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CONTENTS.

SUMMARY: —
Acceptance of the Arbitration Scheme suggested by the Association of Building Employers in New York. — The Matter of Eye-bar Chains or Wire Cables for Manhattan Bridge. — The Krupp Establishment likely to be a Bidder for the Contract. — An Amelioration in the French Baggage System. — The Award in the Liverpool Cathedral Competition. — The Boston Park Commission rules against disfiguring Surroundings. — The Closing of the New York State School of Forestry. — The coming Treatment of the Champ de Mars, Paris. 17
TESTING THE SOUNDNESS OF CEMENT. 19
THE ROYAL GOLD MEDALLIST. 20
THE CITY OF SALONA. 22
BOOKS AND PAPERS. 23
ILLUSTRATIONS: —
The Washington: a Design. — House of Andrew Carnegie, Esq., Fifth Ave., New York, N. Y. — Garden Front of the same House. — The Garden and Pergola of the same House. — Bench in the Tribune of the Collegio del Cambio, Perugia, Italy.
Additional: Randolph Hall: a Dormitory, Cambridge, Mass. — Executed Portion of Hamden Dormitory, Massachusetts Ave. and Plympton St., Cambridge, Mass. — Apley Court: a Dormitory, Cambridge, Mass. 23
NOTES AND CLIPPINGS. 24

THE contest between the Association of Building Employers in New York and the unions has terminated, the unions voting, one by one, to accept the plan of arbitration offered by the Employers' Association, with certain modifications, unanimously agreed to by the representatives of both sides. The Painters' Union, which has been one of the worst sufferers from the ambitious scheming of the walking-delegates, was the first to declare its independence of them, and accept the Employers' plan; but the others followed in rapid succession, and building work is already actively resumed. On the whole, the result is a victory, not so much for the Employers' Association as for justice and common-sense, of which the Association was, to a great extent, the representative. Under the new agreement, the present schedules of wages are to remain in force for a year, so that both masters and men know what to count upon for twelve months, to the great advantage of both sides; and, for the future, it is agreed by both sides that no walking-delegates or "business agents" shall be appointed to represent the men, or shall be received by the employers. The present walking-delegates make a show of submission to this stipulation, but it is a characteristic of their tribe to "lie low" in adversity, only to make their appearance again when the public attention is diverted from them, and we shall not be surprised to see them, a year or two hence, filling their pockets, and gathering political plums, as actively as ever, although, probably, under a different name.

SO far as the employers are concerned, the settlement will undoubtedly be of great benefit, not so much in the direct saving of money, since wages will remain the same, as in affording a reliable standard for making contracts, and in giving a reasonable hope that a contract can be carried out within a definite time, and under definite conditions. Within the last few years, a building contractor in New York has been in constant danger of having his undertakings interfered with by malicious conspirators, against whom he had no redress. It is this burden which the Employers' Association determined to remove, and it has succeeded, more quickly and thoroughly than any one anticipated, in accomplishing this result. Very probably it may have to deal with the same trouble again later, but it has learned the lesson that organization can be met by organization; and, so long as it maintains the attitude of fairness and consideration which has characterized it so far, it has little to fear.

AN interesting dispute is going on in New York between Mr. Lindenthal, the Commissioner of Bridges, and certain other engineers of note, in regard to the new suspension bridge over the East River. Mr. Lindenthal prefers to use eye bar cables for the suspending members of the bridge; while several eminent engineers object to these, and advocate wire cables, as being less expensive, and more reliable. Naturally, we do not venture to express an opinion on such a delicate point; but the fact that every portion of an eye-bar cable is exposed to view, while the interior of a wire cable can never be examined, will be, to the mind of an architect, an advantage to the former. It is fair to say that Mr. Lindenthal's plan has been approved by a commission of experts, appointed by the Mayor, so that it is likely to be carried out, notwithstanding the conflicting opinion of others; but it would be interesting and instructive to have the two sides of the question thoroughly discussed, with the support of all the available evidence on each side.

IT is reported that, whenever the plans for the Manhattan Bridge are finally decided upon, several foreign firms, including the Krupp-Gruson Company, will submit bids for carrying them out. This prospect seems to alarm some of the New York people, who think that American firms ought to be protected against the competition of foreigners. Of course, if the people of New York like to pay high prices to monopolies, that is their concern, but it may be observed that the notion that the exclusion of foreign bidding necessarily involves advantage to American citizens is a delusion. Although, in many industries, our highly-paid workmen, through their superior intelligence, produce goods at a smaller labor cost than the careless and unambitious foreign workmen, there are others, particularly those employing unskilled help, in which the scientific training of the German engineers and superintendents gives them an advantage over us. In these industries the radical step has been taken, in multitudes of cases, of transferring the industry bodily to our territory; and we imagine that the statistics of manufactures carried on in the United States by foreign capitalists, with foreign superintendents, imported machinery and foreign workmen, would surprise the public. Of course, we are very far from deprecating this movement, which has done a great deal for the prosperity, as well as for the intellectual development, of the country, but it may be useful for over-zealous protectionists to remember that the policy of shutting out, by means of the custom-house, occasional shipments of goods from a foreign manufacturer, has brought the foreign manufacturer, with bag and baggage, over here to compete, often with overwhelming success, against the Americans in their own market.

ARCHITECTURAL tourists and students will be glad to know of a new arrangement, entered into, under a common agreement, by the seven "great railroad systems" of France, under which personal baggage is received at any station, and sent to any other station, there to await its owner, who is not obliged to travel on the train with it, or on any train, but may proceed from the place where his baggage is received to that at which it is kept for him in such way as he may prefer, either through the air, in a balloon, or on foot, or in an automobile, or on a bicycle. An experimental trial of this system was made two years ago, and has proved so successful that it is now permanently adopted. Architects, particularly, are likely to make much use of it. To say nothing of the comfort of being able to send one's trunks ahead, and to follow them at a more leisurely pace, with a hand-bag, and a stop-over ticket, the pedestrian sketcher, who, after all, enjoys a tour better than any one else, can go on by easy stages, arranging, if he wishes, to find his baggage awaiting him every night, at the end of a moderate walk through the incomparable picturesqueness and interest of Normandy, Picardy, Burgundy or the Isle of France. Naturally, a charge is made for forwarding baggage in this way, but, in return, the railway company assumes responsibility for its safety, and keeps it until its owner wants it.

THE decision in the competition for the Liverpool Cathedral, which has ended in the employment of Messrs. G. F. Bodley and G. Gilbert Scott as joint architects of the new building, gives much dissatisfaction in England. The two architects selected are well known as masters of the regular English Gothic, and it may be said, in defence of the Cathedral Committee, that a warning, which no experienced architect could mistake, was given at the outset that no other style would be acceptable. Of course, the warning was disguised under a stipulation that the style should be such as to "inspire reverential feelings"; but the meaning of this, in connection with a

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Church of England cathedral, was obvious; and the people who, like Professor Beresford Pite, chose to send Byzantine designs, clever as they might be, and as Professor Pite's unquestionably was, could hardly blame any one but themselves for the neglect with which they were treated.

MR. SCOTT'S design, as may be supposed, was correct and well-composed, and Mr. Bodley, who, besides being an experienced church architect, and an enthusiastic churchman, is an artist of great and original talent, may probably be depended upon to illuminate with the "divine spark" of genius the correctness of his younger colleague. There has been no important Gothic building in England since Mr. Pearson's Truro Cathedral, and we are inclined to think that the more vigorous talent of Messrs. Bodley and Scott may produce a work of the highest interest. Meanwhile, a very important piece of Gothic architecture has been begun in this country, in the new buildings for the Military Academy, at West Point, by Messrs. Cram, Goodhue & Ferguson, who have frankly adopted the *parti* of a complete but varied group of buildings, all in a consistent Gothic style. Those who know the work of these artists from our pages of illustrations do not need to be told of the brilliancy with which they use their favorite style, or of their talent in contrasting wall-surfaces with openings; and in the West Point group they have an admirable field for the display of their skill.

THE proceedings of the Boston Park Commission are always interesting, not only because the Boston chain of parks is different from any other in the world, but because there is no place in which so many original ideas in park management have been carried out. The latest of these ideas seems to be one for preventing the disfigurement caused by the display of posters and other advertisements in and about the parks, and is embodied in an order, providing that "No person shall erect on land abutting on any parkway or boundary road of any park, or upon a public way connecting therewith," within the distance of five hundred feet from the park to which their jurisdiction is by law extended, "any fence more than six feet in height, or constructed otherwise than of stone, metal or ornamental work, or of palings separated by spaces not less than one inch in width"; nor is any "sign, poster or advertisement" except signs not larger than three feet by four, and relating only to the selling or letting of the premises on which the sign is placed, and signs not exceeding fifteen inches in width, relating to business conducted on the premises, to be displayed on any land within the Commissioners' jurisdiction.

THIS is certainly radical enough, and the new regulation is likely to do much to preserve the beauty of the ten-mile chain of narrow parks which, except for it, would sorely tempt the bill-board man; but it will interest a good many people to know whether it is retroactive, as a variety of signs, as well as fences, already exist within the Commissioners' limits which are contrary to it. To take an example very familiar to the public, the garden walls of the Gardner Museum, familiarly known as the Palace, are much more than six feet high, and are neither of "palings, stone, metal or ornamental work," unless the bits of sculpture set in the brick walling constitute it "ornamental work." Presumably, the intention of this part of the rule is to keep not only the parks, but the estates bordering them, as open as possible, so as to prevent unnecessary obstruction of air and sunshine, and the object is a very worthy one. The Trustees of the Museum of Fine Arts, or the Simmons College, or the owners of private houses near the parks, are quite likely to be tempted to shut out the gaze of the public by high brick walls, bordering on the park, after the English fashion. This would not only shade the parkways, making them cold and dismal, but would subtract very much from the effect of openness and verdure which it is so desirable to retain; and the Commission has done well to forestall any fashions of this sort.

THERE is a mystery about the closing of the New York State School of Forestry which the public would be glad to have cleared up. Although no one can doubt Governor Odell's impartiality, it seems evident that the personal feeling of some one against Dr. Fernow has had much to do with the movement for the suppression of the School; and architects, who know Dr. Fernow only as the author of reports on the forest timbers of the United States which have been of great value to the profession, and the apostle, we might almost say, of the movement for forest preservation which promises so much for the future of the country, cannot, without regret, either see him, by implication, discredited, or his great work interrupted. Some of the newspapers have attempted to spread the idea that his work in the Adirondack forests has been unskilfully done; but, apart from the improbability that so accomplished an expert, after years of study of American conditions, would show either carelessness or want of knowledge in the treatment of the model forest under his own care, to say nothing of the smallness of the number of newspaper writers in this country competent to criticise his methods, we have the unqualified assertion of Mr. H. B. Ayres, recently Forester to the United States Geological Survey, that the New York State School, under Dr. Fernow's care, is "by far the best forest school on the continent, and in a fair way to be the best in the world." Mr. Ayres adds that, as he has been approached in person by the adversaries of Dr. Fernow, he is in a position to know something of their state of mind, which he characterizes as "thoroughly disgusting"; and he calls upon people who care for the best interests of the forests, and of the State of New York, to visit the School, and investigate the matter for themselves. Meanwhile, it may be observed that the State of New York is much less vitally concerned in forestry than many others, and that, if Dr. Fernow could be induced to do for Maine, or New Hampshire, or Michigan, or Wisconsin, or even the great State of Texas, what he has tried to do in New York, he could accomplish quite as much good, and would, in all probability, be far less interfered with, than in the Adirondack region, where as is currently reported, his chief enemies are found among the cockney sportsmen who swarm there, and whose preferences are quite incompatible with rational forest management.

AS our readers know, the Champ de Mars, in Paris, is to be in part utilized for building. The plans for the new distribution are now under consideration, and the discussion upon them has a certain interest for us. The plan prepared by M. Bouvard, the official architect, recommended to the Municipal Council for adoption by the Prefectoral Administration, and approved by a Committee of the Council, proposes to leave the centre of the space entirely clear, but to reserve for buildings two strips, each about four hundred and twenty-five feet wide, running at right angles with the river, one on each side of the present park. This will leave the greater part of the front of the Military School exposed, facing on the portion of the park remaining between the new blocks. Each of the strips at the sides is divided into two sections, separated by a street running parallel with their length. The houses in the first section, bordering on the park, are to be allowed to be carried to the maximum Parisian height of ninety feet, while those in the sections behind them are restricted to a less height. Besides the main longitudinal streets, the new blocks are divided by cross-streets, presumably in continuation of those which now terminate at the park. The central area, if the vote of the Committee of the Municipal Council is confirmed, is to be devoted entirely to flower-beds and shrubbery, the committee proposing that "in no case, or under any pretext, shall any permanent construction be established in the central portion."

THIS scheme is a great improvement upon any of those formerly considered, under which the Champ de Mars was to be devoted to race-tracks for automobiles, bicycle-tracks, concert-halls and other things of the same sort; and M. Bouvard seems to have utilized the experience which he gained in laying out the Exposition groups of 1900 to good purpose. It is worth noting that, in arranging for limiting the height of buildings, he places the highest buildings in what would seem to be logically the best place for them, bordering on the open area of the park; while the next row is kept lower, partly, as we may suppose, to prevent shading the rear of the lofty houses facing on the park, and partly to give better light and air to the avenues behind them. This is in direct contradiction to the Boston theory, which keeps buildings bordering on parks a quarter of a mile wide very low, while it permits those fronting on narrow streets behind them to be carried up to a height unknown in Paris, and our descendants will have an opportunity of judging for themselves which produces the more successful results.

TESTING THE SOUNDNESS OF CEMENT.[1]

BY the soundness of cement is meant its property to withstand swelling or disintegration after it is once set. The tests for soundness, while exceedingly simple so that they can be made without expert knowledge, are really as important as any to which a cement should be subjected. More stress is often laid in specifications upon the tensile strength than upon other characteristics, but in almost all works where mortar and concrete are used, there is so large a factor-of-safety that slight deficiency in the strength of a cement will not affect the masonry, provided it sets up properly and maintains its volume without expansion or disintegration.

Disintegration of work in cement where it has been mixed with good materials and properly laid is generally due to an excess of lime or of magnesia, occurring in forms which can be attacked by the elements. Freshly ground Portland-cement which has not been given sufficient time to properly "air-slake" may contain free lime which will swell upon the addition of water. This is readily understood from the action of ordinary quicklime as it is used in lime mortar. Quicklime, as is well known, swells to about two and one-half times its original volume when mixed with water into a paste. In a similar way an excess of free lime in Portland-cement may expand and cause the disintegration or distortion of the mortar or concrete in which it is used. If cement containing free lime is exposed to the air before using, it may be air-slaked so as to render it harmless. The presence of free lime is always due to faults in manufacture. The raw materials may be improperly proportioned so that there is too much lime, the mixture may be imperfect, or it may be underburned.

The presence of magnesia in Portland-cement up to three per cent is regarded as harmless, and some of the latest authorities, including the Committee of the American Society of Civil Engineers, suggest a limit as high as five per cent. The presence of a large amount of magnesia in natural-cement — in the term natural-cement being included the Rosendale, Utica, Akron, James River and other cements made from natural rocks by heating them to a temperature less than "incipient fusion" — may not render it unfit for use because of the lower temperature of burning employed in its manufacture.

The test for soundness which has been generally adopted consists simply of making a little pat of the cement to be tested, and exposing it to conditions which will show up its bad qualities. The Committee of the American Society of Civil Engineers[2] give two classes of tests for soundness, or, as they term it, constancy of volume. The normal test is made with pats kept at a temperature of about 70 degrees Fahr. for several weeks, while the accelerated test indicates the quality of the cement within about twenty-four hours. The apparatus required for soundness tests consists simply of a piece of plate-glass, which for temporary use need not be over ¼ inch thick and, say, 12″ x 18″ square, a small trowel, preferably a 3-inch pointing trowel, the scales for weighing the cement, a measuring-glass for the water and as many pieces of thin glass about 4 inches square as there are pats of cement to be made.

For testing Portland-cement take samples at random from several barrels or bags, every tenth barrel is a common practice, and mix each sample separately with about twenty per cent of its weight of water. Eight ounces of cement will make two pats of cement, one of which may be placed in water after setting for twenty-four hours, and the other subjected to an accelerated test as described below. The exact proportion of water, which can best be measured in an eight-ounce measuring-glass, will vary with the brand of cement, and if the desired consistency is not obtained with the first proportion selected, repeat the operation with more or less water. The Committee of the American Society and also authorities in Europe recommend the use of a special apparatus for determining when the cement is mixed with just the right amount of water to give it the proper consistency. This "Vicat apparatus" consists of a cylinder, for this purpose 1 centimetre diameter, which, weighted with 500 grammes, is allowed to penetrate into a thin disc of cement. The normal consistency is obtained when the cylinder penetrates to a specified distance. For tests of soundness such as we now have in mind, where no laboratory is at hand, the consistency can be determined well enough by the appearance of the paste. Sufficient water should be added so that the cement can be kneaded with the fingers without crumbling, and so little that when the pat is pressed onto the glass it will maintain its shape without spreading.

The temperature of the room where the mixing is done and where the samples are kept should be from sixty degrees to seventy degrees Fahr., and the water should also be about that temperature. The cement is weighed out and placed in a little pile upon the plate glass, and a depression formed in the centre, into which all of the water is poured. The cement from the outside of the ring is turned over into the water, and the water gradually penetrates the mass. This should not take over one minute, and then the paste is kneaded with the hands for about one and one-half minutes in the same way as one would knead dough. One or more balls are formed of the paste, and each one is pressed down onto one of the square plates of glass, so that a circular pat is formed about 3 inches in diameter and ½ inch thick in the centre, tapering to almost nothing at the edges.

For the normal test of cement, a pat from each of the packages sampled is allowed to remain in moist air for twenty-four hours and is then immersed in water. The reason for requiring moist air is to prevent shrinkage cracks upon the surface. A special moist closet may be used for this purpose, or a wet cloth may be spread above the pats so that it does not quite touch them, and the ends immersed in water to prevent its drying. The pat is examined from day to day during a period of twenty-eight days, and should show no signs of cracking, checking, swelling, distortion or disintegration.

Some authorities, among them the engineers of the Navy Department and the engineers of the New York Subway, require a similar pat to remain in air for examination for cracking and also for uniformity of color. An unsound cement will generally show defects within three days. Some specifications require only a seven day normal test for soundness, but the majority specify twenty-eight days.

A cement which shows defects of the character described is said to "blow," and it is designated as a "blowey" cement. The cracking and disintegration are due to expansion caused by chemical action. Cracks due to unsoundness must be distinguished from shrinkage cracks and hair cracks. *Shrinkage* cracks, which often appear on the surface of pats or briquets on account of too rapid drying, appear during setting instead of after the cement is set, and occur as irregular curved lines over the surface which cross and recross each other. *Hair* cracks appear sometimes on cement work when neat cement or cement with too small a portion of sand is used, and sometimes also where such a large excess of water has been employed in mixing that it does not dry off until the cement is set, and then there is deposited a very thin coating of cement which has remained in suspension in the water. *Expansion* cracks are distinguished from those due to improper manipulation of the cement by running from the edges toward the centre of the pat. They widen out as the distance from the centre increases. It is the expansion cracks which show the unsoundness of a cement.

Distortion may be detected, if the cement does not remain attached to the plate upon which it is placed, by applying a straight edge against its lower surface.

Puzzolan cements are tested for soundness in the same manner as Portland-cement, by making up pats and placing them under water when set. About eighteen per cent of water, by weight, is required for mixing Puzzolan cement. This quantity, in fact, is specified by the United States Army engineers, although most authorities allow a variation in quantity for different cements.

For natural-cement less reliance can be placed on tests for soundness, and some specifications omit it entirely. Natural-cement requires about thirty per cent of water by weight.

To obviate the delay required in allowing a cement to set for so many days before it can be determined whether it is of good quality, numerous methods have been suggested for hastening the set and chemical action by means of heat. There has been a great deal of discussion as to just how far the results obtained from hot tests may be used to indicate the character of the cement, but it is generally recognized by foremost authorities in this country and abroad that accelerated or hot tests will give a fair indication of the quality of a cement.

A number of methods of accelerating the action of the cement have been devised. Some of them expose the specimen to moist heat and others to dry heat. One of the simplest methods is that recommended by the Committee of the American Society. After keeping the pat of cement in moist air for twenty-four hours, it is exposed in any convenient way in an atmosphere of steam above boiling water in a loosely closed vessel for three hours. It will be seen that this requires the use of no apparatus, not even a thermometer, except a vessel like a wash-boiler with some kind of a grating arranged above the surface of the water on which to place the specimens after the water has been raised to the boiling point. An alternate method suggested by the Committee of the American Society is that of keeping the pat twenty-four hours in moist air, and then placing it on a shelf in a vessel filled with fresh water. The water is gradually raised to a temperature of 115 degrees Fahr., which is maintained for twenty-four hours. By this method the soundness is determined by the appearance of the pat, as described above.

Although the methods advocated by the Committee of the American Society are probably the simplest and best of any accelerated tests, it may be of interest to outline several other ways of accomplishing a similar result: —

Henry Faija's Method. — As soon as a pat is gauged it is placed on a rack above the water, which has been previously raised to a temperature of 115 degrees to 120 degrees Fahr., in the inner vessel of the Faija apparatus and kept there for six or seven hours. This apparatus consists essentially of a covered double vessel, the inner one containing a rack and a thermometer which runs through a hole in the cover and down into the water below the rack. The space between the outer and inner vessel is filled with water which equalizes the temperature. The temperature of the moist air in the inner vessel will be between 100 degrees and 105 degrees Fahr. After six hours the pat is placed in the water below, and allowed to remain until the next day. If the pat shows signs of blowing, another sample of the cement is spread out to aerate or cool for three or four days, when if it again fails to pass the hot test it is reckoned as unsound.

M. Deval's Method. — Pats are left in moist air for twenty-four hours, then placed in a hot-water bath at a temperature of 176 degrees Fahr. for six days or more, when unsound cement should show signs of expansion. A briquet one day in air and three days in hot

[1] Copyright, 1903, by Frederick W. Taylor, M. E., and Sanford E. Thompson, Associate Member American Society of Civil Engineers.

[2] Progress Report of Special Committee on Uniform Tests of Cement in *Proceedings* of the American Society of Civil Engineers for January, 1903.

bath develops, according to Deval, a tensile strain equivalent to that it would attain in seven days in ordinary cold water. One day in air and six days in the hot bath, the strength is equivalent to one day in air and twenty-seven days in the cold water.

Dr. Michaelis's Method.[1] — Two balls 1½ inches to 2 inches in diameter are placed twenty-four hours in moist air, then placed in a water bath, which is gradually (in not less than thirty minutes) raised to the required temperature and maintained there for three hours. The sample after cooling should be sound and free from cracks or warping. For Portland and Puzzolan cements the temperature of the water is 212 degrees Fahr., and for natural-cements 122 degrees Fahr. The water must be renewed for each succeeding test.

United States Army Method, 1901. — As soon as a pat is set, it is placed in water, which is raised to the boiling point and kept there for about six hours, then allowed to cool. The pat should show no cracks or distortion.

United States Navy Method, 1901.— A pat is allowed to set, and is then immersed in water at a temperature of 212 degrees Fahr. for a period of twenty-four to forty-eight hours, when it should be in good condition.

Oven Tests.[2] — Pats are placed on supports in a basin which contains at the bottom a very small amount of water. This is heated so that all the water is driven off in from three to six hours, and the cement is left dry. While the water remains, the temperature is about 95 degrees Centigrade. The heating is still continued after the water disappears by raising the temperature of the air in the vessel to 120 degrees Centigrade. The interior of the specimen will then be about 100 degrees Centigrade. There is difficulty, Professor Tetmajer remarks, in performing this experiment with uniformity.

Tests of Red Heat. — A ball several centimetres in diameter is placed on a triangle, and heated by a gas-flame. The heating is regulated so that after one-half hour the temperature is about that of the hand, and after the second half hour reaches 90 degrees Centigrade; then the heating is continued until the bottom of the ball is raised to a red heat.

Chimney Expansion Test. — A test which is sometimes used for determining undue expansion is to mix up a small quantity of neat cement and press it solidly into a straight lamp chimney. The swelling of a defective cement will break the glass. This test has no special advantage over the normal tests described, and does not show so clearly the degree of unsoundness.

THE ROYAL GOLD MEDALLIST.

AT the meeting of the Royal Institute of British Architects, June 22, the President, Mr. Aston Webb, R. A., spoke as follows: —

"*Your Excellency, Ladies and Gentlemen,* — As you all know, we are met together to-night to present the Royal Gold Medal for the promotion of architecture, annually given by his Majesty the King to 'some distinguished architect or man of science or letters who has designed or executed a building of high merit, or produced a work tending to promote or facilitate the knowledge of architecture or the various branches of science connected therewith.' The mode of selection is that a name is brought forward by the Council and submitted to the general body of members of this Institute, after which it is submitted to the King for his gracious approval. Among those to whom the medal has been awarded, and who are now no longer among us, are Professor Cockerell, the first recipient in 1848; Sir Charles Barry; Owen Jones; Sir Gilbert Scott; Viollet-le-Duc; Sir James Pennethorne; George Edmund Street; John Pearson; Baron von Ferstel; F. C. Penrose; H. Schliemann; Charles Garnier; Baron von Hansen; R. M. Hunt; and Lord Leighton.

"In selecting a recipient for this honor it has almost become an unwritten rule to select in rotation an English architect, a foreign architect, and a literary man with architectural instincts. This year we have somewhat departed from this rule, and, as you know, our Institute has selected, with the full approval of his Majesty the King, Mr. Charles Follen McKim, of New York, and Mr. McKim has returned us the compliment by crossing the Atlantic especially to receive the medal in person to-night; and here he is, I am glad to say, safe and sound with us this evening, and very heartily we all welcome him. I have said that in selecting Mr. McKim we have somewhat departed from our rule, for we cannot claim him as an English architect, we have not selected him for his literary attainments, and, least of all, can we consider him as a *foreign* architect. No, we have selected him as a highly-distinguished American architect, a very near relation of ours, and a representative man, in order that we may show to him personally and to the whole world of American artists our high appreciation and admiration of the great work that marvellous country is doing on the other side of the world; an appreciation not only of what they are doing, but also of what we expect them to do, untrammelled by traditions, full of youth, energy, imagination and initiative, and supported by almost boundless resources; and we are confident that as time goes on, they will not only develop fresh types and plans of buildings, but they will, though still mindful of the past, clothe those buildings in a language that will be distinctly their own.

"As I have already said, this selection has met with the full approval of his Majesty the King; and I venture to hope that the presence here to-night of the Ambassador himself from the American people to our Court may be taken as setting the American seal on this selection of ours also.

"And now I must introduce you to Mr. McKim a little more in detail, in order that not only those present, but also those who read these proceedings, may fully understand our choice. I may say my facts may be depended upon, for I have received them from the best authority, Mr. McKim himself. He was born in Chester County, Pa., six and fifty years ago, and at eighteen entered Harvard University with a view to becoming a mining engineer. A year later, finding the work uncongenial, he entered the office of Mr. Russell Sturgis, architect, of New York, and in the autumn of the same year, the Atelier Daumet in Paris, where he was prepared for, and admitted to, the École des Beaux-Arts, remaining till the outbreak of the war some three years later. During this time Mr. McKim also travelled in Europe, and visited England in 1869, where, he tells me, through the kindness of Mr. Phené Spiers, Mr. Florence and others, he was able to make profitable use of his time, as far as cricket matches would permit. He also was made an Honorary Member of the Architectural Association. Returning to New York in 1870, Mr. McKim entered the office of the well-known architect, H. H. Richardson, and in 1872, at the age of twenty-five, commenced practice on his own account, being joined in 1877 by Mr. Wm. Rutherford Mead, and in 1879 by Mr. Stanford White, and since that time they have continued their practice as 'McKim, Mead & White.' In 1887 they were appointed architects to the new public library of the city of Boston, now a famous building. In 1889 two fellowships in the School of Architecture, Columbia University, known as the McKim Fellowships, were established. In 1891 Mr. McKim was made a member of the Commission of ten architects from throughout the United States to design the World's Columbian Exhibition at Chicago; in 1894 the firm were appointed architects of the new Capitol building of the State of Rhode Island; in 1897 the American Academy of Architecture in Rome was incorporated under the laws of the State of New York, and Mr. McKim was made President. In 1899 he was elected a member of the Academy of San Luca, and in the same year was appointed to serve as a member of the first Municipal Art Commission of the city of New York. In 1901 Mr. McKim was appointed a member of the Park Commission for the improvement of the park-system of the District of Columbia, and assisted in drawing up the magnificent scheme, photographs of which are exhibited here to-night. Here there is to be an avenue 1,600 feet wide and a mile and a half long, architecturally treated at various points, with great public buildings incorporated in the scheme. The cost is put at some three to four millions, some half of which has already been voted. A bill has also passed Congress for locating the memorial.

"Mr. McKim was elected President of the American Institute of Architects in 1901, and reëlected in 1902, and in the same year appointed by President Roosevelt to restore the White House, and also as architect for the new Army War College.

"Of the buildings erected[3] some idea may be gained from the

[1] Reported by Dr. Michaelis as Chairman of Committee at the Fifth International Convention for Unifying Methods for Testing Construction of Materials, at Zurich in 1895.

[2] Quoted from Tetmajer by M. H. LeChatelier in his report to the French Commission.

[3] The following is a complete list: — 1879–1893: Casino at Newport, R. I.; House of Louis C. Tiffany, Esq., New York; Houses of Henry Villard, Esq., New York; The *Judge* Building, New York; The Imperial Hotel, New York; House of the Hon. John A. Andrew, Boston, Mass.; The Algonquin Club, Boston, Mass.; The Public Library, Boston, Mass.; Country House of Mrs. William Edgar, Newport, R. I.; The Freundschaft Club, New York; The New York Life Insurance Co.'s Buildings at Kansas City, Mo., Omaha, Neb., and New York; Country House of C. J. Osborn, Esq., Mamaroneck, N. Y.; Country House of Colonel Elliott F. Shepard, Scarborough, N. Y.; St. Peter's Church, Morristown, N. J.; House of General Charles A. Whittier, Boston, Mass.; House of F. I. Amory, Esq., Boston, Mass.; House of the Hon. Richard Olney, Boston, Mass.; Deutscher Verein, New York; First Methodist Episcopal Church, Baltimore, Md.; Judson Memorial Church, New York; Country Houses of E. D. Morgan, Esq., at Newport, R. I., and Wheatly Hills, L. I.; House of the Hon. J. Hampden Robb, New York; Power-house and Office-building of the Broadway Cable Railway, New York; The Bowery Savings-bank, New York; The Century Club, New York; The Power-house of the Niagara Cataract Co., Niagara Falls, N. Y.; The Germantown Cricket Club, Philadelphia, Pa.; The Metropolitan Club, New York; Country House of H. McK. Twombley, Esq., Madison, N. J.; Office-building of Messrs. Cornelius & W. K. Vanderbilt, New York; The Washington Memorial Arch, New York; The West Point Battle Monument, West Point, N. Y.; The Walker Memorial Library, Bowdoin College, Brunswick, Me.; The Public Library, Naugatuck, Conn.

1893–1903: The Agricultural Building and New York State Building at the World's Columbian Exposition, Chicago, Ill.; Building of the New York *Herald*, New York; Museum Building of the Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.; The Columbia University, New York; The University of Virginia, Charlottesville, Va.; The University of the City of New York, New York; Radcliffe College, Harvard University, Boston, Mass.; Building of the Medical Department of Cornell University, New York; Building of the Architectural Department, Harvard University, Cambridge, Mass.; The Harvard Union, Cambridge, Mass.; Campus Fence and Gates, Harvard University, Cambridge, Mass.; The Harvard Club, New York; The University Club, New York; The Capitol of the State of Rhode Island, Providence R. I.; Symphony Hall, Boston, Mass.; The Cullom Memorial Building, West Point, N. Y.; The Public Library, Orange, N. J.; The First Congregational Church, Naugatuck, Conn.; The Detroit Savings-bank, Detroit, Mich.; The Carnegie Branch Libraries, New York; House of George A. Nickerson, Esq., Boston, Mass.; Country House of Herman Oelrichs, Esq., Newport, R. I.; House of Thomas Nelson Page, Esq., Washington, D. C.; Country House of Frederick W. Vanderbilt, Esq., Hyde Park, N. Y.; Country House of Ogden Mills, Esq., Staatsburg, N. Y.; House of Hon. Levi P. Morton, New York; House of Joseph Pulitzer, Esq., New York; House of R. W. Patterson, Esq., Washington, D. C.; Country House of Clarence H. Mackay, Esq., Roslyn, L. I.; Country House of the Hon. William C. Whitney, Roslyn, L. I.; Town House of the Hon. William C. Whitney, New York; The White House (Executive Mansion), Washington, D. C. — Restoration.

Now in Course of Construction: The Bank of Montreal, Province of Quebec,

splendid series of photographs and drawings Mr. McKim has kindly shown us here to-night. He seems equally at home with a palace or a bungalow, with a university or a railway-station, with laying-out a great park scheme or arranging a charming little formal garden. In all I think you will find artistic feeling, nobility of plan, breadth of treatment, absence of unnecessary or meretricious ornament, and a suitability of purpose. The style, based largely on Italian examples, shows the influence of French training, and, while founded on traditional lines, appears to me to show just that amount of individuality required, and without which the best work must be dull and uninteresting.

"Then, again, Mr. McKim has set all us architects an example by the opportunities he has given to painters and sculptors to further adorn his works. The decoration of the Boston Library by Mr. E. A. Abbey, who I am glad to say is here to-night, and by Mr. Sargent, who would have liked to have been here but is still abroad, is a case in point, and is well illustrated by photographs here to-night.

"And now, Mr. McKim, it only remains for me to present you with this medal as an English token of our admiration and esteem of yourself and your colleagues. May you long live to still further adorn your country with your works!"

The Chairman then placed the medal round Mr. McKim's neck, amid loud applause.

MR. MCKIM, in response, said: —

"*Mr. President, Your Excellency, Ladies and Gentlemen,* — I am no speaker, and if I were it would be quite beyond me to adequately express to you my appreciation and deep sense of obligation to his Gracious Majesty King Edward and to the members of this Royal Institute of British Architects. The broad philanthropy which created this medal, not alone for British subjects, but that it might help and encourage the successful development of the art of architecture in other countries, was characteristic of the Most Gracious Queen whose memory we, next to you, hold in veneration. That it should have a second time within a single decade come to our shores is indeed cause for felicitation, since it attests, in lasting form, the progress and achievement your eminent body has been pleased to recognize in the work of your younger colleagues in America.

"The medal which you do me the high honor to bestow on me is pure, at least, in virtue of my accidental Presidency of the American Institute, but is, I feel, to be regarded in a far larger sense than as a personal recognition of the ties which unite the builder's art on both sides of the Atlantic. As a spur and incentive, and as a token of the friendship and respect that for many years have been growing up between our two bodies, I accept with grateful pride this medal, tendered, as to my countrymen, by the Royal Institute. I accept it for the whole profession in the United States, and I accept it for my associates of twenty-five years, to whom I owe everything. As the bearer of many messages from across the seas, I cannot let such an occasion as this pass by without, at least, briefly adverting to the ties which have united us in the past, and which must render the development of our future of something more than passing interest to you. I will add also a word concerning recent events on our side of the water.

"The early buildings of the New England coast, dating back to the eighteenth century, and, more rarely, to the seventeenth, from the once vice-regal town of Portsmouth, to Charleston, S. C., have happily descended to us despite political revolutions. Notwithstanding their simpler forms, both of construction and design, made necessary by slender means and the circumstances of transplantation, they still reflect the mother country in their excellence of construction as well as sound and correct taste. Precisely the most interesting, and in their sphere the most admirable, architectural monuments of my native land, private dwellings and public buildings alike, are those that most strongly recall their English prototypes. Our obligations, for instance, to Sir Christopher Wren are very imperfectly understood even at home, yet the cities of the Atlantic seaboard, especially in New England, abound in examples showing the influence of his school.

"The struggle of these landmarks for existence in the advancing tide of commercial prosperity before which they are gradually being swept away is a melancholy daily spectacle; not alone deplorable in the loss of historic monuments, but for the lessons they invariably teach of sound proportion, simplicity and good manners. Happily some of the best examples remain to us. At the seat of Government, for instance, our Capitol, and the home of the President, the White House, are both singularly animated by a pure taste and devoted love of beauty, not to mention the City-hall and the old Department buildings of the city of Washington. Of these, for our information at home, as well as yours, let us gratefully acknowledge that the Capitol, though enlarged and changed since, was originally designed by one William Thornton, the White House by a certain James Hoban, while the City-hall and old Department buildings were the creation of a man of the name of Hadfield — *all Englishmen!*

"I can well remember the thrill of surprise and pleasure which I experienced on my first visit to England, more than thirty years ago, in the discovery of a strange familiarity in the appearance of things, and in the sense of not being after all so far from home. Though I did not understand it then, the reason, as has been shown, was not far to seek. I will venture to refer to one more building, of the era which we call "Early" and you ingloriously "Late," albeit of the period of Adam — the Octagon.

"Our Institute, which has urged upon governments, national, state and municipal, the duty of preserving historic monuments, has itself recently secured possession of one of the historic houses of America, known from its shape as the 'Octagon,' and designed by the same William Thornton, architect of the Capitol. Here in the early days was dispensed a liberal hospitality by President Madison, whose home it was. Under its roof, too, the Treaty of Ghent was signed. The house was finished in a manner befitting its importance, and to-day is in an excellent state of preservation. Thus the expressed desire and often-recurring efforts of our Institute to secure for itself a permanent home have been accomplished after nearly half a century of existence. May it typify to those who assemble in it, as well as to the people of the city of Washington, the spirit of public service.

"Our Institute has ample reason for felicitation in both the increase and betterment of our own schools of architecture, in Harvard, Columbia, Pennsylvania, Cornell and Chicago universities, as well as in the admirable and still older foundation of the Institute of Technology in Boston. The movement to endow an American Academy of Fine-Arts in Rome on the general lines of the French Academy in the Villa Medici is not new. Till now dependent for support upon the insufficient means at the command of the incorporators (members of the Institute), the number of scholars has of necessity been small, and the conveniences for work not such as would be afforded by an older, well-equipped and well-endowed institution. Nevertheless, in spite of its vicissitudes, such has been the quality of the men and work turned out, so strong the conviction of those most deeply interested in the need for an institution offering a post-graduate course intended only for those who shall be already technically well equipped, that a bill for the incorporation of the American Academy in Rome by Act of Congress, and asking the protection of the United States Government, was introduced in 1901 by the late Senator McMillan. The persons named as incorporators, besides the leading architects, painters and sculptors, include the great universities and technical schools, represented by their Presidents, the Secretaries of State and War, the Librarian of Congress, the Government architect, and a considerable number of names of men chosen from the community at large known for their interest in art and art education. This bill passed the Senate, and was favorably reported to the House; but owing to the legislative conditions prevailing in the latter body during the closing weeks of the session, it failed to become law. I am happy to say that it will be reintroduced in the coming Fifty-eighth Congress and is considered to have every prospect of success. Indeed, we seem to be living in a new age, not only in our private enterprises, but in our relations with the Government. It was no small thing that a committee of the United States Senate, under the leadership of the deeply-mourned Senator McMillan, called into consultation, officially, the Institute and accepted the advice of its Committee in the formation of a commission to prepare plans for the improvement of the park-system of the District of Columbia, including the location of public buildings.

"Following this lead have come frequent requests from Government officials on the various and often perplexing problems of their departments, so that, informally and unofficially, there has come to pass a seeking for expert advice as gratifying as it has been unusual. The forces which have brought about plans for the improvement of the National Capital are acting throughout the land. Not only in the Atlantic seaboard city of New York and the cities of the Lake region like Buffalo, Cleveland and St. Paul, but even from far-away Seattle, on the Pacific Coast, comes the news of attempts to treat the city as a unit and to develop a municipality as a consistent work of art. It is worthy of note also that as the star of progress takes its western way, the effort at improvement is made with increasing vigor in both enthusiasm and money. As evidence of the times, and among the measures voted by the last (Fifty-seventh) Congress for new buildings to be erected within the District of Columbia alone, I will quote the substance of a single paragraph from the Report of the Senate Commission of the District of Columbia, dated March 14, 1903: —

"'The Fifty-seventh Congress, besides the restoration of the White House, authorized the construction of the Army War College and the Engineer School of Application; a building for the National Museum . . .; the Union Railroad Station; an office building for the use of the members of the House of Representatives; a Municipal Building for the District of Columbia, and a Hall of Records. The cost of these buildings completed will approximate not less than fifteen millions of dollars, or over three millions sterling.'

"I cannot conclude without an expression of appreciation for one whom your eminent body so recently did honor. After nearly half a century of successful endeavor, during which Mr. Hunt held aloft the banner and fought the battles of the Institute, and in the fulness of his powers, at a time when his influence was greatest, he was suddenly taken away."

THE CHAIRMAN said they were honored that evening by the

Can.; The New York Terminal Station, Pennsylvania Railroad; Library Building for J. Pierpont Morgan, Esq., New York; The Army War College and Engineers' School, and Washington Barracks, Washington, D. C.; The New Bellevue Hospital, New York; Building for the Gorham Company, Silversmiths, New York; Building for Tiffany & Company, Jewellers, New York; Building for The Knickerbocker Trust Company, New York; Officers' Mess Hall and Quarters, West Point, N. Y.; The Harmonie Club, New York; House for James Stillman, Esq., New York; House for L. C. Hanna, Esq., Cleveland, O.; House for T. B. Wanamaker, Esq., Philadelphia, Pa.

presence of the American Ambassador, Mr. Choate, and they would be glad to hear a few words from his Excellency.

Mr. Choate said he was present in a three-fold capacity: first, and he thought most important, as the personal friend of Mr. McKim; second, as a Harvard man, representing a University which was so proud of Mr. McKim; and third, as the official representative of his country, upon which, in honoring Mr. McKim, the Institute had conferred a lasting and highly appreciated honor. He knew how dangerous it was for a layman to appear and speak before a company of distinguished professional men, but he believed that in either of the three capacities he had mentioned he could say a word or two without coming into conflict with that technical criticism which arose in the minds, if it did not fall from the lips, of those who listened to one who was emphatically a layman. It had been his good fortune to know Mr. McKim from boyhood — he was sorry to say it was from Mr. McKim's boyhood and not from his own — and it was not exaggerating the estimate of his friends to say, in view of his whole-souled attention to his art, to the sweetness and simplicity of his character, and to his enthusiasm for the profession which he so highly honored, that from the beginning of his career they thought that Mr. McKim would receive, if not that medal, the highest honor which his professional brethren throughout the world could confer upon him. As a Harvard man he rejoiced to be there that evening. Perhaps they knew — if not, he would tell them — that Harvard bore the same relation to American life that Oxford did to the life of Great Britain, and Harvard was particularly proud of this son whom they had selected for that distinction that night. She had already conferred upon Mr. McKim one of her honorary degrees, and he believed that the day was not far distant when she would again select him to confer upon him the highest degree known to her. As the representative of his country, he had no hesitation in saying that if they put it to the vote of the whole American people who among her distinguished sons was most worthy of this honor, by a practically unanimous vote they would have selected Charles Follen McKim. And if they had called for a vote of the Congress of the United States as representing the power and judgment of the whole community, they, too, would have selected him, because, with their approval, he had been selected to take an important part in the Commission — a Presidential Commission, corresponding very much to a Royal Commission here — as to the laying out, the restoration of the city of Washington — a development of the city of Washington upon the lines and according to the plans which received the approval of the Father of his Country, George Washington, more than 100 years ago: not only their capital city, but their Republican palace, the White House — a symbol of the homely, the unambitious, which did not venture to compete with any of the palaces of the Old World — the home of their President, which every ingenuous American boy was taught to look to as his possible future residence — not only the White House, but the city itself, had been laid out upon the more generous plans of the Father of his Country instead of upon the mistakes, should he say, which subsequent generations had allowed to be developed. It was thought a few years ago that it would be wise to select a commission of competent architects to see whether the original plans of Washington could be again brought to life and restored, and put into practical operation both as regards the White House and the city itself. It was no secret that to the genius of Mr. McKim and his associates on that commission was to be ascribed the success which had resulted in the complete restoration both of the palace itself and of the city of which they were so proud. The President of the United States, from his life-long friendship and heartiest sympathy with Mr. McKim in all the successes and incidents in his career, would have joined in the approval of the selection of Mr. McKim for the honor which had been conferred upon him. It was his (the speaker's) good fortune to have known Mr. Richard Hunt, who was honored by the Institute some ten years ago in the same way, and he thought he could say of both gentlemen that, in the immense development of their art which had taken place in the United States during the last thirty years, they were entitled to a very great share of the credit. After the Civil War, and when it was established once and forever that the United States was to be a nation, one and inseparable — an indestructible union of indestructible States — there grew up, throughout the length and breadth of the land, an ambition to improve, to adorn, to glorify its buildings, both public and private; and, as Mr. McKim had said in his address, from Boston, on the shores of the Atlantic, to Seattle, on the shores of the Pacific, this purpose grew up of acquiring, of having, of living in buildings remarkable alike for their beauty and their utility, and of having public buildings worthy of the municipalities and of the country — of their wealth and power — which they represent. This had been the universal idea, and the result was that America had been, is now, and was likely to be in the future, a perfect paradise for architects. There had grown up, not a school only, but many schools of architecture connected with the great universities, and they were sending forth year after year numbers of young men highly qualified for the pursuit of the profession. These young men were following in the footsteps of Hunt and McKim, and, if he mistook not, in the future there would be added to this fraternity of architects — for he believed they were one great fraternity throughout the world — a noble contribution from the United States, of whom, like the recipient of the medal that night, they would have reason to be proud.

The Chairman called on Sir L. Alma-Tadema, as one interested in American art, to say a few words.

Sir L. Alma-Tadema said he was glad to welcome Mr. McKim, because Mr. McKim was more or less one of them. In the Royal Academy they had always felt that American artists belonged to us and we to them, that artists were one great fraternity. He knew there were many beautiful things in America, for a friend of his once remarked that if they wanted to write a history of the art of the nineteenth century, they could not do it without going to America, and he believed the same remarks applied to architecture.

Mr. E. A. Abbey, R. A., who was also called on by the Chairman to address the meeting, said he was not accustomed to public speaking; he tried to express himself in another way. The Chairman had referred to the great scheme of the American School in Rome, which was a beginning of a sort of Renaissance of the wedding, he might say, of the three arts of painting, sculpture and architecture, which had been separated too long. This School in Rome, which owed so much to Mr. McKim's energy and devotion, was one which he hoped one of these days English students would go to as to a sort of Mecca — a sort of University of the Fine-Arts, which by that time would be much more brought together. He was glad to be present that evening to testify to Mr. McKim's devotion to his art.

The Chairman said there was a request which they would like to make to Mr. McKim. When Mr. McKim went back to America they would not have the advantage of hearing him as they would like; but the Institute had a list of honorary corresponding members, and they would all like Mr. McKim to consent to become one of their honorary corresponding members, so that, in that way, they might have the advantage of hearing from him from time to time what was being done on the other side of the Atlantic.

Mr. McKim: "I shall be extremely glad to be associated with you in that way."

The meeting then concluded.

THE CITY OF SALONA.

THE buried city of Salona, where Diocletian was born, is four miles from Spalato, where in A. D. 313 he died. It was established as a Roman colony in the first century before the Christian era, and must have been a very large city, for traces of the walls are distinguishable for miles (writes a correspondent of the *Times of India*). Its greatest diameter is along the line of the Castelli Bay, but it stretches up the gentle acclivities at the foot of the first range of the Dinarics that separate Dalmatia from Bosnia and Herzegovina. Before the recession of the sea it had a good port and a fine situation, for it borders the southern end of one of the most beautiful tracts in Dalmatia, the Riviera delle Sette Castella. Its opulence must have been a source of envy to the incessant procession of marauders who fell upon this coast. It was raided by Odoacer in the fifth and by Totila in the sixth century, and was finally destroyed by Goths and Croats in 639. From the date of its abandonment it has been left at the mercy of rain and winds and desolating dust. It has to be dug up out of its grave where it has been partly protected but entirely forgotten under 8 to 10 feet of mould. These excavations began in 1847, and they have continued since with the slowness and interruptions so characteristic of dear, drowsy Austria. It is hard to understand why so much money and international coöperation are devoted to Babylonia when archæological treasures of deep and pathetic interest to the Christian world can be laid bare close at hand at very little cost. For the soil over Salona can be conquered with the spade. If it had nothing but its Christian antiquities to show, its tombs of the saints whose names are treasured in the martyrology of the Diocletian persecution, no Christian traveller could possibly pass it by. To move among these tombs, to touch the dust and reverently tread the mosaics of these old basilicas just unearthed from the fields that, half desolated, have protected them, is like one's first visit to the Catacombs. That man, if he be a Christian, is not to be envied who has not felt the tide of emotion surge within him at such a moment. Salona gave to the Church one of the greatest persecutors; but Diocletian disappeared, leaving the victory to the martyrs whose blood and dust make these sanctuaries holy. The episcopal basilica, on a lower terrace than the basilica of the cemetery, is almost entirely uncovered. Many of the little cubes in the mosaic of the apse have parted from the mortar, and something should be done at once to fix and protect them from our insuppressible and contemporary Goth. The pediments of the sixteen columns of the nave are in their place, but the shafts are in fragments. The design is perfect. It is curious to note the portion of the edifice annexed to the church, but outside it, which was set apart for catechumens and for Christians undergoing the canonical penances. The church covers the site of a former Roman villa, for under a portion of the foundations is visible a handsome mosaic floor delineating one of the muses. The name of the muse — Terpsichore, if I remember rightly — is embedded in the plan of the picture. But the basilica of the cemetery of Monastirine on the upper ground is one to which visitors

mostly flock. Underneath and buried in its walls and all round the plateau are the graves and sarcophagi of the Christian dead. These sarcophagi have the massiveness of monoliths. The tops, sloped like a double roof, have the corners finished in curved pyramidal segments. Great force must have been employed to scatter such dead weights of limestone in reckless disorder over the ground. The entire floor of the basilica is covered with sarcophagi, all desecrated, and underneath the church are family vaults into which you can look. The monogram of Christ is everywhere. The evidence goes to show that the Catholics of the time had men of wealth among them.

BOOKS AND PAPERS

THE sculptures of the Parthenon form probably the most conspicuous example in the world's history of a vast scheme of plastic decoration consistently devised as a whole and executed in a manner which has never been in any respect equalled. The study of these sculptures shows how thoroughly the Greek art at its height was imbued with the spirit of unity and how extraordinarily the artists of that time were able to unite the highest perfection of sculptured art with the utmost harmony in general conception, correlation and subordination to the building as a whole. It is in these respects that Greek sculpture shines preëminently and it is this unity in diversity, subordination in individuality, that are made particularly manifest in the work [1] on the subject which Dutton has just published. The author, by his long study and familiarity with the antiquities in the British Museum, is qualified to speak as an expert in matters of observation and detail, and these are points with which the book is specially occupied. The wealth of sculpture about this building is something marvelous. The frieze around the cella is 522 feet in length, sculptured all along with figures nearly half life-size, in many parts densely crowded till the marble could carry no more, the whole in very low relief and executed with marvelous detail. There are ninety-two metopes, each consisting of a group of two figures two-thirds life-size, in the highest possible relief and full of the most beautiful workmanship. Each of the two pediments is filled with an immense group of statues, the smallest equal to life-size and the central figures colossal, and the crowning work of all was the statue of Athena in gold and ivory, compared with which the external sculptures of the Parthenon, extraordinary as they were in extent, in grandeur and in beauty, were of secondary importance. This statue appears to have been built up with a framework and backing of wood, but entirely covered with beaten gold for the garments and ivory for the exposed flesh. It stood 40 feet high and the grandeur of a temple properly fitted to receive so magnificent a statue can hardly in these days be fully appreciated. It is extremely probable that color was lavishly used to help out the architectural forms and to adorn the interior of the temple. It will be remembered that the art building erected in Nashville at the time of the Tennessee Exposition was as nearly as possible a replica of the Parthenon and the enthusiasm which this copy aroused in all classes and conditions of visitors can give us some idea of how passionately the magnificent original must have impressed itself upon the hearts and the minds of the singularly artistic Athenians of the time of Phidias.

Professor Murray's book is the work of a careful, painstaking archæologist, with a love for art. His enthusiasm for his subject leads him to see some things and to draw some conclusions with which we cannot always agree. As, for instance, he seems possessed with the belief, as he puts it, that the sculptor of the Parthenon was the first to lay down the rule that reliefs in a diffused light must be kept low, in exposed lights as high as possible. However this may be as a practical rule, it is not the reason for the difference in relief which we find in the Parthenon between the different groups of statuary. It seems fairer to assume that the subtile minds of the Greek artists felt that the pediments required a bold treatment of heroic proportions in full relief because they represented the most emphatic decorations of the building. Likewise a delicate flat treatment of the metopes would be lost by comparison with the bold cutting of the triglyphs and the heavy emphasis of the horizontal line. On the other hand, the low relief of the frieze was not due to its being in the shadow, but rather because the frieze was treated in a thoroughly decorative sense and excessive relief was avoided with much the same feeling that in our decorative paintings of to-day we strive to avoid sharp contrasts of planes. This sufficiently accounts for the variation in the treatment of the sculptures without the slightest reference to light. The metopes and the pediments were meant to strike one at a glance, to throw their whole force and impulse toward the beholder, while the beautiful frieze was for after and more quiet study, and well does it repay study. Ruskin has most beautifully shown us how cleverly the planes of the sculpture were crowded together. Professor Murray brings out one detail which has been noted before but which is so cleverly treated that we do not appreciate how far it was conventionalized, namely, the horses' tails and manes. We are accustomed to think that a long, flowing tail is a beauty in a horse. On the whole Parthenon frieze there are but two or three instances of this, and for most of the horses it is both curious and instructive to observe with what care the sculptor has studied to hide their tails, and the artistic instinct was perfectly right, as may be gathered from the fact that no one notices the concealment.

The book is thoroughly commendable in its make-up and in the treatment of the subject matter. The illustrations are masterly half-tones from photographs or photogravures, including also, moreover, the numerous drawings by Carrey which were made in 1674 before the explosion which so cruelly mutilated the building. In reading the book one could at times wish that it were less detailed and technical and that the writer did not undertake to attribute quite so much to the sculptor and the sculptures in the way of motives and intent which hardly seem warranted by the remains. But we cannot perhaps expect the higher criticism to be applied rigidly to art and for what the work aims to do it has certainly accomplished it in a most admirable manner.

MR. MIDDLETON'S little book [2] is rewritten and enlarged from a smaller one, now out of print; and, although concise in treatment, it gives all the essential elements of architectural perspective. It may be observed that architectural perspective in England is a different thing from what it is here. Mr. Middleton's system is that of picture-plane, point of sight, and actual plan, tacked to the upper part of the board; a system which has been obsolete among architectural draughtsmen in this country for many years. He understands, it is true, the method, universally used here, of the perspective plan and measuring-points, and gives a clear and intelligent description of it, observing that it is generally in use, even in England, "by all save architectural draughtsmen."

Apart from the difference in the methods of setting out, the two perspective processes are essentially the same, and some practical suggestions are made which are worth remembering. Where the picture-plane and the separate plan are used, Mr. Middleton says that the angle included between two lines drawn from the point of sight to the extreme angles of the plan should not exceed sixty degrees, as otherwise there will be unpleasant distortion; and, for a similar reason, the angle made with the horizon by a line drawn from the point of sight, set off laterally, to any part of the building, as shown in the perspective drawing, should not exceed forty-five degrees. Both these are excellent suggestions; and some more, of great value, are to be found in the chapters on Shadows and Reflections, as well as in those on Isometric Drawing and Finished Perspective Drawing. This last is illustrated by reproductions of drawings by half a dozen of the most accomplished perspective draughtsman in England, giving a variety of beautiful work, on which judicious comments are made. We are so accustomed to seeing rather inferior perspective drawing in the English professional journals that we sometimes forget the surpassing merit of the very best English work. Proud as we are, and with reason, of the skill of many of our perspective draughtsmen, few of them have quite the artistic sense of the very best Englishmen, even where pen-and-ink drawing is concerned; while in water-color work, or in the beautiful Payne's gray and sepia, the Americans are still far behind their Transatlantic rivals.

ILLUSTRATIONS

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

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[1] "*The Sculptures of the Parthenon.*" By A. S. Murray, LL.D., F. S. A., Keeper of Greek and Roman Antiquities, British Museum. New York: E. P. Dutton and Company. 1903. Price $7.

[2] "*The Principles of Architectural Perspective*"; prepared chiefly for the Use of Students; with Chapters on Isometric Drawing and the Preparation of Finished Perspectives. By G. A. T. Middleton, A. R. I. B. A. Illustrated. London: B. T. Batsford, 94 High Holborn. 1903. Price 2*s.* 6*d.*

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NOTES & CLIPPINGS

WASTE BY AMERICAN COLLECTORS. — Herr Bode, a well-known German art writer, contributes to *Kunst und Kunstler* of Berlin a long article deploring the alleged waste of American money upon more or less doubtful works of art sold as of value and antiquity. He greatly praises the collections made in this country by Mrs. Gardner and Messrs. Shaw, Marquand, Havemeyer and Ryerson, but declares that other collectors have not been so fortunate or so wise. The Raphael portrait of Ripalda, he says, was refused by every famous museum in Europe at half the price paid by Mr. Morgan. Its authenticity is unquestioned, but it is called a poor and uninteresting work. Upon the other hand the collections of small objects and bric-à-brac bought by Mr. Morgan from Mannheim of Paris and Gutmann of Berlin are praised as containing pieces of priceless value in German silver, bronze, enamel, etc. Senator Clark, according to Herr Bode, paid five times the value of the Preyer collection of paintings he bought in Vienna last year. The Roman collection of alleged masterpieces by Raphael, Titian, Rubens, Correggio, Rembrandt, Perugino, Botticelli and other masters, sold to Mr. Walters of Baltimore for a sum said to be nearly a million dollars, is characterized as beneath criticism. The fact that the Italian Government, which collects a tax of one-fifth upon the value of all antique works of art sold for export, asked for only $8,000 upon this Mazzarenti collection is considered as conclusive by Herr Bode, who ends his article by saying that while all the pictures and works of antique art bought by Americans in Europe during the last ten years do not equal in value one such collection as that left recently to Paris by the late M. Dutuit, the effect upon artists has been unfortunate; for when the good work of living men is ignored the result is discouragement or a temptation to manufacture "antiquities," to which many competent painters have succumbed. — *N. Y. Evening Post.*

PREHISTORIC ART IN DORDOGNE, FRANCE. — Another grotto in the limestone hills near Eyzies, in Dordogne, France, has been explored for prehistoric pictures with considerable success. Messrs. Capitan, Breuil and Peyronny have examined the Bernifal cave and found it the fourth cave of that neighborhood which shows mural decorations. There are three connected chambers about 250 feet long, and in the second, under a thick coating of stalagmites, occur twelve groups of figures amounting in all to thirty-six carvings. There are heads of reindeer and wild goat, an antelope with a head resembling the saiga now living in Northern Siberia, a bison or auerochs, very true to the life; a little horse like the wild horse found in Mongolia by Prejevalski, and several mammoths with long, curving tusks, high foreheads, and a covering of tufted heavy hair, like the specimen recently obtained entire from the frozen tundras of Northern Siberia. A puzzle is the frequent recurrence of triangles, even on the flanks of the animals represented. They are supposed to represent huts or tents, and perhaps signify that the beasts have been marked as the property of the tribe or totem-kin to which the cave belonged. A reason for this very serious artistic effort on the part of prehistoric men in Southern France, an effort which men in such a stage would not make from æsthetic instinct or for their pleasure in art, has been given as follows, by Hamy: Carving these wild beasts on the rock, they imagined that they were bound to them by magic, so that when they sallied forth to hunt, the game would be unable to escape. This is supposed to account for the drawings with which the African bushmen and the Australian black fellows decorate certain caves. One of the huts more elaborately carved seems to consist of skins and turf heaped on a framework of wood — in all probability one of those half subterranean dwellings that are known in Western Asia and also on the northwest coast of America. — *N. Y. Times.*

GUATEMALA CATHEDRAL. — The old churches in Central America are, or are intended to be, in the Italian style. Guatemala Cathedral is the only correct and fine church in the country. It was built by an Italian architect in the last century, after the destruction of the cathedral of Old Guatemala by an earthquake. In general correctness of style it is perhaps equal to St. Paul's Cathedral, London; and the churches generally are nearly as good as provincial churches in Italy. This cathedral is perhaps about 300 feet long. There is a lady chapel east of the high altar with an apsidal end. The nave, which is about 35 feet wide and 40 to 45 feet high, has double aisles, each 15 to 20 feet wide, north and south clerestory and transepts, or quasi-transepts with chapels. The walls are of great thickness and the windows rather small for the size of the building, which has a gloomy appearance. The window frames are of wood, and do not open sufficiently to ventilate the buildings properly. The orientation of the churches generally is correct or nearly so; and the principal entrance almost always in the west front or portico. Guatemala Cathedral has a dome over the choir. The other churches generally have a kind of dome or dome-covered tower. It has a good peal of deep-toned bells; and the organs, clocks and bells generally are good, and of Spanish manufacture. The roofs, both of the naves and aisles, are plain semicircular stone vaults, covered externally with stucco or cement; there is no timber, lead or slate used. — *The Architect.*

PIETRO TORRIGIANO, SCULPTOR. — A bronze bust in relief by Pietro Torrigiano, the sculptor who boasted to Benvenuto Cellini that he had broken Michael Angelo's nose for teasing him when they were boys together in the Medici Gardens at Florence, has been placed in Henry VII's Chapel, Abbey of Westminster. Torrigiano went to France and England; but he is better known by the slashing method he adopted to remodel Michael Angelo's nose than by the bronze tomb of Henry VII. The relief is a portrait of Thomas Lovell, K. G., Chancellor of the Exchequer, Speaker of the House of Commons, and High Steward of the Universities of Oxford and Cambridge. He was executor of the estates of Henry VII and Lady Mary Tudor, his mother. He died in 1524. Torrigiano is spoken of in the State papers of Henry VIII as "Peter Torrisany of the City of Florence." Beside the bronze tomb of Henry VII, which was finished about 1519, ten years after the King's death, Torrigiano made the monument to Dr. John Young in the Rolls Court, Chancery Lane, and a portrait round in plaster of Henry VIII at Hampton Court. Lovell is shown as a man with pronouncedly firm features, massive chin, and stern mouth. The insignia of the Garter has been used as a decorative adjunct to the quaint headgear of the period. A modern frame ornamented with Tudor roses incloses the relief. It was made for the archway above the entrance to a manor-house built by Thomas Lovell in the County of Norfolk. — *N. Y. Times.*

INTERNATIONAL EXHIBITION REPORTS. — The reports of the juries for the Great Exhibition of 1851 in Hyde Park formed a single volume. Although containing some valuable information, it was not appreciated, and copies may now be obtained for a shilling or less. Afterwards an illustrated catalogue came out in four volumes. For all the international exhibitions held since 1851 reports were prepared, and their voluminousness has increased as time advanced. The reports on the Paris Exhibition by French experts will comprise fifty-two octavo volumes of about 600 pages each. Six of them are the work of M. Picard, the Commissary general. It was arranged that the volume on "Painting" was to be produced by M. Larroumet, the Secretary of the Academy of Fine-Arts. Owing to illness he was compelled to decline the task. Eventually it was undertaken by M. Dubufe, the painter, and it was completed a few days ago. The series is ended, and can be printed. — *The Architect.*

THE IRON PILLAR OF DELHI. — The famous iron pillar of Delhi, India, is a solid shaft of wrought-iron, 16 inches in diameter, and of a length that is variously reported. The total height above ground is 22 feet, including a capital of 3½ feet. Major G. A. Cunningham, R. E., C. S. I., Director-general of the Archæological Survey of India, reported in 1863 that the total length of the pillar is upward of 48 feet, and possibly 60 feet. The lower diameter is 16.4 inches and the upper diameter 13.5 inches. The pillar contains about 80 cubic feet of metal and weighs about seventeen tons. The metal was for a long time reputed to be bronze, owing probably to a curious yellowish shade on the upper part. A sample from near the base was analyzed by Dr. Murray Thompson, and found to be pure malleable iron of 7.66 specific gravity. The metal is, of course, charcoal iron, made directly from the ore in small billets; but how it was welded up no one can tell, as no record exists of any early method of dealing with great masses of wrought-iron. An inscription, roughly cut or punched upon the column, states that Rajah Dhara subdued a people in the Surdhu, named Vahlikos, and obtained with his own arm an undivided sovereignty on the earth for a long period. The date of the inscription has been referred to the third or fourth century after Christ, but on this authorities are at variance, as the style of writing is supposed by some to belong to a later period. According to tradition, the iron pillar was erected by Bilan Deo, the founder of the Tomara dynasty, who was assured by a learned Brahmin that, as a part of the pillar had been driven so deep into the ground that it rested on the head of Vasuki, King of Serpents, who supports the earth, it was now immovable, and that dominion would remain in his family as long as the pillar stood. The rajah, doubting the truth of the Brahmin's statement, ordered the pillar to be dug up, when the foot was found to be wet with the blood of the serpent king. The pillar was again raised, but, owing to the rajah's incredulity, no means could be found to fix it firmly, and it remained loose (dhila) in the ground, and this is said to have been the origin of the name of the ancient city of Delhi. — *Cassier's Magazine.*

A BOAT OF RE-ENFORCED CONCRETE HALF A CENTURY OLD. — The idea of increasing the resistance of masonry by iron cramps is very old. With the development of the cement industry, and its sister industry of artificial stone-making, at the beginning of the last century, in England and France, the necessity of reënforcing concrete forms by iron wires became apparent. The knowledge of utilizing iron wire for this purpose can be considered as having been quite general in 1850. The Patent Letters of J. L. Lambot, of Carces, France, issued in 1855, contain the idea of replacing timber in shipbuilding by reënforced concrete plates made of mortar laid on a core of iron netting. A boat was built of this material by Malot and exhibited at the World's Exhibition of 1855. It is still in active service on an estate in France. It is this boat and not the legendary flower-pots ascribed to Monier which represents the first application of reënforced concrete known up to the present time in which the methods and advantages of this type of construction were made public. It is of great interest, as it furnishes a rare proof of the durability of concrete almost half a century old. The subject of building ships of this material was at that time quite seriously considered, and it is not surprising that the Marine Department of Toulon, in a report dated November 5, 1855, expressed itself against the idea. Recent experiences, however, with many applications which were condemned in their time, but which finally triumphed, as, for instance, railroad ties of reënforced concrete, may serve as warnings against the final disposal of the subject. — *Stone Trades Journal.*

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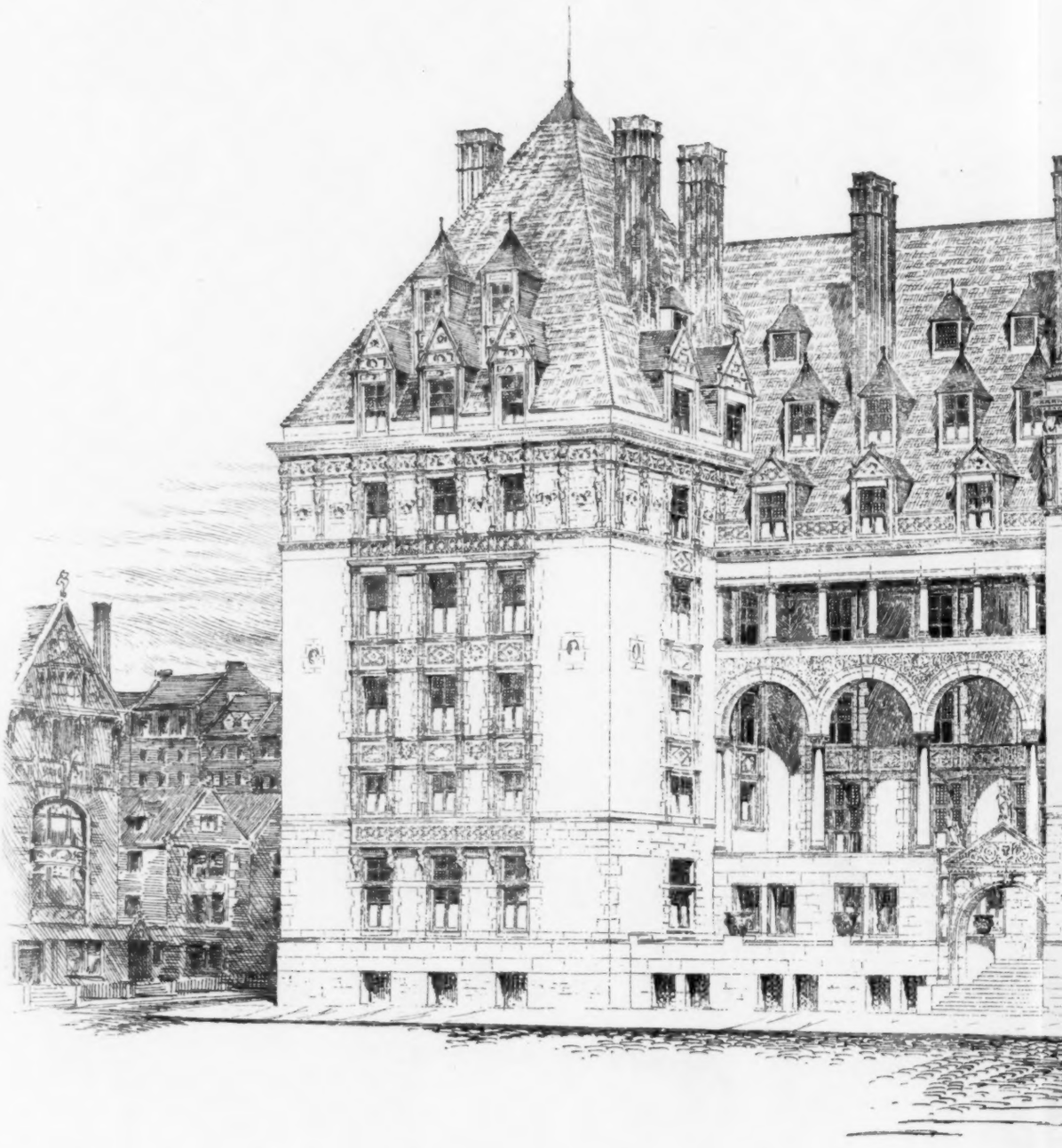

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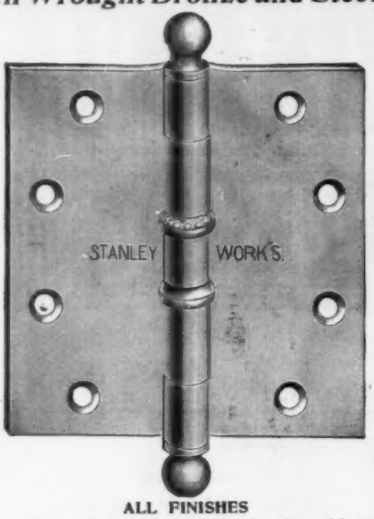

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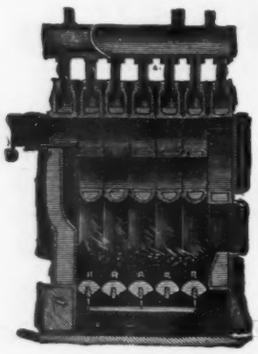

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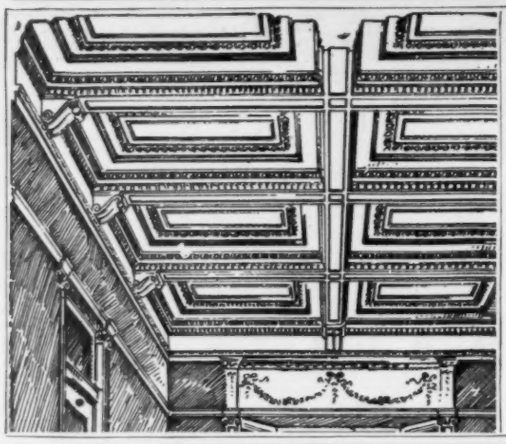

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Code Of Practice
FOR SUB-ESTIMATING AND SUB-CONTRACTING

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 having 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.

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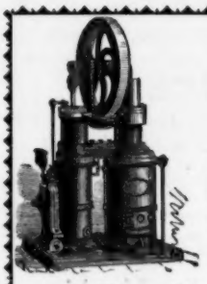

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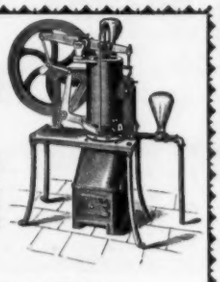

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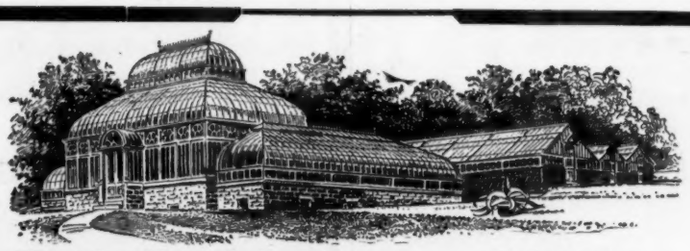

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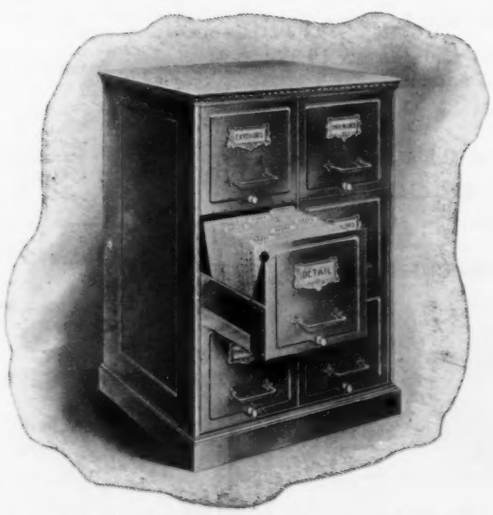

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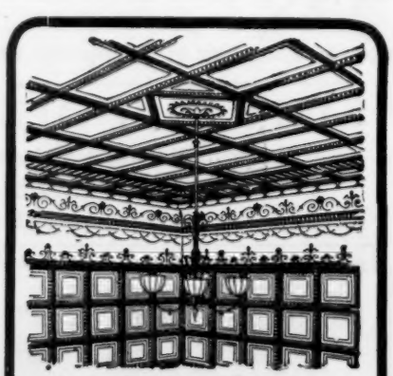

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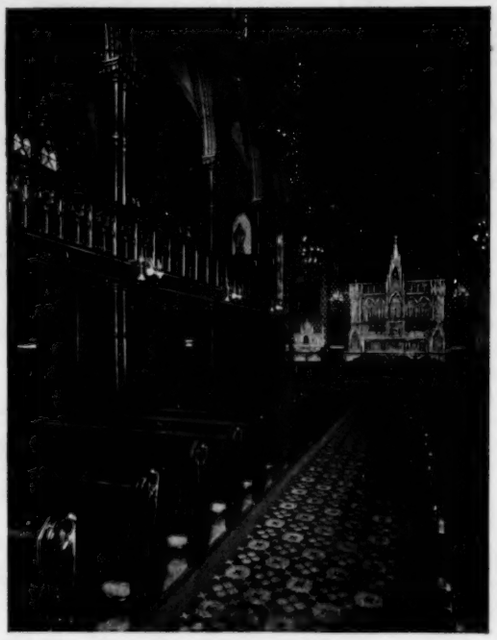

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New Advertisements.

POSTUM CEREAL CO. LTD. (Battle Creek, Mich.). Page x.

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PROPOSALS.

The date for the opening of proposals for the construction of the Battle Mountain Sanitarium, at Hot Springs, S. D., as heretofore advertised, is hereby changed from July 28, 1903, to August 4, 1903, at same time and place. MOSES HARRIS, General Treasurer, N. H. D. V. S. 1440

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.

Bartonville, Ill. — The quarterly meeting of the trustees of the Bartonville Asylum Board was held recently at the asylum and the bids were opened for the construction of the eight new cottages which have been ordered constructed. The award was not made however, the Board reserving the decision for some days. The appropriation by the State for the new buildings was $300,000 and this entire amount will be expended.

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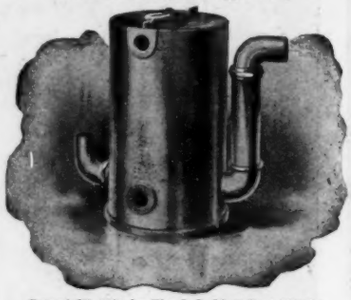

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Bristol, Conn. — The New Departure Manufacturing Co., manufacturers of bells and similar articles, has awarded the contract for the construction of an additional brick factory, to be three stories high, with dimensions 150′ x 500′. The building will be connected with the present plant.

Cambridge, Mass. — Two high-grade apartment-houses will soon be erected on the lot at the corner of Broadway and Lee St. by Frank M. Wallace. Both structures will be first-class in every particular, and the two together will cost in the neighborhood of $100,000. They will be of brick with stone trimmings, and the interior will be of as solid and durable material as the exterior. It is Mr. Wallace's intention to start work on these apartments at the earliest possible moment.

Carbondale, Ill. — Charles W. Rapp has been retained by the trustees of the Southern Illinois State Normal School to design a library and museum building for the institution. It will be two stories high, 37′ x 90′, of pressed brick, with stone trimmings and slate roof, and will cost $25,000.

DESIGNS WANTED
by the
POSTUM CEREAL CO., Ltd.

The Postum Cereal Co., Ltd., of Battle Creek, Michigan, are asking for rough sketches or designs to be sent to them for approval and final acceptance, and completed details of a one-story Demonstration Booth or pavilion to be constructed in the Agricultural Building at the World's Fair; the height is not to exceed 15 feet, corner space 35x43. Design to cost not over six thousand dollars. 1441

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Chicago, Ill. — Carson, Pirie, Scott & Co. have purchased land on the west side of the river, south of 18th St., for $138,750, on which they will erect a warehouse to cost $500,000. The new warehouse will be a seven-story structure of a high type of mill construction. Plans for the building have been prepared by Architect Robert T. Newberry, while the George A. Fuller Co. will be the contractors.

Joseph Molitor has let contracts for a parochial school to be built at the southwest corner of 48th and Paulina Sts. for St. Joseph's Roman Catholic parish. It will be three stories high, 80′ x 175′ ground dimensions, and contain a large assembly hall, with a seating capacity of 1,500, besides twenty class-rooms. Cost of construction is estimated at $50,000.

Concord, N. H. — W. E Durgin & Co. are having excavating done for a two-story brick factory building, 171′ x 187′, to cost $100,000. The contractors are Mead, Mason & Co., 520 Tremont Building, Boston.

Dawson, Wash. — This city has purchased a site at the corner of 4th Ave. and Queen St. for the Carnegie Library to be erected shortly.

Detroit, Mich. — A. C. Varney & Co. have taken out a building permit for the Standart Bros. new wholesale house on the corner of River and 2d Sts., of which the cost is to be $90,000.

Dorchester, Mass. — The Francis M. Perkins estate has transferred to Charlotte A. Powell a lot of land situated on Columbia Road, corner of Normandy St. The land will be improved by the erection of high-class houses from plans by F. G. Powell.

A desirable lot of land near Codman Sq., has been secured for the site of the proposed Young Men's Christian Association Building, to be erected in that section of the city. It fronts on Washington St., near Southern Ave., and is a part of the Galvin estate.

Hartford, Conn. — Plans are finished for the Ætna Fire Insurance Co. building. It will be five stories, with front of Indiana limestone. The main halls

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

and corridors will be of stone and marble, with a marble and bronze or iron stairway, the general office to be wainscotted in marble with Ionic columns and entablature. The officers' quarters will be finished in mahogany and the building trimmed throughout in oak.

The Hartford Manufacturing Co. has awarded the contract for the erection of a five-story brick factory building, 50' x 75'. The structure will increase the company's facilities for the manufacture of Government stamped envelopes.

Helena, Mont.—The Board of Governors of the Montana Club has received from Architect Cass Gilbert, of St. Paul, preliminary sketches of the club's new home. The plans follow the Spanish Renaissance. They contemplate a five-story building, which will have the appearance of a six-story structure. The first story will be of granite, the stone remaining in the first-story walls of the old building to be employed in the new, and the remaining stories to be of brick and terra-cotta. The intention is to preserve, so far as possible, the desirable features of the old building. Work may begin by August 1. The building and its furnishings will cost more than $100,000.

Hudson, Wis.—The plans of Van Ryn & De Gelleke for the new library have been accepted. It will be of Classic Greek architecture, and cost $12,000.

Huntington, Ind.—The Board of County Commissioners have decreed that Huntington County shall have a new court-house to cost in the neighborhood of $200,000. The present court-house has been declared unsafe.

Jeffersonville, Ind.—Plans have been drawn for a library building which will be erected in Warden Park. It will cost $15,000 and is the gift of Andrew Carnegie.

Joliet, Ill.—Contract has been awarded by the Board of Education for building the new ten-room Ivanhoe School at 39th St. and Euclid Ave., to J. B. Neevel, at $47,366, the work to be completed January 1, 1904.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Laconia, N. H.—The ground plan for the new Congregational Church which will be built on the B. M. Sanborn lot on Church St., has been received. The church will be in the shape of a cross and will seat about 1,000. The general style of architecture will be like the old standard English Church.

Little Rock, Ark.—S. C. Dowell has let the contract for his fine new residence to Stewart Bros., of Newport. It is to be of the old Colonial style of architecture, and will cost $10,000.

Louisville, Ky.—A $500,000 cotton-mill company is planned for this place.

Macon, Mo.—At a recent election the proposition to expend $45,000 for the construction of new public school buildings was carried by five to one.

Toledo, O.—The Building Board of the Masonic Temple have awarded the contract for the new structure to W. W. Bright for approximately $150,000. Work will begin inside of seven days and be rapidly pushed. Mr. Bright performs all work save the plumbing.

Washington, D. C.—Mr. Robert S. Peabody, of Boston, has been offered the place of advisory architect in the formation of plans for the new office-building for the House of Representatives. It is expected that the building will be completed in about two and a half years.

The old Ebbitt, long known as the Army and Navy headquarters, is to be torn down and upon its site, including a number of adjoining properties, the largest hotel here is to be erected by a company of which Caleb Willard is one of the principal stockholders. The new hotel will extend down 14th as far as the Ebbitt now goes and along F St. so as to take in one-half of the block, including the Geological Survey Building. It will take two years to complete plans and erect the hotel.

Waterloo, Ia.—The Waterloo Livestock & Commission Co. will build a large sale stable costing $20,000.

A Presbyterian Hospital costing $25,000 will be built.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Watertown, Ill.—Robert Bruce Watson has completed plans for a hospital to be erected here at a cost of $125,000.

Waxahachie, Tex.—Steps have been taken to carry out the provisions of the will of Col. N. P. Sims, who died about eighteen months ago leaving his estate, consisting of notes and cash to the amount of between $50,000 and $75,000, in trust for the establishment and maintenance of a public library and lyceum here. Plans are now being prepared, and bids will soon be asked for erection of the building, which will cost not less than $25,000.

Webster, Mass.—The plans of E. I. Wilson, Boston, for a high-school building to be built here have been accepted by the school committee. Estimated cost, $75,000. Construction, brick and stone.

West Wenham, Mass.—Francis L. Higginson, Jr., of Boston, has bought the "Dodge Hill" farm at this place. The estate contains about 20 acres of land. Mr. Higginson will build upon the property.

Wheeling, W. Va.—Plans have been prepared by G. D. McCarty, Reilly Building, for an eight-story warehouse and store building for Block Brothers. Cost, $60,000.

Winchester, Ky.—A new jail building will be erected here at a cost of $15,000, for Pulaski County.

Winchester, Mass.—Work on the new high-school building will be suspended owing to delay in arrival of material. It is said the contractors will not be able to finish the structure before early in the spring of 1904, instead of next November, as was planned. Cost of the new structure, when completed, $100,000.

Woburn, Mass.—The Woburn City Government has voted to purchase a lot at the corner of Salem St. and Wade Ave. for a high school site.

Yankton, S. D.—Turnbull & Jones, McBride Block, Elgin, Ill., have prepared plans for a $40,000 brick and stone church for the Congregational Society. Steam heat.

Yarmouth, Me.—Mr. Joseph E. Merrill, of Newton,

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BUILDING INTELLIGENCE.

(*Advance Rumors Continued.*)

Mass., is the donor of a new public library building soon to be erected in this town. Mr. Longfellow, of Boston, is preparing the plans.

Yazoo City, Miss.—W. O. Glass will make the plans for the brick and steel addition to the jail building.

Youngstown, O.—William M. Boerama, manager of the Hotel Salow, and others, are contemplating the erection of a $600,000 hotel building.

ALTERATIONS AND ADDITIONS.

New York, N. Y.—*One Hundred and Eighth and One Hundred and Ninth Sts.*, nr. Amsterdam Ave., 2 five-st'y wings, 53′ 10″ x 200′, added to five-st'y bk. school; $70,000; o., City of New York; a., C. B. J. Snyder, 500 Park Ave.

Fifth Ave., cor. 43d St., eight-st'y bk. & st. extension to eight-st'y hotel, 50′ x 102′; $150,000; o., David H. King, 16 W. 43d St.; a., J. G. Howard and D. E. Ward, 156 Fifth Ave.

E. Eighty-sixth St., No. 1, one & three-st'y extension, 9′ x 31′, to four-st'y & base. bk. dwell.; $25,000; o., Herbert L. Griggs, 291 Madison Ave.; a., Warren & Wetmore, 3 E. 33d St.

E. Eighty-ninth and Ninetieth Sts., foot of, three-st'y extension, 41′ x 87′, to 4½ st'y bk. asylum & chapel; $50,000; o., House of the Good Shepherd, on premises; a., T. F. Houghton, 213 Montague St., Brooklyn.

Fifth Ave., No. 222, five-st'y rear extension, 18′ 2″ x 28′ 2″ to five-st'y & base. bk. dwell., offices & store; $20,000; o., J. C. and A. H. Baldwin estate, 40 Wall St.; a., Buchman & Fox, 11 E. 59th St.

HOUSES.

New York, N. Y.—*Thirteenth St.*, nr. 1st Ave., four-st'y bk. & st. vicarage, 25′ x 66′, with extension, 10′ x 16′ 4″; $25,000; o., Grace Church Corporation, 804 Broadway; a., Renwick, Aspinwall & Owen, 367 Fifth Ave.

Garfield St., cor. Grant St., 2½-st'y fr. dwell.; $10,000; o., James Bradley, 2077 Washington Ave.; a., Rudolf Werner, 4019 Third Ave.

W. Fifty-first St., No. 36, five-st'y bk. & st. dwell., 21′ x 51′ 9″; $31,000; o., Emily Fordyce Barker, Tuxedo Park; a., J. H. de Selbour, 1133 Broadway.

Main St., nr. Grant Ave., 2 three-st'y bk. dwells., 36′ x 61′ & 26′ x 61′; $16,000; o., Arnow & Newman, Westchester; a., B. Ebeling, W. Farms Road.

W. Fifty-first St., No. 38, five-st'y bk. & st. dwell., 21′ x 89′ 10″, with extension, 11′ 10″ x 13′ 6″; $42,000; o., Harry A. Murray, 28 Nassau St.; a., J. H. De Selbour.

STABLES.

New York, N. Y.—*Carroll Pl.*, nr. 165th St., two-st'y fr. stable, 20′ x 30′; $1,000; o., Edward Smith, 3403 Third Ave.; a., C. C. and M. T. Thain, 4 E. 42d St.

Forty-eighth St., nr. 11th Ave., two-st'y bk. stable, 25′ x 100′ 5″; $6,000; o., Maurice Bloch, 400 W. 57th St.; a., G. F. Pelham, 503 Fifth Ave.

St. Paul, Minn.—*University Ave.*, nr. Prior St., two-st'y bk. stable, 38′ x 125′; $7,000; o., McLaughlin Bros.; b., Ingemann Bros.

STORES.

Minneapolis, Minn.—*Washington Ave., No.* 307, three-st'y bk. & st. store building, 22′ x 165′, steam; $20,000; o., Minneapolis Brewing Co.; a., Boehme & Cordella.

TENEMENT-HOUSES.

New York, N. Y.—*E. Fifth St., Nos.* 606-612, 2 six-st'y bk. tenements & stores, 35′ 10″ x 83′ 2″; $140,000; o., M. Jacobs, 218 E. 6th St.; a., A. E. Badt, 1 Union Sq.

E. Houston St., No. 398-400, & *Second St., Nos.* 289-291, six-st'y bk. tenement & store, 40′ x 66′ 4″ & 61′ 2″; $55,000; o., David Zipkin, 68 E. 101st St.; a., G. F. Pelham, 503 Fifth Ave.

First St., Nos. 61-63, six-st'y bk. tenement & store, 41′ 8½″ x 57′; $30,000; o., A. D. Weinstein, 1297 Lexington Ave.; a., Bernstein & Bernstein, 72 Trinity Pl.

WAREHOUSES.

New York, N. Y.—*Broome St.*, cor. Elm St., eight-st'y bk. warehouse, 22′ 9½″ x 119′ 5″; $85,000; o., August Truckman, 183 Howes St., Brooklyn; a., Buchman & Fox, 11 E. 59th St.

MISCELLANEOUS.

New York, N. Y.—*Thirty-eighth St.*, nr. 10th Ave., three-st'y bk. bakery, lofts & stable, 83′ 8″ x 124′ 10″; $100,000; o., Kick Baking Co., 160 W. 36th St.; a., F. A. Gerber, 108 Fulton St.

PROPOSALS.

REPAIRS TO HOSPITAL. [At Fort Strong, Mass.]

Fort Strong, Mass. Sealed proposals will be received here **until July 30, 1903**, for painting and repairs to hospital. Information furnished on application. QUARTERMASTER, Fort Strong, Mass. 1438

BUILDINGS. [At Fort Wadsworth, N. Y.]

Fort Wadsworth, N. Y. Sealed proposals for building ward wing on hospital and erection of building in rear for kitchen, etc., will be received **until August 7, 1903.** Information furnished on application. LIEUT. GEO. L. HICKS, JR., Q. M. 1439

PROPOSALS.

BUILDINGS. [At Sandusky, O.]

Sealed proposals will be received separately as indicated by parenthesis, on the buildings below mentioned, by the Board of Trustees of the State Soldiers' Home, of Sandusky, O., **until July 23, 1903**, for performing the labor and furnishing the necessary material to complete the improvement in the (Administration and Domestic Buildings) and the (engine-room) according to the plans, descriptions, bills and specifications which are on file at the office of Frank L. Packard, architect, New Hayden Building, Columbus, O., and at the office of the Commandant of the State Soldiers' Home, Sandusky, O., and open to the public inspection between the hours of 8 A. M. and 5 P. M. on all working days until the date of letting. By order of the Board of Trustees of the State Soldiers' Home. D. DUGAN, Quartermaster. 1438

SCHOOL-BUILDING. [At Austin, Tex.]

Notice to Contractors. Sealed proposals will be received **until July 27, 1903**, by the Board of Trustees of the State Blind Asylum, Austin, Tex., for the erection of a two-story and basement brick schoolbuilding; copies of the plans and specifications can be seen at the office of C. H. Page, Jr., architect, Austin, Tex. R. C. WALKER, President Board Trustees. C. H. Page, Jr., architect. 1438

CHURCH. [At Elizabeth City, N. C.]

Sealed bids for contract to build a brick church in Elizabeth City, N. C., will be received **until August 1, 1903.** Plans and specifications can be seen at office of M. N. Sawyer, corner Road and Cypress Sts. Order of Building Committee. GEO. W. BROTHERS, Sec'y. 1439

Treasury Department, Office of the Supervising Architect, Washington, D. C., July 11, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 4th day of August, 1903, and then opened, for the mechanical heating and ventilating apparatus, etc., for the National Bureau of Standards, Washington, D. C., 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. 1439

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PROPOSALS.

Treasury Department, Office of the Supervising Architect, Washington, D. C., July 8, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 17th day of August, 1903, and then opened, for the construction (except heating apparatus, electric conduits and wiring) of the U. S. Post-office and Post-office at Greeneville, Tennessee, in accordance with the drawings and specification, copies of which may be had at this office, or at the office of the Postmaster at Greeneville, Tennessee, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1439

Treasury Department, Office of the Supervising Architect, Washington, D. C., July 11, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 18th day of August, 1903, and then opened for the construction, including plumbing, heating apparatus, electric wiring and conduits, of the U. S. Post-office at Northampton, Massachusetts, in accordance with drawings and specification, copies of which may be had at this office or at the office of the Postmaster at Northampton, Massachusetts, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1439

Treasury Department, Office of the Supervising Architect, Washington, D. C., July 7, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 10th day of August, 1903, and then opened, for the low pressure steam heating apparatus, complete in place, for the extension to the U. S. Courthouse, Post-office, etc., at Fort Smith, Ark., in accordance with drawings and specification, copies of which may be had at this office or at the office of the Superintendent at Fort Smith, Arkansas, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1439

MASONIC TEMPLE. [At Waco, Tex.]

Sealed bids will be received by Grand Lodge Committee for building a Masonic Temple in Waco, Tex., bids to be filed with John Watson, grand secretary at Waco, **until July 31, 1903,** at which time and place the committee will open same. The plans and specifications can be seen at the offices of J. E. Flanders, architect, Dallas; John Watson, Waco; John L. Terrell, Terrell; William James, Fort Worth; Ingham S. Roberts, Houston; Nat M. Washer, San Antonio; O. K. Harry Steel Works, St. Louis, Mo. W. M. Fly, Grand Master, Gonzales, Tex. JOHN L. TERRELL, Secretary of Committee, Terrell, Tex. 1439

BUILDING. [At Little Rock, Ark.]

Bids are wanted by the Board of Public Works **until August 12** for the construction of a building for the State Capitol. 1440

Treasury Department, Office of the Supervising Architect, Washington, D. C., June 30, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 11th day of August, 1903, and then opened, for the construction, including electric wiring, but excluding heating, of the extension to the U. S. Post-office and Court-house at Portland, Oregon, in accordance with the drawings and specification, copies of which may be had at this office or at the office of the Custodian at Portland, Oregon, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1438

Treasury Department, Office of the Supervising Architect, Washington, D. C., July 1, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 12th day of August, 1903, and then opened, for the construction (including plumbing, heating apparatus, electric wiring and conduits) of the U. S. Post-office at Kirksville, Missouri, in accordance with the drawings and specification, copies of which may be had at this office, or at the office of the Postmaster at Kirksville, Missouri, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1438

PROPOSALS.

GRADING, ROADS, ETC. [At Fort Strong, Mass.]

Depot Quartermaster's Office, 170 Summer St., Boston, Mass. Sealed proposals will be received at this office **until August 6, 1903,** for grading and constructing roads and walks at Fort Strong, Long Island, Boston Harbor, Mass. Proposals and information furnished on application. Plans and specifications can be seen at this office. A. M. PALMER, Depot Quartermaster. 1438

WAREHOUSE. [At Fort Totten, N. Y.]

Office of Constructing Quartermaster, Fort Totten, Willets Point, N. Y. Sealed proposals for warehouse, foundation of piling, at Quartermaster's wharf, Fort Totten, N. Y., will be received here **until July 24, 1903.** Information furnished upon application. G. H. McMANUS, Constructing Quartermaster. 1438

CONSTRUCTION, HEATING AND PLUMBING. [At Wahpeton, N. D.]

Sealed bids will be received by the Board of Trustees for the State Academy of Science **until July 25** for the erection and completion of a brick academy building, according to plans and specifications by Schuler Bros., architects. Plans and specifications on file at the office of Schuler Bros., architects, Wahpeton, N. D.; Builders' Exchange, St. Paul, and Builders' Exchange, Minneapolis, after July 1, 1903. Also bids wanted for heating and plumbing at the same time. Certified check, $100. W. R. PURDON, Secretary, Wahpeton, N. D. 1438

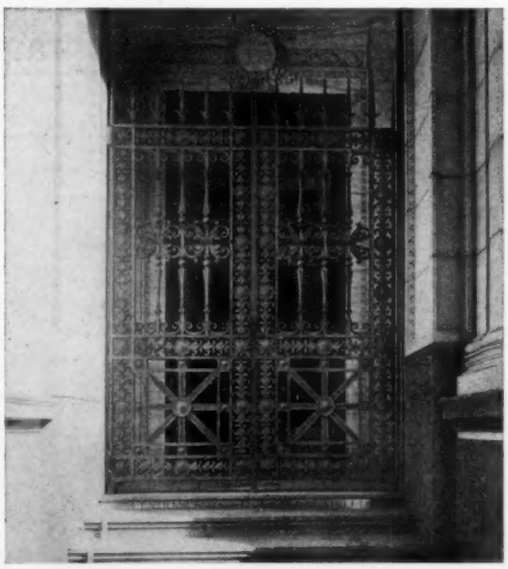
PROPOSALS.

BUILDINGS. [At Hot Springs, S. D.]

Sealed proposals addressed to Moses Harris, General Treasurer National Home for D. V. S., in care of Thomas R. Kimball, architect, 503 McCague Building, Omaha, Neb., will be received at the above address, **until 12 o'clock M., August 4, 1903,** and then opened, for furnishing materials, labor, etc., for the construction of the main group of buildings at the Battle Mountain Sanitarium, at Hot Springs, S. D. Plans may be seen, and copies of instructions and specifications together with blank proposals had upon application to the architect, Thomas R. Kimball, 503 McCague Building, Omaha, Neb.; to the Builders' and Traders' Exchange, 138 Washington St., Chicago, Ill.; to John F. Daggett, Secretary, Denver Building Contractors' Council, 203 *Times* Building, Denver, Col.; to the Builders' Exchange, St. Paul, Minn.; to E. S. Kelley, Banker, Hot Springs, S. D.; and to the office of the National Home for D. V. S., 346 Broadway, New York, N. Y. Address all inquiries regarding drawings and specifications to the architect as above. 1440

DRY DOCK. [At Norfolk, Va.]

Sealed proposals will be received at the Bureau of Yards and Docks, Navy Department, Washington, **until July 25, 1903,** for constructing a concrete and granite dry dock, exclusive of pumping plant and caisson at the Navy Yard, Norfolk, Va. Limit of cost of entire work $1,200,000. Plans and specifications can be seen at the navy yard named, or will be furnished by the Bureau upon deposit of $100 to secure their return. MORDECAI T. ENDICOTT, chief of bureau. 1438



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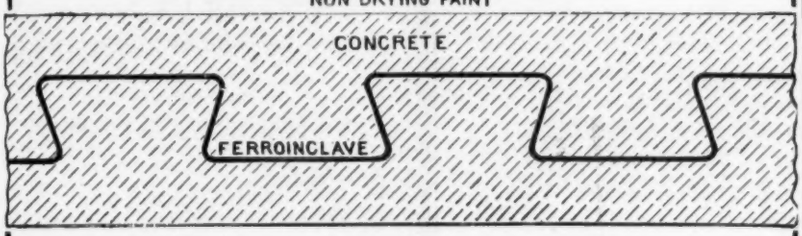

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