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THE New York *Commercial Advertiser* makes some judicious remarks on the evil effect on values of real estate of the overbuilding which has been so common in and around all our cities for several years. Theoretically, building keeps pace with the demand, and houses are generally supposed to be built with the idea that they will be sold, or profitably rented, soon after their completion. In practice, however, the circumstances have been, of late years, very different, and thousands of houses are erected without any regard to the probability of their being occupied, the builder looking for his profit entirely to the advances that he can secure on mortgage. If savings-banks and trustees were as careful as they should be, they would not lend money to a hazardous extent on property which was likely to be unsalable or unrentable, but both trustees and savings-bank directors frequently dislike to take much trouble about other people's affairs, and have, besides, matters of their own to attend to, and they leave the examination of the property to some irresponsible lawyer or mechanic, who is, as the *Commercial Advertiser* thinks, often in collusion with the speculator, under an agreement to share with him the profits of the operation. The *Commercial Advertiser* thinks that, in some cases, the savings-bank officials receive a portion of the profit which the speculator makes out of this misuse of the depositors' money, but this supposition is hardly needed to account for bad investments which may just as well be due to carelessness and incompetence.

HONEST people, who try to borrow money on real-estate mortgage, and find that savings-bank officials and trustees of estates will not lend them more than sixty-five per cent of the assessed valuation of their property, generally have difficulty in understanding how a speculating builder can get any profit out of savings-bank loans on property which is obviously of inferior quality; and it may be interesting to them, as well as to savings-bank depositors, to know something of the methods employed. In the first place, the value of the property is usually grossly misrepresented in the application for a loan. We heard once of a man in Massachusetts who paid seven thousand dollars for an estate, and mortgaged it immediately afterwards to a savings-bank for forty thousand. The estate was at one end of the State, and the savings-bank at the other, and the officials of the latter evidently thought that it was too much trouble to inquire into the real value of the property, and took the owner's word for it. Even supposing that the bank officials or trustees ascertain the assessors' valuation of the land on which a building-loan is desired, they are not quite safe, for there are ways of temporarily increasing the assessor's valuation for the purpose of deceiving mortgagees, but, supposing that the loan is based on an honest valuation of the land, and a fair estimate of the cost of building in accordance with the plans presented by the speculator or his confederate, an ample field is still left for profitable fraud. Very

frequently, the first step is to change the plans, or substitute new ones, providing for a building more expensive in cost to that represented to the money-lender as the one which was to be a part of his security. As savings-bank directors are rarely paid enough, in their opinion, to justify any one in expecting them to run about examining their mortgage securities after the loans are approved, and trustees feel themselves even less called upon for such service, the chances are that the changes in the plans are not noticed by any one who has an interest in preventing them, and the proportion of the loan to the value of the security is thus materially altered, to the advantage of the speculator. When building is fairly begun, a few payments are usually made, out of the mortgage money, to the most importunate and wary of the mechanics, but the others, while liberally compensated in promises, receive little or no cash. Meanwhile, transfers and conveyances of the equity are quietly made, in such a way as to make it difficult to trace the ownership; and when the mechanics and material men at last become desperate, and attempt to file liens or attachments, they find it almost impossible to ascertain the name of the owner against whom the lien should be filed; or, if the name of the proper record owner is discovered, it proves to be a fictitious one, or to belong to some one who lives in a distant State, or has recently left his recorded residence for parts unknown, or is otherwise beyond the reach of creditors. Of course, the speculator's interest is to have the building carried on as far as possible on credit, so that he can get all the advances possible from the mortgagees before the final crash, but it frequently happens that the work comes to a stop before its completion. Then, the speculator, who has, of course, placed the money which he has received where his creditors cannot reach it, turns his attention to new schemes, while the mortgagees and the mechanics devote themselves to considering how the property for which they have paid so dearly can be completed, so as to be salable or rentable. In many cases the contractors assume the mortgage, and finish the building, to save themselves from further loss, but, in perhaps the majority of instances, the mortgagees foreclose, cutting off all subsequent liens, and complete the building themselves, as best they can. As, under the law, savings-banks cannot hold foreclosed property permanently, but must usually sell it within two or three years, they then hasten to offer it at a sacrifice, to the obvious injury of all the honest real-estate owners and builders in the neighborhood. Of late years these practices have grown to such proportions as to affect real-estate seriously in and about all our large cities, and it may be hoped that the New York real-estate brokers will not be alone in calling attention to the evil, and concerting means to remedy it.

IN the discussion following the settlement of the Chicago building-trades' strikes, the architects have taken a creditable part. Although, as between masters and men, they are, naturally, neutral, they have ample opportunity for studying the effect of the walking-delegate system on the economy and efficiency of building-operations, and, knowing the strictness with which building contracts are enforced, they can appreciate the distress into which the most honest and well-disposed builders are often plunged, without fault of their own, to promote the personal or political ends of the labor agitators. At the same time, no one has a higher appreciation of intelligence and skill on the part of individual workmen, and many an architect cherishes a sincere regard for some journeyman mason or carpenter who has carried out his ideas with special intelligence and faithfulness. This being so, the architects would seem to be well fitted to mediate in disputes between two parties, both of whom could be sure of their intelligent sympathy; and the fact that they are rarely called upon for such mediation indicates the flimsiness of the pretences on which the so-called "labor struggles" are generally based. In the building-trades, at least, as was shown in Chicago, the "grievances" put forward by the men as a pretext for a strike are usually either utterly ridiculous, or such as could be adjusted in ten minutes by a disinterested arbitrator; but the very absurdity of the claims made is often carefully calculated, so as to make an adjustment of them impossible, and give a pretext for prolonging a contest brought about solely to give a few selfish individuals an opportunity to profit at the expense of those who trust them. Every one must have observed, in

reading accounts of strikes, that the most conspicuous individuals concerned in managing them are usually Irish; and the student of history, knowing how cruelly the generous and faithful Irish people have, for a century or more, been exploited by heartless and treacherous plotters of their own race, finds little difficulty in recognizing, in the manœuvres which build up political influence on the sorrows of starving women and children, much of the baseness which, in the old country, has so often betrayed comrades to death in return for money or personal safety.

It would not be possible, and it would be very undesirable, to object to the Irish leadership in such matters which the affectionate fidelity of the race does so much to facilitate; but it is quite possible to avoid using the public authority to throw such leadership into the worst hands, instead of the best. To take a single example: some years ago, a man who claimed extraordinary, and, as it turned out, fictitious influence among working-people, exhibited himself to the public as the principal personage in a great railway strike. In this strike millions of dollars' worth of railway property was destroyed, several men were murdered while doing their duty faithfully, trains full of innocent people were stopped, and more than one attempt was made to accomplish wholesale massacre, by throwing trains off the track. The prominent individual in question was seriously suspected of complicity in these crimes, which, if he had possessed the influence which he claimed, he could at least have prevented, and there was evidence which indicated that an attempt was made, previous to the strike, to extort from the railway companies shares of stock to the credit of individual "champions of labor," and that it was not until these attempts had failed that the "grievances" of the railway operatives became too intolerable to be borne; yet, instead of investigating the charges, and dealing with any person found guilty under them as an enemy to the human race, the brother, if we recollect rightly, of the person claiming to be the principal actor in the strike was, as soon as the agitation was over, appointed by the President of the United States to an important office. It is hardly necessary to say that the lesson was not lost on other plotters and mischief-makers, and positions which offer money in return for selling-out one's constituents, and public office as a reward for inciting them to deeds of violence, are eagerly sought by the worst class of adventurers. How long this will last it is impossible to say, but it is certain that nothing in the shape of provisions for arbitration or conciliation will ever be acceptable to men of this kind, and that, until their influence is reduced by the withdrawal of the support, either direct or indirect, of State and municipal governments, it is useless to expect any rational treatment of labor troubles.

ALTHOUGH we predicted, last winter, that the high prices of building-materials would not last long, the decline has come even more quickly than we expected, and has been greater, we imagine, than any one anticipated. As usual, however, the busy public, which was slow to appreciate the violent rise of last year, is equally slow in finding out that prices have fallen back, nearly or quite to the point from which they started, and we imagine that, for a time, occasional concessions will be secured, even from present rates, from dealers and manufacturers whose business has suffered from the recent fluctuations, and who find themselves obliged to make sacrifices. There is, however, no reason for considering the present prices of staple building-materials exorbitant, and, when the bargains and bankrupt stocks are disposed of, the market seems likely to remain nearly steady for many months to come. This is, of course, the best condition for building operations, and, with the elections over, and political conditions settled for four years, it seems probable that the next season will be a busy one in the building world.

THE newspapers say that an increase in the rates of insurance on plate-glass may soon be looked for, as a result of the recent conference between the managers of the various plate-glass insurance companies. As the price of plate-glass has more than doubled within a year or so, and the rate of insurance, which is tolerably high in any case, is based on the value of the glass, the owner of a modern mercantile building is likely to find his plate-glass a rather expensive investment, especially as, in the course of the tariff changes which seem likely to be made, a reduction in the duties on plate-glass

is sure to be called for by the thousands of householders who shiver in winter behind their thin sheet-glass windows, while the cold is shut out of even very modest houses in England and on the Continent by plate-glass a quarter of an inch thick.

THE Director of the Prussian Meteorological Bureau has collected some important statistics in regard to the increase of casualties by lightning, which has become so rapid in Europe as to excite alarm. The insurance of buildings against fire is now compulsory throughout Germany, but the principle of enforced insurance was first adopted in Bavaria, and, as records concerning loss by lightning have, in consequence, been carefully kept there for some years, the statistics of Herr von Bezold are based on these records. This evidence, the accuracy of which can hardly be questioned, shows that the loss by lightning in Bavaria has increased six-fold within a few years. A part of this increase might possibly be ascribed to the growing disposition of the peasants to make claims on the insurance companies for small casualties; but it appears that the average annual number of thunder-storms has risen materially, as well as the average destructive effect of each. What may be the reason of this change, Herr von Bezold does not try to conjecture. It is said that the destruction of forests increases the violence of thunder-storms, by removing a means for the harmless passage of electricity from the clouds to the earth; but forests are carefully protected in Bavaria, and the number of forest trees probably increases, rather than diminishes. It is not impossible that the artificial disturbance of the electrical balance of nature, which is now carried on at a vast scale in all civilized countries, may have an influence on natural electrical phenomena; but Bavaria, which is mainly a farming and wooded country, should suffer less from such a cause than England or Belgium, or the vicinity of the great cities, and it does not appear that this is the case.

ANOTHER meteorological phenomenon which has given much trouble of late years, particularly in Italy and France, is hail. In those countries hailstorms are frequent and violent, particularly at the season when the grapes are ripening, and the produce of the vineyards over a large tract of country is often destroyed in a few hours. To meet this danger, the vineyard proprietors in Italy and France, and, to a certain extent elsewhere on the Continent, have recently set up great numbers of cannon, placed vertically on a stone foundation, and shaped like trumpets, so as to send the smoke well up into the air. The Government in both countries approves the plan, and encourages it by furnishing ammunition at a very low price. When a dark cloud is seen approaching, the careful farmer runs to his vineyard with a quantity of cartridges, and fires his cannon at the cloud as it passes over. For some reason not yet explained, the concussion seems to prevent the formation of hail, and, if there is any precipitation over the tracts so guarded, it is in the form of rain. At first sight, this looks like the old rain-making plan, but the object sought is far less difficult of attainment, and statistics seem to prove that valuable results are secured.

EVERY one knows how pieces of iron are brazed together, by means of melted spelter, or brass, but every one may not know that only wrought-iron can be successfully brazed, the carbon in cast-iron, which exists partly in the form of particles of graphite, preventing the adhesion of the spelter, just as a coating of dust prevents the adhesion of cement to bricks or stones. If the graphite layer could be removed before brazing, there seems to be no reason why cast-iron cannot be brazed as well as wrought-iron, and a process for accomplishing this result has been patented in Germany, consisting essentially in applying to the surfaces to be united an oxide of copper, and protecting them against the influence of the air with borax or silicate of soda. When the joint is heated, the oxide of copper gives up its oxygen to the graphite, converting it into carbonic oxide gas, which escapes in bubbles, while particles of metallic copper are deposited on the iron. Any oxide of iron which may be formed is dissolved by the borax, and the surfaces of the iron, thus freed from graphite, unite readily with the spelter which is run into the joint before it cools, the copper already deposited on the iron assisting the process. The inventor claims that cast-iron can in this way be readily brazed in an ordinary blacksmith's forge; and, if this prove to be the case, he has certainly conferred a great benefit upon industry.

A CORNER OF OLD FRANCE.¹—II.

The Hospital, Beaune.

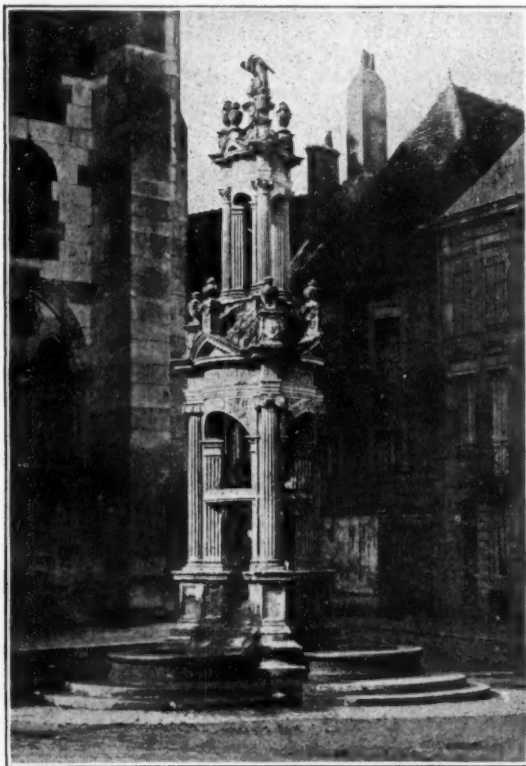
OF Beaune, the next town to be visited, it may be said without exaggeration that it is perfection. We all know the name of Beaune on wine-bottles, and indeed the town would be worth visiting on the strength of this reputation alone. Not merely do I mean for wine-drinking purposes, but for the sake of the evening walk which you may have under a pale, warm summer sky, among the glowing vineyards of the Côte d'or.

At Beaune you will find besides these delights of the vineyard, a moat (such a moat!), town-walls and ramparts planted with plane-trees, and two or three first-class subjects for sketches in every street. But these glories are mere additions to the two jewels of the place, the church of Notre Dame and the incomparable hospital.

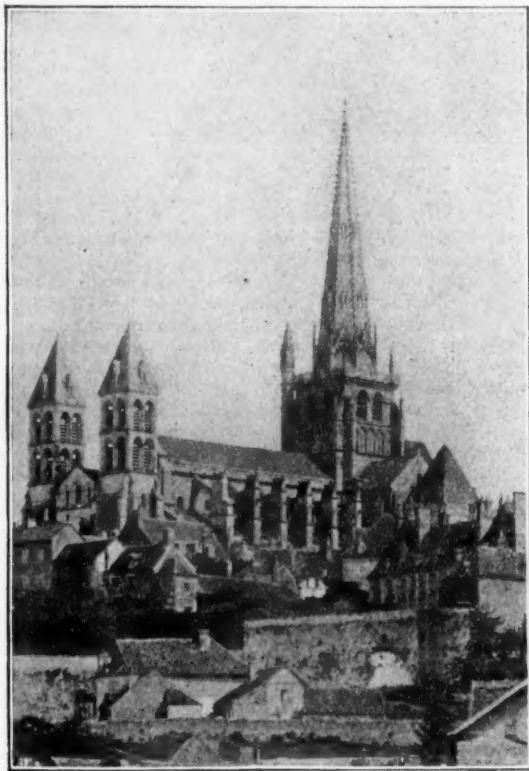
The hospital at Beaune is one of the few buildings, other than churches, which has retained its spirit as well as its body. It is seldom that one finds a secular building of the Middle Ages whose use to-day is the same as its use in the past—not that one can call this hospital a secular building in every sense, for the gracious work which is done there is as much a work of religion as a medical aid. The buildings, which front on the street and are covered-in by a long, high-pitched roof, contain a ward which is, perhaps, one's ideal

on a summer morning—an hour at which one best understands the full significance of the place. On either side are beds placed, not as in our modern hospitals with the feet outwards, but longitudinally and close to one another, with no space between. There is a passage-way between the beds and the wall in which the patients can dress, but the space between the two rows of beds, which is wide and ample, is quite free from hospital furniture, and in this particular ward is supplied with ordinary church chairs. One notices a tall pulpit rising from the floor. The end of the room is cut off by a chancel-screen, beyond which is the altar, where at the moment of our visit mass was being celebrated. The nuns—ladies of good family—who serve the hospital as nurses, were hidden from view, being ranged on unseen seats to the right and left of the altar. A few townspeople and the sister in charge of the ward knelt in the public space, and when the mass was over, a procession, headed by a small server with bell and candle, threaded its way around the court-yards of the hospital. It was at this point that the hitherto hidden sisters came into view, as they streamed out in an orderly procession after the priest. We walked out into the court-yard and saw them pass by, the living evidence that there are some things of the Middle Ages—and good things, too—which keep their vitality at the present time.

The hospital was founded in 1443 by Nicholas Rollin, Chancellor of Burgundy, of whom Louis XI said in unfriendly jest, "It is well that he who has made so many paupers during his life should prepare an asylum for them before his death." The sisters who serve the



Fountain of St. Lazare, Autun.



The Cathedral of St. Ladre, Autun.

of what a hospital ward should be. Those who know the almshouse at Chichester will be able to bring to mind something which in its original intention was practically the equivalent of this great and beautiful ward. My companions and I visited it at seven o'clock

building are of the Order of the Holy Spirit, which belongs to Malines, and their costume is the same as it was in the fifteenth century. The pavements—which are of tile—bear the oft-repeated initials of the founder and his wife, Nicholas and Guignon, twined together with an oak-bough and the motto "Seule," alluding, if I remember rightly, to the latter's widowhood. One could spend much time in describing what one may call the spiritual aspects of the place, which are so strong as to be not easily passed by; but as our concern is with architecture and such things, we must pass on to the more material side of the hospital's beauty.

The roofs and gables are profusely decorated with vanes and finials, mostly cast in lead and bearing a distinctive Flemish character. There are a few which have been restored, but as the models from which the originals were cast have been preserved in the hospital, there is no doubt of their authentic shape. The first courtyard one enters is strikingly picturesque; it has a double gallery extending round two sides of it, which forms a cloister on the ground-floor, and a covered passage to the upper rooms. There is little incident in the centre of the court-yard, the rough paving of which is interrupted only by one or two well-heads; but there seems to be always a group of picturesque convalescents and nurses and a flight of pigeons to catch the sunshine. The dispensary, with its long ranges of earthenware vases, each decorated with a symbolical serpent, reminded us of the dispensary at Monte Oliveto, near Sienna, and the great council-hall on the first floor—in which takes place the annual sale of the wine, which is the hospital's principal source

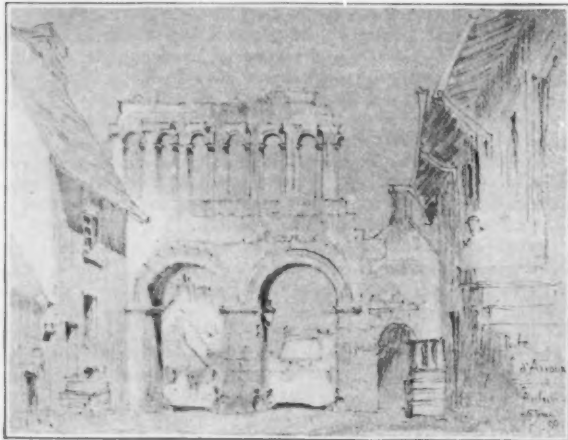
¹ Continued from No. 1289, page 77.

of income—had many treasures to show in the way of tapestries. One of the hospital's best possessions is a superb altar-piece by Roger van der Weeyden, no longer kept above the altar, but exhibited in an upstairs room. Viollet-le-Duc has laid the hand of the restorer upon the place, but with singularly little evil effect; the whole presented a truly Gothic appearance, and though it is of the late type, to be sure, it was true Gothic of its type, and we felt in walking through its court-yards that we were veritably back in the fifteenth century.

The church of Notre Dame has many claims on an architect's attention. It has, to begin with, a splendid narthex—an outside one in this case—standing in front of the western portal and rather older in date than the body of the church. The interior is of an altogether unusual, a transitional, type—in fact, one is not prepared by anything outside for the altogether remarkable surprise which the interior offers. The nave-piers and their arches maintain some of the features which one is accustomed to associate in England with the period between Norman and Early Pointed architecture, but as the eye travels upwards, there is seen an evidence of Roman mimicry—to call it by no other name—which finds few parallels in pre-Renaissance times. The lower parts of the vaulting-ribs are fluted pilasters; the string-courses which run round the church are of a heavy Roman, and in truth not very graceful, type, while the triforium is an unadulterated Roman arcade. No doubt, it was the presence of Roman remains in the neighborhood which induced the builders to give way to what is in effect a sort of prophecy of the Renaissance. A view of the east end, which one gets from a back street, is well worth seeing; the tower, as viewed from this point, preserves the Transitional characteristics, and the windows of the chapels in the apse bear out a reminiscence of Norman work, but as the apse mounts higher one sees traces of freer and later treatment in the clerestory windows, which, indeed, seem to have got ahead, in point of date, of the severity of the intervening buttresses. There is a very good piece of Renaissance loggia-work in the back-yard of a shop in the town.

Autun, the next convenient stopping-place, is a still more Roman town than Beaune; in fact, its name but barely conceals the Roman title *Augustodunum*. It has been in happier and earlier days a larger town than at present, the result of which is that the outer walls are very far from the present circle of buildings which form the city, and there are little bits of country and rather dreary lanes between the streets and the Roman gateways, which are, perhaps, the special glory of the town. One of these, the Porte St. André, has been restored by Viollet-le-Duc, but has retained a good many of its old stones; the other, the Porte d'Arroux, which is very finely placed near the river, looks its best from the parapet of the bridge. Both consist—or rather did consist—of a double archway for vehicles, with a smaller archway on each side for foot-passengers, surmounted in each case by a sort of triforium arcade, which, no doubt, formed the communication between the guard-towers on either side.

The Cathedral of St. Ladre is splendid, and is of about the same date as the church at Beaune, though it almost surpasses it in the curiously Classical effect of its interior, in which the piers—which are not in this case of the normal rounded form, but are rather vast masses of masonry coated with pilasters—present a strangely archaeological effect. The east end is without an ambulatory, which makes it cheerless and cramped in appearance. The especial glory of the church is its narthex, and in that narthex the best feature is the doorway. This is composed of a vast semicircular arch, supported on columns of Norman type. The doorway—as in the case of the familiar thirteenth-century type of French cathedral doorway—is divided into two by a sculptured column, and the tympanum is



Porte d'Arroux, Autun.

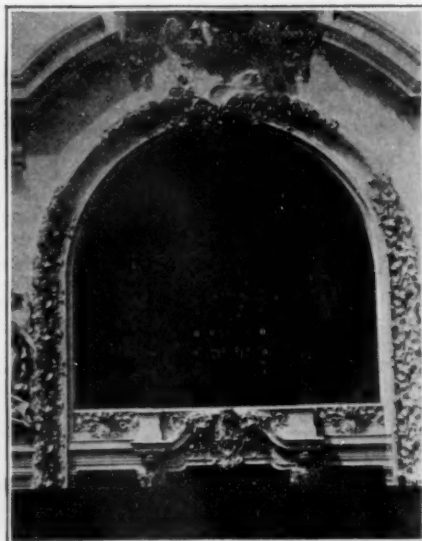
filled with rich sculpture of a singularly pure and unusual nature. In the midst is the figure of Our Lord in judgment, the strange grace of which, as well as of some of the other sculptures, has caused much speculation upon the nationality of the craftsman who carried out a

work of such refinement. There is something very unusual, too, about the figure of the patron saint, who occupies the central pier between the doors. He is in full bishop's vestments and has on either side of him two female figures, whom one could call angels if their beauty had not about it something of the pagan grace of Greece and Rome. The narthex makes up for being placed in a very awkward and narrow street by the fine effect of the stairs, which occupy almost the whole of its floor-space, and on the Sunday when I was there it offered an unusually fine setting for a church pageant—the *Fête Dieu*. The vast throng of figures in bright vestments who made the air bright with rose-leaves, as well as sweet with incense, could certainly not have been seen, if on a level floor, with the effect that came from their standing on a tall flight of steps. The north exterior of the cathedral, though it has some early features about it—notably in the transept—is mainly of Flamboyant date, the aisle having richly traceried windows and being surmounted with open-work parapets. It would be unfair to Autun to leave the place without visiting the Roman theatre, which at the present time is nothing more than a meadow with a hollow in it, and the so-called Temple of Janus, which stands in a field at the far side of the river; but Temple of Janus or no, this stalwart ruin is a fine testimony to the lasting power of Roman building.

PAUL WATERHOUSE.

[To be continued.]

AN ITALIAN ARTIST IN THE UNITED STATES.



Detail from the Palais des Invalides: Paris Exposition. MM. Larche & Nachon, Architects.

THE following remarks relate to an Italian architect who, abandoning architecture, devoted himself to engraving, and, practising this art in New York and Philadelphia, enjoyed great fame all over America. They relate to Michel-Louis Pekenino, or, as he usually signed himself, Pekenino; and concerning this master-engraver I can write a short biography after a memoir published by my confrère Camille Boggio, a memoir very little known, even in Italy, where the name of Pekenino is forgotten

of a little circle of amateurs. Nevertheless, the fame of this master-engraver is justified by his works, which, during the lifetime of the artist, were much sought after, just as now they are much esteemed by collectors. For the rest, independently of Pekenino's capacity, it is interesting for us to see an architect renounce his art to follow engraving, and emigrate to America at a time when voyages were not so simple and easy as they are to-day. It is true that in Italy, before Pekenino, Jean Baptiste Piranesi, architect, practised engraving as a master, and his name is familiar to every architect, even because Piranesi placed his burin particularly at the service of architecture and of ancient ruins. But between Pekenino and Piranesi there is a very essential difference. Pekenino practised engraving as a figure-painter, while Piranesi practised it as an architect; so, although the latter was addicted to engraving, he did not withdraw entirely from architecture in the same way that Pekenino did, who was an engraver of the same class as Charles Antoine Porporati, Raphael Morghen, Joseph Longhi, in Italy, Abraham Raimbach, Samuel Cousins and Robert Newton, in England.

Born in the country near San Giorgio Canavese, in Piedmont, September 14, 1788, his father was a doctor of laws, and his mother, Therese Deagnostini (daughter of Joseph), ordinarily did the housework. Michel-Louis was the eldest child, and the remainder of the family consisted of another son and a daughter: Jean-François and Marie-Anne.

In his native country, our Pekenino was very little appreciated, and early in life he resorted to Turin, where he entered the Academy of Fine-Arts, under Ferdinand Bonsignore, in the course of architecture; and, on the 27th of August, 1810, he obtained his architect's diploma. But just as soon as Pekenino could escape from the beginnings of architectural practice, he devoted himself to pen-and-ink and figure drawing. In the Italian schools, especially in the first years of the century, the pupils knew how to draw only with compass and rule in hand. Classic art was everywhere given predominance, and it was enough that the pupils knew their Vitruvius and their Vignola for them to be mentioned amongst the most intelligent

and distinguished of the rising generation. To know the proportion of the orders, to know how to draw the Ionic volute with exactitude, and to indite a dissertation on the Pantheon at Rome, was all that was demanded in Italy of a brave architect; so much so that Pekenino's professor, an impenitent Classicist, immortalized himself by a church at Turin—"La Gran Madre di Dio,"—which is a mere paraphrase of the Pantheon. As for drawing ornament or figure, that was a wholly secondary matter; so architects drew their designs and caused their statues, and sometimes their ornaments, to be executed by modellers and ornamentists. Even now, in the Italian school of architecture, it often happens that the architectural pupils apply to the figure-painters to draw in their statues.

In the midst of these strange customs, it is especially curious that Pekenino should have succeeded as an engraver of the figure, and one asks where and under whom he was able to learn the beginnings of his art; but the question is unanswerable. From 1793 to 1824 the records of the Academy at Turin are not in existence, and we only know, after a manner, that during this time there were as professors at the Academy, besides Bonsignore, Charles Ant. Porporati, an engraver, assisted by Vincent Revelli; Comolli, a sculptor, assisted by Spalla, and Laurent Pecheux, a painter. This seems to make it likely that in figure-work Pekenino was the pupil of Pecheux, the French painter and writer, author of several memoirs of an academic nature, such as a "*Discours sur l'harmonie de la Peinture*." But Pekenino might also have attended some private school. It seems fair to add that the first and second suppositions have been made to throw light on an absolutely obscure point in the life of Pekenino, a point which it was necessary to illuminate, as it has an intimate relation with the career of the master.

People are agreed, however, on the things which concern his moral character; Pekenino was a man desirous of seeing and travelling, he was a searcher after adventures, so much so that in his youth he travelled to England. In 1816 George III was encouraging engravers, and the importation of engravings required resources of the highest order in English commerce. At this time all important publications issued in England won numerous subscribers, and the master-engravers could there count on the sale of their productions. I cannot say under just what conditions Pekenino decided to visit England, but it is probable that the favor which the art of the engraver enjoyed in the country of John Bull drew the artist thither, desirous of making himself known and achieving a place in the world. Reaching England, Pekenino did not discover there, as it appears, the land of his dreams, and he once more took up his route after a little time. Quitting England, he turned his steps towards America, in the hope of finding a fortune in that country which displays larger sympathies than we people of old Europe.

In Pekenino's time engraving with the burin, in the United States, had not received that large artistic application which it later received, and the master did not deceive himself. I have already noted that Pekenino established himself in New York and Philadelphia, and he achieved such a reputation in these places that he was spoken of as a real genius in his art. A political and literary journal which was published in Philadelphia in the twenties of this century (issue for March 1, 1822) published the highest praise of Pekenino, author of two superb engravings, a head of the Saviour and a portrait of Commodore Perry. The same journal tells us that the master at this time was employed in engraving a portrait of Washington after a painting by Stuart, and I can inform you that of these two engravings there still exists a certain number of copies. The head of the Saviour, measuring 115 x 89 millimetres, is of the same size as Raphael's "Virgin," and the portrait of Washington, dated at Philadelphia in 1822, has a height of 147 millimetres and a width of 18. Pekenino also made a reproduction of it in oval, 7 x 5 millimetres. The Commodore Perry, after a painting by Jarvis, is a reduction from the engraving by Myer, 67 x 58 millimetres.

In great part the master's engravings are dated at New York or Philadelphia, and the system of engraving adopted by him is the dotted line, which has much the effect of crayon, only in the first instance the dotted line is sometimes reinforced with hatchings, while in the second the engraver excluded them in order to make the closest fac-simile possible of the crayon strokes. Almost all of the master's engravings are signed "Pekenino" in the place of Pecheux, which is the real family name of the engraver.

Among the engravings executed in America are some private portraits: "Beattie," M. el Pekenino sc., Philadelphia, 1821; without the name of the personage (62 x 54 millimetres), copied after an engraving by G. Murray of the painting by Reynolds. "Franklin," after the painting by Janinet, 1822 (130 x 111 millimetres), of which we know three reproductions of different dimensions (71 x 57, 64 x 55, and an oval 7 x 5 millimetres). This last reproduction is really a portrait of Washington. "Goldsmith," New York, 1820 (66 x 55 millimetres); "Milton," New York, 1821 (63 x 53 millimetres); "Pope," New York, 1821 (77 x 55 millimetres); "James Thompson," Philadelphia; "Rt. Rev. William Witbe, D. D.," bishop of the Protestant Episcopal Church in the State of Pennsylvania, after a portrait by Sully (142 x 118 millimetres); "Portrait of a Young Man," New York, 1821 (66 x 57 millimetres).

There were also engraved in America, without being dated, the following eleven engravings: "A Small Temple in a Garden" (172 x 113 millimetres); "Hive on a Bench near a Kitchen" (149 x 90 millimetres); "Emblems of English Liberty," (131 x 113 millimetres); "The Archduke Charles of Austria" (78 x 64 millimetres);

"Commodore Decatur" (66 x 58 millimetres), after a painting by J. W. Jarvis; "R. Harlan, M. D." (68 x 65 millimetres), after a painting by Eicholtz; "The Portrait of a Commodore" (66 x 57 millimetres); "A Man with Face Concealed by a Curtain" (68 x 59 millimetres); "Portrait of a Man," after a painting by Rogers.

As to whether the five subjects next mentioned were executed in America there is no certainty: "The Bust of Saint Catherine," after Titian (70 millimetres), and three portraits of "Napoleon" of different dimensions (99 x 67, 60 x 50 and 7 x 6 millimetres), and also a small portrait of Petrarch (9 x 6 millimetres).

From what has been recorded, it follows that Pekenino remained in the United States for a certain number of years; we do not know, however, whether he practised also his profession as an architect. The news which reached Italy gave no information on this subject. Nevertheless, it may be supposed that the master-engraver, with the renown that he enjoyed, had in America some occasion to give evidence of his ability as an architect. The thing is likely, in the opinion of those who assign to Pekenino the Villa Belloc, situated at Saint George, his native country, which the engraver might have erected after his return to Europe, an event which might have taken place in 1824. But this date is not surely accurate; M. Boggio has not been able to state with precision the time when Pekenino left the United States. M. Boggio tells us that the villa here in question was engraved about 1823, which would make it all the more difficult that the Villa Belloc should be one of Pekenino's buildings. If, on the other hand, this villa was one of the engraver's buildings, this return to architecture after a sojourn in the United States would fortify the supposition that while in America Pekenino handled the burin side by side with the T-square. Notwithstanding, I offer these only as suppositions, though, from an historical point-of-view, even mere suppositions have their utility, and may lead us on the right road.

Pekenino's return must have been welcomed with enthusiasm by his mother, since he returned celebrated in his art and the possessor of a respectable fortune. He was not yet forty years old, if we admit that his return to Europe occurred about 1824. He found himself then in the flower of his age. But in Pekenino's life everything has its curious side; even his new sojourn in his natal country, even his tragic end.

In Italy the master continued to practise engraving, and, since he was not as well known as in America, he decided to achieve a name by reproducing the celebrated painting of Raphael, "The Marriage of the Virgin." The engraving of this painting, which is one of his best works, was bought by the Florentine publisher Louis Bardi, who also desired to commission the engraver to engrave Raphael's "Transfiguration" as a pendant to the "Marriage." Pekenino accepted the order. So, after having finished the drawing, he began the engraving, which he carried to the end with the greatest enthusiasm; but, not having agreed upon any price with his publisher, a fierce discussion of the subject was inaugurated, and Pekenino, with a stroke of his burin, spoiled the plate in such a manner that not a single proof could be pulled from it.

After this mad dispute, followed by the ruin of the plate, Pekenino lost his mind; he began to believe that in Italy they were not willing to acknowledge his ability; he became discouraged, and began to commit follies to such point as to cut his plates, such as the "Franklin," which, in fact, has reached us in three morsels; and one day, collecting under his bed a great quantity of his engravings, he set the pile afire. Fortunately, the flames did not spread; but, if the flames themselves were quickly extinguished, the flames that the master carried in his own head demanded the attention of the alienists, and even their help was of no avail. Pekenino was taken to the insane asylum at Turin, December 23d, 1832, and died there, January 15th, 1835, at the age of forty-six. Two portraits made by himself remain, one an engraving, the other a water-color, and, according to these subjects, he had a well-shaped head, a broad forehead, a lively eye, a small mouth, the whole showing an energetic and intelligent man.

ALFREDO MELANI.

TOMB OF BUDDHA FOUND.



ACCORDING to London advices, Prof. Rhys Davids, the well-known Sanskrit scholar, who lectured in Philadelphia a few years ago, has located the tomb of Buddha in the district at the foot of the Nepalese Himalaya, where the founder of a religion that now numbers 350,000,000 believers moved and lived and died. Buddha was born either in 566 or 552 B. C. and died in either 482 or 472 B. C. There is some doubt as to the exact dates. Professor Davids has been working for some time in the region of the Basti district, on the west of Gorakhpur, in India, which is the district intimately associated with incidents in the life of Buddha and the Sakya tribe from which he came. Here there are several of the stone frontier pillars erected by the great Asoka, recording his visits to shrines. The most important of these is the one erected at Padaria, bearing an inscription written by Asoka about B. C. 253, recording the fact that the pillar marks the site of the garden where Buddha was born.

The neighboring ruins of Kapilavastu, Buddha's native town, are on the banks of the Banganga River, which descends from the Himalayas and flows through a rich plain. The land belongs chiefly to Europeans, and has within the last half-century been transformed from primeval forest and jungle into rich and well-cultivated fields.

All this region is described by Professor Davids as covered with small mounds, marking in most cases "stupas," or Buddhist burial-places. Among the largest of these is one situated near the village of Piprahwa, from which it derives its name. This stupa is on the land of the Birdpur grant, which was in charge of Mr. W. Pepe, who was associated with Professor Davids in making the excavations. The mound rises to a height of about 21 feet above the plain, and is about 116 feet in diameter at the base.

Excavations were commenced in January, 1898, and at the lowest depth a steatite vase, filled with small ornaments and beads of crystal, gold, amethyst and small objects of gold-leaf, was found. The stupa is composed of solid brickwork, but down the centre is a curious pipe-like drain, the purpose of which is obscure. At the depth of 18 feet below the surface a curious discovery was made, in the form of a large stone slab, about 4 feet by 2 feet, evidently covering some receptacle.

Removing this cover a stone chest was seen, in which were found three urns, a box of steatite and a crystal bowl. These objects were most beautifully finished and polished, and presented all the appearance of glass. It was evident that the coffer concealed some precious relics. The urns contained ornaments in gold, gold beads and curious impressions of a woman's figure, the upper part of the body nude, resembling Parthian work.

Some of these gold-leaf fragments bore figures of elephants and lions and scroll ornaments, and were evidently taken from engraved gems or tokens. There were also pieces decorated with the "savastika," or Buddhist cross. Amongst what at one time were evidently personal ornaments, pearls of considerable size were conspicuous; a few fragments of wire found show that these, with beads of many kinds, had once formed necklaces.

To whom was this ancient shrine erected? Manifestly to some person of note. One of the vases is inscribed in Pali letters of an archaic type, and, according to Prof. Rhys Davids, reads as follows:—

"This shrine for the relics of the Buddha, the August One, is that of the Sakyas, the brethren of the Distinguished One, in association with their sisters, and with their children and their wives."

If the inscription is genuine we must have here the burial-place of a portion of the Buddha's remains, and the bones found in the vases must have been taken from the pyre after his cremation! The writing, an expert declares, is certainly older than the age of Asoka, and both writing and phonology—the omission of long vowels and the double consonants—point to a more remote age than that of the pillars. — *Philadelphia Press*.

NEW GERMAN RULES FOR THE STABILITY OF CHIMNEYS.



The Servian Building: Paris Exposition.

SOME time ago the Prussian Minister of Commerce and Industry requested the boiler-insurance societies and allied organizations to investigate the principles underlying the construction and dimensions of chimneys. The societies mentioned, the Society of German Engineers, the International Union of Boiler-Insurance Societies and a number of specialists were represented on the Commission which undertook this work. Mr. Th. Peters, director of the Society of German Engineers, was chosen as the manager of the investigation, and in a recent issue of the *Zeitschrift* of the Society he has published a report of its conclusions, of which the following abstract appears in the *Engineering Record*:—

SECTION 1. The proposed rules refer only to chimneys of the dimensions employed in the greater number of cases—that is, up to 75 metres height and 3 metres clear width at the top.

For chimneys of greater dimensions than these there is a lack of satisfactory precedent for the establishment of standards, and the rules for average dimensions would not apply to extraordinary cases. The Commission was of the belief, however, that there is no need of directions for unusual cases.

SEC. 2. As a rule 150 kilogrammes per square metre is to be taken as the wind-pressure on a plane surface at right-angles to the direction of the wind. Any chance suction on the lee side is included in this amount. Any shielding of the chimney by neighboring or sur-

rounding buildings is to be neglected. The centre of pressure of the wind acting on the stack is assumed to be at the centre of gravity of the vertical cross-section. If F represents the area of such a section, taken normal to opposite surfaces in the case of angular chimneys, the amount of the wind-pressure is $.67 \times 150 F$ for round chimneys, $.71 \times 150 F$ for octagonal, and $150 F$ for square.

These values also hold when the wind blows toward an angle. This latter direction determines the maximum pressures at edges in the case of angular chimneys.

According to articles in technical literature, a pressure exceeding 144 kilogrammes per square metre has been occasionally observed in Germany, Austria and Belgium. The Commission accordingly chose 150 kilogrammes, which is the amount prescribed in Austria also. The pressure of 125 kilogrammes, proposed by others, is too low, at least for high chimneys, because it is probable that the pressure increases with the height above the ground level. A single value is highly desirable, however, for all heights up to 75 metres. On the other hand, it may be advisable for very high chimneys in particularly unfavorable situations along the coast or on mountains to go as high as 200 kilogrammes.

The Commission recognized clearly how unsatisfactory is the present knowledge of wind-pressure and how much the preceding rules need confirmation. It therefore concluded to recommend urgently a comprehensive experimental investigation of the subject. In making the choice, however, between entirely abandoning their work or using the existing deficient material as a starting-point, the Commission believed the latter course preferable.

SEC. 3. A computation of the weight must precede the calculation of the stability.

A computation of the weight is necessary because the stability and the stresses depend on it. The following rules are suggested for lightening the work:—

The weight of a round chimney can be figured by multiplying the weight of a cubic unit of masonry by the contents of the separate drums or shells, each figured by the formula $C = .7854 z (D^2 - d^2)$. In this expression D and d are the mean inner and outer diameters, z the height of the shell; the thickness of the shell is assumed to be uniform. The weight and surface of architectural additions, caps, cornices and the like, are to be neglected.

SEC. 4. The contractor for the chimney must accept entire responsibility for the correspondence of the unit weight of masonry assumed in the computations with that of the materials actually employed, as well as for their fulfilment of the specifications for quality and strength. It is left to the party letting the contract to demand proof of the correctness of the unit weight established and of the other specifications enumerated in Section 6, or even to exercise a control over them.

It is impracticable in computations of stability to determine all factors which have a strong influence with such certainty that a subsequent calculation of the correspondence of the actual materials and strains with the assumptions may be omitted. On this account, because of the great influence of the weight on the stability and the widely different specific weights of the materials of chimney construction, the Commission did not propose a definite unit weight for masonry.

SEC. 5. In determining the stability of chimneys, which may be regarded as single masonry-masses on which the wind-pressure is the sole overturning force, proof must be had, in the interest of safety, that the resultant of the weight above the most dangerous horizontal section and the wind-pressure from the most unfavorable quarter lies within the masonry and far enough away from the outer edge to prevent any injury to the material on account of the pressure. This must be true without making any allowance for the adhesion of mortar, and assuming that the joints on the windward side can open without hindrance.

There is no doubt that masonry can resist tension if made with care from good materials, particularly after the mortar has had time enough to harden. But the greater or smaller degree of fulfilment of all such assumptions and the impossibility of providing in advance for such highly-important influences on stability as rapid construction, the weather and the like, led to the conclusion that the tensile resistance of masonry should not be taken into account.

SEC. 6. The pressure on the most heavily loaded edge must not exceed $(5 + .15 H)$ kilogrammes per square centimetre. In this expression H is the distance in metres of the joint from the top of the chimney. If the value thus determined exceeds 12 kilogrammes per square centimetre, using cement-lime mortar, proof of the strength of the stone and mortar may be called for. By cement-lime mortar is meant one containing at least one part of Portland cement to two parts of fat lime and six to eight of clean, sharp sand. If fat lime-mortar is used a pressure of 7 kilogrammes per square centimetre must not be exceeded.

The joints on the windward side must not open more than half their width. This condition is reached when A is less than $\frac{1}{2} R + \frac{1}{2} r$, where A is the distance from the centre of gravity of the section to the point of application of the resultant of the weight and wind-pressure, and R and r are the radii of circles bounding the outer and inner perimeters of the section.

The longer time spent in the construction of high chimneys, their greater area and the better grade of materials generally employed in their construction warrant higher permissible stresses in their lower portions than is the case with chimneys of less height. A measure

for this is furnished by the above entirely empirical expression. The difficulty introduced in the design by this variable permissible stress is not so great as to offset the resulting economy. In determining the permissible stress the Commission found itself in the same situation as in determining the wind-pressure, and it was considered better to make use of the incomplete existing information concerning the strength of masonry than to abandon the investigation.

As a rule the Commission held that the materials in a chimney should not be strained to more than one-tenth their ultimate resistance. It may be assumed that the preceding rules conform to this principle, at least with joints under 15 millimetres thickness. Materials of considerably greater strength are often used, and it would be unjust and unsuitable not to permit them to be strained to one-tenth their ultimate strength. But in such cases proof must be forthcoming when desired that this greater strength is actually attained during the time the chimney is under construction.

The second requirement, that A is less than $\frac{1}{2}R + \frac{1}{4}r$, calls for larger dimensions in small stacks than the first requirement. Its neglect in such low stacks would lead to an opening of the joints far beyond their middle, which might cause highly hazardous swinging, eccentric pressures, shearing and even overturning. A numerical example will illustrate this.

With an upper clear diameter of .6 metre and a shaft 16 metres high, the first requirement permits a maximum unit-pressure of 7.4 kilogrammes. With a unit weight of 1,650 kilogrammes per cubic metre and 150 kilogrammes wind-pressure, the following dimensions are obtained:—Thickness of top shell, .15 metre; offset of each of the five drums or shells, .05 metre; height of shell 3.2 metres; inner diameter at the bottom, 1.1 metres; outer diameter at the bottom 1.8 metres. Thus A is equal to .645 metre, although the second requirement permits only .5875 metre. The joints would open therefore on the windward side 23 per cent more than half their width, which is highly serious.

An increase in section is imperative, and may be given in various ways. By using a stone of 1,750 kilogrammes weight and increasing the batter of the chimney to 6 centimetres in the metre, the dimensions become:—Outer base diameter, 1.86 metres; inner base diameter 1.16 metres; A , .602 metre, just under the amount allowed. The maximum unit-pressure will be 5.71 kilogrammes, and the opening of the joint on the windward side will be .819 metre, less than its half. In case the permissible limit of A is but slightly exceeded, and the most dangerous section is surely in the base, the most simple remedy is to add a small plinth to the latter.

SEC. 7. In the upper offset joints the maximum stresses given in Section 6 must likewise not be exceeded. In case the shells have equal heights the test is to figure the pressure for each of the offset joints, from the base upward, until they show a decrease in the unit-stress. With drums of unequal height the pressure is to be figured at each offset section.

As a rule this requirement is answered by a few computations. The provision of Section 6 suffices to assure a gradually decreasing stress from the bottom upward. There is no objection to this because the safety of the entire structure is made dependent on the most strained joint.

SEC. 8. The maximum edge-pressure which the chimney while subjected to wind-pressure exerts on the earth must not exceed 2.5 kilogrammes per square centimetre. At the same time the base must never rise from the earth at the windward side.

In reaching this conclusion, the Commission again had to overcome many difficulties. The character of the earth, its dampness, the depth of the foundation and numerous other circumstances presented a host of variations. It was also noticed that nearly everywhere there were already regulations concerning the allowable loading of earth. Hence many of the members were opposed to the fixing of the 2.5 kilogrammes limit, and the section was finally adopted by a majority of a single vote. The other sections were approved unanimously, or practically so.

The Commission thoroughly discussed the matter of proposing a single carefully elaborated method of computing the stability, and decided not to do so. After it was determined not to allow tensile strength to be considered, those methods of calculation were necessarily excluded which figure the stack merely as an upright subject to pressure and bending. For the computation of round chimneys the Commission recognized the simplicity and safety of the tables of Professor Keck, of the Hanover Technical Institute, and the methods of Professor Lang, of the same school. But it was finally deemed best to permit any correct method.

THE RESTORATION OF CHICHESTER CATHEDRAL.



THE Secretary to the Society for the Protection of Ancient Buildings writes as follows to the *Times*:—

Chichester Cathedral is fast being lost to us—not by the hand of time, but by the hand of man. If one of our modern towns decided to erect a reproduction of Chichester Cathedral, no one would look upon the imitation in the same light as Chichester Cathedral, and yet, given time (money they can always get), this is what the "restorers" will do, for they are busily engaged in making Chichester Cathedral into a model of itself.

On November 6, 1897, the *Times* published a letter from this Society calling attention to the risk to the ancient work of building a new northwest tower, and again, on October 18, 1898, it published

another letter from the Society showing that its fears had been only too well founded.

An appeal for funds, dated June 20, and a report have been received by the Society. This report ignores altogether the damage caused by the new tower, although people in Chichester have a lively recollection of the recent anxiety caused by the cracks in the west front.

Our letter of October 18, 1898, says: "The west wall of the nave has been cracked from top to bottom, and a visitor approaching the cathedral by the western porch will see two fresh long cracks over the large doorway, one being apparently about an inch wide, and the other a quarter of an inch wide, and on entering the building it will be seen that the cracks go through the full thickness of the wall and run right up to the groining." The report just issued says: "This (west) wall, a little to the north of the centre line, is slightly fractured from top to bottom, and to a still less extent on the south side; these fractures are, no doubt, due to a defective foundation, to which also at an early period the inclination of the large tower buttresses may be attributed, and they were without doubt increased by the fall of the northwest tower." Now, this fall was upwards of two centuries ago.

The Society's statement before being made was carefully verified, and was not (and could not be) contradicted. A letter from Mr. Walter Crane was published in the *Times* of October 25, 1898, calling attention to this.

Beyond this question of the cracks, and as is usual with "restorers," the work of previous "restorers" is condemned in this last report, and funds are now asked for to allow of the modern west window being "replaced by a treatment more in harmony with the thirteenth-century work"; and of the west porch it says: "The centre feature of this archway has been renewed; it unfortunately is but little in character with the old work." How can "treatment more in harmony" be guaranteed?

Those who can spare the time to take the report and read it over standing opposite to the west front will see that by the time all the older "restorers'" work has been replaced by still newer work, and much other new stonework added, comprising a gable cross, coping-stones, labels and terminations, caps and bases, sills and string-courses, etc., together with new pointing which is to go over the whole, the front, with its new tower, will have acquired just the appearance of the imaginary building in the modern town which was spoken of at the beginning of this letter.



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

A COMPETITIVE DESIGN FOR THE LADY CHAPEL OF ST. PATRICK'S CATHEDRAL, NEW YORK, N. Y. MR. CHARLES C. HAIGHT, ARCHITECT, NEW YORK, N. Y.

PLAN AND SECTIONS OF THE SAME: TWO PLATES.

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

RAILWAY-STATION, HIETZING, AUSTRIA. HERR OTTO WAGNER, ARCHITECT.

This plate is copied from *Architektonische Monatshefte*.

NEW TOWN-HALL, LYNTON, NORTH DEVON, ENG. MESSRS. READ & McDONALD, ARCHITECTS.

This plate is copied from the *Building News*.

[Additional Illustrations in the International Edition.]

PUBLIC GYMNASIUM, HAMILTON FISH PARK, NEW YORK, N. Y. MESSRS. CARRÈRE & HASTINGS, ARCHITECTS, NEW YORK, N. Y.

VIEWS IN BEAUNE, CÔTE D'OR, FRANCE.

WEST DOORWAY: ST. LADRE, AUTUN, FRANCE.

SKETCHES IN A CORNER OF OLD FRANCE, BY MR. PAUL WATERHOUSE, F. R. I. B. A.

See article elsewhere in this issue.

DESIGN FOR THE NEW SESSIONS HOUSE: OLD BAILEY, LONDON, ENG. MR. J. BELCHER, ARCHITECT.

COMMUNICATIONS

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.]

FIREPROOFING BUILDINGS ALREADY BUILT.

STATE LIBRARY, ALBANY, N. Y., September 20, 1900.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—We have too many fires in libraries. Some catch from sparks from chimneys and from adjoining fires. What is there in the nature of a fireproof slate paint or other treatment for roofs and the clapboards or shingles of wood buildings that will really furnish protection? Is there anything else that would be better, to protect a wooden building standing within 30 to 80 feet of another which might burn?

I send this inquiry to three or four people whom we think most likely to know what there is and what merit it may have.

Yours truly, MELVIL DEWEY.

[SLATE paint would only protect such a building for a short time against sparks. For real protection, the best simple means would be to wire-lath the building all over, outside the clapboards or shingles, and plaster with mortar containing cement, and replace the shingles on the roof with tiles. —EDS. AMERICAN ARCHITECT.]

NOTES AND CLIPPINGS

THE IMPERIAL TOMBS AT SPEYER.—The opening of the Imperial Tombs in Speyer Cathedral, in the Bavarian Pfalz, was begun on August 17, in order to see what historical relics were left after the rifling of the tombs by the French in 1680, and at the time of the Revolution. The Cathedral at Speyer was founded in 1030, and built immediately afterwards. There were buried there eight German Emperors—Conrad II, Henry III, Henry IV, Henry V, Rudolph of Hapsburg, Philip of Suabia, Adolph of Nassau, and Albrecht of Austria, who was murdered by Johann the parricide—and three Empresses and a Princess—Beatrice, the wife of the Emperor Frederick Barbarossa, with her little daughter, Agnes Gisela, the wife of Conrad II, and Bertha, the wife of Henry IV—two Bishops of Speyer, and an Imperial Chancellor. The definite results up to the present are the discovery of the body of the founder of the Cathedral, Conrad II, and that of another Emperor not yet identified. A large copper crown was at the head of each body, with a cross and three lilies in the front. The crown found with another body had the following legible inscription: "Gisilla Imperatrix R.," proving the remains to be those of the wife of Conrad II. The remains of a figured cloth, with portions of gold edging, were also found. A lead tablet on the grave of the Empress gives her birthday as having been on November 11, 999, which contradicts what has hitherto been believed. The bones of Adolph of Nassau are also thought to have been found. An oak casket has also been found in a large vault, containing bones from various bodies and a sword. Most probably these are the bones which, after the great desecration of 1680, are known to have been collected together and buried in an oak casket in 1739. Recently another body was found in a state of decay, shrouded in a cloth. There was a copper crown with the body, which is supposed to be that of Henry III. The bones of the Emperor Henry IV have also been found. The gilded copper crown was broken. The clothing has, unfortunately, mouldered away, except a few fragments. A beautiful heavy gold ring was found on the right hand, with a large rock crystal, surrounded by three pearls set clear in filigree. The workmanship shows Roman forms. The grave of Henry V was also found. —Berlin Correspondence London Standard.

THE "BAUWAGE" USED BY THE CATHEDRAL-BUILDERS.—An interesting explanation has recently been given of the methods used by the architects and builders of the early cathedrals to determine the equilibrium of the arches and supporting columns. The various problems connected with their construction were solved by a graphic method, which involved the use of the "Bauwage," or building balance. This consisted of a flexible cord in the form of an inverted arch, passing over pulleys at either end, the cord being drawn into an equilibrium polygon by weights suspended at various points along the cord, each proportionate in position and amount to those which the arch would be required to carry at its various points. By means of weights connected with the cords passing over the pulleys at each end the system was supported and the horizontal force also measured. From the curve thus obtained, the various elements could be readily calculated and a reliable method of construction devised. The system was employed by the so-called master-builders, who were included in a guild that extended over Europe during the Middle Ages. Through this guild the traditions and higher knowledge of the building art were confined to a few masters in each country, and there is every indication that they were endowed with more than mere artistic feeling and intuition in carrying out their constructions. The graphic method described was used before 1685, but previous to that time it is hardly thought to have carried with it any special knowledge of the laws of statics. —N. Y. Evening Post.

SKYSCRAPER MAIL-SERVICE.—The large amount of mail-matter which arrives at the New York Post-office every day addressed to the tall business blocks in Broadway and Park Row has caused the creation of what the postmen call "skyscraper" mail-routes. They are considered quite a "cinch" for the winter, and the men who have been assigned to them are congratulating themselves that their work will be indoors. As many as three carriers have been assigned to some of the larger buildings, where the population is greater than that of many small towns and the mail-matter received much greater in proportion. The Empire Building, American Tract Society Building, Park Row Building and Equitable Building have at least 3,000 occupants each, and have forces of mail-carriers large enough for towns of that size. The daily population of the Equitable Building is 3,100, and three carriers work eight hours a day to handle the mail, which averages about 18,000 pieces a day. Every forty-five minutes mail-wagons run over from the Post-office and carry back with them 75 pounds of outgoing mail. Many people who do not have regular offices in the building have their mail sent in care of friends, and this adds considerably to the quantity. The Park Row Building, with six floors given over to city departments, has an equally large mail. The Empire Building averages 35,000 pieces a day, and there are several other buildings which receive almost as much. The plan of making these big buildings separate delivery routes has given much satisfaction, and will be continued by the postal authorities. —N. Y. Tribune.

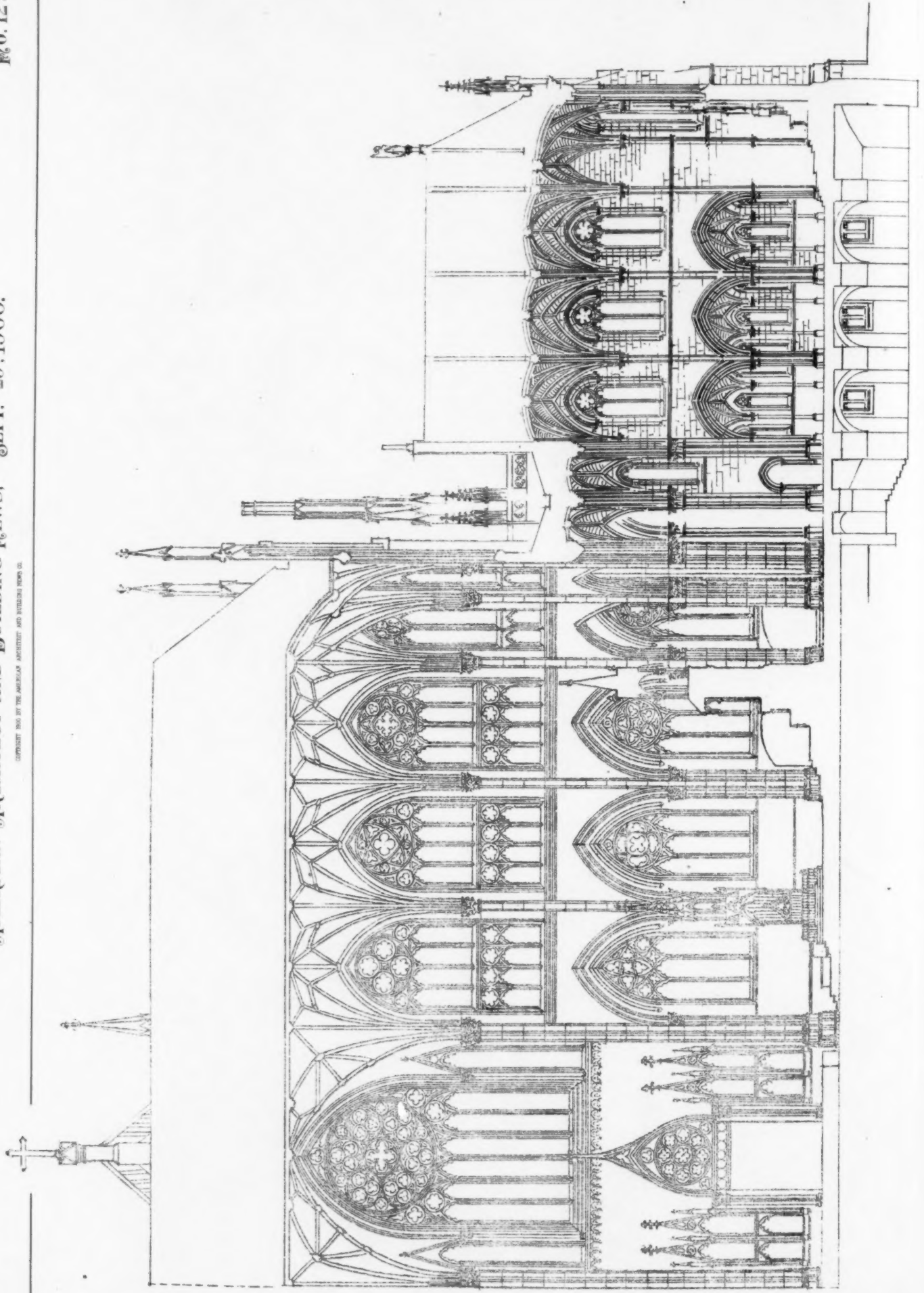
DISCOVERY OF A RUBENS AT WAPPING.—Remarkable finds are the order of the day. London is excited over what it believes to be a real Rubens, discovered in an out-of-the-way Catholic church, at Wapping. Wapping would be the very last place where it would have been deemed possible to find a Rubens. The Church of St. Patrick, in Old Gravel Lane, has been possessed of a picture which for untold years was hung on the walls so as to cover a piece of ugly brickwork. Later on this picture was hung, of all places, in the church porch. It was begrimed. Nothing could be made out of it. Some time ago a well-known English artist, Mr. Greenwood, was attracted by "a something" in the old picture. Mr. Greenwood had the picture cleaned. Strange to say, the task was an easy one. The varnish was so solid that with a few cautious wipes the colors of the picture at once stood out. From all appearances, it looks as if the work came from the hand of Rubens. It depicts the body of the Saviour after the descent from the Cross. One figure, that of Mary Magdalen, is said by the experts to be typical of the great master. Many other traits of resemblance are discoverable. So far nothing has been determined as to the history of the picture. How did it come to Wapping? That is not answered. One theory is that the picture was brought to London by the Flemings, and placed in the custody of St. Patrick's Church. Another is that the picture came from the old palace at Whitehall. We would advise some caution before accepting this picture as the work of Rubens. The authenticity of the picture can, however, be soon determined, because Rubens has certain distinctive marks which are unmistakable. —N. Y. Times.

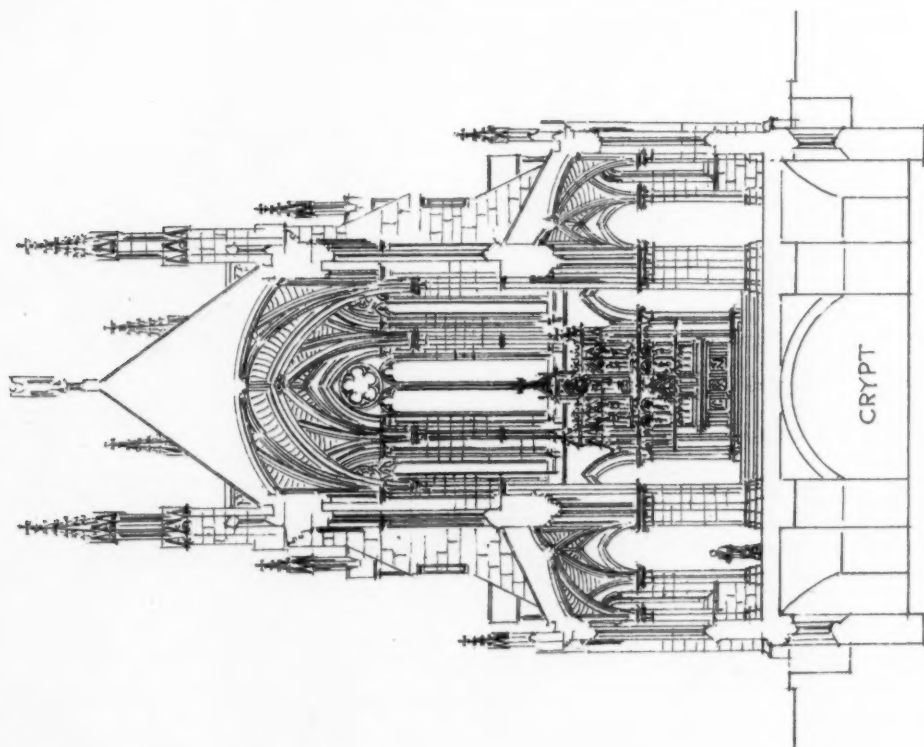
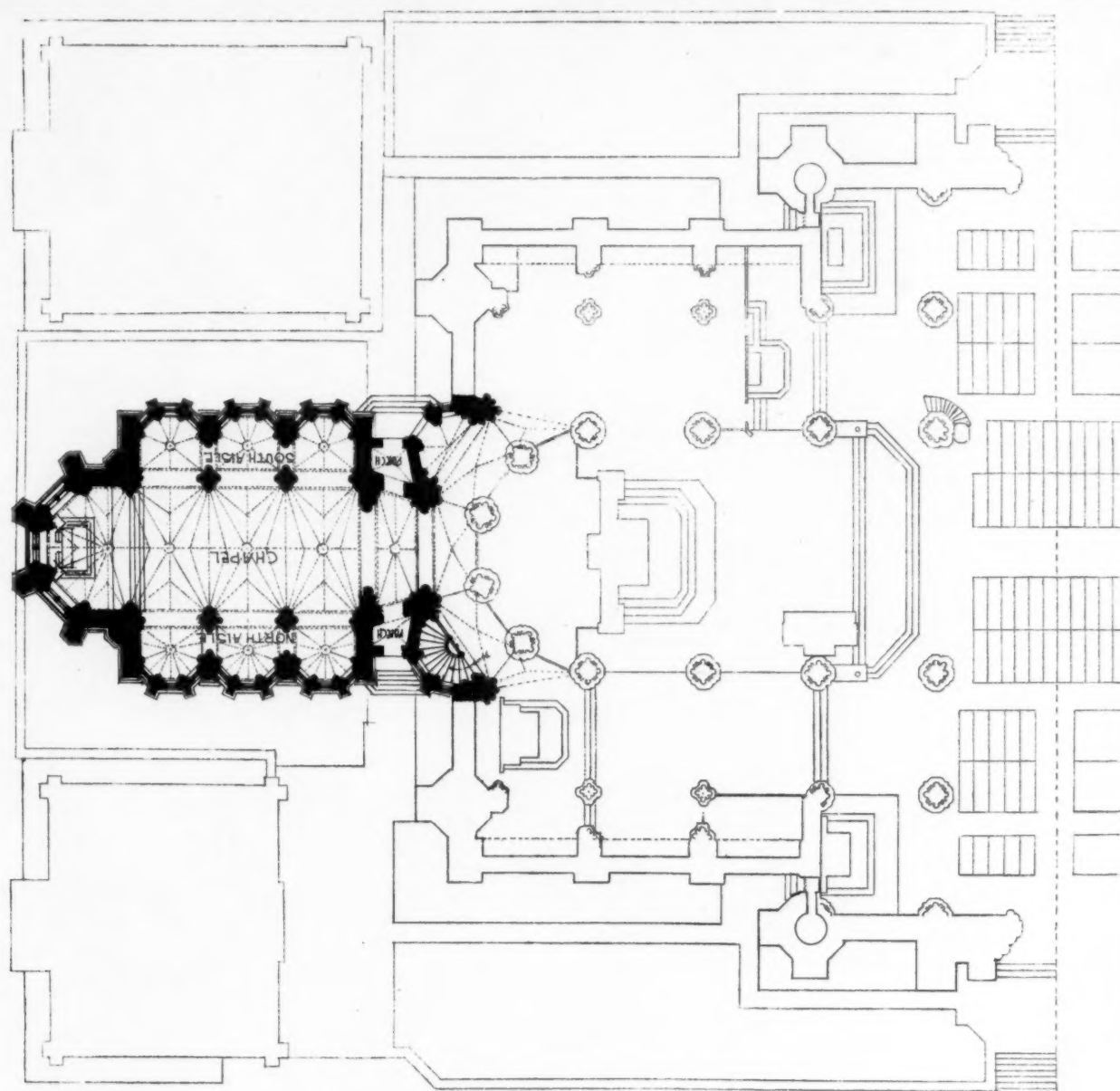
A RECENT THEORY OF ELECTRICITY.—An important development of the electron theory has been carried out by Robert Lang in his article on atomic magnetism contributed to the *Annalen der Physik* (No. 7). It may now be said that the phenomena of magnetism have at last been successfully reduced to those of electricity. We know from the work of Thomson and of Drude that an electric current in a wire consists of a stream of very small particles called electrons. These electrons are formed by the splitting up of the metallic atoms into a larger positive and a smaller negative portion. The positive electrons, under the influence of an electromotive force, travel in one direction along the wire, with a velocity of 1 centimetre per second. The negative electrons travel in the opposite direction with the same charge, but with a smaller velocity. The masses are in the ratio of about 9 to 1. Now, according to Lang, the negative electrons revolve around the heavier positive electrons in a magnetized metal, like a planet around the sun, and the electric convection-currents thus produced are nothing more nor less than Ampère's "elementary molecular currents." Lang calculates the speed of the electrons and the diameter of their orbit. The speed is that of light, and the figures obtained lead to conclusions in close agreement with known facts. —Nature.

A NEW SCHEME FOR LIGHTING PARIS WITH OIL.—About a fortnight ago experiments were made in Paris with a new oil-lamp which it is said will in certain portions of the city supplant gas, if not electricity. A number of these lamps, which are mounted upon elaborately designed wrought-iron pedestals, and which have a light of 1,000 candle-power each, now illuminate the Quai des Tuileries. It is said that they adequately light up the Tuileries gardens on one hand, while their rays are sent across the terrace to the water's edge, and on the other to the Quai and the Seine as far as the left bank to the Gare d'Orléans. *Le Petit Parisien* says that if the experiment "of effectually lighting up the dense gloom of the Quai des Tuileries, which has been especially chosen for this purpose, is successful, as every one believes it will be, petroleum-lamps will shortly replace gas and electricity in all the large squares and open spaces in Paris, and no doubt they will eventually be utilized for lighting the Bois de Boulogne." —N. Y. Times.

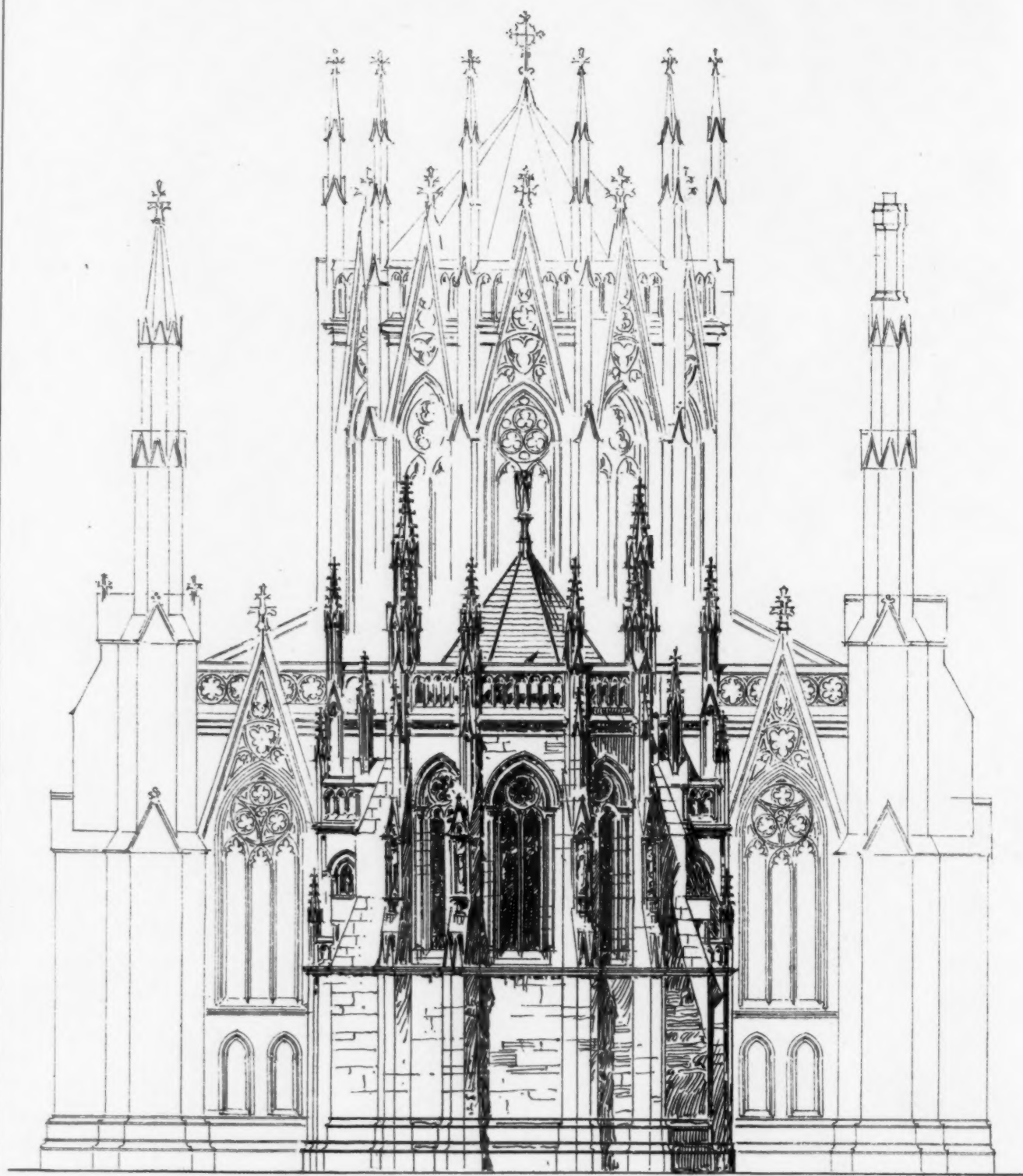
SNEEZE-WOOD.—Among its many peculiarities South Africa includes the "sneeze-wood" tree, which takes its name from the fact that one cannot cut it with a saw without sneezing, as the fine dust has exactly the effect of snuff. Even in planing the wood it will sometimes cause sneezing. No insect, worm, or barnacle will touch it. It is very bitter to the taste, and its specific gravity is heavier than water. The color is light-brown, the grain very close and hard. It is a nice-looking wood, and takes a good polish. For dock-work, piers, or jetties, it is a useful timber, lasting a long while under water. —The Building News.

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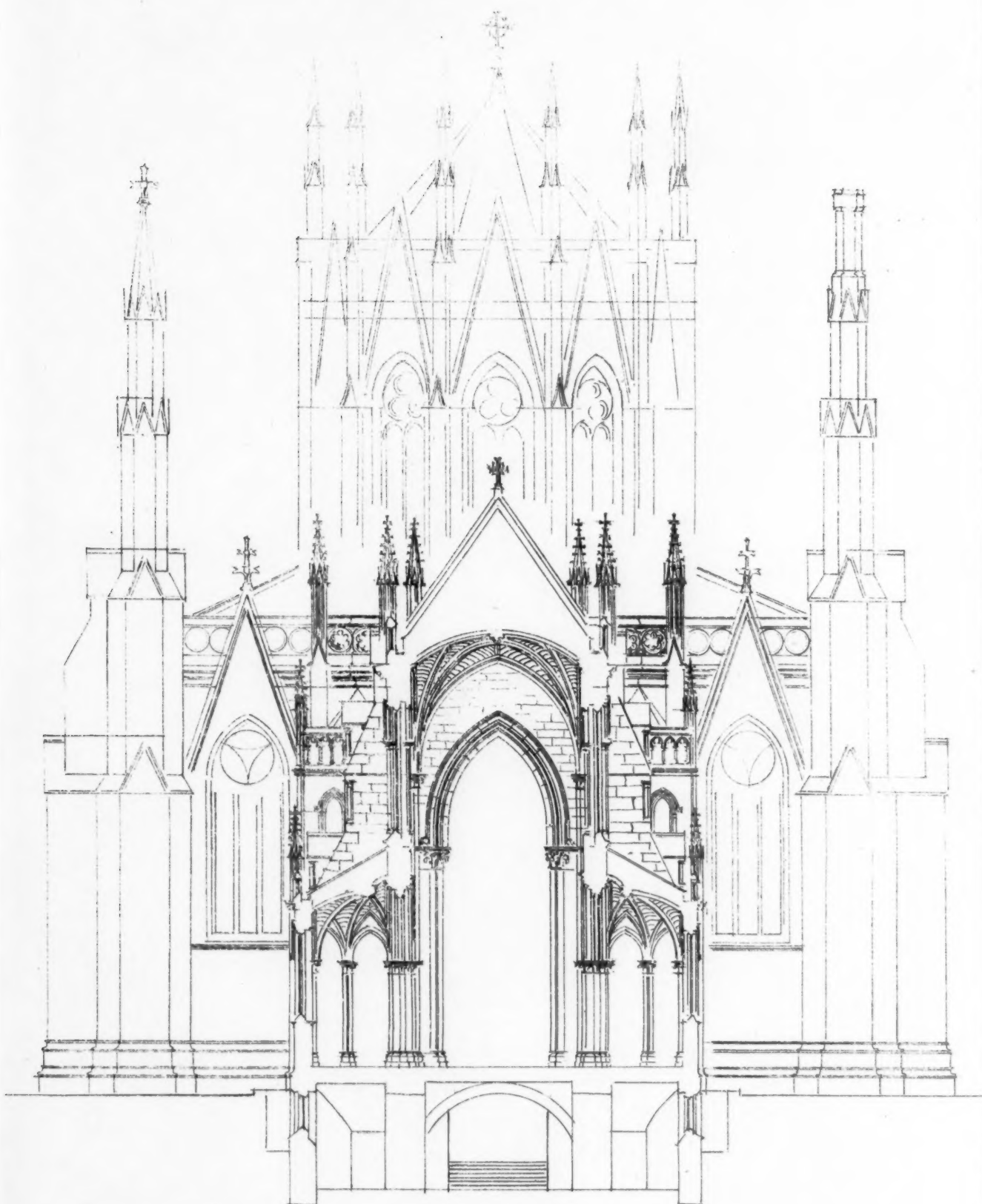


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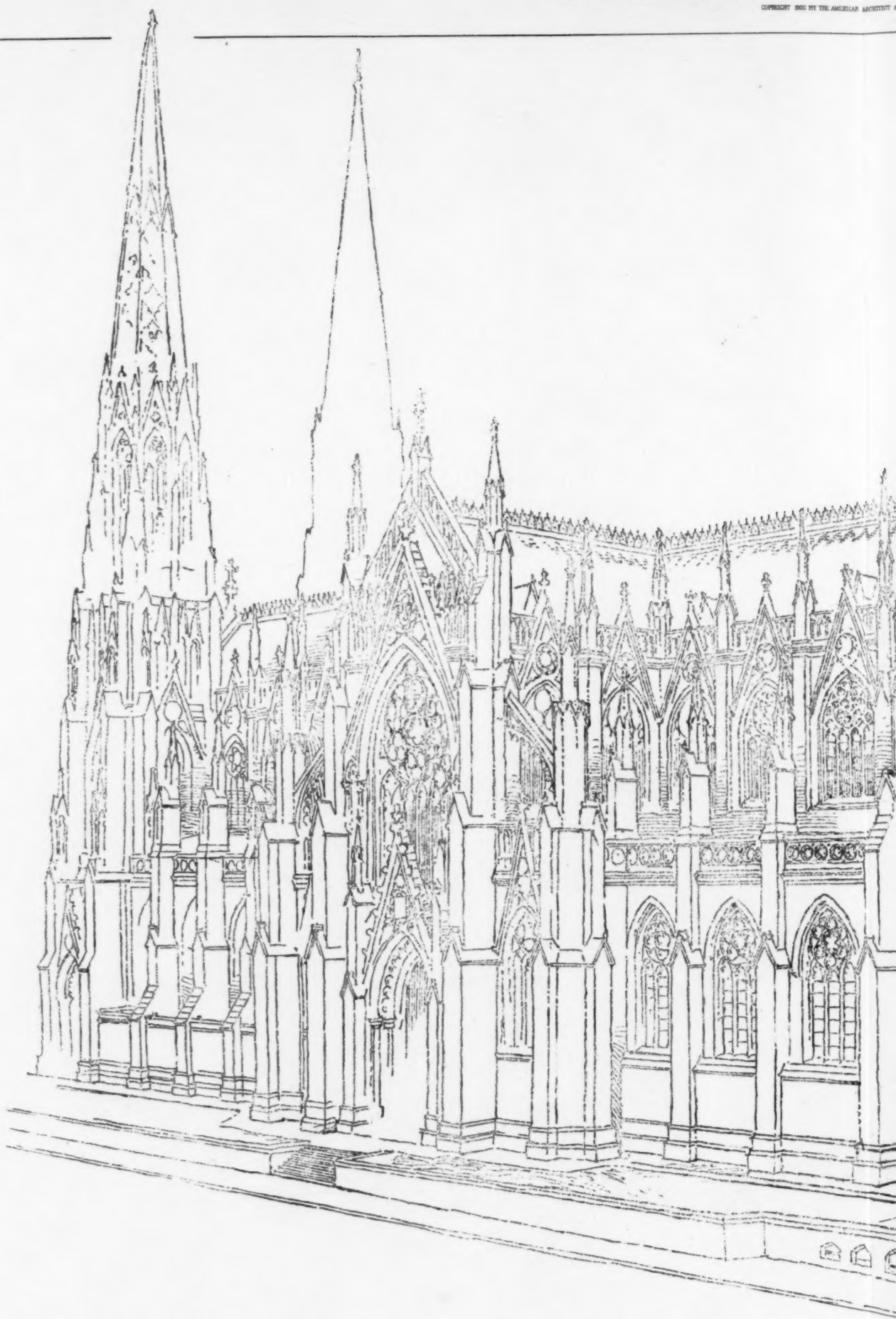
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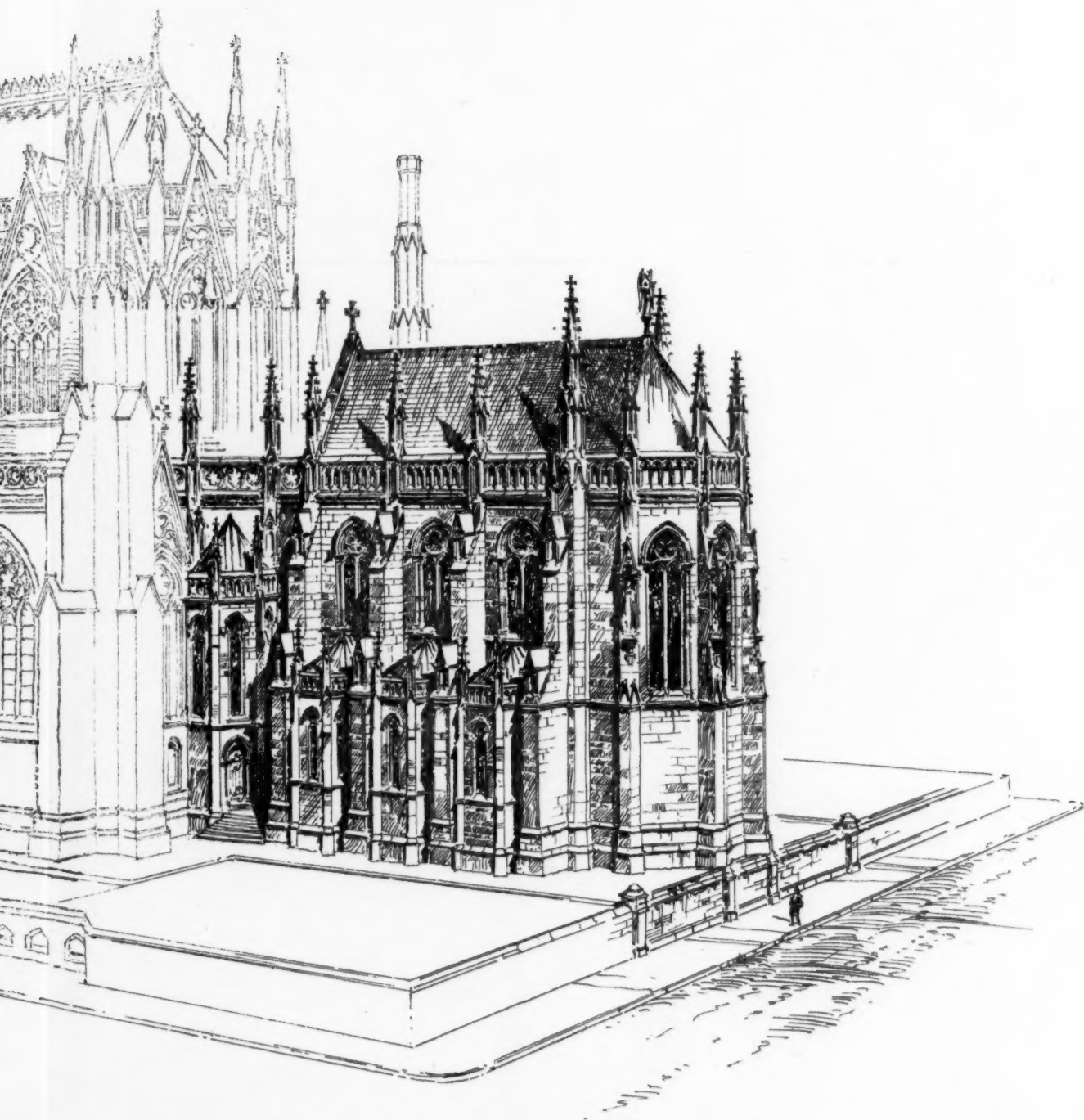
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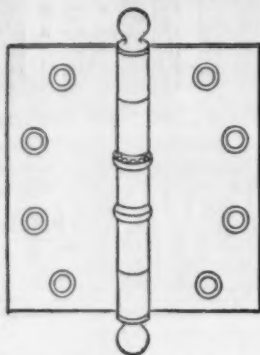
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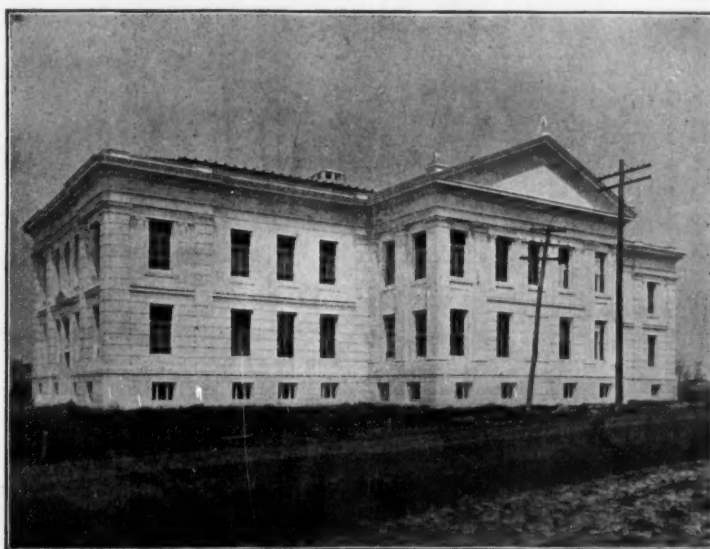
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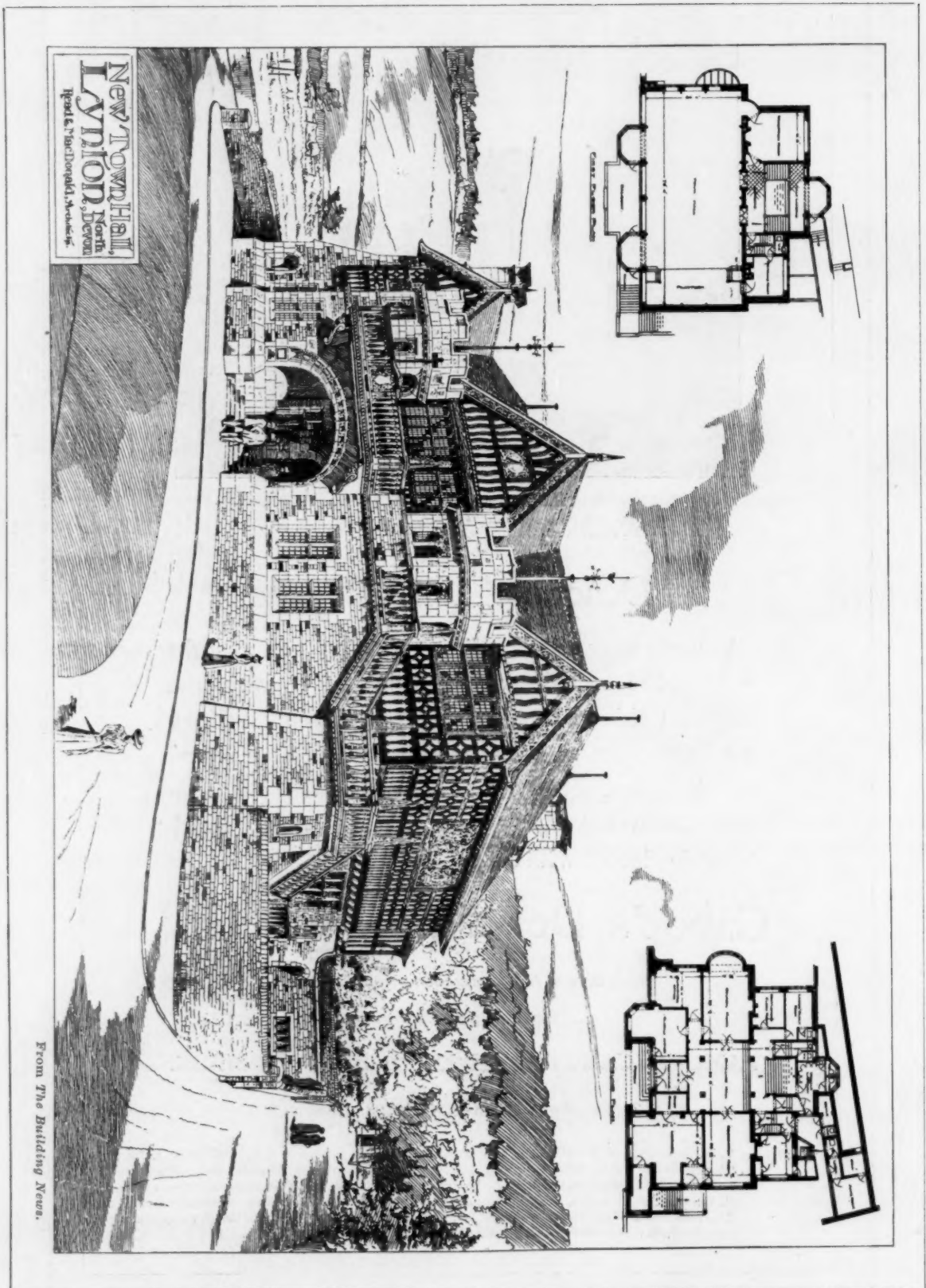
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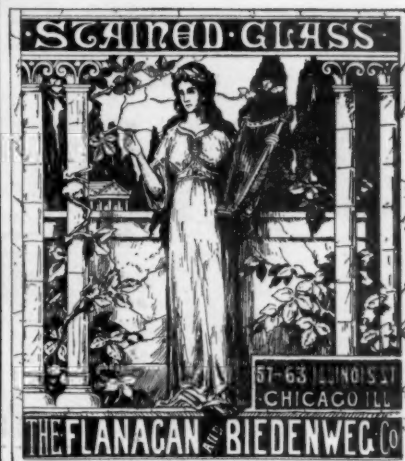


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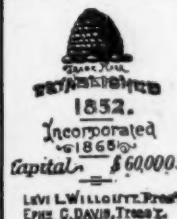
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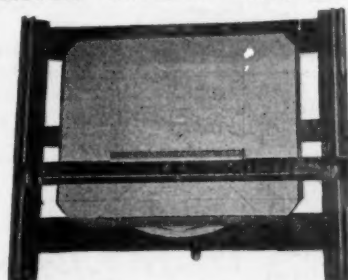
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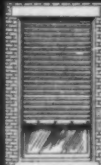
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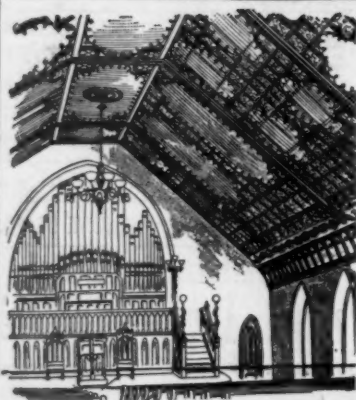
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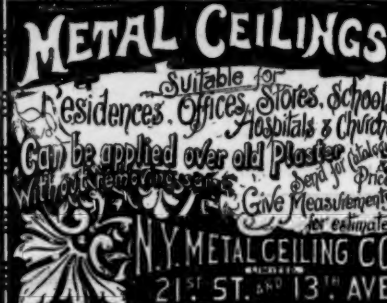
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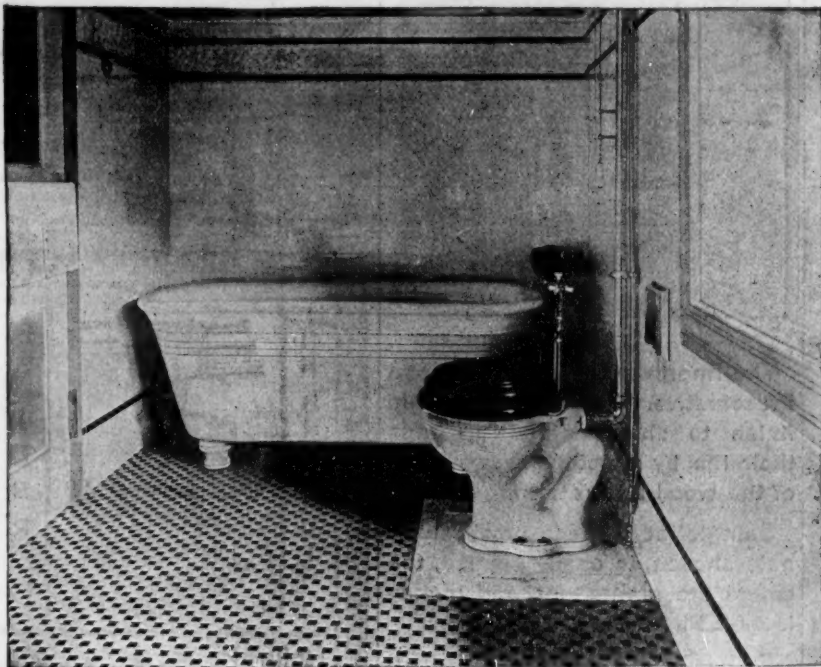
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(Advance Rumors Continued.)

Ironwood, Mich.—Alden & Harlow, 314 Fourth Ave., Pittsburgh, Pa., have drawn plans for a \$12,000, 30' x 80', stone and brick public library.

Kansas City, Mo.—The Yale Investment Co. will erect a three-story, 50' x 129', apartment-house at 13th and Charlotte Sts., after plans by Architect J. G. Kroecklein; cost, \$40,000.

Knoxville, Tenn.—Dr. W. S. Nash will build a brick residence at 519 W. Main Ave., after plans by Leon Beaver; cost, \$10,000.

Le Mars, Ia.—The Western Union College, Rev. H. H. Thoren, president, will rebuild the college building recently destroyed by fire. It will be a two-story and basement brick structure; cost, about \$20,000.

Mason City, Ia.—D. McGregor will erect a two-story brick and stone apartment-building, after plans by S. J. Bowler, Minneapolis, Minn.; cost, \$18,000.

Menomonee, Wis.—W. G. Williamson, of Chicago, Ill., and John Charles, of Menomonee, associate architects, have plans ready for figures for the gymnasium and natatorium to be erected by Sen. J. H. Stout. The building will be three-story, 100' x 132', of pressed brick, with stone and terra-cotta trimmings; cost, \$60,000.

Milwaukee, Wis.—The County Supervisors will secure plans and specifications immediately for improvements at the county hospitals, at a cost of not more than \$100,000.

Minneapolis, Minn.—The J. I. Case Implement Co. have had plans prepared by Kees & Colburn for a warehouse and office building to be erected at 7th Ave., South and 3d Sts. It will be a six-story brick and mill-construction building, 82' x 120', costing \$60,000.

New Albany, Ind.—Adolph Hallenberg, Louisville, Ky., has drawn plans for a three-story 60' x 105', brick public school-building, to cost \$30,000.

Omaha, Neb.—J. H. Evans, president of the National Bank of Commerce, will erect a residence at 33d and Farnum Sts., after plans by Architects Fisher & Lawrie. It will be built of gray stone, brick and terra-cotta in the Tudor style of architecture; cost, \$25,000.

Peotone, Ill.—J. M. Deal, Lincoln, will draw plans for the proposed new \$10,000 school-house.

Philadelphia, Pa.—The B'nai Ruben Anshai Shofar Congregation has purchased the houses at 928, 930 and 932 S. 6th St. and will erect a commodious synagogue on the site.

Red Wing, Minn.—The trustees of Red Wing Seminary contemplate erecting a new building to cost about \$40,000.

Richmond, Va.—John Murphy is having plans prepared for a hotel annex to cost \$40,000 to be built on Broad and 8th Sts. Leon Denzoe, 1421 F St., N. W., Washington, D. C., architect.

Spartanburg, S. C.—Ladshaw & Ladshaw have prepared plans for a large cotton-mill to be erected for R. R. Haynes & Co., at Henrietta, N. C.

Spokane, Wash.—The warehouse of the Shaw

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Wells Co., which was burned recently at a loss of \$35,000 will be rebuilt.

The Sacred Heart Society is having plans drawn for a hospital by Architect J. B. Blanchett, Vancouver; cost, \$200,000.

Seattle, Wash.—B. Everett has plans drawn by Bergfield & Buchinger for two double houses with all modern conveniences; cost, \$10,000.

Stuart, Ia.—The Catholic Society, Rev. Fr. Daley, pastor, will erect a church to cost \$25,000.

ALTERATIONS AND ADDITIONS.

Brooklyn, N. Y.—Driggs Ave., cor. Diamond St., one-sty' fr. extension, 13' x 31', & interior alterations; \$5,000; o., Peter Doelger, 330 W. 100th St., N. Y.; a., C. Stegmeyer, 306 E. 82d St., N. Y.

Cambridge, Mass.—Oxford St., five-sty' bk. & st. addition to museum building, 77' x 101'; \$150,000; o., Harvard University; a., Shaw & Hunnewell.

New York, N. Y.—E. Twenty-second St., No. 134, alter roof, new porch; \$8,000; o., Henry W. Poor, 1 Lexington Ave.; a., McKim, Mead & White, 160 Fifth Ave.; b., M. Reid & Co., 18 E. 20th St.

W. Third St., Nos. 123-128, four-sty' extension, 50' x 55' 10"; \$14,000; o., Christina S. Wyle, Morris-town, N. J.; a., Wm. C. Van Doren, 130 Broadway.

E. Twenty-third St., No. 125, six-sty' extension, 28' 6" x 70'; \$25,000; o., Fred'k and Jennie Beach, 9 W. 20th St.; a., Frank T. Cornell, 281 Fourth Ave.

APARTMENT-HOUSES.

Boston, Mass.—Alexander St., cor. Olander St., three-sty' bk. apart., 23' x 23' x 77', flat roof, stoves; \$8,000; o. b., Abram Hoffecker.

Brooklyn, N. Y.—St. Marks Ave., nr. Flatbush Ave., four-sty' bk. flat, gravel roof, steam; \$20,000; o., James Cochran, 1477 Bedford Ave.; a., Wm. Debus, 808 Broadway.

Ninth St., nr. bet. 8th & 9th Aves., 2 four-sty' bk. & st. flats, 30' x 65'; \$30,000; o., Thomas Van Pelt, 7th Ave. & 6th St.; a., Thomas Bennett, 198 Fifty-third St.

Louisville, Ky.—Three-sty' pressed-bk. aparts., 40' x 100'; \$7,000; o., Mrs. Mary Rodemaker; a., J. J. Gaffney.

Millbury, Mass.—Repairs and additions to high school building; \$10,000; o., Town of Millbury, Amos Ormsby, Chmn. of Bldg. Com.; b., J. I. Elliott, Worcester; a., Geo. A. Clemence, Worcester.

Milwaukee, Wis.—Third St., three-sty' bk. & Bedford st. addition to hotel, 32' x 144', tin roof, steam; \$35,000; o., Charles F. Klezsch; a., Ferry & Clas.

Muskegon, Mich.—Two two-sty' & base, bk. & st. & terra-cotta wings, 50' x 70', slate roof, steam; \$35,000; o., Hackley Manual Training School; a., Patton, Fisher & Miller, Chicago, Ill.

New York, N. Y.—W. Fortieth St., Nos. 313-319, 4 five-sty' & base, bk. flats, 24' 11" x 85' 2"; \$80,000; o., Karst & Korn, 2651 8th Ave., & 37 Maiden Lane; a., Louis Korn, 37 Maiden Lane.

Lexington Ave., cor. 78th St., seven-sty' bk. & st. flat, 38' x 77'; \$63,000; o., Geo. A. Groth, 123 Edgecombe Ave.; a., G. F. Pelham, 593 Fifth Ave.

BUILDING INTELLIGENCE.

(Apartment-Houses Continued.)

One Hundred and Thirtieth St., nr. 3d Ave., 3 five-sty' bk., st. & terra-cotta flats, 25' x 84' 4"; \$75,000; o., Mr. Scheuring, 418 E. 91st St.; a., John Hauser, 1961 Seventh Ave.

Riverside Drive, cor. 98th St., seven-sty' bk. & st. flat, tin & plastic slate roof; \$275,000; o., Max and Moses Ottinger, 20 E. 70th St.; a., Henry Andersen, 1180 Broadway.

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Alton, Ill.—Henry and Sixth Sts., st. & bk. church, 76' x 96'; \$16,000; o., Congregational Society; a., H. S. Marland.

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Overbrook, Pa.—Lancaster Ave. and Shervood Road, two-sty' & base, st. parish house, 66' x 91'; \$11,000; o., Memorial Church of St. Paul; b., Milton W. Young; a., Fred M. Mann.

Philadelphia, Pa.—Tasker St., Nos. 2010-12, one-sty' & base, bk. & granite chapel, 33' x 68'; \$8,000; o., Metropolitan Baptist Society; b., J. V. Randolph.

West Brooklyn, Ill.—One-sty' bk. with st. trimmings church, 48' x 100', shingle roof, steam; \$14,000; o., St. Joseph's Roman Catholic Society; a., Joseph Molton, Chicago.

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FACTORIES.

Boston, Mass.—*Stillman St.*, Nos. 44-46, bk. manufactory, 30' x 60', flat roof, stoves & steam; \$12,000; o., Leah Goldstein; b., Israel Goldstein; a., A. Halstrom.
Summer St., nr. Liverpool St., bk. machine-shop, 68' x 300', pitch roof, steam; \$20,000; o., E. Hodges & Co.; a., Webber & Smith.
Brooklyn, N. Y.—*S. Second St.*, nr. Kent Ave., two-st'y bk. boiler-house, 42' x 88' 8", corrugated steel roof; \$20,000; o., American Sugar Refining Co., 117 Wall St., N. Y.; a., V. Wolz, 479 Quincey St.
Cook St., n. w. cor. Morrell St., five-st'y bk. factory, 25' x 75'; \$10,000; o., R. Reisenberger, 61 Graham Ave.; a., S. S. & Smallheiser, 31 Park Row, N. Y. City.
Chicago, Ill.—*S. Jefferson St.*, Nos. 82-86, seven-st'y mill-construction factory, gravel roof, steam heat; \$45,000; o., R. C. O'Dwyer, agt.; a., Chas. H. McAfee.
Philadelphia, Pa.—*Ludlow St.*, e. 45th St., two-st'y bk. factory, 50' x 100'; \$7,000; o., James McConnell; b., William Patterson.

HOSPITALS.

New York, N. Y.—*E. Forty-second St.*, Nos. 215-217, six-st'y bk. & st. dispensary, 50' x 92', tile roof; \$200,000; o., St. Bartholomew's Church Corporation, 348 Madison Ave.; a., M. L. & H. G. Emery, 68 Bible House.

BUILDING INTELLIGENCE.

HOUSES.

Boston, Mass.—*Centre St.*, nr. Gay Head St., 2 three-st'y bk. dwells., 22' x 54', flat roof, stoves; \$15,000; o., Julia A. Hayden; a. & b., Edward Hayden.
Gay Head St., nr. Centre St., three-st'y bk. dwell., 23' x 44', flat roof, stoves; \$8,000; o., Julia A. Hayden; a. & b., Edward Hayden.
E. Sixth St., Nos. 710-16, 4 three-st'y fr. dwells., 23' x 50', flat roofs, stoves; \$20,000; o., a. & b., Watson & Walte.
Holmes St., nr. Harvard St., 9 fr. dwells., 25' x 33', pitch roofs, furnaces; \$40,000; o. & b., John J. Johnson; a., J. Mulcahy.
Blue Hill Ave., No. 686, 2½-st'y fr. dwell., 20' x 52', pitch roof, hot water; \$5,500; o. & b., William Dolandson; a., Nathan Douglas.
Southern Ave., nr. Whitefield St., two 2½-st'y fr. dwells., 20' x 50', pitch roofs, furnaces; \$10,000; o., a. & b., Benjamin Rockwell.
Bay State Road, cor. Sherburn St., bk. dwell., 20' x 47' x 125', flat & mansard roof, hot water; \$80,000; o., Charles G. Weld; b., G. W. Morrison; a., Peters & Rice.
Brooklyn, N. Y.—*Degraw St.*, nr. New York Ave., seven 2½-st'y & base. bk. dwells., 20' x 47', gravel roofs; \$38,500; o., Fred'k L. Hine, 759 Nostrand Ave.
Grant St., nr. Schenectady Ave., two-st'y fr. dwell., 34' x 30', shingle roof; \$5,500; o., Walter Bown, 1 Rugby Road; a., G. Martin, 108 Grant St.
Lincoln Road, nr. 185' E. Bedford Ave., 3 three-st'y bk. dwells., 20' x 45'; \$16,500; o., John Wilson, 456

BUILDING INTELLIGENCE.

(Houses Continued.)

**Fourteenth St., a., Roosen & White, 68 Fort Greene Pl.
New York, N. Y.—*Union Ave.*, cor. 151st St., 5 two-st'y fr. dwells., 17' 6" x 41'; \$32,750; o., Mabel M. Moore, Pleasantville, N. Y.; a., Fred R. Meres, 583 Prospect Ave.
Philadelphia, Pa.—*Gorges St.*, 40 three-st'y bk. dwells., 16' x 44' x 53'; \$160,000; b., John E. Lynch.
Pittsburgh, Pa.—Two-st'y & attic bk. dwell., 38' x 40', slate roof, furnace; \$9,000; o., Enoch J. Adams; a., C. M. Bartberger.
Quincy, Ill.—*Kentucky St.*, two-st'y bk. & st. dwell., 37' x 50', steam heat; \$5,000; o., C. H. Lawter; a., F. C. Ledebink.
Somerville, Mass.—*Westminster St.*, nr. Broadway, two-st'y dwell., 20' x 48', pitch roof, furnace; \$4,500; o., Emeline Teale; b., Daniel E. Robbins.
Whittinsville, Mass.—Two-st'y fr. dwell., 28' x 60'; \$6,000; o., Geo. E. Trowbridge; e., J. J. Van Steinberg, Northbridge; a., Cutting, Carleton & Cutting, Worcester.
Worcester, Mass.—*W. Boylston St.*, 2½-st'y fr. dwell., 30' x 57'; \$4,000; o., James Gilgan; a., J. P. Kingston. Contract not let.
Office Ave., two-st'y dwell., 28' x 52'; \$6,000; o., B. F. Sawyer; a. & e., W. E. Putnam.
Gardner St., three-st'y fr. dwell., 29' x 67'; \$8,000; o., H. Hobbs; a., Chapin & Topanellian.
Cambridge St., 2 three-st'y fr. dwells., 27' x 47'; \$7,000; o., John Brophy; e., Augustin Lagrenade; a., A. J. Harrington.
Forbes St., 2½-st'y fr. dwell., 27' x 50'; \$4,000; o., John Lundberg; a., J. P. Kingston; o., C. E. Anderson.
Arlington St., three-st'y fr. dwell., 28' x 60'; \$5,000; o., Wm. Schollard; e., Lynch Bros.; a., Barker & Nourse.**

STABLES.

Boston, Mass.—*Arboreway*, nr. Pond St., bk. stable, 22' x 34', pitch roof, stoves; \$3,000; o., Joseph Engle; a., R. A. Watson; not let.
A St., nr. Binford St., fr. stable, 16' x 29', flat roof; \$800; o., F. P. Maxwell & Co.; not let.
Brooklyn, N. Y.—*Elton St.*, w. s. 125' n. Fulton St., two-st'y bk. stable, 25' x 20'; \$650; a., Conrad Pfeiffer, 2994 Fulton St.; a. & b., C. Merz, Schenck & Liberty Aves.

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No. 593,276, May 26, 1897
No. 593,276, May 26, 1897
No. 591,598, Oct. 12, 1897

No. 620,388, Mar. 14, 1899
No. 601,426, Mar. 23, 1899
No. 608,540, Aug. 2, 1899
No. 608,972, Aug. 9, 1899

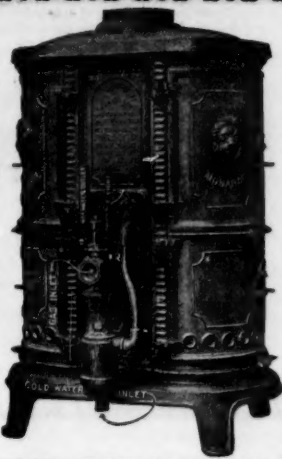
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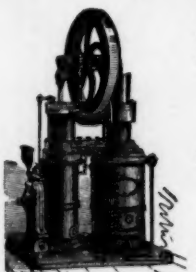
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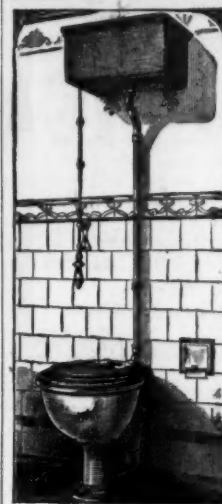
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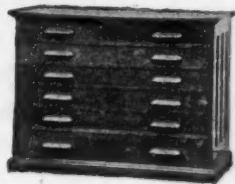
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st'y fr. stable, 40' x 50', shingle roof; \$1,200; o.,
James Nolan, 251 E. 29th St.

New York, N. Y.—E. Twelfth St., Nos. 611-613, two-
st'y bk. stable & wagon-room, 25' 5" x 103' 3";
\$6,000; o., Standard Dairy Co., 133 Seventh St.; a.,
Henry Regelmann, 133 Seventh St.

STORES.

Brooklyn, N. Y.—Fourth Ave., s e cor. 49th St.,
three-st'y bk. store & tenement, 22' 6" x 74'; \$10,000;
o., John Best; a., T. Bennett.

Reverly Road, cor. Coney Island Ave., three-st'y
fr. store & dwell., 29' x 100', steam heat; \$15,000; o.,
National Trading Co., Court & Montague Sts.; a.,
G. Hitching, 1090 Flatbush Ave.; b., E. Wenschler,
2208 Church Ave.

St. Nicholas Ave., cor. Hart St. & St. Nicholas
Ave., 3 three-st'y bk. stores & tenements; \$24,000;
o., H. Grassmann; a., H. Vollweiler.

Fort Hamilton Ave., nr. 40th St., 6 three-st'y bk.
stores & dwell., 19' x 43' 6"; \$30,000; o., W. Mc-
Cormack, 5th Ave. & 49th St.; a., T. Bennett, 198
Fifty-third St.

Fort Hamilton Ave., n e cor. 40th St., three-st'y
bk. store & dwell., 19' 2" x 55'; \$7,000; o., W. Mc-
Cormack; a., T. Bennett.

New York, N. Y.—E. Seventeenth St., No. 5 and
E. Eighteenth St., No. 6, eight-st'y bk. & sto. &
loft building, 37' 6" x 184'; \$150,000; o., Geo. A.
Heisler, 217 W. 125th St.

W. Twenty-second St., No. 262, 1 six-st'y & base,
bk. & st. store & flats, 25' x 85' 2"; \$28,000; o., Oslas
Kanner, 530 Broadway; a., G. F. Peilham, 543 Fifth
Ave.

TENEMENT-HOUSES.

Brooklyn, N. Y.—St. Nicholas Ave., nr. Hart St.,
9 three-st'y bk. tenements, 25' x 58' 6"; \$58,500; o.,
H. Grassmann, 1725 Broadway; a., H. Vollweiler, 453
Hart St.

New York, N. Y.—W. Sixty-seventh St., Nos. 233-
235, 2 five-st'y bk. tenements, 25' x 84' 4"; \$40,000;
o., Thos. A. Woods, 170 W. 65th St.; a., R. Graff,
830 Gerard Ave.

W. Sixty-seventh St., Nos. 231-237, 2 five-st'y bk.
tenements, 25' x 84' 4"; \$40,000; o., T. A. Wood; a.,
R. Graff.

Ford St., n s, 250' w Webster Ave., three-st'y fr.
tenement, 21' x 52'; \$6,000; o., Peter Shand, 1229
Brook Ave.; a., W. C. Dickerson, 149th St. & 3d
Ave.

WAREHOUSES.

Beaver Falls, Pa.—Three-st'y & base. bk. front
storage house, 50' x 120', composition roof; \$25,000;
o., McHattie Bros.; a., Oscar Beyer, Chicago, Ill.

MISCELLANEOUS.

Boston, Mass.—W. Concord St., nr. Shawmut Ave.,
bk. sanitary building, 12' x 90', flat roof, furnace;
\$5,000; o., City of Boston; b., James Fagan; a.,
Charles Brown.

Summer St., cor. Lamson St., bk. sanitary build-
ing, 25' x 54', flat roof, furnace; \$5,000; o., City of Bos-
ton; b., James Fagan; a., Charles Brown.

PROPOSALS.

SKYLIGHTS.

[At Washington, D. C.]
Sealed proposals will be received until October 5
for furnishing skylights, corrugated steel roof arches,
tile roofing, galvanized-iron pipe and fittings, pipe
machines, etc., for the new building for the govern-
ment printing-office. JOHN STEPHEN SEWELL,
lieutenant engineers, United States engineer, 735
N. Capital St., Washington, D. C. 1292

PROPOSALS.

DWELLING.

[At Georgetown Heights, D. C.]
Sealed proposals in duplicate will be received at
the Bureau of Equipment, Navy Department, until
October 9th for constructing a dwelling at the
naval observatory, Georgetown Heights. R. B.
BRADFORD, chief of bureau. 1292

CHURCH.

[At Charleston, W. Va.]
The Building Committee of the Charleston Baptist
Church will receive proposals until October 8 for
the erection of a new church. WILLIAM KEELY,
secretary of the building committee. 1292

ARCH BRIDGE.

[At Rock Creek, D. C.]
Sealed proposals will be received until October
13, 1900, for the construction of a Melan arch bridge
across Rock Creek in the National Zoological Park
on the line of the Quarry Road. LANSING H.
BEACH, engineer commissioner, Washington, D. C.
1293

DORMITORY.

[At Umatilla, Ore.]
Sealed proposals will be received until October
29 for furnishing the materials and labor required in
the construction, at the agency school, of a frame or
brick dormitory, for remodeling and improving the
present boys' dormitory of the agency. W. A. JONES,
United States Indian warehouse, 233 Johnson St.,
Chicago, Ill. 1294

HOTEL.

[At Atlantic City, N. J.]
Bids are invited for constructing a seven-story fire-
proof apartment hotel. J. L. YOUNG. 1292

STABLE.

[At Fort Yellowstone, Wyo.]
Sealed proposals, in triplicate, will be received
until October 17th for the erection of a quarter-
master's stable, wagon-shed, teamster's quarters,
shops and an addition to the commissary storehouse.
GEO. E. POND, C. L. M., St. Paul, Minn. 1294

Treasury Department, Office Supervising Architect,
Washington, D. C., September 20, 1900. Sealed pro-
posals will be received at this office until 2 o'clock
P. M. on the 8th day of October, 1900, and then opened,
for the installation of a wiring system for the U. S.
Post-office Building at Newport, Ky., in accordance
with the drawings and specification, copies of which
may be obtained at this office or at the office of the
Superintendent of Construction at Newport, Ky., at
the discretion of the Supervising Architect. JAMES
KNOX TAYLOR, Supervising Architect. 1293

Treasury Department, Office Supervising Architect,
Washington, D. C., September 22, 1900. Sealed pro-
posals will be received at this office until 2 o'clock
P. M., on the 15th day of October, 1900, and then
opened, for new plumbing and interior finish of
toilet-rooms for the U. S. Treasury Building at Wash-
ington, D. C., in accordance with drawings and specifi-
cation, which will be furnished at the discretion of
the Supervising Architect at this office. JAMES
KNOX TAYLOR, Supervising Architect. 1293

Treasury Department, Office Supervising Architect,
Washington, D. C., September 22, 1900. Sealed pro-
posals will be received at this office until 2 o'clock
P. M. on the 23d day of October, 1900, and then opened,
for the construction of the basement of the U. S.
Post-office building at Butte, Montana, in accordance
with the drawings and specification, copies of which
may be had at this office or at the office of the
Postmaster at Butte, Montana, at the discretion of
the Supervising Architect. JAMES KNOX TAY-
LOR, Supervising Architect. 1293

PROPOSALS.

STABLE.

[At Detroit, Mich.]
Sealed proposals will be received at the office of
the Chief Quartermaster, Chicago, Ill., until Octo-
ber 11th for constructing a brick stable at Fort
Wayne, Detroit, Mich. E. B. ATWOOD, Lieut.-col.
and chief quartermaster. 1293

LIBRARY.

[At Galesburg, Ill.]
Sealed proposals will be received by the Library
Building Committee until October 1st for the
erection of a public library. ALBERT J. PERRY,
chmn. 1292

COURT-HOUSE.

[At Westville, Miss.]
The Board of Supervisors of Simpson County will
receive bids until October 1st for the erection of a
court-house and jail. J. F. THAMES, clk. of bd. 1292

Treasury Department, Office Supervising Architect,
Washington, D. C., September 13th, 1900. Sealed pro-
posals will be received at this office until 2 o'clock
P. M. on the 15th day of October, 1900, and then opened,
for the construction (except heating apparatus, elec-
tric wiring and conduits) of the U. S. Post-office
building at Carrollton, Kentucky, in accordance with
the drawings and specification, copies of which may
be had at this office, or at the office of the Postmaster
at Carrollton, Ky., at the discretion of the Supervis-
ing Architect. JAMES KNOX TAYLOR, Supervis-
ing Architect. 1292

Treasury Department, Office Supervising Architect,
Washington, D. C., September 13th, 1900. Sealed pro-
posals will be received at this office until 2 o'clock
P. M. on the 9th day of October, 1900, and then
opened, for the construction of the basement of the
U. S. Post-office building at New Brunswick, New
Jersey, in accordance with the drawings and specifi-
cation, copies of which may be had at this office or
at the office of the Postmaster at New Brunswick,
New Jersey, at the discretion of the Supervising Ar-
chitect. JAMES KNOX TAYLOR, Supervising
Architect. 1292

Treasury Department, Office Supervising Architect,
Washington, D. C., September 18th, 1900. Sealed pro-
posals will be received at this office until 2 o'clock
P. M. on the 16th day of October, 1900, and then
opened, for the construction (except heating appa-
ratus, electric wiring and conduits) of the U. S. Post-
office at Annapolis, Maryland, in accordance with
the drawings and specification, copies of which may
be had at this office, or at the office of the Postmaster
at Annapolis, Md., at the discretion of the Supervis-
ing Architect. JAMES KNOX TAYLOR, Supervis-
ing Architect. 1292

POLICE-STATION.

[At Cleveland, O.]
Sealed bids will be received until October 5th
for a police-station. M. F. BARRETT. 1292

CHURCH.

[At Selma, Ala.]
Sealed proposals will be received until November
1st for a church for the First Baptist Society. WIL-
SON & EDWARDS, archts., Columbia, S. C. 1293

ASYLUM.

[At Abilene, Tex.]
Sealed proposals will be received by the Com-
ptroller of Public Accounts until October 8th for
the erection of asylum building. T. W. ROBBINS,
treas. 1293

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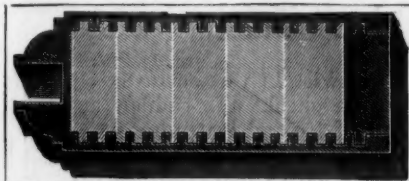
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. . . CODE OF ETHICS . . .

Prepared in Conformity with the Best Standards of Practice, and Recommended to its Members by the Boston Society of Architects, was . . .

ADOPTED BY THE SOCIETY, FEBRUARY 1, . . . 1895. . .

SECTION 1. No Member should enter into partnership, in any form or degree, with any builder, contractor, or manufacturer.

SECTION 2. A Member having any ownership in any building material, device or invention, proposed to be used on work for which he is architect, should inform his employer of the fact of such ownership.

SECTION 3. No Member should be a party to a building contract except as "owner."

SECTION 4. No Member should guarantee an estimate or contract by personal bond.

SECTION 5. It is unprofessional to offer drawings or other services "on approval" and without adequate pecuniary compensation.

SECTION 6. It is unprofessional to advertise in any other way than by a notice giving name, address, profession, and office hours, and special branch (if such) of practice.

SECTION 7. It is unprofessional to make alterations of a building designed by another architect, within ten years of its completion, without ascertaining that the owner refuses to employ the original designer, or, in event of the property having changed hands, without due notice to the said designer.

SECTION 8. It is unprofessional to attempt to supplant an architect after definite steps have been taken toward his employment.

SECTION 9. It is unprofessional for a Member to criticise in the public prints the professional conduct or work of another architect except over his own name or under the authority of a professional journal.

SECTION 10. It is unprofessional to furnish designs in competition for private work or for public work, unless for proper compensation, and unless a competent professional adviser is employed to draw up the "conditions" and assist in the award.

SECTION 11. No Member should submit drawings except as an original contributor in any duly instituted competition, or attempt to secure any work for which such a competition remains undecided.

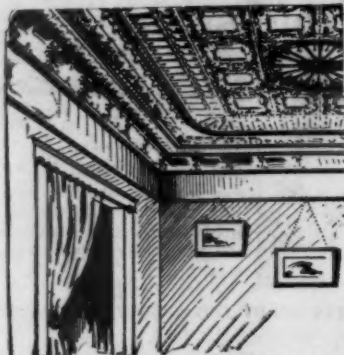
SECTION 12. The American Institute of Architects' "schedule of charges" represents minimum rates for full, faithful and competent service. It is the duty of every architect to charge higher rates whenever the demand for his services will justify the increase, rather than to accept work to which he cannot give proper personal attention.

SECTION 13. No Member shall compete in amount of commission, or offer to work for less than another, in order to secure the work.

SECTION 14. It is unprofessional to enter into competition with or to consult with an architect who has been dishonorably expelled from the "Institute" or "Society."

SECTION 15. The assumption of the title of "Architect" should be held to mean that the bearer has the professional knowledge and natural ability needed for the proper invention, illustration and supervision of all building operations which he may undertake.

SECTION 16. A Member should so conduct his practice as to forward the cause of professional education and render all possible help to juniors, draughtsmen and students.



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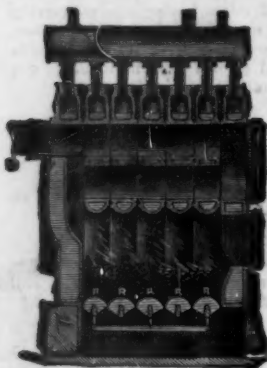
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