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THERE is a suspicion of an important judicial idea in a decision of the New York Supreme Court, just made in the case of *Fox vs. Ireland*. This case grew out of the noted disaster to the Ireland Building, where a column, which seems to have been set over an old well, sank, allowing the rest of the structure to collapse. Fox was injured in the crash, and sued the owner for damages. The courts below rejected his claim, apparently on the ground that Mr. Ireland had done all that could be expected of an owner, and that the architect and the builder, if any one could be regarded as responsible for the disaster, were the ones at fault. The Appellate Division of the Supreme Court reverses this decision, and orders a new trial of the case, on the ground that there was insufficient evidence "to show that Mr. Ireland could rightly rely upon the architect he employed."

THIS appears to introduce a new element in such cases. While a man, in other damage suits, must show, in order to clear himself of responsibility, that he employed, or endeavored to employ, men skilled in their business to do his work for him, it has generally been assumed that all architects were skilled, and that a man might employ any one that he chose, without fear of being held accountable for his mistakes or misdeeds. From this decision, however, it seems to follow that a man in New York who employs an architect must have good reason to believe that he is skilful and sober, so that he may properly be entrusted with important work, or he may find himself called upon to pay heavy damages in consequence of the carelessness or unskilfulness of a person whom he employed without due investigation. Of course, we do not mean to say that the architect of the Ireland Building was either incompetent or careless, and the Court does not say so, but simply points out that no evidence was produced at the former trial to show affirmatively that he was a person to be trusted, and that, on general principles, this must be done in such cases. On the whole, the new principle is likely to work to the advantage of the profession. Many a man who ought to know better employs cheap, so-called architects, with the idea that he is saving money by doing so. Experience shows that this is, in any case, a very doubtful method of saving money, but if it is established that the employer will have to shoulder the consequences of the professional incompetence or carelessness of his architect, he is likely to be much more disposed to seek the aid of men whose skill and reputation will be satisfactory to a jury.

THE familiar rule of municipal liability, that citizens, who are free to vote for intelligent and zealous municipal officers, cannot tax each other for damages if they suffer injury in consequence of the incompetence or carelessness of the officers whom they elect, has received a new illustration in a case decided by the New York Court of Appeals. One

Hughes, living in the city of Auburn, died from disease caused by the overflow of a defective sewer into the cellar of the house in which he lived, and his representatives sued the municipality for damages. They lost their case, as might have been predicted at the outset, the Court saying that "the remedy for 'most of the evils incident to the exercise of governmental power, whether in the State itself or in localities, is to change the administration. The law in most cases must proceed upon the principle that it is wiser and better for the members of a political community, general or local, to endure some of the evils that they have, rather than fly to remedies such as are invoked in this case, that are certain in the end to bankrupt the treasury, and involve them in endless strife and litigation.'"

IT is a satisfaction to learn that the National Board of Fire-Underwriters has undertaken an investigation into the subject of leaks in gas-mains in New York and elsewhere. As asphalt is substituted for stone block-pavement in the city of New York, it is found that gas from the mains, unable to escape, as it formerly did, into the air from the surface of the streets, finds its way into neighboring cellars, or into leaky sewers, where it accumulates to an objectionable, and often to a dangerous, extent. It will be remembered that the Supreme Court portion of the Capitol at Washington was very badly damaged by an explosion of gas in the basement some months ago, and nine explosions recently occurred in the sewers of New York in one day, all caused by leakage from gas-mains. It is very difficult to get statistics of such matters, as the gas-companies do not care to let their stockholders or their customers know how much money is wasted in this way; but in one of the largest American cities the leakage from the mains is known to have averaged eight hundred and seventy thousand cubic feet per year per mile of main. Any one who knows the average length of main for each customer of a city gas company, and the price charged for gas, can readily calculate the extra tax added to each customer's bill, to pay for the gas wasted in the ground. It is probable that something like one-third of the gas delivered from the retorts is lost before it reaches the consumers, and millions of dollars must be paid every year by householders in our large cities for gas which they do not get, but which is expended in poisoning the atmosphere which they breathe, and in endangering their lives and those of the public.

ACCORDING, however, to Mr. James C. Bayles, whose authority as an expert can hardly be questioned, the leakage from water-mains in cities is even more important than that from the gas-mains. Few persons, probably, will be prepared for the assertion that at least half of all the water which enters the mains of city water-systems leaks out in the streets, never entering the houses at all; yet in England, where the matter has been carefully investigated, it is found that in the majority of public waterworks the leakage in the mains is at least one-half the total supply; that it is very frequently two-thirds, and that "in many cases" it is "three-fourths, or even more"; while, according to the English report from which Mr. Bayles quotes, in America the loss is "still greater"; that is, in many towns in England, and still more in America, three gallons of water are allowed to soak away into the streets for every gallon that is delivered in the houses of the consumers. Applying to this condition of affairs the same rule as that applicable to gas-supply, the inference is that municipal water-takers pay, in this country, about four times as much for water as they would if the mains were properly laid. Officials of Water Boards understand this well enough, although as Mr. Bayles says, every engineer and official connected with water-supply seems to be sworn to conceal the facts in the case; and he hints that the inspections of houses for leaky fixtures, and annoyances of the same sort, are simply a solemn farce, intended to draw public attention away from the real source of waste.

EVERY one will rejoice that the threatened labor troubles in the building trades in Chicago have been averted, we will not say by a victory of the contractors, as we dislike to hear of victories of citizens over their fellow-citizens, but by a return to common-sense on the part of the workmen. The contractors had made up their minds to take advantage of the

dulness of building operations in the city to resist the arrogant dictation of the leaders in the labor unions. It will be remembered that the latter held a meeting some weeks ago, at which they resolved that six hours should constitute a day's work in the building-trades in Chicago. This resolution was probably intended merely as a defiance of the employers, but it showed the reckless and arbitrary spirit of the unions; and another rule, limiting the amount of work that every union man should do in a day, would probably have been enforced if the contractors had not determined on resistance. The latter, early in the winter, gave notice that they would not submit to this, or to certain other rules which had been adopted; and that, unless they were repealed, all building operations in which they were concerned should cease on the first day of January. This would have thrown about thirty thousand men out of employment, and the more sensible of the workmen seem to have thought that it was time for them to make themselves heard. Committees were appointed on both sides, and the result, which the most sanguine friend of his fellowmen would hardly have ventured to predict, has been the adoption, by employers and men, of the Boston plan, under which a permanent board of arbitration is established, consisting of five representatives from each side, which must immediately decide all questions or disputes between employers and labor organizations in the building trades. If the Board fails to come to an agreement on any question, it is to select a referee, to give the deciding vote. Under this plan, as has been shown in Boston, not only are sympathetic strikes—the bane of employers and men alike—but strikes in general, practically avoided; and all persons concerned in building operations in Chicago have reason to congratulate themselves on this happy solution of their difficulties.

THE New York Soldiers' and Sailors' Monument is, at last, to be built somewhere, although, even now, the site is not positively determined. After the abandonment of the Plaza site, and with it the beautiful original design for the monument, a small hill near the Riverside Drive, known as Mount Tom, was selected. This proved objectionable for several reasons, and another place, beside the Riverside Drive, and nearly opposite Eighty-ninth Street, was selected. This site has again been objected to, by the Society of Landscape Architects, but it seems likely that the Board of Park Commissioners, who have been selecting sites, and having them objected to, for seven years, will abandon the attempt to satisfy everybody, and will proceed to erect the monument on the spot last chosen.

THAT the Society of Landscape Architects is justified in objecting to the site now fixed upon is obvious to all who know the locality in question; but it is one thing to find a suitable site for a monument, and another, and much easier, thing to object to some one else's choice; and unless the critics can agree on some other place, the Park Commission is likely to use its own judgment. The fact is that there is no very good place on the Riverside Drive for an important monument. Even the Grant Memorial, which is rather a tower than a monument, and, as a tower could be placed almost anywhere with propriety, is by no means happily situated; and, while, as a light-house, it would be imposing, its effect as a monument, standing, as it does, on a bleak hillside at the extreme edge of the city, recalls rather painfully the undeserved discredit and neglect from which the great general suffered at the end of his life. If, however, there is no very good place on the Riverside Drive for monuments, there is no such place, perhaps, anywhere in New York. At least half the artistic value of anything of the kind depends on its surroundings, and these must be arranged for it beforehand. No more fatal mistake can be made in municipal decoration than to imagine that important works of art can, with good effect, be deposited at random in streets or parks in which no provision has been made for them. To show monuments with advantage, the streets of a city should be laid out expressly for their accommodation, providing open spaces, at the intersection of important avenues, in which they can be seen from a distance in several directions, and where they will, so to speak, form a central ornament from which the streets may radiate. The Arc de l'Étoile, the Vendôme Column, the Column of July, and, particularly, the monument in the Place de la République, in Paris, furnish examples of the successful management of such sites. For miles in each direction the traveller can see the monument sufficiently to

have his interest excited, and, as he approaches it, the impression which it makes upon him increases in intensity, and develops, as he sees more and more of the detail, in a manner very advantageous to artistic effect. In our cities, such provision for great monuments is unknown. There are a few accidental open spaces, where streets meet at an angle, but these, being obviously fortuitous, as well as ungainly in shape, are not in themselves attractive, and do not furnish such favorable situations for monuments as are presented by rectangular spaces, the surroundings of which harmonize much better than those of a polygonal area with the lines of a rectangular pedestal.

THE opening of the Chicago Drainage Canal was accomplished without any ceremony, and in the presence only of a few of the people interested in its construction, for the curious reason that, although the work has been going on for fifteen years, and endless plans, cuts, photographs and descriptions have been published to show how the sewage of Chicago was to be diverted through it to the Desplaines River, and thence to the Mississippi, the people who live in the neighborhood of the new channel seem to have just discovered, after thirty million dollars have been spent on the work, what it was intended for, and it was seriously threatened that an appeal would be made to Congress to order operations suspended until the claims of the riparian towns from Chicago to St. Louis could be investigated by a Congressional committee. As this would mean several years' delay, and as, by New Year's Day, everything was ready for the completion of the undertaking except the removal of a barrier of earth which separated the Chicago River from the new channel, it was decided to cut through this before the expiration of the Congressional recess, so that, if an investigation should be ordered when Congress reassembled, the city would, at least, have its drainage waters flowing meanwhile into the Mississippi, rather than into the lake. With a few hours' quiet work the change was accordingly made, and Congress will have the advantage, if it decides to make an inquiry, of studying the actual conditions produced by the canal in the valley below, instead of listening to the theories of experts as to what the conditions would be under given circumstances.

THE recent geological investigations, which show a rather rapid subsidence of the south shores of the great lakes, add an important factor to the problem of the drainage of Chicago. It seems likely that the sewage of the city is, at present, insufficient, in comparison with the volume of water by which it will be diluted, to do much harm to the towns situated on its route, and, as the city grows, and its waste waters increase in amount, it seems likely that at least an equal increase will be produced by natural causes in the volume of pure lake water poured through the Chicago River in connection with it. In fact, in the course of a thousand years or so, we are told that the Niagara River will be nearly dry, and that the lakes will discharge their waters mainly into the Mississippi. Any approach to this condition should render the Chicago sewage harmless; but, meanwhile, the question whether, under present circumstances, the flow is injurious to any one, will be of much interest.

A CERTAIN M. Berlier has, it is said, devised a scheme for connecting Europe and Africa by means of a tunnel under the Straits of Gibraltar, and some of the French newspapers point out that such a tunnel, with a railroad through it, would do much to promote commerce between Europe and Africa, and particularly between France and its African colonies. As the distance across the straits, from land to land, is only about seven miles, the scheme would seem feasible enough, were it not for the great depth of the water at that point. According to the charts, the hundred-fathom line runs very near the shore on each side, leaving a space two or three miles wide in which the water must be not far from a thousand feet deep. So far as we are aware, no submarine tunnel has yet been built at a greater depth than twenty or thirty feet, and the difficulties in the construction of one at a depth of a hundred fathoms or more would be enormous. To say nothing of a hydrostatic pressure of more than twenty tons to the square foot of the shell enclosing it, a gradient of three or four hundred feet to the mile would be a serious obstacle to the use of the tunnel for the passage of railway trains. Whether British military interests would favor the construction of such a tunnel no one probably can say, but it is extremely unlikely that the question will ever be brought before them.

THE DEWEY ARCH.—I.

THE Dewey Arch, erected by the National Sculpture Society on the occasion of the reception to Admiral George Dewey, U. S. N., by the City of New York, is remarkable not only for the extraordinary beauty and success of its design, and for the rapidity with which it was brought to completion, but also because it affords the most notable instance of coöperation among artists in this country; a coöperation, moreover, that was effected without any compensation or thought of pecuniary reward on the part of the distinguished men who so gladly gave their services and their work to the adornment of their city. The National Sculpture Society is, as is well known, a national organization, with a professional and non-professional membership that includes sculptors and art-lovers from all parts of the country, as well as a number of members who permanently reside abroad; but the Dewey Arch was so far a local work that with but one exception all the artists engaged upon it were New Yorkers. The exception was Mr. John J. Boyle, a native New Yorker, who has resided in Philadelphia for a number of years, but who has always maintained a close and constant connection with the metropolis. Neither the time allowed for the erection of the arch nor the occasion permitted or required the coöperation of other artists; and while the Dewey Arch is the most considerable undertaking carried out by the Society, it was more especially a New York work than anything else the Society has accomplished.

The origin of the arch was due to Mr. Charles Rollinson Lamb, the Second Vice-President of the Society. The suggestion met with an enthusiastic response; first, in an informal way, at a dinner of the sculptor-members of the Society given by its Secretary; then it was formally adopted by the Council of the Society, its governing board; and, for the third time, at a meeting of the sculptors, at which each man pledged himself to do whatever work might be required of him. The artists of this country have at no previous time given evidence of a loftier patriotism than in the eager way in which the sculptors embraced the plan. It is true that they were not called upon to do more than make the sketches from which the final and enlarged figures and groups were to be made; but every one familiar with the methods of artists knew that much more than that would be required in the end. And such proved to be the case; for many of the sculptors not only actively superintended the enlargement of their designs before they were placed on the arch, but actually worked on the arch itself, giving as much time and personal energy to the work as was permitted by the shortness of the period allowed for its completion. Moreover, it required more than ordinary courage to agree to make a sketch for a monumental design in a very short period, and then entrust its enlargement to others, with the certainty that only the slightest personal supervision could be given to the work, and an absolute prohibition of that correction of errors and that re-doing of what has been done that is the almost invariable procedure in sculpture-making.

These are some of the technical difficulties and conditions that had to be accepted and agreed to before anything could be done; and that they were agreed to at the outset, and not rebelled against in the sequel, is eloquent testimony to the pure patriotism that animated the sculptors in their noble undertaking. But more than this was needed. Not only had the sculptors to agree to methods and conditions almost completely the reverse of those under which they ordinarily worked, but there was the question of coöperation; of mutual giving and taking, of mutual dependence and coöperation, without which nothing whatever could have been accomplished.

A few years ago it would have been utterly impossible to propose a work on which twenty-five sculptors could be harmoniously engaged, and, indeed, the time is not far behind us when such a scheme of coöperation would have been impossible to any group of artists. But it is the distinction of the artist-societies that, even if they have sometimes failed to produce that increased interest on the part of the public for which they were largely founded, they have at least brought the artists in touch with one another in a helpful way that would have been impossible by any other method. They have learned to know one another not only personally, but in a helpful personal-professional way that has brought about a wholly new feeling in professional circles. No society has been more successful in this than the National Sculpture Society, which for the first time brought together a body of men in an important profession that, until its formation, had no professional organization of its own. The Dewey Arch, standing to-day in its completed beauty in Madison Square, is perfect and complete testimony to the thorough way in which the value of artistic coöperation has been accepted and agreed in by the sculptors.

The artistic difficulties swept away by frankly admitting the very things that, under other circumstances, would have been advanced as insuperable objections to doing anything at all, there remained the practical objections which were anticipated in proposing any extensive artistic work to the municipal authorities. The Committee appointed by the Council of the Society to carry out Mr. Lamb's idea—which at the outset was the general thought of offering artistic service rather than the execution of a specific plan—consisted of Mr. J. Q. A. Ward, President of the Society; Mr. Karl Bitter and Mr. F. Wellington Ruckstuhl, sculptors; Mr. Charles Rollinson Lamb, architect; and Mr. John De Witt Warner. The offer of the Society was immediately made to the Mayor as representing the city and as Chairman of the Reception-committee. Into the details of

the arrangements between the city and the committee it is unnecessary to enter. It is sufficient to state that the practical difficulties disappeared as rapidly as the artistic difficulties. Aldermanic opposition, the delays in securing appropriations, the opposition of officials, were all swept away in the enthusiasm created by the Society's patriotic offer. The Society's suggestion took the definite form of a proposal for a triumphal arch: its programme was accepted; its estimate of cost approved, and the work begun. The Madison Square Garden Company, a private corporation, offered the use of its basement free of charge for the enlargement of the groups and the preparation of the staff ornaments, and the thanks of the city and of the Society are due it for this very generous assistance.

Among those who have noted the great success with which the plan was carried out not a few viewed the extraordinary success that has attended every part of the work as a triumph of the artistic over officialism. It is an unfortunate and ill-grounded point-of-view to regard the authorities of any city or of any party as opposed to the good and the beautiful in life. The professional politician takes another view of affairs than the professional artist, and it is hardly fair for one to judge the other from his own exclusive standpoint. The relations between the municipal authorities of New York and the National Sculpture Society on the occasion of the Dewey celebration were of the happiest description, and show, so far as the former are concerned, that the artists have only to propose a definite, practical, popular scheme to ensure its adoption. It too often happens that proposals for civic embellishment are neither practical nor popular; it was a happy combination of these most important elements in the scheme for the Dewey Arch that led to its immediate acceptance by the city officials, and the subsequent agreeable and courteous intercourse during the carrying out of the work.

Although the idea of an arch met with instant acceptance, some little discussion was occasioned as to the best site. The location at the junction of Fifth Avenue and Broadway at Madison Square was due to Major-General Daniel Butterfield, Chairman of the Plan-and-Scope Committee created by the municipality for the reception of Admiral Dewey. It possessed advantages that belonged to no other situation. Even before the route of the parade was determined, it was evident that it would pass this point; it was a spot so nearly central in the life of the busy city as to be for all practical purposes the real centre; and it afforded a larger open area than could elsewhere be had without considerably diminishing the accessibility to the arch. Moreover, the junction of the two principal thoroughfares of the metropolis formed here a focal point of special importance. All things considered, therefore, Madison Square seemed not only the most suitable place for the arch, but really the only one available.

The site offered both advantages and disadvantages. The junction of the two principal streets formed by no means the most spacious thoroughfare in the city; but a real sense of openness was obtained by the immediate proximity of the square on the one side and the relatively low elevation of the buildings on the other side between Twenty-third Street and Twenty-fifth Street. The junction of Twenty-third Street, which is a wide street, also adds to the space at this point, which is further increased by the sloping off of the park towards Twenty-third St. The road-bed of Fifth Avenue is but forty feet wide, and the problem for the architect was to place an arch of monumental proportions—seventy feet wide—on the designated site. Obviously there was not room in the Avenue itself; nor, on the other hand, could the space filled by the railroad tracks in Broadway be interfered with. The necessary space was, however, obtained by moving the arch to the eastward to the house-line of the Avenue, the open space permitting the arch to be seen without producing the effect of being off the centre of the main street. By selecting Twenty-fourth Street for the transverse axis of the arch it was possible to build an approach or colonnade on each face, north and south, forming a great parallelogram and creating a monumental square where theretofore there had been merely the crossing of two streets.

The colonnade, which thus formed a court of honor on the north and south faces of the arch, was built of double columns returned at right angles at Twenty-third Street and Twenty-fifth Street, where they form groups of three. The motif of the double columns was obtained from the double columns placed on the sides of the arch. Some slight width was given to the design by doubling the thickness of the columns, so that the western side of the columns on the east register with the eastern side of the columns of the arch, and vice versa. Thus, when seen through the colonnade, the arch seems to be increased in width. Both arch and columns were designed as a single work, and were, from the beginning, considered together. The bases of the columns and of the four great piers of the arch are on the same level, some discrepancies in Fifth Avenue being made up in the lower members of the columns. The latter, both in capital and base, are identical with those of the arch, all being likewise of the same height. Though for economical reasons the columns of the colonnade were finished plain, while the arch columns are fluted, the general effect is very fine, and no objections can be made to the difference.

Now that the arch has been completed, it is apparent that in itself it has sufficient dignity to stand alone; but the columns of the colonnade are still an essential feature of the design and add greatly to the majesty of the whole conception. Moreover, the entrance-group of three columns afford pedestals for some of the most beautiful sculpture in the entire scheme, and are themselves so fine that the

whole, the columns, their groups and the arch, form a unity of considerable extent and very unusual artistic success. Whether the colonnades were so happy in their practical effect is not quite so certain. Although the pleasantest relations existed between the committee of the Society, the city officials, the architects and the builders of the grand-stands at Madison Square, it must be admitted that the latter detracted very much from the general effect. Not that a difference resulted from the immediate juxtaposition of the work of different designers, the architect of the arch and the architects of the stands, for the latter cordially welcomed the suggestions of the former; but the mere enclosing of the whole surrounding space with gigantic stands, reaching as high as the third floor of the adjacent buildings, created a background that could not but be harmful to a structure which, like the arch, was intended to be freely seen from all points-of-view. On the north side of the arch both sides of Fifth Avenue were filled in with high stands, and the broad street became a narrow thoroughfare between structures, the like of which do not ordinarily bound streets nor surround triumphal arches. But it could not be helped. The arch was the focal point of the parade. It not only was the most important decoration in the whole city but it marked the site of the reviewing-stand from which the guest of honor reviewed the great land parade.

And here followed one of the chief misfortunes of the festival. The northern court was complete in itself. On the north it was approached by the decoration of garlanded poles and gilded statues prepared by the National Society of Mural Painters as its contribution to the great celebration. On the east and west it was bounded by the columns of the arch-colonnade; on the south it was closed by the arch itself, and the reviewing-stand for the Admiral was on the east side of the court. On the south the court was bounded by a great grand-stand on the west; on the east was the Fifth Avenue Hotel, and it was open on the south towards the city. The misfortune of the day came from stopping the Admiral at his reviewing-stand, leaving the procession alone to pass beneath the arch that had been built for the Admiral's special honor and distinction. The guests of the city, who, by the way, included the sculptor-members of the Society, seated on the stand to the south of the arch, were thus deprived of the privilege of seeing the Admiral. As a man in the crowd behind the present writer remarked, "What was the use of building a \$40,000 arch, if they did not take Dewey through it?"

This, of course, was not the fault of the Sculpture Society, but it is possible that the completeness of the court of honor in which the reviewing-stand was situated may have helped the military authorities, who were responsible for the land parade, in reaching the extraordinary decision they did in declining to take the Admiral through his own triumphal arch. It may safely be asserted that the like of this never before happened in the history of military triumphs.

The design of the arch was frankly based on the Arch of Titus in Rome, perhaps the most graceful and most beautiful of Roman arches; but it differs from its prototype in many respects. The most radical change was the essential one of deepening it from the comparatively flat structure of the Roman city to one deep enough to permit transverse or right-angled penetrations. The attic is considerably lowered, so as to form a proper screen for the statues of admirals placed against it, as well as to serve as a base for the group surmounting it. The attic is also recessed to give standing-room for the figures before it, and the columns are increased from half-columns to three-quarter columns. The keystone was changed to support a shield and eagle.

Although only a temporary structure, built in two months' time, and for a single day, the Dewey Arch eclipsed the Roman arch in beauty and in sculptural decoration. Of the latter there is no doubt; and of the former one needs but a cursory comparison to be satisfied with the supremacy of the American arch. While it is true the arch was designed for an abundant display of sculpture—and it was perfectly right, under the circumstances that called it into being, that such should be the case—its architectural character is extremely fine; and even were it to be stripped of its sculptured adornments, it would still possess great interest and beauty. And this, it will readily be admitted, is no small success for a structure designed primarily for the display of sculpture. Yet there is no hint of a deliberate sculptural end in the decorations of the arch. The great groups on the north and south faces, the panels over the side-arches, the figures of admirals on the attic, the portrait-medallions on the side spandrels, the great group that crown the whole, all filled natural positions and helped the design of the whole without the slightest hint of having had positions made for them. Though built for sculpture, the arch is not a sculptor's arch, but a fine piece of decorative architecture. And that was just the sort of work needed for the Dewey celebration.

Viewed strictly as a work of architecture, and without decorative significance, the arch is equally successful. Placed in the midst of busy streets, thronged with a great traffic of vehicles and foot-passengers, built, moreover, of a fragile material, and constructed in a temporary manner, albeit with ample stability, it was essential that the decorative features should be lifted high enough to be out of reach of the passer-by, and that the architectural enrichment, in the lowest part, be of the slightest. If, therefore, the base of the arch is plain and severe, it must be remembered that this was necessitated by the situation; for unlike all other triumphal arches with which we are familiar, it had its place in the busiest part of the city, without the advantage of park arrangement and with only police pro-

tection to preserve it. How indifferent the latter might become, even under the favorable conditions that attended the erection of the arch, was apparent from the fact that the parade had scarcely completed its triumphal march past the Admiral before the vandals made an attack upon the arch, carrying off huge pieces of plaster as mementoes.

At every point, therefore, the designer was beset with conditions such as never before surrounded the designer of a triumphal arch. If the structure of the arch is plain below, it is relieved by strong, yet simple, mouldings, whose ample projections afforded a delightful relief of shadow, which is one of the most valuable means of securing architectural variety. The same rule was followed in every part, and while the general effect is rich and satisfying, the architectural enrichment, the ornamental detail, is relatively slight. It is the shadow that counts;—the strong, sharp, brilliant shadow obtained by vigorous projection against a pure-white surface.

The south side is practically the main front, since it is in that direction that the group on the summit of the arch is faced. This position was determined upon at the very beginning of the work, before the route of the land parade was settled, and seemed the natural direction, since the figure of Naval Victory faced the direction of the water-entrance to the city. It thus happened that the parade approached the arch from what may properly be termed the back; yet the design of President Ward's group was such that little difference was felt from this circumstance, the central figure alone presenting a rear view to the Admiral as he entered the Court of Honor.

Although the sculptors who volunteered their work for the arch were numerous, it was possible to make an important assignment to each of them. The largest groups were on the great piers between the columns carrying the entablature. Emblematic figures in the arch-spandrels and four figures of admirals and naval heroes on the attic completed the decoration of each front. On the sides, the sculpture consisted of allegorical panels, and the decoration was completed with portrait-medallions on the interior and exterior arch-spandrels. The whole scheme may best be viewed in tabular form.

Pier Groups. North Side: to the east, "The Call to Arms," by Philip Martiny; to the west, "Peace," by Daniel C. French.

South Side: to the east, "The Combat," by Karl Bitter; to the west, "The Triumphal Return," by Charles H. Niehaus.

Spandrels. North Face: to the east, "Pacific Ocean"; to the west, "Atlantic Ocean," by Isidore Konti. South Face: to the east, "The East River"; to the west, "The North River," by R. Hinton Perry.

Attic Figures. (Counting from east.) North Face: Admiral Farragut, by W. Ordway Partridge; Commodore Hull, by H. K. Bush-Brown; Commodore Perry, by J. Scott Hartley; Commodore Jones, by E. C. Potter.

South Face. (Counting from east.) Commodore Decatur, by George T. Brewster; Admiral Porter, by J. J. Boyle; Lieutenant Cushing, by H. Augustus Lukeman; Commodore McDonough, by Thomas Shields Clarke.

Side Panels. East Face, "Protection of Our Country," by William Couper; West Face, "Progress of Civilization," by John Gelert.

Medallions on Spandrels of Transverse Arches. East side, exterior: North, Admiral Davis, by F. W. Kaldenberg; south, Admiral Foote. Interior: North, Commodore Bainbridge, by Ralph P. Goddard; south, Admiral Dahlgren, by Caspar Buberl. West side, exterior: North, Commodore Preble, by Carl F. Hamann; Commodore John Barry, by F. W. Kaldenberg. Interior: North, Admiral Worden, by Frederick Moynihan; south, Captain Lawrence, by Henry Baerer.

Group surmounting the Arch: "Naval Victory," by J. Q. A. Ward.

Groups at Entrance of North Court of Honor. East side, "The East Indies," by Charles Albert Lopez. West side, "The West Indies," by Isidore Konti.

Groups at Entrance of the South Court of Honor. East side, "The Army," by F. Wellington Ruckstuhl; west side, "The Navy," by George E. Bissel.

Figures on Intermediate Columns between the Entrances of the Court of Honor and the Arch: "Victory," by Herbert Adams.

INSCRIPTIONS.

NORTH:

TO THE GLORY OF THE AMERICAN NAVY AND IN GREETING OF OUR ADMIRAL, A GRATEFUL CITY, RELYING ON THEIR VALOR, HAS BUILT THIS ARCH, MDCCCXCIX.

SOUTH:

TO ADMIRAL GEORGE DEWEY, GREETING, WELCOME, HONOR, FROM THE PEOPLE OF NEW YORK, SEPTEMBER 30, MDCCCXCIX.

EAST:

MANILA.

WEST:

SANTIAGO.

[To be continued.]

THE T-SQUARE CLUB EXHIBITION.

LAST summer in the convocation of the various societies which resulted in forming the Architectural League of America, it was decided to simplify the management of the different exhibitions, by arranging their dates in a sequence, so that the drawings might pass from one city to another without the necessity of directions from each exhibitor for every exhibition. The T-Square Club has always managed the yearly architectural exhibitions in Philadelphia, and they have now included with theirs those drawings to be shown in the series. This, being the first of the series, is particularly interesting, as there is a chance to review what later is to be shown in New York, Baltimore and the West.

The tendency of the Philadelphia exhibition in preceding years has been toward a stronger representation of modern English work. It is markedly noticeable this time, and the effect shows in the local domestic architecture; but in larger work the influence of the École des Beaux-Arts is almost supreme, and the formerly paramount Mediæval and Renaissance architecture of Italy and France seems to be becoming a thing of the past. The French influence is evident particularly in the designs submitted in the various competitions, and above all, in the Phœbe Hearst competition for the University of California. The Regents of the University send exceptionally clear photographic enlargements of the ground-plans and perspectives of the five prize designs; namely, those of E. Bénard, of Paris (First Prize); Howells, Stokes & Hornbostle (Second Prize); Despradelle & Codman (Third Prize); Howard & Cauldwell (Fourth Prize), and Lord, Hewlett & Hull (Fifth Prize); also of several of the others selected to enter the final competition. These great photographs are decidedly the centres of attraction, and the various compositions of the college buildings on this California hillside and the use the architects have made of the approaches and natural contours of the ground, form perhaps the most interesting study of the exhibition.

In a totally different spirit from these, and principally inspired by the English Universities of Oxford and Cambridge, is the winning design in the competition for the Washington University at St. Louis, the block-plan of which Cope & Stewardson exhibit. Cass Gilbert shows the plan of another of these designs, but this again is French. Among the various competitions, those for the New York Custom-house, for the Washington Public Library, and for the Nassau County Court-house are represented by the designs of Israels & Harder, and of Trowbridge & Livingston. Lord, Hewlett & Hull send strong and thoroughly French plans for the Wilkesbarre Court-house; and finally there is a carefully rendered perspective of the successful design, by Andrews, Jaquès & Rantoul, for an enlargement of the Court-house of Worcester County, Massachusetts. The Greek Classic of the older parts of the building sets the key for the new work, and its severity is refreshing after the cartouches and appliques of the French Classic. It is encouraging to have, at last, the drawings for a monumental bridge, of which America has so lamentably few; namely, that over the Charles River, by Wheelwright & Haven. The design is evidently not yet thoroughly studied, but it shows what the reality will be.

One feature of the exhibition is the increased number of photographs illustrating the various buildings lately erected. Evidently, architectural sketches are distrusted, and photographs are supposed never to lie: it seems as if in a few years a series of photographs of the actual building, together with drawings of the ground-plans, will be the usual exhibit. Such a series is that of the Free Museum of Science and Art of the University of Pennsylvania, by Wilson Eyre, F. M. Day & Brother, and Cope & Stewardson, associated architects. F. M. Day & Brother exhibit also a similar series of views of a house on Locust Street, Philadelphia; Cope & Stewardson have two water-color perspectives of parts of the University of Pennsylvania dormitories now being erected, and Wilson Eyre a number of his strongly characteristic chalk and water-color drawings for houses and gardens, and one of a Memorial Hospital at Montague City, Mass. The work of these men is entirely uninfluenced by modern French design, and they form the nucleus of a Philadelphia group which still holds out against it.

Among other drawings are Cass Gilbert's Agricultural Building at the Omaha Exposition, Peabody & Stearn's Horticultural Building at the Buffalo Exposition, Cram, Goodhue & Ferguson's Church at Cohasset, and Rankin & Kellogg's Post-office and Custom-house at Camden. Then there are photographs, perspectives and details of various buildings by Field & Medary; Adin Lacey; Wm. L. Price; D. K. Boyd, and L. V. Boyd; Duhring, Okie & Ziegler; F. E. Mann; John Molitor; Schermerhorn & Reinhold; Spencer Roberts; Eden Smith; Maginnis, Walsh & Sullivan, and Winslow, Wetherell & Bigelow.

The English architects have responded most cordially to the invitations for the Circuit Exhibition, so there is an exceptionally strong representation of their work. Ernest George & Yates send drawings of Edgeworth Manor and of several stone and wood bridges, typical renderings by Ernest George himself; John Belcher, a house at Pangborne and two interiors of the Guildhall at Cambridge, — one of these a masterly line-drawing; Harrison & Townsend an entrance to a Devonshire house, Beresford Pite, town-halls at Cardiff and Colchester; and Arnold Mitchell; Edgar Wood; W. H. Seth-Smith; E. W. Mountford; C. J. H. Cooper; G. Aitchison; Thomas Davison; Rogers, Bone & Coles; F. S. Taylor; F. I.

Thomas; and Ernest Newton, various houses and churches. From France, Tony Garnier sends a *projet* for a chimney in a hunting lodge, and L. Dumènil, a drawing of the door of the Hôtel de Ville, at Toulon.

Preëminent among the exhibitors of measured drawings and restorations of old work is the recently returned holder of the John Stewardson Memorial Scholarship, Wm. C. Hays. A. H. Brockie is the present holder, and his competition drawings and those of Lloyd Titus (First Honorable Mention) are here also. Hays's most interesting drawings include a careful restoration of the Palace of Domitian, on the Palatine, at Rome; measured drawings of a monument in S. Maria del Popolo, of the Church S. Lorenzo Fuori, and of the façade of the House of Tristan, at Tours. He exhibits his Paris *atelier* work and numerous sketches. H. B. Pennell, the Rotch scholar, has sent four studies of the great churches in France and Italy. They are something rather new in architectural work — exceedingly accurate drawings of exterior and interior decorations both in form and color. They are not in any sense sketches, but go into the minutest details in a way that shows a thorough and effective study of the subject. R. Clipston Sturgis, J. R. Pope, Oscar Enders, E. T. Boggs and G. S. Morris have sent sketches and small measured drawings of European work, and Arthur S. Brooke, several pencils and pen-and-inks of the Virginia Colonial Architecture along the James River. Then there is a good collection of T. Raffles Davison's work and two sketches by Walter Crane. Joseph Pennell has sent many of his wash-drawings and pen-and-inks, and, thanks to the Century Company, several of Harry Fenn's drawings are here also.

Of the architectural schools, Columbia, Cornell, the University of Pennsylvania, and the Drexel, Pratt, and Carnegie Institutes send designs and scale-drawings. Among these are several most commendable India-ink drawings by the students of the University of Pennsylvania and Drexel Institute, sent to be passed upon for entrance to the T-Square Club. The École des Beaux-Arts is represented by F. E. Perkins and J. H. Parker. Two competitive designs for Cornell's new students' club house are sent by Hubbell & Benes and S. R. Davis, alumni of the college.

Year after year the scope of the exhibition is broadened. Now, not only architecture but all manner of subjects allied to architecture are eligible; in fact, almost everything which necessitates art in the designing. Landscape-gardening is represented by Olmsted Brothers and Beatrix Jones; stained glass by d'Ascenzo; decorative furniture by Maxfield Parish, F. C. Brown and Ellen Macauley; drawing by Bissegger; interior decoration by the Chapman Company, Petry & Bazin, Supplee & Farady; and C. R. Ashbee, of London, contributes wrought-iron work, both architectural and unarchitectural, and even jewelry.

To David Knickerbacker Boyd is due the success of the catalogue. It is in a more durable form than any preceding, and careful selections have been made of the subjects for reproduction. The catalogue is preceded by a tribute to the memory of Adolfo Carlos Muñoz, a Philadelphia architect, whose sudden death took place on November 10, 1899.

It is undoubtedly one of the best exhibitions, and effectively hung. As we look back in review, an interesting and reassuring fact is clear — that although most of the best-known architects of the other American cities are inadequately represented, or not represented at all, nevertheless the general tone is well up to that of preceding years. With the exception of the University of California drawings, there are none which attract the attention of all to themselves; but owing to the superior quality of the general work the average is higher than ever. The younger men fill the places left vacant by the older firms, and all goes steadily forward. The different styles are still at war, but gradually composition is rising in importance above accurately copied detail, as architecture approaches that long-desired millennium, when style will be a question of personal and national expression, and not of archæology. ALFRED MORTON GITHENS.

CORROSION OF WATER-PIPES BY ELECTRICAL CURRENTS.

IT is, no doubt, unfortunate, but, at the same time, equally inevitable, that the practical application of all new and advanced scientific principles in the interest of the comfort, convenience, and welfare of the community at large, should be invariably accompanied by a certain number of drawbacks or obstacles, which must be either removed or nullified before any real progress can be recorded. The exercise of a considerable amount of patience, ingenuity, invention, and skill is frequently demanded before the way is cleared; but the attempts in the long run are pretty sure to be successful. In the development of electrical railways and tramways a new source of apprehension and disquietude has arisen which, if not checked, may be fraught with grave consequences to all pipes of metal laid beneath the surface of our roads, streets, and the thoroughfares of all our towns and cities. The whole question, sufficiently indicated by the title of our article, has now assumed a phase which calls for public attention and consideration, and, consequently, in the following brief account we bring the matter to the notice of our readers. As some proof of the urgency of the case, it may be mentioned that the evil has attained to such proportions in the United States that an electrical expert of eminence has been specially appointed to investigate and report upon the whole subject. He has also been

instructed to ascertain, as far as possible, what measures should be adopted to mitigate or entirely prevent the present damage by corrosion to underground metallic pipes by the action of return electrical currents. It will not be necessary for us to refer to any purely technical details in our short *résumé*, but simply to allude to the general principles of electricity with which all are now familiar.

It was about eight years ago that, in the city of Boston, in the United States, the effects of the electrolytic action of the return current of electric tramways was observed for the first time upon the leaden pipes in which telephonic wires were laid. Some years later, in Brooklyn, upwards of three hundred miles of similar lead-piping were so seriously attacked that they became perfectly useless, and had to be removed.

It is well known that in, for instance, an ordinary electrical tramway belonging to the overhead or trolley-system, the current starts from one of the poles of the dynamo, and follows the course of the overhead wire until it arrives at the tramcar. Passing downwards towards the axle of the wheels, it sets the motor in action, and then using the rails as its home conductor finally returns to the opposite pole of the dynamo from which it started. So far, everything is quite satisfactory, and confirms a well-recognized fact, that the simple transit of an electric current through metallic water-pipes is not *per se* productive of any injury or damage of any kind. Were this statement not fully established, electric tramway companies would never have been allowed, as they have been by the municipal and local authorities of towns, to use, when they wanted, the water-pipes as return conductors for the current. Here is where the mischief comes in. When the return current is passing along the rails, it constantly occurs that it, or at least a portion of it, deserts its natural conductor, the rails—so to call them—leaves its normal circuit, and attaches itself to any underground conductor that may accidentally come in its way. This abandonment of its proper conductor and the taking up of another not in connection with its own normal circuit will, in many cases, give rise to electrolytic action, attended with corrosive deterioration. It appears that a very small difference of potential is required to enable a current to pass from one conductor to another through an intervening space, particularly if the ground be of a damp description.

In addition to the existence of the underground currents themselves, electrolysis and corrosion will not take place without the active interference of other agents. The presence of soluble salts, consisting chiefly of the nitrates, the sulphates, and the chlorides, is imperative, and the magnitude and intensity of corrosion produced depends not only upon the strength of the current, but also upon the proportions in which the salts are present in the soil. It frequently happens that a very small quantity of the salts is sufficient to start the evil, which will continue contemporaneously with the existence of the current itself. The corrosive effect that the nature of the soil in combination with the electric current has upon metallic pipes is well evidenced by the fact that in Kansas a length of pipe, 8 inches in diameter, when taken up was found to be so terribly corroded that it was easily cut through and chopped up in pieces by an ordinary knife. In this district the deterioration of the pipes proceeded at such a rapid rate that in many localities the pipes were renewed nearly every six months. Up to recent date it has usually been taken for granted that the electrolytic corrosion of pipes was restricted to their external surface; but subsequent experiments have disproved this fallacy, and the existence of internal corrosion is thus accounted for. At the joints of the pipe, owing to the greater thickness and the greater amount of metal, the resistance to the transit of the current is increased, and becomes much stronger than that of the body of the pipe. When it arrives at a certain intensity, the current, in attempting to pass from one part of the pipe to the other, seeks naturally an alternative and less-resisting path which is open to it, either *via* the soil, or the water in the pipe. If then, as often occurs, the water flowing through the pipe should contain even a minute quantity of the soluble salts already enumerated, electrolysis supervenes, and the damage is effected in the interior of the pipe as well as on the exterior, on the assumption that a part of the current might pass by the one route and the remainder by the other. In support of this statement, which is no doubt perfectly accurate, it may be mentioned that a very careful inspection and examination of several lengths of pipes in Brooklyn, where the water is singularly destitute of soluble salts, detected no signs of internal corrosion. On the other hand, at Kansas City, a locality in which the water supplying the population is rich in salts, pipes 6 inches in diameter were found quite incrustated on the internal surface. To such an extent was the corrosion carried that when some of the pieces chipped off were submitted to analysis, they were found to contain 23 per cent of carbon, whereas the normal proportion varies between 2 and 5 per cent. It is obvious that this great surplus quantity of carbon must be accompanied by a corresponding reduction in the metal, due to electrolytic action.

A crucial test was undertaken, which may be considered as both conclusive and unimpeachable. A piece of perfectly clean and unused tubing 4 inches in diameter was placed in a bath impregnated with soluble salts, and a current of 20 amperes passed through it. At the end of three or four hours the corrosive influence was strongly apparent, and the parts attacked evinced 30 per cent of carbon. Some valuable and interesting experiments were also made with the object of ascertaining the actual ratio between the respective resistance of the joints and that of the body

of the pipe. Without entering into the question of the electrical units employed, it will be sufficient to mention that the resistance of the joints was found to be a couple of hundred times greater than that of the pipe itself. Taken altogether, these facts establish beyond all possible doubt that internal corrosion does take place in water-pipes. It is also true that the process is considerably slower than when the deterioration attacks the outside, and it is, moreover, more difficult to detect; but, given a certain proportion of soluble salts in the water, and a sufficient resistance in the joints to the passage of the current, the one result is as certain as the other. Besides, from its comparative slowness of growth, and its insidious character, internal corrosion is really more to be feared than external, though each is in itself sufficient to account for an enormous amount of damage inflicted upon water-pipes. While there are certain remedial measures in the form of palliatives available for the treatment of the evil, there is only one real remedy which constitutes the moral of the whole subject—do not allow your water-pipes to be traversed by electric currents.—T. C. in the *Building News*.

BOOKS AND PAPERS

THE second edition of this excellent little manual¹ appears, not only extensively rewritten, but with almost twice as many plates as were contained in the first edition, the additions being half-tone plates, very well executed, of subjects having a rather unusual interest, as showing the sculpture in connection with the architecture which it adorns. It is hardly necessary to say that Professor Melani has the art of treating his subjects in a most attractive manner, and those who can read clear and simple Italian will find the text of his account of the sculpture of the early Renaissance extremely interesting, not only because of the discernment and knowledge with which he treats the noblest development of the art of sculpture that the world has, perhaps, ever known, but because the author, who is an original investigator of the most truth-loving and painstaking kind, disturbs many accepted notions in regard to the history of Italian art, and, while reinstating men of merit in their proper places, points out relationships, known or probable, which are often extremely curious. For example, speaking of the Florentine School of the latter part of the fourteenth century, he mentions that the second lateral doorway on the right-hand side of the Cathedral of Florence was the work of a German, from Freiburg, who was famous in his time under the name of Piero di Giovanni Tedesco, and points out that this doorway shows a naturalistic spirit, quite distinct from the style of other Florentine sculptors of the period, yet full of life and energy. The artists who succeeded this German were inspired to a certain extent by his works, and he thinks that this influence counted for something, at least, in the development of the school of sculpture of which Donatello was the great example. Between Piero, the German, and the school of Donatello came, however, another great artist, a native of Arezzo, named Niccolò Lamberti, but called, after the fashion of the time, Il Pela. This Niccolò Lamberti, or Pela, was an architect, as well as a sculptor, and Professor Melani calls him a "flower of art." He was impressed with the vigor of the work of his German predecessor in Florence, and, being entrusted with the sculpture of another doorway in the Cathedral, known as the "Porta della Mandorla," or Doorway of the Almond, he made it "one of the most beautiful ornaments of the Cathedral," by the lovely arabesques with which he surrounded it, displaying in them the richness of nature, directed by pure taste, which was afterwards to reach its culmination in the works of Ghiberti, Della Quercia and Donatello.

It seems that the work of Il Pela was highly appreciated in his time, for he was kept busy in Florence, and, when the Republic of Venice sent for him to work on the Ducal Palace, he was obliged to send his son Pietro in his place. Whether Pietro worked on the Ducal Palace or not, the documents do not show, but it is known that a certain Pela, a Florentine sculptor, and "son of Maestro Nicholò," was employed in Venice in the year 1434, in the ornamentation of the Ca d' Oro, and it seems altogether likely that this was the son of the sculptor of the Porta della Mandorla.

It must not be thought, however, because the author treats in such an interesting manner of the period which he has studied with so much care, that he neglects the other manifestations of Italian sculpture. On the contrary, the chapters on antique Italian art, in which are included descriptions of the sculpture of Etruria and Magna Græcia, as well as of Rome, are not only full of information, but contain the results of the most recent study. For instance, speaking of the Apollo di Belvedere, Professor Melani tells us that it is now tolerably certain that the statue now existing in the Vatican Museum is not, as has been supposed, an original, but a copy, probably belonging to the early days of the empire; that, instead of being found at Porto d' Anzio, it was really dug up at Grotta Ferrata, in a field belonging to Cardinal della Rovere, who brought it to the Vatican when he was made Pope; and that a head of Apollo, now in the Museum of Basle, in Switzerland, resembling closely the

¹ "Manuale di Scultura Italiana, Antica e Moderna"; di Alfredo Melani. Second revised edition, with 24 woodcuts and 100 plates. Published by U. Hoepli, Milan. 5 francs.

head of the Belvedere statue, but superior in style, belonged, very possibly, to the original of the Vatican statue.

PERHAPS a more tragic impression is produced on the tourist by the first sight of the Bay of Naples than by any other view in the world, unless, possibly, the first glimpse of Rome. It would seem as if the soft beauty of the long succession of islands and promontories by which the bay is enclosed called up, by contrast, the recollection of the horrors which the history of the Empire attaches to those lovely shores, while the cloud of smoke floating slowly away from the summit of Vesuvius, the most conspicuous object in the scene, brings to mind at once the three cities which sleep under the lava and ashes around its base. Of these three, we have begun to know something about one, and this one, although neither the largest nor the richest, has furnished for a century material of the deepest interest to the whole civilized world. To the study of this material Professor Mau brings what we may call a human sympathy which distinguishes his works from those of Sir William Gill and others, who have endeavored to reconstruct the ancient city in complete form, forgetting, as far as possible, its present condition. Twenty-five summers spent on the spot have taken the visionary element out of Professor Mau's views, and what he tells us is the story of a patient observer, familiar with all the theories relating to his subject, but disposed to fit his theories to the facts, rather than to adapt facts to what may seem to him a satisfactory theory.

Beginning with the history of the eruption by which Pompeii, Stabiae and Herculaneum were buried, Professor Mau gives some interesting details, which have been brought to light by recent discoveries. The ordinary opinion, that Herculaneum, which was the richest and most important city of the three, was buried by a stream of lava, has been found, as he tells us, to be incorrect. The material which fell upon it was fine ashes and pumice, just like that which covered Pompeii and Stabiae; but it was covered to a much greater depth than the others, excavations having been carried to a depth of sixty-five feet before reaching the pavement; and, although rain seems to have fallen in all cases with the ashes, the mass which covered Herculaneum appears to have brought with it a great quantity of water, for the ashes and pumice have solidified into a sort of stone, which is removed only with difficulty.

Another common notion, which Professor Mau disposes of, is that nearly all the inhabitants of Pompeii perished. It is known that the population of the city at the time of the eruption was about twenty thousand, and, as the position of the bodies of those who perished is indicated by characteristic hollows in the mass of hardened ashes, as well as by the bones left in these cavities or elsewhere, it is calculated, from the number of objects of this kind already discovered, that not more than two thousand persons perished in the city itself. No doubt, others, who had escaped to the outskirts, were overtaken by the storm of ashes, and it is known that several, who had gone to the waterside, died there; but it seems probable that five-sixths, at least, of the inhabitants reached places of safety.

What they left behind them, however, has done more than almost anything else to enlighten us in regard to the ancients and their ways. The Pompeians were originally neither Romans nor Greeks, but Samnites, who formed a colony on the border of Magna Græcia, and must have been strongly influenced by their more refined neighbors to the south, as well as by the rough, vigorous Romans to the north of them, and this mixture of influences has given to Pompeian art an extraordinary interest. The student of the subject, who has followed recent discoveries in the archaeological journals, would hardly find anything new in Professor Mau's book¹; but readers who have only a general knowledge of Pompeii, and would like to have that knowledge refreshed and extended, would be unable, so far as we know, to find any other book of reasonable size so full of accurate information, of learned but interesting comment, and appropriate illustration as this modest work of Professor Mau's. Nor should Professor Kelsey's part in the book be forgotten. It is not strictly a translation, but a new book, published only in English, and utilizing the manuscripts, drawings and other documents furnished by Professor Mau for the purpose. It is possible that the character of the material gave Professor Kelsey more freedom than he would have felt in translating a book already published in German; but however that may be, he has certainly succeeded in avoiding entirely the awkwardnesses which usually characterize a translation, and the English of his chapters is as clear and pure as possible. People who have tried to translate well from the German will appreciate the difficulty of the task, while those who are annoyed by the faults of ordinary translations will be grateful for a book which is perfectly free from them.

THE CHICAGO HIGH-BUILDING LAW.—Although it would be very desirable that the architects and builders of Chicago should have abundant and steady work, we very much regret to learn that a movement is on foot to so amend the high-building law as to allow the erection of twelve-story buildings, the present law fixing the height-limit at ten stories. A truly wise and far-sighted policy would dictate, even for a wide-streets city, a decentralization of business traffic rather than further concentration and congestion.

¹"*Pompeii, Its Life and Art.*" By August Mau, German Archaeological Institute in Rome. Translated into English by Francis W. Kelsey, University of Illinois, with numerous illustrations from original drawings and photographs. New York: The Macmillan Company. \$6.



SKETCH-CLUB OF NEW YORK.

THE last smoker of the season was successfully celebrated on December 30, 1899, with a large attendance. The monthly competition due at that meeting was fairly attended, and a five-minute competition among the members present was enthusiastically entered by all. ADOLPH MERTIN, Recording Secretary.



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

THE DEWEY ARCH, FROM THE SOUTHEAST, NEW YORK, N. Y.

For description see article elsewhere in this issue.

TOMB OF CARDINAL CETTI, IN THE CHURCH OF SAN PRASSEDE, ROME, ITALY.

THIS and the following plate are copied from Giacomo Fontana's "*Raccolta delle migliori Chiese di Roma e Suburbane.*"

TOMB OF DOGE ANDREA VENDRAMIN, IN SS. GIOVANNI E PAOLO, VENICE, ITALY.

PALACE OF DOMITIAN, ROME, A RESTORATION BY MR. WILLIAM CHARLES HAYS, SECOND HOLDER OF THE JOHN STEWARDSON SCHOLARSHIP.

ADDITIONS TO MAXWELL FARM, PINNER, ENG. MR. W. H. SETH-SMITH, ARCHITECT.

SKETCH OF HOUSE FOR STEPHEN PARRISH, ESQ., PHILADELPHIA, PA. MR. WILSON EYRE, JR., ARCHITECT, PHILADELPHIA, PA.

BLOCK PLAN OF NEW BUILDINGS FOR WASHINGTON UNIVERSITY, ST. LOUIS, MO. MESSRS. COPE & STEWARDSON, ARCHITECTS, PHILADELPHIA, PA.

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

NO. 2 WEST DRIVE, STREATHAM PARK, S. W., LONDON, ENG. MR. LEONARD STOKES, ARCHITECT.

This plate is copied from *The Builder*.

[Additional Illustrations in the International Edition.]

THE DEWEY ARCH AND SOUTHERN COURT OF HONOR, NEW YORK, N. Y.

[Gelatine Print.]

EAST SIDE OF THE DEWEY ARCH, NEW YORK, N. Y.

[Gelatine Print.]

CONGREGATIONAL CHURCH, WILTON, ENG. MR. J. P. OSBORNE, ARCHITECT.

HEYTHROP PARK, CHIPPING NORTON, ENG.



TO BUY THE CLIFF-DWELLINGS.—Mrs. Virginia McClurg has succeeded in her efforts to get a tangible plan by which Colorado clubwomen may possess the cliff-dwellings. The committee of which she is chairman now asks that clubwomen tax themselves twenty-five cents apiece to raise the sum necessary to carry out this undertaking. Other women—for there are a few of the "unclubbed" yet extant who have a personal pride in their State—may send their quarters also. Mrs. McClurg's address is No. 619 North Cascade Avenue, Colorado Springs. Wealthy individuals who have more than a quarter to spare will not be ruthlessly spurned, and even if the decimal should be placed after the figures, instead of before them, Mrs. McClurg will bear the news with becoming fortitude.—*N. Y. Times*.

RUINED CITIES IN CYPRUS.—Famagusta and Rhodes are probably the most wonderfully preserved of mediæval cities. Nothing in Europe can be compared with them. Both contain examples of the finest Gothic architecture in their old cathedrals, churches, palaces, and fortifications. It is a pity that they are not more known to the travelling public; perhaps if they were, some effort might have been made for their preservation. Famagusta is fast disappearing, thanks to the enterprise of the few natives who still inhabit its ruins. Port Said may be said to be built out of its stones, carried across to Egypt in little lighters. In Famagusta the stones are sold at the rate of fifteen Cyprus piastres, or one shilling and eightpence the hundred. The priceless old carvings of angels, saints, lions, and what not are roughly knocked off to render the stones square, and perhaps to avoid alarming the good people of Port Said. The Turk who keeps the general shop of the place and speaks a little French acts as agent. The more complete destruction of the city now contemplated is another matter. It is proposed to build a small harbor for coasting steamers within the shallow rocky port of ancient times. To effect this, the great walls of the city, which still stand in the most perfect preservation, as if abandoned but yesterday by the martyred Bragadino and his brave companions of 330 years ago, are to be utilized. That is to say, their materials are to be taken for the purpose of forming a new quay-wall for the tramway to run upon, and connect the landing-stage beyond the northern extremity of the city with the village of Varosha, which is situated about a mile and a half to the south. From this latter a tramway to Nicosia is to be commenced. It indeed seems a terrible evidence of poverty, both material and sentimental, that a country like Cyprus should be unable to afford to retain such a marvellous mediæval monument as the old city of Famagusta, a possession which in the future must certainly attract the art-loving tourist and the artist. The beautiful old sea-castle associated with the story of Othello and Desdemona, with its four round towers, on which the lion of St. Mark still stands sentinel, with the proud inscription of the Foscarini giving a date which seems almost incredible, considering the absolutely intact condition of the buildings, must be blasted away as ballast for a dock-tramway by English engineers. The Tower of London might as well be demolished to make way for a new Thames-side dock!—*London Times's Rome Correspondence.*

THE ROYAL VAULTS AT WINDSOR.—During the imperial visit to Windsor Castle the German Empress inspected the interior of the royal vault underneath the Albert Memorial Chapel. During the last few months a new approach has been made to the vault, in order to facilitate the visits of the royal family, and the interior has been lighted by electricity, while an altar has been placed at the upper end. The old coffins, covered with crimson velvet, with gold ornaments and mountings, have all been enclosed in oak cases, and they are now placed on the shelves at the sides of the vault. Until within the last weeks the large stone table in the centre of the vault was covered with the coffins of George III., Queen Charlotte, and the Duke of Kent. This vault was constructed by George III., as a burial-place for himself and his wife and their descendants. The last interment was that of the Duchess of Teck. The old royal vault, in which Henry VIII. and Charles I. are buried, is underneath the choir of St. George's Chapel. There is something very pathetic in the brief entry in the chapel register which records the burial of the "Royal Martyr." It simply consists of five words, with the date, "King Charles, from the Castle."—*Manchester Gazette.*

THE YORK WATER-GATE, LONDON.—It is suggested that a tablet and inscription be placed on the old gateway at present preserved in the Victoria Embankment Gardens, London, and the Parks Committee of the London County Council has decided to ask the Council for sanction to set up a bit of oak with the following legend: "This gateway, formerly the water gate or approach from the Thames to York House, Charing Cross, originally the London lodging of the Archbishops of York, the birthplace of Chancellor Bacon, and afterward the residence George Villiers, the second Duke of Buckingham, was designed by Inigo Jones, architect (1572-1652), and executed between 1624 and 1628 by Nicholas Stone, master-mason (1582-1647), for the first Duke of Buckingham, and marks the river margin before the embankment was constructed. The inscription on the north frieze, 'Fidei coticula crux' (the cross is the touchstone of faith), is the motto of the Villiers family, whose arms are on the south front. By the London Open Spaces Act, 1893, the gateway was vested in the London County Council, who repaired the structure and took measures for its preservation *in situ* as an interesting landmark of London."—*N. Y. Tribune.*

ALUMINIUM-WIRE FOR TELEGRAPH-LINES.—Expectation that the field for the use of aluminium in lines of electrical manufacture would be widened by the increasing price of copper are being realized. A Western railroad-company recently ordered 60,000 pounds of aluminium wire for its telegraph service, and the wire is being used with satisfaction in Pittsburgh for telephone purposes. It is also in use by some street-railroads as cables for the conduct of the electrical power. To obtain the same conductivity the aluminium-wire must be about twice as large as the copper-wire, but as the weight is much less, the strain on the poles is not so great, and it is said that with aluminium at twice the price of copper it will be as cheap a material. Thus, with copper at 20 cents per pound and aluminium at 41 cents per pound, the cost per mile for wire of the same conductivity in either metal will be the same. But as the cost of aluminium is constantly decreasing through the improvement of reduction processes, and the cost of copper is being held up, the outlook is thought to be favorable for the increased use of the white metal.—*N. Y. Evening Post.*

WORTHLESS TIMBER DRY-DOCKS.—Investigations ordered by the Navy Department have disclosed some rather surprising facts regarding the condition of the new Port Royal dry-dock, built there a few

years ago at a cost of over \$500,000. Recent reports show beyond question that this great dock, which was intended to be one of the finest on the seaboard, is practically wrecked, unserviceable, and fast going to pieces. It would not be safe to place the smallest vessels in the basin, and at the present rate of deterioration, it is not believed the dock will be worth anything in a few months unless money is expended to prevent its further decay. Admiral Endicott, under whose charge dry-docks are placed, estimates that the dock as it now stands is useless to the navy, and that it would be reckless to attempt the docking of any first-class ship in it. The defects seem to be due to faulty construction as well as design, and the marine-worm has also done much towards rendering the timbers weak and unsafe. The sides are bulging in, according to reports, water has come through the bottom, and defects are being constantly found, although the basin, when delivered to the Government three years ago, was believed to be the equal of any on the coast. The dock was authorized during the Harrison administration, and one of the last acts of Secretary Tracy was to award a contract for its construction to a Washington firm, whose experience in building operations was confined to houses. Trouble began at once, and the dock was delivered several months over contract time. When completed it was discovered that none but light-draught vessels could safely approach it, and battle-ships only under unusual tidal conditions for lack of anchorage-water near by. The first ship to enter the dock was the Indiana, which crossed the sill on a very high tide, and had to remain inside over a month before another tide allowed her to get out. Weaknesses were then developed in the dock, but of a trivial nature, and after that one of the monitors was docked, but no other ship has ever used it since then. Its uselessness is now apparent to Admiral Endicott, who will recommend that \$500,000 be appropriated in order that the dock may be converted into a masonry basin and suited to the deepest-draught ships of the navy. It was urged at the time the dock was authorized that none but a stone dock should be located in Southern waters, where the marine-worm plays havoc with submerged timber. Admiral Matthews, then chief of the bureau, however, allowed the contract to be made, and the result is a loss to the Government of \$500,000, the dock being regarded now as worthless unless a large amount of money is expended upon it. Wherever the marine-worm is found, only stone and masonry docks, Admiral Endicott asserts, should be built. He points to the dock at Norfolk, which has suffered from its attacks, and that at Mare Island, where the timbers have been eaten into until they are in many instances unsafe. None but stone docks hereafter will probably be built by the Government. They are more expensive than the timber, but last longer and suffer little deterioration.—*Washington Correspondence, Baltimore Sun.*

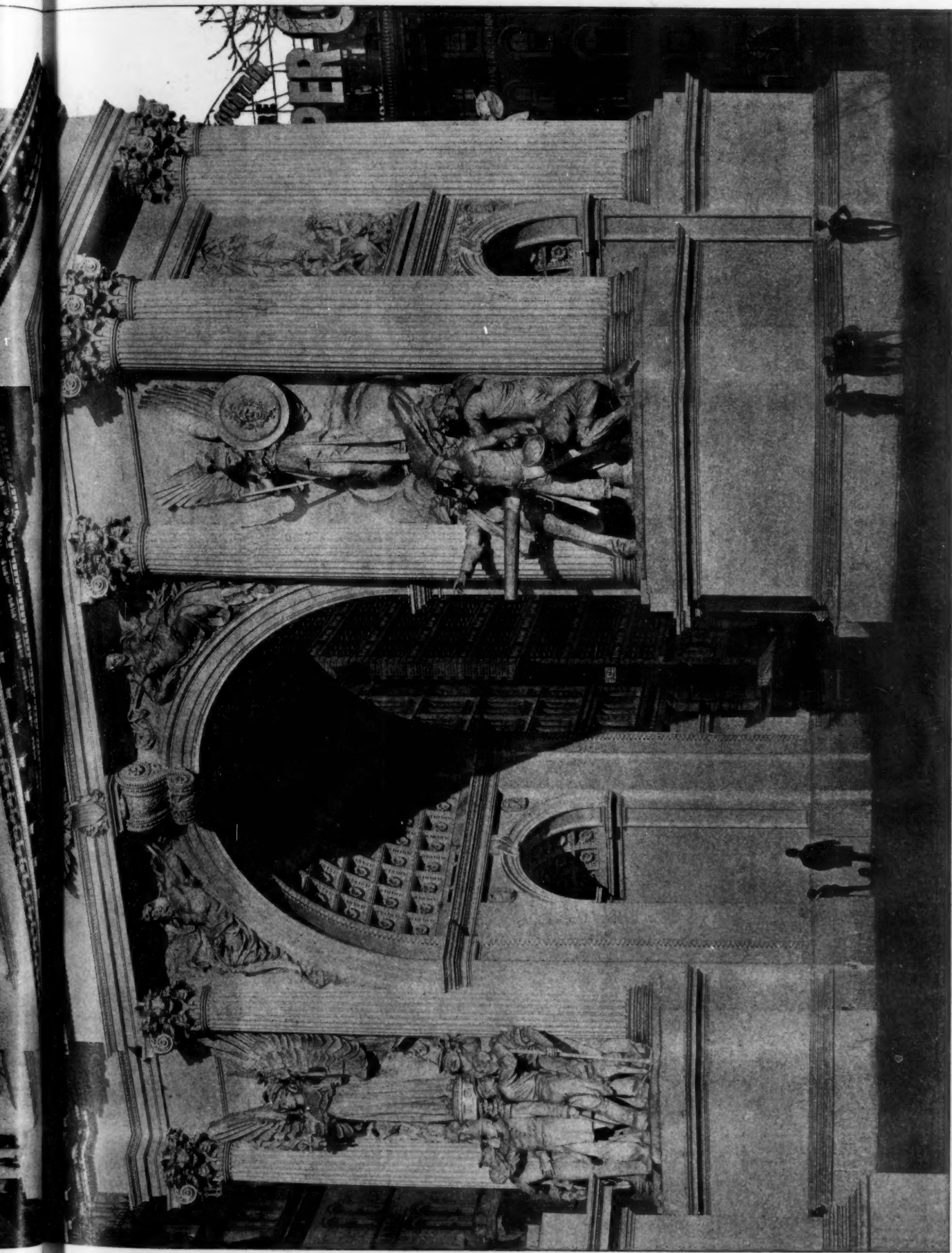
SERVANTS IN FLATS.—The domestic-servant question, from *The Lancet's* point of view, is one of hygiene, especially in flats. The number of rooms in each of these flats being, except in the very largest, not great, it becomes an important matter to make the utmost use of all available space. Naturally, domestic servants are the first people to suffer with the commencement of this squeezing process. The position of their bedrooms is determined by expediency, and the general practitioner who visits a number of patients dwelling in flats becomes acquainted with an amount of sleeping accommodation in kitchens, pantries and cupboards which he never suspected and of which he most seriously disapproves. It is difficult to imagine a state of things less conducive to hygiene than that to be found in a flat where the cook's bedroom is little more than a dark cupboard opening out of the kitchen. If the proximity of the bedroom is not inimical to the products of the kitchen, at least the proximity of the kitchen menaces the health of the occupant of the bedroom. In all probability the purity of both apartments suffers, and, indirectly, the master and mistress suffer too, for if their cook slept rather farther off from where she works, probably both food-stuffs and culinary operations would be improved. In flats with high rentals, too, the manner in which the servants are located is often most unsatisfactory from a medical point-of-view. In such cases the basement, very likely below the level of the street, inefficiently ventilated and receiving scarcely any daylight at all, is given up to the accommodation of two necessities, coals and servants.

THE PARIS UNDERGROUND RAILWAY COLLAPSE.—The London newspapers contain some interesting details of the recent collapse of a part of the Paris Underground Railway. The scene of the disaster was the Place de l'Etoile, but a stone's throw from the Arc de Triomphe. A little after eight o'clock a section of the tunnel, which is sixteen yards wide, caved in, leaving an enormous chasm in the middle of one of the most frequented thoroughfares in this capital. According to eyewitnesses, the spectacle offered was extraordinary. The only warning of what was about to happen was an ominous rumble, immediately followed by a shock as of a slight earthquake. The trees, of which there are many at this spot, swayed backwards and forwards wildly, and the lamp-posts rocked from side to side. Then trees, lamp-posts, and roadway were engulfed in a yawning pit, from which there at once shot up a gigantic sheet of flame caused by the gas, which was pouring out from the broken pipes. The immense excavation was thus converted into a kind of giant punch-bowl. To the general astonishment it was found that only two persons had been injured, neither of them fatally. Of the fifty or sixty workmen at work in the tunnels branching off from that which had fallen in, not one was hurt. A slight settlement had been noticed in the tunnel earlier in the evening, and the engineers had, fortunately, given orders for the work in it to be suspended. M. Berlier, the engineer, ascribes the catastrophe to the fact that the general level of Paris is only eight metres above the water-level, while the depth of the railway tunnels varies from ten to twenty-six metres. He thinks that the pressure to be sustained had not been rightly calculated. The accident excited much interest in London, where underground railroads are so common.—*N. Y. Evening Post.*

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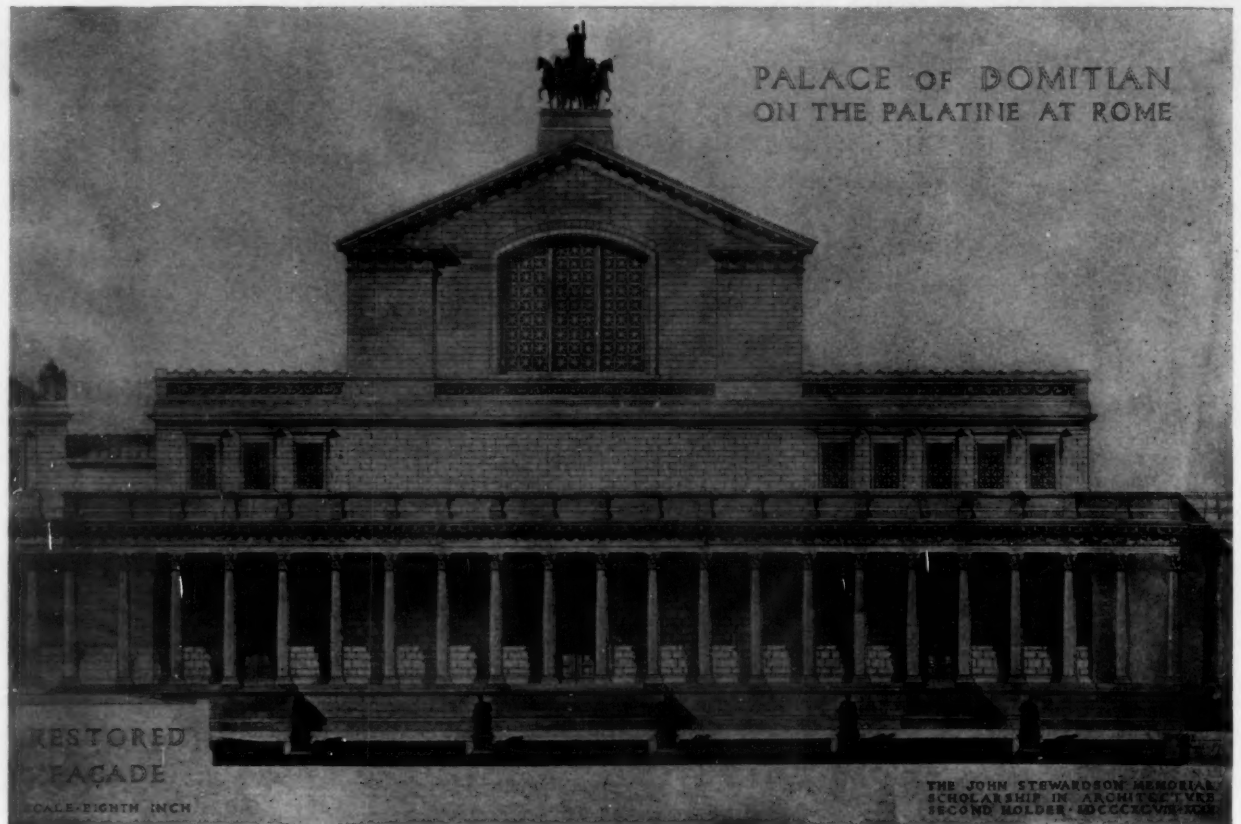




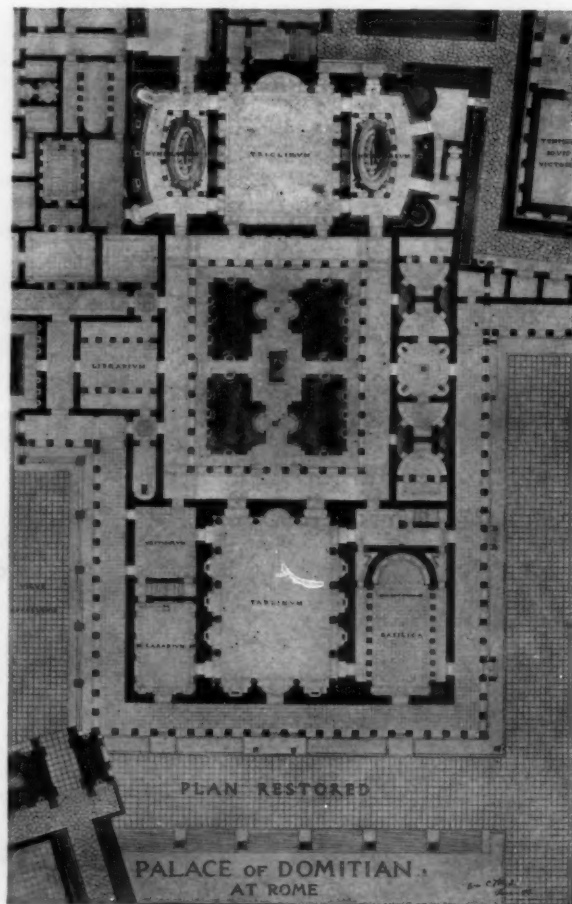
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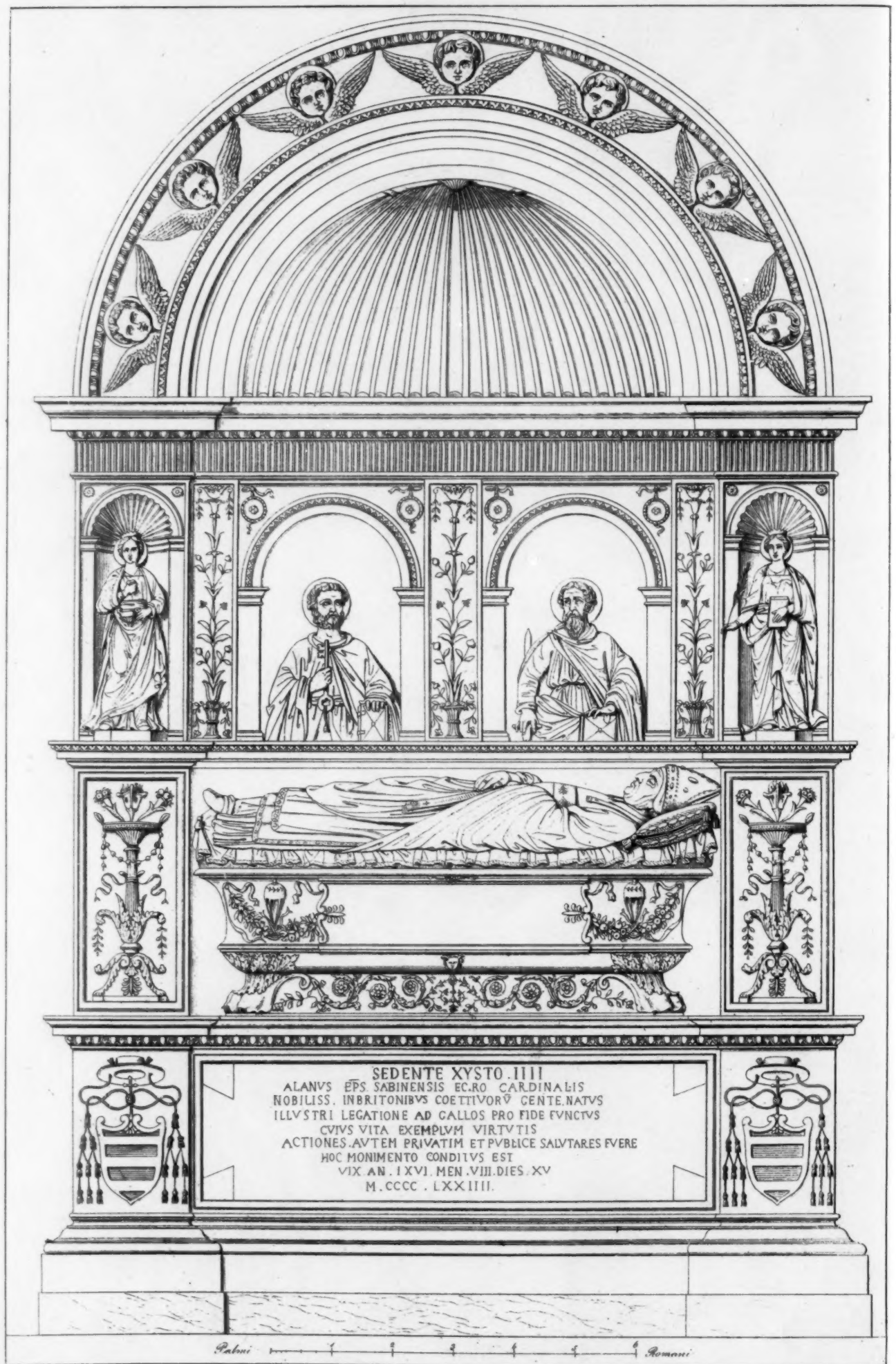
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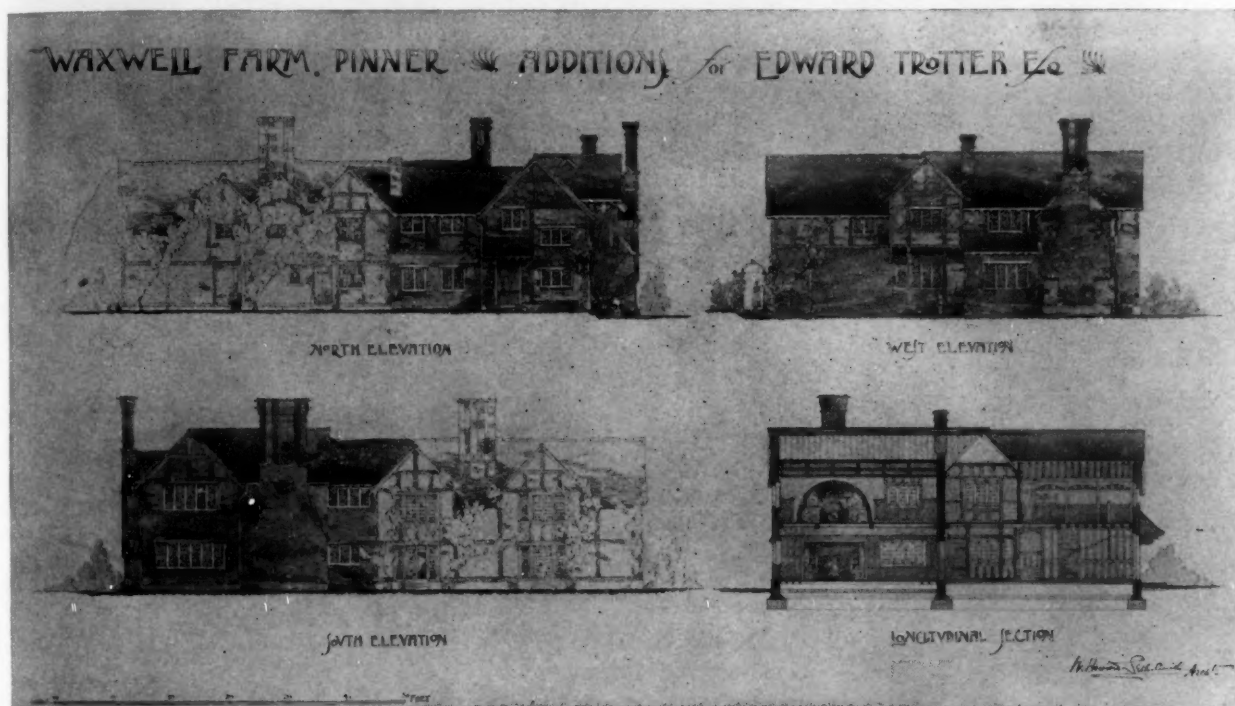
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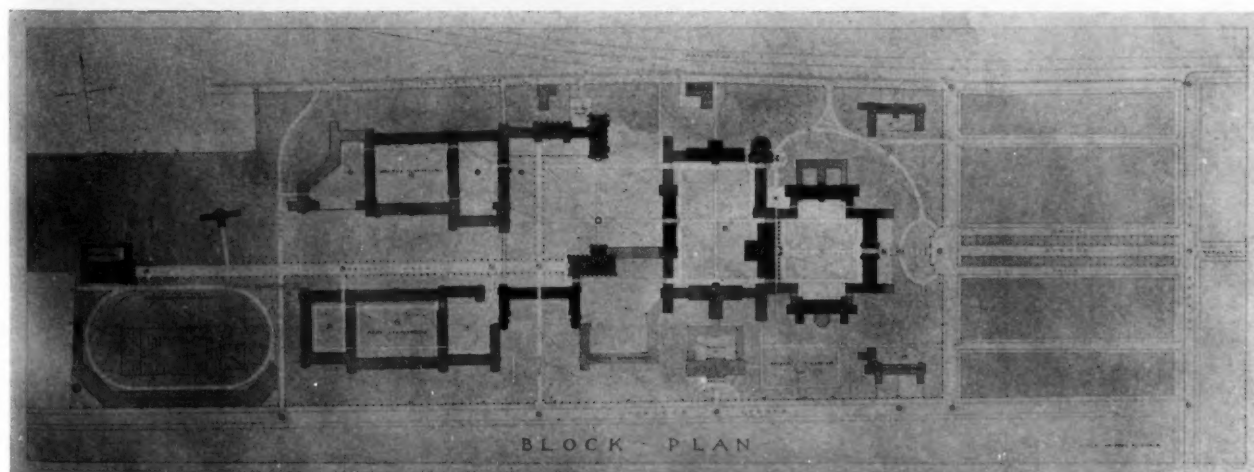
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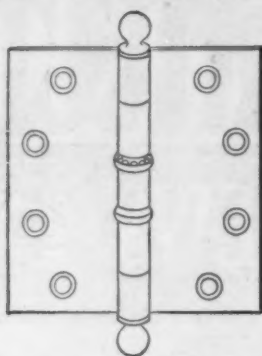
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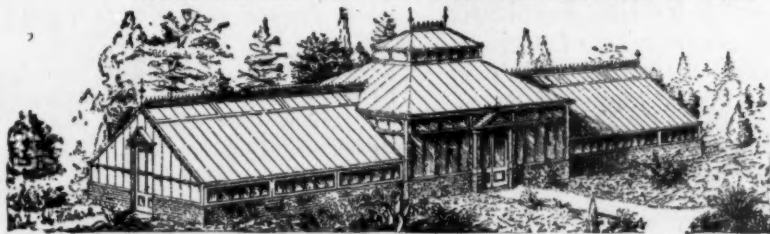
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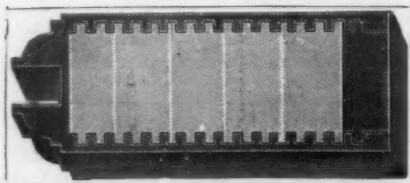
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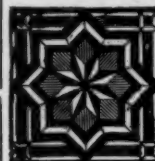
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BUILDING INTELLIGENCE.

(Reported for The American Architect and Building News.)

[Although a large portion of the building intelligence is provided by their regular correspondents, the editors greatly desire to receive voluntary information, especially from the smaller and outlying towns.]

ADVANCE RUMORS.

Albany, N. Y.—The State Prison Commission have adopted a report condemning the women's prison at the Raymond Street Jail, Brooklyn, and recommends that a new prison to cost about \$250,000 be erected.

Ames, Ia.—Reports state that the business men of this place are planning to build a \$10,000 opera-house. L. G. Hardin among others is interested.

Appleton, Wis.—It is stated that the Northwestern Ry. Co. will build a \$12,000 station at Appleton Junction early next spring.

Ashland, Pa.—Plans have been drawn by C. T. Mould, of Pottsville, for a \$14,000 hospital ward at the State Hospital. M. J. Biddle, Supt.

Atlanta, Ga.—It is stated that the Universalist Society will build a \$10,000 church on E. Harrison St. in the spring.

Barro, Mass.—The Stetson Home for Orphan Boys, which Henry A. Pevear, the Lynn morocco manufacturer, is to erect as a memorial to his mother, is to be built here and not in the town of Shirley as originally planned. Mr. Pevear has bought the eighty-acre farm here formerly owned by William T. Ash of Lynn and will use the spacious stock barn as the basis of the new structure. The building will be 37 feet wide, 150 feet long, a story and a half high, and will cost between \$25,000 and \$30,000. Work will begin at once.

Beverly, Mass.—N. W. Rice will build a residence on Ober St., to cost \$10,000. Henry W. Wallis has the contract.

Bourne, Mass.—George P. Gardner, of Boston, will build a \$20,000 summer residence at Monument Beach. H. K. W. Andrews & Son, Florence St., Marlboro, have the contract.

Braddock, Pa.—The First Baptist Church will erect a building to cost about \$12,000. Rev. G. T. Street, Mt. Washington, Pittsburgh.

Buffalo, N. Y.—The Common Council has approved the proposition of M. J. Burke to grant him the Hamburg Canal property in consideration of his agreeing to erect a union station thereon to cost not less than \$1,500,000, to be used for passenger traffic by all railroad companies which now or which may hereafter run into the city.

Charles E. Dickinson will build a two-story brick tenement-house at Eagle and Adams Sts. It will have a frontage of 54 feet, depth of 112 feet, will

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(Advance Rumors Continued.)

have the latest improvements, and will cost about \$7,000.

A three-story stone addition to the Erie County jail at a cost of \$50,000, or more, is being projected.

Cincinnati, O.—Plans are being prepared for a hospital to be built on a tract of land at Clifton Ave. and Straight St., for the German Deaconess Home; cost, \$50,000.**Cleveland, O.**—Architects George L. Hardway & Co., 176 Euclid Ave., has completed plans for a \$200,000 flat building for Frank L. Cody.

Architect F. C. Bate, 131 Euclid Ave., has drawn plans for a nine-story flat-building to be erected on Euclid Ave., near Wade Park, at a cost of \$400,000.

Concord, N. H.—Press reports state that Geo. R. Sheldon, a banker of No. 2 Wall St. and an alumnus of St. Paul's School, with other members of his family, has undertaken to construct a fine new library building at St. Paul's, to cost \$150,000.**Davenport, Ia.**—The Armour Co. has secured a site, and in the spring will erect a four-story pressed brick cold storage plant, to cost about \$15,000.

The city is to have a new \$50,000 free public library. The offer of Andrew Carnegie to provide the building if the city would secure a site and provide for the maintenance of the institution, having been unanimously accepted by the City Council.

Emporia, Kan.—Andrew Carnegie has promised the college here \$50,000 for a new library building as soon as the present debt is paid. B. H. Gragg, the financial agent of the college, has promises of money enough to more than meet all obligations, and it is believed that work on the structure will soon be commenced.**Evansville, Ind.**—The Globe Furniture Co. will erect a \$30,000 factory building, 60' x 125', on W. Maryland St. A. R. Dubber, president; Benjamin Bosse, secretary.**Fairmont, W. Va.**—It is reported that George D. Griffin will prepare plans for a \$100,000 hotel, 98' x 148', to be built by B. G. Williams.**Hamline, Minn.**—Omeyer & Thori, architects, St. Paul, are drawing plans for a college building here for the United Lutheran Church Society. It will be built of brick and stone, 90' x 162', and three stories high; cost, \$75,000.**Hancock, Mich.**—Architect C. Archibald Pearce is receiving bids for the erection of a three-story pressed brick and stone store, office and hall building, 50' x 100', on Quincy St., for Andrew Kauth. Work will be commenced about April 1; cost, \$20,000.**Henderson, Ky.**—F. H. Fraser has prepared plans for a two-story brick canning factory; cost, \$12,500.**Holyoke, Mass.**—The Building Committee of the Free Public Library has accepted the plans for a new library building submitted by Architect Jas. A. Clough. The plans call for a building of pure Greek design, a large letter "T" in general outline, 138' x 140', to be built of Indiana limestone and light cream brick. About \$75,000 will be expended. It will be located on Athletic Park in such a way as to provide space eventually for an art building and a science building, for which, however, no steps have yet been taken and probably will not be for some time.**Knoxville, Tenn.**—The Y. M. C. A. will erect a new building to cost \$60,000. J. O. Fink, Sec.**La Harpe, Kan.**—The Lanyon Zinc Co. will rebuild their plant, recently destroyed by fire, at a loss of \$50,000.**Lewisburg, Pa.**—The trustees of the Lewisburg Lutheran Church are stated to have decided to build a \$25,000 edifice.**Louisville, Ky.**—Architects Dodd & Cobb, Equitable Building, have prepared plans for a one-story glass and steel printing establishment, 100' x 200', for George Fetter & Co.; cost, \$65,000.

Architects J. S. Minor & Son, 3d and Jefferson Sts., have prepared plans for a six-story iron-clad whiskey warehouse; cost, \$20,000.

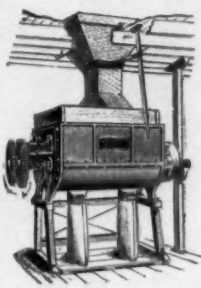
G. C. S. P. and C. W. Jones will in the spring begin the erection of a large vinegar plant. It will be five stories high, 200' x 400', and will cost about \$40,000.

The National Tobacco Co. is about to erect a \$100,000 warehouse at 31st and Walnut Sts. D. X. Murphy, 250 Fifth St., architect.

Manayunk, Pa.—The Polish Catholics, Rev. Henry Chajacki, pastor, are negotiating for a site upon which they will erect a church as soon as arrangements can be made.

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Description and Prices on application.....

W. D. DUNNING,
239 W. Water St. SYRACUSE, N. Y.**BUILDING INTELLIGENCE.**

(Advance Rumors Continued.)

McKeesport, Pa.—The First Presbyterian Church has had Chas. M. Robinson, of Altoona, draw plans for a new church structure to cost \$60,000. Work will begin in the spring.**Menominee, Mich.**—H. A. Foeller, architect, of Gree Bay, Wis., has prepared plans for rebuilding the Turner Society Opera-house in the spring, at a cost of about \$10,000.**Milwaukee, Wis.**—Ferry & Clas, architects, have prepared plans for a four-story brick flat-building for Henry and Joseph Dahmann; cost, \$40,000.**New York, N. Y.**—Arrangements are under way for the erection of a ten-story fireproof dormitory at 116th St. and Amsterdam Ave. for the use of the officers and students of Columbia University. The proposed building, a ten-story structure of limestone and Boston brick, with terra-cotta trimmings, has been designed after a type of the French Renaissance. There will be 432 rooms. The capital of the Morningside Heights Realty Co. which is projecting the scheme has been fixed at \$200,000, and the additional \$300,000 needed to meet the cost of the dormitory has been provided for by a bond issue.**Northampton, Mass.**—Architect R. F. Putnam has prepared plans for a \$5,000 residence for Merritt Clark.**Northfield, Minn.**—Architects Omeyer & Thori, of St. Paul, have plans for a dormitory to be erected for St. Olaf's College. It will be built of brick and stone, 83' x 193', and will be three stories in height; cost, \$60,000. The same architects are drawing plans for an addition to the main college building, 40' x 70'; cost, \$15,000.**Philadelphia, Pa.**—Charles McCaul, contractor, is drawing plans for a two-story and attic branch station for the Bell Telephone Co. The building will be artistic and modern in its appointment. It will have a frontage of 94 feet on 17th St. and 34 feet on Allegheny Ave.

The Board of Managers of the Episcopal Hospital, at Front St. and Lehigh Ave., have under consideration a project to build an elaborate dispensary for convalescent orphan children. \$200,000 for this purpose will be available soon. This sum was bequeathed to the institution several years ago for the support of a ward bearing the name of the donor by Anna Ross Aspinwall, of Pittsburgh.

Pittsburgh, Pa.—The Olive Iron & Steel Co. will erect a one-story steel mill on the Monongahela River front, near S. 10th St.; cost, \$15,000.

It is stated that work will soon be started on the new east end charitable hospital, which, when complete, will cost \$500,000.

Charles B. McLean, president of the Lincoln National Bank, will erect a large apartment-house on Negley Ave. It will have 32 separate living apartments, and will cost \$125,000.

Pottsville, Pa.—John Raring is about to erect a \$12,000 four-story brick store and office building on Centre St. F. X. Riley, 8 S. Centre St., architect.**Rockhill, S. C.**—Architect H. E. White has prepared plans for a two-story pressed-brick, stone and terra-cotta store and office building, 75' x 100', for Ratterree Bros.; cost, \$10,000.**Royersford, Pa.**—Edward Emmers, manufacturer of underwear, etc., is perfecting plans for the erection of a hosiery mill here, to cost \$100,000.**Salt Lake City, Utah.**—R. Kletting, 49 Main St., has prepared plans for a \$100,000 office-building for the *Deseret Evening News* Publishing Co.**BUILDING INTELLIGENCE.**

(Advance Rumors Continued.)

San Francisco, Cal.—Mayor Phelan will, as soon as a suitable site can be secured, build a branch library building and donate it to the Trustees of the San Francisco Free Public Library.**Seattle, Wash.**—S. S. Bailey is negotiating for a site, and if successful will erect a large modern six-story hotel, to cost about \$300,000.**Spokane, Wash.**—Plans are being drawn for remodeling and enlarging the marble tank by S. S. Glidden and Frank Culbertson. Five stories will be added, to be of marble; cost, about \$200,000.

Cutter & Malmgren, architects, have completed plans for a three-story and basement building to be erected by J. P. Graves; cost, \$40,000.

Springfield, Mass.—The officers of the First Presbyterian Church are considering the advisability of erecting a new church edifice on their property on State St. Plans have not yet been made, but it is thought that the building will be started some time this year.**Syracuse, N. Y.**—Harley B. Jeffrey, Sedgwick-Kennedy & Andrews Building, has prepared plans for a convention hall, which the Central City Produce Exchange proposes to construct in connection with a covered market in W. Genesee St., between Clinton and Franklin Sts.; cost, about \$100,000.**Thornburg, Pa.**—Architect E. M. Butz & Co., Park Building, Pittsburgh, are preparing plans for 12 brick dwellings, to be built for Frank Thornburg; cost, \$72,000.**Topeka, Kan.**—H. M. Hadley, State Architect, 627 Kansas Ave., is at work on plans for the administration Building, which is to be erected for the Topeka Insane Asylum; cost, about \$35,000.**Webster, Mass.**—Barker & Nourse, architects, of Worcester, have prepared plans for a store and apartment building for L. H. Tiffany; cost, \$8,000.**Wilmington, Del.**—It is stated that the Jessup & Moore Paper Co. are having plans prepared for a new factory, to cost \$350,000.**Worcester, Mass.**—The proposed brick convent for the Notre Dame Roman Catholic parish will not be built for the present. The matter is in the hands of the pastor, Rev. Fr. Joseph Brouillet. The plans were prepared by Architect O. E. Neault.

Edward J. Cross is builder for two two-tenement frame houses on Beaver St., for E. T. Marble. The houses are to be two-and-one-half stories, 30' x 55' each, with shingle roof. The architect is W. H. Harvey.

Architect W. H. Harvey is preparing drawings for a proposed club-house for the Greendale Improvement Society, of Greendale. The building is to be of frame, two stories, basement and tower. The contract for the work will probably not be let until spring.

James H. Whittle, the manufacturer of sheet-metal specialties, is to double the size of his factory. The contract for the work has been awarded to Edward J. Cross. The new building will be of brick with a flat roof, three stories high, and 50' x 150'.

Architects Frost, Briggs & Chamberlain have nearly finished the plans for the proposed new high school buildings to be erected at a cost of \$130,000.

Architect Geo. H. Clemence has nearly completed plans for extensive alterations to be made on the Walker Building. All the stores in the block are to be remodelled, and new attractive fronts will be put in.

Architect Geo. H. Clemence has awarded W. E. Putnam the contract to erect the new house for the West Side Land Co. This is a ten-room frame

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250 "	6 "	8 "	155 "	6 "	12¼ "
330 "	7 "	9¾ "	200 "	7 "	15 "
430 "	8 "	11¼ "	50 "	7 "	12¼ "
80 "	9 "	13 "	250 "	8 "	17½ "
100 "	10 "	15 "	95 "	9 "	21 "
50 "	10 "	16 "	155 "	10 "	25 "
225 "	12 "	20½ "	200 "	12 "	31½ "
			265 "	12 "	40 "
			150 "	15 "	42 "
			180 "	15 "	50 "
			25 "	20 "	65 "

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

dwelling of English half-timbered style, with part of the exterior shingled and one-story plastered outside; cost, \$6,743.

Cutting, Bardwell & Co. have been awarded the contract to build a large addition to the factory of Crompton & Knowles Loom Works. It will be of brick with stone trimmings, four stories in height, 50' x 60'; estimated cost, \$17,000. Architects Lockwood, Greene & Co., 131 Devonshire St., Boston, drew the plans.

Architect J. P. Kingston has drawn plans for a two-and-one-half-story frame residence, 30' x 40', to be erected on Berwick St., for Contractor George Kingston. It will cost completed, about \$5,000.

APARTMENT-HOUSES.

Detroit, Mich. — Oakland Ave., two-st'y fr. stores & flats, pitch roof, furnaces; \$5,000; o., McLaughlin Bros.; a., Kastler & Hunter, 927 Chamber of Commerce Building.

Bethune Ave., two-st'y bk. & fr. apart., 26' x 65', comp. roof, furnace; \$6,000; o., William J. Gutow; a., Geo. W. Meyers.

Fairmont, N. C. — Main St. and Park Ave., three-st'y & base. wood & steel apart. & stores, 68' x 80', tin roof; steam; \$12,000; o., L. E. Carr; a., A. C. Lyons.

Milwaukee, Wis. — Four-st'y bk. flats, 40' x 70', comp. roof, steam, \$40,000; o., H. and J. Dahmann; a., Ferry & Clas, 2 Broadway.

St. Louis, Mo. — McPherson and Lake Sts., 2½-st'y bk. & st. apart., 50' x 65', slate & comp. roof, furnace; \$12,000; o., Charter Oak Investment Co.; a., A. Blair Ridington, Lincoln Trust Building.

Evans Ave., two-st'y bk. flat, 44' x 60', furnace; \$7,500; o., F. A. Bannister; a., A. Blair Ridington.

CHURCHES.

Marysville, O. — One-st'y bk. church, 60' x 99', slate roof, furnace; \$12,000; o., St. John's Lutheran Congregation; a., F. G. Walker, Cleveland.

EDUCATIONAL.

Fremont, Neb. — Three-st'y bk. & st. school building, 99' x 100', slate roof, hot blast; \$39,000; o., Board of Education; a., W. R. Parson & Sons, Des Moines, Ia.

BUILDING INTELLIGENCE.

(Educational Continued.)

Mercer, Pa. — Two-st'y bk. school building, 75' x 115', slate roof; \$30,000; o., Board of Education; a., W. G. Eekles, New Castle.

FABRICATORIES.

Cedartown, Ga. — One-st'y bk. cotton-factory, 103' x 390', gravel roof, steam; o., Standard Cotton Mills; a., A. F. Walker.

Knoxville, Tenn. — W. Church St., two-st'y bk. factory, 50' x 150', gravel roof, steam; \$7,000; o., Knoxville Knitting Mills Co.; a., Bauman Bros.

Milwaukee, Wis. — Bellview and Park Pl., three-st'y bk. machine shop, 185' x 200', glass & comp. roof, steam; \$75,000; o., Christensen Engineering Co.; a., V. C. Uhling.

HOUSES.

Allegheny, Pa. — Perryville Ave., 2½-st'y bk. & fr. dwell., 39' x 41', slate roof, hot air; \$5,000; o., R. H. Jackson; a., F. H. De Arment, 708 Penn Ave., Pittsburgh.

Detroit, Mich. — Boulevard, two-st'y st. & bk. dwell., 46' x 80', hot water; \$15,000; o., C. Leidich; a., F. Kamper, 10 Miner Building.

King Ave., 2½-st'y fr. dwell., 30' x 56', pitch roof; \$6,000; o., M. T. Starling; a., Rogers & McFarlane, 72 Moffat Building.

Milwaukee, Wis. — Highland Boulevard, two-st'y fr. & bk. dwell., 40' x 45'; \$8,000; o., B. Hoffman; a., C. F. Ringer.

Highland Boulevard, nr. 33d St., two-st'y bk. & st. dwell.; \$30,000; o., Mrs. L. Miller; b., August Neudling; a., Ferry & Clas.

Two-st'y fr. dwell., 40' x 100', pitch roof, hot water; \$9,000; a., Buening & Dick.

Shepard Ave., bet. Newberry Boulevard & Folsom St., bk. & fr. dwell.; \$6,000; o., P. E. Sanborn; a., H. J. Rotier.

New York, N. Y. — St. Raymond Ave., nr. Parker Ave., 2 two-st'y & base. fr. dwells., 18' x 35'; \$47,000; o. & a., C. W. Miller, 971 E. 169th St.

Clinton Ave., nr. 175th St., 2 two-st'y fr. dwells., 19' x 55'; \$10,000; o., J. P. O'Donnell, 2003 Washington Ave.

Hillside St., nr. Kingsbridge Road, two-st'y fr. dwell., 28' x 48'; \$5,000; o., Henry Battermann.

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(Houses Continued.)

Audubon Ave. & 172d St.; a., Henri Fouchaux, 162d St. & Broadway.

Grand Ave., nr. Evelyn St., 2½-st'y fr. dwell., 18' x 27'; \$2,000; o., Louis E. Kessler, 403 W. 24th St.; a., G. H. Budlong, 132 Park Row.

One Hundred and Sixth St., nr. Riverside Drive, 5 five-st'y bk. & st. dwells., 17' x 20' x 62', 78'; \$94,000; o., Peter Wagner, 215 W. 106th St.

West End Ave., n e cor. 90th St., 2 five-st'y bk. dwells., 26' x 42' 6", 57' 6"; \$50,000; o., The Realty Improvement Co., 2291 Broadway; a., Hugh Lamb, 2291 Broadway.

West End Ave., s e cor. 91st St., 2 five-st'y bk. dwells., 25' x 57' 6"; \$50,000; o., The Realty Improvement Co., 2291 Broadway.

Fifth Ave., Nos. 875-876, 2 five-st'y & base. bk. dwells., 27' 6", 23' 4" x 68' 5", 75'; \$160,000; o., T. R. A. & W. A. Hall, 687 Madison Ave.; a., Welch, Smith & Provot, 11 E. 42d St.

One Hundred and Eighty-fourth St., nr. Fordham Road, 4 two-st'y & base. bk. & fr. dwells., 18' 9" x 36'; \$12,000; o., Mary Mapes, University Heights.

Wilkinsburg, Pa. — Wesley Ave., four 2½-st'y bk. dwells., 25' x 35', slate roof, hot air; \$16,000; o., West & Wilson, Pittsburgh; a., F. H. De Arment, 708 Penn Ave., Pittsburgh.

OFFICE-BUILDINGS.

Detroit, Mich. — Wight and Leib Sts., two-st'y office-building; \$20,000; o., Berry Bros.; a. & b., Geo. D. Mason.

Mt. Vernon, O. — Three-st'y bk. & st. office-building, 41' 6" x 135', comp. roof, natural gas; o., M. McDermott; a., Edgar B. Fox, Columbus.

PUBLIC BUILDINGS.

Springfield, O. — Four-st'y bk. Y. M. C. A. Building, 53' x 198', steam; o., Y. M. C. A., W. J. Fraser, Sec.; a., Vernon Redding, Mansfield.

STABLES.

Brooklyn, N. Y. — E. Thirty-first St., o s, 83' 6" x 62' 6", fr. stable, 16' x 25', shingle roof; \$800; o., Carlo Rossa, 32 Radde Pl.; a., F. S. Lowe, 186 Remsen St.

New York, N. Y. — Bathgate Ave., e s, 141' n Tremont Ave., three-st'y bk. stable, 45' x 81'; \$20,000; o., Ellis L. Fox, 178th St. & Park Ave.; a., J. E. Kerby, 722 Tremont Ave.

Arthur Ave., No. 1966, two-st'y fr. stable, 14' x 20'; \$350; o., Louise Schultz, 758 Tremont Ave.

Eleventh Ave., n w cor. 40th St., 2 one-st'y bk. stables & office, 15' 8", 19' 4" x 36' 4" & 24' 4"; \$1,500; o., M. J. Dempsey, 528 W. 32d St.; a., J. W. Cole, 403 W. 51st St.; b., Jas. Buckley, 1749 Crane Pl.

W. Thirteenth St., No. 419, six-st'y bk. stable & lofts, 27' x 95'; \$25,000; o., Chesebro & McNally, 267 Fourth Ave.; a., W. H. Whittall, 123 E. 23d St.

W. Sixty-second St., No. 203, one-st'y bk. stable, 14' x 25'; \$350; o., Fred'k King, 62 Amsterdam Ave.; a., Newman & Duncan, 242 W. 14th St.

Sixtieth St., s s, 200' e 1st Ave., three-st'y bk. stable & storage house, 25' x 93' 5"; \$25,000; o., F. Schillinger, 1073 Third Ave.; a., Wm. B. Tuthill, 287 Fourth Ave.

One Hundred and Sixty-third St., n s, nr. Washington Ave., two-st'y fr. stable; \$4,500; o., Samuel Garland, on premises; a., John De Hart, 1637 Fox St.

Rivington St., No. 330, six-st'y bk. & st. stable & shop, 20' x 85'; \$14,000; o. & b., S. Klein, 315 E. Houston St.; a., Nathan Langer, 9 Catherine St.

STORES.

Milwaukee, Wis. — Buffalo St. and Broadway, five-st'y bk. store building, 100' x 150', comp. roof, steam; \$50,000; o., A. Von Baumbach; a., E. R. Liebert.

Mt. Vernon, O. — Three-st'y bk. & st. business block, 42' x 135', comp. roof, steam; \$10,000; o., M. Mc-

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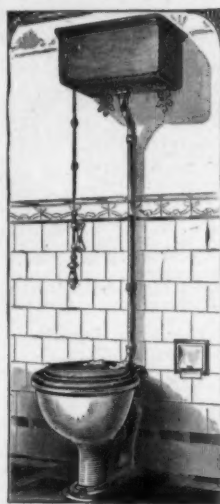
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(Stores Continued.)

Dermott, Columbus; a., Edgar B. Fox, 85 N. High St., Columbus.

St. Louis, Mo. — Bk. & st. store & office building, 45' x 100', comp. roof, steam; \$75,000; o., Oliva Breeding Co.; a., Barnett, Hayes & Barnett.

TENEMENT-HOUSES.

Brooklyn, N. Y. — *Hampden Ave.*, n w cor. Cooper St., 2 three-sty bk. tenements, 25' x 60'; \$12,000; o., Edward J. Mott, 1208 Decatur St.; a., A. H. McGeehan, 2581 Atlantic Ave.

Glenmore Ave., s s, 25' x Christopher Ave., 3 four-sty bk. tenements, etc., 25' x 52'; \$24,000; o., M. Levy, 47 E. Broadway.

N. Fifth St., nr. Havemeyer St., three-sty fr. tenement, 25' x 55', gravel roof; \$5,000; o., Cora Dalia, 237 N. 5th St.

Thirteenth St., nr. 6th Ave., 2 four-sty bk. tenements, 25' x 62'; \$18,000; o., W. M. Calder, 478 Thirteenth St.

Eckford St., nr. Norman Ave., three-sty fr. tenement, 25' x 62' 7"; \$5,000; o., Martin Bourke, 231 Monitor St.; a., G. F. Rosen, 68 Fort Greene Pl.

New York, N. Y. — *Second Ave.*, No. 2207, six-sty bk. tenement & store, 25' 2" x 86' 6"; \$25,000; o., Lowenfeld & Prager, 115 Broadway.

One Hundred and Fifteenth St., nr. 1st Ave., six-sty bk. tenement, 29' 6" x 89' 8"; \$30,000; o., Epstein & Galewsky, 28 W. 116th St.; a., M. Bernstein, 245 Broadway.

First Ave., Nos. 2160-64, 2 six-sty bk. tenements, 30' x 82' 6"; \$60,000; o., Simon Epstein, 28 W. 116th St.; a., M. Bernstein, 245 Broadway.

WAREHOUSES.

Cincinnati, O. — *Sycamore St.*, cor. Canal St., five-sty bk. & st. mill-construction warehouse, 96' x 120', comp. roof, steam; \$30,000; o., Crane-Hawley Co., 221 E. 9th St.; a., G. W. Draoh.

Dayton, O. — Three-sty bk. warehouse, 88' x 170', slate roof, steam; \$10,000; o., Charles H. Warford & Co.; a., Chas. E. Gemin; not let.

Farmington, Mich. — One-sty bk. & st. warehouse, 60' x 240', comp. roof, steam; \$12,000; o., Detroit & Northwestern Railway Co.; a., E. C. Van Leyen.

Newark, N. J. — *Atlantic St.*, nr. Lombardy, two-sty bk. storage building, 67' x 68'; \$6,000; a., Wm. Titus; a., Hurd & Sutton.

WAREHOUSES.

New York, N. Y. — *Fifth Ave.*, n e cor. 16th St., ten-sty bk. & st. loft & stores, 49' x 141' 10", 116' 10"; \$300,000; o., Leo Wise, 338 E. 59th St.

W. Twenty-fourth St., Nos. 109-111, seven-sty bk. warehouse, 50' x 103' 10"; \$50,000; o., R. H. Horner, 59 W. 68th St.; a., Harding & Gooch, 253 Broadway.

Peoria, Ill. — *Water St.*, cor. Liberty St., five-sty storage building, 45' x 150'; \$25,000; o., Swift Co.; a., H. C. Gardener.

St. Louis, Mo. — *Oak Railroad and Arsenal St.*, bk. warehouse, 80' x 185', comp. roof, steam; \$30,000; o., Blackmer & Post Sewer Co.; a., Mathews & Clark.

Bk. warehouse, 75' x 100', comp. roof; \$20,000; o., Robinson Danford Commission Co.; a., R. C. Ferguson.

Seventh and Elm Sts., five-sty bk. & st. warehouse, 90' x 90', comp. roof, steam; \$40,000; a., J. H. Bright.

Eighth and Gratiot Sts., mill-construction bk. warehouse, 75' x 100', comp. roof; \$20,000; o., Robinson Danford Commission Co.; a., R. C. Ferguson.

Seventh and Clark Ave., mill-construction bk.

BUILDING INTELLIGENCE.

(Stores Continued.)

warehouse, 40' x 127', comp. roof, electric heat; \$20,000; o., Howard Benoit; a., Weber & Graves. *Seventh St.*, bet. Elm & Clark Aves., four-sty bk. warehouse, 88' x 95'; \$35,000 o., Samuel Supple R. E. Co.; b., James H. Bright.

COMPETITIONS.

CHURCH.

[At Columbus, O.] Plans will be received on January 20th, for a pressed-brick church to cost \$30,000. L. L. RANKIN, chr. bldg. com. King Ave. M. E. Church. 1255

PROPOSALS.

Treasury Department, Office Supervising Architect, Washington, D. C., January 8, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 26th day of February, 1900, and then opened, for the construction (except heating apparatus, electric wiring and conduits) of the addition to the U. S. Court-house and Post-office Building at Topeka, Kansas, in accordance with the drawings and specification, which will be furnished at the discretion of the Supervising Architect on application at this office or at the office of the Custodian, U. S. Court-house and Post-office, Topeka, Kansas. JAMES KNOX TAYLOR, Supervising Architect. 1256

RESIDENCE.

[At Sacramento, Cal.] The State Capitol Commission invite sealed bids until January 25th, for the erection and construction of a residence for the governor of the State of California. HENRY T. GAGE, pres., W. H. DAVIS, sec. 1256

ASYLUM.

[At Pueblo, Col.] Sealed bids will be received until February 1st, for the erection of a home for feeble minded. DR. H. WORK. 1257

CHURCH.

[At Spring Green, Wis.] Bids will be received until February 1, for the erection and construction of a church for St. Mary's parish. REV. J. LAW, pastor. 1256

GRANITE PAVING BLOCKS.

[At Brookline, Mass.] Sealed proposals will be received until January 2, 1900, at the office of the Selectmen, Brookline, about \$180,000 feet granite paving-block, and 2,000 feet of granite flagging, etc. A. H. FRENCH, Town Engineer. 1253

CHURCH.

[At Fort Wayne, Ind.] Bids will be received until February 15, 1900, for the erection of a school and church to cost \$15,000. LUTHERAN SOCIETY. 1255

COURT-HOUSE.

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

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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.

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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."

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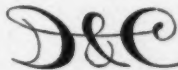
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