THE AMERICAN ARCHITECT AND BUILDING NEWS

VOL. LXXXII SATURDAY, NOVEMBER 14, 1903 No. 1455

CONTENTS

THE project for a wide street from Copley Square, in Boston, to the Broadway bridge, has been revived, and it is to be hoped that it may be seriously considered by the city authorities. Copley Square is becoming every day a more important centre of traffic, and, while it has five long streets diverging from it to the north, west and south, it has toward the east only one, which is already crowded with the vehicles poured into the Square, on their way eastward, from Dartmouth Street, Boylston Street and Huntington Avenue. Of this eastward traffic, a great deal might be taken direct to Washington Street, the South End and South Boston, by way of a new avenue, more conveniently than through Boylston Street, and as the congestion in Boylston Street increases, the need of a new outlet eastward from the Square will become still more pressing. At present, the land to be taken for such an avenue will cost much less than is usual in the case of improvements of this kind, and will soon be repaid by the improvement of the property on both sides, which has been lying idle for several years, on account of the lack of any satisfactory plan for developing it.

WHERE, however, we think that Boston has the best opportunity for beautifying itself, without any expense, at present, is in the new region about the Charlesgate, the Fens, and the splendid area at the junction of Beacon Street, Commonwealth Avenue and Brookline Avenue. Nearly all that private effort can do to improve the Charlesgate has been done, by building around it the most costly and most interesting group of houses in the city, but the public authority has done next to nothing to assist in the work, and the actual outlet of the Muddy River, or Fen Stream, or whatever else we may call a watercourse which deserves a respectable name, is one of the most pitiable objects that can be conceived, presenting to the view of the beholder who sees it from Beacon Street or Commonwealth Avenue at low tide simply the back of a rough stone wall, some irregular gravel-banks, covered with reeking filth, and the disgusting remains of two brick sewers. If this were the work of nature, it might be passed by in silence, but it is all artificial, and might just as well have been arranged in any other way. We will not say that in Paris or Berlin or Vienna such an opportunity would have been eagerly seized for artistic treatment, for no one can say what might happen in such a case; but there is no doubt that Boston has at the Charlesgate an unrivalled opportunity for the placing of a public monument, facing south on Beacon Street, but slightly recessed from it, which would be seen from Commonwealth Avenue with its reflection in the river surrounded by a framing of verdure. In the same way, the space at the confluence of Beacon Street, Commonwealth Avenue and Brookline Avenue, now ornamented with a horse-trough, might accommodate a triumphal arch, or, still better, a lofty column, like the Vendôme Column, or the Column of July. A monument of this sort would be not only visible, but conspicuous, from all Commonwealth Avenue, including the Public Garden and a large part of the Common; from the whole length of Beacon Street, from the State House westward; from the western portions of Commonwealth Avenue, Beacon Street and Brookline Avenue, as far as Brighton, Longwood and Brookline; and from a large part of Cambridge. No better place for a city monument can be found, perhaps, in this country, even the splendid Union Square site in New York, which is likely to be used for this purpose before many years, being in many respects inferior. Going southward from this point, the Fens present many magnificent sites for monuments. It is true that the Fen region is not yet sufficiently built up to call for monuments, but it is quite time to reserve the spaces for the monuments which are certain to be needed later. The topography being fixed, and the development of the city certain, now is the time to secure sites which can be had, at present, for nothing, but which, unless they are quickly secured, will be devoted to subway entrances, sewer ventilators, horse-troughs, or similar utilitarian purposes, while the monuments which should occupy them will be tucked away among the bushes in the Public Gardens of the future, or perched on fences, or built around trees, after the manner accepted in most American cities.

FROM all quarters come accounts of the abandonment of building enterprises, partly on account of the high prices of labor and materials, partly on account of the universal dread of the arbitrary tyranny of organized labor, and partly through the advance in the loaning rates for money, which has made it difficult to finance extensive building schemes. The current depression, singularly enough, seems to have made itself first felt among the steel manufactures, the United States Steel Company having closed a large number of its mills. Whatever may be the present dulness in building, it is certain that the country is gradually absorbing the surplus of houses, stores and other structures erected a few years ago, and that others will soon be needed. When the new demand will be supplied depends on how soon the walking delegates conclude to give up persecuting builders and owners, as well as on the course of prices of labor and materials; but it is obvious to architects that, under any circumstances, the use of structural iron is sure to increase. Already, strength for strength, steel floor-beams are cheaper than those of Georgia pine; and, while much remains to be done in the way of cheapening and perfecting the filling between such beams, and the attachment of floors and ceilings to them, so much has already been done that there is every reason to suppose that improvements will continue. All these improvements, however, must, practically, be based on the regular steel construction, and where steel beams are used now only in office-buildings, hotels and warehouses, they will assuredly be used, before many years, in dwelling-houses. The demand for this purpose may be counted upon to steady the market for structural steel, even if that for other structural materials should fall away; and, while we should be glad to see a reduction in the prices of such steel, as a means of stimulating building, which has been greatly checked by the feeling that the cost of steel was artificially maintained at an unreasonable level, we cannot see why all the good steel mills in this country cannot be operated at a fair profit for many years to come.

THE city of Buffalo has just entered upon what the experience of other cities shows to be a costly experiment, in the establishment of an architectural bureau in the Department of Public Works, where plans are to be made for the various buildings required by the city. The Buffalo *News* rejoices greatly at this change, assuring its readers that it will save the city thirty thousand dollars a year in architects' fees, besides enabling the taxpayers to get their buildings much more cheaply than is the case where they are designed by private architects. As a matter of fact, the cost of architectural work done by a "bureau" of this sort usually amounts to as much as the customary fees to private architects for similar

services, and the work is not so well done, to say nothing of the fact that a private architect can be held pecuniarily responsible for neglect, or want of due skill, while a salaried employé incurs no responsibility whatever. In exceptional cases, where an architect of the highest ability and integrity is secured to conduct it, a municipal "architectural bureau" conducts building operations efficiently and economically; but the history of such bureaus generally is a tale of gross extravagance, incompetence and corruption. As to the assertion that a salaried architect can plan and carry out a given building for less money than a private practitioner can, it is obviously improbable that a man dependent for his salary upon the favor of politicians would be able to keep the cost of public work down to the rigid standard of economy which a private architect can insist upon; and the fact that public buildings, particularly municipal buildings, carried out under official auspices, are apt to cost about twice as much as they could be built for by private architects, and, even then, to be badly executed, shows that the plea of economy for putting the execution of public buildings in the hands of politicians is far from being well founded. We certainly hope that the people of Buffalo may find means of getting the most possible for their money, and the selection of a competent and honorable man as official architect is the most important step in the process; and, next to this, he must be left free to carry on his work without interference or coercion from any interests whatever. If this is provided for, and he is efficiently sustained by his superiors in his inevitable struggles with people determined to get hold of some of the public money expended under his care, it is possible that some real advantages may follow from his employment; but, if the politicians are permitted to influence him, the taxpayers will have reason to regret his appointment.

THE organization of employers which was recently formed at a conference in Chicago is to be known as the Citizens' Industrial Association of America, and announces its purpose to "assist by all lawful and practical means the properly constituted authorities of State and nation in maintaining and defending the supremacy of the law, and the rights of the citizen"; as well as to "encourage harmonious relations between employers and employed." We are not sure that combinations of citizens to assist in the enforcement of the laws do much good. All citizens are supposed to be bound to assist in the enforcement of the laws, and the property of all the citizens of any given community is liable for the payment of damage resulting from failure to enforce them in that community; while volunteer associations in aid of them often serve as a pretext for those who wish to violate them to identify the laws with their volunteer supporters, and thus create a party spirit in opposition, both to the laws and to the friends of the laws, by which they find means to profit. Otherwise, the declarations of the new Association may be unreservedly approved. To promote a better understanding between employers and employed is a work of urgent necessity, and such a work can be carried out more efficiently by an organization of this kind than in any other way. We might, perhaps, suggest, as a practical contribution to the cause, that such an association might greatly assist both employers and employed by keeping lists, in as many places as practicable, of qualified journeymen mechanics in various trades, without distinction between union and non-union men. Most of the unions now keep such lists, confined, of course, to their own members, while the non-union men have no such convenience, and lose, in consequence, a great deal of work which they could do quite as well as the union men if they had the means of presenting their names to those desirous of such service. In fact, for a great deal of mechanics' work non-union men would be preferred, as being less bound by rigid rules, and more disposed, in consequence, to consult intelligently the wishes of their employers. We should be the last to advocate discrimination against any faithful and competent man on account of his attachment to a union, and it is probable that, if perfect fairness were shown, the tyrannical and unreasonable portions of many of the union codes would be insensibly abandoned.

THE new license law for architects in New Jersey has already given occasion for several controversies. In one case, an elderly member of the profession, who had long ago retired from active practice, was brought before a court, charged with practising without a license, on account of some trivial professional service which he had rendered, and was only released on promising not to offend further. A few days ago, the two members of the firm of Benner & Son, of Bradley Beach, were summoned into court, to answer to the same charge. What their defense will be remains to be seen, but it is reported that they propose to resist the operation of the law. Probably they will abandon this resolution, on more mature consideration. As we understand such matters, a State is entitled to provide by statute that all its male inhabitants shall have their ears slit and wear curb bits in their mouths, if the chosen authorities, in their wisdom, see fit to pass such a law; but the case is very different where residents of another State are concerned. To them, each State except their own is, legally, a foreign country, and they are entitled there, with certain exceptions, to the immunities of a foreigner. One of the principal items in which the Constitution of the United States overrules any State action is that of freedom of commerce between the States, and it seems not impossible that, under this provision, an architect not resident in New Jersey could successfully resist the law requiring a license, while a resident, being, theoretically, a participant in the legislative action taken by his elected representatives, could not do so.

THE heirs of the late Richard M. Upjohn have conferred a great favor, in a most courteous manner, in sending to the State Librarian of Connecticut the drawings of the State Capitol, at Hartford, executed from his designs. For a long time the State authorities have been endeavoring to find the plans of the building, and have made inquiries of the various mechanics employed, as well as of the heirs of the builder, the late J. G. Batterson; but have been unsuccessful in their search. It is proposed to place statues on the north front, and the sculpture committee was contemplating the measurement of this front, for the purpose of having elevations made as a guide to the sculptors, but this timely gift will obviate the necessity of measurement. The Upjohn heirs request that duplicates of the drawings may be made for them if occasion should require it, but otherwise they are made over absolutely to the State Library, as a gift from the late architect.

THE members of the United States Board of General Appraisers must have attacks of dizziness after their sessions in which they make rulings upon works of art. Three of these rulings were recently made at one sitting. A New Orleans importer brought in some marble vases, presumably decorated with bas-reliefs, and asked admission for them as statuary. The Board, properly enough, held that "statuary," in the tariff law, meant only representations of human or animal forms, and rejected the application. Another importer, however, who brought in some wooden images for a church in Galveston, and claimed free entry for them as "church statuary," was informed that the word "statuary," in this part of the tariff, applied only to articles made of stone, marble, alabaster, or metal, and that the wooden saints and angels were properly classified as "manufactures of wood," dutiable at thirty-five per cent. A third importer thought that the reciprocity treaty with France, which provides for a reduction of duties on products of that country, covered paintings; but his claim was rejected, on the ground that the evidence to sustain the contention that paintings were products of France was insufficient.

THE superstition that Parisian buildings are limited by law to five or six stories, which was rather rudely shaken by the erection of a fourteen-story structure near the Place Vendome, has received another shock through the completion of a building of eleven stories on the Avenue de la Grande Armée, near the Arc de Triomphe. This structure keeps faithfully to the legal limit of twenty metres, or sixty-five feet, from the sidewalk to the top of the cornice, but the Parisian regulations permit a roof above this, containing three stories, and there are two stories below the sidewalk, one of which is entirely above the level of the pavement of the courtyard, while the other is simply a cellar. The important point for us to notice in this construction is that, owing to the profile of the roof it does not obstruct the light half as much as an American building of the same height would.

ROME AS A PLACE OF SCHOOLING FOR A DECORATIVE PAINTER.[1]

WHAT constitutes the most fitting situation for an Academy of Fine-Arts is, that it shall be in the place where the best existing examples for study can be made most acceptable to the student. If you add a background sympathetic to the consideration of the greatest art, you have an ideal environment.

Rome unites these conditions as does no other city. She unites them within her own walls, and again, better than any other town, she fulfils the further and important condition of being central, a pivot upon which a relatively short radius of travel may sweep Athens, Cairo, Constantinople, Paris, London, Madrid, putting at the service of the student the Greek fountain-head of art, the Roman development of Greek methods, the Byzantine evolution, its succession in Oriental and Occidental art, the mediæval and contemporaneous art of France, the collections of Vienna, Munich, Dresden, London, Madrid.

No other world-city is so central to all these capital points as Rome; while Magna Græcia opens away from her very gates, the hills of Etruria may be seen in panorama from the cupola of St. Peter's, and Sicily, distant but sixteen hours' journey, offers the remains of three civilizations, Greek, Arab and Norman. It is through the peculiarity of her historic evolution that Rome became and remains the natural art centre. She alone of all cities has twice held the headship of the western world, under the Cæsars and under the Popes, and thus has twice received the willing service of the arts of antiquity and of the Renaissance.

Her determining fortune was that she should be not a fountain-head, but a reservoir, and thereby the art-cosmopolis of all time. In this cosmopolis, the founders of the American Academy propose to place their pupils to learn the lesson of the city and the circumjacent world which for fifteen hundred years was tributary to that city. They believe that this lesson will in the end be more profitable than even the one taught by the great annual exhibitions of Paris and contemporaneous Europe.

The lesson of Rome and Italy is more useful because it is broader, because it is less tumultuous and more serene, because instead of emphasizing sharply one phase of thought it offers the development of a chain of thought; above all, because it enables the pupil to realize that the present is not the ultimate thing which it has seemed to him; that not the art which dazzles, but the art which shines enduringly, is to be sought; that all achievement lapses into some other achievement which is not yet, nor ever will be final; that the finalities are not the painted walls themselves, but the conviction, earnestness, perseverance, which have gone towards their painting, and which are eternal qualities that shall go on forever evolving a better and a higher order of work. This confrontation of the pupil with the best art of all times, together with his claustration from the ephemeral and from all which has not proved its title to endure, is the prime object of the Academy and lies at the core of our educational problem. Sequestration from the ephemeral has, in the idea of the founders of the American Academy of Rome, been almost as important as access to the best examples of work. The history of art shows us that the sum of each individual artist's achievement is made up, first, of what he gets directly from nature as seen by himself through the medium of his own temperament; secondly, of what he gets from the work of other artists, whether forerunners or contemporaries, that is to say, from nature again, but from nature as seen through the eyes of other men.

A few great geniuses have been relatively little affected by other artists' work; other great geniuses have been powerfully influenced at many stages of their careers — witness Raphael, Rubens, Tintoretto — yet by the overwhelming personal force of their assimilativeness have each remained *sui generis*. But haroly any individuality has been strong enough to be unaffected by the art of others.

When we say that Donatello and Michael Angelo felt outside influences, nothing is left to say further. Therefore if our pupil whom we would wish to see a great artist is sure to be acted upon by the art of others, it is desirable, and all the more desirable in proportion to his intrinsic worth, that at some time during the period of his education he should be removed from the disturbing influence of any art save that shown in the best examples. Here lies the main reason for sending such a man to Rome for a period of at least three years, instead of permitting him to complete his art education in Paris. Here, too, is the reason why the founders of the American Academy in Rome insist that their course is and always must be a post-graduate one. They wish to start with a technically-equipped painter; they do not want a raw pupil; they do not propose to take a beginner to the Vatican, to blindfold a man and lead him thus and at once into a paradise of the greatest art, for fear that, once the bandage taken from his eyes, he could never find his way back alone to the common things of life which good art must take well-considered note of on its way to the higher ground.

The ideal pupil would be he who was already an experienced artist when he entered the gates of the Villa Aurora, but under any circumstances he should have passed through two phases at least. First, he should know the spelling and grammar of art; for the achievement of this, study of living models under good masters and among emulous fellow-pupils suffices, whether the student be in Chicago, Paris or Finland. Next, he should have seen enough of modern art and its tendencies to safeguard him from such conservatism as could harden into archaism and quench the vital spark in his artistic temperament, as should convince him, in fact, that he must bring something with him to Rome there to grow in strength, and that he is not to expect to find his all there. He is not to steal the sacred fire from the altar of antiquity, but is rather to comfort and feed at it that particular spark which is his individual allotment by inheritance after it has passed down the centuries and through generations of temperaments of his own people.

Therefore it is good if he be familiar with the exhibitions of Paris and New York, with their art shops, books and periodicals, their current art ideas ahd changing fancies. He should mix with all this life, but at some time during the earlier and more impressionable part of his career he should be taken from New York or Paris and set down in Rome; and this not because it is Rome instead of Paris, but because it affords a wider horizon to the pupil who is entering his ultimate phase of student life.

In Paris, too, there is a splendid background of effort and achievement, of force and restraint, spontaneity and culture, of mediæval sculpture, of architecture, classic already yet native to the soil, of art of all kinds, but, and here is the relative disqualification, the background in Paris is confused by the foreground. We have said that the horizon in Rome is wider, it is above all clearer; in Paris the clouds that pass across it often pass rapidly and sometimes dissolve under our very eyes. A great personality makes itself felt, perhaps suddenly; it is not sufficiently removed from us that we view it undisturbed and as a fixed luminary; it dazzles but does not warm us, and the hundreds of young men who are swept into its sequence are but the tail of the comet. We who have frequented the Paris exhibitions have seen scores of huge canvases directly inspired by Puvis de Chavannes, every one of them a flat failure, where the imitators thought, for instance, that if for Puvis's nymphs they substituted peasant girls and men raking hay, they had made something realistic and personal to themselves. Again Bastien Lepage, Besnard and dozens of other masters have so appealed to beginners that the latter have wasted years in fruitless imitation. You may say that a man with a really vigorous personality will eventually win clear of the personalities of others; even so, eventually, but why not endeavor to shorten his period of probation, why not let him have his primary-school education in the *atelier d'élèves* of Chicago, or New York, his university education in the studios and exhibitions of New York and Paris, his post-graduate course in Rome?

After he has seen and noted something of the modern struggle, set him upon the vantage point of the Monte Pincio and let the centuries do the sifting for him. In the contemporaneous struggle of Paris, he will have seen A, B, C and D working, all artists; he will have watched them, learned from them useful things indeed and modified his technique, perhaps to his advantage, but he will have been hindered too. A and B will have been brilliantly successful. Crowds will have paused before their work. Our pupil, wishing to be successful also, will have seen his opportunity in theirs and will have tried to imitate them or, worse still, will have imitated them without trying, and yet by his temperament he may have been wholly unsuited to anything along the lines of A and B. C and D's lines were perhaps those suited to his following but he did not realize the fact, for these men were in the shadow still; their turn had not come and his dazzled eyes did not perceive them at all. But take our student away, place him in Rome, as we said before, let the centuries do the sifting for him and he will see that in the long line the turn comes also to C and D, that the same kind of laurel wreath does not fit all heads and that all work which is truly good forges to the front, and remains there irrespective of individual praise or personal affinity. And the uses of personal affinity also will be made known to him in full. No one ever heard of a modern man being hurt by closely studying Raphael or Rembrandt, Rubens or Velasquez, Michael Angelo or Titian. Why? Because, do what we may, we cannot reproduce the conditions under which they worked. In their own time, they did precisely the same harm to hundreds of weaker personalities that comes to-day to the pupil who too closely imitates his master; hundreds of artists were but pale reflections of Titian, Raphael, Correggio, and a whole generation of men grew frigid in the shadow of Michael Angelo's overtopping genius. But the conditions of their epoch have passed; the temperament of the modern artist is necessarily a part of his time, modern; with him it is no longer an affair of the imitation but of the inspiration of bye-gone art. And so in Rome, sheltered from commercial cares, unhurried, with time for thought, and with the succession of the arts spread out before him with all their problems, our pupil will gradually select those to whose solution he is best fitted. His personal vision of nature through his own artistic temperament will be attracted to what is most akin to it in the art of the past; he will supplement his own observation, prove it, clinch it, strengthen it, develop it and even adorn it from the experience of other men, and his personal experiment plus this inherited experience will become culture.

And this above all is what we need at present in American art culture: a standard of taste and men capable of upholding it, not culture buttered on thinly over the utmost possible extent of ground, for we have almost, already, too much of the kind of culture which sets up the Winged Victory of Samothrace in her room windows and furnishes penny prints of the Sistine Madonna for children to cut out with the scissors and paste upon box tops. Such is all very well in its way, but we wish for culture that goes deeper, and teaches us

[1] A paper by Edwin H. Blashfield, read at the Thirty-seventh Annual Convention of the American Institute of Architects.

why the Niké of Samothrace and Our Lady of San Sisto are thus popularized and called to the uttermost ends of the earth. In a few words, what we wish above all else to create and store in the Villa of the Roman school is leaven.

And within but a little distance of its garden gates, there is inspirational leaven abundant for the accumulation of architect, sculptor and painter. To the mural-painter, Rome is indeed *caput mundi* and Italy the land of lands for him as specialist, what lies north of the Alps, or south of Sicily, is relatively little for him, mural painting in its entire development is to be visited within the boundaries of Italy from the panel of the wall painter who worked for Livia Augusta down to John Baptist Tiepolo, painting periwigged goddesses upon church ceilings, at a time when our grandfathers were preparing for the Revolutionary War. It is all within a day's railway ride of the city of Rome and its culmination is within the city itself.

As we said before, Rome was not a fountain-head of art but a reservoir for its accumulation. She gave to the world organization, administration, Roman law, western Christianity; these were her own; they sprang from her, Art she called to her. At first she beckoned with no very gentle hand, bringing the Muses as bound trophies of her wars with conquered Greece. But soon she was captured by her captives; if she stole their columns and statues from the Greeks, on the other hand, she went to school to them, while a little later the imprisoned Muses were unbound and domesticated as Virgil, Horace and Catullus ushered in the Augustan Age. If Rome's eclecticism was tyrannous it was also enlightened and she gradually learned to neglect little that was worth taking. Should the American student of the Villa Aurora go to-day down to the Tiber side to the place where were once the antique wharves for the delivery of marbles, he might find, if he dug deep, fragments of the contribution of nearly every one of the countries which now make up the curriculum of his art travel, since even Britain, if she gave little marble, sent Cornish tin for the helping out of metalwork.

Within the city the student can find the path of his own special art of decoration plain to see and follow for fifteen hundred years, just a broad Roman road along which the spoils of Greek art are carried in triumph and planted as trophies, then lined by Christian basilicas whose pontiffs begin to rival the Cæsars, then narrowing from a road to a mediæval path but still plainly discernible by the light which the Cosmati and the mosaicists shed upon it, then traversed processionally and consecutively by Giotto, Angelico, the painters of the fifteenth century, last by Raphael and Michael Angelo, bringing to the palace of the rulers of Christendom the culminating achievement of modern decorative art.

This cloud of witnesses upon the walls is waiting for our young men to come down the hill to it from the Villa, for from our point-of-view as founders of the American Academy in Rome, it is for our young men that all these things have been done, to them that the centuries have brought all these gifts. Whatever our pupils wish to know about mural painting, they have but to ask; somewhere, within a day's ride at farthest, the answer is waiting for them, somewhere the problem is solved, whether in Rome itself or in some mountain town, or city upon the north-central plains of Italy.

Are they puzzled about scale of figures or ornament, they may go up and down the churches and find that every experiment has been tried and offers its results, from the famous six-foot pen with which St. John writes in the cupola of St. Peter's to the beautifully calculated scaling of Pinturicchio's figures of the Borgia rooms.

Have they a mosaic to compose; they may breakfast in Rome and, before the daylight fails, may study in the dim interiors of Ravenna the most solemn mosaic color in the world; or should they wish to supplement their observation with a greater if more cloying richness or with the glitter of a lighter church, they may leave Rome at midday, next morning in Palermo visit the mosaics of Cappela Reale of the Norman Kings or drive out to Monreale. Should they wish a pulpit, a pavement or a wall pattern, the basilicas of Rome lie all about their Villa, and the Cosmati are awaiting within them. As should they have a Gothic church to decorate in fresco, again they may take their railway ticket in the morning, and in the afternoon, at Assisi may visit what to muralists is perhaps the most interesting eclesiastical building in Europe, the triple church of St. Francis.

There, they will find laid down already in the fourteenth century all the main lines proper to mural painting, and if they drive across the valley to Perugia shining upon the opposite mountain side, a dozen miles away, they may study there the precepts of Giotto, applied to the new forms of the revival by Perugino in the Sala del Cambro. Or, if the question for their consideration be that fascinating and far-reaching one of the application of gold in decoration, they may find their problem resolved in a thousand different ways on both sides of the Apennines. Is it to be profuse and profound in its enrichment and in juxtaposition with strong color, they may find it in the marvellous Borgia rooms of the Vatican. Is it to be rich and gay at once, and brilliant with a basis of white, they may look for it in the Libreria of Siena, again with Pinturicchio as their guide. Do they wish it in great flittering masses in a light church, they have Monreale; will they take it with chocolate color and meerschaum marble, they can visit San Marco or Palermo. Are they looking for it with carved-wood panelling, they have the sacristies. Will they have it delicate, pale, sparingly used, let them study the churches of Lombardy; do they wish just a dash of it and no more, they may find it at the hands of Ghirlandajo in Santa Maria Novella of Florence. Would they gather experience concerning the juxtaposition with polychromatic stone, again they have only to choose; they may, like Lars Porsena's messengers, ride east and west and north and south, they will find examples everywhere of juxtaposition, here with yellow Siena marble, there with the tawny brocatelle of Verona, again with the cold pietra serena of Florence.

The Italians, passionate lovers of the colored marble, have played this game of combination for eighteen hundred years, played it with every procurable natural product of the earth's chemistry from cheapest cipollino to dearest lapis lazuli, and there is no conceivable combination which is not worked out or at least adumbrated. The direct application of paint and gold to precious marble they may study also, in many churches, but, perhaps, best upon the sarcophagi of Verona and in St. Antonio of Padua, while the painted heraldic ornament, which one usually remembers as special to transalpine countries, may be found splendidly exemplified in the town halls of Perugia, Padua and, above all, Pistoja.

To the mural-painter who so often to-day faces the problem of decorating a light-colored interior, where pigment and light gray stone meet, a tour of the churches lying about Milan and the lovely Italian lakes will be illuminating; there he will visit Gaudenzio Ferrari, and in the Royal Palace of Milan in Sant Eustorgio and in Saronno close by the Lake of Como, he will believe that he has found the Italian Puvis de Chavannes in Bernardino Luini, that painter poet of the Lake school of the Italian Renaissance. As he proceeds down the centuries our pupil will note, too, the architectonic progress and changes of mural painting. He will admire the sober and exquisitely elegant Tuscan system, the subordination of ceiling to walls, the clever decoration of vaulting, the flat-painted borders of lozenge and medallion and interlacing scroll. Then passing northward and to the work of later years, he will see how Correggio and his followers cast architectonics to the dogs and broke through cupola and wall panel with their figures floating in a free sky. He will follow, too, the tricks of perspective in ceiling or vaulting decoration from Mantigna and Melozzo in the fifteenth to Tiepolo in the middle eighteenth century and will realize how really tricky such effects are, even in the conviction of those who, like Veronese and Tiepolo, used them most, yet used them least when they desired real beauty and serenity. Again in following the architectonic succession, he will witness the gradual abandonment of vaulting and fresco, the adoption of great flat ceilings with deep convolutions of gilded wooden or plaster framing as oil painting and canvas instead of plastered wall obtained in the Ducal Palace at Venice. In Venice, too, he will follow the last and most brilliant development in the chain of Italian art, the development of color and the beginnings of that manipulation of pigment, which had to pass the Alps and wait another century for its ultimate expression at the hands of Rubens, Rembrandt and Velasquez. The student will give his longest Italian visit outside of Rome to Venice, for she can offer him the most after the capital. In Rome he may see all Florence and Umbria upon the walls of the Sistine Chapel and the stanze of the Vatican, but to know Veronese, Tintoretto and Tiepolo at their best he must visit them in the city of the lagoons or the villas which line the Brenta and dot the Friulian March. With these three great Venetian masters and with Titian, the student will have the complement to Michael Angelo, Raphael and Correggio, and will have surveyed the cycle of Italian decorative painting.

We have walked him about Italy in accordance with the travelling rules of the School of Rome, but within that city's limits he can find first-rate examples of most of the great painters, not only of the Italian masters but even of Vandyck and Velasquez.

Best of all, the city, like most Italian towns, is itself a great decorative *ensemble:* nowhere else will he find such an unending extent of vast gardens, with cypress and stone-pine and ilex, where all the dryads and nymphs, from the antique marble women of the Vatican and Capitol down to the people of Puvis de Chavannes, might find shelter; nowhere else so many decorative fountains with such a glory of running water; nowhere such broad and massy effects of shadow as come from the piled up palaces lining some of the steep streets of the seven hills.

Surely, there could be no better forcing ground for the growth of wings upon the attendant muse, no better place for making a poet, if the germ exists, and if it does not exist, if many of the students turn out to be Academic products, why! they, too, are needed. Perhaps, indeed, they are needed as much as poets in our individualistic America, where we have little time for investigation not directly remunerative, not too much respect for tradition, and are apt to misconceive that if we would have culture we may hustle for it as for a commodity.

Belief in culture, respect for culture, knowledge that, in its most beneficent form, it can be acquired but slowly and earnestly, these we need for the forming of such artists as shall leaven the lump of beginners. Great geniuses stand by themselves; they will prove themselves anywhere, but great geniuses are exceptional, and it is not for them so much as for the school that we should plan, digging deep, building broad, rearing high, that it may be born to the inheritance of a more thorough education, a completer equipment than could fall to our share.

In Italy have been evolved in the last four centuries nearly all of the different decorative systems from which in its turn the practice of Modern Europe derives. Upon these will be based and from these evolved in a considerable degree such practice as is most

fitted to American needs and American temperaments. Already the School of Rome has shown its first fruits in its annual exhibitions. Before long there will be seen upon the walls of one of our buildings, a decorative work exemplifying both the purpose and the achievement of the American Academy in Rome, showing how much wise study of a great past can do for the intelligent preparation of a great future.

REPORT ON FIRE AND HEAT RESISTANCE OF THE LUXFER PRISM COMPANY'S ELECTRO-GLAZED PRISM AND PLATE-GLASS.[1]

THIS test was made at the request of the American Luxfer Prism Company, without waiting the construction of the kiln which we propose to put up as a permanent testing-place for windows, window-frames, doors, incombustible inside finish, and other fire-resistant parts of buildings. The present kiln, standing only six days before the test, had not been given time enough to fully set the mortar; therefore the incident of the driving out of bricks under the window-frame may not be taken as conclusive. The heat was of necessity raised by burning wood, with which it is very difficult to get as high a temperature as is desirable, and in burning wood it is impossible to maintain a uniform high temperature throughout the structure. It will be observed that at one point a blast of heat must have struck a window-pane at above the temperature recorded, as one pane of the glass began to melt.

It may also be observed that the static pressure of water was not as high as would be required for a complete test, nor were there any possible arrangements by which the pressure at this point could be positively determined.

The records given of this test were taken by Professor Norton and his assistant, while Mr. H. O. Lacount also took observations and records for purposes of comparison and verification; Mr. Dana also attending on behalf of the Boston Underwriters' Union.

Some slight errors which were found in the first report have been corrected; the present edition being as exact a record of the facts of the case as the conditions permitted.

The conclusions from this single and partially complete test sustain our confidence in the effective heat-resistance of wired-glass in factory use where it has already withstood many dangerous fires in places in which it would otherwise have been necessary or expedient for the underwriters to advise the bricking up of window spaces.

This test also gives full confidence in the electro-glazed prism-glass or plate-glass for use in other risks where decorative effects or conditions stand in the way of the use of the wired-glass. It may serve an excellent purpose in windows through which it is desirable to convey light but which may be exposed to danger of fire in buildings near by. It may be used for enclosing elevator-shafts in large department-stores or office-buildings in which full light is wanted, and in this connection it may be suitable to make some further suggestions.

May not elevator-shafts and elevators be converted into very important factors in ventilating high buildings? Whenever a fire occurs on any floor, the elevator-shaft, however carefully protected, draws smoke into it, and under many conditions draws heat, sparks and flame. Our customary advice is to put a skylight of very thin glass over the shaft, with wire underneath to catch the broken glass when the heat cracks it and thus make a vent for the heat and smoke. But this same smoke and heat stand in the way of the use of the elevator at the most important time when it might serve as a fire-escape. I therefore present the following crude ideas: —

First. Put up adjacent to the elevator-shaft a large flue or additional shaft of sufficient area to serve as a vent for smoke, heat and sparks, opening outside the roof. This flue should have openings near the ceiling at every floor, including the basement. These openings into a flue subject to a strong draught, even if unprotected by automatic appliances, would be certain to draw smoke, heat and sparks away from the elevator-shaft itself, which, when not enclosed and kept closed by automatic doors, is one of the most dangerous appliances for the spread of fire from floor to floor. It is probable that if the openings near the ceiling at each floor into the special shaft for carrying off smoke, heat and sparks, were not arranged to open and close automatically, the very strong draught of so long a shaft would carry the heat and smoke by the openings into other rooms, especially if they were guarded below by a deflector extending a little way into the shaft. But such openings could be kept closed by automatic devices that would yield under the pressure of heat generated in the room in which the fire might originate, giving vent into the shaft from that room while those above or below would remain closed, the pressure of the heat passing up the shaft tending to keep them so. There might also be openings from the elevator-shaft, fitted with automatic apparatus so adjusted that on the upward passage of the elevator there would be a vent both from each floor and from the elevator-shaft, carrying off heat and smoke. When the elevator itself had passed, the valve would close the opening into the shaft, leaving the vent from each floor to draw smoke and heat from that floor. This might suffice as a prevention of danger from fire; but yet more may be done.

Second. May not the following crude idea for ventilating a building, removing foul air and supplying fresh air all the time, be developed?

May not a flue or duct be placed on the other side of the elevator-shaft, with openings and valves at or near the ceiling on each floor, to draw fresh air from above the roof for distribution upon each floor? In the upper story might be placed a large coil of steam-heating pipe to warm the fresh air in cold weather, the opening to this shaft to be carried upon the roof to a point at a suitable distance away from the foul air or smoke vent. It might be possible that the upward passage of the elevator, serving as a piston, would draw the warmed air downward for distribution through the different rooms, but that may be doubtful. If that did not serve, might not fans be placed, worked by the same mechanism by which the elevator is operated, drawing up the foul air through the exhaust-shaft and drawing down or forcing down the warm fresh air so as to carry it to every part of the building, especially the basement, cellars and lower stories? These shafts might either be made of metal or they could be made as sections of the elevator-shaft, one on each side, all fitted with electro-glazed plate-glass.

These are very crude suggestions, which I publish now in order to cut off any bottom patent that might be applied for, for converting the elevator and shaft combination into a system for the ventilation of the building. There may, of course, be many methods by which this work can be done, and perhaps this crude suggestion will put inventors at work to devise the best method for joining together the lifting and lowering of passengers and freight, with the lifting or forcing out of foul air and bringing down from above the roof pure air, warmed in winter, for distribution from the basement to the upper story.

Professor Norton's report has been carefully revised by Messrs. Lacount and Dana and by the Luxfer Prism Company. Slight discrepancies of no material importance have been rectified and the result justified. Respectfully submitted,

EDWARD ATKINSON, *Director.*

REPORT OF PROF. CHARLES L. NORTON.

Sir, — I have completed the tests of the electro-glazed prisms and plate-glass of the American Luxfer Prism Company, and herewith submit report of tests: —

The purpose of the test was to demonstrate the relative effectiveness, as a fire-resisting window-glass, of Luxfer prisms and plates, as compared with ordinary wire-glass of an approved make.

The specimens tested were (first test) one plate of electro glazed Luxfer prisms, 50″ x 50″, .35 inch thick. Three lights of wired-glass, 24″ x 30″, $\frac{1}{4}$ inch thick, and one plate of electro-glazed Luxfer prisms, 24″ x 30″, .35 inch thick; and (second test) one plate of electro-glazed plate-glass 50″ x 50″; three sheets of wired-glass 24″ x 30″ x $\frac{1}{4}$″; and one plate of electro-glazed plate 24″ x 30″ x $\frac{1}{4}$″. All Luxfer prisms and plates were 4″ squares.

It will be noticed that the first test was to demonstrate the relative effectiveness of the electro-glazed prisms in 50″ x 50″ and 24″ x 30″ sizes as compared with the approved sheet of wired-glass of 24″ x 30″. The second test was to compare the electro-glazed plate in 50″ x 50″ and 24″ x 30″ sizes with the 24″ x 30″ wired-glass.

The kilns of the Experiment Station not yet having been built, we were obliged to construct a special kiln. A square brick hut was built 8′ x 8′ inside, and 10 feet high, and it was provided with a roof of T-irons and corrugated sheet-iron.

A grate of 3″ x $\frac{1}{2}$″ iron bars on 3 inch centres rested on dwarf walls 18 inches from the ground, and draught holes 24″ x 18″ were left on all four sides below the grate. Holes 12 inches in diameter, cut at the corners of the sheet iron roof, were surmounted by lengths of tile pipe, making chimneys 3 feet high.

On the four sides of the hut, there were left four openings in the brickwork, one for a door, and three for the windows, which were to be tested.

The door was not installed for a test of its efficiency, but as it stood well, a description may be of interest. It was a "Victor" standard, tin-clad, wooden fire-door of approved pattern, 2$\frac{1}{2}$ inches thick. It was composed of three layers of pine boards, at right angles, with the tin nailed and locked in the usual manner. Its size was 3′ x 7′, and no especial care was taken in hanging it, or fitting it up. It closed against the wall without a rabbet.

The openings in the brickwork to receive the window-frames were as follows: —

West side, 54″ x 54″; north side, 52$\frac{1}{2}$″ x 34″; and east side, 52$\frac{1}{2}$″ x 34″. The frames were of an approved pattern for stationary sash. The metal was galvanized steel No. 24. The 50″ x 50″ lights were fastened to the upper rail of the sash by three $\frac{3}{16}$-inch bolts properly riveted.

The sheets of glass being in place in their sash and frames, a pile of kindling and cord wood, liberally saturated with kerosene, was built upon the grate and lighted. With several replenishings, the fire was maintained for one hour. Readings were taken of the temperature of the fire continuously, through holes in the brickwork at the edges of the frames, and at varying heights. The instrument used was a standard thermo-electric pyrometer from the Laboratory of Heat Measurements of the Massachusetts Institute of Technology. It was calibrated both before and after the test.

At the end of one hour the door was opened, and the inside of the hut was sprayed with water for thirty seconds, then a full stream at about twenty-eight pounds pressure on a 1$\frac{1}{2}$-inch nozzle was thrown

[1] A Report recently issued by the Insurance Engineering Experiment Station, Boston, Mass.

in for several minutes, until the hut was cool enough to enter. The procedure in the two tests was the same in all respects.

FIRST TEST. — PRISM AND WIRED GLASS.

1.29. Fire lighted.
1.29½. Wired-glass cracked in many places.
1.30½. Luxfer prism 50″ x 50″ cracked.
1.31. Luxfer prism 24″ x 30″ cracked.
1.37. Door smoked.
1.39. Luxfer 50″ x 50″ curved in toward the fire about ½ inch.
1.39. Wired-glass bulged in or distorted in some way about ¼ to ½ inch. All the glass is very much cracked.
1.40. Curvature of all the glass increasing. Luxfer 50″ x 50″ about 1 inch out of line in the middle.
1.45. Door smoking badly, leaking sap and steam, but cold to the hand on outside.
1.49. The cracking of the glass has practically stopped. Curvature of Luxfer 50″ x 50″ sheet increasing.
1.57. Recharged with cord-wood sticks.
2.00. Flames through cracks on edge of door.
2.03. No change except gradual closing up the cracks in all the panes. Glass near its melting-point.
2.04. Recharged with cord-wood.
2.12. Prisms in 50″ x 50″ plate are sagging a little, showing curved line. No openings yet. Plate curved in 1⅜ inch at centre.
2.26. One prism tile has softened and sagged down so as to leave small openings between it and upper bar above it.
2.27. One more prism tile has softened and opened at a crack.
2.29. Water thrown on the wood and windows, spray for thirty seconds. Solid stream major portion of five minutes on windows and walls.
2.35. Part of brick wall washed out under window on north side. Frame and glass intact.

FIRST TEST. — OBSERVATIONS AFTER THE FIRE.

The plates were all in position without serious injury at the close of the test. The 50″ x 50″ Luxfer prism plate had curved in toward the fire until its centre was 2½ inches out of a vertical line from the top to the bottom. There were three holes in the sheets, caused by the glass actually melting. The total area of the holes was not more than 2 square inches.

The frame was rigid and the prism tiles firmly in place, so that, although completely covered with fire-cracks, none of the glass fell out, even when the plate was removed from the frame, laid on the ground, and jumped on by the ever-present small boy. There was no sensible distortion of the sheet, other than concavity of the whole, and there was no sagging away from the frame at top or sides. The other prism plate, 24″ x 30″, on the east side was curved in less than ½ inch, and though much crackled, it was firm, strong and in good condition. The copper had not been melted at any point on either plate.

The wired-glass windows were warped about ½ inch at the centre. They were much cracked, and the inner edges of the cracks were rounded as if the glass were very near its melting-point.

The window-frames were much warped and twisted on the inside, as they were not let into the brickwork, because of lack of time, but outside they were in good condition and fit to use for the second test. It should be noticed that the window in the north side of two lights, 24″ x 30″, of wired-glass, was opposite the door, and received the full effect of the stream of water, and that it was uninjured by the stream although the brick wall under it was knocked out, leaving a hole about 6″ x 12″ clear through the wall. The most rigorous impact of the water failed to break through the glass in any of the windows.

After examination, the prism plates and one of the wired-glass plates were taken out. A new sheet of wired-glass 24″ x 30″ was put in place of the one taken from the east side, and Luxfer electro-glazed plates, 50″ x 50″ and 24″ x 30″, were substituted in the east and west side for the prisms.

The window of wired-glass on the north side was allowed to remain, so that the action of a second fire might be noted. The hole in the wall was bricked up, and a new fire was prepared and lighted as before. The progress of the fire is noted below.

SECOND TEST. — LUXFER PLATE AND WIRED-GLASS.

3.18. Fire lighted.
3.19, 10. Wired-glass cracked across.
3.19, 30. Wired-glass all much cracked.
3.20. House full of fire; Luxfer plate beginning to crack.
3.22. Luxfer plate cracking more. Keeps shape well. Fire seems in centre of house, not well against the 50″ x 50″ plate.
3.30. Refired and stirred up. Good fire in whole house.
3.32. East side with its 24″ x 30″ wired-glass and plate is very hot.
3.34. The 50″ x 50″ plate is warped ⅞ of an inch.
3.40. Refired.
3.50. The 50″ x 50″ plate warped 1½ inches.
4.08. Refired, house well filled with flames. A large stick of cord-wood thrown against Luxfer window and knocked hole through one plate. No other harm to plate. Hole about 2″ x 2½″.
4.19. Water turned into house. Spray one-half minute, then full stream on Luxfer 50″ x 50″ plate. No effect except to "frost" the glass with fine crackles. Water kept on for thirty-six minutes to extinguish and cool.

OBSERVATIONS AFTER THE SECOND FIRE.

The door had smoked a little during the second fire, and could be seen to be burning on the inside. The tin was loosened and it had been noticed that in places the door was charred half way through, at the end of the first fire. It was very little the worse for the second fire, the charring being only slightly deeper.

The Luxfer 50″ x 50″ plate window was cracked, was warped 1½ inches, and had a small piece knocked out of it by a careless helper, but it was sound, strong and in good condition to resist fire further. The 24″ x 30″ Luxfer plate was sound and strong, and warped about ½ inch; a corner was broken from one 4-inch plate when the solid stream struck it, and knocked the plate badly out of position. The stop on the frame could not be properly fastened for the second setting, and the break of the corner was a mechanical rather than a thermal effect. The same breakage of the corner, and opening of a small hole, occurred with the wired-glass sheet at the same time. The wired-glass 24″ x 30″ plates which had withstood both tests were in good condition, except for a multitude of fine cracks. These cracks did not destroy its value for resistance to fire, however.

The frames were badly warped on the inside as before, and they were somewhat loosened in the setting.

TEMPERATURES.

First Fire.		Second Fire.	
Time.	Temperature F.	Time.	Temperature F.
1.32	1600	3.24	1000
1.38	1375	3.27	1325
1.41	1330	3.30	1300
1.45	1620	3.33	1570
1.48	1350	3.36	1670
1.52	1300	3.39	1775
1.56	1180	3.42	1510
1.58	1760	3.45	1450
2.01	1670	3.49	1500
2.05	1550	3.52	1750
2.08	1775	3.55	1400
2.09	1800	3.58	1575
2.12	1400	3.60	1730
2.15	1620	4.02	1600
2.19	1775	4.06	1420
2.20	1650	4.09	1830
2.21	1575	4.12	1700
		4.16	1700
		4.20	1600

SUMMARY.

The two tests resulted in demonstrating the ability of all the samples tested to remain in position and effective operation, up to the time when the temperature of the melting glass was reached.

The Luxfer plates and prisms in 24″ x 30″ stood the test quite as well as the 24″ x 30″ wired-glass, and they were stronger at the close.

The Luxfer plates 50″ x 50″ were down nearer the fire, and the glass was undoubtedly hotter than the wired-glass. But the wired-glass was just at the melting-point, as shown by the rounded edges of the cracks and the distortion of the plate.

The results of the tests indicate that, as shown by these samples, the three materials, wired-glass, electro-glazed prisms and electro-glazed plates, when used in sheets 24″ x 30″, are of practically the same effectiveness in resisting the action of fire. The condition of the 50″ x 50″ plates, during and after the test, shows them to be as effective as the 24″ x 30″ wired-glass sheets, provided the melting-point of the glass is not exceeded; and it is certain that, at this temperature, all of the samples tested would completely fail.

Many of the details of the test and report have been greatly hurried in order that the report might be ready at the earliest possible moment, at the earnest solicitation of the Luxfer Company. A more complete report will be made later.

Respectfully submitted, CHARLES L. NORTON.

SOME PAINT-TESTS.[1]

ON December 14, 1899, the writer presented a paper to the Association entitled "Painting Railroad Bridges" ("*Transactions*," Volume XI, page 5). In that paper the results of some tests of different kinds of paints were given, the test being described as follows: "Discs of No. 22 sheet-iron 6 inches in diameter were placed upon a concave wooden block and hammered with a round-faced hammer until each became a saucer about ½ inch deep. The inner surface of each saucer was divided by radial lines into three equal sectors. After being thoroughly cleaned, each saucer was painted all over one coat. When this coat was thoroughly dry, two of the radial divisions, or sectors, were given a second coat. Again, when dry, one of the radial divisions, which had already received two coats, was given a third coat. In this manner one-third of each saucer received one coat, two coats, and three coats, respectively. Each saucer had about a tablespoonful of locomotive sparks placed in it and water poured over them until about three-quarters full. As the water evaporated, which often occurred three times in one day, the saucers were refilled."

[1] A paper by Hunter McDonald, Member of the Association, read before the Engineering Association of the South and printed in the *Proceedings* of that Society.

Since the paper mentioned above was presented, these experiments have been continued, and the results of the tests up to date will be presented in this paper. All of the saucers tested are not presented, some of the coatings proving so worthless as not to merit mention. Many of the saucers tested were painted by the manufacturers themselves, and they also made a parallel test at their own works. These tests generally confirm the results of those made by the writer.

There are many different conditions to which structural metal is exposed, calling, perhaps, for differently-prepared paints for each condition. The writer, having confined his attention almost entirely to railroad bridges, will mention only those with which he has had experience. They are as follows: —

"A." Metal exposed in tunnels or on the underside of overhead bridges, where the steam and gases from locomotives are confined for some time, and where often the cinders from the smokestack act as a hot sand-blast to destroy the paint.

"B." Metal exposed to ordinary sunlight, cold and rain, with more or less smoky atmosphere, depending upon the surroundings.

"C." Metal exposed not only to the destroying agencies mentioned under "B," but also to the action of water penetrating through locomotive sparks and dirt which have lodged on the horizontal surfaces of the metal, in confined places, or stuck in the wet paint.

The test described above is intended to meet only the conditions described under "C," but it is fairly reasonable to suppose that a paint giving satisfactory results under this test stands a good chance of meeting the conditions described under "B." No paint applied with the brush can successfully meet the conditions described under "C."

Permission of the manufacturers to publish the result of these tests has not been asked. As a general thing, they furnish the samples with full knowledge of the test to be applied. Unless painted by the manufacturers, the saucers were in nearly every case painted by our master-painter. Each coat was allowed to dry before the next coat was added. All saucers are of steel, unless otherwise noted.

1. Campbell & Thayer's linseed-oil. Red lead, tested pure. Three coats applied, as described in test, immediately after mixing. Exposed twenty-seven months. When the saucer was examined — December 26, 1902 — its surface was smooth and free from rust, except around the edge. It now shows a number of small bright-red blisters near the bottom, with a circle of smooth paint about 1 inch wide almost entirely around the saucer. The single coat only shows rust-spots within this zone. Upon examination of these blisters, it will be found that opposite each one is a small hole through the metal, where the rust has come through from the bottom side. Opposite the perfect zone on the top side, the zone on the bottom side is in some places free from rust, and in no place rusted through. The blisters shown on the face of the saucer are, in the opinion of the writer, due to rust coming through from the bottom side, and not through failure of the paint on top.

2. Permanent Carrara, tested at request of local dealer. Three coats applied, as usual. Exposed eleven months. The single coat is pitted with rust; the second coat is pitted, but not so badly as the first coat; the third coat is pitted, but not so badly as the second coat. The back of the saucer is slightly rusted in spots.

3. Painted in the usual manner with Dixon Crucible Graphite Paste, mixed 6½ pounds per gallon with Standard Oil Company's linseed-oil. Exposed twenty-two months. First coat rusted. Painted one coat of red lead freshly mixed. Put out on October 5, 1901; taken in during August, 1903. Exposure of red lead, fourteen months. Where the first coat of graphite had rusted the rust had come through the coat of lead. The second and third coats over the unrusted graphite paint are almost perfect. The object of this test was to show whether red lead applied over graphite paint would be effective.

4. Graphite Elastic Paint. Half of saucer painted one coat; other half, two coats. Exposed eleven months. Single coat, completely rusted; two coats, considerably rusted.

5. Graphite Elastic Paint. Painted and tested by manufacturers. Exposed eleven months. Single coat, considerably rusted; two coats, rusted in spots.

6. Two coats of freshly-mixed red lead painted over rust. Exposed ten months. The paint does not present a glossy appearance, but no rust is visible. The original blisters over which the red lead was applied are still in evidence, and it is impossible to say whether they have increased or not.

7. Kellogg & Miller's linseed-oil. Tested pure red lead applied fresh. Exposed nineteen months. Single coat shows rust blisters; second and third coats, smooth and glossy.

8. Standard Oil Company's linseed-oil, tested pure. Red lead mixed and applied fresh. Exposed nineteen months. No rust spots visible; surface glossy.

9. A paint prepared by a Mr. Krass, Murfreesboro, Tenn., and tested at the request of Mr. H. T. Sinnott, of Nashville, Tenn. One coat applied. Exposed nine months. Shows a number of rust spots.

10. Painted in the usual manner by the Dixon Crucible Company. At the end of three months all three coats were badly rusted. Painted one coat fresh red lead and exposed nineteen months longer. It is impossible to tell whether the rust has increased under the coat of red lead. Blisters appear over the entire surface.

11. Saucer made of bright tin. Painted two coats of Carrara. First coat ran badly. No rust apparent. Bright tin visible in small spots over saucer.

12. Saucer of galvanized iron. Painted with red lead in the usual way. Exposed eleven months. The paint has flaked up in two or three places; otherwise perfect.

13. Painted three coats of red lead in the usual manner, except that one-half ounce of lampblack was added to each gallon of oil. Exposed eleven months. All the coats are badly rusted, except near the bottom of the saucer, where the paint appears to have run together and caked. The object of this test was to show the effect of mixing lampblack with red lead.

14. Same as No. 13, except that one ounce of lampblack was added for each gallon of oil. Rust blisters appear all over the saucer.

15. Saucer made of bright tin. Painted with red lead in the usual way. Exposed eleven months. Coating, perfect.

16. Saucer made of bright tin. Painted three coats of Lowe Brothers Company's Red Lead Metal Preservative. Exposed eleven months. Surface, perfect.

17. Lowe Brothers Company's Black Metal Coating. Painted one coat, two coats and three coats in the usual manner. Exposed fifteen months. First coat, badly rusted; second coat shows some rust blisters; third coat shows a few rust blisters.

18. Lowe Brothers Company's Black Metal Coating. Painted one coat, two coats and three coats over Lowe Brothers Company's Red Lead Metal Preservative. Exposed fifteen months. Surface, perfect.

19. Lowe Brothers Company's Red Lead Metal Preservative. Painted in the usual manner. Exposed fifteen months. Surface, perfect.

20. Lowe Brothers Company's Black Metal Coating. Painted over galvanized-iron two coats. Exposed eleven months. Surface, perfect.

21. Saucer made of bright tin. Lowe Brothers Company's Black Metal Coating, two coats. Exposed eleven months. Surface, perfect.

22. Saucer made of galvanized-iron. Carrara paint, two coats. Exposed eleven months. Surface, perfect.

23. Saucer made of galvanized-iron. Painted two coats of Lowe Brothers Company's Red Lead Metal Preservative. Surface, perfect, except paint flaked up in large places near the edge.

24. National Paint Works' Prepared Ready-mixed Red Lead. Painted one coat, two coats and three coats in the usual manner. Exposed seven months. A few rust blisters visible at one point; remainder, perfect.

25. National Paint Works' No. 16 Special. Painted one coat, two coats and three coats in the usual manner. Exposed six months. First coat, slightly rusted; remainder, perfect.

26. Flexible Compound, applied by the Flexible Compound Company, of Philadelphia, Pa. Exposed five months. Rusted all over.

27. Metalastic. Saucer painted by manufacturers. One coat, two coats and three coats in the usual manner. Exposed five months. First coat, rusted; remainder, perfect.

28. Carbonizing Coating. Painted by Goheen Manufacturing Company, of Canton, O. One coat, two coats and three coats in the usual manner. Exposed three months. First coat, badly rusted; remainder, perfect.

29. Krass Paint. Two coats. Exposed two months. Shows some rust.

30. Jones' Protective Coating. Painted by manufacturers. Exposed eleven months. All coats rusted — first coat, very badly; second and third coats, not so badly.

ILLUSTRATIONS

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

ACCEPTED PLAN FOR IMPROVEMENTS AT THE U. S. MILITARY ACADEMY, WEST POINT, N. Y. MESSRS. CRAM, GOODHUE & FERGUSON, ARCHITECTS, BOSTON, MASS.

COMPETITIVE PLAN FOR IMPROVEMENTS AT THE U. S. MILITARY ACADEMY, WEST POINT, N. Y. MESSRS. PEABODY & STEARNS, ARCHITECTS, BOSTON, MASS.

FOR further illustrations of this design, see the *American Architect* for September 5 and September 19.

ACCEPTED DESIGN FOR CHAPEL: U. S. MILITARY ACADEMY, WEST POINT, N. Y. MESSRS. CRAM, GOODHUE & FERGUSON, ARCHITECTS, BOSTON, MASS.

Additional Illustrations in the International Edition.

THE MAIN FACADE: RHODE ISLAND STATE CAPITOL, PROVIDENCE, R. I. MESSRS. MCKIM, MEADE & WHITE, ARCHITECTS, NEW YORK, N. Y.

THE KAISERBRUNNEN, HAMBURG, GERMANY.

WELL IN THE PIAZZA CAVOUR, SAN GEMIGNANO, ITALY.

A COMPETITIVE DESIGN FOR THE CARNEGIE LIBRARY, WACO, TEXAS. GLENN ALLEN, ARCHITECT.

A COMPETITIVE DESIGN FOR THE CARNEGIE LIBRARY, TEMPLE, TEXAS. GLENN ALLEN, ARCHITECT.

NOTES & CLIPPINGS

Restoration of St. Mark's Tower halting. — The party intrigues which have been vigorously carried on ever since the Campanile fell by the supporters of those who then were turned out of office have once more succeeded. First Commendatore Boni, discouraged by the difficulties thrown in his path, retired to carry on his more congenial work among the excavations of the Forum; and now Commendatore Beltrami has followed his example. Against Signor Boni's advice the authorities left the great base of the tower standing instead of unbuilding it all down to the level of the pile-heads, and they insisted that Signor Beltrami should build the new Campanile upon this old base. As every stone and block of this base is rounded and slippery and damaged with age, there is absolutely nothing for the new building to hold grip of, and it would be impossible to bind them together. It would only keep in place by its own weight, and having nothing to rivet it down to the foundations, it would topple over at the first shake of earthquake. Besides this, the very consistence of the old plaster is such as to prevent the new part from uniting with it. Plaster in early Venetian times was simply a mixture of lime and sand, and the continual oozing up into the foundations of water, with the rise and fall of the tides, has in the course of so many centuries washed all away — both lime and sand — and the stones only stood in place because there was nowhere for them to go to, as all was held in place by the surrounding mud and earth. It is true that no defect in the foundations caused the fall, but to build up a new tower on them as they are would be a very serious mistake; and it was this that Signor Beltrami, when he came to full knowledge of the condition of things below ground, refused to do, and which caused him first to go to the country "for his health," and now finally to resign altogether. The intriguing party has cleared the ground, but it is remarkable that no one appears ready to undertake the work, now that the condition of things is visible to all. We were down in the great trench round the base this morning, and from the excavation dug into its mass was issuing a flowing stream of water. All work has been stopped, and everything in the matter is, as an official said today, "confusion worse confounded." Meantime, in digging round the spot many things of interest have come to light. All along the side of the trench toward Sansovino's Library a thick wall of foundation stones has been laid bare, which, from their position and from historical records, turn out to be those of an *ospizio*, or hospital, built by the saintly old Doge Orseolo, about 976. The level of these foundations is considerably higher than those of the Campanile, showing that these were of a much earlier date, and that in Doge Orseolo's time the soil had already risen. This also goes to prove the truth of the idea that the Campanile had existed as a watch-tower long before it was used as the bell-tower of St. Mark's. One of the Doge Orseolo's stones now rests in our hall. Another interesting discovery, at the northwest corner of the excavation, at a still greater depth, were stakes and wattlework which had once lined a canal bank in the time of the first lagoon inhabitants, before the invasion of the Huns sent the dwellers on the mainland to seek safety among these watery wastes. Their wattlework was the original from which so many beautiful designs were taken for decorations of vases and for carving in marble in the eighth and ninth centuries, and which, indeed, are found, I believe, in all parts of the globe. This wattlework, together with other interesting objects found, is being carefully preserved in the Ducal Palace. — *London Globe.*

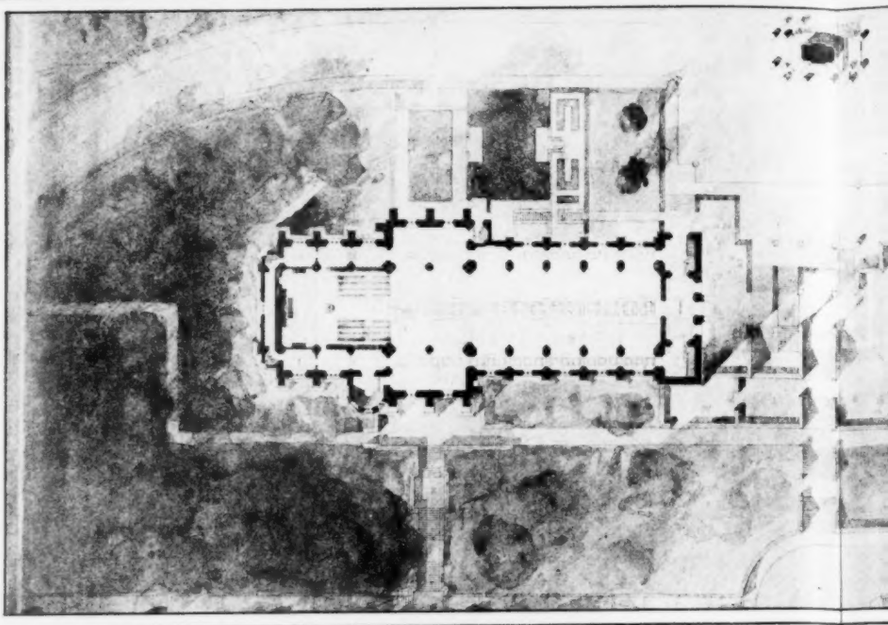
Moving a Water-main. — In a recent issue of *Engineering News* Seth M. Van Loan describes a remarkable piece of work recently performed in Philadelphia. It was necessary to alter the position of a section of water-main 4 feet in diameter and about 1,200 feet long. Had it been permissible to shut off the water for a few days or weeks the task would have been simple. But it was necessary to keep the pressure on all the time. The position was to be altered in two directions — sideways about 11½ feet, and downward a trifle over 13 feet. This change was effected in about 800 feet of the main. At each end 200 feet of it started from the new side to the old one, in order to maintain connections with undisturbed pipes. Mr. Van Loan supplies these particulars of the operation: To place the pipe in its new position the actual laying length was found to be 14 inches longer than in its original location, which indicated the necessity of drawing the joints to that extent. It might appear that 14 inches distributed over 100 joints would offer no difficulties, providing each joint would perform its respective duty, but the additional length was, in a measure, required at one end, limited, as is mentioned above, to a distance of 200 feet. This required increase in the length of the pipe, taken with the decided opening of the joints required to break down on the established grade, demanded that the utmost care be exercised during the progress of moving. The method of procedure was to prepare the trench for the final location of main, uncovering the pipe in question at the same operation. Excavation beneath the pipe followed, earth being removed to a level about 2 feet below the barrel, leaving that section of earth which supported the blocking. Having prepared about 200 feet in this manner, the work of lowering was started and conducted uniformly by digging under the blocking. The greatest depression was the last to be placed in position, thus allowing any gain in pipe to work up to where it was most needed. When a grade slightly above the final elevation was reached, skids were inserted beneath each length, upon which greased iron straps were placed for a sliding surface, and the work of moving laterally was started. Screw-jacks were used for this purpose, one for each pipe, placed about 18 inches from the bell end. The main was then worked over, following the same plan as in lowering. To guard against excessive pull in any joint, marks were placed on top and on each side of every pipe, close to the bell of its neighbor. Small gauges were used continually at these marks, and should a joint pull more than the adjacent ones care was taken to relieve it by a manipulation of the screws. During the forcing of the main along the skids counter-braces were in position on the opposite side of the pipe, and, as it was necessary, sections were sawed from the bracing to allow for the movement of the main. These braces were found to be of decided value, keeping the sections handled from buckling. During the lateral moving the pipe revolved on its horizontal axis to a decided extent, in some cases as much as 100 degrees, due undoubtedly to forcing the pipes along the inclined skids. The lead in many joints was forced out ¼ inch, and in one case as much as 1 inch. These joints were not disturbed, unless water spurted, at which time light caulking with a chisel stopped the leak. Several men were kept busy looking after these places, and in some cases extra lead was hammered in the joints. Too much pounding of the joints was not allowed, it taking the life out of the lead. The entire operation of moving the pipe required a month.

Electricity and Shade-trees. — A bulletin has been issued by the Hatch Experiment Station of the Massachusetts Agricultural College on the injury to shade-trees from electricity. The pamphlet discusses the subject from various aspects, and illustrates damage due to current from railway and lighting circuits. Data are also given as to the resistance of trees. The results are thus summarized: The adverse conditions with which shade-trees have to contend in cities and towns constitute a serious drawback to their development. A considerable amount of damage occurs to shade-trees by wires, causing abrasions, destruction of limbs and leaders, burnings, and necessitating much injudicious pruning. The greatest amount of damage caused to trees by alternating and direct currents is by local burnings. The higher the e. m. f., the more injury is likely to occur to trees. There is practically little or no leakage from wires during dry weather. In wet weather, however, when a film of water is formed on the bark, more or less leakage is likely to occur, and if the insulation is insufficient and contact with the tree exists, grounding takes place, and burning, due to arcing, results. No authentic cases have been observed where the alternating current, employed for lighting service, has killed trees, though there are authentic cases, extremely rare, where the direct current, used in operating street railroads, has killed large shade-trees. This has been accomplished by reversing the polarity, causing the positive current to traverse the rail and the return current the feed wire, which usually carries the positive. The high resistance offered by trees and plants in general serves as a protection against death from an electrical contact. The least resistance in trees occurs in the vital layer (cambium), and those issues adjacent to it. Electric currents of whatever nature, when applied to plants of a certain intensity, act as a stimulus. The physiological effect of the direct current on vegetable life differs from that of the alternating; the latter current acts more as a stimulus to the plant than the former. There is evidence to support the idea that a current of not sufficient strength to cause burning may overstimulate the plant and cause a retardation of its activities which will subsequently result in death. Earth discharges during thunderstorms are more common than generally supposed, and they are known to disfigure and cause the death of trees. — *N. Y. Evening Post.*

Egg and Tongue. — The egg has been from time immemorial among the ancients the symbol of the being who createth all things and hath all things within himself. It is to be found placed on all the statues of Mithras, upon his altars, and in many ancient votive hands of bronze. Montfaucon has given the representation of a statue of Isis, between the horns of which is placed an egg. The Egyptians also regarded it in profound veneration, and, in conjunction with the serpent, held it as representing the mystery of creation, or the mundane globe, or time and the serpent of eternity. On several of the engraved gems published by Stosch are sculptured two crested serpents, raised upon their tails, with the mystical egg between them. From the Egyptians the egg and serpent's tongue crept into the architectural sculpture of Greece, and forms one of the most elegant ornaments. It is still much used, and called the egg-and-tongue ornament. It is introduced between the volutes of the Ionic order, and may be traced back, as is done by Quatremere de Quincy, to the head of Isis, to represent a mystical collar or necklace of the mundane egg and the tongue of the serpent of immortality. It is also used in the entablature of the same order with great effect, as in the Erechtheum. — *The Architect.*

New Egyptian Finds for Boston. — The annual apportionment to the Boston Museum of Fine-Arts of objects recently exhumed under the auspices of the Egypt Exploration Fund has just reached Boston. The consignment is especially rich in rare specimens of primitive Egyptian art, including prehistoric pots, stone palettes on which colors were ground, glazed porcelain of the first dynasty, tiny figures from Abydos, alabaster bowls both of the prehistoric and of the fourth dynasty, and blue basalt ware from Edfu.

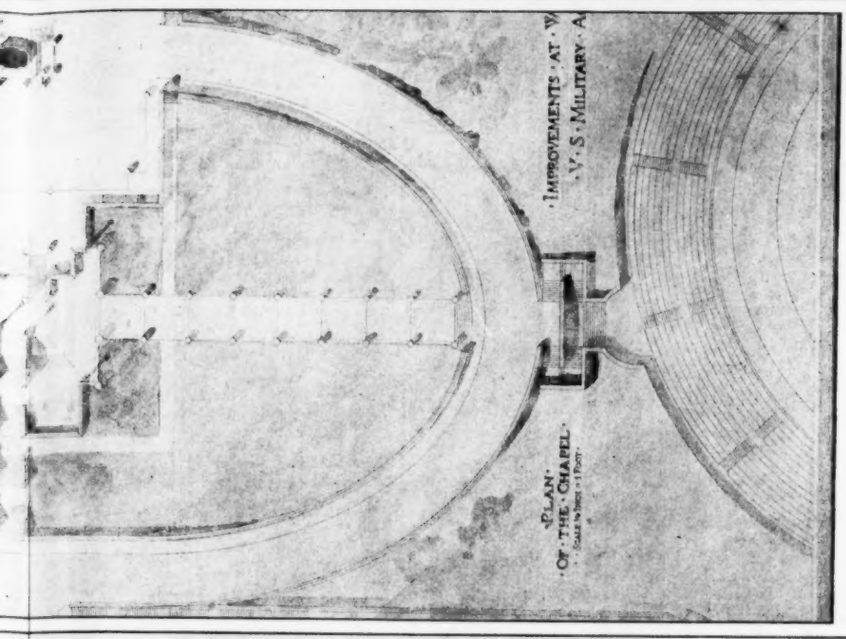
S. J. Parkhill & Co., Printers, Boston, U. S. A.



GENERAL PLAN
SHOWING DEVELOPMENT OF THE GROUNDS AND BUILDINGS

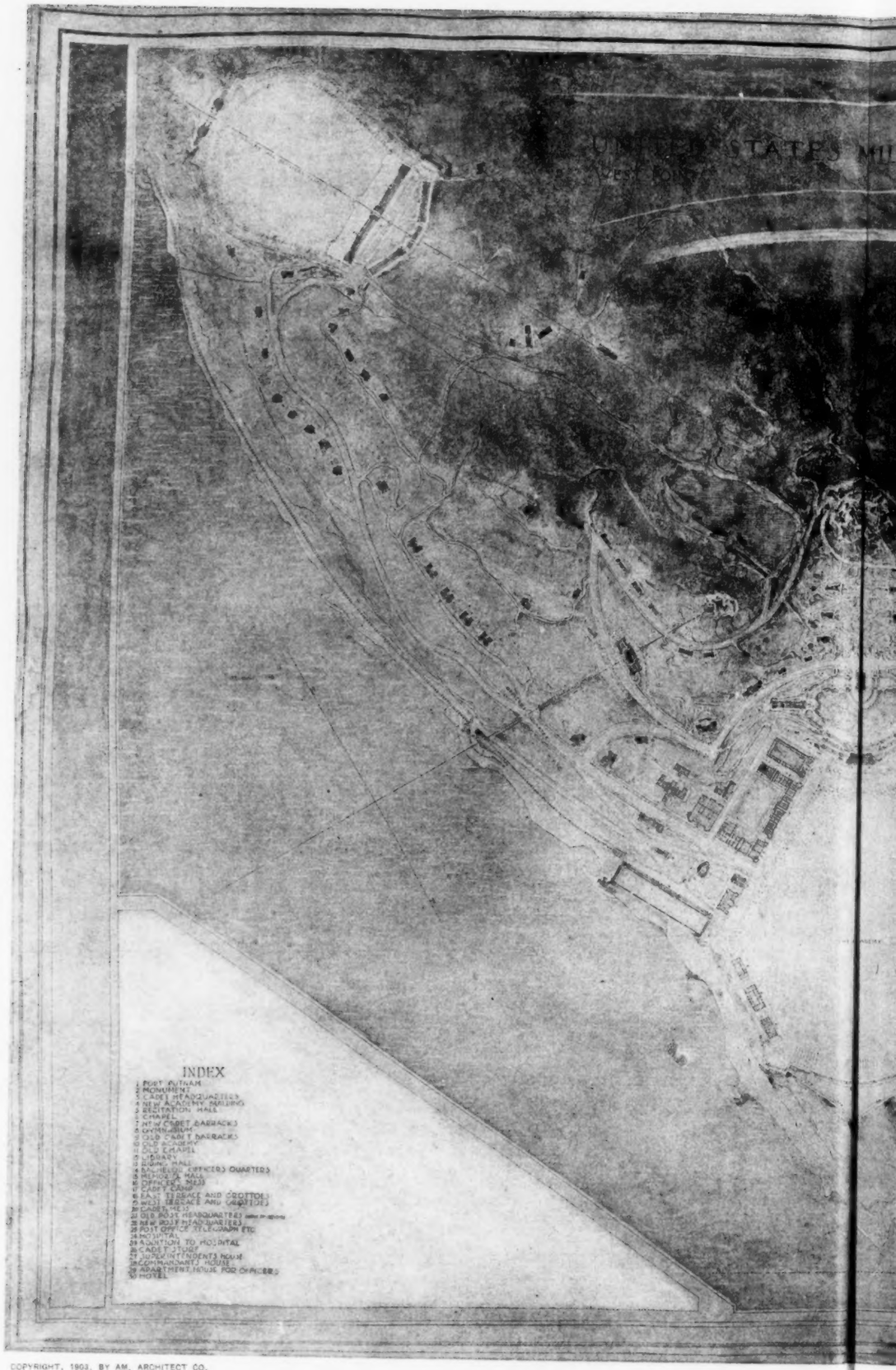
IMPROVEMENTS AT WEST POINT U. S. MILITARY ACADEMY

ACCEPTED GENERAL PLAN: IMPROVEMENTS AT U. S.
CRAM, GOODHUE & FERGUSON



HELIOTYPE CO., BOSTON.

U. S. MILITARY ACADEMY, WEST POINT, N. Y.
FERGUSON, ARCHITECTS.

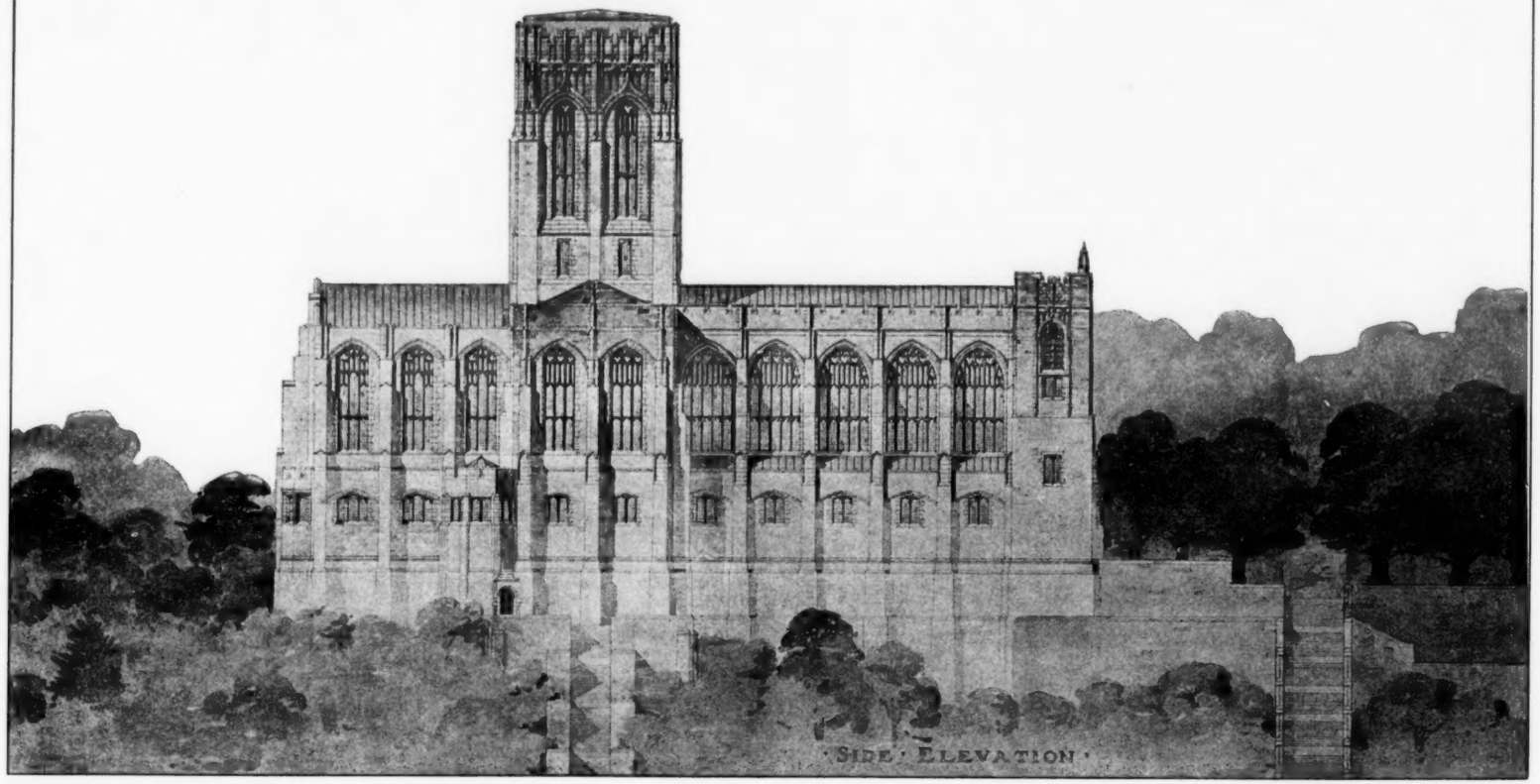


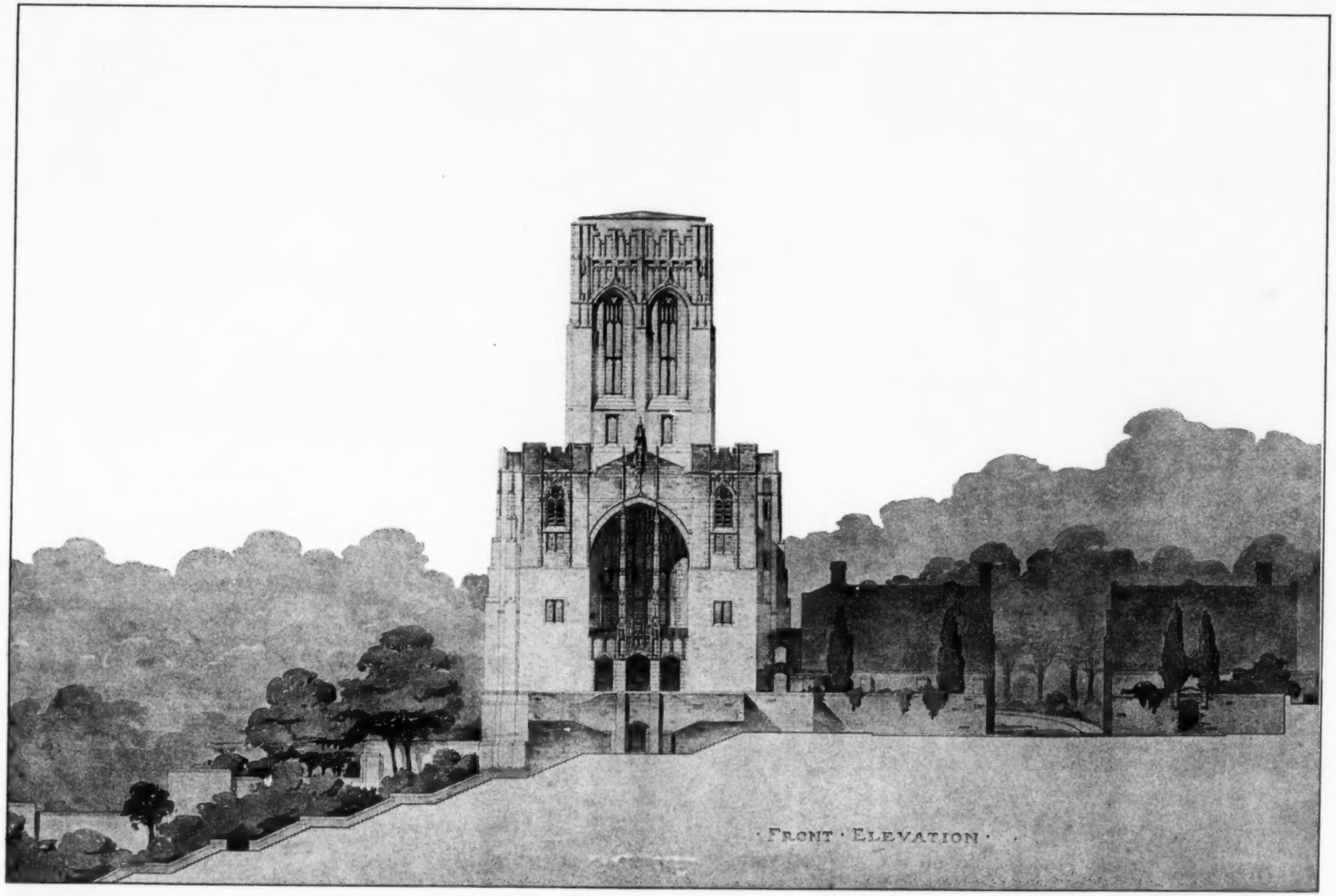
COMPETITIVE PLAN FOR IMPROVEMENTS AT U. S. M

PEABODY & STEARNS, A

HELIOTYPE CO., BOSTON.

TS AT U. S. MILITARY ACADEMY, WEST POINT, N. Y.
& STARNS, ARCHITECTS.


SIDE · ELEVATION ·



THE CHAPEL: U. S. MILITARY ACADEMY, WEST POINT, N. Y.

CRAM, GOODHUE & FERGUSON, ARCHITECTS.

HELIOTYPE CO., BOSTON.

The American Architect and Building News

A WEEKLY JOURNAL OF CONSTRUCTIVE AND DECORATIVE ART

VOL. LXXXII.—No. 1455.] SATURDAY, NOVEMBER 14, 1903. PRICE, {INTERNATIONAL ISSUE, 50 CTS / REGULAR " 15 "

Topographical Index of Advertisers.

[For pagination, see Alphabetical Index on Cover 2.]

Code Of Practice

FOR SUB-ESTIMATING AND SUB-CONTRACTING

Adopted by the Master Builders' Association of the City of Boston, Aug. 2, 1894.

ARTICLE I.

Obligation of Principal Contractor to Sub-Contractor.

A principal contractor is under obligation to treat upon an equal basis all estimates which he "receives" prior to putting in his own bid. Estimates must be considered as "received" when they come into a principal contractor's possession, either by his direct solicitation or by being accepted by him. *The opening of a bid, knowing it to be such, constitutes receipt of the same.*

A principal contractor is under no obligation to use a bid which he has not solicited, accepted, or received, but if he does not wish to use the estimate of a sub-bidder he should decline it, if proffered personally, or should return it unopened if sent to him by mail or otherwise. The retention of a bid should be construed as a receipt of the same.

* * * * * * * * * * * *

A principal contractor, when making up his estimate, is not entitled to receive bids from sub-contractors if he is at the same time making himself their competitor by figuring their portion of the contemplated work. It is legitimate for a principal contractor to figure all portions of work, depending upon no one for what are usually known as sub-estimates, but it is not legitimate for him to receive bids from others for sub-work if he is himself figuring those portions independently.

ARTICLE II.

Award of Sub-Contracts.

The principal contractor having been awarded a general contract should immediately award the sub-contracts to the lowest bidder in each branch.

ARTICLE III.

Penalty for not Awarding Contract to Lowest Sub-Bidder.

A principal contractor failing to award a sub-contract to the lowest sub-bidder to whom he is under obligation as previously provided should be liable to pay damages to the said lowest bidder, in amount not less than ten per cent of the amount of the estimate.

Payment of such damages will not relieve the principal contractor from liability to discipline under provisions of Article X of the By-Laws of this Association.

* * * * * * * * * * * *

ARTICLE V.

Payments to Sub-Contractors.

Unless the contracts made with sub-contractors otherwise provide, payments during the progress of the work should be made by the principal contractor to the sub-contractors upon the same basis of payment, in relation to amount of work performed, as is prescribed in the contract made by the principal contractor with the owner.

Final payment to a sub-contractor should be considered as *due* at the expiration of thirty days after the completion of his work and its approval by the architect or owner, unless otherwise provided by the sub-contract or agreement.

* * * * * * * * * * * *

ARTICLE VII.

Obligation of Sub-Contractor to Principal Contractor.

Should a sub-contractor refuse to contract at the amount of the estimate he has given to a principal contractor who has used the said estimate in good faith, he then should be liable to the said principal contractor for damages in amount not less than the difference between the amount of the estimate which was submitted by him and the amount at which the principal contractor may be obliged to contract the work.

Payment of such damages will not relieve the sub-contractor from liability to discipline under provisions of Article X of the By-Laws of this Association.

* * * * * * * * * * * *

ARTICLE X.

Bids to Architects or Owners.

When bids for separate departments of work on a building are solicited by the architect or the owner, they should be submitted with the understanding that they are direct estimates, for which direct contracts are to be made by the owner with the lowest bidder, and no other disposition of such bids should be permitted without consent of the bidder submitting the same.

Sub-bids should be given only to the principal contractors who are estimating the work in question, and should not be left with architects or owners for the inspection and information of principal contractors. Sub-contractors must understand that bids thus left with architects or owners are in great danger of losing their confidential character, and that if they so leave them they cannot claim protection or redress under the first article of this Code.

SUGGESTIONS.

Members of this Association haying sub-contracts to let, or material to buy, should, as far as may be consistent with business principles, deal only with members of the Association, or at all events give their fellow-members an opportunity to compete, and ther give them the preference, other things being equal.

All bidders should take cognizance of the danger they may be subjected to through the practice, so prevalent in some architects' offices, of making change in plans or specifications, or in both, during the progress of estimating. Correction of this pernicious practice can only be obtained through refusal by contractors to estimate under such conditions.

A true copy.

Attest: WM. H. SAYWARD,
Secretary, M. B. A

The American Architect and Building News

IS PUBLISHED EVERY SATURDAY BY THE

AMERICAN ARCHITECT CO.,

211 Tremont St., Boston, Mass.

Advance Subscription Rates:

Regular Edition, $6.00 per year; six months, $ 3.50

[Foreign Postage, $2.00 Extra.]

International Edition, per year in advance 16.00
" " quarterly " 16.00

ALSO PUBLISHERS OF

Topical Architecture

(Monthly)

Subscription $3 per year

Payment should be made to American Architect Co. direct, either by draft or post-office order.

Address all business correspondence to the publishers direct.

Advertising Agents:

New York City: —
H. M. Carleton, Temple Court, 5 Beekman St.

Agents at Large: —
M. F. Dyer, 211 Tremont St., Boston, Mass.
F. P. Spokesfield, 211 Tremont St., Boston, Mass.

Advertising Rates: For "wants" and "proposals," 15 cents per line [8 words to the line], each insertion. 50 cents the least charge. Other rates on application.

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.

Asbury Park, N. J. — Before the Beach Commissioners and Mayor B. S. Keator, Architects W. C. and A. F. Cottrell have exhibited and explained their plans for the rebuilding of the Asbury Avenue pavilion. It will be a magnificent new structure costing $25,000, and work will begin on it at once. The old pavilion will be torn down, but the lumber, as far as possible, will be used in the new structure. Plans for the reconstruction of the pavilion at 5 h Ave. have not yet been completed.

Atlanta, Ga.— Ground has been broken for the new building of the Central Congregational Church on Ellis St. and Carnegie Pl. It will be a handsome octagonal building, Gothic in design and 75 feet in diameter. The basement will be of stone, the upper part of red brick with stone and galvanized iron trimmings. The church building proper will cost above $30,000, while the furniture and furnishings will bring the total cost up to an amount between $35,000 and $40,000.

Baltimore, Md. — The plans which were recently placed in the hands of local contractors for bids on a new gateway and mausoleum at Woodlawn Cemetery, Powhatan, call for a fine building 36 feet above the grade, to be of brick and marble construction. The building will be one of the finest of its kind in the city, and will cost $30,000. The new gateway will be of iron supported by piers of brick and stone.

Boston, Mass. — A memorial building to the late Daniel S. Ford, to be erected out of the funds which he intrusted to the Boston Baptist Social Union, is the final disposition which the trustees have decided to make of the money. The plans for the building will be competed for by three Boston architects, Andrews, Jacques & Rantoul, the firm of Kendall, Taylor & Stevens and the house of Clark & Russell. The plans are to be ready by December 10. Professor F. W. Chandler of Technology will be the judge.

Bridger, Mont. — It is stated that a $50,000 stock company is being formed to build a stucco factory here.

Buffalo, N. Y. — It is reported that the congregation of the Church of Our Father is contemplating the erection of a $90,000 edifice. Edward Michael is a member of the Building Committee.

Chicago, Ill. — Otto Young has leased for a term of 99 years the property of St. Mary's. The land is located at the corner of Wabash Ave. and Madison St., and is 80′ x 180′ in size. According to his agreement with Archbishop Quigley, Mr. Young will build a large office building on the property, and while the minimum cost of the building as fixed in the lease is $600,000, it is admitted that the actual cost will probably be nearer $1,000,000.

The American Tag Co. has let contracts for a two-story factory, 72′ x 162′, to be built at State and 61st Sts., at a cost of $20,000.

Contracts have been let by William Carbys Zimmerman for a five-story warehouse, to be built at 1426-32 W. Madison St., for G. A. Foster. It will be of mill-construction on concrete foundation, and will cost $75,000.

R. T. Crane has purchased property on the west side of Michigan Boulevard from Thies J. Lefens for $54,000. The land is 287 feet north of 28th St., 112′ x 176′. It is the intention of Mr. Crane to erect a new home on this property to cost, approximately, $200,000.

Cincinnati, O. — The Union Savings Bank and Trust Co. will erect on Vine St., south of 12th St., a branch for the accommodation of its uptown trade and that over the Rhine. The building will occupy a lot which has a frontage of 45 feet with a depth of 120 feet. The structure will be built of concrete and will be of German Renaissance style.

Clarion, Pa. — Bids for the county poorhouse have been opened and the contract awarded to William Zortman, of Pittsburgh, for $69,950.

Danbury, Conn. — Bids will soon be asked for erecting the Danbury Normal School, to cost about $100,000. Address Chas. D. Hine, Sec'y State Bd. Educ., Hartford.

Dayton, O. — A terminal station may be built here with a $100,000 capital stock company behind it. It

BUILDING INTELLIGENCE.

(*Advance Rumors Continued.*)

is proposed to build it on S. Main St., between 5th and 6th Sts.

Decatur, Ill. — Plans have been prepared for the erection of a $60,000 Y. M. C. A. building.

Des Moines, Ia. — Curator Charles Aldrich of the State Historical Department has asked for an appropriation of $100,000 for expenditure in 1904-5-6, and an increase in the appropriation for the working fund from $5,000 to $15,000. Curator Aldrich's cry is for additional room. The new building in which are located the rooms of the historical department already are too small and are cramped.

The lot at the southeast corner of Locust and 15th Sts. has been sold through the agency of L. H. Cleland to the Waterbury Chemical Co. which will have erected on it a four-story laboratory involving the expenditure of about $50,000. The lot is just west of Still College of Osteopathy.

It is reported that the Waterbury Chemical Co. will erect a four-story building at 15th and Locust Sts. for a laboratory. Cost, $50,000.

Detroit, Mich. — Bids will be called for about the end of the year by Maj. W. H. Bixby, Corps Engrs., U. S. A., Detroit, for the new canal at St. Clair Flats. Appropriation, $330,000.

A new casino will be erected on Belle Isle, and the Board of Estimates has allowed $100,000 park bonds to be issued for same. R. E. Bolger, commissioner.

A. C. Varney & Co. have prepared plans for an engraving works for John L. Newberry, Fort St. West. Cost, $33,000.

Cliff R. Cook, 25 Atwater St., W., has given $25,000 to the Church of Christ for the erection of an Orphan Asylum.

Max Broock has sold to Mrs. Mary R. Schmidt the property embracing Nos. 38 and 40 Miami Ave., on which Mrs. Schmidt will erect a building to suit the lessees, to cost not less than $25,000. The property has a frontage of 46.56 feet, and is covered with old frame buildings, which will be removed in a short time.

Evanston, Ill. — The committee in charge of the new alumni gymnasium project, which is to provide a new $100,000 gymnasium for Northwestern University, has declared the building a certainty, as already $92,000 has been pledged.

Grand Rapids, Mich. — The Pere Marquette R. R. Co. has had plans prepared for a $50,000 roundhouse to be erected here.

Greenwich, Conn. — The latest prospective addition to the list of buildings given to this town is one for a branch of the Y. M. C. A. The name of the donor

BUILDING INTELLIGENCE.

(*Advance Rumors Continued.*)

is as yet unrevealed, but rumor mentions Mrs. George Nichols and Mrs. Herbert B. Stevens.

Homestead, Pa. — The congregation of the Reformed Hungarian Church of this place has bought from Lloyd & Hessig, two lots, 50′ x 120′ each, in 10th Ave. facing Dixon St., for $14,250. One lot is vacant and the other has on it a frame house. Plans have been prepared by Architect Titus de Bobula for a stone church to cost not less than $50,000.

Hot Springs, Ark. — Wiley Bros., of Chicago, Ill., have prepared plans for repairing the Park Hotel, this city. Probable cost, $25,000.

Huntington, Ind. — Reports state that a $40,000 theatre is to be erected in this city.

Huntington, W. Va. — Parker & Thomas, of Baltimore, have been chosen as architects of the new post-office building here.

Iowa City, Ia. — Work on the Iowa City post-office will commence soon. The government has advertised for bids and the same will be opened on December 9.

Jeanerette, La. — The R. C. Society, according to reports, is preparing to erect a $40,000 church.

Jeffersonville, Ind. — The Hope & Myrtle Lodge, K. of P., will erect a castle hall, to cost about $35,000. A committee is at work on the details and will select plans and advertise for bids.

Kansas City, Kan. — It is said that a St. Louis man is contemplating the building of a $100,000 flour mill here.

Long Island City, N. Y. — Press reports state that the Health Department has completed plans for a group of buildings for a hospital for contagious diseases to be erected on Flushing Ave. The group will consist of 2 pavilions, and a main building, to include a boiler-house, disinfecting room, laundry, ambulance and stable apartments and dormitories. Probable cost, $75,000.

Lorain, O. — Contract has been signed for the erection of a new post-office building. It will be two stories high, the post-office occupying the entire first floor and basement.

Los Angeles, Cal. — Architect C. H. Brinkoff has prepared plans and has commenced work on a three-story frame and plaster hotel to be built on Coronado St., near Wilshire Boulevard, for the Bair Realty Co. Specifications call for brick foundation, plaster elevations, staff decorations, plate, art and leaded glass windows and roof garden. Interior to have natural wood finish, hardwood and tile flooring, tinted walls. The whole to be in the Spanish Renaissance.

BUILDING INTELLIGENCE.

(*Advance Rumors Continued.*)

Louisville, Ky. — It is proposed to erect a building, 52′ x 176′, to cost $40,000, to be used as a packing department and storage room in connection with the bottling plant of the Central Consumers Co.

Herman Probst, 10 W. 22d St., N. Y. City, has secured the contract to erect the "Preston" hotel in this city at about $550,000.

Lynn, Mass. — Several hundred men of the thousands employed by the General Electric Co. at the Lynn factories, have organized an athletic association, and with the proceeds of the various picnics and athletic contests run by them the past two years, are preparing to erect a big gymnasium to be used exclusively by the members. The preliminary drawings show a building constructed of wood. The first floor will contain a gymnasium 30′ x 40′ in dimensions, with a twenty-foot ceiling; hot and cold water baths, locker room and club parlor. On the second floor will be a reading-room, assembly-room, smoking and billiard room.

Macon, Ga. — Wesleyan Female College will have a memorial building to be known as the Susannah Memorial. It has not yet been decided whether to erect the memorial upon the site of the old chapel or upon other grounds. It is very probable that should another site be selected the present chapel will be used as a dormitory. The memorial is to be erected in honor of the mother of John Wesley, founder of Methodism in America. It is estimated that the cost of the structure will be in the neighborhood of $25,000.

The Academy of Music is to be enlarged, at a cost of $35,000.

Mason, Mich. — The new county court-house will be one of the finest in the State, costing $76,000.

Mattoon, Ill. — The M. E. Memorial Hospital Trustees are contemplating the erection of a $100,000 hospital.

It is reported that the congregation of Trinity Episcopal Church is considering the erection of a $20,000 edifice.

Monmouth Park, Neb. — The School Board has awarded to Thomas Herd the contract for the erection of the new Monmouth Park School building. Mr. Herd's original bid was for $36,800, but the Board entered into a contract with him providing for certain modifications in the original plans which will reduce the cost of construction about $5,000.

Muskogee, I. T. — There are $80,000 on deposit in this city for the purpose of building school-houses. The city will at once begin the erection of three $25,000 buildings, two for white children and one for negroes. There are over 500 school children now unprovided for on account of inadequate room.

Newport, R. I. — The County Commissioners have voted to build a $20,000 jail on the new site, and also to sell the old jail and house adjoining.

New York, N. Y. — Plans have been filed with the Building Bureau by C. B. J. Snyder, architect of the Department of Education, for a new school-house to be erected on the block west of Madison Ave., between 127th and 128th Sts. It is to be known as Public School 24 and will be four stories high, with façades of limestone, brick and terra-cotta. It is to cost $135,000.

At a recent meeting of the Board of Managers of St. Luke's Hospital the president, George MacCulloch Miller, announced the desire of Mrs. Margaret J. Plant to erect and present to the institution an additional pavilion. The new pavilion will be for

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

the care and treatment of private patients. It will be located on the southeast corner of the block overlooking Morningside Park.

Benjamin Stern, of Stern Brothers, is to spend $500,000 on a new eleven-story store and loft building to be erected at 15 to 23 W. 21st St., through to 15 W. 22d St. It will have a frontage of 137.3 feet on the former and 27.4 feet on the latter street, with a depth of 197.6 feet.

Norwalk, O.—The contract for the Carnegie Library has been awarded to George Peik, of Sandusky, at his bid of $20,000. Mr. Frank L. Packard, of this city, is the architect.

Pittsfield, Mass.—Page & Hayes, of this city, are preparing the plans and specifications for the proposed new Notre Dame parochial school but it has not been definitely decided as yet whether the structure will be erected during the winter or in the spring. The building, which it is estimated will cost about $15,000, will be of brick and contain six large rooms with all of the modern improvements.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Work has been started on the new building that the Berkshire Street Railway Co. is to add to its car-house on Beaver St. This structure is to be built by P. J. Mahoney, of Westfield. The building will be 60′ x 60′ in size and will cost about $10,000. The company is also to build a new machine-shop 20′ x 60′ next to the power-house. Work on the two structures is to be completed about the middle of December.

Poughkeepsie, N. Y.—Contracts have been signed for the building of the new Presbyterian Church. Thomas Brennan, of New York, is the successful bidder. Price, $90,875. The plans are by P. M. Lloyd. The first work will be the tearing down or removal of the Bowne house on Cannon St., and the tearing down of the chapel. Including the value of the buildings to be destroyed—the Bowne house and the present manse—it is expected that the church will cost something like $115,000.

Redlands, Cal.—The Union High School of Redlands is being remodelled and enlarged at an expense of $68,000. When completed it will be 220 feet in length by 110 feet in extreme width.

Riverside, Cal.—Burnham & Bliesner, the Los Angeles architects, have just completed the plans for the Pennsylvania building, which is to be erected at the corner of 10th and Main Sts. in the near future. Work on the new office-building will be pushed rapidly.

Somerville, Mass.—A six-apartment block for Mrs. H. M. Butler is in process of erection on Walnut St., near Pearl St. It will be built of wood and will cost $10,000 above the land.

Springfield, Mass.—The county commissioners have under consideration a plan to build an addition to the rear of the court-house as soon as the necessary authority to expend money for this purpose can be secured from the legislature. An estimate of the cost of the proposed addition has not been made but it would probably be considerable, for the heavy granite construction is of necessity costly, and the interior changes with the fittings required would cost several thousand dollars.

Syracuse, N. Y.—The Central New York Methodist Conference has had plans prepared by C. D. Wilsey for a one-family house to be erected on E. Genesee St. and Westmoreland Ave.

Union City, Tenn.—The promoters of the new bank soon to be established here comprise some of the wealthiest and most prominent men in Obion County. The capital stock will be $40,000, no stockholder being allowed to own more than $1,000 worth of stock, the idea being, to have as many people as

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

possible interested from all parts of the county. $30,000 has already been subscribed, and twice that amount could be secured if necessary.

Waco, Tex.—The Building Committee of the Waco Library Association has awarded the contract for the erection of the library to F. M. Garthwait, of Chicago, the contract price being $30,000. The work on the building is to begin at once as soon as the contract is drawn up for the building. The building is to be located on the corner of 12th and Austin Sts. It will face Austin St. and will be built of brick, trimmed with stone and granite. It is hoped to complete the building in four months.

Washington, D. C.—The contract for the concrete work on the new Pennsylvania terminal station has been awarded to the R. S. Blome Co. Under an act of Congress the new station must cost at least $4,000,000, and $4,250,000 will be required exclusive of the structural iron and steel. The steel and iron will cost at least $750,000, making the total cost fully $5,000,000, and probably more. The iron and steel will be furnished by the Pennsylvania and Cambria Steel Companies, which are connected with the Pennsylvania Railroad.

Webster, Mass.—The plans for the new high school building show a proposed structure 126 feet long and 73 feet wide, three stories, of brick, fireproof construction. Cost, $60,000. Architect, E. I. Wilson, 101 Tremont St., Boston.

Wheeling, W. Va.—March & Peters, Washington, D. C., have been selected by the Treasury Department as architects for the public building to be erected here.

TENEMENT-HOUSES.

New York, N. Y.—*Seventeenth St., Nos.* 210 212, six-st'y bk. tenement-house, 44′ x 79′; $45,000; o., W. Bohland; a., G. F. Pelham.

W. One Hundred and Twenty-eighth St., No. 34, six-st'y bk. tenement-house, 25′ x 86′ 11″; $25,000; o., J. Goldstein; a., G. F. Pelham.

Sullivan and Watts Sts., six-st'y bk. tenement-house with stores, 18′ 3″ x 77′ 6″; $45,000; o., Freedman & Feinberg; a., Bernstein & Bernstein.

Melrose Ave., cor. 154th St., six-st'y bk. tenement-house with stores, 50′ x 90′; $45,000; o., Thomas D. Malcolm; a., Bronx Architectural Co.

Prospect Ave., nr. Jennings St., four st'y bk. tenement-house, 27.9″ x 103.9′; $100,000; o., Wahlig & Sousin; a., Otto L. Spannhake.

Barretto St., nr. Home St., five-st'y bk. tenement-house, 25′ x 88′; $20,000; o., Graham & Little; a., Henry T. Howell.

Prospect Ave., nr. Westchester Ave., 2 five-st'y bk. tenement-houses, 40′ x 84′; $70,000; o., John McGrath; a., James F. Meehan.

BUILDING INTELLIGENCE.

(Tenement-Houses Continued.)

Trinity Ave., nr. 165th St., 2 five-st'y bk. tenement-houses, 56' 2" x 84' 3"; $56,000; o., George H. Hill and C. A. Lavelle; a., J. H. Lavelle.

Forest Ave., nr. 166th St., four-st'y bk. tenement-house, 37' x 83'; $22,000; o., Elizabeth Harrison and Ethel Gurth; a., J. F. Lavelle.

Forest Ave., nr. 165th St., five-st'y bk. tenement-house, 37' 6" x 125'; $70,000; o., Zimmerman & Flood; a., Harry T. Howell.

St. Ann's Ave., nr. Westchester Ave., 2 four-st'y bk. tenement-houses, 35' 2" x 47' 8" x 40' 2" x 44' 1"; $50,000; o., Vincenzo Balestrieri; a., Moore & Landsiedel.

Prospect Ave., nr. Macy Pl., 2 five-st'y bk. tenement-houses, 37' 6" x 90'; $60,000; o., McCarthy & Macy; a., Bronx Architectural Co.

Robbins Ave., cor. Kelly St., five-st'y bk. tenement-house, 41' 9" x 93' 6"; $35,000; o., Patrick T. Owen; a., Bronx Architectural Co.

Union Ave., n w cor. 168th St., six-st'y bk. tenement-house & store, 41' x 82' 7"; $50,000; o., Annie Chisling; a., Moore & Landsiedel.

MISCELLANEOUS.

New York, N. Y. — *One Hundred and Thirty-eighth St. to One Hundred and Fortieth St., Amsterdam Ave. to St. Nicholas Terrace*, 5 college buildings; $2,500,000; o., City of New York; a., George B. Post.

PROPOSALS.

SCHOOL-HOUSE. [At Medora, N. D.]

F. A. Eaton will receive bids **until November 21** for the erection of a frame school-building. 1455

Treasury Department, Office of the Supervising Architect, Washington, D. C., November 10, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 16th day of December, 1903, and then opened, for the construction (including plumbing, electric wiring and conduits) of the U. S. Post-office at Chillicothe, Ohio, in accordance with drawings and specifications, copies of which may be had at this office or the office of the Postmaster at Chillicothe, Ohio, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1456

CELL BLOCK. [At Jackson, Mich.]

Bids are wanted **November 30** for removing old brick cell block and erecting new cell block of 340 steel cells, including ventilating and heating system, plumbing, electric lighting, concrete and tile floors, elevators, etc. W. H. BILLS, M. D., Pres. Bd. Control. 1456

JAIL AND RESIDENCE. [At Towner, N. D.]

Bids will be received **January 25** by J. Christiansen, Co. Aud., for erecting a jail and sheriff's residence, work to include steam-heating apparatus, steel and iron work. 1457

Treasury Department, Office of the Supervising Architect, Washington, D. C., October 29, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 9th day of December, 1903, and then opened, for the construction including plumbing, heating apparatus, electric wiring and conduits of the U. S. Post-office at Iowa City, Ia., in accordance with drawings and specification, copies of which may be had at this office or at the office of the Postmaster at Iowa City, Ia., at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1455

STEEL TANK. [At Fort Brown, Tex.]

Bids are wanted **November 19** for erecting a 50,000-gallon steel tank on 50-foot trestle at this post. T. E. TRUE, Ch. Q. M., San Antonio. 1455

PROPOSALS.

Treasury Department, Office of the Supervising Architect, Washington, D. C., October 29, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 24th day of November, 1903, and then opened, for the installation of an electric passenger elevator in the U. S. Post-office, Custom-house and Court-house building at Tampa, Florida, in accordance with the drawings and specification, copies of which may be obtained at this office at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1455

Treasury Department, Office of the Supervising Architect, Washington, D. C., October 29, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 25th day of November, 1903, and then opened, for extending and changing plumbing system at the U. S. Post-office building at Kalamazoo, Michigan, in accordance with drawings and specification, copies of which may be had at this office or at the office of the Custodian, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1455

CHURCH. [At Warrensburg, Mo.]

Bids are wanted **November 20** for erecting a church for the First Baptist Society. Address JOHN THRAILKILL. 1455

SCHOOL. [At Lakepark, Ia.]

Bids will be received **December 1** by D. C. May for erecting a school, including a heating plant and plumbing. Murphy & Ralston, architects, Waterloo. 1456

PROPOSALS.

LAUNDRY. [At Johnson City, Tenn.]

Bids are wanted **November 24** for furnishing material and erecting laundry building and equipment at the Mountain Branch, N. H. D. V. S., near Johnson City. J. H. Freedlander, architect, 244 Fifth Ave., N. Y. City. MOSES HARRIS, Gen. Treas., 346 Broadway, N. Y. City. 1455

PRISON. [At Portsmouth, N. H.]

Sealed proposals will be received at the Bureau of Yards and Docks, Navy Department, Washington, **until November 21, 1903**, for constructing a naval prison with appurtenances at the navy yard, Portsmouth, N. H. Appropriation, $125,000. Plans and specifications will be furnished by the bureau upon deposit of $25 as security for their return. MORDECAI T. ENDICOTT, Chief of Bureau. 1455

BUILDING. [At Fort Myer, Va.]

Fort Myer, Va. Sealed proposals for constructing blacksmith shop, guard-house and extension to riding hall, will be received **until November 21, 1903.** Information on application. W. F. CLARK, Q. M. 1455

COALING PLANT. [At New London, Conn.]

Sealed proposals will be received at the Bureau of Yards and Docks, Navy Department, Washington, D. C., **until November 28, 1903**, for constructing an extension of the coaling plant at the naval station, New London, Conn. Funds available, $24,700. MORDECAI T. ENDICOTT, Chief of Bureau. 1455

Professional Ethics.

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

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

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

*

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

*

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

*

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

*

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

*

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

*

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

*

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

*

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

*

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

*

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

*

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

*

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

*

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

*

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

*

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

[See Alphabetical Index on Cover 2 for Pagination.]

CLASSIFIED ADVERTISEMENTS.

[Advertisers can be indexed only under a single head free of charge.]