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VOL. XXIX

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DECORATION

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[Gelatine Print issued with the Imperial and International Editions only.]
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COMPETITIVE DESIGN FOR A CHURCH AT BUFFALO, N. Y.

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[Etching.]

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THEATER, VIENNA, AUSTRIA.

[Gelatine Print.]

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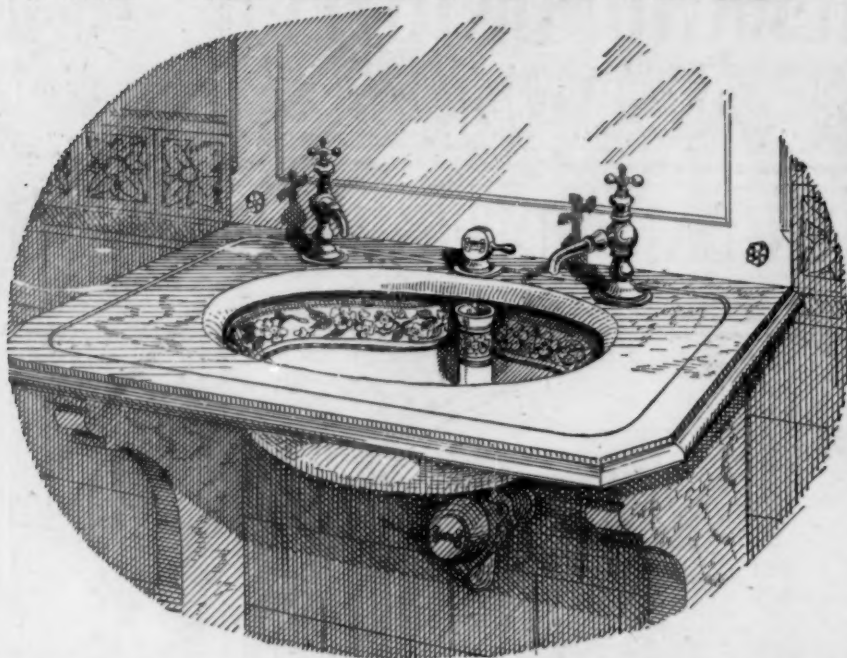
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THE AMERICAN ARCHITECT AND BUILDING NEWS.

VOL. XXIX.

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AUGUST 2, 1890.



SUMMARY:—

The New School of Architecture at Philadelphia.—The Carpenters' Eight-hour Strike in Boston.—The Boycotting of Brickmakers on the Hudson.—Death of E. W. Loft, Architect.—The Effect of Lightning on Iron Buildings.—The Worcester Architects' Action in the Matter of a School-house Competition.—Asphalt Floors for Houses.—The World's Merchant Marine.—Protecting Fence-posts with Lime-water.	61
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THE new school of architecture established in Philadelphia, in connection with the University of Pennsylvania, begins its career under the happiest auspices. Quite unlike the other great architectural schools of the country, the organization of this one has been placed almost unreservedly in the hands of the architects of Philadelphia, and the profession has responded to the confidence shown it by taking a very great interest in the school, and cheerfully undertaking to give a large part of the instruction. It need not be said that the Philadelphia architects are thoroughly capable of doing this, and we may expect important results from a course of training through which not only the present and the future generation of architects, but the different members of the present generation, are brought so closely in contact. The Department has already been organized, with Professor Pepper as *ex-officio* President, Dr. Horace Jayne as Dean, Mr. T. P. Chandler, Jr., the well-known architect, as Director, Mr. Thomas W. Richards as Professor of Architecture and Secretary, and Mr. Charles E. Dana as Professor of Art. We infer from this list that Mr. Chandler will have charge of drawing up the plan of instruction, and those who know the originality and force with which he thinks, and his earnest enthusiasm for his art, will be greatly interested in observing his work in this new field. Besides this, as we understand, the French *atelier* system is to be imitated, by placing the students in the offices of practising architects, where their principal work is to be done, while lectures, and judgments on designs, are held at the school; and among the lecturers appointed are several of the principal architects of the city, so that the young men will enjoy the advantage of being plunged, from the beginning, into the atmosphere of current professional life. The full course, leading to the degree of Bachelor of Architecture, takes four years, and includes instruction in mathematics and other scientific subjects, as well as in the strictly professional branches, but special students, who receive only a certificate of proficiency, will be admitted to portions of the course. Rooms have been allotted to the Department, and all preparations have been made for receiving students at the beginning of the academic year, in October next. So many people will be interested in the matter that, as a memorandum for reference, we append the address of the Secretary of the Department,—Professor T. W. Richards, 4812 Fairmount Avenue, West Philadelphia.

THE carpenters' eight-hour strike in Boston appears to be in a desperate way. Most of the men, who have been on strike since the first of May, are tired of the struggle, and would gladly return to work on the old terms if they dared. Unfortunately for them, the waning influence of the leaders received the other day an unexpected reinforcement. As usually happens just before the collapse of a strike, the managers had begun publishing in the newspapers "interviews" and appeals to the public, describing the "heartlessness" of the contractors, and holding them up to the indignation of the world, when it occurred to them to hold a public meeting, under the auspices of the professional mischief-makers. A defeated candidate for Congress was secured to preside over the meeting, a local preacher discoursed upon the "manliness" of taking plenty of rest with one's work, the "silver-tongued" walking-delegates poured forth streams of eloquence, and the strike, refreshed by this exhibition, was renewed with as vigorous a show of determination as ever. The revival, however, did not last long, and a few days ago the strikers held another meeting, at which they resolved that "whereas" the contractors had "endeavored," in some way which was not explained, to prevent them from obtaining their "rights as workmen," they would in future not hold themselves responsible for any trouble that might arise in the building business in the city. This resolution is undoubtedly intended as a threat to the wavering strikers, who understand well enough that "trouble in the building business" means attempted assassination, robbery, insult and assault, but we trust that if any of the drunken tools of the mischief-makers attempt to carry it out, they will be dealt with by the most summary process known to American self-government.

IN New York, the Board of Walking-Delegates of the Building Trades has just decided to "strike" all buildings in New York and Brooklyn in which bricks are used which are furnished by brick-makers employing non-Union men. As the Board contains delegates from all the building trades, this means that all the masons, carpenters, painters, roofers, plumbers and iron-workers in New York and Brooklyn, through their authorized representatives, have conspired to compel a few poor brick-moulders either to join the Union, swear obedience to the dictators, and pay fees which they can ill afford, or lose their means of earning their bread. If a conspiracy like this is not a violation of the law, as well as of the rights of freemen, the New York law must be in a singular condition, and we trust that the question will be submitted to the courts if any attempt is made to carry out the scheme.

MR. E. W. LOFT, a distinguished architect of Sioux City, Iowa, died there of consumption a few days ago. Mr. Loft, although quite a young man, had carried out many important commissions in and about Sioux City, and was the designer of the curious "Corn Palaces" which have been erected annually in the city for several years. Some time ago he showed symptoms of pulmonary trouble, and within the last year his health had failed rapidly. He went to Colorado for relief, but was unable to bear the climate, and returned to Sioux City and his business, visiting his office as usual until the second day before his death.

A CORRESPONDENT asks the *Builder* for information as to the effect of lightning on an iron roof, or an iron building, and wishes to know what form, if any, of lightning-rod would be best in such cases. Similar questions are often asked in this country, and it would be curious, as well as useful, to collect facts in relation to the matter. Our own impression is that an iron building, connected, as buildings in cities usually are, with the public system of water and gas pipes, is little liable to injury from lightning, the current, if the building is struck, being easily carried off through the mass of metal. Some years ago, the Tiffany store, on Union Square, New York, an immense iron building, was struck by lightning. The flash was accompanied by very loud thunder, but no harm was done beyond the destruction of a wooden flag-staff on top. Whether a building covered with corrugated iron, or an iron roof on a brick building, nearly isolated from the ground, would be more seriously injured, seems uncertain. Probably, since the current must find its way to the ground somehow, the

extent of damage would depend upon the resistance which it experienced in passing from the iron roof or walls, through less perfectly conducting substances, into the earth. An illustration of the way in which the passage is likely to be forced may be deduced from studying the disposition of the conductors in country dwelling-houses of the better class. Here, the metallic point most exposed to lightning is usually, unless the building is provided with rods, the top of the soil-pipe, which is carried through the roof. The system of waste-pipes, of which the top of the soil-pipe is the upper termination, furnishes a ground-connection of a certain sort; but, as the sewers and drains are of brick or earthenware, the ground-connection is far less perfect than that furnished by the water-supply pipes, which connect with an immense network of iron mains, laid in moist earth. Hence, the probability is that when such a house is struck the current will enter at the soil-pipe and jump, at the most favorable place, from this to the water-supply pipes, through which it will be dispersed harmlessly into the ground. It will readily be seen that in nearly all plumbing fixtures, the waste-pipes, which are in metallic connection with the soil-pipe, are separated by non-conducting substances from the supply-pipes. With wash-basins, stone and earthenware generally intervene between the two metallic systems, and the same is the case with water-closets and porcelain or soapstone sinks and tubs. In copper-lined bath-tubs only is there, where the faucets project from the lining, or where the tub is supplied from the bottom, an uninterrupted metallic connection between the waste and the supply; and it is through this that the current may be expected to pass. Whether it always does so, it would be interesting to ascertain; but we know of one instance where it unquestionably followed this track, as was shown by the tearing of the metal of the bath-tub, which was probably too thin to carry the heavy charge. The obvious deduction from this is that people who have plumbing in their houses, and who are afraid of lightning, or have bath-tubs arranged, as many are, with faucets not in contact with the metal of the tub, or with the waste-pipes, might do well to connect here and there the wastes and supplies, which might easily be done, under a wash-basin, for instance, by taking a wide strip of lead and wrapping one end around either supply-pipe, and the other around the waste-pipe, and, if possible, soldering it to both.

THE architects in Worcester, Mass., are doing a good work for the profession, as well as for themselves. It has just been decided to erect a new high-school building in the city, and the local architects asked the city authorities to limit the competition, if there must be a competition for designs, to themselves. To this very proper request they added other stipulations, to the effect that the author of the best design should be charged with its execution, at the usual commission of five per cent, but consented that, out of this five per cent, five hundred dollars should be reserved, to be divided among the unsuccessful competitors, in deference to a rule, which the architects of the city have all agreed to, and which binds them not to make any sort of sketch or design gratuitously. We must confess that the idea of making the successful competitor pay the others out of his own pocket, rather than have them break their rule of not working gratuitously, has a flavor of whipping Satan around a stump which is rather unpleasant; and we cannot conceive why the city, which is the party profiting by having several designs to choose from, instead of one, should not pay for the privilege; but it is, perhaps, too much to expect architects in the smaller towns, where the professional spinal column is weaker than in the great cities, to lay claim to all their rights at once, and we have reason to be grateful to our Worcester brethren for setting the example of refusing to do work in general for nothing.

THE city authorities, however, with the ingenuity in trying to get the better of somebody which usually distinguishes municipal officials, after receiving the proposition of the architects with apparent favor, voted to amend it by providing that if any design would cost more than a hundred thousand dollars to execute, the designer, if it should be placed first, should be paid only fifteen hundred dollars, in place of the regular commission. As it is perfectly well understood what will be required for the new building, and the architects, who are the best judges, believe that the necessary accommodation cannot be obtained for less than a hundred and fifty thousand dollars, it is not surprising that the amendment did not meet their

approval, and every architect in Worcester signed a paper, which was forthwith presented to the city authorities, refusing to have anything to do with the competition under such conditions. The city officials make a feeble explanation, saying that they have had rough sketches made, showing the accommodation required, and that an examination of these will save the competing architects much labor; but the latter repudiate this idea, saying what every architect knows to be true, that such sketches are worse than useless to competitors, who do best to avoid looking at them altogether. What will be the result of the disagreement we cannot say, but, as we suppose the city wants its most important school-building designed by an expert, instead of an incompetent blunderer, we imagine that, sooner or later, it will conclude to pay what all the world agrees to be a reasonable price for the service of such experts.

ONE of the most brilliant and sensible correspondents of *La Construction Moderne* is a woman, whose letters have only the defect—that they do not come often enough. In the last one published, she calls attention to the statement recently made in the *Engineering and Building Record*, to the effect that Mr. Chandler had recently built an apartment-house in which all the floors were laid with asphalt, which could be covered with carpeting, if desired, by nailing the carpet to strips buried for the purpose in the asphalt. This idea strikes the lady, as it probably has many other persons, as an excellent one. We think it is not quite new, even in France, as school-room floors have been treated in this way in various countries, but for house floors the lady thinks that a great improvement in healthfulness would be secured by the abolition of wooden floors, with their infinity of seams and joints, which can never be washed out, and harbor multitudes of "microbes," and the substitution of a waterproof, impervious, jointless flooring, which two or three pailfuls of water would at any time make as clean as the day it was put down. Unfortunately, with us asphalt is far too costly to be used in this way except in palaces, but it is time that the demand for the material should lead to the discovery of the mines of it which undoubtedly exist in this country, and perhaps it may some time come into common use for such purposes.

LE GENIE CIVIL quotes, from a circular published by the Bureau Veritas, some interesting statistics in regard to the commercial marine of the world. It seems that there are, on the surface of the globe, eighty-eight hundred and thirty-five merchant steamers, of which England owns forty-eight hundred and eighty-five, or considerably more than one-half. Germany holds the second rank in number of vessels, possessing five hundred and fifty-nine, but France has four hundred and fifty, which aggregate a larger tonnage than the German fleet. The United States comes fourth, with four hundred and seventeen steamers. In number and capacity of sailing-vessels, the United States is second, although a long way behind England, and only a little in advance of Norway. France does very little with sailing-ships, its fleet being surpassed even by that of Russia, and exceeding in tonnage that of Greece only by about one-fourth. Adding steamers and sailing-vessels together, and measuring by cargo capacity, we find that, while England is still far in advance of the rest of the world, having eighteen thousand vessels capable of ocean-voyages, and aggregating nearly eighteen million tons, Germany comes second, France third, Norway fourth, and the United States fifth, while Italy and Spain follow close after.

A NEW method of preserving fence-posts from rotting is described by the *Norddeutsche Wirthschaftsfreund*. The posts to be treated are allowed to get thoroughly dry, and are then placed for several days in a tub of lime-water, so that the end to be set in the ground may get thoroughly saturated. After removing them from the lime-water, they are to be dried, and then painted with dilute sulphuric acid. This treatment makes them very hard, and they will last far longer in the ground than posts charred at the end, or treated with tar. The philosophy of this process is not very evident, since the sulphate of lime, which would be formed on the surface by painting the posts with sulphuric acid, after the lime-water treatment, is quite soluble in water. Probably the good result is due entirely to the lime-water, which is known to be an excellent preservative of wood.

RELIGIOUS ARCHITECTURE.¹—XVII.

GOTHIC PERIOD.

IN tracing the series of transformations in the methods of covering churches, from the system adopted in the little church of Vignory to the earliest attempts at great intersecting vaults, we have seen that an effort was at first made to

nave continued to be covered with barrel-vaulting. At the same time, there was a tendency to make the nave loftier; this increase in height rendered the support derived from the low aisles inadequate. An attempt was made to supply the deficiency by means of buttresses running up to the top of the side-walls of the nave, and resting on the pillars separating the nave from the aisles. Then, as these supports necessarily

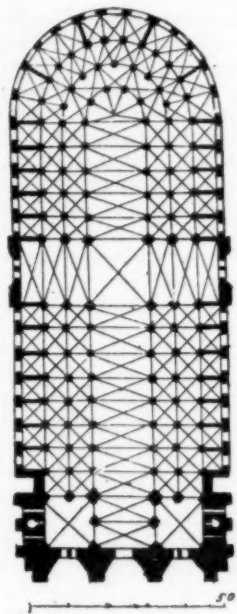


Fig. 1. Plan of Nôtre Dame, Paris [12th-13th Centuries].



Fig. 2. View of Nôtre Dame, Paris [12th-13th Centuries].

buttress the barrel-vaulting of the nave by means of half-barrel vaults above the aisles.

Then the aisles were themselves covered with cylindrical vaults resting on transverse ribs and buttressing the nave, but lengthwise.

projected over the pillars, the transverse arches of the aisles were so strengthened that the buttress could rest on their springers and haunches. In some cases, as at Autun for example, the stilted arch was adopted for the nave, thus lessening the thrust: here we have the pointed arch fully foreshadowed.

Once more the solution proved defective, as repeated accidents show.

At Vézelay, more still was attempted. The Roman groined

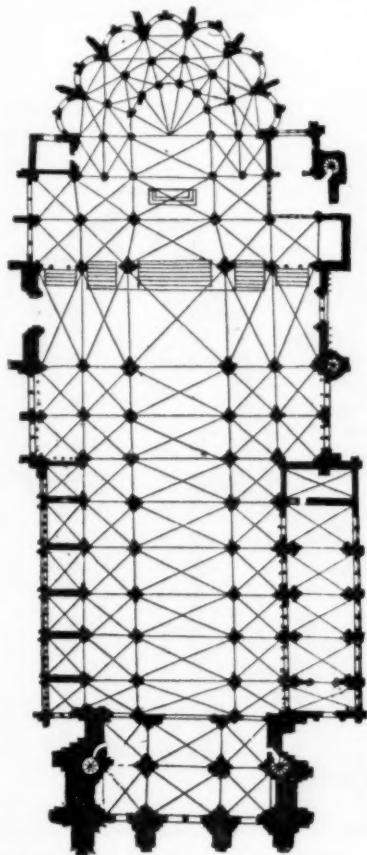


Fig. 3. Plan of the Abbey of St. Denis [12th-13th Centuries].



Fig. 4. View of the Abbey of St. Denis.

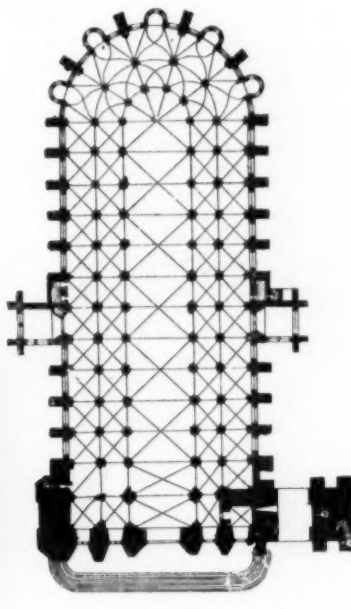


Fig. 5. Plan of Bourges Cathedral [12th-13th Centuries].

The intersecting vault, constructed in the Romanesque fashion, was very soon introduced over the aisles, while the

vault was here employed for the nave; as a precautionary measure, solid external buttresses were established, and tie-beams even were inserted at the springing of all the vaults. But the same defects—the same warping of the walls, the

¹From the French of P. Planat, in Planat's "Encyclopédie de l'Architecture et de la Construction." Continued from page 55, No. 761.

same deformity in the aisle-vaults—appeared. At Vézelay, as at Autun, it became necessary, later on, to strengthen the structure with external flying-buttresses.

When, about 1130, in conformity to the Cluny regulations, a narthex was added to the church of Vézelay, a new disposition was tried. The aisles, which were covered with intersecting vaults, were surmounted with galleries covered with the same kind of vault; but, for the latter, a rampant arch was adopted, thus making it possible to carry the buttressing higher. By this means, the principal vaults were firmly supported. But, as Viollet-le-Duc has remarked, the Vézelay solution was also defective, as the nave could not be sufficiently

received their light from bays above the roofs. The triforium here served merely as an ornamental motive, but broad openings were pierced above the inner aisle for the direct illumination of the vaulting and the interior.

Another change was destined to produce a yet greater modification in the general aspect of important ecclesiastical edifices. At Bourges, the outer aisle was necessarily built low, to obtain an adequate supply of light in the interior. As the architect became bolder, as he found himself able to do away with the upper galleries, and to give thus a much more ample and satisfactory effect to the aisles, he wished to carry his innovations farther. His next step was to suppress one aisle altogether and broaden the other proportionally. Then the same change was made around the choir where it was desirable to secure more space for the chapels, which, up to that time, had been contracted by the encircling double aisles. By this means, the chapels could be made as high as the aisles themselves, as may be seen at Rheims and Amiens. Advantage could also be taken of the entire space comprised between the supports of the upper flying-buttresses, and even the thickness of these was sometimes trespassed upon.

At the same time, the number of lateral and apsidal chapels was largely increased. The Paris Cathedral, which was completed in 1230, was entirely remodelled after 1240 for the purpose of constructing side-chapels; these were amply lighted by mullioned bays between the projecting masonry of the buttresses. In 1260, the transept gables were pierced with rose-windows with openings underneath; in the beginning of the fourteenth century, large chapels were introduced all around the *rond-point*. In the first half of the fourteenth century, also, the Cathedrals of Laon (Figure 11), Rouen, Coutances and Sens were remodelled in the same way; while the Cathedrals of Clermont-Ferrand, Limoges, Narbonne and Troyes were reared, each with its cortege of chapels.

In edifices constructed in accordance with the severe rule of Cîteaux, a simple, low, shallow porch precedes the aisles, with a single tower in front, such as may be seen at Clairveaux, Pontigny and elsewhere. The Cluny regulations, on the contrary, provided for a spacious and often well-developed porch, as at Vézelay and Cluny itself, surmounted with two towers; at

the extremity of each transept there were also two towers, and, finally, a central tower crowned the intersection of the tran-

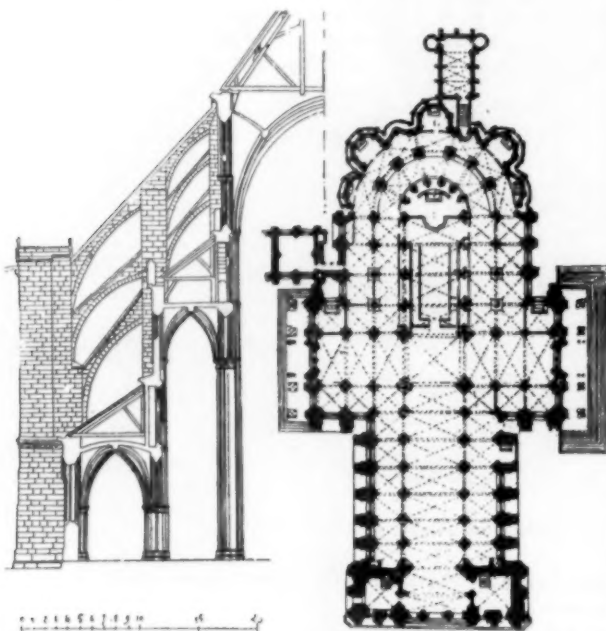


Fig. 6. Section of Bourges Cathedral.

Fig. 9. Plan of the Cathedral of Chartres (13th Century).

high to admit of the construction, above the galleries, of the bays needed for lighting the interior; and this defect was all the more apparent because of the universal use of stained-glass in churches.

Thus far, then, all attempts to solve this important architectural problem had proved ineffectual. To reach a satisfactory solution, it was necessary to have recourse to diagonal arches; and these were destined to modify wholly the construction of the intersecting vault.

In Notre Dame, at Paris (Figures 1, 2), we find indicated as early as 1163 the method which was to become of universal application: the more elevated side-aisles, which are two in number, were covered with intersecting vaults; the second story comprised a single gallery covered by rampant ogival vaulting, surmounted by a very flat roof, and supported by a first flying-buttress. Above, a double flying-buttress, spanning both aisles, supported the nave-vault. The interior could, therefore, be lighted by three rows of windows: one in the outer aisle, another in the upper gallery, which communicated by broad openings with a triforium over the inner aisle, and still another in the nave-wall rising above the gallery.

This arrangement of aisles surmounted by galleries, as seen at Notre Dame, was maintained down to the first half of the thirteenth century. The Cathedrals of Meaux and Rouen, and the choir of the Abbey-church of Eu, offer examples of it. But as the aisles were necessarily low and heavy, and also quite poorly lighted, attention was ere long turned to the suppression of the high galleries: "The Cathedral of Bourges" (Figures 5, 6) exemplifies the curious transition from the great churches with vaulted galleries and double aisles to such purely Gothic edifices as the Cathedrals of Rheims (Figure 8) and of Amiens, of Le Mans, and especially of Beauvais. Bourges Cathedral is another Notre Dame de Paris stripped of its upper gallery." The outer aisle at Bourges was still low and compressed, but the inner one rose to half the height of the nave. The outer aisle was lighted through openings in the exterior wall, while the inner aisle and the nave both

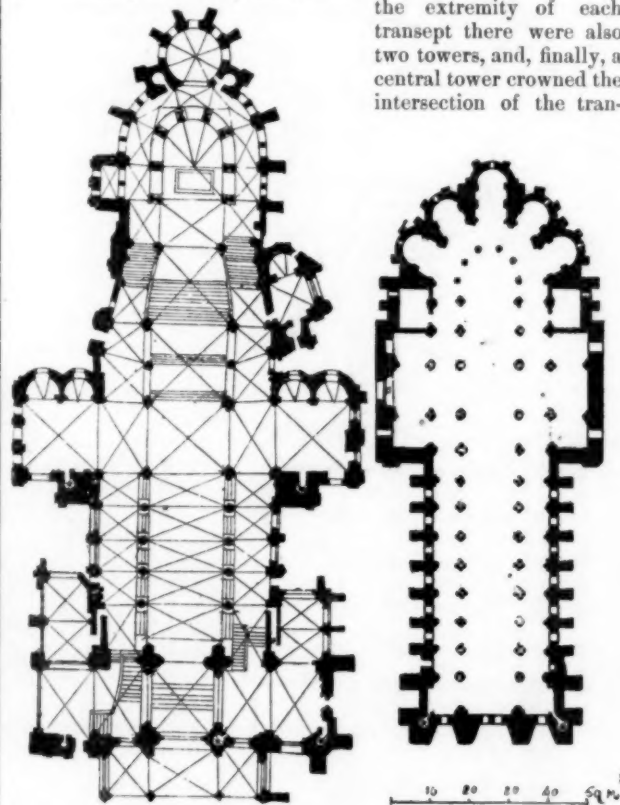


Fig. 7. Plan of Canterbury Cathedral (12th-13th Centuries).

Fig. 8. Plan of Rheims Cathedral (13th Century).

sept and nave. In large cathedrals, these closed porches were not sufficiently capacious; wide, open porches were, therefore, fitted to these, as at Laon and Chartres, or even flaring porches, as at Paris, Amiens, Rheims and Bourges. Most of the

¹ Viollet-le-Duc. "Dictionnaire d'Architecture."

edifices were decorated with a great number of towers. The central tower, so common in important Norman structures, is rarer in the churches of Ile-de-France, or assumes there only a mediocre importance.

We must, however, remark that the development of lateral chapels described above is not so sharply defined in the south



Fig. 10. View of the Cathedral of Chartres.

of France as it is to the north of the Loire. Whether because of a more determined persistence of ancient traditions, or owing to troubles engendered by the religious wars, during which ecclesiastical structures were transformed into veritable defensive fortresses, or, lastly, on account of the poverty induced by these

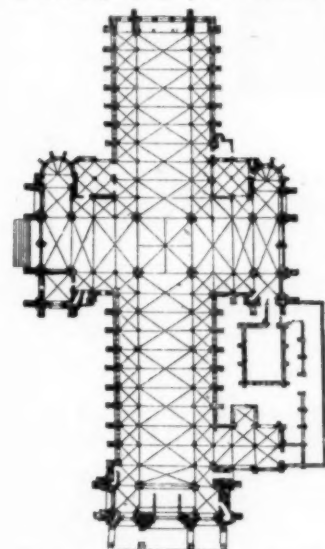


Fig. 11. Plan of the Cathedral of Laon [13th Century].

disorders, the greater part of the southern churches preserve the ancient disposition of single naves covered with intersecting vaults supported by interior buttresses. The Cathedrals of Marseilles and Fréjus were built in this way, as was also the later Cathedral of Carcassonne. In the last, however, the vaults had ogival intersections. It is the same with the Cathedral of Alby, although it belongs to the fourteenth century; but, two stories of side-chapels were arranged in it by utilizing the spaces between the buttresses, and the same disposition was carried out around the choir. This general plan was, moreover, so poorly adapted to ceremonial needs that it became necessary in the sixteenth century to isolate the choir from the rest of the church; this was accomplished by erecting an open-work stone screen.

The Cathedrals of Béziers and Narbonne, dating from the thirteenth and fourteenth centuries, were defended like genuine fortresses; they were lighted through occasional narrow slits in the outside walls and they were flanked by towers, crowned with machicolations, and surrounded with fortified enclosures.

(To be continued.)

ACOMA.

A PICTURESQUE PUEBLO.



Approach to Acoma. — Water-Carriers.

IT was in the summer of 1883 that, coming up from Mexico, I made acquaintance with those strange dwellers in communal houses called Pueblos.

Leaving the Rio Grande at El Paso, I took rail for Santa Fé, New Mexico, but halted on my way at a railroad station near the pueblo of Santo Domingo. The station was in a lonely spot, and the agent was delighted to have a companion, so he soon "hitched up" his horse and buggy and took me over to the Indian village. As the cars stopped they had been at once surrounded by shock-head boys and girls, a score or two, offering for sale pottery of fantastic shape, obsidian and jade. This latter they called *chalchihuitl*, which (by the way) is the ancient Aztec name for jade, or emerald.

The "bucks" and some of the women had their faces painted a fiery red, and, as they were clad in their peculiar costume, they were exceedingly interesting. Some spoke Spanish, and all were very agreeable, welcoming us to the pueblo with smiles and words of greeting. The town was about two miles from the station. We drove in without attracting any notice or eliciting any adverse criticism, and after rambling through the streets came to the church. After a long delay, the Indian sexton came with a bunch of keys and let us in. The most interesting things we discovered here were some old books, all in Latin, the oldest bearing date 1506. They were in the inner chapel, and belonged, the sacristan told us, to the *padre*, who lived at Peñol Blanco, and only visited here occasionally. The bell in the little tower was of copper, and cast in the plaza of the town. Then we visited some of the dwellings, all neat and clean, broad and low apartments, the floors smooth as glass. In one of the rooms a fire was burning at one end, and over it a buxom girl was baking thin, wafer-like flakes of bread. Blankets and clothing were carefully hung up on lines, some crockery was tidily arranged against the wall, and a few wooden chairs and benches made up the furniture. Side and trap doors led to other apartments, and the upper rooms had broad platforms in front of them.

As is generally known, these pueblos lie mainly in Arizona and New Mexico, and represent the dwellings of people who have lived here many hundred years. The buildings are nearly always communal, occupied by whole tribes, or families, and are built of rubble-stone, or adobe, in terraces, or with retreating stories. One of the most complete is that of Taos, very ancient, and still occupied by the descendants of its builders; and one of the most famous is that of Zuni, brought into notice by the recent labors of Mr. Frank Cushing. Others, as San Domingo, San Felipe, etc., lying near the railroad, are not so large, but are as complete, in their way.

The pueblo dwellers are quiet and inoffensive people, devoted to their herds and flocks and agriculture. They have never made any trouble whatever for our Government, and are the nearest approach to the

Mexican type (such as we find in southern Mexico) of any in the United States.

The first intimation of these people to the Spaniards came from that wild journey made by Cabeza de Vaca, who was lost in an expedition to Florida, and wandered for years through Florida, Texas and New Mexico, finally reaching Mexico, with the news of his exploits. The Spaniards were fired to zeal in exploiting the country, whence rumors came to them of cities full of treasures, where gold and silver could be had for the asking. The celebrated expedition of Coronado was fitted out, in 1539, which roamed through this country, bringing the people into subjection and capturing the pueblos.

But Coronado did not discover the famed treasure-cities, the "Seven Cities of Cibola" and their wonders did not "pan-out" as the Spaniards had expected.

To-day, as three hundred years ago, the Pueblos are a peaceful people, asking odds of no man, content to live and die in the land of their fathers. The people of Domingo brought out samples of their pottery, for sale, but they would not let us inspect their secret store-rooms nor would they let us descend into the *estufa*, where their conferences take place. As we drove back to the station, we passed through a prairie-dog village and saw several of the quaint inhabitants, and their feathered neighbors, the burrowing owls. I succeeded in shooting one of the owls, which I skinned and stuffed, but the "dogs" were too wary for me. Towards sunset, I went gunning for a troublesome coyote, a sneak-wolf that the station-agent said was a nuisance, that he wished I would abate. At some distance away I saw a gray, gaunt animal approaching that looked so much like a dog that I asked an old Indian what it was. "*Es coyote*?" queried I. "*Si Señor*," assented the Indian, "*es muy malo*." At that, I "up and fired," and the animal dropped, howling, in its tracks. As it lay on its back, kicking its last, that wretched "Lo" came up and shook his finger warningly, saying, "*No es coyote, es perro*"—"It isn't a wolf, it's a dog, and belongs to somebody." I don't know, to this day, whether it was dog or coyote, and the agent even was in doubt; but said, anyway, he was glad I had shot it.

I took the emigrant train, that night, for Santa Fé. At Lamy, 18 miles from the capital of New Mexico, I found the ticket-agent there had collected a great number of Indian curiosities, such as stone mortars and pestles, pictures painted on buffalo robes, ancient tomahawks, etc.; which, he said, he was going to exhibit. This was a reminder of the great exhibition that was to open at Santa Fé, the first of July.

Perhaps the dull-eared East has never heard of that great exposition? Briefly, the enterprising people of the territory of New Mexico had prepared, or were preparing, to celebrate their tertio-millennial; for a third of a thousand years had passed since first the Spaniards came here and slaughtered the gentle savage. In view of this fact, and to proclaim that their city was the oldest in these United States, the New Mexicans (that is, the *Newest* Mexicans) invited all the rest of the country to come and inspect their ancient capital. They pointed out that their "cathedral" (that old lump of adobe as big as a cow-house) was the oldest on this continent; that their "palace" (the roof of which a ten-year-old boy could touch on tip-toe) was one of the sights of the century; and that their "palace hotel" could care for all arrivals—as it certainly did, with room to spare. With that per-fervid love for the Eastern man, so often shown by the man of the South and South-west when he fancies he describes the aforesaid Easterner coming with capital to invest, the tender-foot was invited to come and partake of the hospitalities of Santa Fé.

Why the Eastern brother did not accept that invitation generally, no one but himself can tell. Perhaps investors in Santa Fé stocks may have had a premonition that the Western boom had boomed. At all events, the exposition was, financially, a failure, and hardly a success in anyway. But a vast space was enclosed within a high board fence and herein the products of the territory were deposited, and for sale. These products included also the native Indians, and it is anent them that this chronicle is written.

The exposition "didn't expose," as a resident told me, "wuth a cent." For, the camp was pitched on a hollow, overlooked by a hill,

and no "Greaser" in Santa Fé was going to pay a quarter to go inside, when he could view the whole performance from the hill!

Having two weeks to spare, before the exposition opened, I improved that time by making another trip into Mexico, to Guayamas, in the State of Sonora, on the Gulf of California.

The one incident of that trip that stands out more distinctly than any other, occurred at Deming, where I had to take the Southern Pacific Railroad, to go over a section my passes on the Santa Fé system did not cover. As this is now some seven years removed, I may mention that I was "well-heeled" as to passes; but there was one little link, in the chain of nine thousand miles, I had failed to provide for.

This was the distance between Deming and Benson, on the Southern Pacific, 174 miles, for travel over which, and return, I paid thirty-five dollars, or at the rate of ten cents per mile!

Well, as I stood looking ruefully at my depleted pocket-book, a smartly-dressed man stepped briskly up and said to the ticket-agent, "I have a pass from Los Angeles to San Francisco; now, I suppose, I can pay from here to Los Angeles, and use my pass the rest of the way?"

"Oh, yes sir."

"Well, how much is it?"

"Just the same as to San Francisco!"

"Good God!" ejaculated the astonished recipient of the pass. "Then what good is that pass!"

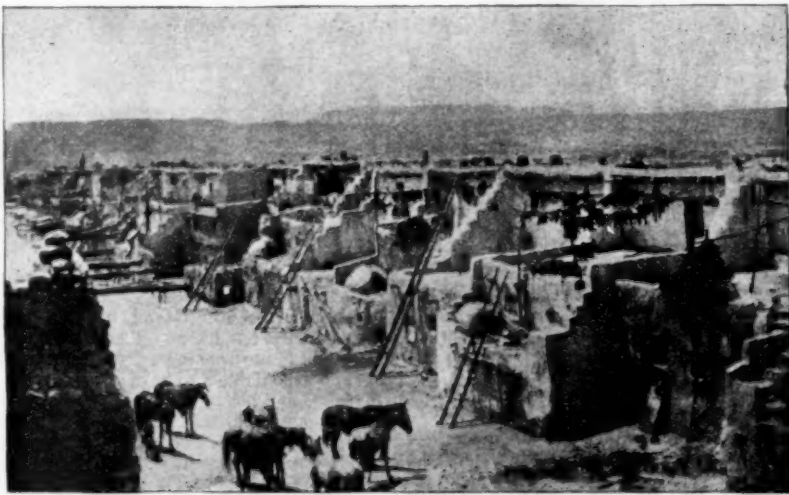
But, he had to pay \$134, all the same, for himself and his little son.

I was in Sonora just before the terrible outbreak of yellow fever, which drove all foreigners out of the State, and got out just in time to meet General Crook and his band of beloved Apaches, after their long absence in the Mexican sierras.

Coming back to Albuquerque I went over the Atlantic and Pacific Railroad to the Grand Cañon, as far as it was then finished, descend-

ing to the cañon at "Diamond Wash," and at midnight, June 29, took the return train at Peach Springs for the Pueblo country.

On the night of June 30, I find, by referring to my journal, that I slept in the section-house of the station called McCarthy's. I hired a horse of the station-agent and started, next morning, for the Pueblo of Acoma, some twelve miles distant. There was no road, hardly a trail, and this was crossed by tracks innumerable, so it was not strange that I missed my way. A straggling Indian set me right, and some six or eight miles out, I sighted the valley I was seeking. The only life along the trail was in the prairie-dog villages, with their quaint



View in Pueblo Acoma.—From the eastward.

inhabitants, so shy, yet so inquisitive, each head of a household sitting bolt-upright at the entrance to his hole. Then I had to descend a very steep bluff, from the brink of which the view was grand; a long and narrow valley lay before me, completely enclosed within steep-sided hills. In the centre of this green and level plain rose a congeries of great rocks several hundred feet in height, and upon the level summit of the largest was a long, clay-colored structure (apparently but one), and this was the pueblo. On the plain, wandering amongst scant pasturage, hundreds of *burros*, cows, goats and sheep, grazed quietly. The *burros*, I found on near approach, were in excellent condition, not one of them with raw or bleeding back, as would invariably be the case if they were owned by Mexicans or Americans.

Crossing this narrow plain, the trail, now plainly defined, led me between two great groups of sandstone, above two hundred feet in height, and then amongst others, to the central *mesa*. I never saw such an assemblage of giants, single or grouped, standing carelessly about, like petrified Titans, and all guarding the approach to Acoma.

By good luck, I selected the right approach, apparently the only mule-trail, which wound over vast sand-drifts and half-buried ledges.

There were two other trails, I later learned, but available only for Indians on foot, as they led up the almost perpendicular sides of the cliffs, and by footholds cut in the face of the precipice.

The geologist describes this *mesa*, or table-topped cliff, of Acoma, as lying at an altitude above the sea of nearly 7,500 feet. It is an extensive polygonal bluff of sandstone, with walls nearly everywhere vertical or overhanging, from 200 to 250 feet high. The surface of the *mesa* consists of about 300 acres of denuded rock. There are

no springs in the immediate rock, but two immense reservoirs, of natural formation, hold the water that falls from heaven. The mesa "stands on the southwest corner of a huge basin, open to the northeast only, four miles wide and ten long. High and almost vertical cliffs surround it on all sides. Over its surface are scattered isolated rocks, sandstone pinnacles and columns; the whole looks like an enchanted valley."

After surmounting the sand hills, I found steps cut in the living rock, up which I led my horse with great difficulty. Great shafts of sandstone, capped with grotesque head-pieces of larger blocks, guard this narrow trail pathway. The only other trails are the ones I have mentioned, with footholds cut in the perpendicular faces of the cliffs; yet, night and morning, long files of Indian girls climbed up and down them, with huge water-jars nicely balanced upon their heads.

As I reached the top of the mesa, I was observed by a party of Indians who were vociferously at work, scooping out the reservoirs, in anticipation of the approaching rains. Though they regarded me attentively, they did not manifest much curiosity and no hostility, merely making the occasion of my apparition an excuse for sitting down to a smoke.

By good chance, I rode directly to the *Gobernador*, who received me cordially, and invited me to his house. The storekeeper, the only *Americano* (a Jew, by the way), had shut up shop, that very morning, and *vamosed*, passing me unobserved on the road.

The Governor and I climbed a ladder to the second terrace, entered a low doorway and took a seat. My horse was promptly unsaddled and cared for, while I was at once made "one of the family." Some other men entered, later, one of whom said to me "How-do, John? All light?"

They all spoke Spanish, and we hobbled along quite gracefully, speaking a bi-lingual language most curious to hear. All, at once, lighted cigarettes, the tobacco and corn-husks being placed in the middle of our circle, and each one helping himself.

Very soon, the Governor's wife set before me some *tortillas*, meat and syrup, on a low box covered with a shawl, and I was invited to eat. The others refused to eat until I had done, then they fell-to and cleared the cloth, finishing with more cigarettes and animated converse.

After this, we visited the house of a very intelligent man, on the same terrace, who was lying down on a couch of blankets, suffering from the effects of a fall. After a while of chat, he showed me some letters, written by his son, then at the Indian School at Carlisle, and told me he had two children there. These letters were very quaint, one in English, the other Spanish. Perceiving that I was fatigued and sleepy, the Indians spread blankets on a bench and invited me to repose, so I lay down and dozed, while they indulged in a silent smoke.

Awaking, an hour later, and going out, I found the entire population of adult males gathered in a great court, holding council, and discussing the advisability of sending delegates to the Santa Fé *tercio*. The discussion was carried on without violence, all smoking, but now and then half-a-dozen would talk at once, each trying to drown the others out.

The Governor finally had his way, deluging the others with a stream of talk, and they finally separated. As they talked, all smoked incessantly, tobacco and "corn-shucks" being placed where all could help themselves.

As night came on, the pastoral character of the people was brought to mind as the herds of goats and cows were driven up from the plain and penned at the base of the cliff. Beneath the beetling rock, the impending cliff high over them, in great hollows and little dens, the goats and sheep are herded for the night, while the donkeys (more valuable) are driven to the summit of the mesa. Coming up the winding path over the sand-dunes, you see rude carts and wooden ploughs, and other farming implements, stowed carefully away in hollows of the rock.

They take life easily, these Pueblo people, yet they are measurably industrious. During the day, at intervals, a crier went about, shouting, for many minutes at a time, warning the men to work, to meals, and to retire.

At night, I was taken around to several houses, by my friend who spoke English: José Josecito, or the Little Josey, who was the only

one of them all who demanded remuneration for his services. His entire stock of English consisted in salutations, and the phrase: "Gib me halluf dollah!" the meaning of which he knew full well.

In one of the *adobe* dwellings, where the fire danced merrily on the hearth, and the firelight gleamed cheerily on the walls, I was treated to a nice, warm supper. The buildings on this mesa are in three long rows, containing ten large communal houses, built of rubble-stone and *adobe*, and with a population, all told, of about one thousand. The back side, or higher part, of the first row is perpendicular, rising sheer from the summit-platform of the cliff, a continuation of its face, and fronting towards the north. The open, or terraced, part faces south. Narrow streets run between the rows, and narrower alleys cut the blocks themselves. Most of the blocks are three stories in height, the roof of each story forming a platform in front of the one above, and reached by rude and strong ladders. No structure in the world could be more picturesque than the terraced *adobe* of the Pueblos, and in the position chosen by Acomá we have the acme of the picturesque.

The structures were doubtless originally built for defence, and were well-nigh impregnable on this inaccessible mesa. Acomá was discovered by the Spaniards three hundred and fifty years ago. Its ancient name in Spanish annals is *Acuco*—so Coronado called it, who stormed it and carried it in 1541. The people, I believe, made desperate defence, rolling down rocks upon the heads of the invaders; but their position availed them nothing against Coronado.

In 1598, Acomá surrendered to a Spanish force under Juan de Onate, but in 1680 rebelled, and murdered their priests, left in charge of the church. The church stands to-day, isolate, at the southeast corner of the mesa. It is forty feet high, one hundred and fifty feet in length, and its *adobe* walls are said to be seven feet thick. An abandoned convent lies near, and connected with it.

It was rebuilt after 1694, when Diego de Vargas re-subdued the Pueblo, and for two hundred years the inhabitants have worshipped in the Catholic faith.

By the sacristan, I was shown a copy of a paper, the original of which is said to be in Santa Fé, purporting to be the deposition of an inhabitant of Acomá in 1689. The language spoken by these people is a dialect of the *Queres*, and their mode of life, tribal organization and customs differ in no degree from the other Indians, called Pueblos.

At about nine o'clock I returned to my headquarters, the *casa* of the Governor, and found the entire family stretched out on the platform in front of

the doorway. They saluted me, and, observing that I must be very tired, gave a boy some sheep-skins and blankets, and told him to spread them for me on the roof-top, a story higher up. I climbed to my aerial bed-chamber and "tumbled in," for I was tired and very sleepy. My bed was a sheep-skin, my covering a coarse blanket, my canopy the star-lit sky. I had the terrace all to myself, though in the morning I was awakened by a subdued chattering, and, opening my eyes, saw a group of men, women and children regarding me attentively, but who immediately looked away, seeing that I was awake.

The night air was cold, and it took some time to get warm in the morning. I lay there quite contentedly, although a certain mysterious motion in the sheep-skin warned me to look for other bed-fellows when I changed my clothes. In truth, without wishing to appear ungrateful for this hospitality, yet I am compelled to state that when I arrived at the verge of civilization I found myself appropriated by that loathsome insect, called by frontier men the "gray-back," and was fain to shave my head and cast away my clothes to rid myself of its presence.

That was a serene sunrise that I observed from my elevated dormitory. I found, on rising, that if I had rolled over many times, or had walked in my sleep, I should have fallen near three hundred feet, clear to the base of the cliffs, and I do not to this day understand why the Indians assigned me to sleep in such a precarious place. Perhaps they were wondering that I hadn't rolled over the precipice, when I awoke and saw them chattering over me.

But it was a scene of peace I looked upon that morning. All was quiet, even lifeless, on the plain below. Smoke was curling from a few of the chimney-pots. Many of the people were on the house-tops, where they, too, had slept—impressive figures, some of them,



Pueblo Acoma. — East end from the Old Church of S. Estevan. — "Maria Dolorosa" in the distance.

wrapped in blankets from head to heel, standing still as statues, facing the sun. On the parapet of the house across the way an eagle was preening his feathers. The eagle, we know, is a bird venerated by some of the Pueblos (if not all), and it was this bird, according to a tradition, that took Montezuma upon his back and flew with him to Mexico. This Montezuma, by the way, was a culture-hero, said to be in nowise identical with the emperor of the Aztecs. Fable and fact are somewhat mixed in the Pueblo traditions, and it is difficult to separate aboriginal from exotic ecclesiastical traditions. Already, then, the girls and squaws were descending the cliffs, and some even trooping over the sands, a mile away, with their water-jars carelessly carried. This is a daily and oft-repeated task, as no drinking-water wells up to them from beneath the mesa. The various noises that announce the coming of the day next broke the stillness, from dogs and donkeys, flocks of fowl and turkeys.

Sitting on the outermost angles of the fortress are single sentinels, motionless, wrapped in their blankets. Through the morning mist rises the shape of the "enchanted mesa," *la Mesa Encantada*, which frowns at Acomá, a mile away. It is a perpetual mystery, a siren without song, tempting the Pueblos to death. No one has looked upon its summit and returned to describe it. It rises four hundred feet above the valley, with perpendicular walls, its summit-platform inaccessible. Yet the dwellers at Acomá tell of three young men of their tribe who were tempted to scale the cliffs, but who were unable to descend again, and perished there of hunger, their own beloved pueblo and their kinsfolk within their range of vision.

A most sociable style of living these Pueblos have, where everybody is welcome to the house of everybody else, and one may climb from room to room of every block.

Finally, all Acomá was astir, and in the courts below an unusual commotion. I was summoned down to breakfast with the Governor. Then I was informed that about thirty of the people were going to the station with me; that they had taken my casual mention of the gathering of Indians at Santa Fé as an invitation, which they had accepted! I was struck aghast. How could I provide for the transportation of a horde of Indians over one hundred miles?

During all the morning I was pondering this question, and my state of mind was not serene. But we left the Pueblo at about ten o'clock, myself and twenty-four Indians. We filed down the cliffs, a picturesque cavalcade, all happy and excited, save myself. As we went along, I noticed anxious glances cast at my gaunt gray steed, so I did the dutiful by inviting the prettiest of the Indian girls to mount behind me. This she did, after a little coy hesitation, taking a running leap, and landing astride. Her legs were bare, and, though shapely, her feet stuck out on each side of me in a manner decidedly ludicrous. I said she was the prettiest of the lot, but that is speaking relatively. She was plump and smooth-skinned, with that velvety smoothness peculiar to Indians and other thick-skinned peoples. Her eyes were black, of course, her mouth red-lipped, her hands and feet small, her bosom full, and her waist supple and slender. Half close your eyes and hold on to your nose, and perhaps she might appear tolerable.

I was mounted double, and so was the whole troop, some even *treble*, the little jackasses grunting under their loads of humanity. As we reached the cliffs, the girls and women secured some white clay, which they masticated, and smeared their hands and faces. My own particular maiden smeared her hands and arms, but her face was a fiery red, most beautiful to see. She was, at first, quite shy, perhaps appreciating the delicacy of her position, astride a horse, behind a white man, to whom she had had no formal introduction, for our salutations had been brief. I had merely halted by her side, jerked my thumb behind me and said "How?" then "montar usted?" that being the nearest approach I could make to "get up behind."

Her sweet lips murmured "How!" she drew the back of her hand across her nose (for this unsophisticated maiden scorned a handkerchief), hesitated a moment, and the next had straddled my steed. Thus, you see, it was quite natural she should at first appear diffident; but as time wore on (as time will) she became accustomed to her surroundings, and dropped her dainty hands from my shoulders to my thighs, leaving a white streak wherever she touched me. Now and then, in the amblings of my horse, her velvety cheek caressed my ear, leaving a red mark, or her nose scraped the back of my neck, leaving a bright vermillion. She was a girl of infinite variety—of color, and when we parted company the back of my coat was adorned with a vermillion spot big as a porous plaster, and my shoulders with white epaulets. We parted with regret—at least, I did—for it was a novel experience, and I decidedly enjoyed it.

I had in my canteen some sort of a pleasant drink with which to refresh my inner self, and this she insisted on sharing with me; otherwise our journey would have been without an incident to mar it. As we approached the railroad some section-hands espied me, and greeted us with such a shout that my little gazelle slipped off quietly over the horse's tail, and sneaked into the bush to still her agitated heart and hide her blushes. Thus we parted, without a farewell, my rainbow-hued damsel and myself, and the last I saw of her was her sweet face shining through a bush, like the red sun of morning through a bank of valley mist.

From noon till midnight we camped at the station, then the East-bound train came thundering in, and I slipped aboard. I had arranged it all with the station-agent, and he engaged the Indians' attention while the conductor and brakemen kept them out of the

cars. They sent reproachful glances after me, but took my defecation quietly, and went back to their camp-fire. It was the best I could do. The next night they all came on by freight, and I met them at the station at Santa Fé. During the day I had seen the authorities, and had arranged for quarters for them with the Zuñis, who were then in charge of Frank Cushing. Then, when the train came in, I met them, with tobacco for the crowd, and led them in grand style through the town to the Tertio tents, and there I left them.

FREDERICK A. OBER.

EQUESTRIAN MONUMENTS.¹—XXV.

RISE OF THE PRUSSIAN MONARCHY.



Louis XIV. Place des Victoires, Paris, France. Bosio, Sculptor.

hardly dreaming, we may be sure, that his own name later would fill the world, and that on both hemispheres he would be held to be not only a great and able leader but, as an individual, as much a *preux chevalier* as Bayard himself.

Finding that Louis would not grant his request and that he had incurred the active enmity of the great war minister Louvois, the young count entered the service of the Austrians, was at once employed against the Turks, so distinguished himself that he was given the command of a regiment of dragoons and at twenty-five was a major-general at the siege of Belgrade. Louvois and Louis now saw the mistake they had made and tried to induce him to return to his allegiance, but the young soldier had been deeply offended and declared that when he again entered France it would be in the ranks of her enemies. This event came about in 1692 when he served in the invading army of the Duke of Savoy. Shortly after this he was



Prince Eugene in the Court-yard of the Hofburg, Vienna. Fernkorn, Sculptor.

made field-marshal. Those were busy times for the soldier and Eugene was constantly employed in the field, now against the Turks, now in Italy during the Spanish War of Succession, then in the Netherlands as the ally of the English under Marlborough, then in Italy, again, against Vendôme, and so on. In short, during all his career, from 1683 to 1736, he was one of the most prominent figures of that exciting and ever shifting military epoch, and throughout it all one of the most persistent and capable opponents of Louis XIV, who, once having learned how valuable a servant he had slighted, did all in his power, not only once but several times, to win him to

¹ Continued from page 172, No. 742.

his service. Prince Eugene was not only one of the five great generals of early modern times but, like Wellington, was an able statesman and as such held at different times civic offices and discharged political functions of great moment; thus he was governor of the Milanese territory in 1706; vicar-general of Italy in 1718 and at all times the trusted adviser of the Emperor Charles VI. Naturally, a man in his position made many enemies but he was of such an equable and forbearing temper that he never was known to take revenge upon them. Like other great generals, with the possible exception of Marlborough, he had other interests than those strictly connected with his military career and in his leisure hours gave himself up to collecting books, manuscripts and pictures, and to correspondence with such men as Montesquieu and Leibnitz.

Without the aid of Prince Eugene, Austria could hardly have preserved her autonomy and hence if but a single statue were to be erected in Austria to its most noted and useful servant the vote would probably go in favor of the discarded subject of the great Louis. Such a statue has been erected in grateful commemoration of his



The Archduke Charles of Austria, Vienna. Fernkorn, Sculptor.

service to the empire, and as he was essentially a cavalry commander it was most appropriate that the statue should be equestrian, so there stands to-day in the Outer Burgplatz of the imperial Hofburg at Vienna a large — a very large — equestrian figure by the sculptor Fernkorn, which shows the Prince in the costume of the period seated on a rearing horse. In this case the sculptor felt constrained to follow the example of the Philip IV at Madrid and gain an added support for his figure by making the horse's tail sweep the ground, but in the companion figure on the opposite side of the court the same sculptor balances the equally large rearing horse of the Archduke Charles of Austria solely upon his two hind legs. The effect of the statue of Prince Eugene is singularly impressive, though why it is so is rather hard to discover. To be sure the statue is far larger than most equestrian figures, but the pedestal is well proportioned to the bronze group above and one would think that, being so, this would prevent one's feeling overpowered by the sense of the size and weight of the mass of metal that seems ready to plunge down upon one as the horse regains his footing. It is one of the few statues of which photographs give no adequate impression, but in spite of its good qualities it is hardly interesting as a piece of art: it is theatrical and somewhat German in flavor — that is, mechanical and cold.

Prince Eugene's last service in the field was at the Battle of Philipsberg in the War of the Polish Succession, in 1734, and there was serving under him that day a young man then undergoing his "baptism of fire," who later was in his turn to find his place amongst the greater military leaders of modern times: this youth was the Crown Prince of Prussia, afterwards Frederick the Great. History continually turns on the slightest combinations of the veriest chances. If Eugene had not been opposed by Louvois he would probably have fought on the French side at Philipsberg instead of against it. If

Eugene had not been already an old and failing man when Frederick was brought within the sphere of his influence, the career of the latter might have been totally different, or if Eugene himself had been a few years younger he might have found all his sagacity and



The Great Elector, Frederick William, Berlin. Schluter, Sculptor.

experience called into play in defending Maria Theresa from the aggression of the young king, who actually was for a short time his own pupil in the art of war. Had this supposed possibility really taken place, Prince Eugene would have had a right to use the much abused phrase "I told you so;" for he opposed the Emperor of Austria's policy in allowing the erection of the Electorate of Brandenburg into a kingdom in return for a contingent of ten thousand soldiers for service during the War of the Spanish Succession, and the Elector's promise to support the emperor in the Diet and vote for the House of Austria at every election.

That Frederick II, the third king of Prussia, should be able to successfully oppose the might of Austria was the result of the ambition and foresight of his immediate ancestors. During the last years of the Thirty Years' War, Frederick William, the young Elector of Brandenburg, took part, and although much of his territory had been lost and most of his cities destroyed, he had succeeded in the few years between his accession and the close of the war in regaining a considerable portion of his lost territory, which, with additions, was confirmed to him by the Treaty of Westphalia. With the aid of Charles X of Sweden, he secured the independence of his dukedom of Prussia, long a Polish fief, and then for several years

devoted himself to promoting the internal prosperity of his enlarged domain; but when Louis XIV attempted to enforce his claim upon the Netherlands, the Elector of Brandenburg went to the assistance of William of Orange, and when Louis, to effect a diversion, persuaded the Swedes to invade Prussia, the Elector turned in his track and drove the Swedes not only out of his own country but also out of Pomerania, which he held until peace was made, when he restored it for an indemnity paid by Louis. From this time, 1679, to his death in 1688, he devoted himself to developing the resources of his prov-



The Great Elector and the Long Bridge, Berlin, Prussia.

ince. Amongst other things he welcomed and provided homes for twenty thousand French Huguenots, driven from France by the persecutions of Louis XIV. — It would be interesting to inquire how much of the artistic capacities of the German of to-day can be traced back to such a considerable infusion of the more artistic Gallic blood.

In this way Frederick William Elector of Brandenburg, became the founder of the family of Hohenzollern, who at present fill the



Frederick the Great, Berlin. Rauch, Sculptor.

Imperial chair of Germany. He is known in history as the "Great Elector," and it is perhaps a more distinguishing title than if he had gone down to posterity as the first king of Prussia. It is certainly a more individual title, and the Elector himself had individuality of sufficient force to deserve it. But all he could do was to lay the foundation upon which his successors could rear the structure of one of the most powerful kingdoms and finally most powerful empires the modern world has ever known. Like all such creators of historic periods the Great Elector is regarded with a great degree of reverential awe, and is looked upon as something rather more than human; but this, of course, is due mainly to the magnifying effect of



Detail of the Monument to Frederick the Great [From the London Illustrated News].

the simple passage of time. However this may be, he was considered so great a personage by his subjects and his actual descendants that it was felt to be desirable that his memory should be honored with an equestrian monument which should outshine any that existed. The work was intrusted to the sculptor Andreas Schlüter, who yielding to the prevailing Classic tendencies of the time, took the statue of Marcus Aurelius for a starting-point and modelled the Elector after the Classic manner. If the sculptor had never seen the first statue of Henry IV at Paris, he must at least have heard of it, for about the pedestal were placed four chained slaves very much after the manner of the similar figures about the pedestal of Henry IV. Moreover, just as the statue of Henry IV stands in a little bay built out at the side of the Pont Neuf, the statue of the Great Elector stands in a similar bay built out

at the side of the Long Bridge at Berlin, where it was placed in 1703, though the bronze figures were cast in 1701, by Jacobi. It is an impressive piece of sculpture, but it is not possible to agree with Lübke who declares that "no other equestrian statue can be compared with this in fiery majesty."

The son and successor of the Great Elector, Frederick I, at length found himself presiding over a territory of sufficient size and of such wealth and military force that he might dare to assume the title of king, and demand that he should be so recognized by the ruling monarchs of Europe. Apparently it was a case of acquiescence or war, and little as they liked the notion of welcoming a German upstart, the kings and queens of the time one after another acknowledged his right to the title.

To Frederick I succeeded Frederick William I, who most unwittingly played the part of a John the Baptist for his much hated and



Detail of the Monument to Frederick the Great [From the London Illustrated News].

much abused son Frederick II, better known as Frederick the Great. Frederick William I pursued with even more eagerness the policy of his father and grandfather, and did all in his power to effect the enlargement of his territory, but coupled with this desire was a most determined avariciousness and mania for increasing the military establishment of his kingdom. To the second king of Prussia soldiers were too valuable articles to be wasted in warfare, and although the army was maintained at incredible expense and brought to the very highest point of military efficiency, it was never, with one short exception, engaged in actual warfare. One of



Detail of the Monument to Frederick the Great [From the London Illustrated News].

the best known peculiarities of this infatuated king was the formation of a regiment of grenadiers no one of whom should be less than seven feet high. The tales that are told of the private life of the king, and the manner in which he maltreated his detested oldest son, leave no reason for doubting that in many ways the king was a veritable mad man.

Neither Frederick I nor Frederick William I seem to have been considered worthy subjects for equestrian monuments.

At the time when at the age of twenty-eight, Frederick II succeeded his father, in 1740, Charles VI, Emperor of Austria, had just died, and as he had no male issue he endeavored to secure the tranquility of his possessions and of all Europe, and, at the same time, provide for his own family by effecting a Pragmatic Sanction by which the throne of Austria should be secured to his daughter, Maria Theresa, who had married Francis Joseph, Duke of Lorraine; but in spite of the Pragmatic Sanction the chance was too inviting to several potentates, who thought they saw a chance of increasing their own possessions at the expense of Austria. Amongst these was Frederick II, who, finding that his father had left him an army of 72,000 of the most perfectly

drilled soldiers in Europe and a treasury with a surplus of 12,000,000 dollars, could not refrain from following the aggrandizing policy of his predecessors, but with much greater audacity. Under pretext of assisting Maria Theresa in her evidently impending difficulties, he offered an alliance, but upon such terms that they could not possibly be accepted. Before the reply was received, Frederick had seized upon Silesia, and other interested parties had made so threatening a movement on Vienna, that Maria Theresa abandoned it in haste, and sought refuge and support in Hungary, of which kingdom she was also the ruler or king, as she was styled. The Hungarians supported her with unwavering fidelity, and from that time forward a most active but sometimes interrupted warfare was carried on between Frederick and Maria Theresa for many years.

It is not necessary to give further details as to the history of this great man as enough has been said to inform our readers how the time and deeds of Frederick II stand in relation to the great Protestant movement of the seventeenth century, and to remind them that his contemporaries in all countries have names more familiar to us even than the names of the great men of our own time. It was not desirable to stop this brief historical sketch until the fact that Maria Theresa was Frederick's contemporary had been mentioned, for to these two equally great adversaries have been erected two of the world's most ambitious equestrian monuments, which, with one other, — the new monument at Leipsic — form a little class by themselves. Strictly speaking, however, only the monument to Frederick the



Frederick the Great in the Garden at Sanssouci, Potsdam.

Great should be called equestrian for in the other cases the four equestrian groups which adorn the bases of the monuments are merely accessories.

Founded on a dreary, sandy plain upon the banks of a sluggish river, which seems to assure poor drainage and consequent ill health to its inhabitants, Berlin, after two hundred years of hardly perceptible yearly growth, has, since its erection into the capital of the German empire, made extraordinary progress in population, wealth and culture until now it holds the rank of third city in Europe and one of the most profusely decorated cities in the world. A large part of its adornment has been accomplished in the last twenty years, but before this later growth something had been done to make the favorite city of the Hohenzollerns a notable place.

In 1830, King Frederick William III began to give effect to his intention to create a worthy monument to the memory of his illustrious ancestor, and intrusted the work to the architect, Professor Schinkel and to Professor Rauch, already a noted sculptor. Just what was Schinkel's part is not clear, for it is generally believed that the monument as it exists was Rauch's design. Nine years passed before the model was satisfactorily worked out, and three years more elapsed before the full-size model of the crowning figure was ready, and four further years passed before it was successfully cast; and though the corner-stone was laid in 1840 on the one hundredth anniversary of Frederick's accession to the throne, ten years after the king gave the commission, the unveiling of the completed whole did not take place until the month of May, 1851. When this ceremony took place, with much accompanying pomp and parade, there stood at some little distance to the rear of the statue the full-size models of four quadrangular pillars, widely spaced and each over fifty feet in height, four feet square and carrying each a statue ten feet high of one of Frederick's ancestors, namely: Albert the Bear, the Elector Frederick I, King Frederick I and King Frederick William I. These statues were to be executed by the sculptors Stürmer, Dankberg and Afinger in marble. Contemporary illustrations of the ceremony show these pillars in place and prove conclusively that Rauch was right in insisting that they should not be allowed to mar his work by their wholly detached but overpowering presence, and fortunately he was able to prevent the models being replaced with permanent work.

The lower part of the actual monument consists of a base of polished granite, three of whose panelled sides bear the inscribed names of the

most noted of Frederick's subjects. Upon the fourth side is the legend "To Frederick the Great, Frederick William III, 1840. Completed under Frederick William IV, 1851." Above this the rest of the pedestal is of bronze, the lower portion of which is adorned on each of its four faces with high-relief, life-size groups containing twenty-four figures, the most noticeable amongst which are the four equestrian figures at the corners. These represent Prince Frederick of Prussia and Prince Ferdinand of Brunswick on the eastern corners, and on the western ones General Ziethen and General Seydlitz. But besides these there are several equestrian figures forming bas-relief backgrounds to the groups of military chieftains which occupy the longer faces of the die: the groups at the front and rear ends of the die represent statesmen, diplomats, writers and so on. The upper portion of the pedestal is formed by a sort of attic which is embellished with bas-reliefs representing some scenes from the king's life,



Frederick the Great, Breslau, Prussia. Kiss, Sculptor.

and its corners are decorated with seated figures of cardinal virtues, to which various names are attributed. Above all stands the colossal figure of Frederick mounted on a spiritedly modelled charger, a group which would hold high rank as a piece of sculpture even if it were placed upon a much simpler pedestal, for the over-elaboration of some parts has a deteriorating effect upon the whole; the attic, for instance, looks like an afterthought, as if the sculptor after his work were done had received a hint from high quarters that there was not enough personal glorification of the august subject of the monument. Fortunately Rauch was a conscientious as well as skillful workman and all parts of this elaborate structure will bear examination. The great length of time needed to complete the work was doubtless due to the fact that all the figures are accurate portrait statues, and as most of the men represented were already dead, probably the sculptor had to spend much time in searching after the material needed for his work.

The statue stands in the principal street of Berlin — Unter den Linden — just abreast of the imperial palace.

The statue of the king has one peculiarity which has often misled artists who have been called on to make illustrations of it for the press and, as a consequence, have shown the king wearing his sword on the right side which would indicate that he was a left-handed man while the truth is that he was right-handed and wore his sword on the left side, as the statue itself shows. What has misled the illustrators is the famous walking-stick, which the king, even on horseback, carried suspended by a thong to his right wrist.

What the statue cost, and how much the sculptor received for his twenty years' labor cannot be told; but some of the material facts connected with it are that the monument is about forty-three feet high, the king and his horse counting for eighteen of them, and that eight hundredweight of metal were used.

A replica of this mounted figure of the king was set up later in the garden of Sanssouci at Potsdam, about twenty miles from Berlin, which was Frederick's favorite place of retreat. It is placed on a lower and more simple pedestal and its effect there bears out what was said above as to the statue's not needing its elaborate pedestal.

Besides these two there is another equestrian statue of Frederick the Great at Breslau, the work of the sculptor Kiss. In this instance the king is represented as a much younger man than in the great statue at Berlin where he is shown as the successful monarch

who has achieved his ends. At Breslau it is rather as an active and anxious general he is shown.

PRINCE EUGENE.—Prince Eugene, or, more fully, François Eugène de Savoy, was the son of Eugene Maurice, Comte de Soissons, and Olympia Mancini, a niece of Cardinal Mazarin, and was born in Paris in 1663. He entered the service of Austria in 1683 and in 1691 Eugene was made field-marshal, and gained advantages over the French in Piedmont, where he commanded the Imperial army. About 1694, he rejected the offer of a marshal's baton which Louis XIV offered him, with a large pension, in an endeavor to induce him to return to the French service. He received the command of the Austrian army of Hungary, and in 1697 won an important victory over the Turks at Zenta. The war of the Spanish succession now summoned him to a more famous career. In 1701 he was given the Italian command, and proved himself superior in generalship to Catnat, also surprising and capturing Villerot at Cremona. At the indecisive battle of Luzara, in 1702, he met Vendôme, and at the end of the campaign was made President of the Council of War in Vienna. His association with Marlborough in the command of the allies contributed greatly to the success of their cause. Together, they defeated the French at Blenheim in 1704. In 1705 Eugene was sent to Italy, and was defeated by Vendôme at Cassano; but in 1706 he gained a complete victory at Turin, and drove the French out of Italy. Returning to Vienna in 1707, he was given the command of the Imperial army in Flanders, and fought, in conjunction with Marlborough, the battles of Oudenarde and Malplaquet, the former a victory, and the latter claimed as such by the allies, though they lost 25,000 men. In 1712, Eugene was sent on a diplomatic mission to London, but failed to prevent the retirement of England from the alliance against France, or to restore Marlborough to the command of which he had been deprived. In 1712 he returned to the army in Flanders, but made the campaign with little success, and in 1714 signed a treaty of peace at Rastadt with Marshal Villars. In 1716 and in 1717, he won great victories over vastly larger Turkish armies at Peterwaradin and Belgrade. For many years after the end of this war he was employed in civil affairs, and enjoyed the honor and confidence of Charles VI of Germany. He died in 1736.

FERNKORN.—Anton Dominik Fernkorn was born at Erfurt in 1813. He did not turn his attention to art until 1836, when he entered Stiglmayer's studio, afterwards studying under Schwanthaler. At this time he made a copy of Thorwaldsen's statue of Schiller for the Emperor of Russia. In 1843 he settled in Vienna, where among his first works were six figures from the Nibelungen for Count Reichenbach, followed by a large equestrian statue of St. George for a fountain for Count Montenuovo. He was afterwards commissioned to make the colossal companion equestrian statues of the Archduke Charles and Prince Eugene for the Vienna Burgplatz, and for the former received the rank of knight. Fernkorn was director of the Imperial foundry at Vienna, where he died in 1878. Towards the end of his life he became insane. Among his other works are six statues of emperors for the cathedral at Spire; the Lion of Aspern; St. Mary for the gable of the Catholic Church at Foth, Hungary; the Jellatschitz monument at Agram; the statue of Duke Charles William Ferdinand of Brunswick; the figures for the fountain of the Exchange at Vienna, and busts of the Emperor Francis Joseph and others.

THE GREAT ELECTOR.—Frederick William, Elector of Brandenburg, surnamed the Great Elector, born in 1620, was the son of the Elector George William, the prince to whose policy the house of Hohenzollern owes its greatness. He succeeded his father in 1640, soon after which he obtained from the King of Poland the sovereignty of the duchy of Prussia. By the treaty of Westphalia (1648) he acquired Magdeburg, Minden and part of Pomerania. In 1655 he joined Gustavus of Sweden in a successful invasion of Poland. As the ally of Holland and the Emperor, he took the field against Louis XIV in 1672. The Swedes, having invaded his dominions, were totally defeated by him at Fehrbellin in 1675. In 1679 he made peace with Sweden and France. Frederick possessed great political abilities, and his reign was very beneficial to Prussia. He died in 1688.

SCHLUTER.—Andreas Schluter was born at Hamburg in 1662. He studied first under a sculptor in Danzig, and then in Italy, and in 1691 was employed at Warsaw by the King of Poland. In 1694 he was summoned to Berlin and entrusted with several important works, being appointed court architect and sculptor soon after. He finished the Royal Palace at Berlin, and worked at Potsdam and Charlottenburg. Through the intrigues of rivals, he was deprived of the post of court architect, though retaining that of court sculptor. In 1713 he was invited to St. Petersburg by Peter the Great, and commissioned to execute various architectural works, but he died there in 1714. His principal works in sculpture are the equestrian statue of the Great Elector on the Kurfürsten Brücke in Berlin; the decorations of the Arsenal at Berlin (notably the heads of dying warriors above the windows of the inner court); the marble pulpit in the Marienkirche at Berlin, and a statue of Elector Frederick III at Königsberg.

FREDERICK THE GREAT.—Frederick II, surnamed the Great, King of Prussia, son of Frederick William I and Sophia Dorothea, who was a daughter of George I of England, was born at Berlin, January 24, 1712. He was educated in a very strict and narrow manner by his father, and treated with great severity. It is even stated that he would have been put to death by the King for desertion but for the intercession of the Emperor of Germany, who got the penalty commuted to close confinement. Frederick married (by compulsion), in 1733, Elizabeth Christina of Brunswick, and ascended the throne in 1740, when he soon displayed great political ability and a remarkable energy. Seizing the opportunity presented by the accession of Maria Theresa, he gave the first signal of the War of the Austrian Succession by a sudden invasion of Silesia, which he occupied without much resistance. In April, 1741, he won a victory over the Austrians at Mollwitz, after which Bavaria and France became his allies. A separate peace was concluded the next year between Frederick and Maria Theresa, who ceded Silesia to him; but he renewed hostilities in 1744 and took Prague, but was afterward compelled to retreat. He defeated the Austrians again in 1745, and then made peace with them in December of that year. A strong coalition was formed against Frederick by Maria Theresa, the Empress of Russia, the King of France and other powers, and he thus became involved in the Seven Years' War, with no ally but England. In 1756 he conquered Saxony, and then entered Bohemia, gaining a great victory at Prague in May, 1757, but was defeated the next month at Kolin by Marshal Daun, and driven out of Bohemia. In November he won an important victory over a superior French force at Rossbach, and in December completely routed the Austrians at Leuthen. In 1758 he beat the Russians at Zorndorf; in 1759 he was vanquished by the allies at Kunersdorf. Berlin was taken by the enemy and Frederick's fortunes were desperate, but in 1760 he gained the battles of Liegnitz and Torgau, and the tide turned. The campaign of 1761 was, on the whole, disastrous to him, but the next year saw the death of the Empress Elizabeth, which changed the Russian policy, and Maria Theresa, deserted by her allies, was forced to make peace in 1763. On the partition of Poland in 1772, Frederick acquired Polish Prussia and a part of Great Poland. He had quickly repaired the ruinous state to which war had reduced his kingdom, was his own prime minister, encouraged commerce, manufactures and the fine arts, and tolerated all religions. He invited Voltaire to his court, and treated him with great favor, but afterwards quarrelled with him. Frederick, in addition to being a great commander, was a most voluminous writer, especially in verse, and his works were published in 23 volumes in 1780. They include a "History of My Time" and a "History of the Seven Years' War." He died at Sanssouci, August, 17, 1786.

RAUCH.—Christian Daniel Rauch was born at Arolsen, in the principality of Waldeck, in 1777. His parents were poor, and for a long time he suffered from lack of instruction, his first master teaching him little more than the art of sculpturing grave-stones. Later, he studied under Professor Kuhl, of Cassel, and in 1797 removed to Berlin. Poverty still clogged his attempts, and he was forced to earn subsistence by becoming a royal lackey, exercising his favorite art in his leisure hours. His genius, however, attracted notice, and among other persons of influence who assisted him was Queen Louise. She, surprising

him one day in the act of modelling her features in wax, sent him to study at the Academy of Art. Not long after, in 1804, Count Sandrecky furnished him with the means to complete his education at Rome, where he was befriended by William von Humboldt, Canova and Thorwaldsen. Rauch made rapid progress, and executed bas-reliefs of "Hippolytus and Phædra," "Mars and Venus wounded by Diomed" and "A Child Praying," and busts of the King and Queen of Prussia and of Raphael Mengs. In 1811 he entered upon the eminent part of his career, when he was commissioned to execute the monument to Queen Louise, now in the mausoleum at Charlottenburg, and one of his most admired works. Rauch made a great number of busts of celebrated persons, and statues of Generals Scharnhorst and Bulow, and of Blücher, Dürer, Luther, Kant, Goethe, Schiller, Schlaermacher and many other notables for different German cities. In 1830, in conjunction with Schinkel, the architect, he began the models for his masterpiece, the colossal equestrian monument to Frederick the Great, at Berlin, on which he labored many years, and which was inaugurated in 1851, gaining for the sculptor the most flattering honors. He died in Dresden in 1857. Rauch's other works include the "Victories in the Wallhalla," near Ratisbon; statues of the first two Christian Kings of Poland, in the cathedral at Posen; one of Max-Joseph at Munich; one of Franke at Halle; those of Queen Frederica and King Ernest Augustus at Herrenhausen; the monument of Frederick William III at Charlottenburg; and a statue of Queen Louise at Potsdam. Among his ideal sculptures are a "Danaide" and a group of "Moses supported by Aaron and Hur."

FERDINAND OF BRUNSWICK.—Karl Wilhelm Ferdinand, Duke of Brunswick, a famous German general, was born in 1735 at Brunswick. He was a nephew of Frederick the Great, for whom he fought in the Seven Years' War. He was made commander-in-chief in 1792 of the allied armies of Austria and Prussia, and invaded France to fight against the Republic, but was baffled by Dumouriez, and retired from France. In 1793 he fought several battles against Moreau and Hoche, and resigned the command. He was given the chief command of the Prussian army in 1806, but was defeated in the battle of Jena in October of that year, receiving a wound of which he died in the following November.

PRINCE HENRY OF PRUSSIA.—Prince Friedrich Heinrich Ludwig, brother of Frederick the Great, was born at Berlin in 1726. He was noted for his skill in strategy, and was spoken of in 1763 by the great Frederick "as the only general that in this war has not committed a single fault." He commanded the right wing at the battle of Prague in 1757, and decided the fortune of the day. He outgeneraled the enemy in the campaign of 1758, obtained some advantages in 1759, and in 1760, with 35,000 men, held in check a superior force of Russians by skilful marches, preventing their junction with the Austrians. He won a signal victory at Freyburg in 1762, which was the last important action of the Seven Years' War. He died in 1802.

ZIETHEN.—Hans Joachim von Ziethen, a Prussian general and a favorite of Frederick the Great, was born in 1699. He served in the Silesian campaigns of 1742 and 1745, and later in the Seven Years' War, winning renown for skill and bravery at Reichenberg, Prague, Kolin and Torgau. Soon after, the King made him a general of cavalry, and gave him many other distinctions. Ziethen died in 1786.

SEYDLITZ.—Friedrich Wilhelm von Seydlitz, a Prussian general, born near Cleves in 1721, served in the Seven Years' War. He was given the Order of the Black Eagle for his distinguished bravery at the battle of Rossbach in 1757. He became general of the cavalry in 1767, and died in 1773.

KISS.—August Kiss was born at Pless in 1802, and studied at the Berlin Academy under Rauch. He afterwards became a member and a professor of the Academy. In 1839 he exhibited the model of what is still his best-known work, the "Amazon Struggling with a Panther," which evoked great enthusiasm, and was cast in bronze by public subscription. It is now in front of the Old Museum of Berlin. Kiss also executed a colossal group of "St. George and the Dragon," now in the court-yard of the palace at Berlin, and an equestrian statue of Frederick William III at Breslau. His other works include "The Fox Hunt" and a group of "Faith, Hope and Charity." Kiss died in 1865.

[To be continued.]

BARON HAUSSMANN'S WORK.



"All the Modern Improvements."—No. 13.

THE second volume of Baron Haussmann's Memoirs, which was published on July 3, in Paris, contains the history of the transformation of Paris and of the Prefecture of the Seine from 1853 to 1870. To effect that transformation, Baron Haussmann spent 2,553,668,224 fr., and it is a well-known fact that he has often been accused of having handled that immense sum to his personal advantage. In his memoirs he protests against the accusation. He says: "I feel myself strong against such outrageous calumnies. For the last twenty years, instead of

being able to enjoy in peace the rest to which no one will contest my right, I have been compelled to continue the struggle for life, which is hard at eighty years of age."

Temptations and opportunities to profit by his position were not wanting, and a Paris dispatch to the *London Standard* says that in connection with them Haussmann relates several amusing anecdotes. He was frequently offered "hundreds of thousands of francs, which he always rejected with indignation." After the exhibition of 1867, there was a question of re-establishing gaming-tables in Paris, and the person who was seeking the concession came to the Prefect of the Seine and told him a group of his friends were urging the Emperor to grant the concession. Napoleon was, according to this gentleman, almost inclined to grant it, and would certainly do so if only Baron Haussmann would point out to him what a great advantage the re-establishment of the gaming-tables would be to the Municipal Exchequer. Baron Haussmann was, on this occasion, offered 600,000*f*. He refused them, and strongly advised the Emperor not to grant the concession.

A few months later the Baron related the incident to a Minister in Italy, and seems to have had some difficulty in making him believe it. In reply to the Baron's reiterated assurances that it was true, the Italian Minister said: "Well, if you will take my advice, you will say nothing about that at dinner this evening." According to the Minister, it would not have increased the admiration of the Italian personages for the Prefect of the Seine.

The appearance of this volume gives occasion to the *London Daily Telegraph* for an interesting article on Haussmann's era of rule in Paris; as follows: "In the year 1868, when Baron Haussmann was in the plenitude of his power as Prefect of the Seine, he boasted that the transformation of the imperial capital which he had been mainly instrumental in effecting had produced a metropolis so monumentally splendid and so socially luxurious that he did not wish any one, were he a native or a foreigner, to live in Paris unless he had an income of at least 50,000*f*. a year. It was then that an Opposition Deputy, M. Jules Ferry, startled—even to the point of terror—the Parisian bourgeoisie by the publication of a pamphlet called 'Les Comptes Fantastiques d'Haussmann,' the title of which was an obvious, but happily witty, parody of the famous 'Contes Fantastiques d'Hoffmann.' M. Ferry strove to prove that the millions upon millions of francs which the Prefect of the Seine of Napoleon III had lavished on the embellishment of Paris had been attended by circumstances of prodigality and jobbery almost approaching systematic corruption, and that Baron Haussmann had handled the immense sums over which he had the control not only to the aggrandizement of his subordinates and his parasites, but to the advantage of his own private fortune.

"In the second volume of his memoirs, just published in Paris, the ex-functionary of the Second Empire has vigorously rebutted the calumnies and the insinuations against his personal probity which were current twenty years ago; and he declares that since the fall of the empire, instead of enjoying in peace the dignified rest and tranquillity which were his right, he has been compelled to continue the struggle for life, which, as he cogently remarks, is hard enough at eighty years of age. It is certain that M. Haussmann acquired no great wealth during his tenure of almost illimitable sway as the *Edile* of Lutetia, and that when his magnificent task was practically accomplished he was cast politically overboard very much after the fashion of Jonah of old. He was forced by M. Emile Olivier to resign his office in favor of M. Chevreau; but, although he was offered as a consolation the Governorship of Algeria, the Vice-Presidency of the Senate, and even, it is said, the title of Duke of Paris, he was content to retire not ungracefully into private life, whence he only emerged a few years afterward to become one of the Directors of the *Crédit Mobilier*.

"It is worth while in this, the springtide of the existence of a County Council from which such sumptuous things are expected in the direction of the amelioration and embellishment of London, to ask what Baron Haussmann really did for Paris. A scion of a well-known bureaucratic family and the grandson of a once notorious member of the Mountain in the National Convention, M. Haussmann began life as a student at the Conservatory of Music, from which he passed into the office of a notary; but the official traditions of his race were too strong for him, and, after filling divers subordinate places in the provincial administration, he became Prefect of the Department of the Gironde, and was present at Bordeaux, in 1852, when Louis Napoleon was making his final and successful electoral campaign, and had uttered his memorable piece of claptrap, 'L'Empire, c'est la paix.'

"It seems to have occurred to the pushing Prefect that the empire meant likewise M. Georges Eugène Haussmann, with plenary powers, at the Hôtel de Ville, Paris. It is positively alleged that he had his audacious plan for the transformation of Paris completely cut and dried, and that he submitted it to the Prince President; at all events, it is certain that in 1853, the newly-fledged Emperor summoned M. Haussmann to Paris, created him a Baron and gave him *carte blanche* to carry out his colossal scheme. He set to work at once, and the less friendly of his critics declare that the governing idea of Haussmannism was more political than social. In clearing vast spaces for the erection of handsome squares where formerly had been only filthy slums, in piercing spacious boulevards through tortuous lanes and alleys, the Prefect, it was said, was actuated by the desire of establishing prolonged strategic lines and military means of communication which would render revolutions in the future impossible.

"Again, in substituting opulent districts for regions previously

crowded by workmen of the poorest class, he was charged with the desire to banish the laboring orders from the centre to the circumference of the capital. He succeeded, some will think almost too well, in his gigantic enterprise. Rents in central Paris rose under his rule at least 200 per cent. Whole quarters of the city, heretofore cheap, and, it must be admitted, slightly nasty as places of residence, became so costly as to render emigration compulsory, not only to the working people, but to the large class of modest tradespeople who had retired comparatively early from business with a small competence, but to whom the augmentation of their expenses, even to the extent of a few hundred francs a year, was a serious matter. The imperial and imperious Prefect of the Seine did not want such humble clients, and he preferred to drive them disdainfully away rather than welcome them to the renovated streets which arose with almost magical rapidity at his command.

"His ambition was to make Paris more a cosmopolitan than a French city. He indulged in visions of millionaire American, Brazilian, Spanish, English, and especially Russian colonies, to be established in the shadow of the Tuileries—colonies, the members of which should be continually spending or squandering their wealth for the benefit of Parisian hotel and lodging-house keepers, restaurateurs, theatrical managers, jewellers, goldsmiths, milliners, livery-stable keepers, and all manner of tradesfolk. Parallel with this grandly-rapacious undertaking, this scheme of converting Paris into a gigantic spider's web, which not even the wealthiest bluebottle would be able to break, ran two firmly-persisted-in plans—the first to win the trading classes to the side of Bonapartism by showing them how imperial institutions attracted wealthy strangers to Paris, and to conciliate the workmen by continuous employment on the new buildings; the next to glorify the cause of Cæsarism by completing the monuments of which the inception was due to the First Napoleon. The prolongation of the Rue de Rivoli from the Place de la Concorde, past the Hôtel de Ville, to the Rue de Sévigné, was only the accomplishment of a design prepared in 1802, when Napoleon was First Consul. The completion of the Louvre, which had baffled the Government of the Restoration, and which Louis Philippe, much as he did for Paris, was unable to carry out, was triumphantly achieved by Baron Haussmann.

"These astonishing structural changes cost, according to Baron Haussmann's own showing, about a hundred millions sterling. His enemies assert that his feverish mode of procedure, his recklessness and sometimes illegal expropriations, and his almost boundless propensity for borrowing money at high interest, threw the finances of the city of Paris into a state of confusion from which even the most recent of the municipal budgets has not extricated them. Still the octogenarian administrator may be able to quote in vindication of his adventurous policy an occurrence as wholly unexpected by himself as by the world at large.

"Paris in 1853, was an extremely handsome, but a very filthy, city. It did not contain half-a-dozen properly-sanitated hotels, and the system of sewerage was throughout disgracefully inadequate. The main boulevards from the Fort St. Denis to the Bastille were bordered by ramshackle tenements, on which abutted narrow streets reeking with foul odors. The Bois de Boulogne was a sandy wilderness; the pavement of the city was in a lamentable condition; and these defects were in a surprisingly short space of time remedied by the enchanter Haussmann. His original dream had to a certain extent been fulfilled. Paris had really become a cosmopolitan city, tenanted by millionaire aliens; the Grand Opéra was finished; the Avenue de l'Opéra was planned; the reconstruction of the Palais Royal was contemplated, when at noon on the 4th of September, 1870, the Second Empire collapsed like a house of cards.

"Within less than a year afterward one-half of the Paris transformed by Baron Haussmann had disappeared in the petroleum fires of the commune, and a multitude of edifices built before his time were so many masses of ruins. The Tuileries, the Palais Royal, the Hôtel de Ville, the Palace of the Quai d'Orsay, the Palais de Justice and that of the Legion of Honor, the new Prefecture of Police, the Ministry of Finance, the Library of the Louvre, the Council of State were all gutted and wrecked, and the column of the Place Vendôme was sprawling on the pavement. The works of Haussmann, fantastic or realistic as they may be thought, had mainly vanished in hideous ruin and combustion dire. Yet in the course of less than ten years afterward the city arose again more splendid, more smiling, and more expensive than ever. Haussmannism, some advanced Republicans may maintain, was a very baleful plant. It can scarcely, however, be denied that the plant struck very strong roots, and that it continues to throw out abundance of flower and fruit in the enhanced beautifying of the gay and costly city."—*New York Times*.

NEW YORK CITY'S SEVERAL PUBLIC ENTERPRISES. — To date — since May, 1889: ¹ Washington Memorial Arch Fund, \$83,254.98. To date — since 1885: ² Grant Monument Fund, \$156,759.82. To date — after years of effort: For the Audubon Monument Fund, \$1,558.76. To June 17: Free Circulating Library Fund, \$14,085. Peter Cooper Monument, \$34,136.02. To date — since 1882: The Horace Greeley Statue Fund, \$11,414.95.

¹ So far as can be learned.

² Of this \$10,000 is unofficial.



[Contributors are requested to send with their drawings full and adequate descriptions of the buildings, including a statement of cost.]

INTERIOR OF THE BAPTIST CHURCH, NEWTON CENTRE, MASS.
MR. JOHN LYMAN FAXON, ARCHITECT, BOSTON, MASS.

[Gelatin Print issued with the International and Imperial Editions only.]

THE negative from which this plate is printed was made by Mr. Chandler Seaver of West Newton.

HARRIS WOOD CRESCENT, ROXBURY, MASS. MR. J. WILLIAMS
BEAL, ARCHITECT, BOSTON, MASS.

THESE houses are erected by the estate of the late Horatio Harris, on land extending from Monroe St. to Townsend St., and face Fountain Square, a small park containing about 300,000 square feet. They cost about \$160,000, complete; are fitted with all modern conveniences and are to be sold, price varying from \$12,000, upwards.

FALKLAND PALACE, SCOTLAND.¹

"FIFE is not a county renowned for its scenery; but the glen, or rather hollow, at the foot of the Easter Lomond Hill, where glimpses of the old ruined Palace of Falkland, and the smoke of the surrounding village, are seen through the trees, would make a beautiful scene in any country. The remains of the palace are a diminutive but singularly beautiful fragment, justifying the boast that all the Scottish royal residences, though not of great extent, exhibit remarkable architectural beauties. It has the appearance at a distance of being but an old mansion-house or fortalice, with its keep and parasitical buildings; but, on a near approach, the lover of art who can tolerate the northern renovation of Classical architecture, in the blending of the Palladian with the Gothic and the stunted baronial architecture of Scotland, will find much to enjoy in this fragment. The western front has two round towers, which are a diminutive imitation of those of Holyrood; and stretching southward is a range of building, with niches and statues, which perhaps bears as close a resemblance to the Depressed or Perpendicular style of the English semi-ecclesiastical architecture, as any other building existing in Scotland.

"The east side, again, is diversified by the renovations of Classical architecture which have just been mentioned. The parts wanting to complete the quadrangle were destroyed by fire in the reign of Charles II.² No portion of the present edifice appears to be of great antiquity; but at a very early period there must have been a fortalice at Falkland. In an ancient document, said to be of the fifth year of David I, mention is made of a Macbeath, Thane of 'Falleland.' It appears that a certain Robertus Burgonensis—which, in ignorance of any place in Scotland so Latinized, one might suppose to mean Robert of Bourgogne—had sorely vexed the Culdees of St. Andrews by his oppression and rapacity, and endeavored to deprive them of the fourth part of their lands of Kirkness. To oppose him a host was collected of which the principal leaders were the Thane, and Constantine, Earl of Fife, the Justiciar. A sort of committee or jury seems to have been formed to investigate the genuine boundaries of the Culdees' estates; and in this respect, though imperfect and obscure, the document is interesting as throwing light on the habits of the age.³ In the year 1267, William Earl of Mar is found dating his charters from Falkland.⁴ It is more than a century later, in the year 1371, that the legal documents mention the existence of a castle and a forest; and their keeping is given to the Earl of Monteith by Isobel, Countess of Fife, who, on the condition of his restoring her to her earldom, which by force and fear she had resigned, is acknowledged as her heir.⁵ The domain lapsed to the Crown on the forfeiture of the Earl of Fife in 1425. The hamlet, which, according to old usage, clustered under the walls of the fortalice, was erected into a royal burgh in 1458; and the preamble of the charter gives, as the reason for this promotion, the frequent residence of the royal family at Falkland, and the inconvenience experienced by the many prelates, nobles and other great personages who surround the court, for want of innkeepers and sutlers. This sweet spot was the scene of one of the direst and most touching tragedies recorded in the bloody history of the Stewarts.

"When Albany was governor, he committed to close confinement here David, Duke of Rothesay, the eldest son of Robert III. It was intended that the youth should never leave his dungeon; but, instead of violence, the more cruel means of starvation, through professed oblivion, was adopted. The spot, according to Sibbald,

¹ It should always be kept in mind that these illustrations from the "Baronial and Ecclesiastical Antiquities of Scotland," [1846] by R. W. Billings, are republished very largely for the sake of giving instruction in one manner of the rendering of architectural drawings.

² New Stat. Account—Fife, 227.

³ Registrum Prior. S. Andrew, p. 117.

⁴ Ib. 312.

⁵ Sibbald's "History of Fife," p. 233. Jamieson's "Royal Palaces," 30.

was not the same as that occupied by the present palace; but 'there is, hard by the palace to the north, a fair large house, built by David Murray, Viscount of Stormont, then Steward of Fife, on the very spot where, some think, stood the old castle where David, Duke of Rothesay, was famished.'⁶ Along with such characteristics of the cruelty and savageness of man, this incident also develops the gentler virtues that, even in that harsh age, could find a refuge in the female breast. A poor woman, say the chroniclers, who had discovered the young prince's dreadful position, stole at night to the grating of his cell, and managed, at the risk of her life—which some say was actually her forfeit—to convey to him morsels, or rather particles of food, which protracted his existence until her humanity was discovered.

"When James I, who may be said to have narrowly escaped a like fate, returned to Scotland, it was not likely that he would take up his residence in a place haunted by such unpleasant associations; and we hear little of Falkland until the reign of James V. When this monarch, in his youth, had fallen into the hands of the Douglasses, in the year 1518, they kept him guarded in Falkland Palace. Having ordered a great hunting for next day, and thus found an excuse for retiring to rest, he dressed himself in the uniform of a yeoman of his own guard, and slunk forth from his palace like a criminal. He managed, long ere his flight was discovered, to place the moat of Sterling Castle between him and his pursuers; and thus a revolution was produced, which upset the overgrown power of the House of Douglas.

"Queen Mary enjoyed the privacy and sweetness of Falkland, and there courted a gay ease and simplicity, which did not consort with the barbarian pomp of Holyrood, or even of Linlithgow. It was a favorite with her son, James VI, from the facilities which it afforded for the sports of the field; and many of the events of his reign, which was essentially one of petty and personal incidents, are associated with this summer palace. The notorious Francis Stewart, Earl of Bothwell, whose desperado attacks on the person of the king were so ludicrously formidable, had planned one of his attempts when James was in Falkland; but having found 'certain people provided to resist,' he was less successful than in his well-known surprise at Holyrood.⁷ The modern Solomon was just about to mount his horse at the gate of Falkland, to go forth buck-hunting, one fine August morning, when he received mysterious news from the brother of Lord Ruthven about the discovery of a stranger with a pot of Spanish gold. He was induced to start immediately for Perth; and there he went through the series of odd and unfathomed incidents, which are generally known as the Gowrie Conspiracy."

THE COURT-YARD, FALKLAND PALACE, SCOTLAND.

COMPETITIVE DESIGN FOR THE FIRST PRESBYTERIAN CHURCH,
BUFFALO, N. Y. MESSRS. GREEN & WICKS, ARCHITECTS, BUFFALO, N. Y.

[Additional Illustrations in the International Edition]

MONUMENT TO BE ERECTED TO LAFAYETTE, WASHINGTON, D. C.
MM. FALGUIERE AND MERCIER, SCULPTORS. M. PUJOL, ARCHITECT.

[Etching.]

"THE Republic of the United States recalling the great leaders in its struggle for liberty has had the desire to honor the memory of one of these by erecting a monument to him. This monument conceived by French artists and carried out by French workmen will recall to future generations, at one and the same time, the devotion of one of our compatriots, the master impulse of the French race—namely its great love of liberty—and the native generosity of our character which wishes that others should profit by the benefits of our civilization. This monument is remarkable for the masterly qualities of the sculptors, but as often happens, the pedestal appears defective in more than one respect. In this composition is apparent the meddling of the sculptor with the design, an interference which is always an evil for architecture since sculptors always seek to subordinate the architectural effect to their own work, in place of making their figures subordinate to the mother of all the arts. In no other way can be explained the small scale of the details of this meagre, dry and unimaginative piece of architecture, when compared with the redundancy of the sculptured motives: this escutcheon, all out of scale, above a little socle, itself hoisted atop another little base the moulding of which simply break about the five figures which are placed about the pedestal, all forming a composition which can hardly give pleasure to M. Pujol whose talent is capable of much better things. And, really, it must be granted that this strange inferiority declares itself everywhere on the public places of Paris where the architectural disposition of the latest monuments erected are little short of the ridiculous. The sculptors who impose their own wishes upon the architect associated with them do themselves

⁶ Sibbald, 336.

⁷ Hist. of James the Sixth, 259.

an ill-turn in thus handicapping their own works."—*Moniteur de Architectes*.

We believe the statuary for the proposed monument has already reached this country and that the unveiling will take place during the coming winter.

STATION OF THE HUNGARIAN STATE RAILROAD, BUDA-PESTH, HUNGARY. OVER-INSPECTOR JULIUS VON ROCHLITZ, ARCHITECT.

[Gelatine Print.]

"LOVE" AND "HATRED"—SCULPTURES FROM THE HOFBURG THEATER, VIENNA, AUSTRIA. HERR JOHANNES BENK, SCULPTOR.

[Gelatine Print.]

MORDEN COLLEGE, BLACKHEATH.

EMMANUEL HOSPITAL, WESTMINSTER.

REGENCY MANSIONS, SHAFTESBURY AVENUE W., LONDON, ENG. MR. H. WHITMAN RISING, ARCHITECT, LONDON, ENG.

THE residential chambers of which we give an illustration have just been completed for Mr. F. Stratham Hobson, and stand in a very prominent position at the Piccadilly end of the Avenue opposite the Lyric Theatre. The principal entrance to the chambers is in the Avenue, and the ground floor contains a large hall and stone staircase, with entrance to hydraulic passenger lift. All the upper floors, from the first to the fourth, contain single and double sets of chambers, and bath-rooms attached to each. The single room sets contain well-arranged bath and bed alcoves, which gives practically three rooms in one; these are specially designed to suit the convenience of single gentlemen. The fittings have been carefully arranged, so that very little furniture is required to complete the rooms beyond a bed, table and armchair. The building is lighted throughout with electric light, the installation of which has been carried out by Messrs. Rashleigh, Phipps & Dawson. There are electric bells ringing to the kitchens on the top floor from all rooms. The bath-rooms to each set contain first-class Roman baths, with hot and cold water service, and also lavatory basins. All the floors are of fire-proof construction, and the corridors are laid with wood blocks. There is a general lavatory on each floor with water-closets. There is also entrance to the lift on each floor. The top floor contains ample kitchens, with rooms for the care-taker. The mezzanine floor, which is approached from the main staircase, will be let as offices. The ground floor is taken up with seven shops with well-lighted basements. The general arrangement of the plan is a central area round which the lavatories, water-closets and bath-rooms are ranged, all the rooms being lighted from the front. The exterior of the building is finished in stone dressings, with red-brick facings. The ground-floor story is executed in red Annan stone, and for all the upper floors Beer stone dressings are used. The roofs are covered with permanent green slates, including the octagon turret at the angle of the building.



[The editors cannot pay attention to demands of correspondents who forget to give their names and addresses as guaranty of good faith; nor do they hold themselves responsible for opinions expressed by their correspondents.]

NATIONALISM.

PHILADELPHIA, July 27, 1890.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—In your issue of 19th inst, Mr. Talcott Williams asks:

"With reference to Mr. J. P. Putnam's article in No. 759. If, page 22, column 2, bottom, 'these expensive and dangerous complications were, in many places, actually enforced by legislation' on those putting in plumbing apparatus 'involving a pecuniary loss on the part of the public of a very large sum, in Boston alone . . . of about \$50,000 a year,' (estimated) what guarantee has Mr. Putnam, page 22, column 2, middle, that 'information' in regard to this apparatus embodied in a State price-list, 'obtained in the interest of all the people at once, by the State,' would be a whit wiser? The State is all of us now. It would be all of us then. If we change for the better, the 'State' will change, if not, not."

Mr. Williams will find the answer in the "United States Official Postal Guide," a national circular and price-list of a national co-operative industry, and in innumerable similar documents relating to socialized industries, national, state and municipal, including the water-works' reports of this (Mr. Williams's) city. When "all of us" acquire a business, we generally manage it fairly well and tell nearly the truth about it, even now while it remains to the interest

of individuals to make "all of us" lie about it—a feature which will disappear "under nationalism" as Mr. Putnam says.

"All of us" are good enough and wise enough now to have a national postal service; and when more of us have "changed for the better" and cease to persist in choosing the wrong way rather than the right one, we may have a national plumbing service.

Respectfully yours, JOHN C. TRAUTWINE, JR.

ARCHITECTURAL DICTIONARIES.

ZANESVILLE, OHIO July 29, 1890.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Will you be kind enough to inform me through your journal of the existence of any dictionary of architecture in the English language? Naturally, I want the best, the most concise, complete and reliable. Be kind enough, also, to state the publishing house, and, if possible, the price. Yours, respectfully,

K. S. STAUBERG.

[WRALES'S "Dictionary of Terms Used in Architecture, etc." Price, \$2.00. Can be bought anywhere; "The Dictionary of the Architectural Publication Association" has, in twenty years or more, got as far as the letter P, we believe; Audsley's "Popular Dictionary of Architecture and the Allied Arts" may have got as far as the letter D by this time; Parker's "Glossary of Terms" applies mainly to Gothic work.—EDS. AMERICAN ARCHITECT.]

TESTING-MACHINES.

MANKATO, MINN., July 22, 1890.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Can you kindly give me the name of any party from whom I can obtain a machine for testing the strength of brick, stone, etc., also cost of same. Yours truly, F. THAYER.

[THE Yale & Towne Mfg. Co., of Stamford, Conn., manufacture such machines and there may be others.—EDS. AMERICAN ARCHITECT.]



MOTION OF THE NEVADA LODGE.—A year ago the Virginia and Gold Hill Water Company's employes repaired a disjointed pipe in front of Dr. Cole's drug store and put in a "sleeve" to permit of its expansion. Three days ago they were called upon to lengthen their "sleeve," and readily calculated that the "sleeve" had moved ten inches in one year. In some parts of the town the ground jams or compresses, and in other parts it expands and stretches. To accommodate this action of the lode the water company puts in "sleeves" in its fire and water-mains. The pipe columns that lead water to the electric motors on the 1,000 level of the Chollar mine are also provided with "sleeves." During the process of putting in those pipes the heat expands them to a considerable extent, and when the cold water is turned into them their shrinkage can be observed with the naked eye. It makes a difference of about eight inches in 1,700 feet, leaving so much space between the foot of the pipe and its base. If it were not accommodated with a "sleeve" the action of the water in the pipe would tear everything to pieces. The Water Company's tanks on the side of Mount Davidson are all situated in the "country" formation—off of the lode. They don't move. Pipes lead from the tanks to the moving lode. The point of separation is as distinctly marked as the Chinese wall. The pipe comes to the bank separating the two formations, and at that point a double elbow is put in the pipe, and as the lode lowers away from the immovable country rock, the lower point of the double elbow accommodates itself to the movement.—*Virginia City (Nevada) Enterprise*.

THE LATEST ELECTRIC WONDER.—Notices have repeatedly been published of a coming discovery which would enable a telephone operator to see as well as hear his interlocutor at the other end, and at last the discovery has been completed. It is reported that during the Post-office Jubilee celebration an instrument was shown, invented by Prof. Hughes, F. R. S., and Mr. Preece, which enables any one speaking into a telephone to see his correspondent at the other end, the "image" appearing like an animated colored photograph. The distance covered in the experiments shown was only thirty feet, and it still remains to be seen to what distance light will travel over the wires; but there seems no reason why "visuality" should not be established as far as audibility has been. If it is, the electricians will have realized one of the dreams of the Middle Age physicists, and have struck one more blow to diminish the separating influence of time and space. It will follow, we presume, that it will be possible not only to recognize but to photograph a face miles distant, a triumph of science which, though probably useless, strikes the imagination almost as much as the revelation of unseen stars on sensitized paper. Strange that the photographer should still fail to fix natural colors, though they appear in every mirror.—*London Spectator*.

STREET CARS RUN BY WATER.—A company of St. Louis people has, according to an American contemporary, the *Journal of Useful Inventions*, just been formed for the purpose of manufacturing and introducing a hydraulic street-car motor. Nearly all other available powers known to scientists have been brought forward as street-car motors during the recent years, but this is the first attempt to supersede the street-car mule with hydraulic power. The inventor of the process is L. C. Atwood, of St. Louis, Mo., and the new concern is known as the

Atwood Electric Company. The officers are at work on the machinery for a full-sized street-car, to be tried on one of the local roads as soon as it is complete. The pumps with which the hydraulic pressure is exerted are to be operated by electricity, and the hydraulic engines are to be connected directly to the axles of the trucks of the car, thus obviating the heavy gearing that is used in the electric motor. Two tanks, each containing about one half barrel of water, will be used on each car. The electrical machinery will be much lighter than that used in the electric system, as less than one-third of the electric power will be required, and it is thought that this reduction of electric power will bring the new motor within the range of the storage battery. Two points of merit claimed for the invention over the regular electric system are that it will require but one-third of the electric power, and that it dispenses with the use of cog gearing, which wears rapidly and requires frequent renewals. It is also claimed that the same device can be operated with compressed air by placing receiving tanks for the air under the seats of the car. The company expects to have a car equipped with the motor and ready for trial within 30 days. — *Invention.*

DISCOVERIES AT POMPEII.—At Pompeii some mural paintings of more than ordinary interest have recently been disclosed. In the Eighth Region, between Nos. 16 and 21 of the Second Insula, Via III and IV, the remarkable discovery has been made of a house five stories high. The upper floor, which is entered from the highest level formed by a mound of prehistoric lava, is profusely decorated, and the principal hall displays on one wall the myth of Bellerophon, a nude figure who, holding with one hand the bridle of his horse, is in the act of receiving the letter and orders of King Priæus, who is seated on a throne before him. The lower part of the house, looking towards Stabie and the sea, was used as a bathing establishment. Three steps lead into the *frigidarium*, which is perfect, the lower part of the surrounding walls being painted blue, and the upper red. The middle of the right wall is occupied by a picture representing a nymph, semi-nude, borne over the waves on a sea-horse. The horizontal band dividing the blue from the red surface is a kind of frieze of comic or caricature scenes, representing dwarfs and pigmies, in scenery evidently of the Nile country, fighting with various animals. One dwarf is in the act of throwing a large stone at an ibis; while another is trying to save by drawing to the land a figure (probably a woman) fallen into the river, when, seized himself by a crocodile, he has tied himself with a rope to another dwarf, standing behind, who is striving with might and main to prevent his comrade from being drawn down into the water. — *London Athenæum.*

WHAT IS A "STORY" OF A HOUSE.—Is it necessarily a space enclosed within four vertical walls? This was the question propounded to the Queen's Bench Division in *Foot v. Hodgson*. The answer which the Bench gave to the question, and which may be found in the current number of the "*Law Reports*," is that a story need not necessarily be a space within four vertical walls,—one side may consist of a sloping roof. The point arose under the Metropolitan Building Act, 1855,—rule 6, in the schedule of the Act, speaking of "the topmost story," in reference to certain measurements. Surveyors appointed under section 85 of the above Act rightly thought that an attic might be a "story." On appeal to the Judge of the City of London Court, the latter thought that an attic was part of the roof, and not a "story." The Queen's Bench Division have, it will be seen, reversed this judgment, and, as it seems to us, with justice. "It would be unfortunate if such rooms as these are excluded from the important regulations of the schedule." These are Mr. Justice Grantham's words, and we agree with them. But it is also obvious that a "story," in ordinary language, means a space capable of being used as a room. A mezzanine cupboard in the roof would not be a "story," but an attic, we cannot doubt, is a "story." — *The Builder.*

TESTING THE LINKS OF THE KIEV BRIDGE.—Mr. Beletubsky, professor at the Institute of Roads and Waterways at St. Petersburg, was some time ago instructed by the Minister of Public Works to make an examination of the suspension bridge over the Dnieper at Kiev, which was erected some forty years ago by the late Mr. Charles B. Vignoles, and to give an opinion as to the quality of the metal used in its construction. Luckily, from a scientific point of view, a number of extra links which have been provided at the time of the erection of the bridge were still in store, and it was thus possible to determine by comparative tests what changes the material of the links of the bridge had undergone in their forty years of service. The links in question were about 11 feet 9 inches long by 11¾ inches broad, by 1 inch thick. Stated briefly, the results of the tests show that the iron has not at all deteriorated during its long service. The mean of four specimens of links taken from the bridge gave an ultimate strength of 20.7 tons per square inch, with an elongation of 14.5 per cent on 8 inches, while an equal number of tests of specimens from unused links gave a breaking stress of 22.2 tons per square inch, with an elongation of 13.4 per cent on 8 inches. — *Engineering.*

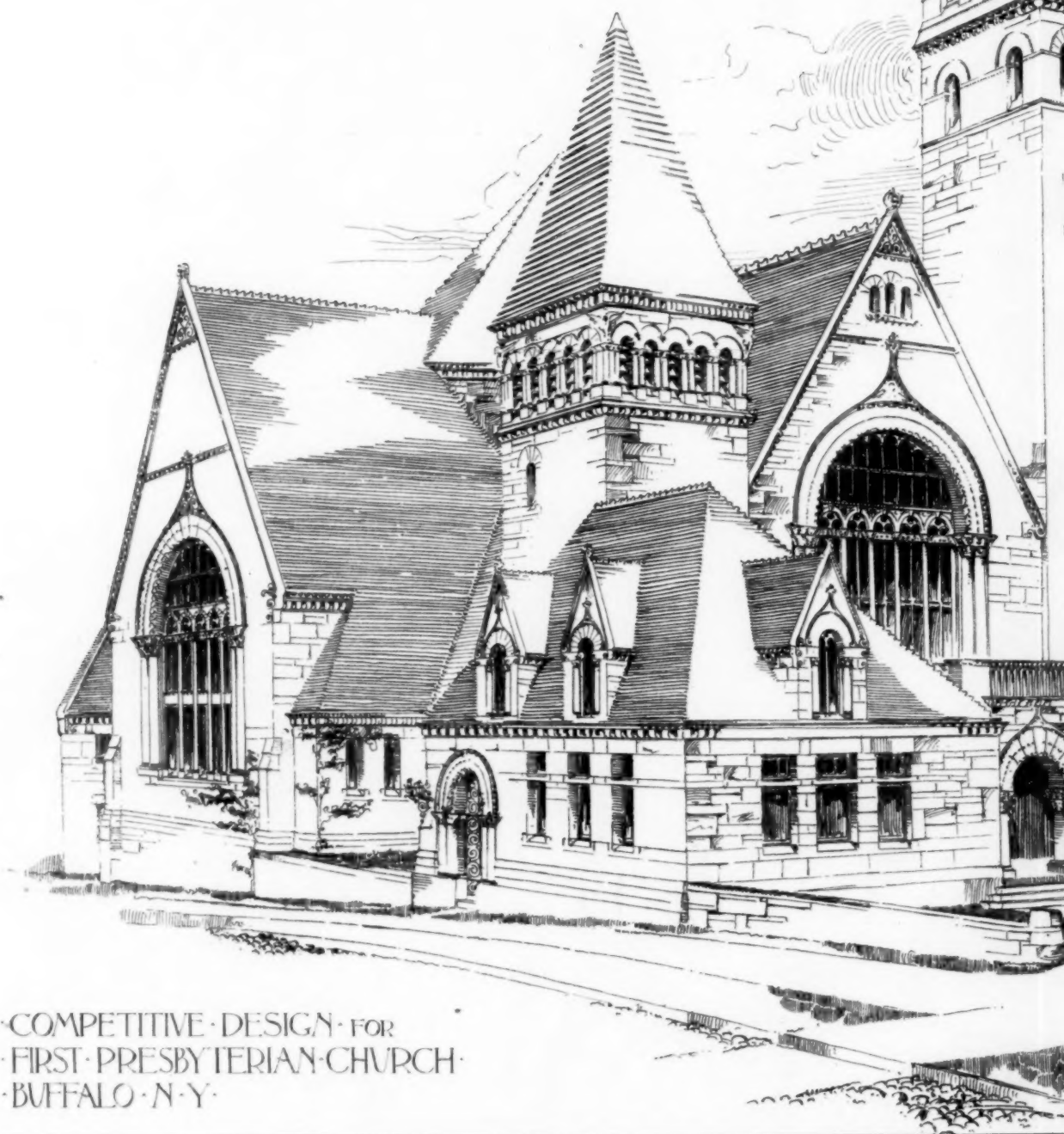
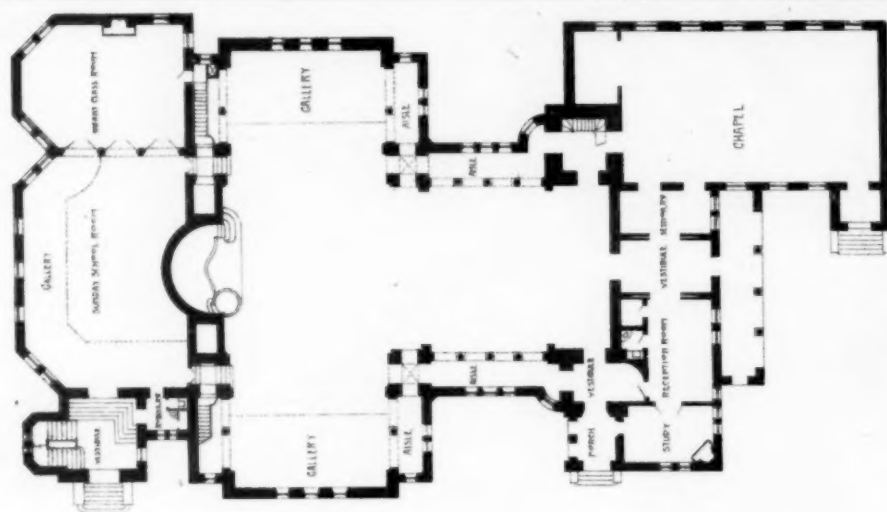
TO BLOW UP THE IRON GATES.—A German syndicate has recently been engaged in preparing to undertake the clearing of the Danube waterway by blowing up the Iron Gates. By international agreement it was settled at the time of the Treaty of Berlin that when the time came Servia should give up the quarries on the banks to whatever company was charged with the work, at a nominal valuation. Several hundreds of thousands of cubic metres of stone are needed in order safely to divert the course of the stream during mining and blasting operations. Upon arriving at Belgrade, however, the German representative found that the Government had anticipated him by hastily putting up all the riverain quarries to auction in numerous small lots, and knocking them down to their radical friends. Consequently, the company, instead of having to deal with the Crown, finds itself face to face with a swarm of individual proprietors, each of whose claims will have to be settled separately. It is believed that the strongest representations will be made to quash the recent auctions, and the company will probably be backed by most European representatives. — *London Standard.*

MICHIGAN LUMBER.—A lumberman interested in a plant in upper Michigan mentions that his concern is selling not only shop common and better lumber to go to Eastern points, but that considerable No. 3 inch is also called for by the Eastern trade. That quality of lumber has been shipped to Philadelphia in considerable amount. Lower Michigan is also requiring a good deal of upper peninsular coarse lumber. The tendency of the trade east of Chicago is towards taking more of the lower grades of lumber than in former years. No better proof of the decline of the white-pine supply could be adduced. Until recently Eastern Michigan furnished all the lower grade Western pine for eastern consumers. Now the dependence is not wholly on that resource. Until within the past two or three years it was thought that all the No. 3 product of the Lake Michigan mills must go West for a market. Hereafter much cull lumber will go eastward and into southern Michigan, Indiana and Ohio. It is the complaint of dealers in this city that the good product of the mills is sold to Eastern buyers, while the coarse stuff is dumped on this market. It is likely that within the coming three years a loud cry will go up from the dealers here that the eastern buyers are getting the greater share of the cull lumber, or are competing so hard for it that Western men cannot handle it at a profit on account of the forcing up of prices. The fact is that the supply in eastern Michigan is becoming so restricted that Eastern dealers are induced to go farther west and north for lumber, and are thus occupying the field that was once considered almost exclusively belonging to the western trade. Even the log supply for the Saginaw mills now comes considerably from the Lake Superior country. Within a year logs have been cut in the upper Ontonagon River valley, rafted to Marquette, and taken hence to Saginaw river mills for sawing. This would have been considered an impossible thing ten years ago. Conjecture then what change will occur in the white-pine supply during the coming decade. The rate of production will continue to be large for several years. Probably the aggregate will not diminish in an appreciable degree from year to year, until the final collapse comes. In some one year in the not far off future, we shall wake up to the fact that the supply has reached the turning-point, and is rapidly on the decline. That is what this increasing reach of Eastern buyers for Green Bay, Lake Superior and Wisconsin pine means. It tells of the decline of supply in the older producing sections of lower Michigan. What we have seen of the progress of Eastern conquest in the West is the beginning of the end. — *Northwestern Lumberman.*

TRADE SURVEYS

SOME of the leading Eastern financial interests have recently taken steps to ascertain for themselves by a most careful investigation whether the agricultural interests throughout the West and South are really losing ground, as has been alleged in so many quarters. The statement has been very widely made that hundreds of Western banks are, and have been, carrying borrowers along month after month, refusing to foreclose, on the business grounds that they could not find buyers for the foreclosed properties. What these Eastern money-lenders desire to know is: Are their investments and loans throughout the newer States safe? Another thing that they desire to know is as to the possibility of any political upheaval which would jeopardize loans or rates of interests, or conditions under which loans are made, or anything else which might endanger their financial interests. The question, in their opinion, is a very important one. The farmers have been organizing with great energy and rapidly during the past year or two, and it is claimed by some reputable authorities that the aggregate of membership is now not very far from two millions. This is quite probably an over-estimate; but there are enough organized to justify a careful study of the whole agricultural question, and that is what financial interests are now about making. The real complaints of the farmers have not reached many influential journals. Thousands and tens of thousands of small farmers are deeply, and, their friends think, irretrievably in debt. A great many banks have been doing just what is stated above, viz: carrying their customers because they cannot help themselves. If the farmers are being robbed or wronged, the money-lenders want to know it; and, if so, they will become agitators for and defenders of their interests. The farmers will probably find friends where they least expect them, if the allegations made by those who pretend to represent them are true. The money-lending interests have too many millions at stake and too many more millions to invest to permit any governmental policy to be pursued which will do them injustice. The politicians do not see this, but they may suddenly make the discovery of a strong sympathy between Wall Street and the prairies. All evils correct themselves in time, and the relief frequently comes from the most unexpected quarters. The farmers are beginning to call for laws of this, that and the other sort, but it is as probable that more powerful interests will come to their rescue, and that, too, in a cold-blooded way, without any sentiment whatever. The railroad managers want freight; the money-lenders want mortgages; manufacturers want customers, and there will be a unity of effort in behalf of the oppressed farmer, if investigation proves that he is in reality oppressed. Business is opening up already in a satisfactory way. Money has been made more abundant by the timely action of the government, which has helped to restore confidence in financial circles. Statistics of the iron trade show that there is an enormous consumption, and the prospects are for a very favorable fall trade. The production of anthracite coal is about up to what it was last year. In bituminous coal there is an increase, but the extent of it is not stated in figures. During the past twelve months, the increase in the volume of money is stated at \$70,000,000, in round figures, of which \$16,000,000 was gold coin, \$36,000,000 silver. The National Bank note-circulation decreased nearly \$25,500,000. The railroad companies are handling fully as much freight as a year ago, and manufacturers are booking about as much fall business as was done at this time last year. There is not the same anxiety to buy ahead as existed a year ago, owing to the fact that capacity has been considerably increased since then, and, taking it all in all, there is a downward tendency in prices. An enormous amount of iron and steel work is projected, or already under construction, and the prospects for the iron trade are very favorable indeed. Considerable activity prevails in trade circles generally, and manufacturers, merchants and jobbers, as well as importers, are doing a full average summer business.

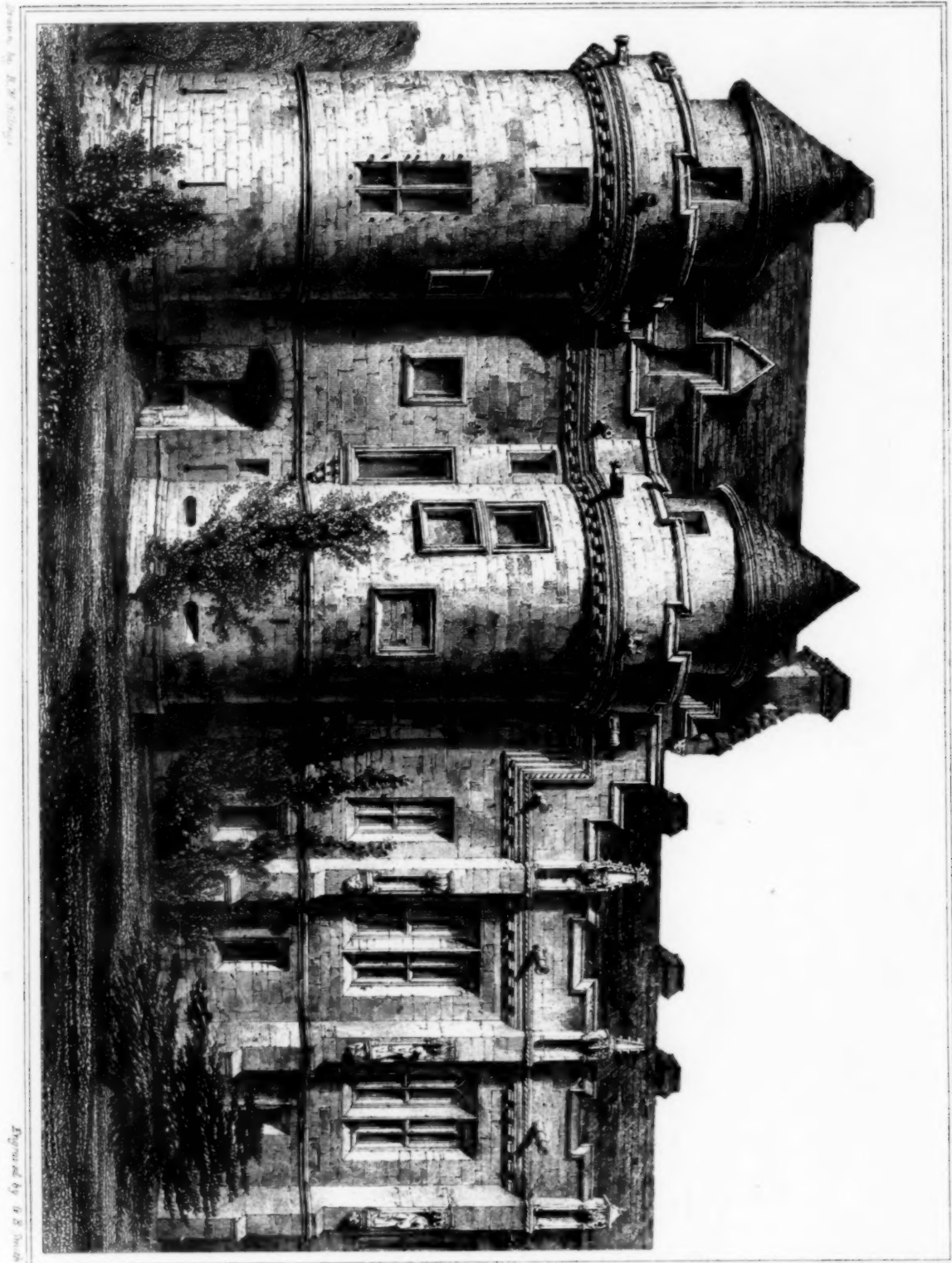
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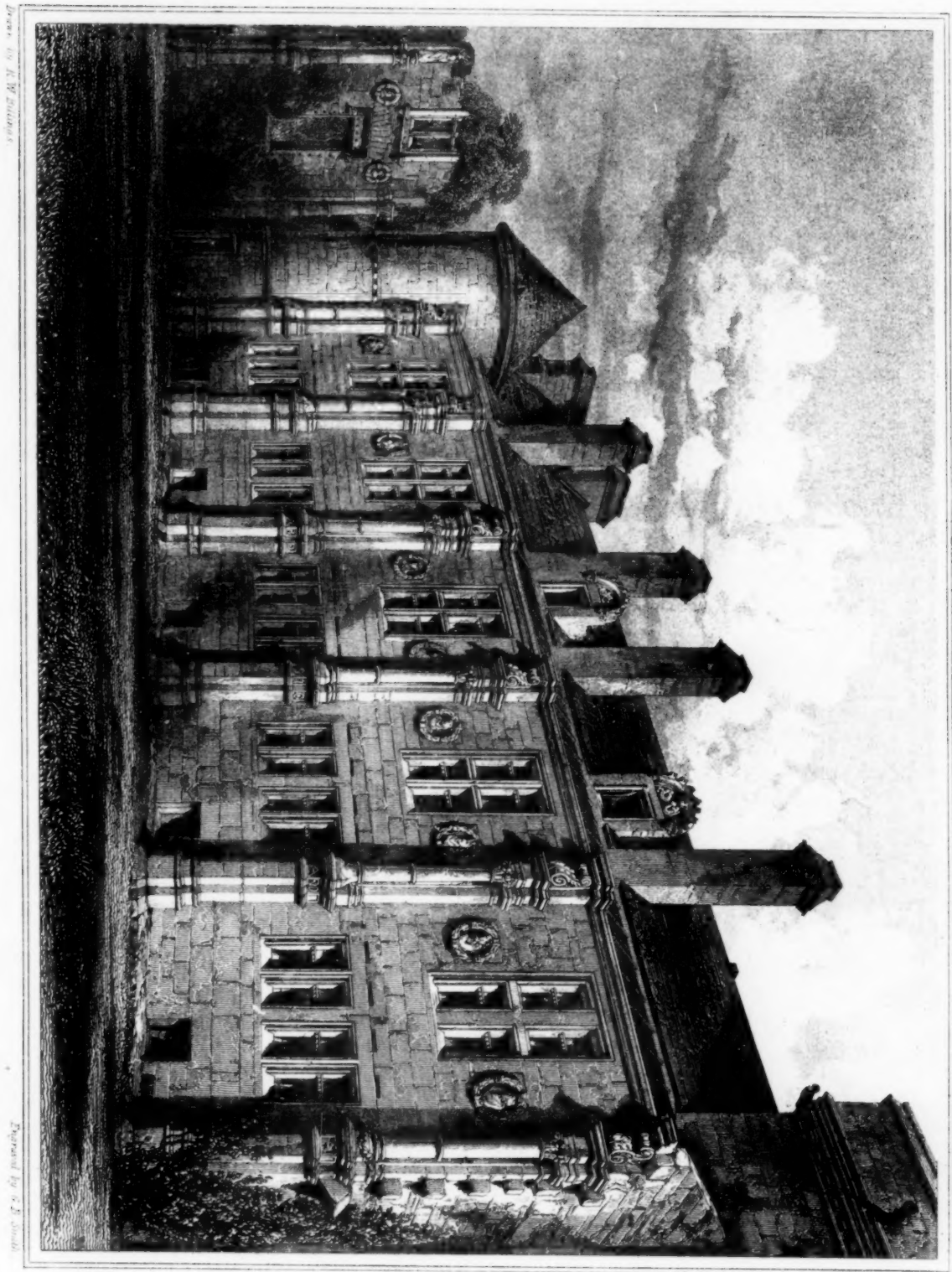
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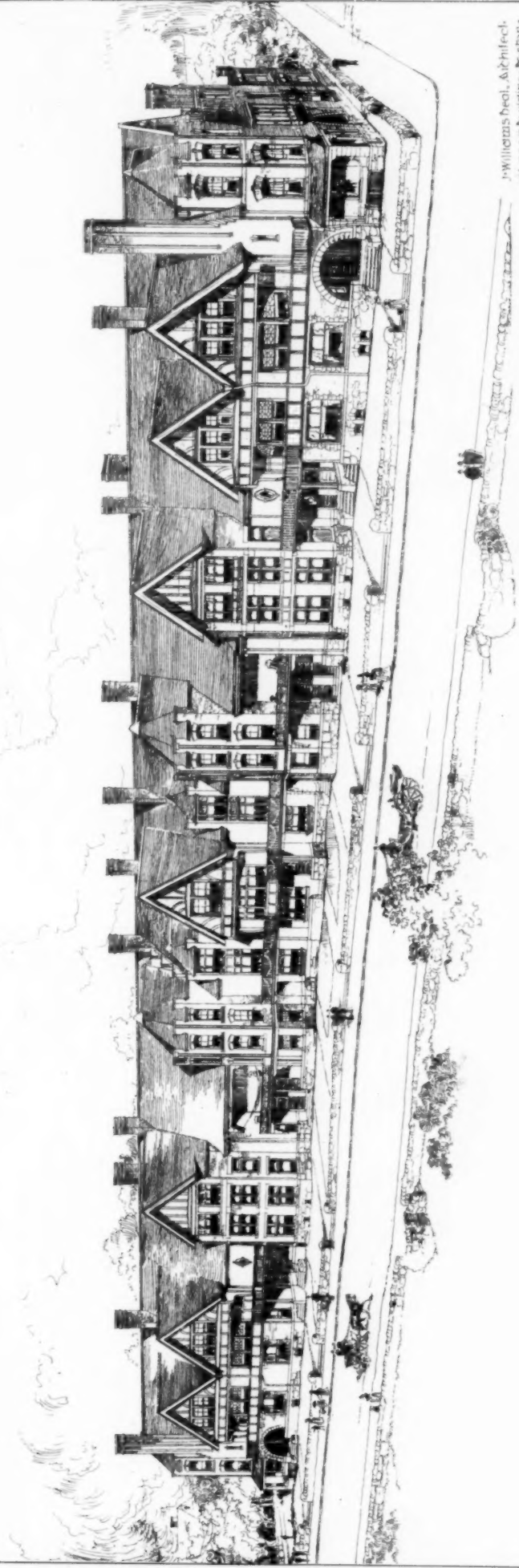
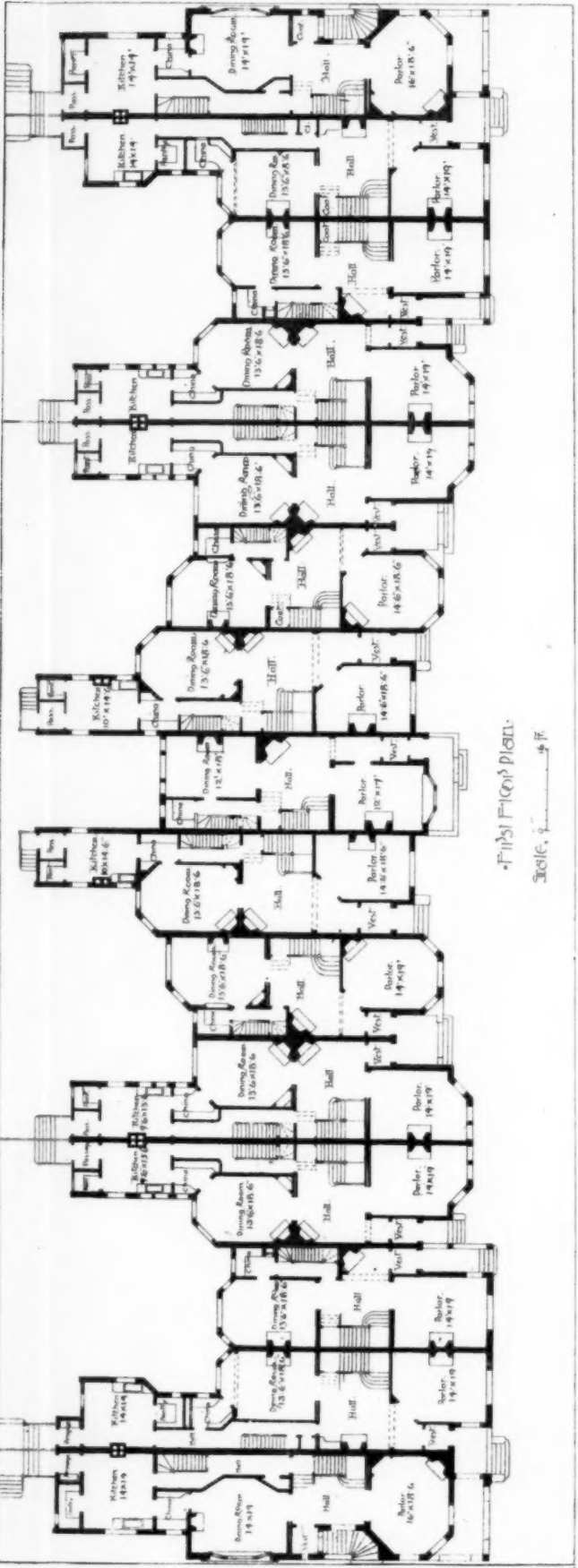
WARRIS WOOD-CRESCENT: Improvements for MORATIO HARRIS ESTATE-BOSTON.



Third Floor Plan.



Second Floor Plan.



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