is precisely by departing from the usual American way of managing such things that we have to show, in the main Exposition buildings, something of which we are all proud, and from which we expect so extensive and beneficent an influence. That will only come, however, if the lesson is rightly learned. A reproduction in miniature, around the principal square of a new town, of the main Exposition buildings, of which the impressiveness depends so largely on their scale, would be merely petty and ridiculous; but it is what we are more in danger of realizing than the subordination and co-operation that are applicable, not only to every group of public buildings, but to every group of private buildings, and that our ordinary street architecture so lamentably lacks. Of course in detached buildings, standing each in its own grounds, the qualities of co-operation and subordination must be manifested quite differently from the manifestation of them in a great court bordered with palaces. Picturesque irregularity itself, to be artistic and architectural, must be intended, and the fronts that make up the effect of it must be considered with reference to each other. Higgledy-piggledy is no more desirable in a collection of villas than in a plaza of palaces, and a group of buildings that gives the effect of a competition rather than of a co-operation cannot be architecturally a group at all. This is the case with our ordinary building, alike urban, suburban and rural, and though of course it is most distressing in the first case it is distressing, also, in the others. To avoid it, consideration for what has been done already is necessary in ordinary cases, and specially so in an extraordinary case like that of the State buildings in Jackson Park, where a number of buildings that are to answer the same general purpose, with great difference in size and cost, are to be erected all at once. Without consultation the general effect, whatever may be the individual excellence of the buildings and even though they be all good, taken separately, must be that of higgledy-piggledy; and such is unfortunately the general effect of the State buildings at the World's Fair. A Grecian temple, a Californian mission, an Italian villa, a Swiss châlet, a Colonial mansion—how can anything but higgledy-piggledy result from an aggregation of these, strewn about promiscuously and without reference to each other, no matter how plausibly each of them may be done?

This is a pity and a misfortune, but it is perhaps unavoidable. Certainly nobody in particular is to blame for it and it could have been avoided only by the excuse of some such general supervision as has been employed with such success at the other end of the grounds. It probably did not occur to the various State commissions or their architects to arrange for such a supervision and submit themselves to it, and it would in any case have been very difficult to arrange. Besides, as we have said, diversity is here to be expected, and even to be desired, so long as it is a foreseen and calculated diversity. Even buildings of so widely different types as those we have enumerated might have made up something like a whole, if they had been arranged in a series of groups, according to their architecture. We must deplore the absence of such an arrangement, and the lament may be useful, not only for reproof, but for edification in the event of another National Exposition, which may follow this one before its lessons are forgotten, as this has followed the Centennial.

Apart from this consideration, controlling as it ought to be, it is manifest that a building which is a State exhibit ought to be as characteristic as it is possible to make it, and to suggest the history of the commonwealth which it represents. It is curious and to be regretted how little attention most of the designers seem to have paid to this consideration. The original thirteen States surely have histories which supply architectural motives, and most of them buildings that would serve for

MASSACHUSETTS STATE BUILDING.

Peabody & Stearns, Architects.

suggestions, if not for literal reproductions.

The architects of Pennsylvania and Massachusetts are almost alone in having gone back to Colonial times for their models, and the result has vindicated them very handsomely. Independence Hall is not a beautiful building, but for the purpose of a World's Fair its historical interest outweighs its architectural disadvantages, and the modifications the architects have made in it are faithful to the spirit of the original. The reproduction for the State building of Massachusetts of a well-known Colonial mansion, in the Hancock house, is about the most distinguished success of the whole series. It has a positive architectural as well as a positive historical interest and in several important respects it sets a model for current domestic building. While it was impossible to make it congruous with all its surroundings, it is in perfect keeping with those of its immediate surroundings that were under the control of its projectors. The inclosure and the quaintness of the old-fashioned garden explain to us the avidity with which Hawthorne seized upon such scanty materials of romance as the New England of his time afforded him, and form a little chapter of Colonial history more vivid and instructive than the written page.

Suppose all the "Old Thirteen" had been represented by structures reproduced in the same spirit; what a teaching and what a benefit would have been imparted to everybody who looked at them. Suppose New York had been represented by a reproduction, as faithful as could now be attained, of one of the most elaborate of the houses of the Dutch burghers of Albany, or by the reproduction of a public building such as Federal Hall in Wall street, upon the portico of which Washington was inaugurated; and Maryland by such a mansion as Homewood, and Virginia by one of the ancient "seats" upon the banks of the James or the Rappahannock, and South Carolina by a reproduction of the Pringle house which is still extant, or some other equally characteristic reminder of colonial times. There would have been no difficulty if the purpose had not been wanting and if all the States named had been represented by characteristic buildings, in making a group out of such structures that would have been entirely at peace with itself and that would have been far more interesting than the individual erections that composed it, interesting as these would have been to natives and foreigners, to students of history and life and manners, as well as to students of architecture. A Colonial "exhibit" has been arranged in behalf of the State of New York, and a very interesting exhibit it is, but how greatly it would have gained if it had been housed in an authentic example of Colonial architecture! It was at one time proposed to reproduce in Jackson Park the old Van Rensselaer house, now left standing in a quarter of Albany abandoned by the march of improvement. It was a pious suggestion, and it is a pity that it was not carried out, although the mansion is neither the oldest nor the most interesting that could have been chosen. It is, however, a decorous and respectable example of the craftsmanship of the eighteenth century, and some of its interior detail has the attractiveness that always belongs to specimens of workmanship that is clearly purposeful and enjoyed, while some of it has a quaint grace that is distinctly an artistic quality. Our point is that a State building should be, so far as possible, distinctive and racy of the soil, provided there be any elements of race and distinctiveness to be had, and in the case of the older States there is no question about that.

Nobody would maintain that the building actually erected for New York was in any direct or specific way characteristic of the State. It is a reproduction, to be sure, but a reproduction of an Italian villa of a period that has nothing to do with the history of New York, being about a century after the discovery of America, and half a century before the colonization of New York. It is so literal a reproduction, that a newspaper critic has been tempted to suggest that its author should have at least forborne to charge his clients that part of his commission

NEW YORK STATE BUILDING. McKim, Mead & White, Architects.

CALIFORNIA STATE BUILDING. A. Page Brown, Architect.

which is supposed to compensate for the design. This is rather too harsh a saying. There is, of course, no attempt in the building to disguise that its architectural motive is that of the Villa Medici; but the modifications are great enough to show that the original has been considered, instead of being copied without consideration, and successful enough to entitle the adapter to credit as a designer, as well as an appreciator. The central arch, flanked with columns that support the entablature at its impost, with sculptured panels in the spandrels, and the belvederes that mark the boundaries of the central building are reproduced with verisimilitude, if not with servility, and these things, doubtless, make up so much of the composition of either building as the spectator carries away with him. But the balustraded roof-terraces of the New York State building, while they have their prototypes in the Roman villa, are legitimate variations upon a borrowed theme; the treatment of the wings and their relation to the centre, are so different as to effect a change in the massing and proportion of the building; the third story of the original is reduced to a rich attic, and for the semi-circular colonnaded wings the original does not furnish any suggestion. And all these things are improvements, insomuch that no instructed observer would fail to prefer the amended design of the Villa Medici as executed in Jackson Park, to the design as executed by Annibale Lippi himself. As a "lordly pleasure-house," standing alone in its own extensive grounds, the New York building would leave very little to be desired. It must be owned, however, that it is injured by its neighbors and returns the injury with some vindictiveness, and also that it bears no traceable relation in its design either to the State of New York, which it represents, or to the Columbian Exposition, of which it is a conspicuous feature, except, indeed, that it has a festal and pompous air appropriate to the occasion.

As an impressive architectural object, impressive by magnitude and elaboration, the only rival among the group of State buildings to that of New York is the yet larger and far costlier building of California. In this, however, the quest of local character and local color is evident. The earliest type of European building in California is the mission architecture founded upon the Spanish Renaissance of the sixteenth and seventeenth centuries, but modified by local resources and conditions. The choice of this architecture for the Californian building is so obvious that one would scarcely be inclined to give the architect any credit for it if one did not observe, by the most cursory circumspection, that other architects of State buildings had neglected indications quite as obvious. The architects of the new Stanford University, in California, have adopted the same hints with a success highly satisfactory, and in many respects brilliant. The success of the present essay is equally gratifying, and the building is not only so racy of California as to explain itself to every interested observer, but it is an admirable piece of picturesque architecture, and one of the noteworthy ornaments of the Fair. Its great dimensions (435x144) give an ampler scope than is elsewhere among the State buildings to be found for attaining picturesqueness and variety without losing mass, sobriety and repose. The ends, as will be seen, are almost literal reproductions of the Spanish Renaissance as practiced by the early missionaries, reproducing even its defects as in the lank and meaningless pilasters and the meaningless entablature of the engaged portico, and might be taken for actual church-fronts in old Mexico. These defects of the original would be defects in a modern building of a more permanent character and a more serious purpose, but it is commendable to retain them in a design which aims at retaining and emphasizing local characteristics. It happens that the modifications made by the missionaries in the architecture they tried to naturalize are such as to fit it especially for reproduction at the World's Fair. The adobe that they were forced to substitute for masonry has much the same characteristics and possibilities as the "staff," or tough plaster which is the envelope

of the buildings at Jackson Park. One of the characteristics of the sun-baked clay is the necessity for protecting it against tropical rains by overhanging roofs, and this necessity enforces an architecturally effective disposition in what would otherwise be a featureless expanse. The shadows of the eaves, alike of the clere-story and of the aisle walls of the California building give strong and emphatic belts that accentuate a division in itself carefully studied and effective, while the corrugation of the tiles, literally reproduced from those of the old missions, gives character to the roofs themselves, and an effective contrast to the smooth walls which is very gently heightened by the contrast in color of the gray plaster and the deep red tiles. The nature of the material is again confessed in the unusual depth of the reveals, giving again an effect of massiveness exhibited by strong contrasts of light and shadow, and suggesting the tropical conditions out of which the architecture grew. The outer wall of the flank of the Californian building is in itself a very agreeable object, not only by its extent and simplicity, but by the skill with which the architect has taken advantage of those qualities in fixing the relation of voids to solids, and in inclosing the arcades of the curtain walls between pavilions that are stark and unbroken masses of masonry. These things would make it evident that, even in what purports to be only a reproduction, there is more than reproduction, being a skillful and intelligent adaptation.

Still, if no more than reproduction or adaptation had been attempted, the California building would not be the striking mass that it is. It would have the look of its prototypes, of a kind of monastic barrack, and would be no more admirable than they. What makes it so admirable a piece of picturesque architecture is the central feature, for which no precedents are to be found in the architecture in which the designer chose to work as the most characteristically Californian. This central and dominating feature gives their greatest architectural value to the subordinate parts, from which also in turn it derives much of its own impressiveness. While a quite original feature, it is distinctly in the color of the architecture which it crowns. Even in the low curvilinear gable of the porch there is nothing discordant, though the precedents for it are rather of Flemish than of Spanish origin. It goes perfectly both with the Spanish Renaissance of the pavilions that flank it and with the Spanish-Moorish of the arcades above and behind it and the spreading domical roof. The roof garden that fills out the angles of the square assists the expression, at once festal and tropical, of the architecture, and completes one of the most attractive and appropriate of all the buildings in Jackson Park.

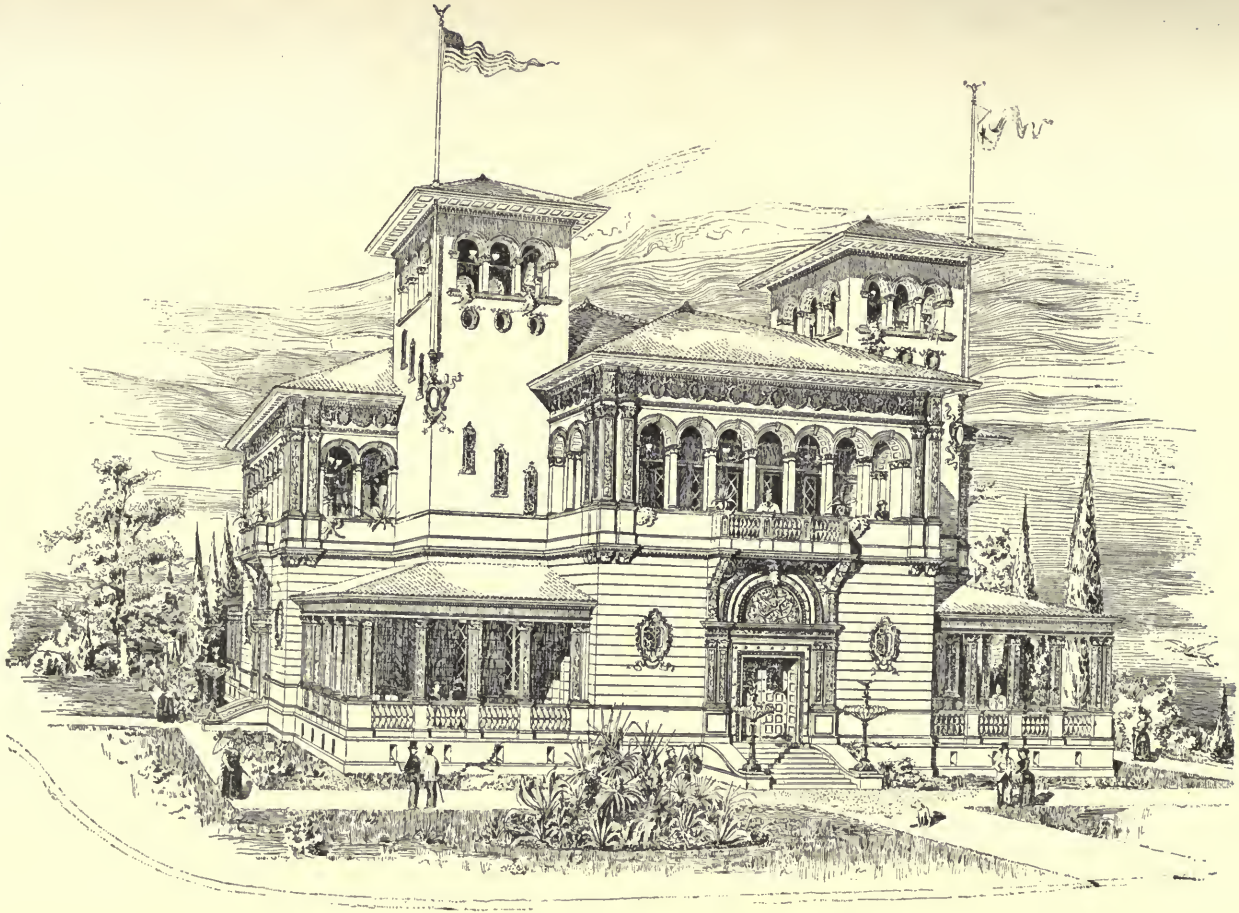
By far the most pretentious and costly, however, of all the State buildings is that of Illinois, and unfortunately it is the least successful of any. Indeed, it is so unsuccessful as to dispute with the building of the United States the bad eminence of being the most incongruous and intrusive of all the edifices by which a noble architectural scheme has been balked and marred. In point of intrusiveness it has clearly the better of this unworthy competition. For whereas one does not see the Government building unless he looks at it he cannot possibly help seeing the Illinois building, which not only forces itself upon his notice but is so placed as to interrupt and spoil what was meant to be and ought to be one of the most impressive vistas of the Fair, the view northward from the water-court up the canal. This vista should be closed by the long and low façade of the Art Building, with its low and spreading dome, and this building is entirely worthy of its situation. But the Illinois Building shoulders itself rudely into the way so as to cut off a great part of the Art Building and to obtrude itself upon the notice of every visitor. Even if it were itself very well worth looking at, this disposition would be a grievous fault, and, as a matter of fact, it is not worth looking at at all. It is of the American Capitolian type, and looks indeed like one of the State capitols that were modeled after the national capitol,

ILLINOIS STATE BUILDING.

a State capitol born out of due time and still more out of due place. The sub-structure is a cruciform building, entirely commonplace in conception and entirely crude in detail, which confesses its festal purpose by being greatly overcrowded with unconsidered trifles of decoration. But it would not be so bad but for the dome at the intersection, which is a distressing object. It is not only the ugliest dome on the grounds, but one of the ugliest in the world; and it is interesting to remark that its ugliness proceeds directly from the purpose, which is not only an inartistic but an essentially vulgar purpose, to make it the highest erection on the grounds, instead of making it a fit and dignified culmination to the substructure. The purpose might have been attained, of course, without producing so painful a result. A square or polygonal base might have been carried well above the main roofs, and have given the dome an adequate footing, which it now grievously lacks, and a subordinate stage or attic might have been introduced between the dome and the bell, as is done in all artistic domes in which altitude is a main object or condition of the design, as it may legitimately be. But a soaring dome is one thing and a spindling dome is another. Altitude is here attained by simply elongating and attenuating each of the parts. The base is much too low, but the dome is "pulled out" to increase its height, the bell above it is pulled out still harder, so that it ceases to be a bell and becomes an extinguisher, and the lantern is pulled out in turn, and so is the flag-staff that surmounts it, the cap of which is in fact the "highest thing on the ground, sir." The dome of the government building itself is respectable by comparison. Whether or not it be the

NEW HAMPSHIRE STATE BUILDING.

Geo. B. Howe, Architect.



TEXAS STATE BUILDING.

James Riely Gordon, Architect.

GEORGIA STATE BUILDING. G. L. Morrman, Architect.

RHODE ISLAND STATE BUILDING
at the Columbian Exposition Chicago Illinois

MINNESOTA STATE BUILDING. Wm. Channing Whitney, Architect.

worst piece of architecture in Jackson Park, the building of Illinois is the most offensive, and it is a real pity that the architect had so much money to spend.

In the building of New Hampshire an attempt has been made at local color, though only by the recognition that New Hampshire is a mountain State, "the Switzerland of America," and that therefore Swiss architecture has a certain appropriateness to its representation. One would have been glad to see something more indigenous. The log cabin is not only appropriate to the representation of the State and to the requirements of occasional and festal architecture, but it is a construction very favorable to an architectural development, as nobody will deny who recalls the Swedish school house at the Centennial, now for many years an ornament of the Central Park, in New York. All the same the choice of the châlet was not inappropriate, and the result is very agreeable of a free and intelligent adaptation of the châlet to the purposes of the World's Fair. The plastered first story, with its angles and jambs quoined in New Hampshire granite of various tints, forms an excellent basement for the timber superstructure, with its brackets and balconies of unmistakably Helvetian origin, and the building is distinctly one of the successes of the collection.

In the building of Texas the Spanish local color has again been sought, as is natural, and seems to have been not unsuccessfully attained, although the general composition of the building, with its double low-crowned belvederes, resembles an Italian villa as strongly as it does any Spanish or Spanish-American erection, though much of the profuse detail is distinctly Spanish. It is at all events distinctly festal architecture, and ingenious provision has been made for heightening this effect by ornamental and characteristic planting.

The building projected for Georgia was the most literal reproduction of a classic temple among the designs for State buildings, being a hexamphiprostyle temple, in a general way Roman Doric, with the order converted upon the flank into a range of square piers, the intercolumniations closed half-way up and furnished with windows above. This, however, has not been built. The most strictly classic building actually erected is that of Rhode Island, though this does not follow classic models in its composition—being rather a reproduction of a mansion of the Greek revival that followed the Colonial revival. It is amphiprostyle, but with a semi-circular projection on one side, decorated with four engaged pilasters of the Ionic order. These pilasters are reproduced, though in a straight line, on the porch of the opposite side, which is not shown in the illustration. While there is a certain awkwardness inevitably resulting from the excess of portico upon a building of modest dimensions and nearly square (39 by 34) the purity of the detail and the proportions of the porches, taken by themselves, give the work a stateliness and distinction, and it has an historical value also as the chronicle of a phase of American building that lasted for more than a generation.

The building of Minnesota does not pretend to any local or historical significance, but it is a decorous and impressive Renaissance mansion, well considered in general composition and carefully and tastefully detailed. The aim of the architect seems to have been to make a building that should not be offensively incongruous with any neighbors that it might have, and in that case he deserves praise for proposing to himself an end at once so sensible and so modest, as well as for the success with which the end has been attained.

The building of Nebraska is an example of Colonial architecture, of the public kind, and recalls more or less a good many public buildings of the period. The two principal stories are too nearly equal in value for the best effect, but the building is entirely respectable, and the rather rich tetrastyle portico relieves it of the monotony and bareness that it would otherwise have.

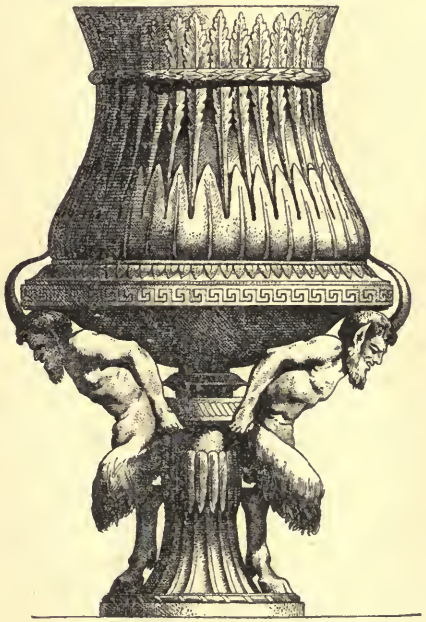
IOWA STATE BUILDING.

Josselyn & Taylor, Architects.

The architects of Iowa had a unique problem. Funds were not available for the costly building it was at first meant to erect for the State, and the State obtained the use of the pavilion already standing in Jackson Park, with permission to add to it. The low building at the right is the pavilion, to which the design had to be conformed, and the addition, in French château architecture, conforms to it fairly well and composes with it a sprightly and festal building.

Upon the whole, while a very much better general result might have been reached had the State architects taken counsel together, or submitted themselves to a general supervision, as the architects of the Exposition building did, the individual buildings are highly creditable. They show a marked advance upon the similar building at the Centennial, and the advance corresponds fairly to the national advance in knowledge of the art of architecture and skill in its practice. It is shown in a most gratifying way by the absence of freaks and monstrosities. There is but one in the list that can fairly be described as vulgar or offensive; and surely this is a great deliverance.

Montgomery Schuyler.



WASTED OPPORTUNITIES.

THE ARCHITECTURAL RECORD intends to add to its series of critiques on current architectural practice, which treat of peculiarities, eccentricities or worse in the façades of buildings, a series which shall deal with the plans of office buildings, calling attention to defects which exist in them and showing the consequences thereof.

Whatever may have been the effect of the series called "Architectural Aberrations," and we believe it to have been decidedly beneficial, we trust that this series will have still more marked effect.

An office building is erected with the specific purpose of making money for its owners, with occasionally the further purpose of serving as an advertisement. It must, therefore, to be a successful one, at least yield as much interest on the gross cost as does any of its competitors. If, then, it can be shown that, in any particular, changes in the plans could have been made to render it still more profitable, an opportunity has been wasted.

We do not undertake to say that the blame for this waste lies on the shoulders of any one person, because it might be due to peculiar conditions imposed by the owner or his representatives, or to peculiarities incidental to the proposed use of some of the floors, or to a misapprehension of instructions, or to attaching undue importance to certain features emphasized by the client, any one of which, while the violation of fundamental principles, might at the same time be perfectly justifiable.

A good office building must combine the following elements:

(*a*) Ease of access.
(*b*) Good light.
(*c*) Good service.
(*d*) Pleasing environment and approaches.
(*e*) The maximum of rentable area consistent with true economy.
(*f*) Ease of rearrangement to suit tenants.
(*g*) Minimum of cost consistent with true economy.

These are copied from an article on "Modern Office Buildings," published in THE ARCHITECTURAL RECORD for the quarter ending June 30, 1893, and for their definition and demonstration the reader is referred to that article because it presents them in form

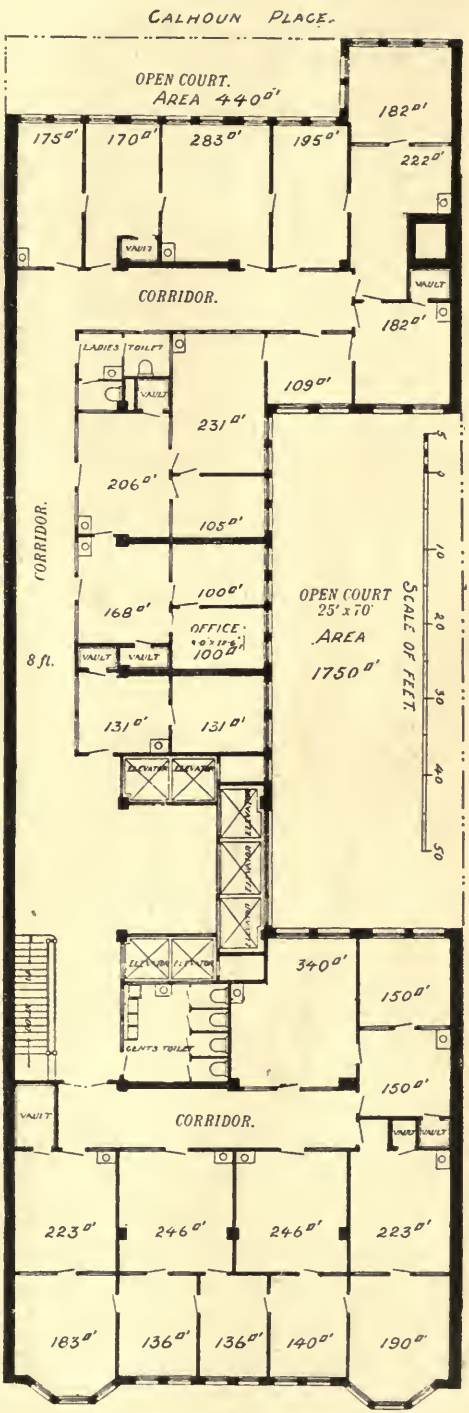
easily referred to. Where cases arise where we disagree with the author the reasons will follow, but it seems desirable to have some authority to fall back on in addition to that most potent of reasons with the owner, the one of dollars and cents.

While Chicago did not actually inaugurate the type of steel skeleton high office buildings it was more fully developed there than elsewhere, and it seems proper, therefore, to begin the series by a criticism of a Chicago building. We shall, therefore, start with the Chicago Title and Trust Co.'s building, located on the southerly side of Washington street, just east of Clark street. To quote from the Company's renting plans: "The aim has been to make all the offices desirable, convenient and the best in the city. The Company will make this the most complete office building in Chicago and will furnish it with every modern convenience."

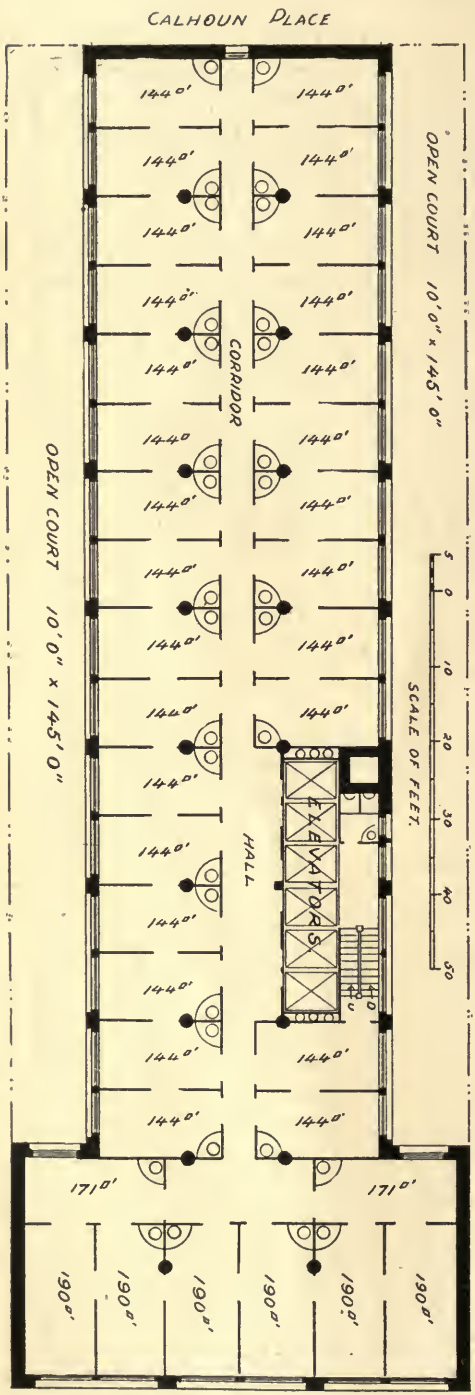
The building is located on a lot 60 feet front and 180 odd feet in depth, running from Washington street south to Calhoun place. It is erected of blue Bedford stone to the fifth story and above that of gray Roman brick. The interior is arranged so that any of the partitions can be changed to suit tenants, according to the prospectus, with high marble wainscoting and mosaic floors in the halls. On the ground floor the rear half is reserved for the Company's own offices, the front portion being dedicated to banking-rooms. The second and third floors are reserved for banks or other use requiring large space.

The statement is made that absolutely no expense "has been spared to make the construction in the highest degree substantial and safe." On the upper floors, down to the ground floor in fact, there is evidence of this in the transverse bracing between four pairs of columns which carry through the stories unbroken. But this bracing is omitted for all but one on the ground floor. From the above it is evident that the endeavor has been made to secure satisfactory results. Now let us see with what success.

We shall consider the various points



Ninth Floor,
98-102 Washington St.
The Plan as it is.



98–102 WASHINGTON ST.
The Plan as it ought to be.

in the plan in the order in which we have stated them. In order to more fully illustrate them we present two plans, one of the building as it is, and the other as we think it should be, and also a schedule showing some of the marked points of difference, with the money value thereof.

(*a*) *Ease of access.*—From the schedule it will be noted that not only is the distance from the entrance to the centre of the elevator space greater than it should be, but also the distance from the elevators to the extreme office, so that a visitor who is desirous of seeing the tenants occupying the office in the rear has to travel in the executed plan a distance of 212 feet through the halls, instead of a distance of 170 feet, which he would have had to travel had the plan been as it should be. In addition to this a person entering the space devoted to elevators in the executed building has to risk the dislocation of his neck in order to see which elevator will most quickly serve him, while in the proposed plan all of the elevators are visible at a glance.

On the ground floor the entrance vestibule would be made 20 feet wide and the hallway to the elevators 12 feet wide, instead of the entrance vestibule being made 12 feet wide and the elevator hall much larger.

(*b*) *Good light.*—It has been demonstrated that courts should have their long axis north and south, and in the building as it is, one of the courts have been so placed; but it is so located that should the owners of the adjoining property ever build, the court will be closed in and no circulation of air can consequently take place through it. Calhoun place, which is very narrow, has had its efficiency as a furnisher of light increased by throwing 10 feet of a part of the lot into it, but since this widening is in the wrong direction, its effect is much less than it should be.

We have then in the plan as it is a total area of 2,190 square feet devoted to courts. In the proposed plan the courts are made with their long axis north and south, 10 feet wide, and opening out directly on to Calhoun place, devoting 2,900 square feet to

light and air; the courts being open to their very bottom will always afford good ventilation, and during the winter time will let in a maximum of light, and their position is such as to make it an inducement to the property-owners on both sides to follow similar lines, while their width is such that even if the adjoining property-owners build on the line the light will be ample.

In addition to this, however, is the question of light in the offices. In the schedule the percentage of light offices is given as 64 for the building as it is; this means that of the 5,053 square feet of the rentable area 1,813 square feet is comprised in rear offices which do not get light from the outer air direct, the cases in which light is taken from the side walls being accidental and liable to interruption at any time.

This being the case, it is hard to say precisely the value of these offices except for certain particular purposes.

In the plan as proposed every office opens directly to the outer air and the hallway has its opening to the outer air as well, while all but two of the elevators have their back to the light, affording ample light.

(*c*) *Good service.*—The only question here involved is the one of whether six elevators are sufficient. We believe that they are, and if they are not it is a very simple matter to put in a seventh one, but experience has shown that if they are properly arranged there is no difficulty. The position of the stairs is such as to make them as unobtrusive as possible and yet have them available in case of need. The fact that they are entered through an office unit, and that the emergency toilet is also entered through it, is one that would decrease the rentable value of that office necessarily. The position of this toilet, however, is such as to insure its being used only in case of emergency, which is what it was planned for. The other toilets would be grouped on one of the other floors, or immediately under the roof, in no way adding to the expense of erecting the building and giving a more liberal accommodation than is now provided.

So far as the question of lost time is concerned, there is certain to be more among the tenants of thirteen suites waiting for some one of the four toilets to become vacant than for them to take a trip in the elevator, which would mean six minutes for the round trip from the first story to the roof and down again, and since the average would be eight stories it would mean three minutes for the average time. Should the owner or the agent deem this excessive some space could be devoted on the eighth floor, thus reducing the total average trip to one and one-half minutes, which is inappreciable.

The further convenience of having the toilets grouped together, and the knowledge of the fact that no time need ever be lost in waiting, would compensate for the trip, while it would be possible to have a man always in charge to prevent any nuisance and see that everything was in proper working order.

We desire to call attention to the fact that the plan as it is shows the basin slabs only 15x30 inches, which is altogether too small. The arrangement of the toilets is open to serious objection on sanitary grounds as well as on account of the space which is wasted by having them in this position, since none of them open to the outer air, and therefore lack direct light, and the shafts which are near them are so small as to be insignificant as factors for ventilation, and the consequence is that there must be times when they become offensive. In any city where sanitary matters are strictly supervised this arrangement would not be permitted.

(*d*) *Pleasing environment and approaches.*—This is a subject concerning which we have no interest, it being entirely within the control of the owner.

(*e*) *The maximum of rentable area consistent with true economy.*—The ground floor contains the offices of the Company and a banking room in the plan as executed. In the plan proposed the offices of the company would be very slightly less, running from the line of columns at the left end of the elevator hall through to the rear, but they would be perfectly lighted throughout

their entire length and would not be obstructed by the chimney. In the front there is room for two banking rooms in place of the one, and each one should rent for as much as does the present one, because the space is such as to be more advantageously used, and the light is perfect. We therefore should have on the first floor a better return than is gained at present.

On the office floors it is immediately evident that the proposed plan contains far more rentable space than the executed one, in spite of the fact that there is more space devoted to courts in it, and, in addition to this gain in area, there is the further gain in light.

The arrangement of the offices in suites in the executed plan is such as to render one of the offices dark and fit only for use as a waiting-room, unless artificial light be furnished. In any event, the value of the dark room cannot exceed one-half of the value of a light room and, in that case, we would have the effective area in the executed plan less than in the schedule, since 1,813 square feet are in dark rooms, we should have the effective area for rental of 4,146 square feet to compare with 5,514.

The corridors are made 4 feet wide in the clear, except in front of the elevators, where there is likely to be congestion, there they are made 8 feet wide in the proposed plan. In the plan, as executed, the halls are 8 feet wide, except in front of the elevators, and there there is an effective width of 13 feet; but the total area in front of the elevators is only 221 square feet, against 288 for the plan as proposed, and the position of the elevators is such as to cause confusion and interference at times, especially when the attempt is made to use the two corner elevators simultaneously. The breadth of corridor space is simple waste, since it is unnecessary.

A further disadvantage lies in the arrangement of the executed plan and in the disposition of the four bracing partitions, which make it extremely difficult to get any large space for the use of more than two tenants per floor, while in the plan as proposed, the only partitions which are fixtures are those on each side of the elevator well, the extreme southerly wall affording the other means of bracing, and the arrangement, therefore, being such that anything that is desired can be done with the floor space. Even the stairways are so placed that they can be shut off and communication be kept up past any particular floor without trenching on its space.

If vaults are considered a necessity, it would be better economy for the owner of the building to purchase safes for each pair of offices than to put in the fire-proof vaults with their loss of space as shown.

(*f*) *Ease of rearrangement to suit tenants.*—This point has already been pretty well covered in the discussion of the other points. A study of the plan, however, will make it evident that if the arrangement is desirable as it is, the proposed arrangement must be more so since the private offices are susceptible of a better arrangement of the furniture and communicate directly with the corridor, so that in case of need a person can leave the office without passing through the general office. At the same time the outside or general office is perfectly lit, and is of an economical size. The arrangement of the floors in units is such as to permit of expansion according to individual needs to any extent and to give almost any arrangement of space that is wanted. Every office being the duplicate of every other office, there is no difficulty in separating any set of offices that may be desired to suit a tenant's requirements, while if the offices are to be changed, the removal of the partition is easily accomplished and the lighting and heating would be unaffected; plumbing fixtures being removed by simply unscrewing the couplings where they pass from the column inclosure into the room.

(*g*) *Minimum of cost consistent with true economy.*—In the plan as executed no exception can be taken to the marble wainscoting and flooring, to the bracing, or to any other of the elements of cost considered in themselves. When they are considered, however, in their amount, we find much to deplore.

It must always follow that a bad

plan necessitates bad construction, and that is particularly true in this case. The peculiarities of the Chicago soil are such as to require a very wide spread to the foundations, we should therefore desire to minimize the loads as far as practicable and should have our columns arranged in pairs so as to readily treat them. In the plan as proposed it will be at once seen that it is entirely practicable to arrange all of the columns in pairs except in two cases, and obtain symmetrical footings under them in all cases, without encroaching in the neighboring property. In the plan, as it is executed, this cannot be done. The executed arrangement of the columns leads to an unnecessary depth of floor beams, and as a consequence, the minimum beam depth to use in the building as executed is 10 inches, while in the building as proposed, it would be entirely practicable to use 8 inch beams, a saving in the height of the building of 2 feet 8 inches, and a considerable saving in weight.

In the matter of the windows, in spite of the fact that the plan proposed has more light than the plan as executed, there are six less exterior windows per floor, which means a considerable saving. The superior arrangement of the floors renders the interior sash wholly unnecessary since the hall would be properly lit from the sash and transoms of the entrance doors of the offices, and we therefore would save 38 interior sash and frames per floor. The length of walls in the executed plan, in spite of the fact that they inclose less rentable area, is considerably more than it need be.

The total area of the building as executed is also greater than that proposed, in spite of the fact that there is less rentable space in it, and, as a consequence, the cube of the building is increased 146,000 feet. The values of these various items, based on usual prices, are given herewith.

SCHEDULE OF DIFFERENCES.

Dimension.	As it is.	As it should be	Credit.	Debit.
Number of columns	46	46		
Span of girders	20 ft.	18 ft.		
Span of beams	16 "	13 "		
Exterior windows, per floor	47	41		$4,500
Interior sash, per floor	38	0		14,250
Wash basins, per floor	16	36	$15,000	
Urinals, per floor	3	4	1,125	
Water closets, per floor	6	4		2,400
Elevators	7	6		5,000
Length of walls	529 ft.	484 ft.		20,250
Angles	10	8		4,500
Height of building	198 ft.	195 ft. 4 in.		6,420
Court area	2,190 "	2,900 ft.		
Rentable area office floors	5,053 "	5,514 "		103,725
Hall area	1,912 "	886 "		
Wall area, average	662 "	603 "		
Elevator and miscellaneous area	1,103 "	1,017 "		
Building area	8,730 "	8,020 "		
Total service area	3,677 "	2,506 "		
Lot area	10,920 "	10,920 "		
Cube of building above ground floors	1,552,000 "	1,408,000 "		43,200
Distance, entrance to centre of elevator space	85 "	67 "		
Distance, centre of elevator space to furthest office	127 "	103 "		
Percentage of light offices	64	100		
			$16,125	$204,245
				16,125
			Net Debit	$188,120

Add to these unnecessary expenditures of money the amount which represents the value of rentable area in the proposed plan in excess of that in the executed plan, based on a return of $1.50 per square foot, capitalized at 10 per cent, and the total will represent the cost of planning the building in this way.

If, in addition to these items, we assume that the dark offices have a value of only one-half that of the front offices, we have a further loss of $133,275. It is sufficiently great to demonstrate the desirability of a more thorough investigation of the possibilities of a lot before proceeding with the erection of the building.

Chicago, Ill. THE NEW MARSHALL FIELD BUILDING. D. H. Burnham, Architect.

Chicago, Ill. HAHNEMANN MEDICAL COLLEGE. W. W. Boyington, Architect.

THE MUTUAL RESERVE FUND BUILDING.

Broadway and Duane street, New York City.

W. H. Hume, Architect.

Nassau street, New York City. FULTON BUILDING. De Lemos & Cordes, Architects.

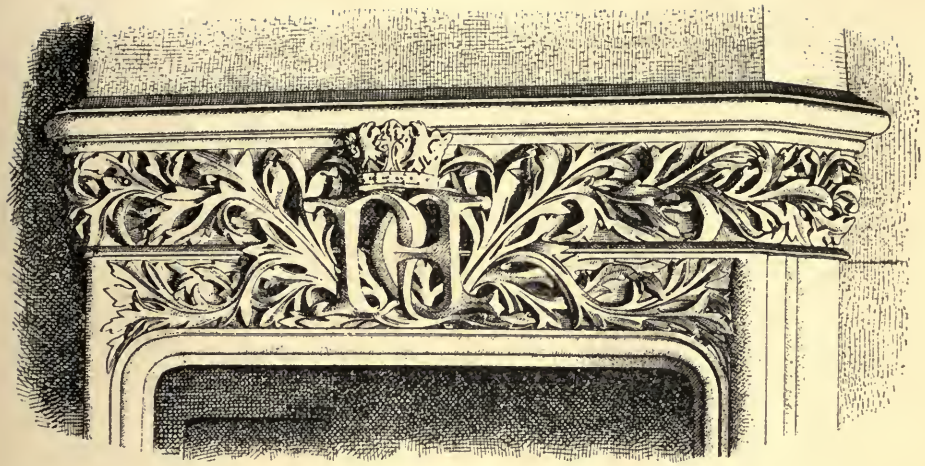
THE MANHATTAN LIFE INSURANCE CO.'S BUILDING.
(The tallest building in New York City.)
Broadway, New York City. Kimball & Thompson, Architects.

THE KEUFFEL & ESSER CO.'S BUILDING.

Fulton street, New York City. De Lemos & Cordes, Architects.

NORWEGIAN COTTAGE.

TIMBER CHURCH, NORWAY.



FRENCH CATHEDRALS.

PART III.

CHRONOLOGY.

I.

THE readers of the New York daily press on the morning of January 2d, 1892, would have found, had they looked closely enough, a brief notice to the effect that on the day before, Bishop Potter had held a "service of occupation" on the site of the proposed Cathedral of S. John the Divine. It is not inconceivable to imagine that, were there no record of the beginning of that cathedral save this, the historian of the twenty-fifth century might readily take it to indicate the day on which the work of construction had been begun. Then again, a year later we all read in our morning papers the accounts of the solemn, though not elaborate ceremonies with which the corner stone of the same church was laid on the 27th day of December, 1892, and again the future historian might unhesitatingly assume, were no other facts at hand, that the first stone was really laid on the self-same day, which, for all time, would be honored as a day of memory for the commencement of the work.

We of this present year of 1893 know very well that no work whatever was done to the Cathedral of S. John the Divine in the City of New York on January 1st, 1892. We know that the ceremony briefly chronicled in our daily papers was simply a formal consecration of the ground without thought of the day when the work of building would actually be begun. We know, furthermore, that while the corner stone, the official memorial stone, of the cathedral was really laid on the Day of S. John the Evangelist, 1892, work on the foundations had been under way for some time before, necessary, in fact, to bring the corner stone above the level of the ground. We know these things because they have but just transpired under our immediate vision and come within the bounds of common, everyday knowledge. But we can readily see how, without other data, they

might confuse an historian living in the year 2493, and so, while realizing the confusion possible with events and dates now easily recorded, understand, in a measure, how difficult it is for us, in this year of grace, to correctly determine events and epochs belonging to a time six hundred years earlier, when there were no newspapers, no printing presses, no myriad ways for recording time and disseminating knowledge, no accurate markers of time, no definiteness, no care, scarce any records. The year 2493 seems to us an immense distance in the future, yet it is no further from our day than the year 1293, a date at which many of the French cathedrals had been completed and with which every archæologist is supposed to be entirely familiar.

No phase of the history of French cathedrals is so complicated as their chronology. Primarily this is due to the insufficiency and inaccuracy of the records. There was no honest historian at hand to record events and progress for the benefit of students living six or seven hundred years later. Even these dates, plainly written in documents of unquestioned authenticity, are now closely scrutinized by careful scholars. It is too much to say that the mere writing down of a date is sufficient to throw doubts upon its accuracy, but were modern archæologists dependent only upon written records for their chronological data, there would be no such thing as a chronology of French cathedrals or of any other class of mediæval buildings.

The records are inaccurate and incomplete because no one was interested in keeping them, and their future interest and value quite undreamed of. Were a Pope present at the consecration of a cathedral, or at the laying of a corner stone, as was not unfrequently the case—for in the twelfth and thirteenth centuries the Popes traveled oftener and further than they have done in the nineteenth—the time is apt to be properly set down, not because it was an architectural event, or was supposed to have the smallest architectural significance, but solely because of the ecclesiastical importance attached to the presence of the Supreme Pontiff. There is no more generally recognized fact in the history of all the cathedrals of France than that the first stone of the Cathedral of Notre Dame at Paris was laid by Pope Alexander III. in the year 1163. The Pope was in France in that year, and, moreover, was in the city of Paris between March 24th and April 25th, so there is every reason to believe that he did indeed perform the ceremony attributed to him. Yet no contemporary historian makes mention of the fact, a most singular omission even in that distant day of loose recording, and the statement rests upon the word of a single chronographer living in the fourteenth century. And when the memory of the beginnings of New York's cathedral is recalled, one may well ask if, supposing the Pope had been present, it was actually the first stone he laid, or did he merely put in position, as did the Bishop of New York, an ornamental memorial stone.

Take the question of the consecration of a cathedral, an event more likely to be recorded than any other in the church's history. This is very far from meaning, as in modern times, the completion of the edifice. The Cathedral of Bourges was consecrated in 1324, though its west front and many chapels were added later. When the Cathedral of Auch was consecrated, in 1548, it was scarcely half finished. Consecration may mean the consecration of an altar, as the choir altars of Noyon in 1153, or of the high altar, as of the Cathedral of Paris in 1182, or the consecration of a choir, as of S. Denis in 1144, or the consecration of the whole edifice when the body was complete though much external and internal work was to be done, as was the case with the Cathedral of Chartres, consecrated in 1260. Often there is no connection between the consecration and the condition of the cathedral. The Cathedral of Albi, begun about 1280, was consecrated in 1480 and finally finished in 1512. The Cathedral of Troyes, begun in 1214, was only consecrated in 1429. The Cathedral of Senlis, finished in 1183, save towers and transepts not included in the original design, is a rare instance

of delay in consecration, which only happened in 1191. No record whatever is preserved of the consecration of the Cathedral of Rouen, and the Cathedral of Paris was consecrated as a whole only in the present century. The French cathedrals have never been finished, nor has their chronology an end. Dating, most of them, from the twelfth and thirteenth centuries, they have borne the brunt of time and man alike. And man has not been tender to them. Not every century has left its indelible mark, but each has impressed itself in some way, generally—at least after the sixteenth century—to the harm and detriment of the original fabric. Thus the chronology of their existence continues to this very day, and will continue long after this century has been dead—in a word, so long as they retain one stone upon another.

Yet it is a mistake to suppose that a cathedral is only the product of centuries of work. The Golden Age of cathedral building, as we have seen, was during the reign of Philip Augustus, when the French cathedrals *par excellence*, those of the Royal Domain, were not only conceived and begun, but many of them were almost completed. The most potent factor in the production of these great churches was not time but thought. They were the expression of a spontaneous outburst of religious enthusiasm. And this developing in an era in which architecture, of all the arts, was closest to the people, an enormous mass of thoughtful, living, real work was produced in an incredibly short space of time. It is true enough the building of many a cathedral was spread over cenuries; that of the Cathedral of Tours, for example, was prolonged through five, from 1175 to the sixteenth century. The people thought it never would be done, and "*C'est long comme l'œuvre de S. Maurice*" passed into a popular proverb. But long continued work was not always as homogeneous as at Tours, which is somewhat remarkable in this respect. The thirteenth, fourteenth, fifteenth and sixteenth centuries had each their own form of Gothic, and the combination of all these styles—for styles they truly were—was not always as happy as in the Cathedral of Albi, where an exquisite porch of the fifteenth century is joined to a church of the end of the thirteenth, and of which it is the richest and most beautiful decoration.

When the building of a cathedral extends later than the sixteenth century the result is apt to be a most unfortunate joining—there can be no blending in styles so different—of the Gothic and the Renaissance. The cathedral of S. Claude is a case in point. In 1726 the monks of that monastery determined to complete their principal church of S. Pierre, begun in the fourteenth century and left unfinished since the fifteenth. This they did by prefixing a debased Renaissance front to a Gothic body, and finished their work at the very time their abbey was created a bishopric (1742). More fortunate, perhaps, are those cathedrals which, like that of Limoges, have only been finished at the present day.

If a cathedral was never finished until its towers were all complete, its windows lined with rich painted glass, its doorways and porches covered with innumerable carved figures, its interior provided with every essential accessory of worship, with altars, choir screens, jubés and stalls, then few indeed, of the long roll of French cathedrals, are justly entitled to be called entirely done. Cathedrals of the twelfth century were often without transepts, which, as at Noyon, were added later. Interior furniture, essential as it was to the proper performance of religious services, was naturally added last, since temporary work could be replaced with more elaborate monuments at any time. Thus, through the centuries new memorials were constantly adding to the beauty and interest of the cathedral. Chapels were opened into the nave, monuments to bishops, princes and wealthy benefactors gave fresh significance to the interiors, and became, to us at least, an integral part of their fabric. And this is the single advantage derived from continuing the building of the cathedral over a long extent of time—the variety of memorials which it permits. As for the actual structures, a study of their chronology will show that, with scarce

an exception, those built in the shortest time are not only the most successful, but the greatest.

II.

Ecclesiastical dates do not always mean to the archæologist as much as they may mean to the ecclesiologist. They contain elements of uncertainty that need external confirmation to render them acceptable for architectural purposes. Nor is this their only fault; they are not only uncertain but incomplete. The early chroniclers were more concerned with the doings of the bishops and princes than with the recording of architectural progress made under their own eyes, and whose significance, notwithstanding the marvellous rapidity of development, they could scarcely comprehend, and in which they could imagine no one's taking an interest. It was much more important, in their eyes, to chronicle the comings and goings of the bishops, to relate how one succeeded the other, and, above all, to preserve tales — often of the most marvelous and impossible character, and the more so the better — of their doings. Thus the ecclesiastical history of any French bishopric may contain a vast number of facts, none of which throws the smallest light upon the building of its cathedral, which, without exception, was the most important work undertaken within the bishopric. Some side light is obtained from the records of donations, either by gift or by will, which crowd the early records and, being often for specific purposes, show that some sort of work was being done to the edifice at that particular time. Some further help is obtained from the chronicling of the visits of popes, kings and princes, or the meeting of a council, or the record of some other event which took a huge crowd of exalted folk to church. At the most, all this falls far short of what a modern newspaper reporter would find to say about the building of a church in any American city, were such things of the same relative importance as the great events which now crowd the columns of the daily press.

Of more vexation to the modern student is the inaccuracy of the written records. One of the most interesting buildings in the city of Arles is the small chapel of the Holy Cross of the abbey of Montmajour, which stands in the midst of an ancient cemetery, long disused, even as early as the thirteenth century. The chapel was built and consecrated in the year 1019 by the Archbishop of Arles, who took this occasion to renew the charter of the abbey, the date and fact being recorded in one of the most important documents preserved in the monastic archives. In the thirteenth century the legend arose, how or why is not known, that in very early times a battle had been fought in that neighborhood between the Christians and the Saracens in a place called Aleschamps. And where so convenient a site as the monastery cemetery, nor what more likely than that it be filled with the bodies of the Franks killed in battle? From this it followed, as a perfectly natural conclusion, that the chapel must have been erected by Charlemagne himself as a memorial to them. And so, without a thought of looking to their own archives for light, the good fathers placed an inscription to this effect in the interior of their chapel, that its origin might not be forgotten, and that future archæologists be not led astray.

More remarkable is an instance supplied by the monks of the church of S. Gilles of Languedoc. This edifice had been begun in the early part of the twelfth century, and to-day one may read the date 1116 inscribed on a stone in the adjoining cloister. Never carried to completion, work was resumed on it in the sixteenth century, and in a petition asking the sanction of the Pope for its continuation, the church was described as a monument begun by Charlemagne. And this monstrous distortion of the truth, which could have been so easily corrected, was actually incorporated in a papal bull issued in this connection.

Dates of all kinds prior to the middle of the twelfth century are extremely uncertain, and the most indefatigable archæological chronologist is certain to have trouble with them. After this

time many dates are unquestioned and readily ascertained, and errors, written or otherwise, as readily corrected. Fortunately modern archæology does not depend wholly upon written records. The analysis of buildings and parts of buildings, the study of ornament and of constructional features, enables the modern student to determine the relative age of buildings within one group; that is to say, in structures of a limited region or members of the same school, and in which progress and change have been similar and in a continuous line. But this does not permit the ascertainment of actual dates, nor does it enable one to say more than that such a building is older than another, or that it belongs, perhaps, to the first, second, third or fourth quarter of the twelfth century. But this comparative study has thrown much fresh and valuable light upon the chronology of mediæval buildings. It has lightened the work of the student, but not wholly relieved him of his burdens.

It would be an easy task, were it needful to do so, to divide the time covered by the building of the French cathedrals into periods, since their chronology is marked by several well defined epochs. In the most literal sense the time filled with their erection is not less than the whole period from the founding of Christianity, or more properly its introduction into France, to the present time. Ecclesiastical historians date the earliest cathedrals from the first preaching of the Gospels, and, in truth, the early missionaries built oratories or utilized caves or heathen shrines for Christian purposes, and thus, if they were bishops, founding veritable cathedrals. But it is misleading to designate all these early buildings, every one of which had passed away before their history began to be written, as cathedrals in the modern use of the word. Properly they were such, for wherever the bishop's chair was there was a cathedral, but in the early centuries, and in Britain as late as the end of the tenth century, the bishop moved his chair and his cathedral as often as he chose or as the exigencies of the times demanded. But the ecclesiastical rank of these buildings, as well as their architectural importance, is of no moment to the student of present cathedrals. It is not uninteresting to know that many of the greatest cathedrals began, like Chartres, and Paris, and Marseilles, and many others, on the sites once filled with pagan shrines, but otherwise these almost mythical buildings have no place in our present studies. They may well be consigned to the LEGENDARY PERIOD of cathedral building without further thought or comment.

Their disappearance has not been wholly a matter of structural decay. Prior to the end of the first quarter of the tenth century Gaul was in a most unsettled condition. Tribes of Northmen poured down upon it in a steady succession, devastating towns, burning cathedrals, murdering bishops and disturbing the ecclesiastical and political state of the country. Internal dissensions were likewise numerous and no building of any sort could be depended on for a long life. Scarcely a bishopric in France but suffered at one time or another from the inroads of the barbarians, and many of them many times. The Legendary Period may therefore be said to close with the end of the Norman invasions, or about the first quarter of the tenth century.

The next period may, with considerable latitude of meaning, be termed the ROMANESQUE PERIOD, including churches built before the last quarter of the twelfth century. It was an epoch in which wooden roofs and hasty and insufficient construction abounded, though neither the one nor the other were universally characteristic of the churches of the time. In the south of France, especially, a widely-distributed group of Romanesque churches were to be found that were vaulted from the very beginning. France was becoming settled; politically and mentally the people were preparing for the GOLDEN AGE of cathedral building—the thirteenth century. The great revival of cathedral building in that era, however, was not wholly a free outburst of enthusiasm, but often an absolute necessity. The most potent cause in the development of Gothic architect-

ure was fire. The wood roofs and slight construction of many Romanesque cathedrals made them easy prey for the flames, caused by carelessness, by war or by lightning. Thus it happens that very nearly all of the rebuildings and reconstructions with which the Gothic period is filled were due primarily to destruction, either in whole or in part, by fire. Perhaps at no period in the history of architecture was this element so useful in furthering the cause of art, nor did it ever bring about the erection of more artistic and beautiful buildings than followed its path in Northern France in the thirteenth century.

The blight of the English wars in the fourteenth century well nigh put an end to permanent and extensive work, though some few cathedrals were carried forward, notably the west front of Reims, built from designs perfected in the preceding century, and one or two, as S. Bertrand-de-Comminges, actually begun. Then, to continue a general classification, came the FINAL GOTHIC PERIOD in the fifteenth and sixteenth centuries, in which the work of the thirteenth was continued in a new form and under different conditions. This was followed by the RENAISSANCE PERIOD of the seventeenth and eighteenth centuries, when classic forms found high favor, and much mediæval work was displaced for imagined improvements in the new style. Several cathedrals were built in this time, those of Blois, Nancy and Versailles serving as typical examples, not only of the architecture used, but of the insignificant place cathedrals and cathedral building held in the minds of the people of this time.

Even as far back as the Final Gothic Period the hand of the iconoclast had pointed the way to the extinction of cathedral building and the end of the old religious life. The ravages of the Protestants in the sixteenth century left indelible marks of willful violence on many a monument of mediæval religious fervor. Scarcely a cathedral in France but suffered from the blind bigotry, malicious hatred aud misguided enthusiasm of the French Protestants, who saw only idolatrous sinfulness in the pious work of the thirteenth century. Thousands of painted windows, countless statues and innumerable articles of church furniture and decoration perished at their hands. Fortunately France had no Henry VIII. to give official sanction to these outrages upon art or to lead in these atrocities. The fabrics of the cathedrals, save in a few instances, were practically uninjured, but when this wild madness had had its day it was to strangely dismantled churches that the worshipers returned.

The cathedrals of France never recovered from this devastation. Such restorations as were attempted were, in many instances, in the newly introduced Renaissance style, utterly out of keeping with the spirit and form of cathedral building. But worse was to come. In the eighteenth century a spirit of reformation and rebuilding began to be manifested in the cathedrals, almost as disastrous and quite as unreasoning and wild as the ravages of the Protestants, from which it differed only in the absence of willful maliciousness. It consisted in nothing less than attempts at "modernizing" the cathedral interiors. Altars were removed and their places taken by the barbarous structures which now disgrace so many French churches. Tombs were torn up and destroyed, either because partially injured or to make way for some projected "improvements." The crowning misfortune was the destruction of the jubés or rood screens, as they are called in England, whose removal has given the modern French cathedral that general open appearance that strangely contrasts with the closed naves of English cathedrals. The cathedrals which suffered in this one thing would make a formidable list, including nearly the whole number. The misguided men who undertook this work were not satisfied with destruction but must needs complete their barbaric task by reconstruction. Sanctuary walls were removed to give place to barbarisms, such as may be seen at Chartres and many another cathedral, totally out of keeping with the architecture of the edifice, but which seemed to offer no incongruity to their makers. The bad taste

of the modern sanctuary walls is only exceeded by that of the modern high altars over which figures of angels and other beings float on clouds of marble or of wood.

No one seemed to have had either the sense or the power to mitigate these innovations, but the history of the French cathedrals in the eighteenth century is not limited to such misfortunes. A Revolution that consecrated itself by the murder of a well-meaning but unfortunate king, and a queen whose greatest sin was want of tact and wisdom, and both of whom were the human representatives of centuries of divinely consecrated government, could very well suppose it might dispense with the Deity. The cathedrals not only became national property, but worship in them was discontinued. God having been abolished by Act of Assembly, the vast wealth that for centuries had been accumulating in His churches became, like them, national property. The rich treasuries of the cathedrals, the hoarded wealth of sacred shrines, the very vessels of the altars were seized in the name of the nation. Incalcuable treasures of art were deliberately destroyed that the precious stones and metals used in them might add to the wealth of the most rabid iconoclasts the world has seen. Nor did the baser metals escape confiscation; lead roofs and copper railings were destroyed to make ammunition and guns for the revoluntionary troops. The tombs of saints and of sovereigns were desecrated, and the relics and bodies destroyed as accursed things. Even the wholesale destruction and sale of cathedrals was debated, and the horrible desecration of the royal abbey of S. Denis was a fitting climax to this unholy work.

But the end was not yet. God had indeed been abolished, but the idea of worship was too firmly imbedded in the human breast for all thought of deity to be disposed of by a brief legislative enactment. Scarcely had the cathedrals been closed than they were reopened, for the worship of Reason. Intoxicated with the blood of innocent victims, the men of 1793, wrapped in an impenetrable mantle of egotism and infallibility that out-poped the most papal occupant of the throne of S. Peter, inscribed over the great door of the Cathedral of Reims the significant words

"TEMPLE DE LA RAISON."

Festivals were celebrated at the high altar in honor of the brand-new deity, who was similarly adored throughout the country. In Paris, a singer of the Opera personated the freshly created goddess, and was borne in state to the Cathedral of Notre Dame, and, seated upon the high altar of the desecrated church, received the personal homage of the National Convention. The end was reached. Human imagination, human profanation of sacred things could reach no sublimer height. Contempt for God Almighty could find no more complete expression.

Was it for this the men of the thirteenth century had poured out their treasure? Was it for this the faithful of six centuries had brought their wealth to their churches? Was it for this the most deeply religious art the world has seen rose and flourished and left its monuments to the care of later generations? The very impetuosity of the desecrations of the French churches in 1793 show how close they stood to the thoughts of the people, that even in time of wildest political and intellectual ferment no insult was neglected that might cover these splendid memorials of a saner time with endless shame.

The Revolution exhausted itself in time to prevent the total destruction of the cathedrals of France. The REVOLUTIONARY PERIOD in the history of the cathedrals was followed, in the first years of this century, by such necessary restoration and repair as would permit the cathedrals to be put to their normal uses. Then comes the final period of cathedral life in France, as we know it, the PERIOD OF RESTORATION in which we are living.

It is one of the strange things of this age in which archæological specialists abound, when the sources of mediæval learning and life were never so accessible nor so largely used, in which culture, refinement and knowledge have be-

come the most desired and most desirable of human attributes, that no sooner is the step of the restorer heard advancing toward some monument of the past than a tremendous hue and cry is raised to stop him and prevent his work. And it is a fact, the more disgraceful because often attributable to experienced and trained hands, that the restorer has done as much harm as the iconoclast. Almost, but not quite. The sins of the restorer are grievous, but he is, very largely, a necessity of the time. He has saved many an old building, he has preserved many a work of art, even his misdeeds have been useful in attracting attention to his performances and preventing complete destruction. His greatest misfortunes have been his zeal and his opinions ; the one leading him to undertake too much, the other tempting him to improve on what was already the best.

The history of the cathedrals of France has been strangely eventful. Few edifices have submitted to the maltreatment they have been subjected to and survived with so little harm. It would be strange indeed if, after five, six and even seven centuries of troubled existence, they should not need the help of the loving caretaker. This the restorer has not always been, but with all his faults and blemishes, with all the harm he has wrought, with all the evil he has done, his work has been chiefly unavoidable. No one will be rash enough to contend that when the roof of the Cathedral of Chartres was burned in 1836, and much of its stonework injured, it should not have been rebuilt and restored to its former form with all the haste and care that good work permitted. On the other hand, when the central tower of the Cathedral of Rouen was destroyed in 1514 little praise could be said for the Renaissance structure that replaced it, and when this, in turn, was destroyed in 1822, no word whatever of commendation can be found for those who began its restoration with the present iron monstrosity, whose building was continued from 1837 to 1876. Nor can any satisfaction be felt in the restoration which the Cathedral of Périguem has recently undergone, which was so complete that the tower was taken down that it might be rebuilt, a process, it is scarcely necessary to say, that has taken away from this rare old church much of its beauty and interest.

Yet, while in this and many other instances it is easy to find fault with the restorer, we should remember that these buildings have not survived for our delight alone. Cathedrals that have stood the brunt of war and siege and religious fanatacism, and that survived the orgies of the Revolution, must be destined to instruct other ages than ours, and educate other eyes than those of the nineteenth century. And in the effort to preserve these buildings for future generations the restorer finds his excuse and his duty.

III.

The history of no French city is complete without the story of its cathedral. Each epoch of French history is as deeply marked upon cathedral walls as though they had been built for no other purpose than to record them. A sketch, in briefest outline, will show how true this is, and illustrate how large an influence events not architectural had upon their history.

Five cathedrals have successively occupied the site upon which stands the Cathedral of Chartres, the present great edifice being the last of the series. Tradition has it that on this spot the Druids had prepared a cave and erected an alter to *Virgini pariturœ* before the beginning of Christianity. The first three cathedrals, belonging to what we have called the Legendary Period, have utterly passed away, and of the fourth, that founded by the great Bishop Fulbert in 1020, there only remains portions of the crypt and the west front, including parts of the north tower and the whole of the south tower. though only the remnants of the crypt are the work of Fulbert himself, the spire of the south tower having been completed about 1176. In 1194 the body of the cathedral was destroyed by fire, only the parts just named surviving. The catastrophe happened at the most auspicious time. Architectural fervor was never at greater heat nor was

the enthusiasm of the populace ever shown with greater force than in the rebuilding of this cathedral, which was pushed with so much vigor that the choir was used for worship in 1198, if not in whole, certainly in parts. The choir and nave were finished by the end of the reign of Philip Augustus, but the consecration of the cathedral, celebrated in the presence of S. Louis and his family, and an immense concourse of prelates, priests and people, only took place in 1260.

Little was done in the fourteenth century. The cathedral was practically complete, but the gables of the three façades, the statuary of the south porch, and the chapel of S. Piat date from this time. It was a troublesome period for France, and politically the people were quite incapacitated for large architectural undertakings. The fifteenth century was scarcely marked upon the fabric of the cathedral so far as fresh work was concerned. In the sixteenth the northern spire was burned in a Protestant seige, and the present graceful and exquisite structure erected. The choir screen, begun also in this century, was the last really important architectural work done to the cathedral. Not completed until the eighteenth century, the choir screen of Chartres is one of the few monuments which connect modern times with mediæval. Almost the last of its kind; this final adornment of a mediæval cathedral was completed in the same century, which, later, was to witness the most deliberate attempts to wreck its artistic harmony. The spirit of Gothic architecture was long since dead, but our own more catholic age can scarcely understand—it certainly would not tolerate—the internal destruction which began in 1753 with alleged modern decorations. Modern they unmistakably are, but it is not to the credit of their age that, at almost the very moment when this great mediæval monument was completed, hands should have been stretched forth to mar its symmetry and destroy the loving work of earlier times. The desecration of the cathedral during the Revolution, the taking off of the leaden roof of the transepts, the destruction of many ornaments, was a fitting climax to the work of the eighteenth century, the most unkind of all to the cathedrals of France.

Seven hundred years ago, less one, the present Cathedral of Chartres began to rise above the ground. At the beginning of this century its life seemed all but exhausted. Damaged by lightning in 1825, it suffered severely from fire in 1836. The rebuilding then begun, continued in many careful restorations, has not yet been completed.

Friend and foe, the mediævalist and the modern, the builder, the destroyer, and the restorer have dowered it with memories, each one of which helps to make it what it is. Though the history of the Cathedral of Chartres has not been as rich in stirring events and exciting episodes as many another French cathedral — those of Paris and Reims, for example — it epitomizes the whole of French history and thought. The chronology of a church dedicated by S. Louis, in which Henry IV., casting aside his Protestantism, was anointed with the sacred oil sent by heaven to Clovis, and which lasted until human thought had progressed sufficiently to dedicate its ancient walls to the Goddess of Reason, cannot but have a lasting and impressive interest to every student of history and of architecture.

Barr Ferree.

ARCHITECTURAL ABERRATIONS.*

No. 8.—THE CHICAGO BOARD OF TRADE.

THE architects and the cultivated persons of Chicago would probably object to having the building of the Board of Trade exhibited as a typical building of their town. If it were typical it would no longer be suitable for our purpose, since it would not be an aberration. And yet it is typical of something that has been. It will be recognized by everybody as a product of that stage of American architecture when the practitioners of the same were very ambitious to make an impression and to "collar the eye," but when their ambition did not lead them to acquire any knowledge of their art, or to submit their designs to revision in the light either of reason or of precedent. While we all recognize, in a building like this, that it was typical, we recognize that it is so no longer. Our architects still do bad things, Heaven knows, but they are not bad in this way any more. This wild autochthonous architecture one might still expect to find in Helena or Seattle, perchance, or in darkest Philadelphia, which is a kind of palæontological museum of building, and where aboriginal architecture is still cultivated amid the facile plaudits of the population. But to come upon a specimen of it in commercial Chicago is like a glimpse of a prehistoric world.

> "Men bring not back the mastodon, nor we those times."

The most striking lesson such a structure has to convey is of the rapidity with which we move in these matters. It has a flavor of mouldy and fish-like antiquity, has the Chicago Board of Trade, like a relic of immemorial time, and yet we know it cannot be so ancient as all that, seeing that the fire from which everything in Chicago dates, and which swept (and garnished) the business quarter, occurred in the year 1871. As a matter of fact the antique but unvenerable Board of Trade dates back only to the year 1883, A. U. C. 12. Wonderful things have been done in these ten years, and one of them is to make a building which was at the beginning of that time the pride of Chicago a laughing stock to the hustling "operators" themselves to accommodate whose operations it was erected. Our illustration shows the advance that has been made, in the corner of the Phœnix building, which is seen just beyond the Board of Trade, and the solid, massive and business-like aspect of which offers so sharp a contrast to the fantastic crudity of the older building. In character, and in the character of the public

* We are making a collection of "Aberrations," and shall present one to our readers in each number of THE ARCHITECTURAL RECORD.

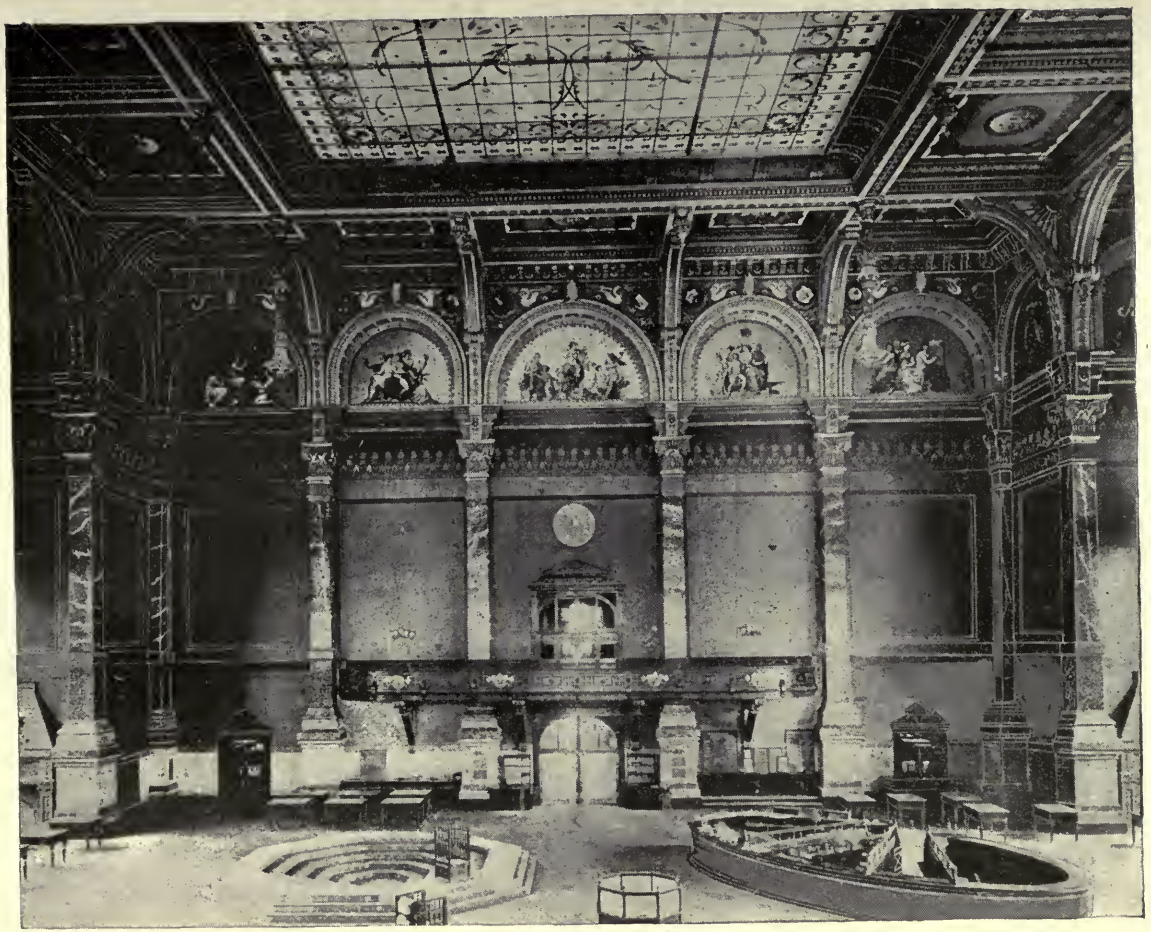
appreciation which architecture always to some extent denotes, the two things are generations apart, and it seems almost incredible that they should have been in point of fact erected within five years of each other.

One can imagine the designer of the newer building envying to the designer of the older his problem and his opportunity. For, in truth, the design of a commercial elevator-building is a rather thankless task, in which success is to avoid ignominious failure. Magnitude is, of course, a great element in expressiveness and mere altitude is an element of magnitude. But to build innumerable stories all alike in purpose and requirement and to make out of them something that is an organism, with related and interdependent parts, without making the composition obviously artificial and arbitrary, to avoid restlessness on the one hand and monotony on the other, to gain variety in unity—this is an almost hopeless task when one is dealing with a multiplicity of the same elements. The task is so difficult and thankless that we are inclined to be thankful to the author of a very moderate success in this kind, and to make constant allowances for the difficulties of the architect is one of the first duties of a critic. The London *Saturday Review* not long ago committed the absurd blunder of holding American architects responsible for the nature of their problems, and blaming them, with much asperity, for erecting buildings twelve or fourteen stories high. The designer of such buildings must often feel himself about his own work in the predicament which Dr. Johnson described about his: "Every other author may aspire to praise; the lexicographer can only hope to escape reproach."

What would the sensitive and artistic author of an elevator building give to have such an architectural problem propounded to him as that which was set before the architect of the Chicago Board of Trade. New as it comparatively is, it yet antedates almost all of the elevator-buildings of Chicago. At any rate, it was composed when the notion that an institution like a great commercial Exchange could not be housed by itself, but must be overlaid or underlaid with tiers of rooms for rental, quite irrelevant to its main purpose and architecturally destructive of that purpose, had not yet taken possession of the Chicago commercial mind, although the New York commercial mind had already been possessed by it, and was rejoicing in an Exchange constructed in accordance with it. For the Board of Trade building is simply and solely what its name denotes, a building containing a great hall for the use of the Exchange, with the necessary appurtenances of the same. The civic pride and the guild-feeling of the operators of Chicago are very great, as nobody can fail to be aware who has had the advantage of conversing with any of them. They are ready to spend all the money that might be required, and there were no extraneous conditions to prevent the architect from making a noble and monumental building out of their requirements.

We see what he has done. He has produced a monument of what we have called fantastic crudity. No straightforward supply of a physical demand for shelter could ever have produced anything so offensive as this structure. In fact, it is doubtful if such a course can result in anything that is offensive at all. It is only when a person who is not an artist is doing what he fondly imagines to be a work of art that offensiveness and vulgarity are introduced. When the "artchitect" undertakes a "fancy building" his work becomes a work of pain and he an object of pity. In the example of fantastic crudity at present under consideration it is the strain to do something novel that makes it most intolerable, and that deprives it of all dignity and all repose. In the general composition of such a building some effort seems to be required to go amiss. The thing to be done with a building that consists virtually of a great hall is to set the great hall on a low basement and cover it with a roof. Here there would already be a triple composition, of which one member was

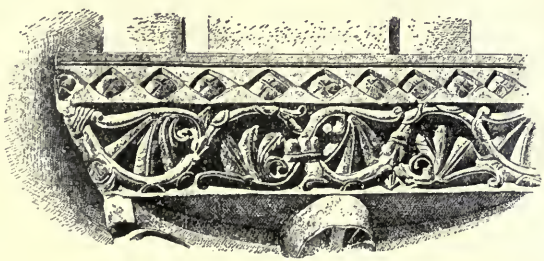
Chicago, Ill. THE BOARD OF TRADE BUILDING.

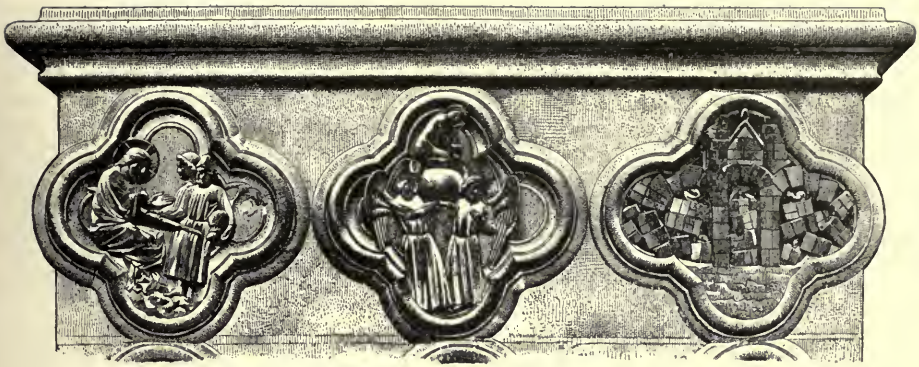


INTERIOR OF THE BOARD OF TRADE.

predominant. But, in fact, the disposition adopted is such that the second story is very nearly equal in magnitude and importance to the first, and the inherent impressiveness of the natural disposition of parts is lost. The windows of the great hall should be a range of ample and similar openings, inclosed between sufficient piers, and it would be hard to deprive such a feature of repose. Here again the natural and obvious arrangement is supplanted by an arrangement which is supposed to be artistic because it is artificial. The openings are not only not of the same size, being varied capriciously, but they are not even in the same plane, and they are still further variegated by the fact that while the springing course of some is marked by a decorated band just under the segmental arch, in others the arch is stilted from the level of the transom. The former arrangement is the more eligible, but either would be far less distressing than a mixture of the two. Continuity, in fact, is everywhere avoided and interrupted in all the lines, and perhaps it is to the solution of continuity that the uneasiness of the building is attributable more than to any other single fact about it. The angle-pavilions are projected from the plane of the wall, and the tower at the centre of the principal front is projected again beyond the plane of the pavilions, while the doorway at the base of the tower is crowned with a projecting shelf of which the level is that of no other line, and which thus destroys whatever effect the expanse of the front might otherwise have made. Add to this that the piers at the angles are painfully thin and weak, that the openings are very painful in form, that there is nowhere anything that can be called modeling, but that the decoration is an application of objects irrelevant to the structure, and crude and unstudied in themselves, and the violent ugliness of the structure is in great part explained. As for the culminations of the structure, the roofs of the pavilions, and especially the form and contour and division and detail of the tower, these are things not to be criticised or described, but only to be pointed out as the vagaries of fantastic crudity.

The architects of Chicago would resent the imputation that the Board of Trade Building was characteristic of the town, and their resentment would be just. It is an example of what might not so many years ago have been seen in almost any American town, and may still be seen in many American towns, though not often on a scale that makes it so conspicuous and therefore so offensive. Rightly considered, it is a tribute to the progress of architecture in Chicago and to the work of the architects. Although so young, it is already hopelessly old-fashioned, the like of it could not possibly be erected now, and it is out of the question that any important building of the present or the future Chicago can be so hopelessly bad.





KYPROS, THE BIBLE, AND HOMER.*

THIS monumental work, consisting of five hundred and thirty royal octavo pages of text and two hundred and eighteen plates containing about two thousand illustrations, has been published simultaneously in German and in English translation. The author is personally and favorably known in America through lectures on Cyprus recently delivered in Philadelphia, New York and Brooklyn, and the Philadelphia Museum has just acquired from him a valuable collection of Cypriote Antiquities. During his visit to this country the German Emperor has moreover allotted a government subvention of twenty-five thousand marks for the publication of his forthcoming work on Tamassos, the site of his most recent and in some senses most important excavations.

Dr. Max Ohnefalsch-Richter stands before the world to-day as the one person who has applied scientific methods to the making and record of excavations on a large scale in Cyprus. This is patent from the most rapid glance at the present publication, by contrast with all that has previously appeared on the subject, but his reputation on this head has been already established during the last fourteen years through the notices of his excavations which have been published by other scholars. Among these may be named Sayce, Helbig Dümmler, Dörpfeld, Fürtwängler and Reinach. The latter has been especially active in making contributions to the *Revue Archéologique* on the subject of these Cypriote excavations.

This being the present reputation and standing of our author, and in view of the fact that America possesses by far the finest collection of Cypriote antiquities in the world in the Cesnola Collections of the New York Museum, it is clear that his book must arouse the interest of American students and that it is destined to be widely known in this country. Before visiting America Dr. Ohnefalsch-Richter had already published his belief that the world will never see another collection of Cypriote jewelry like that made by Gen. Cesnola, and I have personal cause to know that his verdict on the stone sculptures and on the pottery given since his arrival is not less enthusiastic. On the other hand, his disgust for the absence of designation, classification and labeling, and for the wholesale confusion, disorder and blank chaos of disarrangement in the Cesnola collections has been no less openly proclaimed.

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* Oriental Civilization, Art and Religion, in Ancient Times, elucidated by the author's own researches and excavations during twelve years' work in Cyprus. By Max Ohnefalsch-Richter, Ph. D., with a letter to the author from the Right Hon. W. E. Gladstone. Asher & Co., London. Price £9.

In this disgust it is safe to say that he has been anticipated by every serious student who has ever visited the Cesnola collections since their first installment in the Douglas mansion in Fourteenth street some twenty years ago. The arrangements there were, however, far superior to those which have since been made in Central Park. At present the death of three living persons, of whom Gen. Cesnola is one, would result in confounding the Cesnola collections in one hopeless mess for all future time with a large number of terra cottas from Asia Minor, with certain portions of the Drexel collection and with a whole series of Greek-Italian vases. The present arrangement of certain shelves seems expressly designed to create the impression that these collections are a unit, and when the personal knowledge and recollection of one or two persons are no longer accessible it would become permanently impossible to reseparate the Drexel Egyptian objects, the Asia Minor terra cottas and the Greek-Italian vases from the more or less similar antiquities found in Cyprus by Cesnola.

These present indications of want of system or of interest in system in the museum arranged by Gen. Cesnola have notorious counterparts and countless parallels well known to all European students since the first days of Gen. Cesnola's activity in Cyprus in his records and accounts of discoveries made there. Hence the importance of Ohnefalsch-Richter's book, and hence the attention which his own more conscientious excavations in Cyprus have received from European scholars.

It was about 1869 that the eyes of the archæologic world was first directed to this island. Photographs of various antiquities collected by the American Consul Cesnola were sent out by him to various museums with a view to sale of the objects, and the Berlin Museum dispatched Professor Carl Friederichs to inspect and buy the collection if desirable. It was my good fortune to be one of Friederich's pupils at that time and to accompany him as far as Cyprus, at which point I left him for a trip in Syria. A few months later than his purchase of the first Cesnola collection (which was not a large one) for Berlin, the discovery was made at Athienon of an enormous mass of statues now in New York. With them are now mixed together many others from other parts of the island. The outbreak of the Franco-Prussian war a few months after the discovery (1870) had the result of interfering with a prospective sale of these to the French Government, and the other governments of continental Europe, were likewise prevented by the same war from taking steps for their acquisition. Hence a subsequent shipment to London and the negotiations with the British Museum, which were broken off by the American purchase. Meantime, before the shipments to London, a large collection of terra cottas, glass, pottery, metals and minor objects had been excavated by Cesnola from Cypriote tombs or sanctuaries (only the terra cotta statuettes, but not all of these, from the sanctuaries). These were all acquired, together with the stone sculptures, by the New York Museum for the modest sum (actual value considered) of $50,000.

A later purchase and the result of later excavations were the jewelry, gems and other objects, said to include the so-called "temple treasure" of Curium. The objects of pottery and bronze formerly placed in one Museum case as belonging to this "temple treasure" are now dispensed through various cases without special labels, and the few cards placed in the jewelry cases give free scope to the imagination of the individual student as to what does and what does not belong to this "temple treasure." Dr. Ohnefalsch-Richter has examined the described site of discovery without finding the temple vaults described in Gen. Cesnola's work, but there is no doubt that a royal *tomb-treasure* of extraordinary value *was* discovered at Curium, and that its contents are now in New York. What these contents actually were will probably not be one of the death-bed confessions of Gen. Cesnola, because it would require a person in full bodily

vigor to go about among the Museum cases to specify them.

I have made this mention of the Cypriote antiquities in New York because any account of Ohnefalsch-Richter's book seems to make this a necessary preliminary. Let us now rehearse the present condition of the finest collection of Cypriote art in the world. The stone implements from tombs are massed together as distinct from a system which would show with what other objects they were found. There is no information accessible as to the styles of pottery with which they were excavated; the same holds of the objects of iron and bronze, of the gems, jewelry and terra cottas. As for the pottery, it is not classified on any system, excepting that of the most obvious external resemblances, and even these are disregarded in some cases. The statues are thrown together without reference to any system of arrangement, whether that of locality of find, style, period, or subject. Add finally that the cases are entirely without labels as to the above points and occasionally provided with misleading labels as to what is and what is not Cypriote.

Let it now be remembered, to make this confusion appear worse confounded, that there were three distinct races on Cyprus: the Pre-historic, the Phenician, and the Greek; that Egyptian, Assyrian and Chaldean style-influences cross and recross one another in the works of all these races; that Cypriote art is, in the matter of period, partly Oriental, partly Greek, and partly Roman; and when it is considered that no reference is apparent in the Museum classification to any of these facts, it will be evident that the inquiring mind has not much facility for obtaining information about Cypriote art in New York. An opera bouffe is the only parallel to its Museum. In other words, the energy and perseverance with which Gen. Cesnola ransacked the Island of Cyprus for antiquities has been only equaled by his indifference to the historic problems which his discoveries raised and suggested. His commercial interest has been satisfied and he can have had no other.

But these same problems happen to be crucial for the origins of Greek art. We have seen that Cypriote art was practically unknown to students before 1869 or 1870. That it is of highly novel character has been always admitted since Cesnola's discoveries, and that this character is apparently a hybrid mixture of Greek and Oriental influences is obvious. But European students have been crippled in their studies of it; first, because the most important objects were in New York; second, because aspersions had been cast upon the authenticity of the objects, which they could not test; third, because information procured from Gen. Cesnola's book and from catalogues dependent on his word as to locality of finds was subject to suspicion. These suspicions and uncertainties of European scholars are illustrated by the mission of Professor Dümmler, who was sent to Cyprus by the German Imperial Institute of Archæology, to test the accounts of Gen. Cesnola as to his finds of pottery, and by Dümmler's published report on these subjects, made through material furnished by Ohnefalsch-Richter.

It was about the time when Gen. Cesnola became Director of the New York Museum, that Dr. Ohnefalsch-Richter began his activity in Cyprus. I shall quote, for his personal history before and at this time, from the introduction to his thesis presented to the University of Leipzig on the conferring of his degree of Ph. D. Born in Saxony in 1850; agriculture was his original profession, and this profession is made, in Germany, a matter of University education. "I studied Agriculture, Political Economy and Natural Sciences at the University of Halle. During the five years following, I lived for the most part in Italy, where I chiefly devoted myself to the study of art, practising painting and learning photography. At this time, I first began to do some literary work, writing about Italy. When the world was surprised by the British occupation of Cyprus, in 1878, I was in Munich, having come there from Italy for a few months, in order to perfect myself in photography. I cherished the intention of

returning to Southern Italy, in order to prepare an illustrated work dealing with its culture history. The English occupation of the famous island, Franz von Löher's travel sketches, and Louis Palma di Cesnola's discoveries soon matured in me the resolve to make a pilgrimage eastward to a land where I saw that many spoils still awaited the student of its art and civilization . . This is the beginning of my career as an archæologist."

Dr. Ohnefalsch-Richter's excavations in Cyprus date between 1880 and 1889 inclusive. They were made partly in tombs, partly on the sites of sanctuaries. Of the latter those at Voni, Franqissa and Idalian yielded an enormous aggregate of stone sculptures. The principal cemeteries dug out by Richter were those at Hagia Paraskevi and Marion-Arsinœ. He was at first employed by the British Museum and ultimately by the Museum of Berlin. Some of his most important discoveries were made on the account of English officials resident on the Island whose personal interest in the matter was confined to the commercial value and sale of the antiquities discovered. These are, consequently, scattered in various quarters. Many of his most valuable finds are in the Cyprus Museum at Nicosia. In looking for the general aggregate result of these excavations we cannot consequently point to any one collection comparable to the Collection Cesnola, and even when all these results are summed together there would still remain as unrivaled pieces certain statues and sarcophagi of the New York Museum and many of its engraved gems and objects of jewelry. In the department of painted "Greco-Phenician" vases the aggregate result of Ohnefalsch-Richter's excavations would not apparently rival the aggregate of Cesnola's, who had the grand advantage of being first in the field. On the other hand, Richter's discoveries of prehistoric vases surpass Cesnola's in quantity and value and he has discovered one most important class unknown to the Cesnola Collection, viz., the prehistoric vases with raised reliefs of animals and trees. (Richter has also discovered a new class of Attic vases hitherto unknown and made expressly for Cypriote import.)

It is when we turn to the scientific use of material discovered that Richter's work emerges and isolates itself, and it is safe to say that whatever is ultimately and definitely known about and through the Collection Cesnola will be due to him. As far as his book is concerned, considering its plates as an illustrated epitome of Cypriote art, he has drawn on every important source open to him, including many of Cesnola's discoveries, especially those to be found in Berlin. His personal attitude to this excavator is best stated by himself (thesis for the Doctor's degree): "If at first and until I pointed out numerous errors and inaccuracies, too implicit trust was placed in the guidance of Cesnola's brightly-written book, now in my opinion his critics, and especially the English archæologists working for the Cyprus Exploration Fund, have sinned in the excess of their distrust."

It is not, however, with Cesnola but with Perrot that Richter must be compared when a general conception of Cypriote art, and of its place in archæology, is in question, this being a question which Cesnola has never even remotely approached or taken up. On this head it must be said that Perrot's great work on the history of ancient art has failed in the volume for Cyprus to rightly appreciate its significance. This may be because Perrot drew largely for his illustration matter on photographs forwarded from New York, without ever having seen the originals of the pictures, or the entire mass of objects with which those illustrated are associated. It may also be because Perrot's book is essentially a summary up to date of what the best special authorities have said, and because no authority had yet said distinctly what Cypriote art means for the general history of the subject.

At this point it is best to narrow our view for a moment to the art of statuary as being the one for which the character of a contention or variance of views may be most clearly stated, as it is obvious on all hands that the Cypriote statues of New York (of the earlier

periods) represent a hybrid mixture of Greek and Oriental traits. Perrot's view is that Cypriote art is at times a Greek provincial debasement of the higher art of the mother country, at times a provincial Phenician debasement of the art of Assyria and Egypt. Richter's view is that Cypriote art in general, as far as sculpture goes, represents the first progressive stage of Greek art emerging from the Oriental, and that the earliest Greek art farther West is a progressive development from the Cypriote.

With this view I heartily coincide. I announced it myself in the New York *Independent* as far back as 1873, and I prophecied in that article that a similar style would be discovered in the Nile Delta if excavation were made on the site of its Greek colony. This prophecy was verified by Mr. Petrie, at Naukratis, in 1885. The same view (considering the Oriental origins of Greek sculpture as represented by Cypriote art) was announced by Sidney Colvin in his preface to the British Museum publication of photographs of the Cesnola stones which the Museum asked permission to make after losing the statues. The same view was held to my personal knowledge by my teacher, Professor Carl Friederichs, whose journey to Cyprus I have mentioned. It is generally admitted that Friederichs' book on the Berlin casts is the best extant contribution to the practical knowledge of Greek sculpture. This book was written before his contact with Cypriote art in 1869, and I was a personal witness to his subsequent conversion to a belief in the Oriental origins of Greek sculpture. These were not admitted by German archæology in 1869, nor are they now adequately or fully admitted, as Perrot's work is witness. Even where there has appeared, as in the case of the Naukratic excavations, a willingness to admit Egyptian influence on Greek sculpture, the significance of Cypriote finds in the same direction has been strangely ignored. We can only suggest two explanations—the distance of the Cesnola Collections from European scholarship and that archæological timidity in face of a new problem which has also been so apparent in the case of the Mycenæan excavations.

For Americans may at present confidentially announce the following points of view for the stone sculptures of the Cesnola Collection: First, all the stone statues represent Greek art, even those which are most dominantly Egyptian or Assyrian in appearance. Second, we are not dealing with a provincial debasement of Greek art in those types where Greek and Oriental characteristics are most plainly combined, but rather with a progressive evolution of Greek art which was a main motive power and basis for a corresponding evolution beyond the Cypriote stage for points farther West (the types published for Rhodian plastic art in Salzmann *Nécropole de Camire* are highly important connecting links). Beyond these two points the later provincial character and arrested evolutionary stage of Cypriote art must be freely admitted and insisted on. This has been also pointed out by Richter. I have myself pointed out this factor of arrested evolution in Cypriote art in articles some time since contributed to the *Catholic World*, in the Metropolitan Museum of Art.

Its explanation lies in the set-back which the Cypriote Greeks experienced during and after the Persian wars, and in their minimized importance during the Periclean and Alexandrine periods.

If this much be said of the general import of Cypriote sculpture, as now for the first time definitely asserted, explained and illustrated, by an authoritative speaker, let us next ask what is to be learned from Ohnefalsch-Richter as to the subjects represented by the strange figures of Cypriote sculpture, as familiar to the frequenters of the New York Museum. On this head the book contains a mine of information, which it would not be wise to rehearse or summarize without the illustrated objects, but the general bearing of this information can be appreciated from one simple fact. Up to date not a single columnar Greek temple has been signalized for the periods in which Cypriote art attracts our deepest inter-

est. The book under review is the first which publishes *any* series of plans of Cypriote sanctuaries. All these plans are of irregular *temeni*. The sanctuaries were Oriental and to all appearance distinctly Syrian and Semitic in plan and arrangement. Is it then surprising to find that the deities worshiped in them are Grecianized amalgams of Syrian origin (by which words I do not question that the Syrian deities themselves are partly Assyro-Chaldean and partly Egyptian, or that the Isis-Hathor cult attested by various Cypriote pillars does not also imply relations by sea with Egypt)?

It is sufficiently known that the worship of Aphrodite was a ruling one on Cyprus, but the scholarship of Enman has contended at recent date that this Aphrodite was not derived from the Chaldean Istar (Syrian Astarte). That the typology of the Chaldean Istar survives even in the Medici Venus, a fact noticed by others, has been triumphantly redemonstrated by Richter in opposition to this view—a view which has been even quoted with approval by Dümmler.

On the head of Aphrodite-Astarte worship we also observe that the sanctuaries of Athienon *condensed* by Cesnola into *one* temple of Venus (Aphrodite-Astarte) are announced by Richter to have been *two* sanctuaries of Resef-Apollo. This fact may ultimately assist the student to discover which statues in New York do belong and which do not belong to the aforesaid collection from Athienon or Golgoi. At present we are mainly certain that the statues which are said by the Cesnola catalogue to be from other places do not come from Golgoi, but how far the Golgoi find has possessed the elastic capacities of the "temple-treasure of Curium" still remains to be discovered.

Otherwise we are now possessed of two highly important facts, and essentially new facts, about the Chaldean Istar, viz., that the typology *and worship* OF ATHENE AND ARTEMIS are differentiations of her cult *as far as Cyprus is concerned*. Note the last italics, but note also that Richter observes that the high authority of the greatest historian of Greece has contended that *all* Greek female deities have been differentiated from one Oriental deity. This has been said by Ernst Curtius from the standpoint of the mythologist and the man of letters. For Athene and Artemis we now have the testimony of inscriptions of terra cottas and of statues.

Finally, in the matter of deities; keeping to a summary of the most essential points brought out in "Kypros, the Bible and Homer," we notice that the Syrian god Resef now shines forth in full light as original of the Apollo of Amyclæ, and as the original form of the Cyprian Apollo. The identification of certain forms of Apollo on Cyprus with the Syrian Resef is not confined to Richter and rests originally on inscriptions, but the great importance and widespread prevalence of the Resef-Apollo worship of Cyprus has never previously appeared. I have been led myself by quite another road to suspect the importance of this god for Cyprus by studies on the symbolism of the gazelle, which forms a portion of his head dress on Egyptian paintings, and have published these suspicions among my own studies on the Cypriote vases. It is also known to me that Professor Sayre has recently devoted much notice to the importance of this god. A few years ago Resef was almost an unknown deity. Now he figures as the possible ancestor not only of the Cyprian but even of the Delphian Apollo.

But we have still left to be considered the entire subject of the tomb excavations of Cyprus. What has Ohnefalsch-Richter done for us here? Briefly this He has classified the pottery according to the metals found in the graves, and as bronze was supplanted by iron in Cyprus at a time generally known by other evidence to have been between 1500 and 1200 B. C., he has been able to date the classes of Cypriote pottery accordingly. This idea was entirely overlooked by Cesnola. Those vases which we should otherwise specify as "prehistoric" Richter assigns to the period when copper and bronze are exclusively found in the graves as far as metals go (silver and gold being too

scanty in the "copper-bronze period" to count for much.)

These vases in the New York Museum may be roughly described as those imitating animal forms; those with incised geometric ornament; those of grayish white clay with black streaks, and those with plain burnished red clay surface and occasional but scanty ornaments in relief. According to Richter these specify a Thraco-Phrygian race preceding the Greeks and Phenecians, and its independent art disappears from Cyprus with the general displacement of bronze by iron. The flat plank-shaped terra cotta images and the rudest Istar images (bird-headed, with earrings, etc.,) belong to this race. To the "iron period" belongs the art of the Greeks and Phenecians. The well-known painted vases which are best known as Cypriote, and which are so largely represented in the New York Museum are called by Richter "Greco-Phenecian" He holds that they disappear with the sixth century. My own conviction is that these vases are Greek. The general and older belief is that they are Phenician. If the term Greco-Phenician is a concession to the older stage of belief, while tending to supplant and overthrow it, it may be well to let it stand, in view of the race mixture between Greeks and Phenicians which certainly took place in Cyprus, but I wish to point out that neither in Syria, Carthage, or Sardinia (our main points of observation for Phenecian art outside of Cyprus) do any similar vases with painted figure ornament occur. Moreover the barbaric quality of the figure design does not correspond to the technical perfection of Phenician design as otherwise known. As regards the sixth century being the last in which these vases appear, I wish to point out that a vase published by Alexander Cesnola in his *Salaminia* is dated to the time of the Ptolemies by an inscription which was authenticated by Dr. Birch; but I do this with great deference to the superior information and knowledge of Dr. Richter.

At all events, the repeated explanations and assertions of Dr. Richter tend to emphasize the Greek element during the period which he terms Greco-Phenician, and this is a point to be laid to heart by all who are interested in early Greek art and in Cyprus.

During the period between the exclusive use of iron and that of the exclusive use of bronze, the transition from bronze to iron, between about 1500 and 1000 B. C., Dr. Richter places the pottery found in Cyprus of the "Mycenæ" style. It may not be known to New Yorkers that their Museum contains a certain number of these vases. Many interesting relations of the "Mycenæ Culture" to Cyprus are brought out by other observations.

In turning from this brief summary of the matter on Cypriote pottery, it should be noticed that Dr. Richter's book is the first archæological publication ever made which illustrates a large number of tomb finds by grouping *together* all the objects found in one tomb, of whatever material and class. It is obvious that this is not only the only method of moving from the known to the unknown, but the only way to offer a picture of an otherwise forgotten civilization. This classification is generally neglected by Museums, often necessarily so, as they rarely conduct their own excavations, and their objects are mainly obtained piecemeal. The Scandinavian Museums are the only ones which adopt this classification for tombs, but it is clearly the proper one not only for students, but also for popular interest. The hopeless chaos resulting from the dispersion of objects according to material of manufacture—as distinct from arrangement according to locality of final style and period—is apparent in the New York Museum, and any one wishing to penetrate this chaos will do well to consult the similar tomb finds as pictured *together* in Dr. Richter's book. (The height of absurdity in classification according to material was reached by the New York Museum when it created three curators—one for painting, one for *sculpture*, and one for *casts*.) The difference between plaster and marble was sufficient to create two officials for the same branch of study!

When we remember finally that Richter made these sketches of his tomb

finds in the cause of science, knowing often that the objects themselves were to be dispersed in auction sales, or otherwise, by his employes, it is obvious why he has achieved success. In the matter of conscientious record Mr. Petrie and Dr. Schliemann would appear to be his only rivals. It was, moreover, necessary to train the excavating workmen themselves to scientific habits. Of his best workmen Richter says (Thesis for the Doctor's Degree): "They could never understand and up to this day cannot quite realize that rusty and broken bits of iron have an archæological (possibly even a material) value as high or even higher than gold bracelets. Only after many years have I been able to teach Gregori and Loiso that the discovery of things which cannot be exchanged for ready money, such as bones, ashes, lime, or traces of primitive walls, may be decisive for the success of an excavation."

I have reserved till the last mention of what seems to me the highest service of Dr. Richter's book. In the plates which compare the prehistoric relics of Cyprus with the prehistoric remains of Hissarlik, unearthed by Schliemann, we have a contribution to science whose value can scarcely be over-estimated. Let the reader make the comparisons and judge for himself. The discovery that the prehistoric race of Cyprus is identical with the prehistoric race of Troy is surely one to be quoted and made world-famous, and will surely ultimately lead to still more important facts in ancient history. It is the comparison of pottery and of implements as made on these places which carries conviction with it. A much more limited similar contrast of Hissarlik and Cypriote finds was published by Dümmler in 1886 with the same general argument in view. At this time Ohnefalsch-Richter was working in English employ and Dümmler's conclusions were in the first instance based on his excavations. Dümmler specifies the assistance afforded him by Richter during his own stay on the Island, together with his presence at the excavations conducted by the latter, and concludes his introduction to the announcement of the discovery with the remark that Ohnefalsch-Richter had previously reached the same conclusions.*

It goes without saying that I have left unmentioned long sections and entire chapters of Richter's book. My advice to the American reader is to begin with the plates and the plate descriptions as containing important matters of which the text proper contains no hint, and these the most important for a student of the Cesnola collections. Among so far unmentioned topics I specify the text chapters on the Sacred Tree, and on the Ashera. Professor Sayce had held the Ashera to be a goddess. Robertson Smith contended that it was a pest. Ohnefalsch-Richter proves that it was both. This does not leave much more to be said on the subject.

On the topic of the Sacred Tree I hold opinions to which I shall not attempt to convert Dr. Richter just here, and so I will bid him farewell, thanking him again for the gracious present which chanced to offer me an opportunity for this review, and also for the praises he has showered on my own contribution to the study of Cypriote art.

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* Beobachtungen zu welches in der Hauptsache wol auch Ohnefalsch-Richter schon gelangt war.

Wm. H. Goodyear.

RAYMOND LEE.

CHAPTER XIV.

THE PARTING OF WAYS.

MARIAN was at a loss to understand completely the episode in the Carroll's drawing-room. She had been thrust, as it were, too suddenly into the "plot" to perceive instantly the significance of what had happened. The utmost she could grasp was that rivalry concerning herself had arisen between Ralph and Raymond, and even this was apparent in outline only.

About the new, surprised, half-realized understanding that had arisen between herself and Raymond there was a vague delightfulness which was not less sweet because it was incomplete, and left the indefinite reach of love, which always in such cases seems the infinite reach of love, yet to be traversed. But, as to Ralph, Marian could not keep regret regarding his position from warming a little into anger. Surely, in all fairness, he had acted with presumption in changing the step of their fellowship to a quicker pace without—and surely he *had* acted without it?—even the permission of encouragement? But certain as Marian felt on this point she couldn't argue herself into a really comfortable frame of mind. Ralph had thrust a dim but persistent sense of responsibility upon her, much as a beggar might upon the opulent by merely passing by.

On the way to the "Bungalow," on Sunday evening (Raymond had absented himself with the plea that he would find Ralph and then "follow on"), Marian endeavored to disclose to Mrs. Carroll, in a round-about way, what had happened, and was surprised at the readiness with which the

old lady, usually so reticent, hastened to conclusions that Marian thought were far in the background of the tale as she told it.

"Yes," "yes," "yes," whispered the old lady eagerly again and again as Marian halted in her attempt to reveal by a half-told story what had happened. She slipped the young girl's hand through her own, and stroked it lovingly as token of sympathy and interest. At the same time she slackened the pace of their walk so that the organist, proceeding in his unconscious fashion, might pass ahead out of hearing.

"Very, very friendly, indeed, of Mr. Lee," murmured the old lady, ready to approve of any step that tended to bring Marian and Ralph to an understanding. "We shall owe him a great deal. Eh, Marian, dear? I am afraid I am to blame for having been so unnecessarily cautious, but you know, dear—you won't mind my saying so now?—you *have* been quite secretive. Months ago I knew of Mr. Winter's affection for you (Marian started). Yes, dear, he told me. You don't object? For, as he said, I am, in a sense, your mother. He has been actuated by the very nicest feeling—and, though knowing even all I did, I could detect only once or twice any response on your part. I know he was discouraged many times, poor fellow. But go on with your tale, darling. I am so happy; almost as happy as you are, only not quite, and I want to hear it all. Of course, when Mr. Lee had finished, Ralph—we will call him Ralph now—walked in? Do you know I saw him hesitate a moment by the door as I was just coming down stairs, and you—do tell me, Marian—why, what *is* the matter, darling?"

"Oh, Mrs. Carroll, it isn't Mr. Winter."

Surprise arrested the old lady. Without a thought she exclaimed:

"Not that bookseller fellow, Marian!"

The tone of reproach stung Marian. She replied with determined frankness:

"Yes, that bookseller fellow."

"Forgive me, Marian. I was wrong to speak so, but—dear me, dear me, child—you have surprised me. Gracious! what will your father say? Poor Mr. Winter! You forgive me, Marian, don't you?" Marian smiled.

"Don't ask even. There is nothing to forgive."

Mr. Carroll had already arrived at the "Bungalow" gates, and turning around called aloud:

"Well, well, do I walk so fast?"

Though Mrs. Carroll lingered longer than usual that night at the "Bungalow," neither Raymond nor Ralph arrived. Consequently, it was with a slight feeling of anxiety that Marian found upon arriving at the schools next day that Ralph had not made his appearance there as usual. She was rather glad than not that she did not have to meet him under circumstances which she felt would be very trying, for neither was in a position to say anything openly to the other, yet could either forbear giving some expression to the change that had been made so suddenly in the old fellowship?

Marian's curiosity about Ralph increased as the day progressed without tidings from him, and more than once this curiosity was darkened by a passing presentiment of evil.

"Mr. Winter might at least have sent a word concerning his absence," thought Marian. "He must know his classes would await him. Dear! Dear! And he was doing *so* much. Surely it was not my fault. Poor fellow! He must have heard last night and understood. And, Raymond, —oh, Raymond! do you—? Am I selfish? No, child, that is not D. What is it, Mary? B; that is right. Mr. Winter must return. Surely I have some responsibility with him? My Father, am I doing wrong? Am I departing from the road it seems you bid me tread. No, Darling, no, that is F. Don't you see the big fish there, with the large round eye. Say F—f. So, and the next letter? Oh, Father, these are thy children, the little ones thou hast bidden me care for. Oh, Raymond, I do love you, but what am I to do?"

So, the day spinning along unraveled Marian's thoughts, until the setting sun came aslant through the school windows and lighted with a melancholy brightness the bare rude room which the children had just deserted. A sense of loneliness pained Marian as she prepared to depart for home. There came to her for a moment that dissatisfaction from afar, the feeling of unrest and longing which in so many cases is the torture of less securely centred spirits than hers.

She walked home to Eastchester. The evening air was fresh and pleasant and a soft presence very like the ripe summer with its golden aspect was on the hills. The yellow sunlight glimmered along the spring-green of the earth like a mellow sheen and attached long, dark shadows to the trees. In the twilighted hollows and on the shadow-side of the farmhouses and clusters of quaint country buildings which dot the way to Eastchester the air was tinged with a misty blue. The rooks were clanging settling themselves to rest in the tall trees around Elmwood as Marian passed, and further on in a tall willow a blackbird like the spirit of the evening poured out its song:

"That wild music burdening every bough."

Marian met farm carts lumbering along at a tired gait and laborers making their way homeward with something of the stolid obedience of the earth stamped upon their faces. Everything wore an air of passive sadness, of constraint and governance, of allotted ways and ordered necessities. There was a new unrest in Marian that strove against this depressing impression, but with painfully little success. The evening darkened, and she was glad to enter Eastchester and feel the hospitable comradeship of its houses and the sociable activity of its streets.

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Upon arriving at the "Bungalow," Marian was surprised by finding the old bookseller's little daughter sitting patiently and demurely in the hall.

"What, Mag! You here! Come along with me, child. What is it?"

"Oh, please don't take your things off, Miss Marian. Ma sent me for you hours ago."

A little pain shot through Marian's heart.

"What is wrong, dear?" she asked, anxiously.

"Papa's got a letter from Ray, and he's sick."

"Who? Who is sick?"

"Pa."

"What's the matter with Mr. Lee?"

"Ray? He's gone away, Miss."

Mag began to cry.

Marian's face paled.

"Don't do that," she said, rather sternly. "Come, let us go."

And the two set out for the bookseller's.

There was only a smoky lamp burning in the musty store, and its light was almost as brown as the worn leather of the antique books. The place looked more like a tomb-chamber than an abode of the living—a tomb wherein reposed, Egyptian-fashion, some long-forgotten scribe with his books around him. The lamp made a small bright patch on the red table-cloth, and within the circle of its feeble rays Marian beheld the silver head of the dwarf bowed as though asleep. At the sound of her approach he raised himself and cried toward the darkness:

"Please don't bother me to-night. Don't talk to me. Please go."

"It is I, Mr. Wart," said Marian, coming forward.

"Oh! my good angel," he cried, pressing her hand upon his breast. "He used to call you the Princess, our Princess. Oh, Raymond!"

A great fear seized Marian. She threw herself at the old man's feet.

"What has happpened to him, Mr. Wart?" she cried. "What has happened?"

"Read," said the dwarf, opening one of his hands, in which was a crumbled letter.

Marian read:

"Dear Good Friend: We cannot break away from the Past. It is the Destiny that pursues us. You know how hard I have tried, and now I find it was only to fail. I have striven to find another road but there is only one for me to take: I must leave you, dear old friend and father. *I love the Princess.* Need I tell you more to enable you to know that the step I am about to take is imperative? I must be true to Ralph and to her. I have struggled, you may feel how much, in the last few months and might have continued a little longer if my secret had not been read last Sunday by Ralph and the Princess herself. You know hope is impossible for me. Ralph thought me a traitor and fled to London. I found him here in despair and almost

delirious from I know not what excesses. He starts for America to-morrow and I go with him. By and by if things go well with me I will write to you. Continue the book. My small aid would count for little. Some publisher will surely take it up and if I should make money you shall have it—as a real contribution. Watch over the Princess for me and know that my love, thoughts and prayers and gratitude are ever with you. "RAYMOND."

All the sweet music that had arisen in Marian's life ceased as by the snapping of the chords that made it.

"Raymond! Raymond!" she cried, piteously.

This unexpected note of grief startled the old bookseller and called him from the centre of his own trouble.

"Oh, Miss Marian," he said, soothingly, taking her head between his hands. "Don't—why?"

"I have loved him ever—ever since the old days."

"Loved my Raymond!" exclaimed the old man, utterly astonished.

Marian's eyes answered him.

"Give me the letter," said the dwarf, eagerly.

He read it again in a hungry way.

"I see, I see," he exclaimed, his eyes passing from line to line. "That cursed thing," he cried, his voice rising. "What folly! He knows you love him, eh?"

"Yes," answered Marian, softly, "I think so."

"Oh! oh! oh! Why have I been so blind; why did I not see? Why didn't you say one word, give me the slightest hint?"

"Why?" asked Marian, bewildered by the old man's impetuosity.

"Why? Because I could have explained everything to you and this would not have been."

"I do not understand," said Marian.

"Of course you don't, my dear girl," said the old man, his voice taking a softer tone. He paused. "Raymond has left us because he feels he may not accept your love."

"Because of Mr. Winter?"

That idea had not been considered by the dwarf.

"Yes, no doubt—partly. But that isn't it. I suppose I ought to tell you. Raymond's father was hanged for murder.

Don't speak. Wait a minute; hear all. He was hung unjustly—a damnable business."

"Oh, Raymond!"

"Yes, the poor lad is to be pitied. It was the awful sense of disgrace that drove the poor mother to St. Michael's, where you first saw them."

"But Mr. Fargus . . . . "

"Yes, yes, but let me tell you the story. It was from Mr. Fargus that Raymond learned it, and we have been hiding it here for years."

The old man descended from his chair and, after helping Marian to arise, hobbled over to one of the upper bookshelves and took down a bundle of newspapers. He handed them to Marian.

"You will find there," he said, "the entire public record of the case from the discovery of the crime—for a crime was committed—to the sad closing tragedy. I will tell you the story in outline if you like, and afterwards you can fill in the details yourself—Raymond and I have been over the ground so often."

"Yes, do," pleaded Marian, who felt she needed an external distraction to save herself from being overpowered by her own emotions.

"Well," said the old man, speaking in a dreamy manner, pausing frequently as though his mind was chiefly occupied with something he was looking at, "I scarcely know where to begin, but few words are enough. First of all, Raymond's father was the great scientist—you have, no doubt, heard of him—Erasmus Brewer, whose sad fate everybody deplored. Raymond got the name Lee because his mother reverted to her maiden name, which was Lee, when she went to Seahaven to hide herself from public curiosity and her son from knowledge of his origin. The Brewers lived near London, they had a large house in Bainbridge, and were, of course, well known. The father at the time of the tragedy was a man, I think, of about forty—in the very hey-dey of his powers. I have read his works, masculine, penetrative, aglow with the intelligence of a peculiarly rich and interpretative mind. He was one of those men who can build only on a large scale; and, it

appears that in the daily affairs of life, he proceeded with very little calculation. He was deficient in prudence and economy or, perhaps, I should say indifferent to them. He spent the last penny of his income, whatever it was, and not infrequently was in debt. Among the friends from whom he received accommodations was William Noble, a private banker, a man of uncertain disposition, generous or niggardly, according to how the world went with him. Brewer, it seems, borrowed of this Noble three thousand pounds which, when the day stipulated arrived, he was unable to repay. Noble pressed him for payment—these facts were adduced at the trial—and threatened to sue Brewer, or something of the sort. One night Noble, who had gone out to see Brewer to induce him to discharge the debt, had an altercation of some sort with the latter, a circumstance which was testified to by a friend Ayers, who was staying at Brewer's and by some of the servants. In the morning, Noble was found dead in the garden. Somebody had stabbed him. A knife, or dagger, was found in Brewer's room, stained with blood, and on Raymond's night-shirt—the lad was about four years old then—were bloody finger marks. I must tell you that the boy slept in an ante-room which had to be crossed to enter the father's chamber. You can see the result. Brewer was accused and arrested. The theory of the prosecution was that Brewer had slain Noble because of the latter's insistence or threats. What the verdict of the jury would have been but for the judge's summing up—which you should read—it is hard to say. But, as the newspapers said, the summing up was against the prisoner. The dangerous practice of allowing a judge to practically restate the evidence at the last moment of the trial undoubtedly determined Brewer's fate. He was sentenced and hanged. You will find in that bundle the last letter of the poor man. The hall-mark of veracity, the stamp which it is impossible to fabricate, is upon that final stoical assurance of his innocence which he sent to be a comforter to his wife. Mr. Fargus—his dearest friend—was with him to the last, and he will tell you of the certainty of Brewer's innocence now that you know the secret which he promised the mother he would keep from Raymond but

couldn't, for Raymond forced him to divulge it through a strange suspicion which possessed the lad after his mother's death." (The Dwarf paused. "What more was there to be said? Nothing." In another tone of voice he concluded.) "Now you can see the reason why Raymond has left us. He knows you love him and will not allow you to share what he calls his disgrace."

"But Mr. Brewer was innocent, you say?"

"Yes, yes, a thousand times yes; but how can we prove it—the court records stand as the human statement of the fact."

Marian was silent. She gazed helplessly at the odious bundle of papers in her hand. The tears came and then the cry of the heart:

"Oh, Mr. Wart, what are we to do?"

There was nothing that could be done. Raymond was already a good day's journey out at sea. Marian and the bookseller were like prisoners chained to the spot upon which they were. An effective step in any direction did not seem possible. The only plan promising any result which the two could hit upon was to address a letter to Raymond at Pittsburgh, in the care of Mr. Winter. Hope suggested that step, however, with little confidence of success. Mr. Wart felt that Raymond's return could not be purchased by the very coin he had refused to accept in going away. He would regard Marian's acquaintance with his secret merely as an extension to the comprehensibility of his action, not as justification for his return. The dwarf knew that. It was not knowledge of but participation in his past that he desired to remove from Marian, and his absence was essential to that. Nevertheless, Marian and the bookseller endeavored to make hope big for one another by many words. Possibility is of such infinite promise. There were so many ways Raymond might act besides the very one which seemed to both most probable. But by silence in this one direction it was possible to raise at least the appearance of comfort. The two concocted a letter to be sent to Raymond, an indefinite epistle upon all matters but one—he was to return. It might be that the reasons for his departure were convincing and imperative, but why not let those who were

concerned in his action share in the formulation of his decision? After that there would be no one to appeal against the result. Would he let Mr. Fargus be judge of the proper course to be taken? The clergyman, who was in the Riviera for his health, would be in London again in a few weeks. "Return Raymond," the letter concluded, "and let us discuss this matter wisely."

The letter was posted and Marian and the bookseller returned as far as possible to their old ways with dim expectation at times that perhaps hope might be more prophetic than reason would allow it to be.

The first day of sorrow is always overwhelming because the eye has not yet measured the gloom. But no disaster quite overthrows our lives. The past seeks to re-establish itself, not only on the painful side but as a survival of old duties and ways, to which remain attached old satisfactions, or at least that negative condition, that indifferent sense of mere occupation which makes up by far the greater part of the substance of our lives. Old Mr. Wart returned to his book. "Ah, if that plan could be successfully completed might it not recall Raymond?" Marian returned to the schools, and touching humanity again, now upon a wider surface (as each new sorrow permits us to do) gained much by that diminution of self which results when we fix our daily life as she did in an atmosphere so much wider and tenser than that of the individual's life. Moreover, in the destruction of a woman's heart, her soul rises from the ashes, and Marian sought comfort now even more than ever in that "cloistral refuge"—her religion, which gave significance and value to life so tremendous that Faith reprimanded overestimate of or too great insistence upon any loss that was not directly Faith's.

To be continued.