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WE are pleased to be able to announce that a competitive examination is to be held by the United States Civil Service Commission, to fill the vacancy in the position of Supervising Architect of the Treasury. The salary of this official is forty-five hundred dollars per annum and the Government hopes that an architect of high attainments and administrative ability may be secured to undertake the duties of this important and responsible post. Those architects who are disposed to become candidates for the position may apply for blanks to the Civil Service Commission, and must submit to the Commission, on or before September 10 next, statements, written on these blanks, in regard to their training, education and technical experience; together with drawings or sketch-plans, specifications and photographs, or other suitable illustrations, of buildings designed by them as architects, or constructed under their supervision; and two essays, one relative to designing and construction, and the other relative to office administration. In addition to the submission of these documents, candidates must appear, on September 10, at points convenient to their places of residence, where the Commission has suitable accommodations, for examination in regard to their qualifications for preparing a scheme for competition for a public building, and for criticising designs submitted to them for their inspection. The examination papers will be rated, under the direction of the Commission, by a board of architects of distinction. Candidates are requested to write at once to the Civil Service Commission, Washington, D. C., for blanks and other information relative to the examinations.

IN considering the subject of the examination for the post of Supervising Architect, we are led to wonder if those of our readers who find business dull know how extensive are the opportunities which the Civil Service of the United States offers to persons possessing such technical qualifications as are very likely to be found among those who have prepared themselves for the many-sided profession of architecture. Out of something like a hundred thousand Government positions, by far the larger part are now placed under Civil Service rules, and are open, when vacancies occur, to those who receive the highest marks in competitive examination, without regard to their political influence or connections. The knowledge of this fact seems, however, to spread slowly, and there are absolutely no candidates for some positions, while the applicants for others are so few that the examinations are postponed again and again. In the May number of the *Bulletin* issued by the Civil Service Commission, an appeal is made for more applicants for technical places, and it is mentioned that the ex-

aminations for draughtsman, assistant-draughtsman and tracer of ship drawings for the Bureau of Construction and Repair, of the Navy Department, and those for assistants in the Coast and Geodetic Survey, and in the Department of Agriculture, and for inspectors of steamboat hulls and boilers, and for a cadet in the Revenue Cutter Service, have been postponed for nearly two months, in the hope of getting more candidates. All citizens of the United States who consider themselves qualified to pass the examinations for any position in the service are not only allowed, but invited, to enter themselves as candidates, the Commission and the Government earnestly desiring to raise the standard of the service by competition among qualified persons. The Civil Service Commission, at Washington, D. C., will send information at any time concerning the positions open, the time and places at which examinations will be held, and the subjects upon which candidates for each place will be examined.

APPLICANTS for the position of draughtsman to the Bureau of Construction and Repair in the Navy Department, to take an example from among the positions for which candidates are, or were, lacking, are examined in letter-writing, applied mechanics, ship calculations, practical ship-building and ship-draughting. The salary attached to the position is from fifteen hundred and fifty dollars to two thousand dollars per annum; and the tracer of ship-drawings, who is examined only in penmanship and letter-writing, free-hand lettering and arithmetic, besides actual tracing of ship-drawings, gets from one thousand dollars to twelve hundred and fifty dollars per annum. It is hard to believe that a good tracer of architectural or engineering drawings, with a little special practice on ship work, would not easily pass such an examination as this, and promotion is made in the service itself, when candidates in the lower grades qualify themselves for advancement. For technical positions of higher responsibility there is also at present a lack of candidates. That of anthropologist, in charge of the Division of Anthropology in the United States National Museum is, or was, open to competition among all citizens under fifty years of age, who might consider themselves qualified to fill it. The salary attached to this position is thirty-five hundred dollars a year; and a portrait and vignette engraver for the Bureau of Engraving and Printing is, or was, sought for, at a salary of three thousand dollars a year.

ONE of the features about the competition for designs for the New York Library building does not strike us favorably; that is, the provision by which, after a selection of six designs has been made from among those sent in for the preliminary competition, six privileged architects, who have not taken part in the preliminary competition, are to be invited to make additional designs, and the twelve plans are then to be examined and judged over again. If the jury were to be entirely composed of experienced architects, there would not be so much objection to this course; but with two members, at least, whose training has not included the study and criticism of the thousands of plans which come under the eye of the professional man, the later plans are sure to have the special charm which novelty gives to such things in the eyes of persons of limited experience, and the authors of those previously selected will contend at a decided disadvantage with the newcomers. So well is this principle understood in the profession which, unfortunately for itself, is expected to scramble and fight for employment, that every architect who devotes himself particularly to competition work makes a point of endeavoring to have his design the last to be considered by the jury, knowing that the charms of a plan are quickly forgotten, and that the one whose attractions are freshest in the minds of the jurors when the balloting begins is very likely to get the most votes. For this reason, it is much to be desired that the selection among the twelve designs of the second competition should be made with deliberation, the drawings being considered and reconsidered until all are equally familiar. No competitive plans are ever perfect, and the choice is simply a matter of judging which, on the whole, presents a preponderance of good features. In this balancing, which is often a matter of great delicacy, every circumstance which can lend an extraneous interest to any plan should be rigidly excluded from consideration, and the designs compared, point by point, not only with

each other, but with the plans of existing buildings of a similar character, which have had the invaluable test of actual experience.

WE wonder if our readers have noticed how few failures there have been among builders for the last three or four years, in comparison with the average of normal years. Certainly, builders have not made much money of late, but, at the same time, they appear to have taken fewer risks, and those who have been obliged to borrow money seem to have been favored by the prevalent low rates of interest, and the conviction of lenders that building is, perhaps, cheaper now than it will ever be again in this country, and that the security for a building-loan is therefore not likely to be diminished by future contingencies. Another cause for the improved stability of the building business is probably to be found in the organization of contractors, and the higher tone of business morality which organizations of the kind promote. Among the speculators, who make a living by borrowing money which they never expect to return, on the security of building work which they do not intend to pay for, there have been a good many casualties, but the elimination of these pests of the community will not cause much regret, and, indeed, it is quite possible that the contractors' organizations, which have made it easier for their members to investigate credits and enforce payment, have indirectly had something to do with the discomfiture of the speculators.

A ROW of wooden cases, containing Supreme Court records, to the number of nearly a million documents, fell from the top of a long stack of similar cases to the floor of the Hall of Records, in Brooklyn, a few days ago, smashing the desks, tables and chairs on which they fell, and mixing up the records of about seventy-five years of jurisprudence. It is said that the work of restoring the papers to order, and repairing the furniture injured will take six months time, and cost a hundred thousand dollars. The fall is attributed by the newspapers to the "excessive humidity," which caused the woodwork to swell and expand from the walls; but it is difficult to credit the climate, even of Brooklyn, with a "humidity" sufficient to cause wooden boxes to leap out a foot or more from the walls against which they are stacked; and it is much more likely that the cases, which would naturally be weighted, by the filing of the papers, near the front edge, gradually bent forward, as the height of the stack increased, until the vertical drawn through the centre of gravity fell far enough outside the base to cause the upper row to fall off. This is a phenomenon quite familiar to librarians and others, who deal with stacks of boxes, open in front, and filled with objects which do not extend quite to the back; and the obvious method of guarding against the forward fall of such stacks is to anchor them at intervals back to the wall, by means which will readily suggest themselves.

AN unfortunate controversy has broken out in New York among the people who have the æsthetic well-being of their fellow-citizens most at heart. There is in that city a Botanical Society, composed of public-spirited persons, who have offered to expend a great deal of money and trouble in maintaining a botanical garden in one of the city parks, if the city will furnish the ground and buildings. The new Bronx Park, which has a very large area, affords suitable accommodations for such a garden, and the Park Commissioners, in conjunction with the Botanical Society, determined upon its location and decided what buildings would be required. Plans were made for the buildings, and the scheme was then submitted by the Park Commissioners to a board of experts, who, apparently to the surprise of those most interested, condemned it, saying that the buildings, as planned, would detract very seriously and needlessly from the beauty of the Park, and strongly recommending that a different arrangement should be adopted, by which equal accommodation and advantage could be secured, without interfering with the natural attractions of the place. Considering how few persons in this country are qualified to judge of such questions as this, and how easy it is to ruin natural scenery by injudicious building, it seems as if the counsel of the experts should have been very seriously considered; and the Fine Arts Federation expressed the same thought by passing resolutions, which were forwarded to the Commissioners, "deeply regretting" that the latter had rather

summarily voted to adopt the condemned plan, and asking for a reconsideration of the vote. The Park Commissioners, however, at a recent meeting, "placed on file" the letter of the Fine-Arts Federation, and repeated the vote to which it objected, and, in addition, appointed the architects, Mr. R. W. Gibson and the Lord & Burnham Company, and applied for an appropriation of half a million dollars for putting the scheme into execution.

THE first electric railway in the world to use the Tesla "polyphase" currents is, according to the *Schweitzerische Bauzeitung*, in operation in the town of Lugano, in Switzerland, and the ingenuity with which the installation has been designed and carried out seems likely to make this little road, which possesses only four cars, not only famous in the history of electrical engineering, but a model for many railways, for situations where the conditions are similar. For several years, the town of Lugano has been supplied with electric light from the waterfall of Maroggia, some seven miles away in the mountains. As there is much more water-power than is needed for lighting, the idea occurred to the town engineers that it might be practicable to utilize the surplus in furnishing power for manufacturing, and for driving cars to connect the town with the suburban villages, in which there are hotels and summer cottages. The principal difficulty in the way of this scheme was the expense of installation. To transmit a direct current of high tension from Maroggia to Lugano, and transform it into a low-tension current for driving the car motors would have been a costly matter, and it was finally decided to try whether a polyphase current could be made available. The cascade of Maroggia is seven hundred and fifty feet high, and it was a simple affair to place in it a turbine to develop three hundred horse-power. On each side of the turbine was placed a triphase generator, of one hundred and fifty horse-power, so arranged that either or both could be thrown out of gear with the turbine. At six hundred revolutions per minute, the generators produced a current of fifty-six hundred volts tension, varying at the rate of forty periods per second. The main conductor was made of three copper wires, each having a diameter of five millimeters, or about one-fifth of an inch. As now arranged, this main conductor is carried over the mountains, through Lugano to Paradiso, the present terminus of the tramway, with a branch at San Salvatore, carrying forty-five horse-power to drive a rope-railway for the ascent of the mountain, a second, conveying twenty-three horse-power, for a chocolate factory at Lugano, and various others at different points on the route. Near Lugano is a transforming station, where the primary current of fifty-six hundred volts is reduced to one of four hundred volts tension. This is distributed, by wires of seven millimeters diameter, over the tramway, which consists of three divisions, one connecting Lugano with Paradiso, while the others extend from Lugano to Cassavate and Molino Nuovo. The total length of track is about three miles.

TO convey a polyphase current properly, at least two conductors are requisite, and the Lugano road is therefore furnished with a double trolley-line. It would appear that such a line might present difficulties at curves and intersections, but it is found that, after the motor is once started, it will run with one wire, as a monophase motor; and, in practice, it is only necessary to drop one of the wires for a short interval at such points. On the direct portions of the road, the double wire offers advantages, for, as both trolleys can hardly lose contact at once, the operation of the motor is much less liable to interruption than where one trolley is used. It has been feared that a polyphase motor would not start so readily as one of the ordinary kind, but it is found, in practice, that the Lugano motors start more strongly than those of equal power with a direct current, owing to the comparative absence of induced currents in the iron of the motor. Another curious advantage presented by the polyphase motor is that, while the rapidity of its movement can be reduced to any desired extent, even to zero, by means of a rheostat in the circuit, it cannot be carried above the limit fixed by the changes of current. The consequence is that when the full current is turned on, the car propelled by the motor maintains a constant speed, whether it is going up hill or down, and no brake is necessary on descending grades, the fixed movement of the wheels serving to check the acceleration of speed by gravitation.

AN ARCHITECTURAL "SUMMER SCHOOL" ABROAD.—I.

AS the great steamer "*Cestrian*" backed slowly from the East Boston pier, the Technology yell awoke the echoes among the wharves and elevators, and for a short time rivalled the deep voice calling for right of way into the harbor channel. The first session of the M. I. T. Summer School of Architecture had at last started on its way across the Atlantic, and its one thousand miles of bicycle travel in Europe.

A new departure for American schools was being attempted, and excellent results were expected from the proposed combination of study and healthful exercise. But only in the method of moving the party of students from town to town was the attempt a new one. The making of short excursions to interesting buildings and towns has long been considered an essential part of an architectural student's education. Years ago, when books were few, and methods of photographic reproduction unheard of, technical knowledge could only be acquired through personal visits to existing buildings, and through laborious efforts, with pencil and brush, in transferring to paper the student's impressions of the masterpieces of architecture.

To-day the necessity for travel and close observation does not seem, at first sight, as imperative as in times gone by; for the foreign masterpieces are now brought within the reach of every one, through our public and technical libraries and the modern processes of illustration. The careful examination of books and photographs alone, however, gives only a limited idea of the true appearance of a build-

The Summer School of Architecture was accordingly established at the Institute, in order that its work might supplement the regular winter courses. In past years the summer work has been confined to the study of buildings and details of the Colonial architecture of our New England States.

We possess much that is original and beautiful in the simple dwellings of our old seaport towns, and as these buildings are rapidly disappearing, we have made an attempt to preserve at least a small part of the best material by means of measured drawings, sketches and photographs. But such study, although of great benefit, has heretofore been mainly limited to wooden buildings of comparatively small size, and does not give the broad knowledge of style that all students of architecture should possess.

An important step, therefore, was taken last spring, when it was decided to change the scene of our summer's work from New England to a limited section of France, and to supplement the winter's indoor studies by an excursion among the interesting buildings of

the South of England, of Normandy and Touraine.

Our party included twenty students from the third and fourth year classes, in charge of two instructors. The journey was made on bicycles, partially on account of the expense of railway travel, but principally in order to afford an opportunity for intimate acquaint-

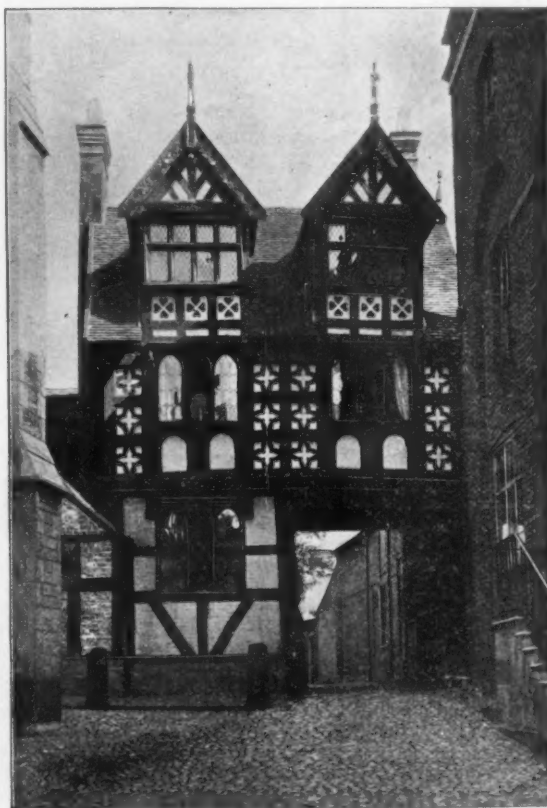


Eastgate St. and Grosvenor Hotel, Chester.



The Council-House, Shrewsbury: looking out.

ing, for the more or less correct representation upon paper necessarily fails to express the real values of scale, broad surfaces and detail — values that can only be understood by inspection of the buildings themselves.



The Council-House, Shrewsbury: looking in.

ance with local architecture. By this means a little over nine hundred and fifty miles were covered during our fifty days on land, and much was seen that is not revealed to those who travel by rail alone. The route was arranged to include the principal towns of

Normandy and Touraine, two of the most interesting architectural sections of France, while a short excursion in England was planned in order to give a comparative view of the architecture of the two countries. Detailed maps, covering the proposed route, were imported early in May, and the selection of the roads from town to town, with the plotting of the route upon the English Government Ordnance maps and the thirty-nine sheets of the Carte de la France, consumed quite a little time in the way of preparation. These maps were taken with us, and through their assistance the selected route was followed with very little difficulty or need for variation.

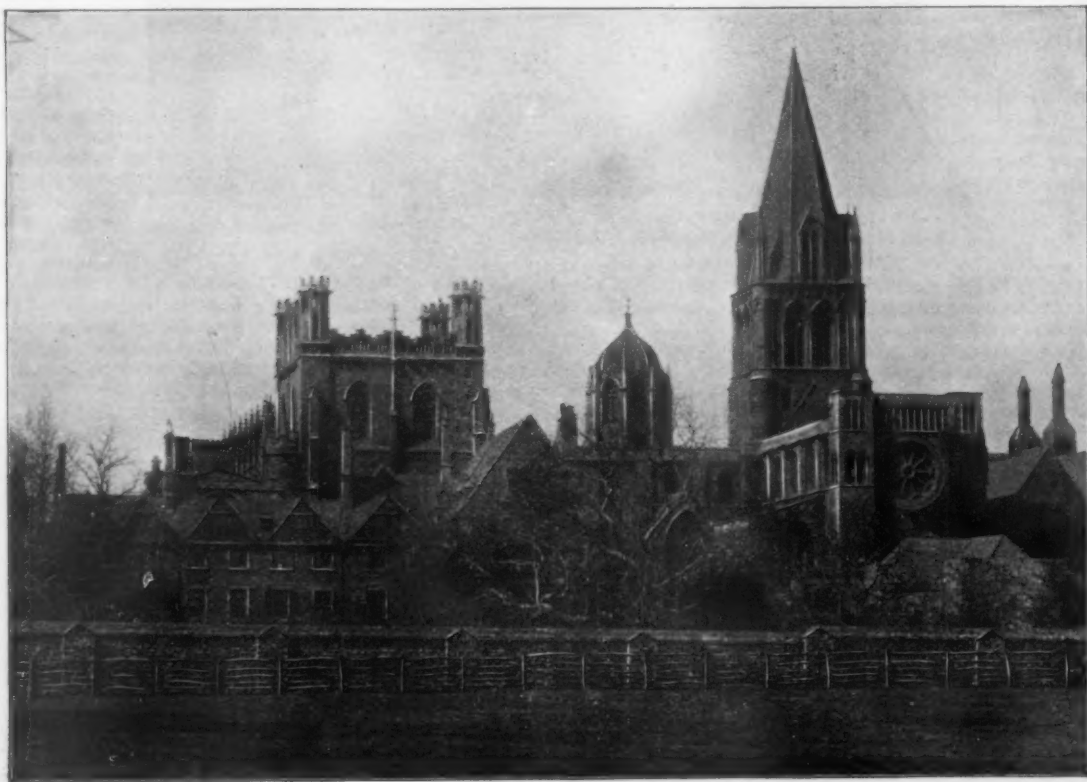
We were unusually fortunate in having only a few days of bad weather, so that engagements made with hotels were kept without a break throughout the entire trip. Good hotel accommodations for a party of twenty-two can be obtained in few towns without due warning of from two to ten days, but the advance letters sent to all hotels from America, and the telegrams despatched a few days before our arrival, not only secured as comfortable quarters as could be had, but also insured much lower rates than the regular charges for transient guests. It was not possible, however, to obtain room for the entire party on one steamer, so the first section sailed from Boston June 3, on the Leyland freighter "*Cestrian*," and the second section June 6, on the "*Gallia*," of the Cunard Line.

Both parties travelled by rail to London (where the actual wheeling tour began), and Liverpool, Chester, Shrewsbury and Oxford

tramped about the streets for some time before finding a place that could furnish us with a good lunch, as the "Hop Pole," "Green Dragon" and other taverns could find no room for us at their tables. Finally, to the tune of three shillings sixpence each, we obtained an excellent lunch at the "Grosvenor," the best hotel in the city.

Shrewsbury, also, possesses much of its old-time half-timber architecture, which, however, does not offend by the presence of too much fresh paint, and, therefore, seems older and more attractive than the more ambitious buildings of Chester. In the Butchers' Row and Wyle Cop many old wooden houses are still standing, but the demand for modern improvements has caused the loss of some of the old landmarks. One of the best preserved buildings, now kept in good condition by the city, is the Council House, just off the High Street at the entrance to the town walls. One half of the lower story is taken up by the passageway to the court in the rear; the remaining half of the front is at present ornamented with half-timbered work painted on the plain brick wall. The upper story is, however, of honest construction. The richly carved dormers are unusually large for so small a building, but are strongly framed into the wall below.

The hill on which the old town is built is surrounded on three sides by the picturesque Severn, and along its shores the great rows of lime trees form promenades that far excel those of the famous English gardens at Rambouillet, or any others that I have seen of



Christ Church Cathedral, Oxford, from Merton Fields.

were visited on the way. The old towns of Chester and Shrewsbury were exceedingly attractive to us after the long journey across the Atlantic, but as our bicycle tour, the real journey, began at London, I shall only briefly mention a few of their interesting buildings and sights.

Every one visits Chester, and the city is so accustomed to receiving Americans that its ancient buildings have a prosperous and ready-for-visitors air that suggested the intentionally picturesque appearance of the World's Fair Plaisance. It being Sunday, we seemed to meet all the young people of the town during our morning walk around the walls, and through the Rows of the Eastgate and Westgate streets, but in the afternoon the beautiful choral service in the Cathedral gave us an entirely different impression of the modern life of the little city.

Chester is fortunate in possessing a remarkably effective, although not very large cathedral, that combines all the English styles from Norman to late Perpendicular Gothic. As restored by Sir Gilbert Scott and Mr. Blomfield, the interior of the early Decorated choir is certainly the richest and most attractive part. The Church of St. John, outside the city, is an impressive example of Norman work, although through the fall of the towers in the fifteenth and sixteenth centuries, little more than the nave now remains of the eleventh-century church. The nave walls are still carried by the massive circular piers and arches, while the triforium shows transitional Norman work that is almost Early English in style. At Chester we

similar character. We were comfortably housed at the "George," and after our evening tramp through the old part of the town, were well satisfied that our quarters were quite superior to those offered by either the "String of Horses Inn" or the "Headless Woman," although these houses displayed signs of far greater antiquity.

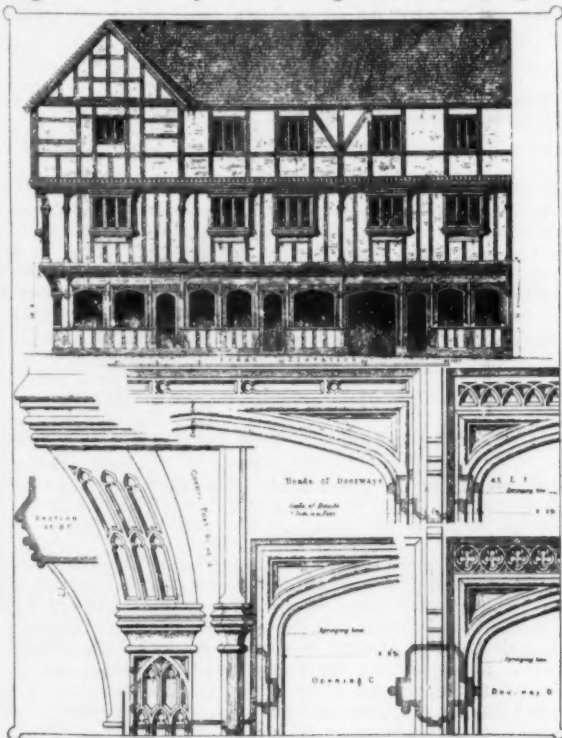
At Oxford, all the students were particularly charmed by the quiet dignity of the college buildings, but our short stay only gave us a glimpse of the outward side of English college life. We did, indeed, see the interior of Christ Church Hall and Cathedral, climbed to the roof of the Radcliffe Library and looked into the quadrangles of many of the colleges. We then spent a short time in the Divinity School and Convocation House under the guidance of a student who obtained the keys for us and talked about the ancient customs in a very interesting way, although his explanation of the five bastard orders used in one of the court-yard motives caused many quiet smiles. Then came the perplexing time of parting, when to our surprise a two-shilling piece was accepted without any hesitation whatever. After making the most of our short five hours' stay in the beautiful college town we were glad to obtain a needed rest in the quiet "Grounds" of Magdalen College, before taking, with many regrets, the afternoon train for London.

Meanwhile, our American bicycles were awaiting us at London, for they had been collected and shipped from Boston about one week before our own departure. Forwarded directly to London by the "*Borderer*," of the Furness Line, they arrived in good season, and

were delivered at our hotel in perfect condition. Much trouble was avoided and a small sum was saved by this arrangement, for the passenger steamers charge a uniform rate of \$2.50 for each bicycle carried across the Atlantic, while for our party the cost of collection at Boston, steamer freight and delivery in London, was eight shillings ninepence for each machine. After five days of interesting but tiresome sight-seeing in London, the bicycles were unpacked and put together. Bundles of wearing apparel, drawing and photographic materials were then securely strapped on, and all was ready for the start.

The morning of the 19th saw the party on board one of the Thames steamers en route for Putney. Making an early start from the "Covent Garden Hotel," we dodged across the Strand, at that time covered with slippery mud, and passing down Carting Lane were at once on the Thames embankment quite near Cleopatra's Needle. London does not begin business at an early hour, so we were fortunate enough to escape its crowded streets and reach the wide embankment road without delay or mishap.

Permission to carry our bicycles on the river boats had been obtained from the officials of the steamboat line, at the dingy central office near London Bridge, after a trial of patience and considerable haggling as to fares. The charges were ridiculously cheap after all, but the demand for three fares for each man and bicycle caused discussion, to say the least. We finally compromised on sixpence for each man, the regular fare, and ninepence for each bicycle. Taking the first boat up river at Hungerford Pier, Charing Cross,



Butchers' Row, Shrewsbury, Eng. From the Builder.

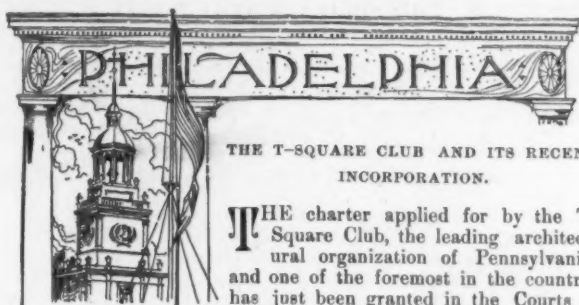
at nine o'clock, we soon passed Westminster Bridge, the great Houses of Parliament, and bridge after bridge, until, about eleven o'clock, Putney was reached.

This proved to be a good way of leaving the city, as the busy London streets were avoided, and we began riding in comparatively open country. All were in the best of spirits, glad to be with our wheels again after the voyage from America, and glad to be beginning the real journey a wheel. Miles of unexplored country seemed to open before us and all were anxious to be bowling along the famous English roads.

E. B. HOMER.

[To be continued.]

FAILURE OF NATURAL-GAS SUPPLY.—Uneasiness has been caused among the manufacturing concerns which flocked a few years ago to the natural-gas belt of Indiana by a recent report of the geologist of that State. The statement in this report that during last year the gas pressure declined twenty pounds on an average all over the 2,500 square miles of the field would indicate that the supply is failing very fast, and that manufacturing plants, which are large consumers, cannot be multiplied without hastening the day of complete exhaustion. In this respect the history of the Indiana oil-field will be a repetition of the history of fields previously exploited. The supply is failing everywhere, and few rich finds are rewarding the explorers. As to whether the supply will ever be renewed, geologists differ. It is held by some that the production of gas is a continuous process, as the petroleum constantly oozes from the oil-bearing strata to come in contact with the heated strata which converts it into gas. The Indiana geologist believes, however, that gas production is an action already completed, and that when the gas fails it is gone forever.—N. Y. Evening Post.



THE T-SQUARE CLUB AND ITS RECENT INCORPORATION.

THE charter applied for by the T-Square Club, the leading architectural organization of Pennsylvania, and one of the foremost in the country, has just been granted in the Courts of Philadelphia, and the Club is, therefore, duly incorporated under the laws of the State of Pennsylvania.

Although but now entering upon its corporate existence, this Club has been an energetic organization and a moving factor in the field of its profession for the past fourteen years, having been organized in 1883. The following well-known architects were the founders: Walter Cope, John Stewardson, Wilson Eyre, Jr., R. G. Kennedy, Lindley Johnson, Arthur Truscott, George Paxson, Charles L. Hillman, Clement Remington, Frank Price, Louis C. Baker and Mr. Carlton.

The purposes of the Club as set forth in the charter and in its Constitution are, "To promote the study and practice of architecture and the kindred arts, to afford its members opportunities for friendly competition in design, and to further the appreciation of architecture by the public." The subscribers to the charter, who constitute the present officers of the Club, all of whom are well-known Philadelphia architects or draughtsmen are: David Knickerbocker Boyd, President; Edgar V. Seeler, Vice-President; George B. Page, Secretary; Horace H. Burrell, Treasurer; Walter Cope, Louis C. Hickman and Charles Z. Klauder, Executive Committee; and Adin B. Lacey, Percy Ash and Charles E. Oelschlager, House Committee.

The T-Square Club has made its influence felt in various municipal and national affairs; has passed important resolutions on progressive, local and other matters, and last fall conducted the architectural exhibition in connection with the regular exhibition of painting and sculpture at the Pennsylvania Academy of Fine-Arts. This exhibition was one of the most successful ever held there or elsewhere, being the first in America to contain so many thoroughly representative contributions from foreign architects.

This fall will again see an architectural exhibition held by this Club, which it is intended shall surpass any previous one, both in the number and the interest of the exhibits. Representatives of the Club are now in England and France securing the best drawings, and a number of exhibits are promised from other countries.

The Club has also sent Mr. Albert Kelsey to represent it at the International Congress of Architects to be held in Brussels, Belgium, in the latter part of this August.

The Travelling-Scholarship in Architecture, awarded by the University of Pennsylvania, has for the past several years been won in each case by a member of the T-Square Club.

This Club in 1889 was awarded the Hinkle Gold Medal for the best Club display at the National Exhibit of Architectural Drawings and Sketches at Cincinnati, and in 1895 was also awarded the medal given by the St. Louis Architectural Club for the best Club exhibit.

The T-Square Club with the University of Pennsylvania, the Pennsylvania Academy of the Fine-Arts, the Fine-Arts League, the American Institute of Architects and other leading organizations, cooperate in all movements for the advancement of art and art matters, whether of local or national interest or benefit.

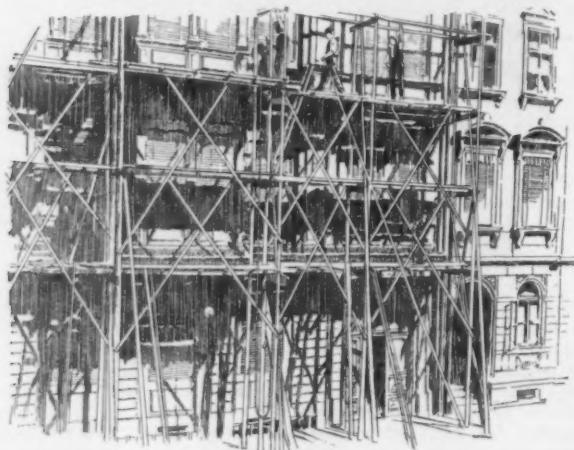
The Club meets once a month and at each meeting has interesting competitions among its members upon architectural and decorative subjects. At various times lectures are given, open to all members of the profession and the season is occasionally marked by social entertainments. The Club consists of 150 members, and numbers among its workers all the leading architects of Philadelphia. These men by their lectures and criticisms at the meetings, give an invaluable assistance to the draughtsmen and younger members, who unite with them in an *esprit-de-corps* so essential to the advancement of this or any other profession or high object.

The Club, having recently removed from the School of Industrial Arts Building, is contemplating the occupation of a building in the central part of Philadelphia which it proposes to fit up for its own uses. Here it will still further increase its usefulness and continue to widen its scope of influence. An idea of its energetic policy may be obtained by the following extract from the introduction to this year's book of programmes for the competitions:

"Our membership is large. The scope of our work and influence is extending. We have reached a position which carries with it a responsibility to the community.

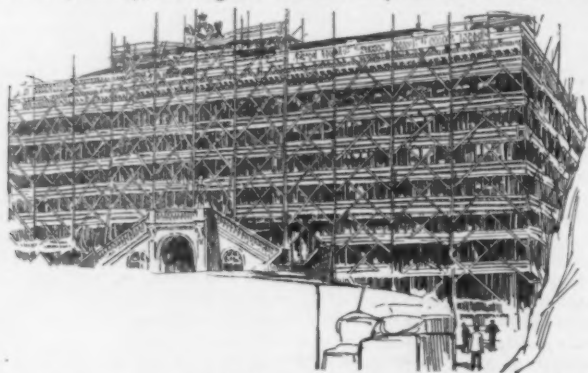
"A high standard of design and criticism among ourselves and an enthusiastic participation in the monthly competitions will be not only of direct benefit to the individual members, but will enable us to take an aggressive attitude as an organization in the struggle against bad architecture."

THE "OLD COUNTRY" WAY.



WHEN the average German painter or plasterer has a façade to re-paint or to mend up, he lays under contribution a pine forest, a railway, several heavy wagons, a small army of laborers, and a blacksmith shop. Then he proceeds to set the forest up anew against the face of the building, in the shape of a complex scaffolding, braced endwise and crosswise and dogged together so that nothing short of a cyclone could move it. The scaffolding is usually made by setting tall "Kiefer" trunks (with the bark on, except on the lower six feet or so) upright, butts down, against the face of the building; then about four feet out from the building, another set, also vertical; then about three feet from these last poles, another set, inclined inwards so that their tips cross the second set near the tips of the latter. These poles, in sets of three, two verticals and a brace, are fastened together at least once, and sometimes twice, in every story, by six-inch boards well spiked on, and there are cross-bearings across the threes and between the threes. Then there are three to five six-inch boards nailed on along the outer set of verticals to form a railing or fence; and a floor is laid at each story. This being done, and the building being well-nigh indistinguishable, the painters or the plasterers, as the case may be, are ready to work—at least after all the principal members of the structure have been well dogged together by dog-irons at every opportunity for driving them. Where the building is taller than the poles, these are lengthened by lapping; but in this case the scaffold has more "spread" from the face of the wall. The whole is usually kept from tipping over outwards by its surrounding the whole building at once; but where this is not the case, numerous holdfasts avert a catastrophe to the workmen and to passers-by.

To show that this description is not exaggerated, I enclose a "snapshot" photograph made from the top of a Georg-Platz street-car in Dresden, Saxony, showing the Johanneum (a museum of armor and



porcelain, etc.) undergoing its regular "prettifying" where the mastic has got cracked; also one of a private house getting ready for painting.



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

THE COLT MEMORIAL BUILDING, HARTFORD, CONN. MR. EDWARD T. POTTER, ARCHITECT, NEWPORT, R. I.

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

THIS curious building, which we understand seeks to typify in its design the favorite occupation of the man whose memory it perpetuates, has been erected by his mother to the memory of Caldwell H. Colt, a yachtsman of some notoriety.

DETAIL OF THE ATRIUM OF THE PALAZZO MASSIMI, ROME, ITALY.
BALDASSARE PERUZZI, ARCHITECT.

HOUSE OF JULIUS N. JAROS, ESQ., WEST END AVENUE, NEW YORK, N. Y. MR. R. L. DAUS, ARCHITECT, BROOKLYN, N. Y.

ENTRANCE TO THE PICCOLOMINI LIBRARY, SIENA CATHEDRAL, ITALY.

THIS view shows the entrance from the Cathedral to the "Libreria," built by Pius III when Cardinal Piccolomini, to contain the magnificent choir-books of the Cathedral, these being almost the most sumptuously illuminated works in the world. The entrance here shown was the work of Lorenzo Marrina, and the interior of the library shows a series of ten frescos by Pinturricchio, who was assisted by the youthful Raphael.

CHOIR OF CHRIST CHURCH CATHEDRAL, OXFORD, ENG.

THIS smallest of English cathedrals is also one of the most interesting, as it brings into close juxtaposition some excellent Norman work and the elaborate fan-vaulting of the choir. The choir was restored in 1856 by Mr. Billings, and later, about 1874, by Mr. G. G. Scott.

BUTCHERS' ROW AND WYLE COP, SHREWSBURY, ENG.

SEE the article "An Architectural 'Summer School' Abroad" elsewhere in this issue.

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

CATHEDRAL OF ST. WERBERGH, CHESTER, ENG.

THIS one of the smaller of the English cathedrals, from its close proximity to Liverpool, better known to American travellers than any other, has been so thoroughly "restored" by George Gilbert Scott as to have lost a good deal of its former reputation for picturesque-ness. It is here reproduced in connection with the article "An Architectural 'Summer School' Abroad," elsewhere in this issue.

KÖNIGLICHE HOFBRAUHAUS, MUNICH, BAVARIA. K. E. WEYSER, ARCHITECT.

[Additional Illustrations in the International Edition.]

THE KAMMERZELL RESIDENCE, MÜNSTERPLATZ, STRASBURG, ALSACE.

[Gelatin Print.]

AMONG the numerous old dwellings which add to the older quarters of Strasburg their quaint appearance, stands foremost the so-called "Kammerzell-Haus," occupying a prominent site at a corner of the Cathedral Square. It does not bear its name rightfully, for, not until 1806 did it come into the possession of the Kammerzell family. It was built for one Martin Braun, a merchant, who in 1589 tore down the original upper stories and placed upon the stone-arched bottom story, dating from 1467, the three-storied half-timbered structure with its remarkable and costly wood-carvings as we see it to-day. In 1879, the city-authorities purchased the building to keep it from falling into the hands of building speculators, who would eagerly have replaced it by a modern business structure.

MAIN FRONT OF THE HOTEL JEFFERSON, RICHMOND, VA. MESSRS. CARRÈRE & HASTINGS, ARCHITECTS, NEW YORK, N. Y.

[Gelatin Print.]

CANTERBURY CATHEDRAL.

SOUTH TRANSEPT CHOIR, CANTERBURY CATHEDRAL.



[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.]

CONCRETE IN FIREPROOF FLOORS.

BOSTON, July 20, 1897.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—In your issue of June 26th is a communication signed by Henry Maurer & Son, of New York, entitled "Fireproofing at the Pittsburgh Fire," in which they discuss the relative merits of terra-cotta tiles and concrete as materials for fireproof floors.

In closing their argument, they say: "Desiring to furnish further light on the subject of fireproofing material for the benefit of the layman, we will endeavor to explain what concrete, such as is used in the manufacture of floors, is, and also the manufacture of so-called terra-cotta." They add that having been manufacturers of terra-cotta for many years, they may claim some knowledge of the subject; which claim is justified by a clear explanation of the composition and qualities of this material; but, as to concrete, considerable "further light" appears desirable.

The authors of the communication referred to apparently believe that the fire-resisting power of concrete, as used in the manufacture of fireproof floors, was determined in 1896, by some experiments made by Mr. J. S. Dobie, at the School of Practical Science, Toronto, Canada, an account of which they quote from the files of the *Architect and Contract Reporter*, London, under the heading "Concrete."

These tests consisted in heating a number of small briquettes of sand and cement in a furnace, cooling them in air or water, and afterward determining their tensile strength in a testing machine. As might be expected, "the result showed a marked decrease in the tensile strength," varying according to the temperature and the time of exposure to the fire.

The final conclusion drawn from these experiments by their author is, that "The great advantages possessed by cement, or concrete, as a protecting material, are entirely offset by the fact that it loses its strength under heat, and is ruined by water applied during a fire, and will disintegrate after a fire, if not during the fire itself."

Those who are familiar with the composition and application of concrete in modern building construction will take these quoted statements at their true value; but, to the "layman," for whom the authors of the communication are especially solicitous to furnish light, they are misleading, for several reasons.

First, he is left to infer that the mixtures experimented on fairly represent "concrete, such as is used in the manufacture of floors"; whereas no one but a layman needs to be reminded, that while neat Portland cement is one thing, and cement-mortar, or cement and sand, is another thing, rock-concrete is a third, and "concrete, such as is used in the manufacture of floors" in fireproof buildings to-day, is still another and quite different thing. The chief ingredient of the latter, as is well known, is furnace cinders, the cement serving only as a filling and binding material,—the same binding material, indeed, as is used in laying terra-cotta tiles, under the building laws of New York. When combined with the cinder, however, the cement does not lose its coherence by exposure to fire, as it does when used alone, or as mortar in the joints of brickwork.

The tests made by the Hamburg Commission, who have carried out the most elaborate investigations ever made into the fire-resisting properties of concrete mixtures, show this very conclusively. Their tests were made upon actual concrete, and consisted in exposing it to fire at a temperature of about 2,000° Fahr. for several hours, and cooling it suddenly with water. An abstract of their report, which was issued in 1895, may be found in Johnson's "Materials of Construction," page 625. The report shows that while all the sand and rock mixtures, with one exception, either crumbled or showed greatly reduced coherence after the test, the cinder concretes, in the language of the report, "showed good coherence," and "did not suffer" by wetting while hot. In this respect the endurance of these concretes exceeded that of bricks laid in cement-mortar, as the report states that, under the same test, "some bricks cracked" and the mortar became "very tender, and lost its binding power."

These tests would be sufficient, even if they were not supported, as they are, by many subsequent ones, to show that the effect of fire and water on the coherence, or tensile strength, of "concrete such as is used in the manufacture of floors," is less injurious than might be inferred from Mr. Dobie's tests on cement briquettes.

Another fact that the Messrs. Maurer do not mention in their references to the tensile strength of concrete, and which may not be known to all laymen, is that concrete, in good building construction, is never used in tension, its comparative weakness to resist tensile stress, whether exposed to fire or not, being thoroughly recognized by intelligent builders, who depend upon steel, imbedded in and protected by the concrete, preferably in the form of a continuous steel mesh, to furnish the binding power that may be required.

To enlighten the layman as to what may be expected of concrete floors as actually built to-day, the Messrs. Maurer need not have delved into the files of foreign journals, or the archives of Canadian Schools,—need not have gone even as far as Pittsburgh, and labored to show why the concrete floors which came uninjured through that fire did not follow the law which they ought to have followed, and "disintegrate,"—indeed, they need not have looked further than their own city.

Probably they have not read any of the reports published in scientific newspapers of the tests made upon concrete floors in New York, under the supervision of the Building Department. In one of these, for example, a four-inch slab of cinder concrete, furnished with a steel-mesh binder of expanded metal, and loaded with pig-iron to 150 pounds per square foot on a span of 4 feet, withstood for five hours a fire test in which the average registered temperature exceeded 2,000° Fahr. It was then suddenly cooled by a stream of water at 60 pounds pressure from a fire-engine, directed against the under side of the floor for fifteen minutes, and then poured on the top of the floor until it was flooded. Inconsistent as it may appear with the rule laid down by the Messrs. Maurer, this floor, instead of

promptly "disintegrating," or collapsing under its load, recovered one-half of the deflection which it had suffered while heated. The *Engineering News* of April 22, 1897, commenting on this test, says, "The result of the test was eminently satisfactory, and is additional evidence of the great resisting qualities of concrete floor construction, which has already been shown by the tests heretofore described in these columns."

Mr. Gus C. Henning, the expert engineer employed by the New York Building Department, who personally conducted the tests referred to, mentions tests on six different concrete constructions, and four of tile, and says, in *Engineering News* of July 1, "The sum and substance of results of all these official tests is this:

"Concrete floors resist all temperatures obtainable in ordinary conflagrations, and are not materially weakened by such fires; tile floors, of whatever construction or make, fail and are destroyed by temperatures slightly above those at which the clay of which the tile is made was baked or burned (or 2,000° Fahr. and above)."

To return once more to the Pittsburgh fire, I will trespass further upon your valuable space only to quote from one other report of competent and disinterested engineers, which bears directly on the point at issue, to wit, the report of the Board of Engineers appointed by the Committee of Insurance Adjusters to report upon the damage to buildings by that fire. This Board consisted of Messrs. Gustav Kaufman, C. E., Consulting and Contracting Engineer; Emil Swenson, C. E., General Superintendent of Keystone Bridge Works; and F. L. Garlinghouse, C. E., Chief Structural Engineer, Jones & Laughlins. Their report may be found in full in a supplement to the *Insurance World* of July 1. Referring to the lessons taught by the fire in the Horne Buildings, they say: "In view of these important developments, it is our opinion that important structures of this class should have a radically different method of fireproofing. The fireproofing should be, in itself, strong and able to resist severe shocks, and should, if possible, be able to prevent the expansion of steel work. There seems to be but one material that is now known that could be utilized to accomplish these results, and that is, first-class concrete."

Yours truly, HORACE B. GALE, Consulting Engineer.

NEW YORK, N. Y., July 1, 1897.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—For the benefit of those who might not have made a special study of fireproof construction and who may be misled by the conflicting opinions that have recently appeared in your journal, we desire to make a few simple statements. These statements are based, not upon miniature samples of materials tested in laboratories, but upon a great number of public and private tests conducted on a scale of sufficient magnitude to be of practical value. We have gone into this subject thoroughly and have the records and data of actual tests to substantiate our statements.

1. All forms of hollow brick obtainable on the market at the present time, made from burnt fire-clay, if heated to a temperature of 2,100° to 2,400°, on being quenched with a fire-stream at 60 pounds pressure will be seriously and permanently injured. The surfaces in contact with the fire-stream will crack and break away, and if the floors are flooded from on top while heated, the joints between the blocks will in many cases become loose and the continuity of the arch will be lost, the dense tile material being more easily injured than the porous terra-cotta.

2. The protection of exposed iron by a thin lug or a slab in contact with the iron surface is almost valueless. A hot fire soon heats such a thin protection to the same temperature as the fire, and the heat is transmitted directly, by contact, to the iron. An air-space should in all cases be provided between the iron and the protecting material.

3. Concrete floors as erected by reputable concerns, in which the concrete is porous and consists principally of first-class steam ashes and high grade Portland cement, when heated to temperatures of 2,100° to 2,400°, will not crack or be permanently injured if quenched with a fire-stream at 60 pounds pressure, nor will the arches be in any way injured by flooding the floors while heated.

Respectfully submitted, JOHN A. ROEBLING'S SONS CO.

NOTES AND CLIPPINGS

THOMAS BALL AND HIS WORK.—Mr. Thomas Ball, the sculptor, who has resided in Florence, Italy, for the last thirty years, has returned to America, and intends to spend the rest of his life in New York. Mr. Ball, although in his 79th year, is still full of vigor and enthusiasm, and does not consider his career finished, by any means. He is a native of Boston, where several of his works may be seen—namely bronze figures of Charles Sumner and Josiah Quincy, his marble statue of John A. Andrew, and his equestrian statue of Washington. He is represented in Central Park by his colossal bronze of Webster. Washington has his "Lincoln Freeing the Slave." He also made the bronze figure of P. T. Barnum for Bridgeport, and that of Edwin Forrest for the Forrest Home, near Philadelphia. During the last seven years Mr. Ball has been at work on a Washington monument for Mr. Edward F. Searles, who intends to present it to Methuen, Mass., his native town. It is to be put in place some time this year. "The figure of Washington," Mr. Ball said to-day, "is alone 15 feet

high. The father of his country is shown with his military cloak wrapped around him, his left hand on his sword, and his right extended over a female figure representing 'Oppression' — young Columbia, fettered. Around the monument are three companion figures — 'Revolution,' an almost nude male, bearing a drawn sword; 'Victory,' a female, with a wreath in one hand and branches of palm and oak in the other, and lastly 'Cincinnatus,' seated on his plough, as a suggestive supplement. Between these emblematic figures and that of Washington are busts of four of his favorite generals — Lafayette, Lincoln, Greene and Knox. All of the figures are of bronze; the column itself is of marble." Mr. Ball remarked that, although he has spent much of his life abroad, he quiets his patriotic conscience with the thought he has devoted eleven of those years to helping perpetuate the memory of Washington. He hopes soon to exhibit some of his ideal work, especially his "Eve" and "St John," both in marble. — *Boston Herald.*

EXPOSURE TO FIRE OF SOUTH KENSINGTON MUSEUM. — Genuine alarm has been caused in England by the report of a special committee of the House of Commons on the imminent peril from fire to which the priceless artistic treasures in the South Kensington Museum are exposed. The report sets forth that there are a number of old buildings, built of wood and lath and plaster, and in some instances covered with tarred felt, in close proximity to the modern permanent buildings which contain the bulk of these collections; and the danger has been aggravated by the erection of large temporary buildings constructed of fir framing, covered on the outside with iron, but lined internally with varnished match-boarding. The roofs of the galleries in which the Sheepshanks and Jones collections, the Chantrey bequest, the Watercolor Gallery, and the Dyce and Forster collections are housed, are constructed mainly of unsuitable timber, and are especially open to fire damage, from the fact of having wood-lanterns, skylights, and open sidelights. Opposite the Raphael Cartoon Gallery there is a staircase with a wooden roof and wooden stairs and partitions. In one of the eastern picture-galleries there is a door which opens into a wooden staircase leading to the roof, with a large amount of wood partitioning. These would, in the event of fire in other parts of the premises, be sources of imminent danger. The art schools, which adjoin these galleries, are described as peculiarly dangerous. The private residences of the officers of the department, near the galleries, are a further source of danger. The whole of the floors are of wood, the partitions running up and dividing the upper stories are of wood, the staircases are of wood, and the roofs are also of wood. The party-walls have not been carried through the roof, and there are eighty-one open fireplaces. The entrance to the southern galleries on the west side of the Exhibition Road is another highly dangerous structure, timber framed, weather-boarded, and covered with tarred felt. The southern galleries themselves are of light construction, are open from end to end, and would fall an easy prey to any fire that was started. — *N. Y. Evening Post.*

THE TOPOGRAPHY OF MANHATTAN ISLAND. — It is only when, in digging deep the foundations of a new building, the presence of quicksand, a creek, or a flowing spring, suggests some of the old topographical features of the island that New Yorkers are reminded of what a very rugged and irregular piece of land their city was built on. The whole island has been in the shovel at one time or another, either to cut down or to fill up the surface. As nature left it, the upper part of the island was long ago described as rocky and covered by a dense forest; the lower part, grassy and rich in wild fruit and flowers. Grapes and strawberries grew in abundance in the fields, and nuts of various kinds were plentiful in the forests, which were also filled with an abundance of game. The brooks and ponds swarmed with fish, and the soil was of luxuriant fertility. Near the present city-prison, whose new foundations promise to give no little trouble to the contractors, there was a deep, clear and beautiful pond of fresh water (with a picturesque little island in the middle), "so deep, indeed, that it could have floated the largest ship in our Navy." This was fed by springs at the bottom, which kept its waters fresh and flowing, and had its outlet in a little stream which flowed into the East River at the foot of James Street. Smaller ponds dotted the island in various places, and an unbroken chain of water stretched across the island from James Street at the southeast to Canal Street at the northwest. An inlet occupied the place of Broad Street; a marsh covered the vicinity of Ferry Street; Rutgers Street formed the centre of another marsh, and a long line of meadows and swamp ground stretched to the northward along the eastern shore. "The highest line of lands lay along Broadway from the Battery to the most northerly part of the island, forming its backbone and sloping gradually to the east and west. On the corner of Grand Street and Broadway was a hill commanding a view of the whole island, and falling off gradually to the fresh-water pond." — *N. Y. Times.*

THE PUPILS OF MECHANIC ARTS SCHOOL. — A table showing the occupation of the parents of the pupils in the Mechanic Arts School in St. Paul is significant in many respects. As might be expected, the largest number is of those designated as "wage-earners," men who are presumably familiar with their trades and who recognize the advantages, particularly to boys, in a practical knowledge of the principles which underlie all trades. The majority in the school, however, do not come from this class. While the wage-earners furnish 106 pupils, the salary-earners send 74, professional people 85, and business men 70. In the opinion of the *St. Paul Pioneer Press*, "the entire list is a forcible witness to the place which the school has already acquired in the regard of the public. It is not a school for any one class of pupils. It has been proved by experience, as shown in previous articles, to fit boys for mechanical positions far more thoroughly and scientifically than can be done in any other way. On the other hand, it is evidently the opinion of a large number of men and women occupied in professional and business pursuits that mechanical training is a valuable accompaniment of the preparation for any career."

AN INTERESTING STAIRCASE: — Having to apply to the architect of the building for the title of a cut used in one of our advertising pages this week, he sends us the following additional information, which strikes us as having a general interest for all our readers: "The staircase referred to is one of two similar ones, which were built at the Cadet Armory by Mr. Guastavino, leading from the basement to the first floor. We selected his method of doing them, instead of using iron staircases, for various reasons. He first cut out a course of brick, 4 inches deep, along the circular wall, following the proposed rise of the staircase. From this he built, on light supports, a tile soffit extending over to the rail-stringer, forming a sort of half vault, the rise being perhaps 2 inches or 3 inches. This was lined underneath with herring-bone glazed tile, and on top of the arch so formed, he built up the steps with common brick and cement. The stringer was made entirely of tiles, with iron sockets imbedded therein to carry the iron railing. The stair-post at the bottom was cast-iron: the treads were slate, and the risers made of his glazed tile. He also formed a close wall-stringer of glazed tile. The staircase landed at the top against an iron beam, and to make a finish, he subsequently built beneath it on a light centre, the segment arch, which shows in the cut. These staircases are, I believe, the first ones ever constructed of similar material, and of like form. They proved very satisfactory; they are very appropriate to their position, and I think showed much ingenuity and skill in working with that peculiar material."

A REVOLVING TOWER — A revolving observation-tower, of which Mr. T. Warwick, of Leamington Road Villas, Bayswater, is the patentee, is being erected at Great Yarmouth in honor of the Queen's Jubilee. The design comprises a strong hexagonal steel tower, 150 feet high by 14 feet in diameter, surrounded by a circular structure or elevator. This latter is raised and lowered by means of four strong cables, each of which is capable of performing the work alone. On this elevator is a circular platform fitted with rollers, and intended to revolve upon the elevator. This platform is provided with revolving chairs accommodating upwards of 150 persons. While the elevator ascends and descends the tower, the platform revolves around it, thus affording an uninterrupted and unsurpassed view of the surrounding country. The elevator is operated by powerful engines, and the platform is propelled by an electric motor. — *Invention.*

THE CITY-HALL, PERTH AMBOY, N. J. — The City-hall is a historical building. It was erected by the English Colonial Government in 1767, for a town-hall and court-house, and within its massive brick walls many of the stirring appeals were made, and most important actions taken, which marked the stormy period of the Revolution. For many years it was used as a public school, and in 1871 was enlarged and altered by the city at considerable expense. It was here that the New Jersey Board of Proprietors celebrated, in 1884, the two hundredth anniversary of its existence. In 1888 the building was badly damaged by fire, but was rebuilt and has since been used for municipal purposes. — *Exchange.*

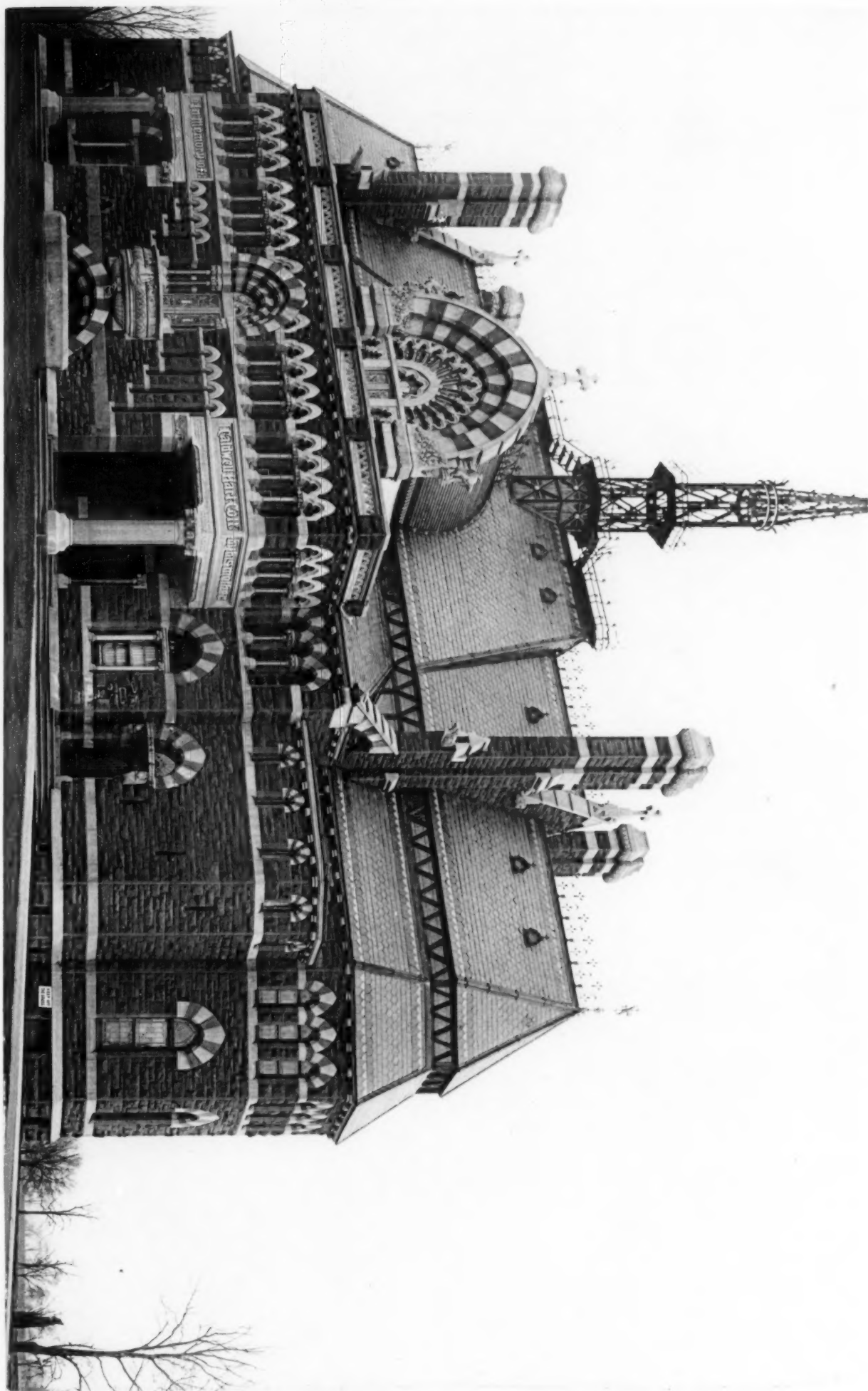
ANOTHER ANCIENT CITY IN MEXICO. — J. Ludwig Hebrahn, a German archaeologist, has arrived at Oaxaca, Mex., from an extensive exploration trip, covering six months, in the State of Chiapas, which abounds in evidences of a prehistoric race. He reports having discovered another ancient city, situated in the depths of a tropical forest, about sixty miles west of the Guatemalan border. He has with him a number of curious relics of the place, and states that he will go to Germany, where he will endeavor to enlist the services of the government in sending out an expedition to make a further exploration of the city and that section. The city is partly buried, and is covered with trees of large size and great age. — *Correspondence St. Louis Globe-Democrat.*

LUMBER IMPORTATIONS BEFORE THE NEW TARIFF. — Oswego has always been a great receiving point for lumber, but never before in her history has there been stored along her water-front the quantity now in sight. In anticipation of the Dingley prohibitive duty of \$2 per 1,000 feet, the large firms have been rushing in the great product from Canada, and it is no uncommon sight these days to see from ten to twenty steamers and schooners unloading cargoes at the docks. The yards of the Standard Oil Company are filled and vacant pasture-lands near by have been pressed into service as storage places. — *Correspondence Syracuse Standard.*

ONYX MINES IN ARIZONA. — The Eastern company, headed by Congressman Charles N. Fowler, of New Jersey, that lately purchased the famous O'Neil onyx mines, eighty miles north of Phoenix, Ariz., has had a large force of men at work rushing operations in anticipation of an added demand through the operation of the new tariff law, which places a prohibitory duty on Mexican onyx. Within the week the discovery has been made, at a depth never before attained, of a broad stratum of onyx of exceptional beauty and of the highest value. The owners are conferring with the Santa Fé Railroad for a branch road from Prescott. — *Exchange.*

THE VALUE OF LADY WALLACE'S GIFT. — Government experts have just completed their valuation of the pictures and art treasures of one kind and another bequeathed to the English nation by Lady Wallace, who during her lifetime was barred from presentation at Court and subjected to much unkindly ostracism by English society. The value is set down officially at the enormous sum of \$22,000,000. The Government has decided to keep the collection where it is — that is to say, in Hertford House, which the State is now about to acquire for the purpose. — *N. Y. Tribune.*

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THE CALDWELL H. COLT MEMORIAL, HARTFORD, CONN.

EDWARD T. POTTER, ARCHITECT

THE HELIOTYPE PRINTING CO., BOSTON



Blätter für Architektur.

Neumann & Co., Berlin.

THE KAMMERZELL-HAUS, MÜNSTERPLATZ, STRASBURG, GERMANY.



NEGATIVE BY H. H. SIDMAN, NEW YORK

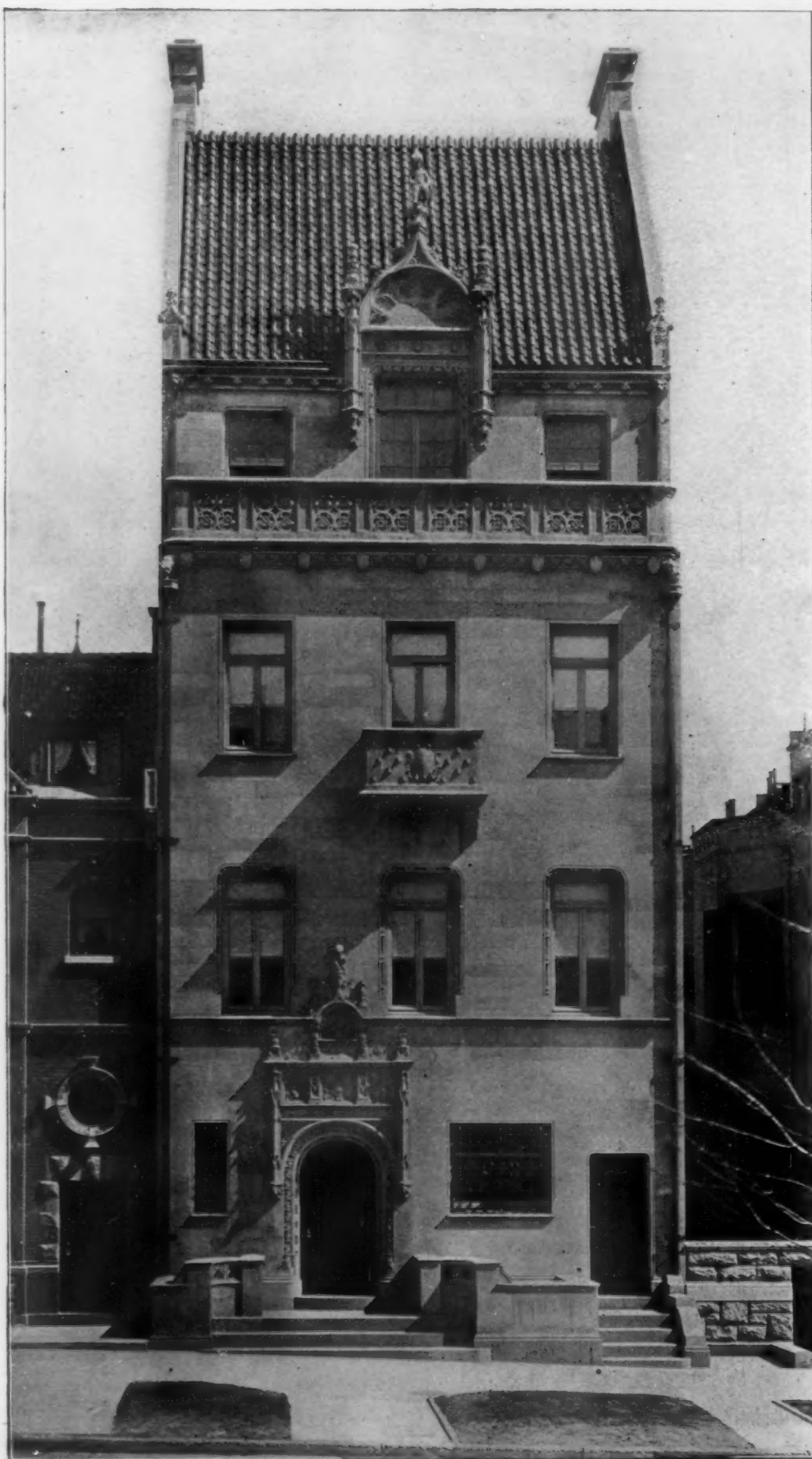
MAIN FRONT OF THE
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THE HELIOTYPE PRINTING CO., BOSTON

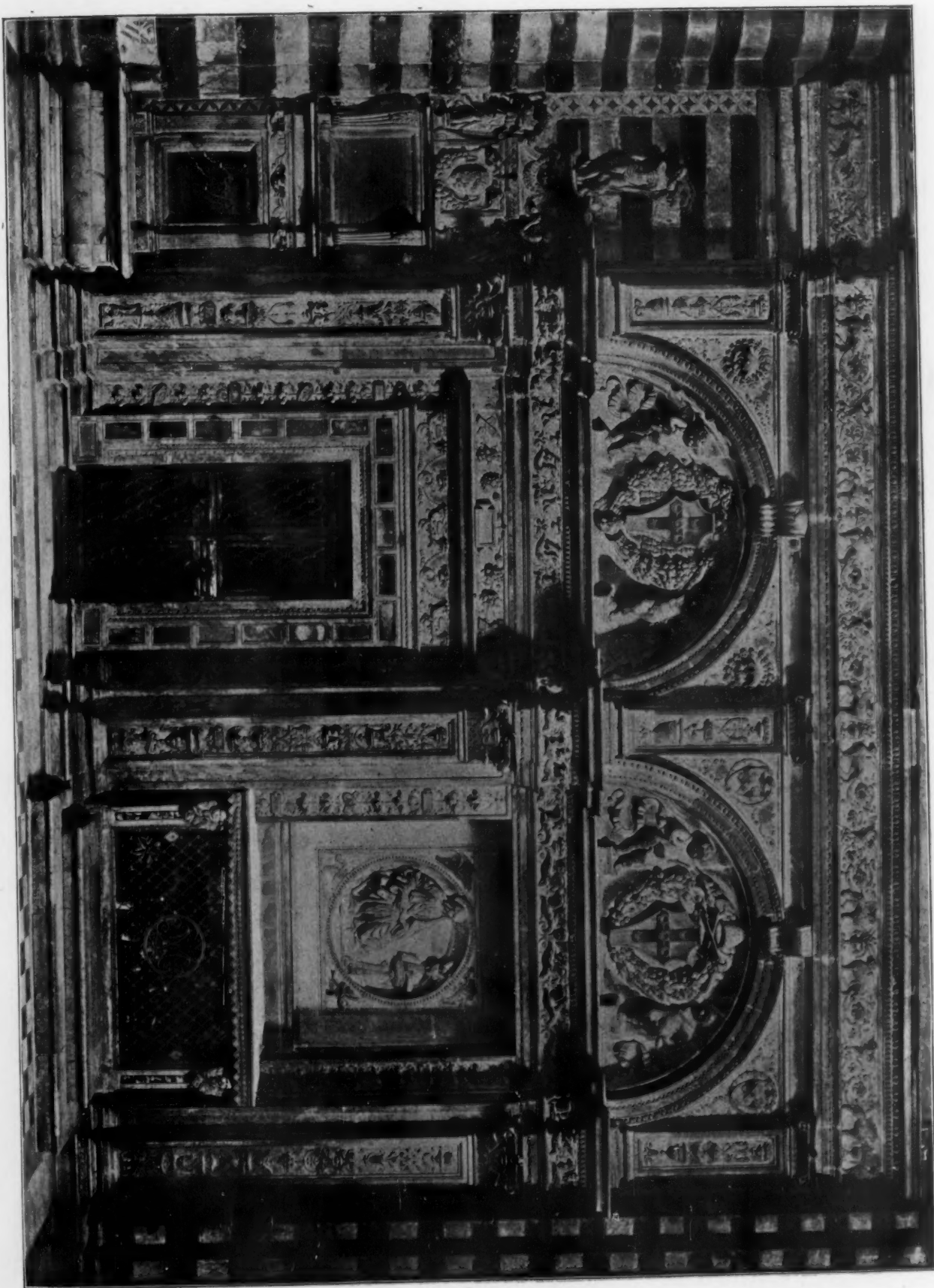
THE HOTEL JEFFERSON, RICHMOND, VA.

ARRÈRE & HASTINGS, Architects.



HOUSE OF JULIUS N. JAROS, ESQ., WEST END AVENUE, NEW YORK, N. Y.

R. L. DAUS, ARCHITECT.



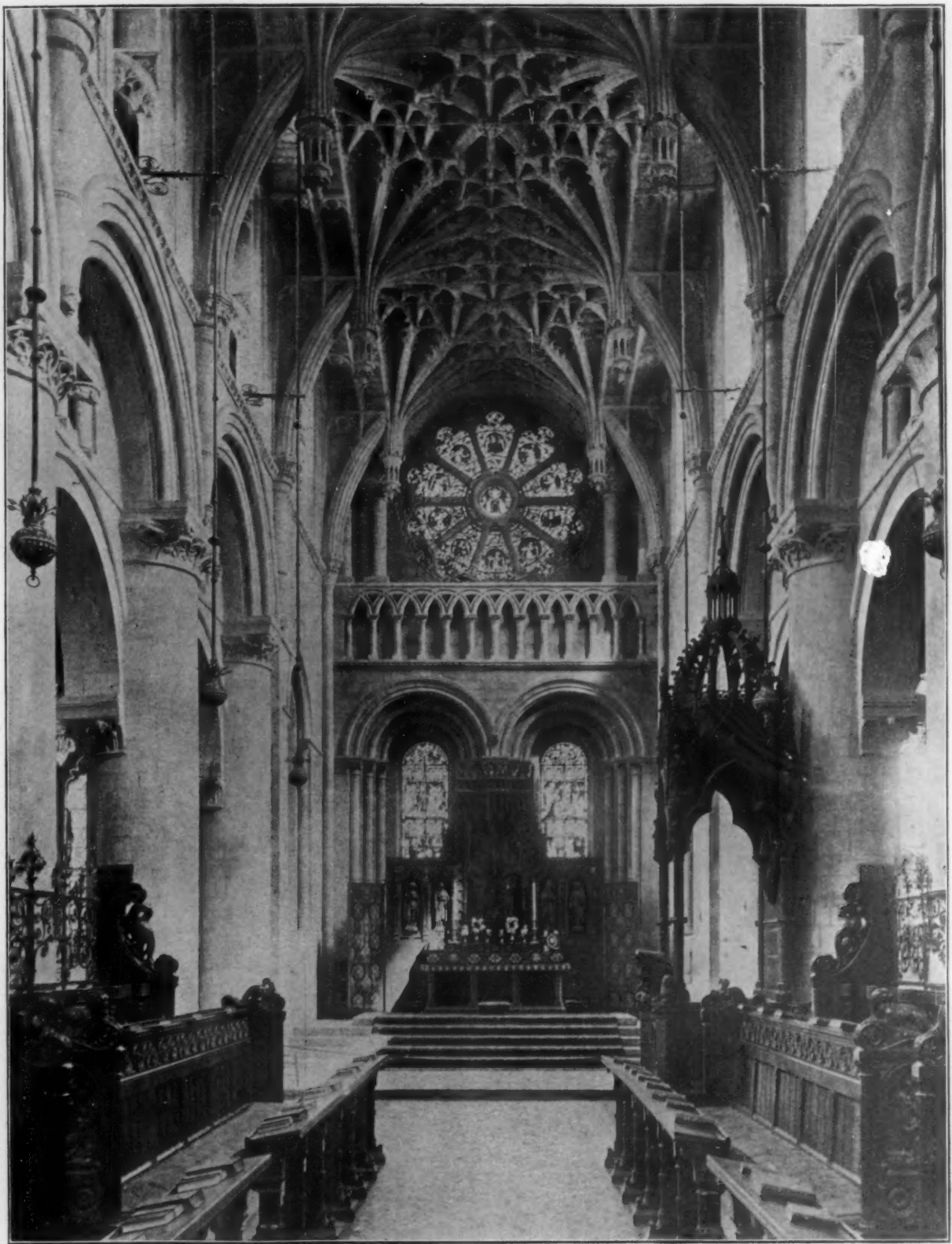
ENTRANCE TO THE PICCOLOMINI LIBRARY: SIENA CATHEDRAL, ITALY.



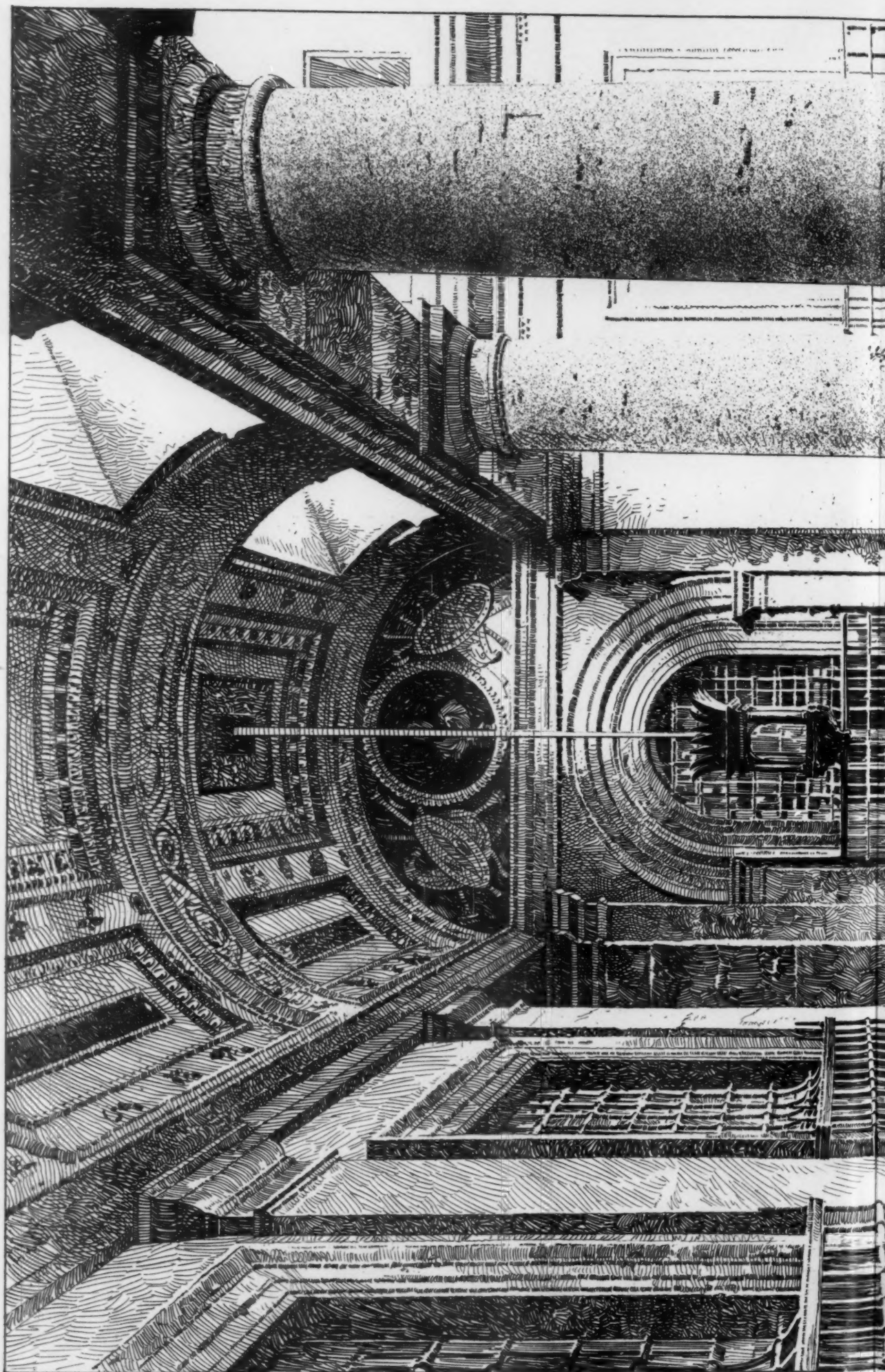
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WYLE COP, SHREWSBURY, ENGLAND.



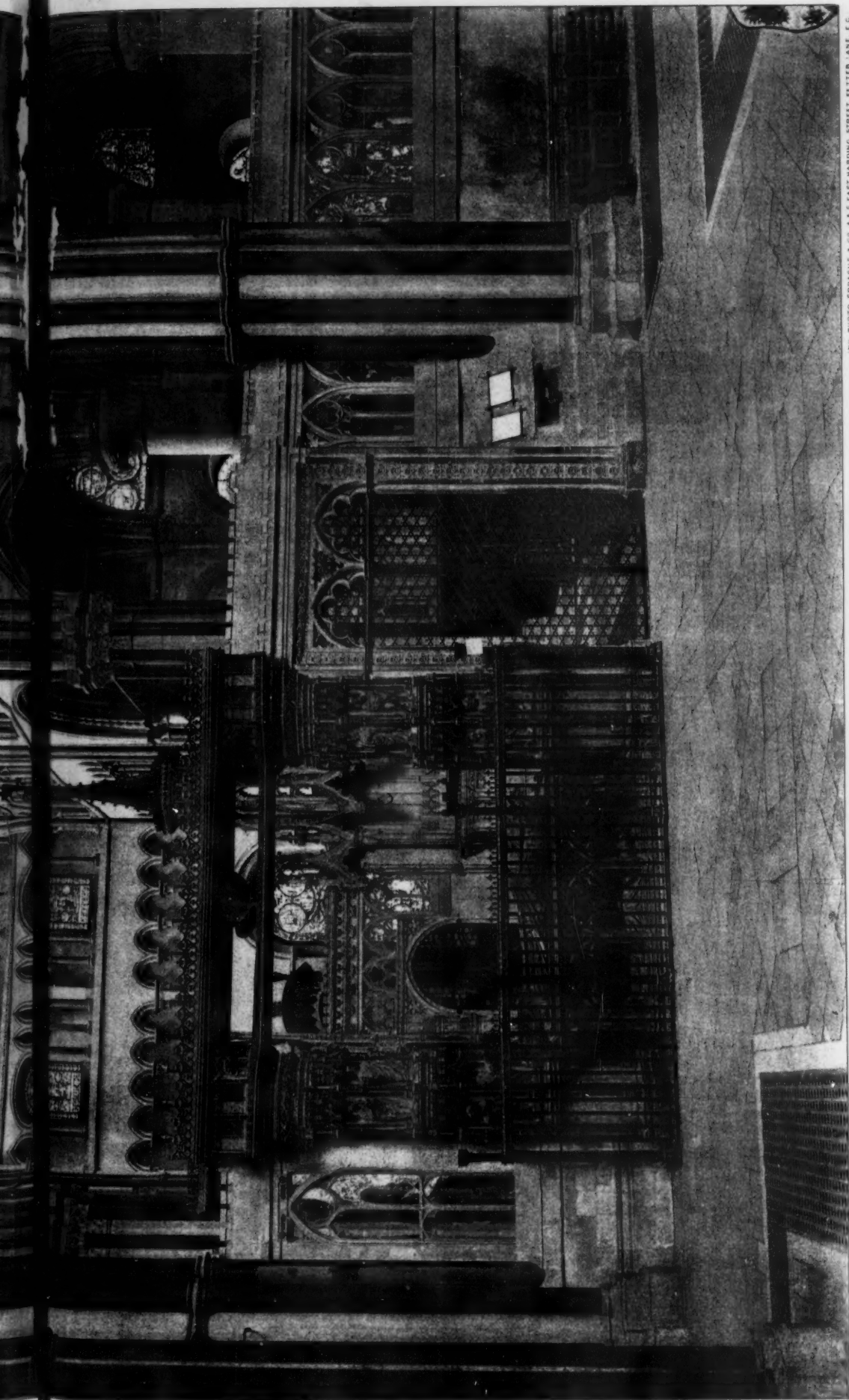
THE CHOIR:—CHRIST CHURCH CATHEDRAL, OXFORD, ENGLAND.





◦ DETAIL OF THE ATRIUM ◦
PALAZZO MASSIMI, ROME. [BALDASSARE PERUZZI ARCH'T.]

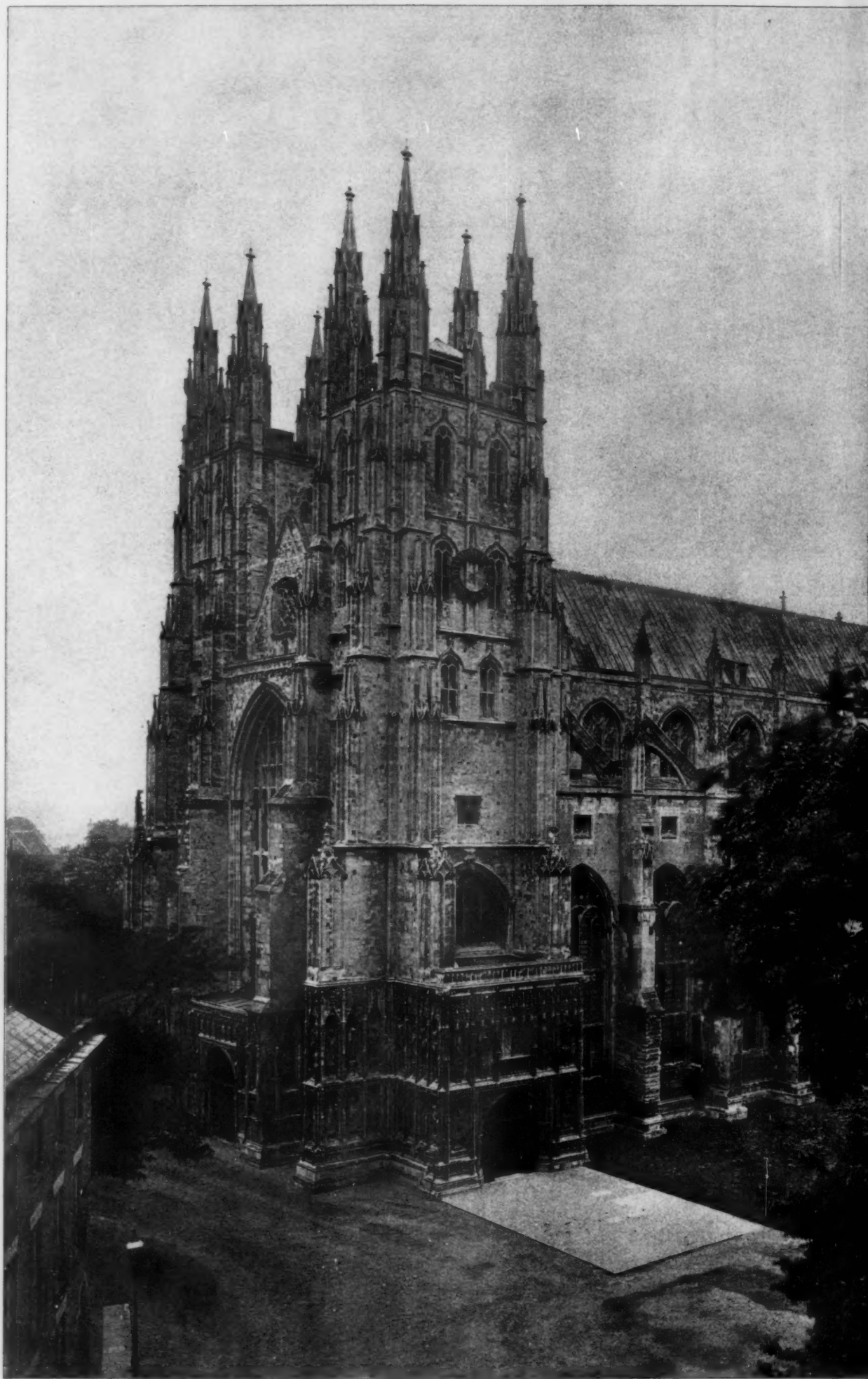




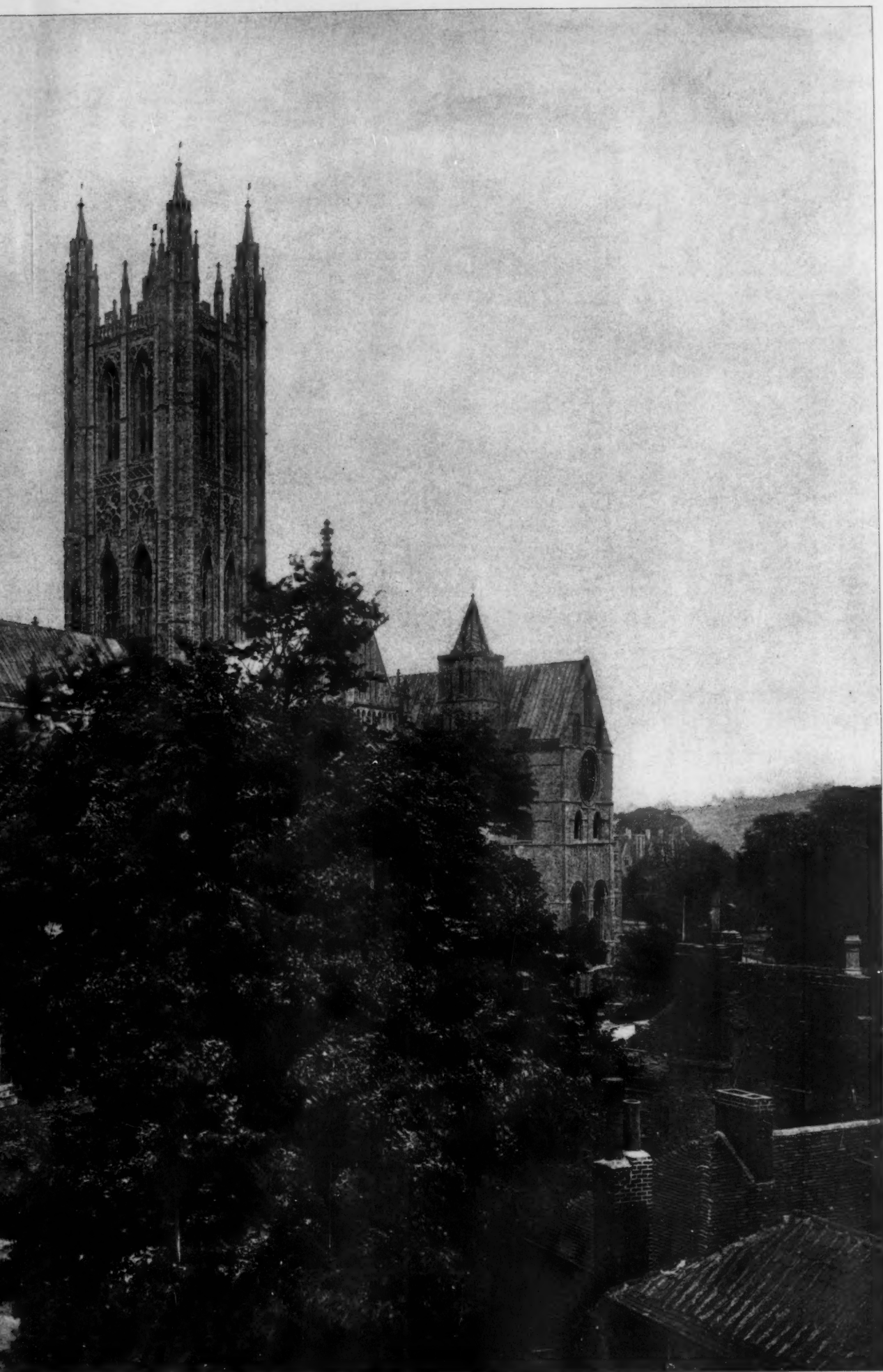
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CATHEDRAL SERIES, NO. 51.—CANTERBURY: SOUTH TRANSEPT CHOIR.



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RBURY: GENERAL VIEW FROM TOP OF GATEWAY.