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STATE-HOUSES seem to be troublesome property. The controversy over that of Massachusetts, which resulted in the erection, at enormous expense, of the worst-placed public building, except, perhaps, the Boston Court-house, in the civilized world; the scandals which enshroud the twenty-million-dollar Capitol at Albany; the alarming settlements which took place in that at Hartford soon after its completion, and the curious device by which they were stopped; the complaints over the galvanized-iron architecture of the seat of government of Texas; and the wooden marble-work of the New Jersey State-house, are all fresh in the minds of our professional readers; and now the compartment of Pandora's box reserved for State-house matters seems to have been opened again. The Pennsylvanians, having lost their Capitol at Harrisburg by fire, are deep in the discussion of a new one; and whether to rebuild the old one, or put a new one on the same site; or build a new one in a new place, or utilize an old building in a new place, they cannot decide. Many people wish to remove the capital of the State to Philadelphia, and, as an advance upon this idea, it is pointed out that the Memorial Hall, in Fairmount Park, the only permanent building remaining from the Exhibition of 1876, was designed, under instructions, so as to be available for the purpose. One would suppose that the architect of the structure, which was intended for the exhibition of pictures and statues, must have passed some unhappy hours in trying to adapt it both to this purpose and to that of accommodating a State Legislature; but, independent of the question whether it could really be used for the latter purpose without alterations which would cost as much as a new building, the Memorial Hall has the reputation of being a leaky and poorly-built structure, which has been a constant source of expense, and would probably not improve with age. Meanwhile, the people of Minnesota have not been quite happy about the location of the new State-house which they hope to have. It was originally intended to have it in St. Paul, but, at the time of the admission of Minnesota into the Union, provision was made for establishing the capital in Kandiyohi County, and the people of that county appealed to the courts to compel the abandonment of the St. Paul site. The decision has just been made, that the claim of the Kandiyohi County people cannot be sustained; but an appeal may perhaps be taken, and, meanwhile, work on the State-house is delayed.

RHODE ISLAND, which already has a site, and a new State-house partly built, is in trouble about paying for it. The programme for the original competition limited the cost of the building to a million dollars. After the plans were ready, the State-house Commission found it necessary to award the contract for the building alone at nearly seventeen hundred thousand dollars, and it now turns out that this sum by no means covers the whole expense, and that, in the opinion of the Commission, nearly a million dollars additional will be required to complete the structure and the approaches to it. Naturally enough, the tax-payers of the little State are disturbed at this news, but, so far, they do not seem to have found any remedy for their distress. In Ohio, on the contrary, Governor Bushnell has taken time by the forelock, and, discovering that the alterations and improvements which a Commission appointed for that purpose proposed to make in the State-house at Columbus would cost about a million and a half of dollars, he has given notice that he will not approve any contracts for the work, or ratify any acts of the Commission in regard to it; so that, as contractors do not like to work without pay, proceedings in the matter have been stopped, until, as we are told, "some agreement is reached between the different interests." In the neighboring State of Michigan, which has already a tolerably satisfactory Capitol, at Lansing, a novel and startling scheme has burst full-fledged, as it were, from the brain of the new Governor, Mr. Pingree. This gentleman was Mayor of Detroit before being elected Governor of the State; and he feels within himself such boundless capacity for ruling his fellow-men wisely that, as the newspapers report, he insists on retaining possession of both offices. There is a physical inconvenience about this dual responsibility, in the fact that the Governor's official headquarters are at Lansing, a good many miles from the Mayor's office at Detroit; but Mr. Pingree has thought of a happy solution of the problem, which consists in moving the capital of the State to Detroit, and having the citizens of the latter town build and present to the State "a magnificent Capitol, to cost five million dollars," where he can sit and administer State affairs within convenient reach of his Mayoralty quarters. The detail of the plan, that the State would be left with the Lansing State-house, a building less than twenty-five years old, on its hands, he provides for by proposing to convert it into a lunatic asylum. This part of the scheme would involve, to say the least, a certain amount of study on the part of the architect employed to make the conversion; but architects are paid for such study, and, as another would probably be paid for his work on the new structure in Detroit, we imagine that the profession will not have much to say in opposition to the Governor's notion.

EVEN in the South, there are signs of awakening life on the part of people who have to do with new State-houses. In Arkansas, where a portrait of George Washington hung over the Speaker's desk in the hall of the lower house of the Legislature, it is said that this ornament has been removed, and a picture of the late Jefferson Davis substituted for it, thus bringing the atmosphere of the place, so to speak, down to the period 1861-4, which is a most encouraging advance. In Louisiana, the legislators at Baton Rouge have begun to get a little tired of having the rainwater come through the State-house roof during their deliberations, and run down their necks as they bend in thought over the mighty problems of statecraft, and some of them even suggest the thought that a new building, with a tight roof, would be more comfortable for their work; but, so far, no step seems to have been taken to put the idea into practical form.

THE National Academy of Design has purchased a large tract of land, bounded by Amsterdam Avenue, One Hundred and Ninth and One Hundred and Tenth Streets, near the new buildings of Columbia University and St. Luke's Hospital, and the Cathedral of St. John the Divine, and close to the beautiful Morningside Park, and will soon proceed to erect a structure suited to its purposes. Although there was a certain feeling in the Academy in favor of a location on Fifty-seventh Street, near the Fine-Arts Building, so that, possibly, the galleries of the latter could be used, on occasion, for the Academy Exhibitions, the price asked for the Fifty-seventh

Street ground is said to have been regarded by the Committee of the Academy as too high; and, independent of any question of the mutual convenience of the two corporate bodies, the site finally chosen is a most beautiful and appropriate one. The Morningside plateau seems to be fast becoming the Acropolis of New York, and the Academy of Design should not only share in the dignity of its site and surroundings, but may, we hope, by the commanding position which it will hold in the American civilization of the future, add to their importance, while, as a practical matter, the advantages in regard to light and air given by the elevation of the ground should be of much value to the students who already crowd the classes of the Academy.

ACCORDING to the New York *Herald*, the owners of the new office-buildings do not find it very easy to get tenants for them, and much ingenuity is expended in providing special inducements for occupants. In the new Bowling Green Building on lower Broadway, which commands a beautiful view over the harbor and the two rivers, bed-rooms are in some cases attached to the offices, so that tenants can, if they choose, sleep near their business; and a restaurant is said to have been provided on the roof, where meals can be obtained and a quiet promenade enjoyed in the open air. This part of the description is attractive, but the combination of bed-room and office is neither new nor, except in very rare cases, satisfactory; while, on the more valuable sites in the neighborhood of Wall Street, the rent of the space occupied by a bed-room would be necessarily high enough to pay for much more comfortable quarters elsewhere. In the building known as Lord's Court, on Exchange Place, some of the offices have bath-rooms attached; but here, again, land is not too valuable to permit the necessary space to be spared; and, apparently, Lord's Court must be designed for tenants of a class enjoying more leisure during business hours than falls to the lot of most of the office population. To our mind, all these extra attractions for tenants are symptoms of an approaching decline in the value of office property. A few years ago, the proprietors of apartment-houses in New York found it necessary to resort to the same kind of competition. Many landlords furnished gas or electric light free; some included the coal for the kitchen range in the rent, and others supplied ice for the refrigerator. These concessions were, of course, simply covers to a reduction in the rent; and as they placed the best class of tenants, those who spent a large part of the year in the country, at a disadvantage in comparison with the others, they soon brought about a general lowering of rents, until apartment-house property, unless in exceptional cases, is by no means very profitable. The *Herald* says that it has been ascertained that office-buildings not more than ten or fifteen stories high bring a better net income than the more lofty ones. Of course, this depends very much on the location; but it is safe to presume that the craze for building "sky-scrapers" anywhere and everywhere is beginning to die out, and that such a restrictive law as is now pending at Albany will not meet with very serious opposition.

MR. DAVID KIRKALDY, well known for his determinations of the strength of materials of construction, died a few days ago, at the age of seventy-six. In his earlier years, the man whose name was destined to become a household word among engineers and architects was a draughtsman in the office of Robert Napier & Co., the great iron ship-builders of Glasgow. He was a mechanical draughtsman of the highest rank, as is shown by the fact which *Engineering* mentions, that four colored drawings, made by him, of the steamers *Europa*, *America*, *Canada* and *Niagara*, were shown in Paris in 1855, and afterwards sent by the Emperor to the Louvre, while a colored section of the *Persia*, which he made after working hours, was honored by being the only mechanical drawing ever admitted to exhibition at the Royal Academy. However, besides being a brilliant draughtsman and most industrious student, he was a scientific man in the modern sense, continually endeavoring to secure accurate data, and eliminate hypothesis and chance. His first efforts in this direction were devoted to studying the circumstances affecting the speed of vessels, by memoranda taken during trial-trips, in which he took a lively interest; and he hoped in this way to enable his employers to predict beforehand what their ships would do. Nowadays, such determinations are made with the utmost minuteness, so that any great ship-builder will contract to deliver

a vessel which shall maintain any given rate of speed under specified conditions; but at that time the speed which a new steamer would show was left very much to the favor of Neptune, or of Thetis and her nymphs, or of some other inscrutable dispensation, and young Kirkaldy's investigations met with little encouragement from the firm. Later, however, Napier undertook to make some high-pressure boilers and machinery out of homogeneous steel, and Kirkaldy was directed to make some experiments to ascertain the qualities of the material; and, a little later, he had to test the plates and angles of two naval vessels. The results of these tests were collected in a paper and read by him before the Scottish Ship-builders' Association; and Kirkaldy, remembering the difficulties that he had found in making them, resolved to build a machine by which such determinations could be made with facility and accuracy. When his plans were ready, he left the Napier Works and prepared to devote himself to making tests, professionally, for engineers and others, but it was two years before his testing-machine was ready for service. As soon, however, as he could begin his work, orders flowed in rapidly. The gun-maker, Krupp, of Essen, was one of his earliest and most faithful patrons, and the records of the tests made by him soon found their way into engineering text-books. Although some manufacturers of iron and steel opposed the venture, the engineers, who, for the first time found themselves in a position to know what resistance they could count upon in their materials, sent him innumerable commissions, and often stipulated in their specifications that the iron and steel used should be tested and certified by him. In England, as in this country later, when Mr. Emery equipped the Watertown Arsenal with his great testing-machine, the searching trials which could be imposed upon materials led to an improvement in their manufacture which would not previously have been supposed possible, and it is not too much to say that the immense development which has taken place within the last twenty-five years in machinery and structural work is in great part due to Mr. Kirkaldy's labors, and the precision with which they have enabled us to adapt materials to the work demanded of them.

VERY creditable occurrence is reported in the English papers. Some little time ago a competition was invited for a city-hall at Belfast, Ireland, and Mr. Alfred Waterhouse and Mr. Bretland were appointed a jury, to select three designs, the authors of which should be invited to a second and final competition. The selection was duly made and reported to the Committee of the City Council in charge of the matter, but the Committee, discovering that none of the local architects were included among the honored three, coolly added two local names to Messrs. Waterhouse and Bretland's list, and then proceeded to make a selection of three out of the five candidates thus presented. As a result of this selection, one of the Belfast architects appeared in the number of those admitted to the final competition. The matter had to come up before the Corporation, and the proceedings of the Committee were made public, with comments of a decidedly unfavorable character. Notwithstanding this, it is by no means certain that the Corporation would not have voted to sustain its Committee, had not the Belfast architects, with a sense of honor which cannot be too highly commended, at once and absolutely withdrawn their plans. It is so fashionable now, particularly in England, to impute to architects dishonest practices with regard to their clients' money that we would like to draw the attention of small newspaper scribblers to this act of the Belfast architects, and ask them if there is any other profession, the members of which would show such honorable feeling, and, also, whether it is probable that men so scrupulous about accepting an unfair advantage over their business rivals habitually fill their pockets with money stolen from those who trust them.

IT is a pleasure to be able to record that an American, Mr. John Van Pelt, of New Orleans, has carried off a signal honor at the Paris School of Fine Arts, in the shape of the medal of the Société des Architectes Diplômés, which is given every year to the student in the School, already possessor of the official diploma, who has since obtaining it received the highest number of "valeurs," that is, of prizes or honorable mentions, in the School competitions. This year the medal was awarded *ex æquo* to Mr. Van Pelt with M. Gustave Umbdenstock, of Colmar, one of the ablest men in the School, and the winner of innumerable honors.

HISTORY OF THE UNITED STATES CAPITOL.¹—XI.

Fig. 78. Figure of "War." By Luigi Persico.

In this suggestion, Mills is careful to state that he assumes the ceiling to be built so that it reflects the sound at a proper angle to prevent echoes.

Mills recommended a permanent screen parallel with colonnade, and put on record his positive objection to a flat ceiling which had been recommended. In a foot-note to this memorial, Mills calls attention to his ignorance, at the time of writing, of the fact that another architect had been called in to make a report on the same subject, and states that his scheme could not with propriety be considered until the result of the first one had been ascertained. The report alluded to was made by Charles Bulfinch, January 25, 1830.

Bulfinch in his review upon the subject says, "Upon Congress being reinstated in the Capitol in 1820, it was found that a difficulty existed both in speaking and hearing in the House of Representatives." This was attributed to the resonances and echoes occasioned by the unfinished state of the hall and the dampness of the new work. To remedy these defects, draperies were suspended in front of the galleries and between the columns of the prostyle, and carpets were spread in the galleries.

In 1821, a committee was appointed "to inquire into the practicability of making such alterations in the present structure of the hall of the House of Representatives as shall better adapt it to the purposes of a deliberative assembly." This committee consulted Bulfinch as well as other architects and scientists. Many contradictory theories and reports were the result of these consultations. Bulfinch, in his report of 1821, says that the three following methods had been proposed as a remedy: "1. To raise the floor. 2. To contract the space by a screen. 3. To form a level ceiling at the foot of the dome." He advocates the last method, although he regrets the effect that it would have upon the appearance of the room.

Nothing was done, and another committee was appointed and a new report was sent in 1822 by Bulfinch, discussing the question, in which he refers to Saunders on "Theatres" as the best work on the subject, and recommended that a flat ceiling of cloth be stretched over the room as an experiment. Acting on this suggestion, canvas was stretched over the whole hall at the height of the blocking-course above the columns. This ceiling put a stop to echoes, but seemed to absorb the whole volume of sound, and obstructed the light. It was removed after a few days' service.

Another experiment was tried at the next session by putting up a wooden partition between the columns; this was removed after one week's trial.

In 1826, William Strickland, of Philadelphia, was employed to act in conjunction with Bulfinch for "devising a plan for improving the hall, so as to make it better suited for the purposes of a deliberative assembly." A Board consisting of the Secretaries of State, War and the Attorney-General were authorized to have the scheme which might be recommended by Bulfinch and Strickland, if it met their

THE echoes in the House of Representatives produced such disagreeable results that there was from 1820 to 1836 a continued discussion as to a feasible method of rectifying the trouble: January 14, 1830, Robert Mills, who had been one of Latrobe's assistants, sent a memorial to Congress repeating the views upon the subject which were contained in a memorial from him, dated October 22, 1826. He attributed the principal trouble to the walls in the rear of the columns running at different angles, which tended to produce an infinite variety of echoes, saying, "the fundamental error in the plan of this hall consists in breaking the curve line behind the columns of the gallery and disposing of the walls there in irregular surfaces. To correct this error it will be absolutely necessary to perfect the curve line, making it parallel to that formed by the semi-circular colonnade."

approval, carried into execution. Strickland visited Washington several times to consult with Bulfinch and the Board. He recommended the breaking up of the plain surface of the dome by "numerous deeply sunken panels, bounded by raised styles or margins," instead of the painted panels which were and are on this



Fig. 79. Statue of George Washington. Horatio Greenough, Sculptor.

surface: as an alternative, he suggests a lath-and-plaster flat ceiling above the columns.

The matter rested from this time until 1828, when decided objection was raised to the lack of ventilation as well as the deficiency in the acoustic properties of the hall.

Bulfinch reported on this, January 24, 1830, recommending a reduction of the height of the galleries so as to get direct communication with windows in the rear, and again insisted on the insertion of the flat plaster ceiling.

February 4, 1832, Robert Mills made a report to the select committee of the House, repeating his former recommendations. In this he asserts that the centre of the curved ceiling being about on a level with or above the ear of a man standing in the hall, all sounds are reflected back to the ear.

The committee in charge recommended: "1. That the floor be raised to the level of the foot of the columns surrounding the hall. 2. That the chair of the Speaker be placed near where the principal entrance now is and that the seats of the members be turned so as to preserve their relative position to the chair. 3. A circular wall to be built back of the third row of seats in the gallery."

"Resolved, That the Committee of Public Buildings cause the Hall of Representatives to be altered according to the plan of Robert

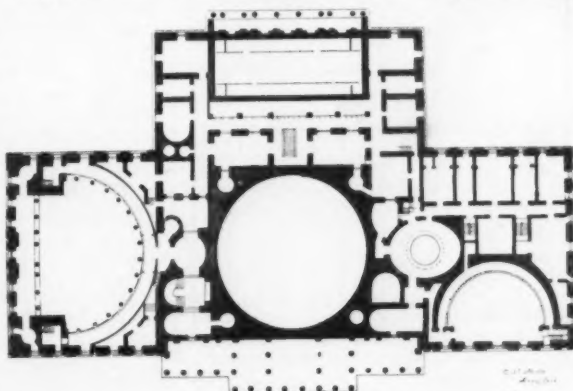


Fig. 80. Plan of Attic Story of Capitol. From Drawing by Robert Mills.

Mills, and the expense to be paid out of the contingent fund of the House."

The reports and investigations to which I have referred, either ignored or tried in a temporary way as an experiment, were not found satisfactory.

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After Bulfinch retired, in 1829, repairs to the building were made under the jurisdiction of Wm. Noland as Commissioner of Public Buildings, with Pringle Slight acting as Assistant Superintendent.

Reports to Congress show that water was brought into the Capitol from springs in the neighborhood in 1832.

In January, 1834, the old copper roof on the dome was replaced by a new copper covering.

From 1829 until the appointment of Robert Mills¹, there was no architect in the employment of the Government. Under authority conferred upon him by the Act of July 4, 1836, President Andrew Jackson appointed Robert Mills, on July 6, 1836, "architect to aid in forming the plans, making proper changes therein, from time to time, and seeing to the erection of the new buildings [Treasury and Patent Offices], in substantial conformity to the plans hereby adopted." The salary of Mills was fixed at \$1,800 per annum; on the 26th of October it was increased to \$2,300. May 17, 1839, when the new Post office was authorized, his salary was increased to \$2,400, and in October of the same year he was allowed \$500 "for assistance in drawing and copying."

During the period from 1836 to 1851, all matters relating to changes in, and the maintenance of the Capitol came under the supervision of Mills. In this way he was able to carry out his suggestions in reference to the improvement of the acoustic properties of the Hall of Representatives. The floor was raised to the level of the floor in the rotunda and a partition was placed in the rear of the colonnade concentric with it (Fig. 80).

February 28, 1837, contracts with Vanderly, Wier, Inman and Chapman were made for filling the four vacant panels in the rotunda with historical paintings, each of whom was to receive ten thousand dollars (\$10,000) apiece. These paintings were to illustrate the discovery of America, the settlement of the United States, the history of the Revolution, and the adoption of the Constitution.

February 10, 1840, Robert Mills made a report upon the foundation and location of Horatio Greenough's statue of Washington (Fig. 79), which had been ordered in 1832. He recommended an opening in the floor of the rotunda, with a grand staircase from the crypt to the present rotunda floor, and the introduction of light into the rotunda at a lower level, so that the statue could be seen to the best advantage.

The act of Congress designated the centre of the rotunda as the location of the statue. It was placed in position on the floor level in 1841, a special foundation being prepared for it. In 1842, it was removed to the eastern park, because of its unsatisfactory appearance in the rotunda.

April 5, 1840, Mills made a report on the expediency of lighting the public grounds with carburetted hydrogen as a substitute for oil. After an elaborate review of the subject, he concludes that it would be safer, more manageable, and economical. In 1841, experiments were made with gas-lighting apparatus by Robert Grant. Nothing further seems to have been done in this direction until 1847, when a thorough plan of lighting the buildings and grounds was begun.

A mast over one hundred feet high was raised on the dome of the Capitol, on which was placed a lantern six feet in diameter. This was to contain the solar gas-light prepared by James Crutcher, giving a light equal to thirty thousand candles, and capable, the inventor calculated, of extending its rays as far as Baltimore, thirty-nine miles distant.



Fig. 81. Figure of "Peace." By Luigi Persico.

The interiors of the Senate, House and rotunda were to be lighted in the same manner.

The statues of "War" and "Peace" (Figs. 78, 81), by Luigi Persico, were ordered in 1832, and put in the niches on the western portico in about 1837. Statues of the same character are indicated on Thornton's design of 1794.

A few pieces of the old furniture used in the Capitol have been placed in the rooms of the Supreme Court.

The hall was heated at this period, 1847, by furnaces with brass registers set in the floor of the House. The air was first introduced into a mixing-chamber, arched with brick, just beneath the floor. The whole floor was kept warm. (This was done when the floor was raised by Mills.)

Very interesting exterior views of the Capitol were made by Bartlett, an English painter, from which steel engravings were made for the work of N. P. Willis.² Figures 54, 58, 82 and 83 show reproductions of these views, one from Pennsylvania Avenue looking east and west, another from the roof of the circular porch on the President's House and a view of the exterior stairway.

These illustrations, with a drawing [See Illustrations] made by W. A. Pratt, rural architect, 1839, give an idea of the treatment of the grounds and surroundings.

GLENN BROWN.

NOTE.—Robert Mills applied for the position of Architect of Government Buildings, February 15, 1815, and from that date until his appointment, frequently memorialized Congress on questions relating to this work: April 26, 1815, in relation to warming Capitol; October 22, 1822, in relation to acoustics of Capitol; October 11, 1833, in relation to water distribution in Capitol.

(To be continued.)

GARDEN DESIGN.—II.



LEAD VASE AT HAMPTON COURT.

PERHAPS the period of greatest activity may be placed in the reign of William and Mary, for to that time belongs the English classic on the subject, a fine folio of views drawn by Knyffe and engraved by a fellow-countryman of the name of Kip. Then we have the diary of Celia Fiennes, a lady who spent some years riding about England and taking a lively interest in the improvements that her many friends and relatives were making to their country places. And to this time, too, belong the great plans of Wren's devising for the beautification of Hampton Court. But with the progress of the eighteenth century, interest seems to have flagged. People, per-

haps, began to tire of spending the sums that their overgrown schemes must have needed to keep up. Pope struck a note of ridicule, and the stupidity of a decadent age was ripe to hoot them out of fashion. Then came the opportunity of the landscape-gardener. Kent and "Capability" Brown stepped on to the scene, and though they mowed down avenues, and destroyed every vestige of dignity under the pretext of "helping nature," they seem to have forgotten how to make a garden.

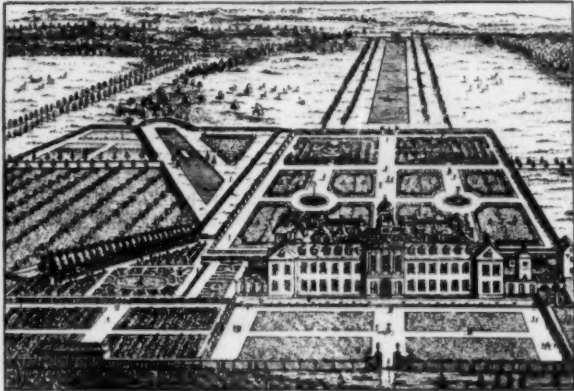
It is mainly due to people of this persuasion that so few of the fine old places are left intact. But there is a more potent influence at work in many parts of England at the present day. The smoke of factories, mines and foundries is killing the timber, robbing the color from the stone-work, and driving out the occupants from many an Old-World paradise. And the only hope is that force of association will lead them to build and lay out their new homes with some of the dignity that still clings about the old. In connection with the greater lay-out I spoke of the influence of Versailles, and probably the extension of design beyond the limits of the garden proper was a good deal due to rumors of what the French King was doing near Paris. Moreover, Lenôtre is supposed to have come over to England, and to have done some work in and about London—if not in the Provinces.

It must be admitted, of course, that he was a great master of his craft; but, to my mind, either his own ambition, or that of his royal patron, ran away with him at Versailles. The spaces are immense. So vast, indeed, are they, that one cannot help feeling the place is

¹ "American Scenery." By N. P. Willis. Illustrated from drawings by W. H. Bartlett. 2 vols. London, 1840.

² A paper read by Mr. F. Inigo Thomas before the Architectural Association, November 20, 1896. As it was not possible to procure illustrations of the views used by Mr. Thomas in his lecture, we have reproduced certain cuts in his and Mr. Blomfield's book on "The Formal Garden in England," (published by The Macmillan Co., New York), which may serve as aids to the text. Continued from No. 1103, page 54.

out of all scale with humanity. Moreover, there is nothing in the conception of the palace itself to warrant this treatment in the grounds. The extent of the façade is great, no doubt, but there is nothing Titanic in its structure, nor is there any great elevation from

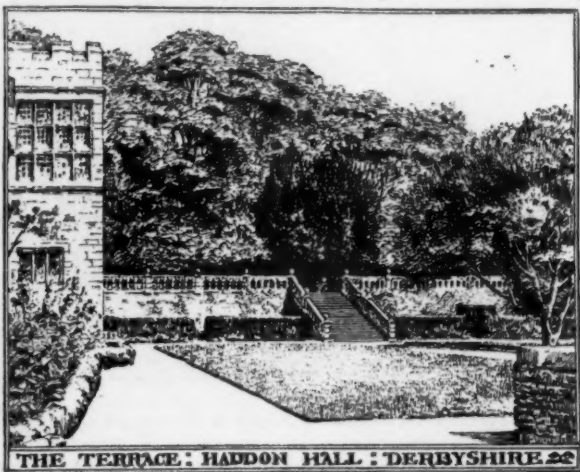


Wrest, Bedfordshire, from Kip.

which it might be possible to grasp the huge scheme of terraces, bosquets, and fountains that surround it. I think there is much more feeling for proportion in the lay-out of the Trianon, and though it only forms a part of the great scheme at Versailles, at the same time it is sufficiently complete in itself to be looked upon as a separate conception. As will be seen from this old plan, the parterre under the windows centres with the house and forecourt, and it is not till we descend to the parterres enclosed *en berceaux* on the second level that the influence of the great scheme in connection with the king's palace begins to make itself felt, and a fountain with two pavilions and alleys beyond are made to centre in some measure with an arm of the great canal that intrudes on the left of the engraving.

But whatever influence Versailles may have had on contemporary work in England was probably through the medium of Hampton Court; and to follow the changes through which that palace has passed is to read the history of garden design in England. Then, too, there was the Dutch influence that came in with the Hanoverians, but exactly in what direction that differed from the French I am not in a position to tell you, for I have never travelled in Holland except as an etcher, and, accordingly, have had no opportunities of studying existing remains.

But this sheet from an old atlas of the country round Delft goes to prove that an architectural lay-out was not altogether unknown there in the seventeenth century. A careful inspection of the map shows the meshes of the intricate network of dykes to be filled with the most elaborate designs, in which the paths, borders, fountains, and even the statues are distinctly visible. And, judging from the pains these Dutch engravers took over their work, there is not much reason to doubt their accuracy. Here is one, for instance, in the environs of Ryswyk, near The Hague. The house and dependencies lie round a square court, and are approached from the road between two groves, with glades radiating from circular pools in the centre of each. Then comes the forecourt, laid out in plots of turf and walled off from small flower-gardens on either side. Through the house a long terrace runs right and left, and then the main garden, set out with four large fountains, two pavilions, covered alleys,



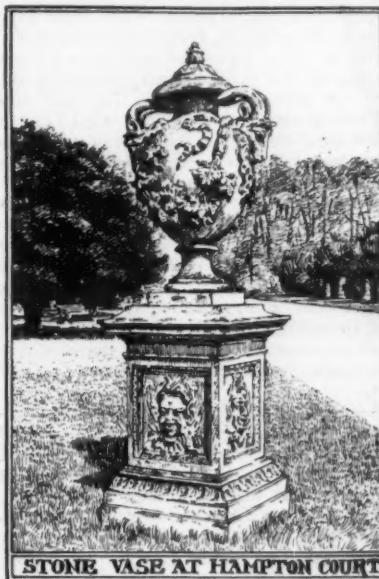
THE TERRACE, HADDON HALL, DERBYSHIRE.

turf plots and flower-beds. Round the whole a double row of trees, a wall, and then the inevitable canal. Here is another engraving that tends to show how lavish was the expenditure of the Dutch nobles in their country homes.

Ideas direct from Italy do not seem to have had much influence in England after the time of Elizabeth. Their work was always more severely architectural than ours, and in the meantime we had begun to look to nature for more of our effects. In outdoor architecture there has always been a scenic and playful character, though with us a certain restraint runs through the work that is not so observable in the south. This view of the organ-case at the Villa d'Este is a good instance of Italian extravagance. It is built of the rudest materials, rough brickwork and some sort of black concrete, but coated over with boldly-modelled stucco, and finished with gesso-uro and color, some of the panels being a very fair imitation of bronze relief. There is something of a stage-like effect, too, in the way this building is perched on a terrace and reflected in the still waters of the pool beneath. Another quaint conceit at the same villa is the long stone trough that borders the upper side of a terrace and receives ninety jets from as many fountains, each with a subject-panel from Ovid's "Metamorphoses."

At the Villa Lante, not far from Viterbo, Vignola has been quite humorous. In the foreground of this view is a stone table for *al fresco* feasts, down the centre of which runs a stream of water as a cool accompaniment to the meal. Behind the table rises a combination of fountain and staircase, with a colossal deity on either side, and hanging his claws over the balustrade above is a giant stone crayfish that the architect has inserted in punning allusion to his patron's name, and drawn out in seventeen long vertebrae to form a channel for the water.

But these are palaces and playgrounds for the courts of kings, and we are mostly concerned nowadays with people of humbler station. If I had started with the cottage-garden, worked upwards a little way, and then stopped, perhaps my paper might have been of more value to you. But when we architects get together to talk over such matters as these, the temptation to speak of the great deeds of the



STONE VASE AT HAMPTON COURT

past, or to build airy castles for the future, is too strong and we yield. And I venture to think we feel the better for yielding. But I am not so sure, after all, that the castles we build for the future will be nothing but air. There is a tendency on foot in some quarters to treat the matter with that seriousness that all thoughtful work deserves, and to illustrate this I will try to describe to you one or two places of my own devising that are either finished or in progress at the present time. But we have been flying high, and though I have the greatest respect for the pluck that some of my clients have shown, still we are in the nineteenth century and it must necessarily

be a great descent from the work of the old masters to our moderate efforts. Here is a plan of one in Dorsetshire that has been finished and growing into shape some three years or more. The house was of various dates, mainly from Edward VI to Elizabeth, but with other additions down to the present century. The wing to the left, and that containing the dining-hall, it was decided to leave untouched, but the comparatively modern work in the south and right wings is shown in the drawing, rebuilt on the same lines as the older portions. The site of the present gardens was a grass field, falling somewhat from left to right. There were a few trees here and there, and a larch plantation across the windows of the south front. The high road bounded the ground on the left, and a back drive skirted the near side of the field, and continued behind the grove to the back of the house. When the ground was cleared of trees and the roots grubbed up, the soil from the south garden and pool was excavated and removed to form the terraces round the sunk garden. Lines were laid down to make vistas through the centres of the courts, and sun-dial, fountain, or wrought-iron grille placed where most they seemed to be needed. There are three main lines on which the work is planned: One from the south gate carries the reflection of the house in the long pool, passes through the doorway in the south front and out into the court beyond; thence down the centre of the tennis-lawn, and across a pool at the end to a sculptured figure in a yew hedge by the river. Another line, centring with a window in the left wing, passes down the rose-garden and through the circular coronet to a niche fountain between the two arches at the far end. The third is taken from a summer-house in the grove to the right, across the south garden, through the coronet and up a flight of steps with a wrought-iron gate, to the sunk garden. Here it catches the fountain and continues up another flight of steps to end in a stone

seat that projects from the back of the terrace. The water for the fountains is forced up by a ram in the river to a couple of tanks in the roofs of the pavilions, which gives it a fall of about 20 feet to the long pool in the south garden. All the stonework, with the exception of a little Doulting, came from the Ham Hill quarries. It is a warm, rust-colored stone, taking a gray lichen, and I have tried to embody some of that variety in the walling that makes such a marked contrast between the old work and that done at the present day.

This is a rather disconnected scheme and has the prime fault that neither of its main axes leads up to the chief block of the house itself. However, this must often be the case when the house and contiguous buildings have already been erected before the grounds are designed. The plan may be divided into two distinct parts, namely, the gardens proper, which are enclosed within walls or other architectural boundaries, and the scheme of avenues, planting, and earth-works outside. Here is a cricket-field bordered with banks and terraces, hedged round and planted on three sides, with a pavilion and seats for onlookers under the trees. East of this is a paddock and deer shelter where the herd would be fed in the winter—forming a pretty picture among the surrounding timber. And south of this, again, is an apple orchard and circular pool enclosed in a grove and centring with a door from the walled gardens. Unfortunately the flower-gardens have had to be planned on the north side of the house, where the ground is formed into three successive levels, ending in a balustrade and sunk fence towards the park. The extent of the walled gardens is marked by a pavilion at either end, and the long central vista is terminated eastward by a bastion with a figure of Sir Philip Sydney, and to the west by a semicircle of twelve terminal figures representing the months of the year, with piers and wrought-iron gates in the centre. There are square-walled sun-traps set about with seats at either end of the lower terrace—but of this you can form a better idea from the photographs.

The next is a simpler scheme of suggestions that was made for a place in Norfolk a few months since, but is, I regret to say, going to remain on paper. The problem was to add some gardens to a house built some twenty years ago, and designed without envisaging any architectural treatment of the grounds about it. The site was pitched on a high plateau, falling away rapidly in a wooded hillside at the back of the house, and from the edge of the plateau a magnificent view of the Wash, and Boston Stump in the distance, was visible through the trees. For a smaller lay-out, I suggested a fore-court and three garden-courts, plotted as shown on the plan. And, to make the most of the distant view, an elliptical lawn was to be hollowed out of the hill in a line with the central alley. This was to be balustraded and buttressed with seven life-size statues on the parapet, and belvedere pavilions at either end. For the greater lay-out there was to be a fan of five avenues, radiating from the centre window of the saloon, and springing from an arc with a radius of 200 yards from the point of intersection. The local stone is of a deep rust-color, and never looks garishly new, which made one all the more keen to handle it.

The principles I have been enunciating were not, of course, confined to the surroundings of country houses only. They were, and are still, equally applicable to town houses where there is any ground to treat, and also to the streets and squares of towns. There are not many towns and villages in England that have been laid out with much attention to this, though I dare say with thought one could enumerate a few. Pitcairngreen in Scotland, for instance, has a pretty plan and a festooned arrangement of trees, that give it quite a gala-like appearance. It is easier to call to mind instances in France, and the two that suggest themselves most readily are Quimper and Quimperle in Brittany. The latter, especially, with its trim canopy of green, surrounding the square like an awning, under which one can wander round in the shade from the Hôtel de Ville to the river.

I have been applying these principles to a budding town in Ireland. Strange though it may seem, there is apparently one spot in that "distressful country" in which trade seems to be on the increase. The causes are natural, but with them we are not concerned this evening. Taking time by the forelock, the intelligent owner of this village and the land about it has had a scheme prepared, of which this illustration shows the plan in block. The principal streets and squares are laid out as you see, and by the time the place is built up, the avenues and groves should be affording some shelter from sun and wind. The court-house forms the focus of the whole arrangement. Beneath it is the butter market, and through the trees across the road, the houses and shops that form the market square. There are two pools and groves of trees at one side of the square, with tall columns for electric light at intervals in the balustrade. Down the street to the west we catch a glimpse of the Calvary in the churchyard wall, and up to the east a fountain. The main buildings and shops round the market square are designed in the rough, but are only to be built as they are required.

[To be continued.]

COLLAPSE OF A SOD SCHOOLHOUSE.—A sod schoolhouse near Perry, Oklahoma, collapsed some weeks ago, and twenty-five school children were entombed for some time. The trustees of the school district had ploughed up the prairie and built a schoolhouse of turf. When the structure collapsed all the children present and the teacher were buried. Several children were fatally injured.

THE TEMPLE OF THE MALATESTA AT RIMINI.

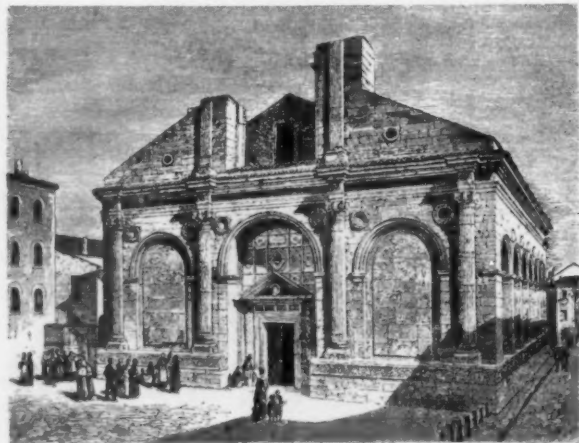


From Medal by Mattei da Pasti, showing the Complete Design for the Temple.

FOR hundreds of years the Malatestas were lords of Rimini, and of all who bore their name Sigismond, the builder of the Rocca and the Church of San Francesco, was the greatest, if the worst.

In 1430, when barely in his teens, he headed a successful sortie against the besiegers of the city, and at fifteen years the death of his elder brother, Galeotto, gave him the right to govern; a right which he had just established by signally defeating the forces of Urbino and Pisaro at Lungarino. Reconciling Rimini with the Pope, and concluding an alliance with Venice, the young prince became the husband of Ginevra, daughter of the powerful Marquis of Este, and when but seventeen, being given command of the troops of the Church, during three years he won great glory as a soldier of fortune. It must have been about this time that Sigismond began his intrigue with Isotta, daughter of Francesco degli Atti, of Rimini, a merchant of noble birth. This remarkable woman, learned, prudent, but not beautiful, though unable to keep Sigismond faithful to her—fidelity was not in this Malatesta—yet wielded a great influence over him to the end of his life. Her he trusted, and to her he always returned, though he did not marry her until after the death of his second wife, Polissena, daughter of the great Francesco Sforza, a magnificent condottiere, like Sigismond himself. Sigismond is charged, be it said, with murdering both of his wives, Ginevra by poison, and Polissena by strangling, and his reputation does not deny it. Traitor, also, was he, betraying Aragon to Florence, deserting the Siennese who had hired him in their quarrel with the lord of Pittigliano, and in other cases playing basely false, until at last he was excommunicated by Pius II, burned in effigy and denounced as a "parricide, murderer of old men and innocent women, committer of adultery and incest, prince of traitors, enemy of God and man." The papal army besieged Rimini, and Malatesta, now nearly friendless, was compelled to accept the terms of Rome, barely escaping utter ruin and death by the aid of the Venetians, with whom he took service against the Turk. The death of Pope Pius and the accession of Paul II proved no gain to Sigismond, who, shorn of almost all his power, died at Rimini in 1468, at the age of about fifty, leaving Isotta and her children to meet an unkind world alone.

Sigismond, says the very Pope who hurled at him all the terrors of the Church, "had great powers of mind and body, and was richly endowed with eloquence and military skill. He knew history, had no small acquaintance with philosophy, and, whatever subject he pursued, seemed born for it especially." Handsome, brave, untiring, thoroughly self-reliant, trusting no one (save only poor Isotta), he was also, as became a typical Italian of the Renaissance, a man of culture and a noble patron of art and literature. When, in 1445, he vowed to build a church in Rimini in token of gratitude for his success in war, he chose Leone Battista Alberti, the great Florentine, as his architect. Alberti, the Leonardo da Vinci of the early Renaissance, architect of the façade of Santa Maria Novella and of the



The Temple of the Malatesta, or Church of San Francesco, Rimini.¹

Palazzo Rucellai at Florence, and of the church of San Andrea at Mantua, designed for Malatesta a masterpiece which fate did not allow him to complete. There existed in Rimini a thirteenth-century Gothic church, the Church of San Francesco, the burial-place

¹ Other illustrations of this building have been published in Nos. 905, 909 and 913 of this journal.

of the Malatestas, and this structure Sigismond decided to make use of, converting it into "a temple still dedicated nominally to St. Francis, but in reality to become an eternal monument of Sigismondo and Isotta."

"Fortunately," says Miss Robinson in the *English Illustrated Magazine*, "the form of the early edifice, its wide nave and simple sanctuary not greatly differing from the Roman Basilica, rendered the conversion within the limits of possibility, and Alberti appears to have enjoyed the difficulty of his task. Perhaps he saw, in this endeavor to fuse into one splendid whole the opposite characters of Gothic mediævalism and Greek antiquity, the opportunity to immortalize the spirit of his time — and the result was success. It is built, this temple of Rimini, of Roman stones from Classis, antique slabs from Greece, and of the Adriatic clay fused long ago by pious hands. Augustan arches rise without, sheltering the sarcophagi of philosophers, and within, the light from mediæval windows falls on the altar of a Christian saint. A pagan church, with pointed Gothic arches raised on sculptured Classic pillars, a splendid anomaly, chiefly original by its combination of opposing elements: it is a type of the Italian Renaissance."

"Finding it impossible to turn the Gothic front with its deep porch and rosette to any Classical account, Alberti resolved to enclose it in a marble casing, distant at all points by nearly four feet from the original structure. He was now free to plan his façade, singularly simple in design, yet solemn, beautiful and stately in its plainness. From a breast-high plinth, giving a noble base to the whole structure, start three engaged arches, the central one larger than the others and higher in relief; the span of all three is extremely wide, their proportions being borrowed from the Roman arch of Augustus, close at hand. At the corners of the façade and on either side of the central arch stand four fluted columns with florid capitals; rising from the plinth they support a heavy, deep-shadowed cornice. Sculptured votive wreaths, six in all, are hung between the capitals of the columns and the spandrel of the arches. From the deep cornice above rises the pediment, unfinished and irregular, its supporting columns incomplete. Above this, again, should have sprung a cupola, vaulting the entire church in its wide span; but in its stead a temporary roof still patches the never-finished masterpiece."

"In the hollow space between the façade and the old brick fronting is placed the tomb of Sigismond, accessible from the interior. But on the lateral fronts there is no such space, for here the round wide arches are not merely in relief, but detached; and in the recesses great stone sarcophagi are placed, standing on the red-cornered plinth. In these repose the bones of the humanists and philosophers of Sigismondo's court. When the temple was built there was made room for fourteen sarcophagi to stand there to enclose the most honorable ashes in Italy: but the fate of incompleteness which has overtaken the temple has not spared this grandiose design. Only seven tombs stand upon the plinth, seven other empty arches keep no illustrious dead."

"Passing through the low door under the central arch of the façade we are amazed by the rich and strange impression of the interior — doubly impressive after the severity outside. The nave is furnished with eight side-chapels inclosed by a high balustrade; there are four on each side, the two central ones being in double bays, while a considerable wall-space divides the first and last on either side from these. The wall between the arches, divided by slender columns, is tinted alternately with pale sea-green and the lightest red; the frieze bears the same tints; across it are swung heavy festoons of yellow-white marble. The sculptured pillars and railings of the chapels are also tinted with like delicate colors. Ferrucci's bas-reliefs of playing children stand out against a ground of palest, unglazed greenish-blue, and below these the balustrade is simply white; while beneath Agostino's delicate untinted low-reliefs the railing is of the richest deep-red breccia, elaborately sculptured with double-headed elephants. Behind Ciuffagni's rude figures the background is of dull gold, while here and there on all sides a tinge of gold faintly lines and splashes the yellowish marble. On the frieze, on the shields of the putti, over the doorways, on the columns and the tombs, above the very heads of the saints in their chapels, we find the double cipher of Sigismond and his mistress. The saints themselves are not safe. Isotta wears the robes and wings of St. Michael. Over the chapel balustrades flourishes her rose, and the image of Sigismond is carved upon the pillars. So that from pedestal to cornice the whole great church is one memorial of the passion that defied it. . . ."

"Sigismond compelled haste from the artists who served him. This temple, of which the corner-stone was laid in 1446, was, by his most earnest desire, to be fit for service and consecration in 1450, the great Jubilee year at Rome. And this, in fact, was done; the dome was not yet planned, and a flat, wooden roof crowned the building; the transept was scarce begun; the façade broken off almost at the base of the pediment; but the nave with its bays was finished, a wonder of sculpture and color. And as it was opened in 1450, so we behold it to-day."

"A strange ceremony it must have been, that Jubilee service in the newly-opened temple. The prelates and great dignitaries of the church meet, appalled, in that splendid shrine to Diva Isotta, which a little later the Pope should adduce as absolute and sufficient proof of the paganism of its founder. From door to transept, from pedestal to cornice, no memento of Christ; only everywhere the I.S. of Isotta and her lover mocking the sacred monogram; and the rose of

the prince's mistress where there should have been the crown of thorns. Diva Isotta herself would be there in all her glory; having furnished from her private purse the funds for her chapel of St. Michael, where her likeness filled the robes of the saint, where, shadowed with the blazons of Sigismond, and standing on the Malatestan elephants, her sarcophagus stood ready. There, also, must have been the hapless Polissena, condemned to witness this triumph of her rival, condemned to praise the chapel in Isotta's honor, while seeing nowhere in all that splendid church a corner dedicated to herself, nor any memorial of the dead Ginevra."



FIXTURES.

ELEVATOR Part of Building. — Where the original plans for a large building provided for an elevator, and the contract for the construction of the elevator was let when contracts for other work were let, the elevator was a substantial part of the building, and the building was not completed, so that limitations for filing mechanics' liens [under the laws of California] would run until it was finished.

[*Coss vs. McDonough* (Supreme Ct. Cal.), 44 *Pacific Rep.* 325.]

When Fixtures are part of Realty. — As between mortgagor and mortgagee, gas-fixtures, consisting of chandeliers and burners, screwed to the ends of the gas-pipes projecting from the walls and ceilings of the building, are not a part of the realty. But this must be regarded as rather an arbitrary exception, established by the great weight of authority to the general rule, and does not apply to steam radiators, attached at the floors to steam-pipes by being screwed to those pipes. Such radiators are a part of the realty. An electric annunciator attached to the wall, and to all the wires of the electric-bell system of a hotel, is a part of the realty.

An office-desk, about twenty-five feet long, resting on a tile floor, between projections on the walls, to which it is fastened by means of screws, the space behind the desk forming the hotel office, such desk is a part of the realty.

[*Capehart vs. Foster* (Supreme Ct. Minn.), 63 *N. W. Rep.* 257.]

Mechanic's Lien for Fixtures: Heater and Range. — A heater and range, although but slightly attached to the building, are fixtures, if put in by the owner of the premises with the intention of making them such, and the one who puts them in, under such circumstances, is entitled to a lien, and has priority over a mortgage made subsequent to the execution of the contract.

[*Erdman vs. Moore* (Supreme Ct. N. J.), 35 *Atlantic Rep.* 958.]



THE NATIONAL SOCIETY OF MURAL PAINTERS.

THE National Society of Mural Painters held its regular meeting on Tuesday evening, January 26th, the first Vice-President, Mr. Frederic Crowinshield in the chair.

As special business, the report was received from its representative, Mr. Chas. R. Lamb, upon his return from Cincinnati. He, as one of the jury, assisted in the decision for the decoration of the City-hall in that city, which is to be carried on by the Municipal Art Society of Cincinnati. The Municipal Art Society accepted two suggestions from the Mural Painters in regard to their competition (arranging it under *nom de plume* and with an expert jury announced in advance). By such action the Society of Mural Painters has helped forward the question of mural painting in our civic buildings. It was particularly fortunate that the question of a *nom de plume* was accepted, as the decision was in favor of Mr. Otto W. Beck, a Cincinnati artist. Thus Mr. Beck won the award distinctly on his merits. Mr. F. W. Schaefer received the Second Prize, and the work of Messrs. Edward W. Hamilton, of Boston, and Orlando Giannini, of Cincinnati, received honorable mention.

The report of the Jury to the Trustees of the Society follows:

TO THE TRUSTEES OF THE MUNICIPAL ART SOCIETY:

"**Gentlemen,** — The jury selected by your body to decide upon the competition for the decoration of the City-hall of Cincinnati met in the Art Museum this day, and carefully inspected the exhibits and the alternative designs sent in by thirteen competitors under *noms de plume*. The jury first read the circular of invitation and then the various letters of explanation sent in by the competing artists."

"The jury decided, if possible, to award not only the two prizes, but also one or more Honorable Mentions. By a process of elimination, each design in turn being carefully considered, they arrived at the following result: That four designs especially seemed to demand a careful study — 'Sasso,' 'Dean Wilbur,' 'Cerebus,' and 'X.' Upon such consideration the jury decided to give the first and second Honorable Mention as follows: First, 'Dean Wilbur,' for his study in gray tones, and second to 'Sasso' for the scheme in mosaic and marble."

"Between 'Cerebus,' with his scheme in deep color as shown for the right and left elevation of hallway, and 'X,' with his scheme for all wall spaces and the ceilings of the hall, the jury decided to place 'X' first and 'Cerebus' second, and to request that the Municipal Art Society award the prizes in this order."

"While with this decision the work of your jury ends, the scheme as suggested by 'X' (while evidently too large a one to be carried out for the

appropriation in hand) is still so interesting that the jury feels a careful reconsideration of the entire scheme and a decision upon those parts which can be carried out within the appropriation should be decided upon in advance, and that a part at least of the work so decided upon should be carried out full size and shown in place before the final acceptance of this artist's proposition.

"Respectfully submitted,

"T. C. STEELE, Indianapolis.

"CHAS. R. LAMB, New York.

"FRANK DUVERNECK, Cincinnati."

Reports from other committees were received, the work of the Civic Building Committee being especially commended in the efforts of bringing before architects and building committees the importance of artistic interior decorations, being considered as an integral part of such building.

Mr. Edward P. Sperry was elected a "resident professional member."
C. M. SHEAN, Corresponding Secretary.



[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

DEARBORN BUILDING, CHICAGO, ILL. MESSRS. JENNEY & MUNDIE, ARCHITECTS, CHICAGO, ILL.

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

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UNITED STATES POST-OFFICE AND CUSTOM-HOUSE, NEW LONDON, CONN. MR. W. M. AIKEN, SUPERVISING ARCHITECT OF THE TREASURY DEPARTMENT.

GATE-LODGE TO ESTATE OF E. C. BENEDICT, ESQ., INDIAN HARBOR, GREENWICH, CONN. MESSRS. CARRÈRE & HASTINGS, ARCHITECTS, NEW YORK, N. Y.

THE UNITED STATES CAPITOL, AS FINISHED BY CHARLES BULFINCH, ARCHITECT.

TWO DISTANT VIEWS OF THE SAME.

THESE views are Figures 82 and 83 of the article elsewhere in this issue.

APSIDAL TREATMENT, NO. 11: COLUMBARIUM IN THE CERTOSA, BOLOGNA, ITALY.

THE cemetery of the Certosa was consecrated in 1801 as a Campo Santo. It occupies the site of an Etruscan burial-ground, discovered in 1869. The arcades of the Campo Santo were built from the designs of Giuseppe Mengoni, the architect of the Victor Emmanuel Gallery at Milan.

APSIDAL TREATMENT, NO. 12: THE CATHEDRAL, RIMINI, ITALY.

SEE article, elsewhere in this issue.

[The following named illustrations may be found by reference to our advertising pages.]

ACCESSORIES OF LANDSCAPE ARCHITECTURE, NOS. XLVII AND XLVIII: FOUNTAIN OF LATONA, VERSAILLES, FRANCE.

ACCESSORIES OF LANDSCAPE ARCHITECTURE, NO. XLIX: THE FOUNTAIN OF APOLLO AND THE TAPIS VERT, VERSAILLES, FRANCE.

[Additional Illustrations in the International Edition.]

THE PERGOLA: HOUSE OF E. C. BENEDICT, ESQ., INDIAN HARBOR, GREENWICH, CONN. MESSRS. CARRÈRE & HASTINGS, ARCHITECTS, NEW YORK, N. Y.

[Gelatin Print.]

DOORWAY OF ST. PETER'S CHURCH, ROSTOCK, MECKLENBURG-SCHWERIN.

[Gelatin Print.]

THE Petrikirche, one of the principal parish churches of the old Hanseatic town of Rostock, was built during the first half of the thirteenth century. The doorway of the west or main entrance shown in our plate dates from the second decade of the eighteenth century, at which time extensive repairs were made to the edifice. The door is elaborately carved in wood. The two symbolic female

figures, in niches on each door-panel, represent respectively "Faith" and "Charity" (on the left), indicated by the cross and the infants nestling up to the woman, and "Hope" (on the right), her attributes being the dove and the anchor. In the tympanum of the pointed arch, above the door, stands a finely modelled statue of St. Peter, the patron saint of the church, bordered on both sides by rich barocco-ornament. It is to be regretted that the door is placed in so unsightly a frame. It appears that, during the last so-called "restoration," in 1863, the clustered jamb-shafts and carved mouldings adorning the doorway, which, probably, had suffered much injury in the run of time, were simply knocked off, and the surface of the jambs smoothed and plastered over, leaving a bare wall-space, over six feet in width, of very clumsy appearance.

A FIFTEENTH CENTURY HALF-TIMBERED HOUSE, LISIEUX, FRANCE.

[Copper-plate Etching.]

THE ANGEL CHOIR, LINCOLN CATHEDRAL, ENG.

LINCOLN CATHEDRAL, ENG.: GENERAL VIEW.



EUGENE LETANG. — A bronze tablet to the memory of Eugène Letang has lately been put up in the Fine Arts room of the Boston Public Library. The tablet reads: "1842. Eugène Letang. 1892. Born at Boullieret, France, in the province of Berri. He came to Boston in 1871. For twenty-two years he taught architectural design at the Massachusetts Institute of Technology. In grateful memory of this loyal and fruitful service, this tablet is erected by his pupils and friends."

HOW LONG WILL THE STEEL FRAMES OF TALL BUILDINGS LAST? — What is occurring or what will occur to the metallic portions of the many tall buildings that are in process of erection at the present time, under great dissimilarity as regards temperature, humidity, and other climatic conditions, but of one characteristic sameness, viz, being sealed in solid masonry or other coverings beyond the ken of inspection? Probably no engineering question to-day is entitled to more serious consideration than this one. In discussing it recently before the American Society of Mechanical Engineers, Mr. M. P. Wood maintained that while inspection of some of the buildings now in progress, as well as some of those lately erected, reveals possibly a slight improvement in the means of preservation adopted over those apparent a short time ago, yet the improvement is a hollow mockery, and will bear fruit for repentance before many years have passed. These structures, though more carefully painted than those erected before, with more and heavier coatings of some kind of stuff called paint, do not appear in a single case to have received any attention or consideration as to the condition of the metallic surfaces before applying the protective coating, beyond a possible wipe with a dirty broom to get rid of the rough dirt from the workshop yard, and a possible sweep with a piece of old sacking to remove the grease due to machining processes. There has been nothing like a washing down of the parts with soda ash or lye water to remove the grease, and then pickling with weak acid to remove the mill scale, and a subsequent washing with lime-water to neutralize the acid bath, warming the work before painting it, and taking care to apply the paint only on clear, bright days, when no sweating can occur, or applying the paint in warm paint-rooms. It is safe to say that not in a single case out of the many skeleton structures of modern sky-scrapers can this be found to have been the procedure. There would seem to be no better possible assurance than all this of trouble ahead for coming generations. — *Cassier's Magazine*.

"STICTION" AT CROYLAND ABBEY. — The mysterious power known to demolishers as "stiction" appears to be exemplified to a remarkable extent in the venerable Benedictine Abbey of Croyland, which was the scene of many historic events. The rector has found that the foundations were laid on a bed of peat, varying from 1" to 1' 9" thickness. The foundations of the abbey tower consist of 1' 6" of peat. Oak piles were driven through this peat bed into the gravel, in length, 5½'; 1' 4" Helpston stone, very small, laid dry and on the edge; 9" light stone quarry dust; 10" Helpston stone, very small, laid on their beds; 1' 1" light stone quarry dust; 11" Helpston stone, very small, laid on their beds; 1' 3" tower base below present ground level — the total depth from the ground level being 7' 8". How could a building resting on so defective a foundation resist the earthquake of May 25, 1671, and the drainage of the Fens? The rector says it is a mystery how such a building with rents from 1" to 4" wide and about 90° in length, has not collapsed before this. The engineer, and not the architect, has left his mark in many a rough and useless addition. Large iron ties hold the upper walls together, but the roof beams are rotten, and to place corbels underneath them would only be adding weight without use to a building already slanting northwards. Add to the defective foundations the peculiar nature of the lime used, the small stones in the walls giving too straight joints, and the inside and outside walls not being bonded together, is it not marvellous that Croyland Abbey still stands as a noble building, wonderful in its situation, unique in its beauty, and a valuable relic of Christian devotion, interesting to the architect, the historian and the antiquarian? It might be imagined that a building which has endured so long, regardless of all the laws of construction, may also be trusted to continue as a puzzle to posterity. But the rector believes in the maxim, "*Aide-toi et le ciel t'aidera*," and he has therefore issued 14,025 letters and appeals for funds to restore the building. He still requires 1,830l. He is well deserving of generous support. — *The Architect*.



THE HELIOTYPE PRINTING CO., BOSTON

THE DEARBORN BUILDING, CHICAGO, ILL.

JENNEY & MUNDIE, Architects

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NEGATIVE BY H. H. SORAN

THE PERGOLA: HOUSE OF E. C. BENEDICT, ESQ., INDIAN HARBOR, GREENWICH, CONN.

CARRÈRE & HASTINGS, ARCHITECTS.

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Blätter für Architektur.

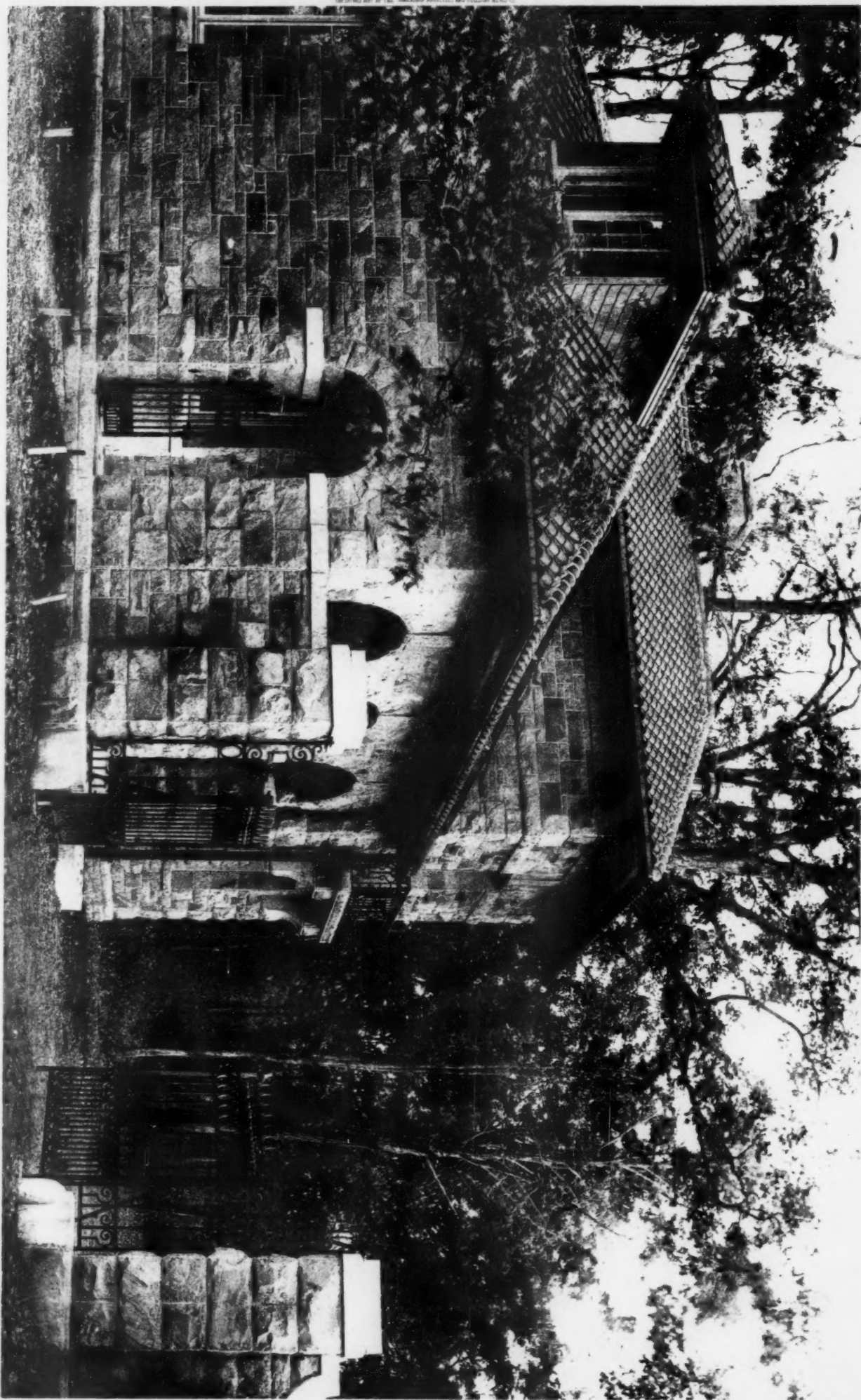
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MAISON A LISIEUX
(XV^e Siècle)



GATE-LODGE: ESTATE OF E. C. BENEDICT, ESQ., INDIAN HARBOR, GREENWICH, CONN.
CARRÈRE & HASTINGS, Architects.

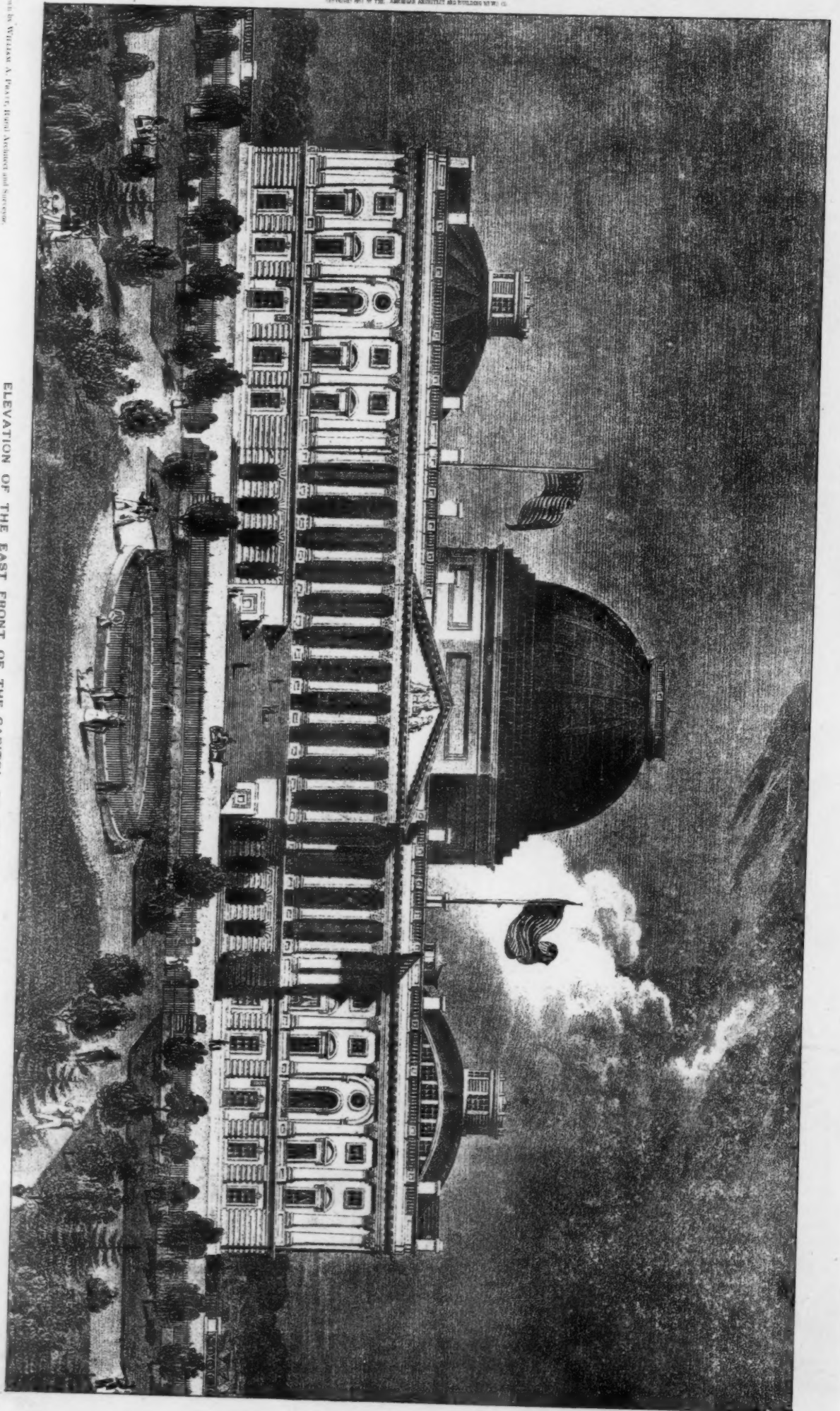
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ELEVATION OF THE EAST FRONT OF THE CAPITOL OF THE UNITED STATES.
FROM AN OLD PRINT PUBLISHED IN 1838.

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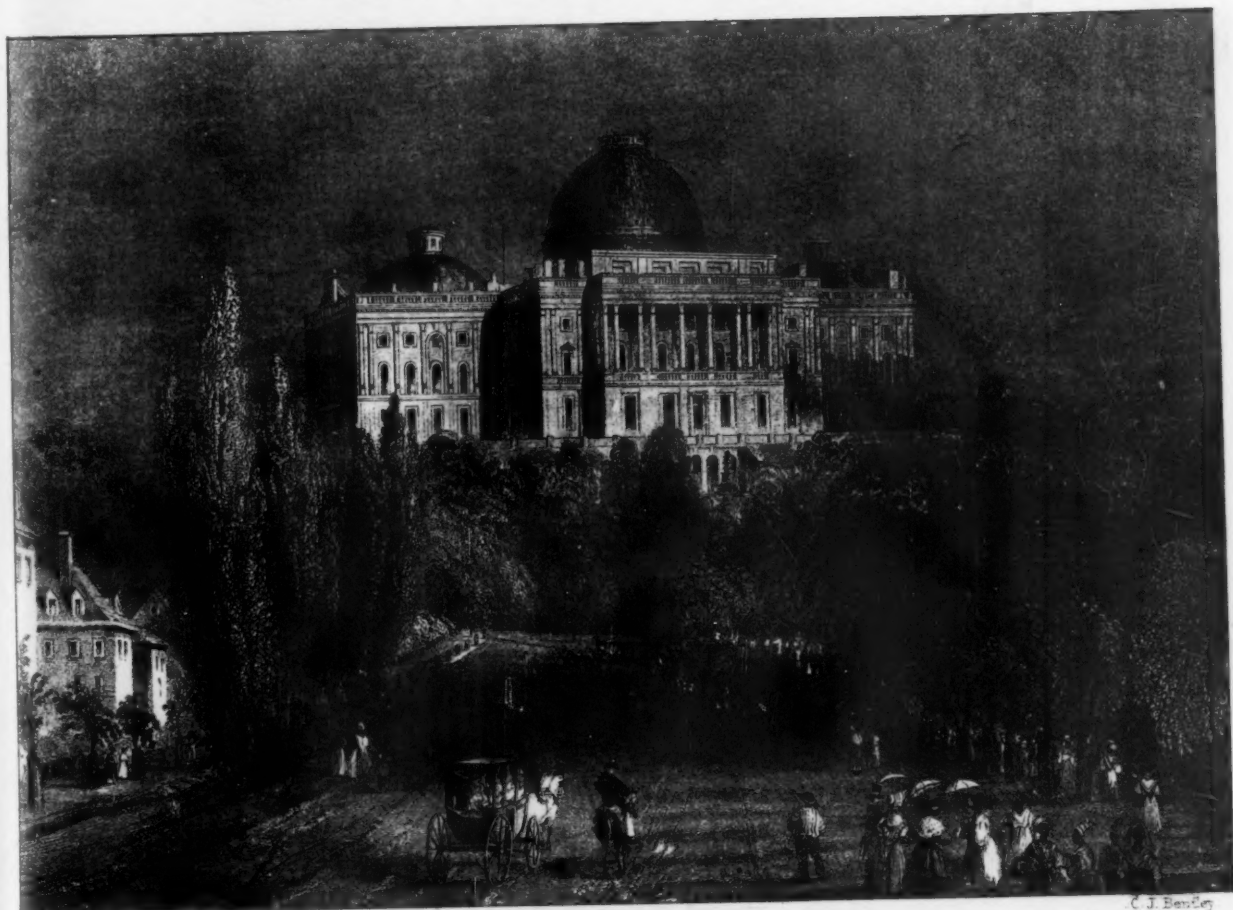
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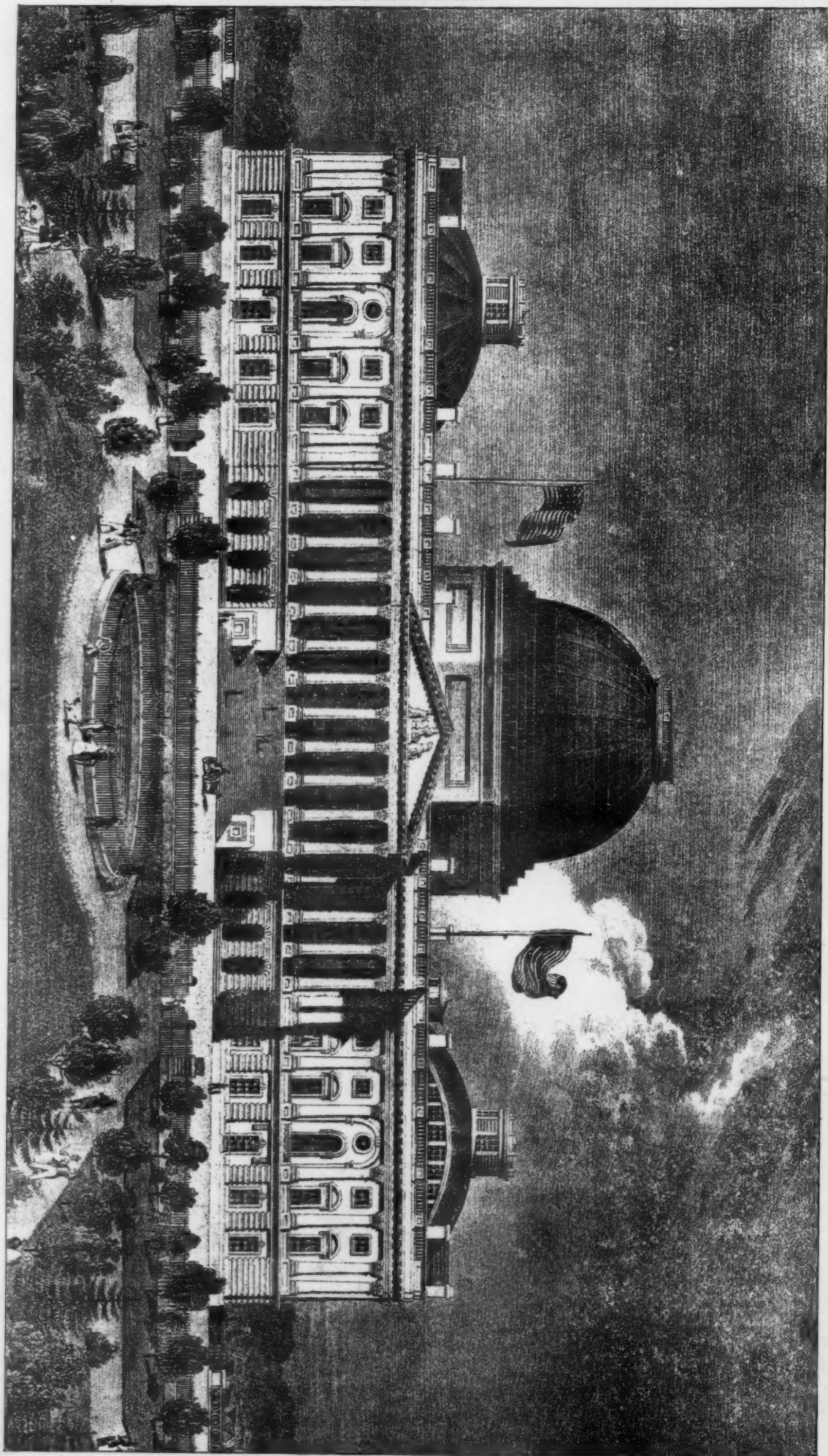
C. J. Benley

VIEW OF THE CAPITOL AT WASHINGTON.

DESIGNED BY WILLIAM A. RAY, HEAD ARCHITECT AND SUPERVISOR.

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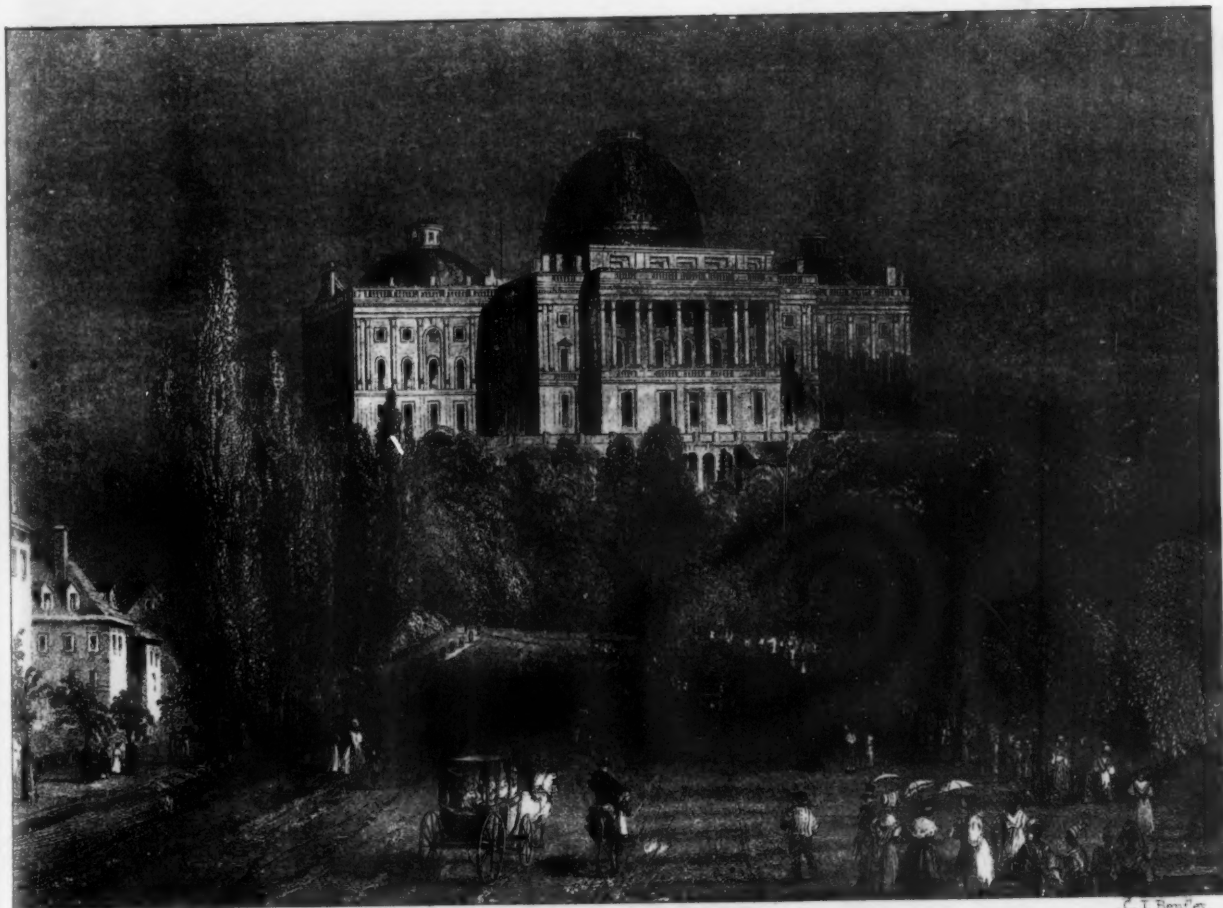




W. H. Bartlett.

H. W. Wallis.

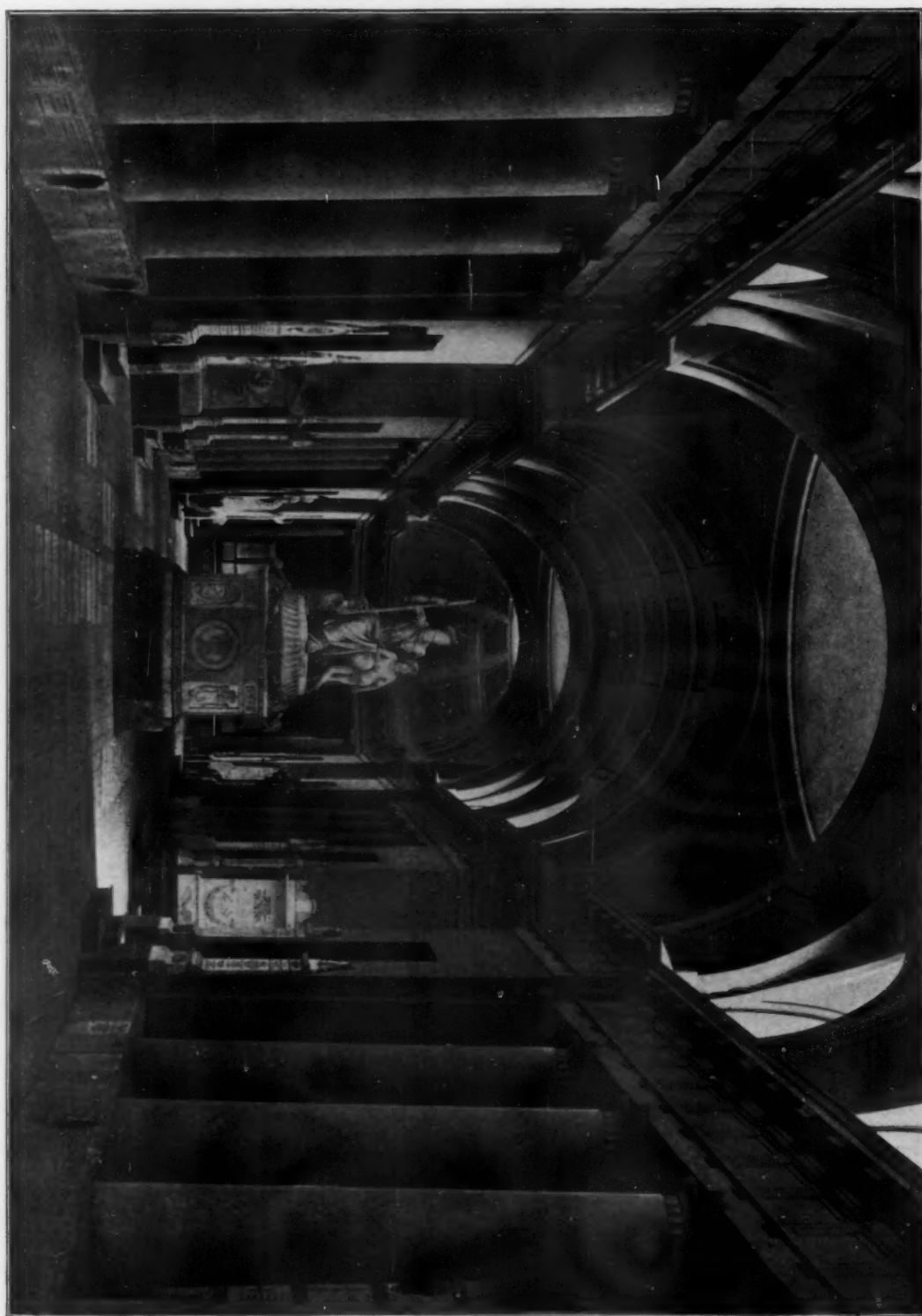
WASHINGTON, FROM THE PRESIDENT'S HOUSE.



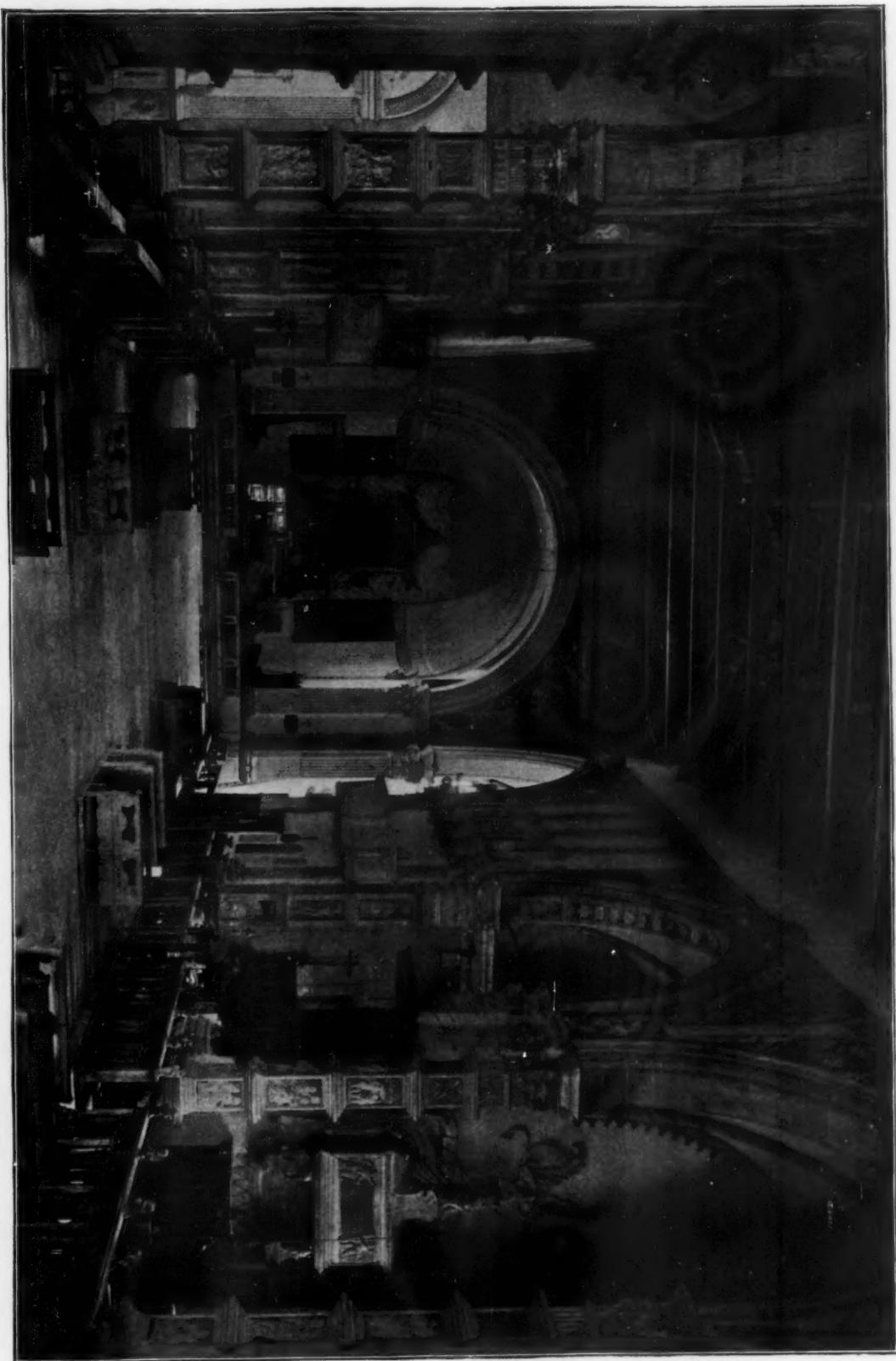
W. H. Bartlett.

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VIEW OF THE CAPITOL AT WASHINGTON.



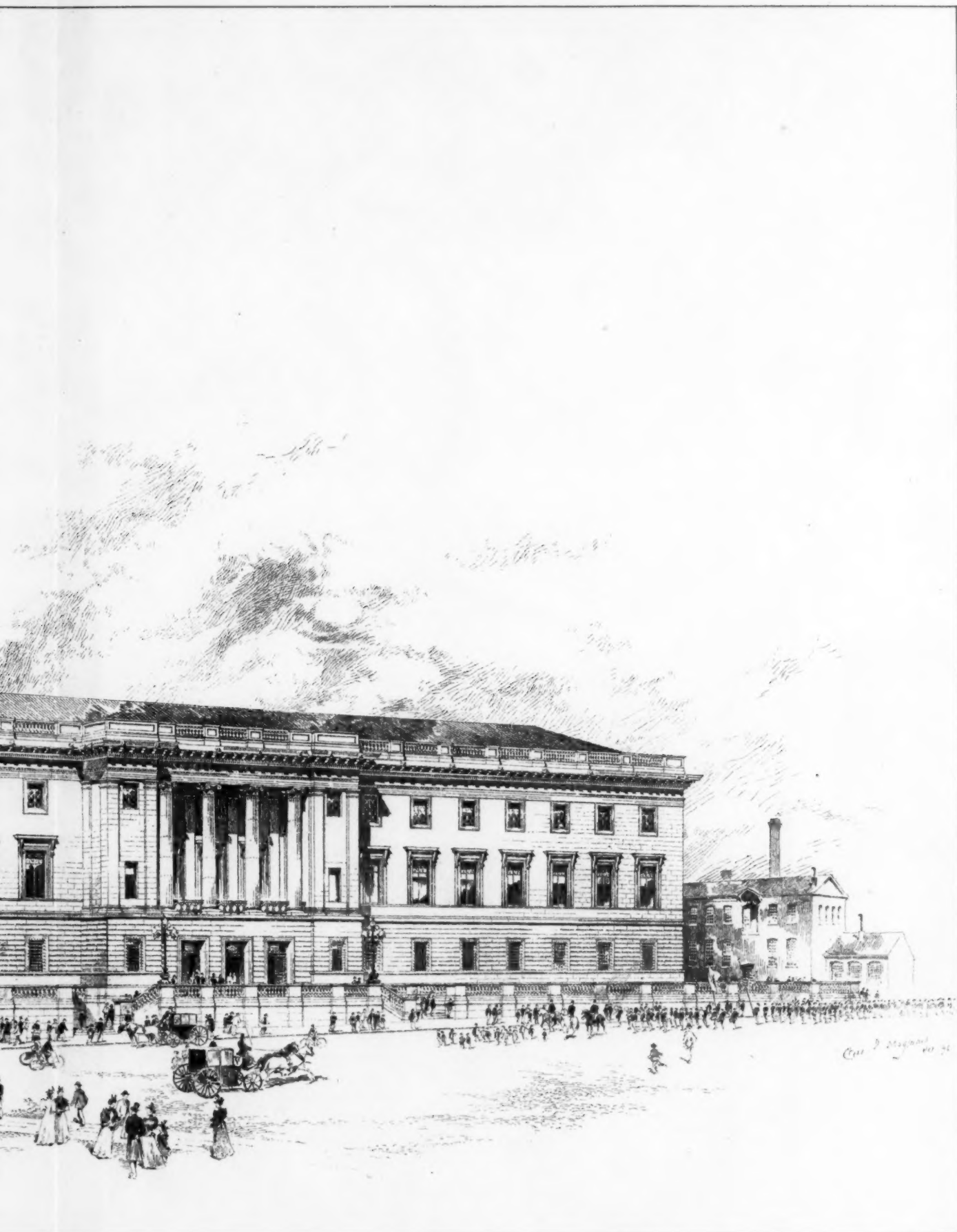
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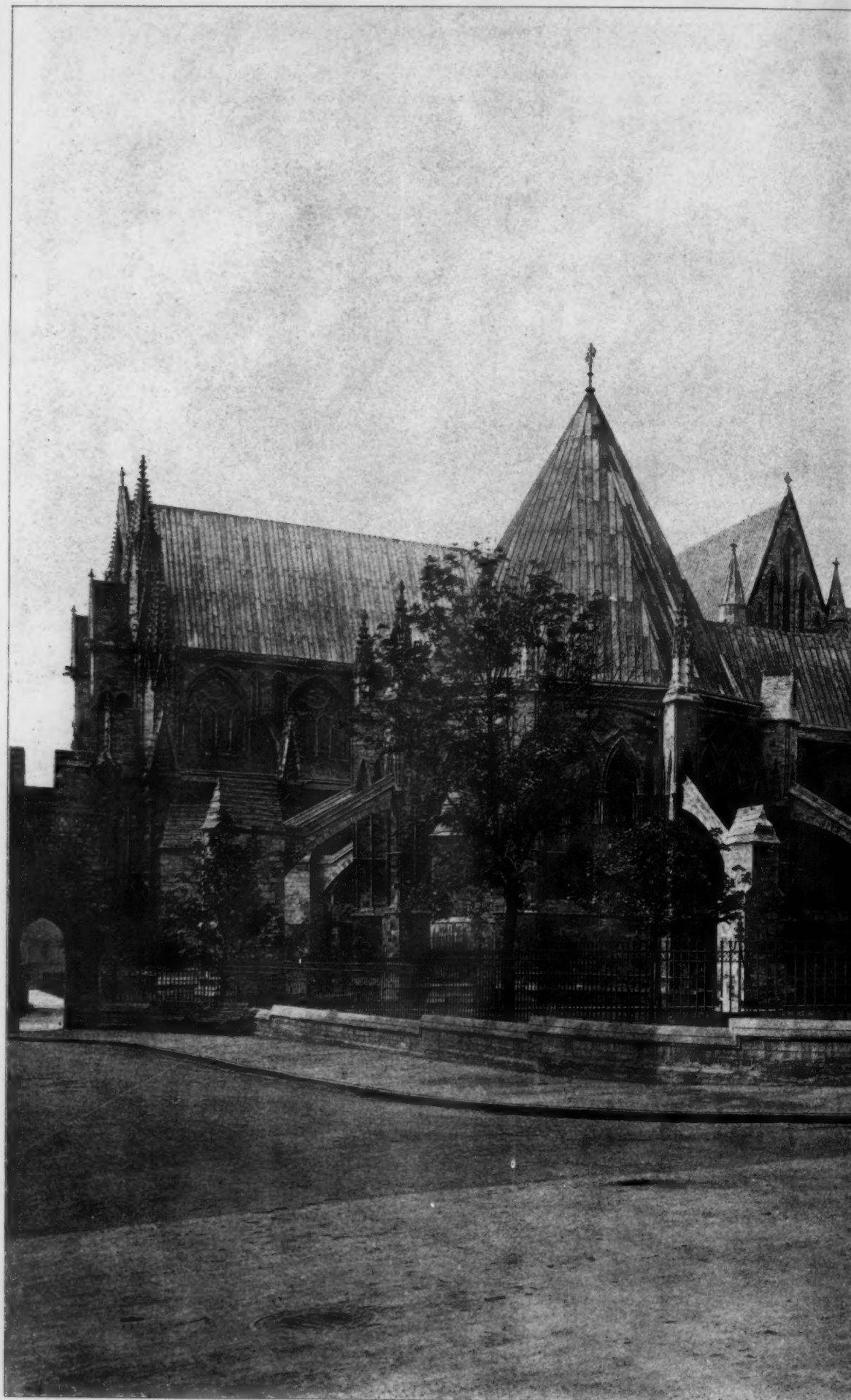


APSIDAL TREATMENT, No. 12:—THE CATHEDRAL, RIMINI, ITALY.

UNITED STATES MINT PHILADELPHIA PENN.
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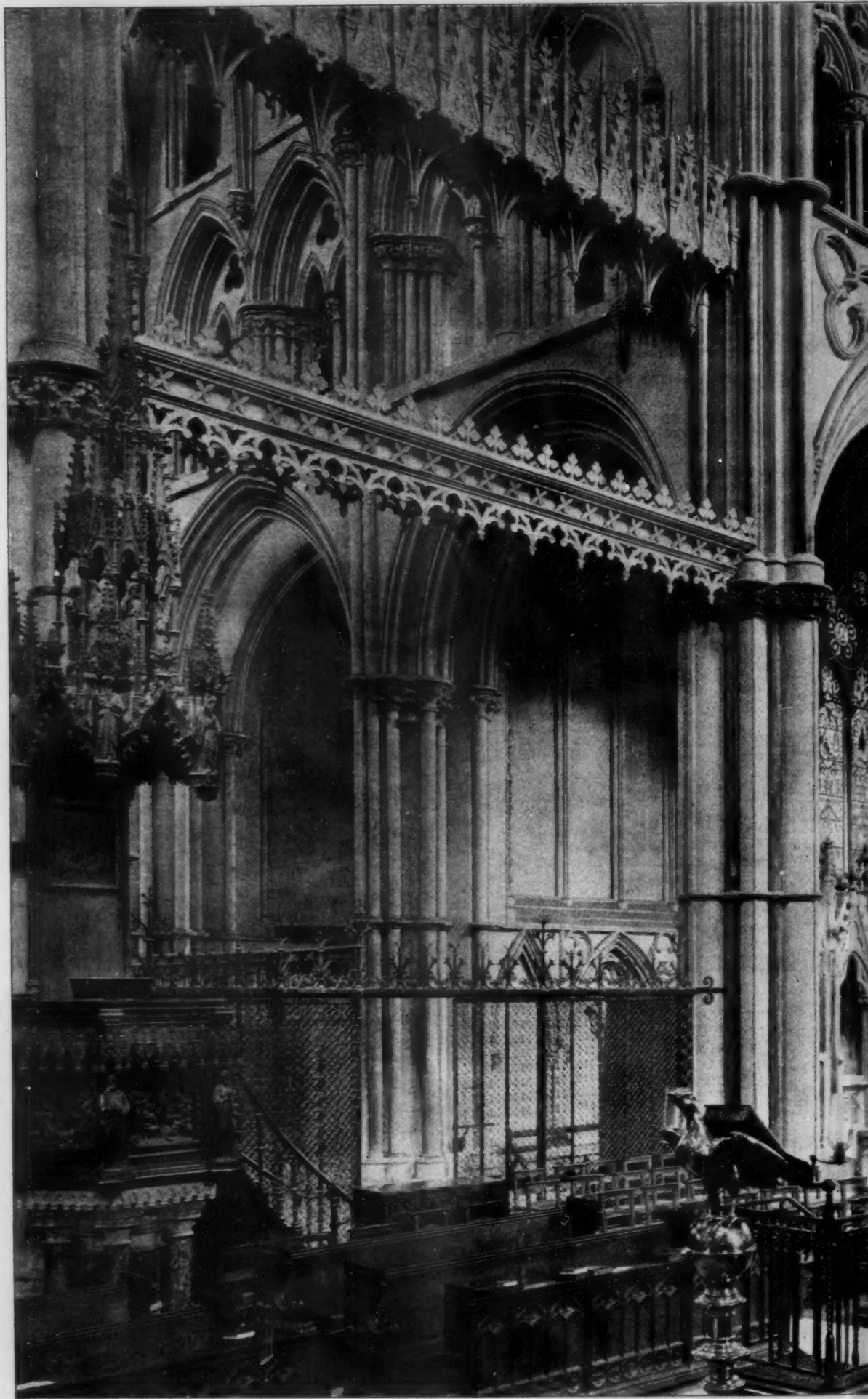


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D. 5.—LINCOLN: GENERAL VIEW.



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