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SUMMARY:—

Costliness of Single-family Dwelling-houses in New York.— Cost of Land near Wall Street, New York, N. Y.—Proposed Parkway for Philadelphia, Pa.—A Light-and-Air Case in New York.—The Glass-blowers' Union and the Window-glass Trust.—Attempt to get Window-glass on the Free List.— The Freezing Process and the Pennsylvania Railroad Tunnel.— A Curious Property of Clay.—Municipal Ownership in England.—A Bit of the Parthenon Frieze found in an English Garden.	97
THE THIRTY-SIXTH ANNUAL CONVENTION OF THE AMERICAN IN- STITUTE OF ARCHITECTS.—II	99
THE IMPROVEMENTS OF WASHINGTON.	101
THE ARGIVE HEREUM.	102
BOOKS AND PAPERS.	103
ILLUSTRATIONS:—	
Chapel of the Troy Orphan Asylum, Troy, N. Y.—A City Residence, New York, N. Y.—Church and Parish House for St. Mark's Parish, Paterson, N. J.—Stable for the Standard Coach-horse Co., 41-43 West 63d Street, New York, N. Y. Additional: The Woman's Club-house, Worcester, Mass.— House on Commonwealth Ave., Boston, Mass.—The Château de Josselin, Brittany, France.—Bedchamber of Françoise de Foix, Chateaubriand, Brittany, France.—Interior of the Collegiate Church, Nantes, Brittany, France.	103
NOTES AND CLIPPINGS.	103

THE newspapers call attention again to the enormous cost of modern dwelling-houses in New York, which now far surpasses anything known in London or Paris. In Paris, although, as in New York, the population is divided between the many poor and well-to-do people who live in tenement-houses or apartments, and the few rich who have a whole house to themselves, the Parisian "hôtel," or single dwelling-house, is a much simpler affair than the New York mansion. For a building-lot, twenty-five feet wide and one hundred feet deep, in the middle of a block on Murray Hill, which still continues to be the fashionable quarter, seventy-five thousand dollars is considered a low price, and few houses are built on such lots which cost less than one hundred thousand dollars, above the value of the land; while, within the present year, sixty-seven houses have been built, valued at from five hundred thousand to six hundred thousand dollars apiece. Two causes seem to favor this enormous increase in the cost of dwellings for rich people, and for land suitable for them; one being the great influx into New York of very wealthy people from all parts of the country, who come there to enjoy the luxury of the second city in the world, and are ready to pay almost any price for a foothold; while the other is the very limited area in New York which is really desirable for the best class of houses. In Paris, the newcomer and his family can settle in the Faubourg Saint-Germain, or in almost any part of the large district between the fortifications and the river, west of the Madeleine, or in the "annexed district" of Neuilly, without feeling themselves cut off from fashionable society; and the proposed demolition of the fortifications will still further extend the fashionable district; but, in New York, the pleasanter parts of the town are surrounded by the tenements of a vast and increasing foreign population, contact with which is fatal to the pretensions of any family to fashion. So sharp is the boundary-line between the fashionable quarter and that occupied by the foreigners that a New Yorker can almost infer the nationality of an unknown person from being told where he lives. Of course, there are comparatively inexpensive regions in New York where artists and men of letters can live together, just as Paris has its Latin Quarter; but the New York Bohemia is by no means so pleasant as that of Paris, and the people who live in it must submit to be elbowed at every step by unsavory Poles, Russians or other foreigners. To sensitive persons, who object to such contacts, Fifth Avenue and the neighboring streets form, therefore, a sort of Paradise of respectability, in which every one desires to take refuge who can afford to do so; and, as there are now plenty of people who can afford themselves such a luxury, they, practically, bid for it against each other.

THE New York newspapers are, perhaps, unnecessarily astonished at the price just paid for the Trinity Building, which brought one hundred and ninety-eight dollars per square foot; and some of them indulge in rather wild dreams of the future of Manhattan real-estate. As a matter of fact, the price paid for the building was rather low, considering the advantages of its situation. Mr. Mills is said to have paid about three hundred dollars per square foot, twenty years ago, for land in the middle of a block, on Wall Street, for the sake of giving his Broad-Street building a Wall-Street entrance; and the Trinity Building, fronting on Broadway, almost at the head of Wall Street, with another street in the rear, and Trinity churchyard on the south, should be intrinsically worth more per square foot than any property on Wall Street, and, perhaps, more than any other estate in New York. In the same way, the Park Street Church estate, in Boston, recently sold at about one hundred and forty-four dollars per square foot, was a bargain for the purchasers, who, although they are restricted as to the height of the building that they can erect on it, have unlimited light on three sides, while the subway cars and trains bring about ten thousand people an hour to their door.

THE Philadelphia Parkway Association, of which Mr. Albert Kelsey is the Secretary, has issued a very pretty and interesting pamphlet in aid of its scheme for cutting a wide parkway in a straight line from the City Hall, through Logan Square, to Fairmount Park. Architects who know Philadelphia do not need to be told of the comparative poverty of the city in dignified features; and the City Building itself, although one of the costliest and most magnificent municipal structures in the world, cannot be seen, as a whole, except from a point so close that its architectural effect is spoiled. It is estimated that the new parkway will not cost more than five million dollars, and this sum should easily be made up by the increased value of the land fronting upon it. Apart from this, however, a street of this kind through the middle of a city so closely and monotonously built up as Philadelphia would be a great public benefit. Beautiful and interesting as Fairmount Park is, it seems a long way off from the poorer quarter of the city, and a wide street through the middle of this portion, leading straight to the Park, planted with trees, and itself constituting a charming promenade, would be a great blessing to the people who now rarely, or never, see the Park.

ALTHOUGH, fortunately for the owners of twenty-story office-buildings, no general light and air easements are recognized in this country, there are circumstances in which the tenant of a building can legally prevent the light from being cut off from a window important to him. A case involving this principle was tried a few days ago in New York, where the tenant of an office in a large building on Forty-second Street sued for an injunction to restrain the owner of the building from making an extension of it which would cut off light from a window in the office in question. The court held that the contract of lease between the owner and the tenant implied that the latter should continue to enjoy, during the term of the lease, so far as any operations of the owner were concerned, the same amount of light and air that the premises received at the beginning of the lease; and that the owner could not rightfully diminish such light and air. An injunction was, therefore, issued against the owner, and he, and other owners in New York, will, henceforth, have to ask leave of their tenants before darkening their windows.

A RATHER extraordinary development in American economics is just now attracting the attention of the newspapers. Our readers know something of the proceedings of the window-glass trust, which, a few years ago, conceived the idea of shutting off competition by making friends with the glass-blowers' union, and supplying its officials, as is reported, with several hundred thousand dollars' worth of shares in the trust, with the understanding that the union would drive out of business all the independent window-glass factories, by refusing to allow union men to work in them. This contrivance was

perfectly successful, and, within a few months after it was put in operation, every independent window-glass manufactory in the country had closed its doors. As usually happens in such cases, however, the trust soon found that the weapon which had proved so efficacious against its competitors had two edges; and the union began to try its hand at keeping to itself some of the advantages which it had so easily procured for its partner. The number of union members was restricted to about two-thirds the force requisite for operating the factories of the trust, so as to guard against the possibility of any member being left unemployed; and new members were admitted only under severe conditions, and on payment of an admission fee said to be five hundred dollars; while the output of glass by the trust was limited to a quantity prescribed by the union. Things have gone on in this way for two or three years, and, curiously enough, it is workmen who have been the first to rebel, the Knights of Labor, of which the glass-blowers' union is an assembly in good standing, having officially prepared a petition to Congress to have window-glass, which now pays a duty of about one hundred per cent, put on the free list, for the reason that the duty prevents the adoption of improved methods of manufacture, unsettles business through arbitrary changes in prices at the dictation of the confederates, and makes the Government of the United States a partner with "this greedy monopoly of manufacturers and blowers, who are a detriment to the industry, and a curse to the country."

THE high-tariff orators have so often wept with joy over the beneficent results to the workman of protective duties that this appeal of the most respectable and most powerful labor organization in the country to have the duty altogether removed from one of the most highly-protected manufactures will come upon them like a cold shower-bath. There is not the slightest probability that window-glass will be put upon the free-list for two years, at least, for the obvious reason that if the Knights of Labor were gratified by being enabled to buy English and Belgian window-glass at half the price that they now pay for it, they would soon be clamoring for the privilege of buying eggs and butter and meat and vegetables from the Provinces for half what they now pay, and clothing and blankets and shoes and leather and wool and a thousand other things, for prices approaching those for which the same things, often made in America, and exported, are sold abroad; and the system of high protection would begin to crumble away.

MR. CHARLES SOOY SMITH proposes to apply to the construction of the Pennsylvania Railroad tunnel under the Hudson River, which is now assured, the freezing-process already used in sinking mine shafts, by which soft earth around the excavation is frozen, so as to keep its place until the supporting lining can be put in. The soil under the Hudson River, opposite New York, is a fine silt, of great depth, and seems well adapted to treatment by freezing. In order to reach the silt with the chilled brine used for freezing, it will be necessary to drive a small "pilot tunnel" through the middle of the proposed excavation, in which the main pipes will be carried, distributing the brine around it by means of radiating-pipes.

MR. H. J. CAMBIE, of the Canadian Society of Civil Engineers, has made a curious and important observation upon clays. It appears that a portion of the Canadian Pacific Railway passes through a valley almost without rainfall, through the bottom of which flows the Thompson River. Above the river are high clay bluffs, forming the edge of a sort of table-land, some two hundred feet above the river. When irrigated, this clayey table-land is fertile, producing several crops of hay a year, and the farmers utilize it for that purpose, irrigating it with water from the river or its tributaries. Since irrigation of the land began, some forty years ago, there have been many land-slides. One of these, a few years ago, carried a tract of about a hundred acres directly across the river, forming a dam seventy-five feet high, and completely blocking its course; and another recently damaged the railway. In consequence of the latter, suit was brought by the railway company, to prevent the farmers from irrigating their fields, on the ground that the irrigation softened the clay subsoil, allowing the ground to slip. This view was confirmed by experiment, the experts, of whom Mr. Cambie was

one, finding that while ordinary clay, in the moist condition in which it is usually found in the ground, will not absorb any more water, and is only superficially affected by washing, clay that has once been so completely dried as to lose its cohesive property absorbs water like a sponge until some sixty per cent of its weight has been added, when it falls into a liquid mud, nearly as fluid as water. Even when the clay has not become powdery by drying, but has taken the form of indurated lumps, it will still soak up water until converted into fluid mud. As the clay of these hayfields exists, to a great extent, in the form of such dry lumps, it seemed probable that copious irrigation through the season might liquefy it, so as to allow the ground over it to slide; while the objection that the clay on the immediate bank of the river was not affected appeared to be answered by the fact that this clay, being constantly kept moist by the water of the river, preserved its solidity.

A CONTRIBUTOR to the New York *Tribune* has sent long and rather attractive descriptions of what he calls the "municipal activities" of certain English cities, particularly in Yorkshire. He is evidently a partisan of collectivism of this sort, and the showing which he makes is tolerably good, although the fact that Sheffield, one of his model towns, "is barely beginning to receive substantial returns" from its "large investments in municipal undertakings," some of which have been five years in operation, suggests to the skeptical mind a suspicion that, when the bills for repairs and renewals, which, under ordinary circumstances, begin to be formidable soon after the fifth year, are all paid, the "substantial returns" may look a little less substantial. We have no desire to undervalue municipal enterprise in behalf of citizens, but it is notorious that the temptation to neglect renewals and repairs, for the sake of making a good financial showing, is too strong for most municipal managers to resist; and, as has already happened in at least one case, a "municipal activity" which showed gratifying returns from year to year may suddenly have to be abandoned, with most of the capital sunk in it, for the reason that the plant had been so neglected and abused, in the effort to show a good income over expenses, that, when it finally broke down, there was nothing worth saving in the whole equipment.

AN illustration of the British "reverence" for art is afforded by the recent discovery, in a "rockery" on an estate in Essex, of a piece of marble, or, rather, of two pieces, bearing a Greek inscription of the fifth century B. C., and another piece, sculptured, which turns out to be a missing portion of the Parthenon frieze, belonging to the group of horsemen in the Panathenaic procession. The inscribed slab of marble is known to belong to a monument set up in Athens in honor of the volunteers from Cleonæ who fought on the side of the Athenians in the battle of Tanagra against the Lacedæmonians and Eubœans, and is also known to have been brought to England about 1770. According to the accounts, it was picked up in Athens by Stuart, who was then engaged in writing his great book on the "*Antiquities of Athens*," and sent, with some other marble fragments, in charge of a sea-captain of his acquaintance, to Smyrna, where he expected to find it on his way home to England. When Stuart reached Smyrna, however, his marbles had disappeared, and it was not until after his arrival in England that he found them in the hands of a Mr. Jones, to whom they had been presented by a naval officer. The inscription was at that time copied and published, but Stuart seems never to have claimed his property. Meanwhile, a noted antiquary, Thomas Astle, is known to have been in the neighborhood, and is quite likely to have bought the old stones of Mr. Jones, and to have carried them off, for the rockery which they until recently adorned stands upon an estate which once belonged to him. We may surmise that, on the death of Astle, who, at least, knew something of the value of his marbles, his surviving relatives lost no time in clearing out the "old rubbish" which he had collected, and that anything so uninteresting as old Greek bas-reliefs or unintelligible inscriptions soon found their way to the ash-barrel, whence they seem to have been rescued by the gardener, in search of lumps of rock for sheltering ferns. Although the rains of a hundred and fifty years have ploughed "grooves" in the face of Phidias's aristocratic young horseman, the figure does not seem to be any worse off than the mangy wrecks which represent, in the British Museum, the rest of the frieze.

THE THIRTY-SIXTH ANNUAL CONVENTION OF THE AMERICAN INSTITUTE OF ARCHITECTS.¹—II.

THE Committee on Foreign Correspondence reports steady increase of exchanges and correspondence.

The "Proceedings" and the "Bulletin" have been sent to forty-six foreign societies, to nineteen foreign periodicals and to fifty foreign correspondents. The book on gardens published under the auspices of the Institute was forwarded to forty foreign societies.

Societies in the principal cities of the world have been requested to send the Institute their building and municipal regulations, and replies have been received from London, Paris, Berlin, St. Petersburg, Buda-Pesth and Brussels. St. Petersburg has asked information about the course of study in our schools, and has received with thanks the information desired.

The Committee on Contracts and Lien Laws has, in conjunction with a committee appointed by the National Association of Builders, revised and published the uniform contract.

The joint Committee has endeavored to preserve as much as possible of the form in use for the past thirteen years, leaving out objectionable features, simplifying and adding some clauses. The most notable omission is that of the clause designating the architect as the agent of the owner.

Article II has been modified to clearly show the architect's ownership of the plans and specifications, and that the charges for the architect's services and use of plans are to be paid by the owner, thus condemning the unprofessional practice of making contractors pay for detail drawings.

The Arbitration Clause has been made more effective, to facilitate settlements out of court of disputes not adjustable by the architect.

The Committee had before it the form of contract approved by the Royal Institute of British Architects, a Washington form, and numerous forms from individual architects, and believes it has, under legal advice, provided a form to meet emergencies which deals justly with owner and contractor, which will admit of almost universal application and be used even more than the previous form. Of the latter were sold about 40,000 copies per year.

The Committee thinks that general adoption of this form of contract will give it a standing in the courts which no individual contract could possess.

The Committee to report on Reports of Special Committees submitted the following:—

The Committee on Conference with the Architectural League on Competition, Codes and Cooperation asks to be discharged, offering no suggestions except a general recommendation for some appropriate action to clear up doubtful clauses in the Code of Competitions.

The Committees on Legislation for Government Architecture and on Fine-Arts Commission and Bureau of Architecture simply report progress and state that, on account of conditions already existing, favorable in many points-of-view, they find it unadvisable to urge any decided changes at present.

The World's Congress Committee has no recommendations to act upon, in view of the postponement of the St. Louis Exposition.

As to the other Special Committees, appreciation of the work of each is noted; the aid of every member of the Institute in furthering the important work of the Municipal Improvement Committee is urged, and, finally, attention is called to the importance of matters before the Committee on Competitions and the supreme necessity, where competitions are necessary, for a clear statement of conditions, with competent advisers and with judges of the highest standard.

Following are excerpts, copies, or résumés, of the more generally interesting of these Special Committees' reports:—

The report of Mr. Alfred Stone, the delegate to the National Fire-protection Association and to the National Conference on Standard Electrical Rules, contained matter of interest. He had been appointed upon request of the Fire-protection Association that a representative of the American Institute of Architects attend its annual convention, and attended in that capacity a convention in Philadelphia in May last.

The membership of this Association is drawn from stock fire-insurance companies, and mainly from persons having charge of the improvement and inspection of risks. The objects are: "to promote the science and improve the methods of fire-protection, to obtain and circulate information on this subject and to cause cooperation in matters of common interest," but with no regard to insurance-rates.

Mr. Stone met with a cordial reception. There were discussed: "Danger of Fires in Breweries"; "Fireproof Construction"; "Uniformity of Construction"; "Protecting Coverings for Doors and Windows"; "Automatic Sprinklers," etc. Mr. Stone remarked that the architect's education and experience fit him to appreciate better than the insurance-companies the requirements in such special cases, and also that the companies have suffered largely from bad construction, for which the architect has been sometimes responsible, the owner often through unwillingness to pay the extra cost of fire-protection, for which until lately the insurance-companies have given him no allowance. He notes a great change already effected and a greater in prospect through cooperation of insurers and insured, and points out how the architect can advance this improvement by advocating

better methods of construction and by inducing the companies to recognize these better methods and to make corresponding reductions of rates.

He recommends the Institute to continue its representation, as invited, at the conventions of the Association.

The delegate also attended the National Conference on Standard Electrical Rules, endorses the effort to establish a uniform code of rules for the country, such as now enforced in large cities with material gain in safety to life and property, and recommends that the Institute continue its representation at these conferences.

A resolution that the Board of Directors be authorized to appoint delegates in accordance with these recommendations was passed.

The committees on a Fine-Arts Commission and a Bureau of Architecture carefully discussed the subject of a "National Bureau of Architecture" and other fine-arts, and drew up various suggestions. At first they hoped to prepare a working-scheme for a commission or bureau that would ensure the execution of work in Washington on the lines prepared by the Park Commission. They hoped, too, that purchases of works of art by the Government might be made under expert advice, that the building work of the Government might either be put under one control, or that the different Departments might adopt methods as intelligent as those of the Treasury Department.

It was found, however, that the members of the Park Commission (who were well informed as to Washington affairs) felt that although the consummation of the scheme to place the work of the Government under the direction of a commission or bureau, created for the purpose was eminently desirable, yet it would be unwise to press this question upon Congress until after the work of the Park Commission had been submitted and passed upon by Congress and its value estimated. They thought it should be remembered that this Commission was created through the efforts of the Institute of Architects, and to propose the appointment of another Commission before the work of the first has been publicly justified would seem premature and unwise. They urged that with delay the proposition might be brought up with much better chance of success.

These opinions controlled the Committee. They were the more willing to remain inactive seeing that the number of buildings produced under the Treasury Act would soon be much greater and probably be standing argument for a general change; and, besides, they saw other Departments, like those of Agriculture and War and the District of Columbia, adopting methods similar to or, perhaps, better than those in use by the Treasury Department.

The attitude of the Government towards artistic work has been constantly and rapidly improving. The question seems to be whether when the disposition towards art is in such an improving condition it is well to be contented or to strive for still better things during these favoring conditions. Until now the Committee, following to a great degree the urgent advice of the Park Commission, have thought it wiser to delay action.

The Report of the Committee on Competitions, an interesting one, reads as follows:—

"There have been no stated meetings of the Committee during the year. The Code which resulted from our first report was an experimental one and there is evidence that it has already had a beneficial effect on the conduct of competitions. Those who draughted the Code thought it undesirable to state that certain forms of competition were disapproved and considered it sufficient to name the existing forms and point out what results were desirable and how best obtained.

"In one instance, at least, the attitude of the framers was misunderstood, and it was claimed that a competition where certain competitors were paid one price, certain others another price, and others again paid nothing, for rendering the same service, was a form of competition approved by the American Institute of Architects. If the Code was generally understood to have this meaning the Committee suggest that it be modified, or some explanation appended. The new duties of the Committee have not been exercised to any great extent. The Committee has stood ready to advise when requested, but have not thought it incumbent upon them to offer advice unasked, or to interfere when unsatisfactory conditions of a competition have been brought to their attention by others than those directly interested.

"The operations of customs and public opinion are steadily trending towards a clearer understanding of the interests that are served by a competition, and the best way of reaching results. The public, as well as the profession, are beginning to appreciate the importance of the jury; and the more undesirable forms of competition are being gradually eliminated.

"When all is said there is one supremely important condition in any competition which far outweighs any consideration of the number of those who compete, or the payment to the competitors, and that is the employment of professional service both for the programme and for the award. No competition may rightly be called improper if it is fairly stated and fairly judged. The best man will compete under the Tarsney Act, although there is no compensation; first-rate men entered the competition for the Washington Hospital. In both cases the assurance of fair play was the sole operative factor.

"In view of this fact it is evident that a great responsibility rests on any architect who is asked to serve as expert either in drawing up or judging a competition. With him, to a large extent, rests the

¹ Continued from No. 1408, page 93.

future of competitions. Even the most careful man acting in this capacity is apt to be betrayed by his committee.

"Our attention has been called to the result of a competition recently held for the Foundry Methodist Episcopal Church in Washington. The Committee pledged themselves not to open the envelopes containing the names of the competitors until a final selection was made — which final selection was to be made by the Quarterly Conference on the report of the Committee and its adviser.

"One of the envelopes was opened by the Committee before the decision of the Conference, and the Committee had a consultation with the architect, whose plans were modified in essentials and then accepted by the Conference. Their professional adviser, Mr. James Knox Taylor, was not consulted in this action, and it is greatly to be regretted that a competition, in which the chief security for justice lay in the acknowledged position of the professional adviser, should have been decided in direct violation of the terms of the programme, to the injury of the other competitors and of the professional adviser, who was unwittingly involved in this scandal.

"The Committee wish to reiterate what is, indeed, the publicly expressed opinion of the Institute, that the best results are obtained without competition, but that where competitions are necessary, good advice in the programme and fair judging and award by competent experts are the most important features. Finally, that the limited properly paid competition is the properest form, producing the best results for the owner and encouraging the self-respect of the architect. To be asked to compete on such conditions is an honor; to be asked to compete on other terms is not an honor, but a request for a favor.¹

"The method of selecting the architects to compete for the Liverpool Cathedral opens up a new phase of the matter which has possibilities. The authorities in their general circulars ask any man who has done church work which he considers worthy to send them photographs or drawings of such work, and the Committee, from the actual performance, will select the competitors. From this position it is but a step to select an architect in the same way; in other words, to let the competitors submit for judgment, not studies for the proposed building, but drawings or photographs of similar work which they have done, with such evidence as they wish or the Committee desire as to their ability, and have the competition decided on the ground of past performance — which is, after all, a better guaranty to the client than a clever plan or a happy solution of a problem.

"In closing, the Committee would urge that every member use his influence to discourage competitions where they are not essential, and to see that programmes are carefully drawn up and the work fairly judged, where competitions are necessary. But above all, that they should exercise the greatest care and discretion when acting as professional adviser."

The Committee on Municipal Improvement reports a paper prepared by the Chairman for the American Park and Out-door Association on "The Relation of the A. I. A. to Municipal Improvement," in general drawing particular attention to the part of the Institute in the appointment of the Washington Commission and to the admirable work of that Commission. This paper was read by Mr. Albert Kelsey at the meeting of the Association held in Boston in August, from which meeting resulted a Committee on Federation of many societies of kindred aims, on which the Chairman (Municipal Improvement Committee A. I. A.) has been invited to represent the Institute. The Committee stands ready to give advice in specific cases to any local body. The Committee is in receipt of numerous reports from correspondents showing a great general interest in municipal improvement and describing the progress of the movement in several cities. An abstract of these reports will be printed in the "Proceedings."

During the afternoon session of Thursday the Convention heard papers on "The Improvement of Washington" (illustrated with lantern-slides) by Daniel H. Burnham, Frederic Law Olmsted, Jr., and Charles Moore.

The latter is printed with this account of the doings of the Convention.

The Evening Session of Thursday was held at the Library of Congress, where the members met at 8.30 o'clock to examine and have explained to them the drawings and models submitted to the Senate Committee on the District of Columbia by the "Park Commission," D. H. Burnham, C. F. McKim, Augustus St. Gaudens, and Frederic Law Olmsted, Jr.

The Morning Session of Friday, Dec. 12, Second Vice-President Alfred Stone in the Chair, opened with the reading of a paper by Captain J. S. Sewell, Corps of Engineers, U. S. A.

Then followed some discussion of matters kindred to the subject of this paper, the Chairman remarking that Boston has a standard-

¹ The Committee had some correspondence in connection with the McKinley Memorial at Philadelphia and took the following stand in regard to the jury. The quotations being from personal letters from members of the Committee: "The experts should be decided upon and named in the programme. The character of these gentlemen will, in many cases, induce men to enter the competition or to refrain from doing so."

"It seems to me in every way desirable that the jury should be selected and named in the programme. For such a competition, especially where the jury are to have the assistance of another committee, three seem to me better than five, and as a mere suggestion I would say they should be, one a sculptor, one an architect familiar with monumental work, and one a landscape-architect or an architect familiar with landscape work."

ized specification such as Captain Sewell recommended, and Mr. Andrews following with an interesting account of the cooperation of architects and engineers in the planning of Boston schoolhouses. A paper by Mr. Smithmeyer on "The Evolution of Design" was read. Mr. Gilbert offered the following tribute to the memory of Walter Cope:—

"In the recent sudden death of Walter Cope, this Institute has lost one of its most distinguished and valuable members. Mr. Cope was born in the year 1860 and had therefore reached only his forty-second year. Yet in spite of the comparatively few years that he had been in active practice, the firm of Cope & Stewardson had produced many buildings of the highest interest.

"Commencing their more important and characteristic work with Denbigh Hall at Bryn Mawr College at a time when John Stewardson was still alive, the firm has executed at Bryn Mawr, at Princeton, at the University of Pennsylvania, and at Washington University, St. Louis, a series of collegiate buildings of a beauty and appropriateness that have fixed the attention and aroused the enthusiasm not only of architects and educators, but of the general public. Adopting a type of later English Gothic or Jacobean and modifying it to meet the requirements of local materials and of modern methods of instruction, Mr. Cope (who, after the death of John Stewardson, was, in all artistic matters, the unquestioned head of the firm) gave to his collegiate buildings an expression of eminent fitness to their uses, while still markedly insisting upon the continuity of our architectural traditions.

"It was, however, not alone in college work, but in buildings of the utmost diversity of purpose, that his talents were manifested. Judged by the standard which Matthew Arnold holds as the true test of artistic and literary performance, excellence sustained at a high level through a great volume of work, Walter Cope's buildings must be regarded as having reached the foremost rank of contemporary architectural achievement.

"In maintaining the standards of professional conduct established by the Institute, Mr. Cope was unswerving and inflexible. Upon his companions the impressions left by his work are of his constant sincerity, his spontaneity and truthfulness, his joy in art, his splendid scorn of wrong."

A resolution was offered by Mr. R. S. Peabody in respectful memory of the late Senator MacMillan.

Resolved: That by the death of Senator MacMillan our art has lost an active and appreciative advocate. For his broad-minded interest and intelligent cooperation with architects and artists in their efforts to beautify Washington our profession and the country will long remain his debtor.

The matter of the admission to the Institute without examination of graduates of architectural schools was brought up. Professor Warren expressed his opinion that "special course" students should be examined before admission, but that holders of a degree in architecture from schools, having a four years' course, which are departments of architecture in chartered institutions of learning should be admitted without examination.

It was decided that a list of schools be prepared.

An amendment admitting holders of degrees from foreign institutions was referred back.

Mr. Gilbert reported fund of \$15,000 raised toward payment for the Octagon House, from subscriptions of members present at the Convention.

In the Afternoon Session of Friday papers were read as follows: W. B. Las Casas on "Organization for Municipal Improvements," Albert Kelsey on "The Modern City," Owen Fleming on "Improvements in London."

These papers were illustrated with lantern-slides and were all of great interest. Mr. Fleming's paper on "London," which was read for him, will be published later. Mr. Owen Fleming is Secretary of the Architectural Board of the Council of London in charge of improvements.

In the Morning Session of Saturday, December 13, Second Vice-President Stone in the chair, much unfinished business was satisfactorily despatched. The members had previously, by invitation of the President of the United States, met at the White House and were conducted over the building and shown the work of remodelling which has been done by Mr. McKim.

On meeting in the Convention-room a paper was heard from Captain Sigabee, U. S. N., on a project of his for permanent marble review-stands in Lafayette Square.

Mr. Marshall, of the New York Chapter, brought up the question of an architect being called upon to give bond to fully discharge his duties and to guarantee his construction and limit of cost, which proposition the New York Chapter desires to reject.

Some miscellaneous business before the Convention being disposed of, the Convention adjourned at the end of the morning hour with the casting of ballots and announcement of officers elected and the place of meeting for the next Convention.

Ballots for election of officers resulted as follows: *President*, Charles F. McKim; *First Vice-President*, Frank Miles Day; *Second Vice-President*, Alfred Stone; *Secretary and Treasurer*, Glenn Brown; *Board of Directors*, Robert S. Peabody, William B. Mundie, Isaac C. Ditmars; *Auditing Committee*, S. A. Treat, Wm. G. Preston.

The following were elected: *Fellows of the Institute*, W. R. Mead,

G. L. Heins, J. L. Maura, Elmer Grey, Ralph Adams Cram; *Honorary Members:* Samuel A. B. Abbott, of Boston; Andrew Carnegie, of Pittsburgh; Emil Vaudremer, of Paris. *Corresponding Members:* George R. Shaw, of Boston; John Jas. Burnett, of Glasgow; Bannister F. Fletcher, of London; Mervin McCartney, of London; Leonard Stokes, of London; A. H. Bloomfield, of London, and Wm. M. R. French, of Chicago.

The city of Cleveland was chosen for the next Convention.

THE IMPROVEMENT OF WASHINGTON.¹

A LITTLE less than a year ago, one of the most brilliant and most successful members of the American Institute of Architects came to Washington to see the models and drawings prepared under the direction of the Park Commission. He was on his way to Italy for needed rest, and also for study that would be helpful in his profession. At the time of his visit, the exhibition was being made ready at the Corcoran Gallery of Art, but enough pictures were on the walls to give a fair idea of the lines along which the Commission had worked. Six months later, this same architect, being again in the city, said: "That hasty and incomplete view I obtained of the work of the Park Commission made a radical difference in my visit to Europe. I had never before appreciated the relations between landscape and architecture. The park plans enabled me to see Italy and Paris with new eyes, and thereby added vastly to my enjoyment and benefit."

This instance is not exceptional. The park plans came at a time when architects all over the land were beginning to feel that it was their duty, and that it might also become their privilege, to consider not alone the individual client, but also the people as a body; and especially that public buildings should be so placed as to enhance the unity, the dignity and the beauty of the city. Years of abundance have piled up capital and interest is low; and it is now both possible and profitable to build not alone for the present generation, but also for posterity. The only element now needed to accomplish in the United States results surpassingly great is a keen but friendly rivalry among cities to excel in civic beauty and dignity as well as in commerce and manufacture. Having secured the power to live, it now remains to cultivate the joy of living. This is to be attained by making beauty a part of the every-day life of all the citizens. To this end no one thing contributes more than beautiful buildings beautifully placed, and ample parks adapted to the refreshment of both the mind and the body. Unless the Washington Park plans shall point the way to the study and practice of civic beauty throughout the United States they will fail of their highest results. In this work the American Institute of Architects, which was so potent a factor in originating the Park Commission, has a duty to perform that is too obvious to need argument.

The models, pictures, maps and plans illustrating the work of the District of Columbia Park Commission were exhibited at the Corcoran Gallery of Art for six weeks beginning on January 15, 1902; and on the same day the preliminary reports of the Senate Committee on the District of Columbia and of the Park Commission were submitted to Congress by Senator McMillan. President Roosevelt and the members of his Cabinet were present at the opening of the exhibition; and, as opportunity has offered, the members of the Administration have given to the Commission and to the plans hearty, intelligent, effective, aid and support.

It was never for a moment the purpose of Senator McMillan to seek the formal approval of Congress for plans to produce which had required the experience and training of years and the intense and absorbing study of months on the part of men who had achieved the highest measure of success in their life-work. To understand the plans requires patient study, because they aim not only to satisfy the eye trained to the perception of beauty, but they also make a direct appeal to the intellect, by reason of their seasonableness and of the historic consciousness which they embody.

Questions of art and taste are not proper subjects for discussion by any deliberative body; and Congress is accustomed to refer such questions to committees or commissions and to accept or reject an individual project at the time when the question of making an appropriation for it comes up. Moreover, many portions of the plans do not need specific Congressional action, but may be carried out by the heads of one or other of the Executive Departments, by the Commissioners of the District of Columbia, the Secretary of the Smithsonian Institution, or the officer in charge of public buildings and grounds, provided the particular individual has taken the pains to inform himself as to the plans and is in sympathy with the project. Happily, thus far, only one officer of the Government has been found who is not both willing and anxious to carry out the plans of the Park Commission. The development of the Mall system substantially along the lines laid down by Peter Charles L'Enfant under the immediate direction and supervision of George Washington and Thomas Jefferson is, by common consent, the keystone in the arch. On this depends the future of the National Capital. If the plans for this portion of the work shall be carried out, then the city of Washington will become a consistent work of art, possessing unity, dignity and beauty. If the Mall plans fail, then Washington will remain a collection of unrelated units, and the greatest opportunity ever presented to the governors of a capital city will be ignorantly, ruthlessly, wantonly cast aside. It is easily within the possibilities that Washington

may become more dignified, more beautiful, more consistent in plan than Paris; and yet with a great price Paris purchased unity and dignity, whereas to Washington it is a birthright, requiring only nurture and development.

As the improvement of the Mall is the key to the development of the Capital, so the removal of the railroad from the Mall is the condition precedent to any adequate development of that space.

What properly may be called the dynamic force of the plans prepared by the Park Commission, combined with the persuasive powers of the chairman of that body, is shown by the fact that a part of the report is a reasonable proposition on the part of the Pennsylvania Railroad Company not only to sacrifice its commercially strategic position in the Mall, but also to go to great expense in promoting the general scheme by erecting at a point selected by the Commission a union railway-station of such architectural character and so fitted and furnished as to be an adequate and suitable gateway to the Capital of the United States.

The proposed union station, in size longer than the Capitol by 8 feet and 8 inches, will not only accommodate the seven railroads now entering the District of Columbia, but also provision is made for the accommodation of any new road which may secure hereafter the right to construct its lines into the District; and the national character of the structure will be recognized both by the monumental character of the building itself and its location in relation to the Capitol, and also by certain arrangements within the structure whereby the President and guests of State will have separate and suitable accommodations when entering or leaving the city of Washington.

A bill to carry out these ideal arrangements having passed the Senate and having been reported to the House with the unanimous favorable recommendation of the Committee on the District of Columbia of that body, the successful outcome of this project before the 4th of March may be anticipated with confidence.

The main axis of the great composition designed by the Park Commission as the completion of the L'Enfant plan has for its beginning the Capitol and for its centre the Washington Monument. It is essential to the integrity of the composition that the western limit of the axis shall be marked by an object worthy to stand with the two great structures mentioned. This end once accomplished, the result must be a civic composition the greatest in extent known in the modern world. After mature consideration and after consultation with those in position to give advice on such a subject the Commission recommended that the main axis be a suitable memorial to the one man in our national history who by common consent shares pre-eminence with George Washington — to Abraham Lincoln.

This suggestion met a prompt response on the part of Congress; a Lincoln Memorial Commission was created and \$25,000 appropriated to provide for the plans. The consultations already held give promise that the type of memorial proposed (a great portico in the Doric or the Corinthian order) and the location suggested by the Park Commission will be recommended to Congress. If these views shall be accepted, then the ultimate development of the space from the Monument westward to the Potomac, an area a mile in length, must proceed according to the plans of the Commission.

On the west front of the Capitol grounds the Commission have laid out Union Square, as they have named it, a space resembling the Place de la Concorde in Paris; and this area they would adorn with statues of Grant and his two great lieutenants, Sherman and Sheridan. The Grant statue, or memorial, has been provided for, and it is within the power of the statue commission to locate it in the space recommended by the Park Commission. There is reason to believe that this location will be the one selected, and thus another stake will be driven. The location of Sheridan on Grant's left should follow without question, since no action on that project has been taken. Nor should there be great difficulty in changing the location of the still uncompleted statue of Sherman to a site on Grant's right. The present location on the axis of the Treasury is the culmination of the long series of blunders and misfortunes that have attended this statue from its inception. No comic opera contains a more absurd conceit than the position gravely maintained in connection with the Sherman statue; namely, that on the death of the artist a commission to execute a work of art becomes an asset of his estate, to be traded on by the heirs as their art knowledge, or lack of it, may dictate and the funds at their disposal may permit. Added to this absurdity is the location of the statue of William Tecumseh Sherman in John Sherman's rightful place. It is quite unnecessary to discuss the pedestal that has been prepared for the Sherman statue. It speaks for itself most loudly. It is to be hoped that the whole business will prove an awful and an effective warning.

Turning now to a pleasanter theme: the proposed union station has been adverted to as the gateway of Washington. There is a gateway by water as well as by land. Where the Anacostia joins the Potomac is the long, narrow space, beautiful for situation, known as the Washington Barracks; and there Congress has provided for the construction of the Army War College and the School of Application for the Corps of Engineers.

The main college building, with its formal gardens, will look down the Potomac to the old town of Alexandria, rich in Colonial memories, and on towards Mount Vernon, the extreme south-eastern limit of the proposed park system. The officers' quarters flanking the parade grounds will present along the river front a series of porticos, with their line of white columns standing in order like a regiment on dress-parade. This work is now being carried out according to plans eminently satisfactory to the Commission.

¹ A paper by Charles Moore, Secretary of the Senate Committee on the District of Columbia.

In the scheme for the development of the Mall, the plans contemplate along B Street, North, and B Street, South, a series of white marble buildings to be devoted to the scientific purposes of the Government, including the museums most frequented by visitors to the capital. Such buildings so placed would give great dignity as well as continuity to the approach reciprocally to the Capitol and to the White House. Under the provisions of an Act of Congress, plans have been prepared by Messrs. Lord & Hewlett for a new Agricultural Department building, and the appropriation for the structure is confidently expected at the present session. The competition was conducted with the assistance of the Park Commission, and if the building shall be erected as planned, a pace will be set for the series on the south side of the Mall. Congress has provided also for plans for a new building to relieve the overcrowded National Museum, and these plans are now being prepared by Messrs. Hornblower & Marshall. Unfortunately, it is now contemplated that this building shall be of brick and terra-cotta. In case this idea shall prevail, the series on the northern side of the Mall (where the new building is to stand) will begin with a serious handicap. The problem now is to make it apparent to Congress that a great and important museum-building should have a character of its own in keeping with the treasures displayed within its walls and worthy of the Government it represents. Those who have immediate charge of the work are fully alive to the situation.

As is well known, the Commission's plans contemplate the purchase of the squares south of Pennsylvania Avenue from the Treasury to the Capitol, and the erection thereon of public or quasi-public buildings, among them a municipal building for the District of Columbia. The ideal location for the District-building is the site now occupied by Centre Market; but the importunate condition of the District in respect to a public building was such as to lead Congress to order the purchase of the square between Thirteen-and-a-half and Fourteenth Streets, and the competitive plans for the new structure will be exhibited to the members of the Institute at this meeting. Thus, while a departure is made from the exact site, the adherence to the general scheme is most gratifying.

In this connection it is worthy of record that the Daughters of the American Revolution, moved by a desire to aid in the park improvements and actuated also by a sense of future advantage to their own cause, have purchased as a site for their Continental Hall, Square 173, the second square south of the Corcoran Gallery of Art. This location, facing the White Lot, is certain to become a most desirable site for a semi-public building. It is to be hoped that other societies will acquire the two lots remaining, and that due regard will be had for architectural effect, so as to secure harmony among the buildings framing this portion of the park system.

An important, even an essential, feature of the park plan is the reclamation of the flats of the Anacostia, or eastern branch of the Potomac River, a project divided as to its cost. The improvement of the lower stretch of the river belongs to the National Government proper; and the Army engineers have long had plans for dredging the stream and depositing the soil behind channel-walls of stone. The recent River and Harbor Act carries an initial appropriation of \$150,000 for this portion of the work, and contracts are now in process of award. Along the upper stretches of the river the improvement is a District of Columbia matter. The Commission recommended as at once the least expensive and the most effective treatment the creation of a water-park, the waters being held back by a dam and islands being created by dredging, as the topography permits. Until the titles to the property to be submerged and otherwise used shall have been established it will not be possible to go on with this portion of the plan.

Congress, however, has already taken steps to have the question of titles settled; and such is the urgent nature of the improvement from a sanitary standpoint that it cannot long be delayed.

The Senate Committee on the District of Columbia in its report calls attention to the fact that the plans of the Park Commission were the resultant of two coincident movements; one, technical in character, being the action of the American Institute of Architects at its annual meeting two years ago; the other a popular movement for the embellishment of the national capital, set on foot at the time of the celebration of the one hundredth anniversary of the removal of the seat of government to the District of Columbia. Among the objects proposed at that celebration was the restoration of the White House as the residence of the President of the United States, a project the imperative nature of which was already recognized by Congress. By reason of a most fortunate chain of circumstances a President alive to the importance of having the work done in the most thorough and artistic manner came to be entrusted with the task. It is in no way invidious to say that if the selection of an architect for this delicate undertaking had been left to this body the choice would have been the man whom President Roosevelt did select—the President of the Institute of American Architects. How well he has carried out the work, with what thorough respect for the traditions of the house, with what comprehensive knowledge of the universal language of his profession, with what noble self-restraint he has subordinated decoration to architecture, and with what modesty he has made the old mansion speak its own speech and not that of an individual architect—all these things you may see for yourselves.

The importance of the work on the White House by way of teaching the highest lessons of dignity, restraint and historic tradition, coming, as it does, at the very beginning of what we fondly hope is a

new era in Washington, cannot be overestimated. To link the age that is past with the age that is waiting before has been the constant endeavor of the Park Commission; and the restoration of the White House affords a supreme example of such continuity.

Thus briefly and imperfectly I have sketched for your encouragement the progress of plans as yet scarcely a year old. In this connection I cannot forbear to advert to the fact that the one man in Congress with whom the work of restoring the L'Enfant plan and carrying it to its ultimate conclusion through the plans of the Park Commission was a passion has passed from the scene of endeavor. Suddenly, unexpectedly, at the moment of highest usefulness and promise, and just as he was beginning to see the fulfilment of plans and purposes pursued through thirteen years of strenuous and intelligent effort, Senator MacMillan's career on earth was terminated. It had been his expectation to press upon the attention of Congress at this session a combination of all the scattered authorities over District parks and reservations, and to create a single body capable of employing experts to perfect the details and to carry out thoroughly and vigorously the comprehensive scheme of the Park Commission. That task now devolves upon others; and it should be the duty of the members of the American Institute of Architects to exert their constant and determined influence towards the creation of such a board of control. By so doing they will complete a task to which they have already set their hands and, as I believe, their hearts also.

THE ARGIVE HERÆUM.

THE excavation of the Heræum of Argos for the American Institute of Archaeology and the American School at Athens under

Dr. Waldstein, whose eminent services to classical archaeology are known to a great part of the readers of the *Transcript*, is the most considerable exploration of its kind that our countrymen have accomplished, and only next in value to the work done at Olympia by the German Government and at Delphi by the French School. It is a special cause for congratulation, because in this country such work gets no help from public funds, and must be carried through with self-denying effort by institutions whose means are small, and by private subscription. The first volume of the report has just been published by Houghton, Mifflin & Co., introduced by Dr. Waldstein's general sketch of the excavations, and containing detailed notices of the work of the American expedition in its several departments.

What makes Olympia, Delphi and the Argive Heræum interesting to study more than other places in Greece is that Greek art as much as Gothic centred in worship. All the arts, architectural, plastic and decorative, were lavished on temples and shrines. The fact that the Heræum was held for 2,000 years in paramount sanctity attracted to it a great accumulation of offerings such as in classical Greece and later in Christendom made the wealth and splendor of favorite shrines. In after centuries it was forgotten and its identity lost. In 1831 the site was first rediscovered by an English officer, General Gordon, who verified it by tentative excavation. More than twenty years later the Greek scholar and poet Rangabé made some further examination, imperfect, and soon given up for want of funds.

It was not till 1892 that, under the direction of Dr. Waldstein, excavation was undertaken there by American archaeologists with the thoroughness and orderly method of modern scholarship. The volume now published contains, besides Dr. Waldstein's interesting notice of these excavations, a detailed account of the architecture of the Heræum by Mr. Edward L. Wilson, of its sculpture by Dr. Waldstein, its inscriptions by Mr. R. B. Robinson and Professor Wheeler, and a sketch of the geology of the plain and hills of Argolis by Dr. H. S. Washington. Vases, bronzes, and some other important subjects are left to be discussed in the second volume.

The commanding situation of the Heræum on a height at the head of the plain of Argolis made it a midway station for the three great Argive cities, Tiryns, Mycenæ and Argos. It survived them all, maintaining its religious preëminence for 2,000 years, down to the end of the classic period. Though every part of this long life has left its memorials, the finds are unequally distributed in time. Of the smaller objects found almost all are of early date. Terra-cottas, vases, bronzes, gems, and the like present the primitive styles in a multitude of examples; but of the classic period there are very few. Yet the primitive objects found here, the vases especially, have a bearing on some important questions of the history of art that gives them peculiar interest. Dr. Waldstein believes that the publication of them will make it necessary to revise in some respects the classification of ancient vases.

In architecture, though there is a continuous series of remains coming down from the oldest temple, to which our explorers are inclined to assign the very early date of the nineteenth century B. C., and which was buried in 423 B. C., the building of which the most important and significant remains survive is the second temple. This was built immediately after the destruction of the first, in the high summer of Grecian art, dating, it is believed, between the Parthenon and the Erechtheum. So of the sculpture, substantially all of which belonged to this temple, a great many fragments have been recovered. There are no whole statues, but many beautiful heads, several in singularly good preservation, some admirable torsos, one or two nearly complete figures from metopes, and a great number of smaller pieces, all of the best period, of exquisite workmanship, and

of marked unity of style. The Argive school of sculpture, from which came Miron, Phidias and Polyclethus, pupils of one master, Agelidas, was the nursery of the Attic. Dr. Waldstein, with that skill in comparative study that distinguishes him, has collated these remains with the recognized works of Polyclethus, discovering in them personal characteristics which mark them all as the work of a single school, if not of a single hand, which he holds to be the hand of Polyclethus himself. He finds it necessary to revise the current estimate of Polyclethus, and even his own, being convinced that this sculptor was "the most purely Classic artist of antiquity," and adding: "Polyclethus is the sculptor of beauty, as Phidias is sculptor of sublimity, Praxiteles of grace and pure Greek sentiment, and the Bergamenians and Rhodians of action." The whole of Dr. Waldstein's essay is an interesting lesson to those who would know what the comparative study of art means.

In mechanical execution the book is of the best, a handsome folio, not intolerably big. The illustrations are not only technically excellent, but full of charm. Photogravures show well the delicate beauty of the sculptures: admirable half-tones set forth the views, the pictures of the lesser finds, and the skilful drawings in which Mr. Tilton embodies his courageous restorations. — *W. P. P. L. in the Boston Transcript.*

BOOKS PAPERS

THE D. Van Nostrand Company publishes in this country a translation of Paul Charpentier's book on timber,¹ which will find a welcome among the multitude of persons in this country who have begun to interest themselves in the production and use of timber. M. Charpentier begins at the beginning with his work, furnishing, after a botanical survey of the subject, some excellent chapters on sylviculture, clearing and replanting, and the exploitation of forests, followed by others on the allied subjects of the drying, seasoning and preservation of timber, and its protection from insects and diseases. To these are added some valuable chapters on the accessory products of forest exploitation, and methods of staining wood, and of utilizing timber wastes. As may be supposed, the book does not pretend to be a treatise on carpentry, or even on the strength of timber, but takes up wood as a substance, showing how it grows; what are its different varieties, their properties and the places where they are found; the methods of converting the different species into useful products, and the purposes to which these products are applied. Nothing just like this has, so far as we know, been done in English for many years; and scientific forestry, as well as the scientific utilization of timber, is so recent a study, that the ancient text-books are of very little use. It would be too much to say that M. Charpentier's work is everything that the American student can desire. Too little is said about American timber trees, and what is said about European timber is not always perfectly clear, as where we are informed that, out of a total annual consumption of twelve million cubic metres of Norwegian timber, ten million cubic metres are used for "household requirements and cultivation of land," and only a million and a half for firewood and building purposes; but it is, at least, comprehensive and most modern, and its defects can easily be overlooked for the sake of its merits. It is due to the translator, also, to say that much of the value of the book in its English form is due to the skill and care with which he has done his work. A more difficult treatise to translate well it would not be easy to find, but Mr. Kennell has accomplished his task with great intelligence, and with a smoothness which is gratifying to the reader.

THAT Professor Carpenter's book on the heating and ventilation of buildings² should have passed through four editions in seven years is sufficient evidence of its value, and the fourth edition, which has been in great part rewritten, and increased in size about one-third, is more valuable than ever. The chapters which are entirely new relate to the mechanical systems of heating and ventilation which are now so justly in favor; to fans and blowers, and to school-house heating and ventilation; and these will be found particularly valuable to architects, whose most serious problems of the kind most often present themselves in connection with the heating and ventilation of school-houses by means of fans. A few years ago, the architect could shift all the responsibility for the designing of such an apparatus on the contractor, but that time has gone by, and the architect of a large school-house or public building, even if he relies upon a contractor, or a consulting expert, for details, must know approximately the sizes of pipe and ducts that will be needed, the extent and position of radiating surfaces, the dimensions of the boiler, and the necessary size of the chimney; and he is expected also to be able to give advice as to the kind of boiler to be used; to

know when steam or grease traps will be necessary, and where they should be placed; to understand the relative advantages and disadvantages of horizontal and vertical engines, and to judge where inlet and outlet registers should be placed, and how much, if any, direct radiation should be introduced for night-work. If he is ignorant of these matters, his building cannot be economically and conveniently designed; and it is not too much to require of an architect at least sufficient knowledge to enable him to plan his building in such a way that it will not have to be altered subsequently to get in the necessary apparatus. As a resource in matters of this kind Professor Carpenter's book can hardly be too highly praised. The rules and tables which it gives for ascertaining the sizes of pipes, conduits and flues, radiators and registers, are not only reliable, but easily understood and applied, and invaluable descriptions are given of nearly all the recent devices, in the shape of improved boilers, temperature-regulators, fans and blowers, and electrical heating-apparatus, which the architect is likely to meet with, and in regard to which it is peculiarly necessary that he should be able to refer to the judgment of an expert, instead of depending upon the reckless and ignorant laudation, if not monstrous misrepresentation, which the travelling agents of the patentee often see fit to offer him. As every architect knows, the business of heating and ventilation is infested with the loquacious vendors of patent grate-bars, by the use of which sixteen pounds of water can be evaporated by burning one pound of coal; of powerful ventilators, consisting of a three-quarter-inch pipe, with one end inserted in the kitchen range, which will keep the atmosphere of a house as fresh and balmy as a June morning; of infallible grease-extractors, smoke-consumers and other devices, recommended by an imposing list of patrons, whose names are, in some cases, either forged or fictitious, but in regard to the merits of which the architect is often unable to judge accurately for himself. Where Professor Carpenter's book does not treat specifically of the appliance in regard to which information is sought, he generally gives principles which will enable an intelligent architect to form an opinion for himself in accordance with which he can conscientiously advise his client, and the latter, who expects the architect to know all about such matters, is always pleased to find that he was not mistaken in his anticipations.

ILLUSTRATIONS

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

CHAPEL OF THE TROY ORPHAN ASYLUM, TROY, N. Y. MESSRS. WARREN, SMITH & BISCOE, ARCHITECTS, BOSTON, MASS.

A CITY RESIDENCE, NEW YORK, N. Y. MESSRS. ROBERTSON & POTTER, ARCHITECTS, NEW YORK, N. Y.

CHURCH AND PARISH HOUSE FOR ST. MARK'S PARISH, PATERSON, N. J. MESSRS. H. M. CONGDON & SON, ARCHITECTS, NEW YORK, N. Y.

STABLE FOR THE STANDARD COACH-HORSE CO., 41-43 WEST 63D ST., NEW YORK, N. Y. MESSRS. LUDLOW & VALENTINE, ARCHITECTS, NEW YORK, N. Y.

Additional Illustrations in the International Edition.

THE WOMAN'S CLUB-HOUSE, WORCESTER, MASS. MISS JOSEPHINE W. CHAPMAN, ARCHITECT, BOSTON, MASS.

HOUSE OF MRS. WIRT DEXTER, NO. 393 COMMONWEALTH AVE., BOSTON, MASS. MESSRS. LITTLE & BROWNE, ARCHITECTS, BOSTON, MASS.

This and the following subjects are copied from Baron Taylor's "*Voyages pittoresques.*"

THE CHÂTEAU DE JOSSELIN, BRITTANY, FRANCE.

BEDCHAMBER OF FRANCOISE DE FOIX, CHATEAUBRIAND, BRITTANY, FRANCE.

INTERIOR OF THE COLLEGIATE CHURCH, NANTES, BRITTANY, FRANCE.

NOTES AND CLIPPINGS

ELECTRIC FIRE-PUMP IN ROUEN. — Thornwell Haynes, United States Consul at Rouen, gives the following description of an electrical fire-pump used in that city: "It is composed of a centrifugal-pump, and

¹ "Timber." A Comprehensive Study of Wood in all its Aspects, Commercial and Botanical. Translated from the French of Paul Charpentier by Joseph Kennell. London: Scott, Greenwood & Co. New York: D. Van Nostrand Co. 1902. Price \$6 00 net.

² "Heating and Ventilating Buildings." A Manual for Heating Engineers and Architects. By Rollo C. Carpenter, Professor Experimental Engineering, Cornell University. Fourth Edition, Revised and Enlarged. New York: John Wiley & Sons. 1902.

an eight-horsepower motor, which gives normally 2,000 revolutions a minute. The motor is well covered, so as to prevent all penetration of water, and a continuous current of 525 volts can be applied. Above are two bobbins: On one is wound the wire upon which the current is received, the extremity being exposed in such a manner as to allow connection with a hook suspended from the tram or electric-light wire; on the other bobbin is wound the return wire, the free end being connected with a cast-iron block to be fastened to one of the tramway-rails. There is beneath the covering a compartment containing two circuit-breakers, a circuit-closer, and a commutator. To start the apparatus, it is only necessary, after connecting the two wires to the line giving the energy, to close the circuit and start it running slowly with the rheostatic guide; the guide being fastened to the circuit-breaker the motor runs normally. The time necessary for starting is about a minute. The bobbins on which are wound the conductors can receive 200 metres (656.167 feet) of insulated wire; if to this are added the 200 metres of hose on the reel and the thirty-five metres (114.83 feet) to which the water can be thrown, it is seen that a distance of 435 metres (1,427.16 feet) can be covered. The distance that the water can be thrown, nearly 115 feet, is accomplished with an orifice of 18 millimetres (.7 inch), and a volume of 350 litres (92.46 gallons) a minute. The whole machine can be placed on a hand-cart or on a little two-wheeled wagon drawn by one horse. Its total weight, with accessories and two men on the seat, is about 1,040 kilogrammes (2,292.78 pounds). The motor and pump are not longer than a metre (39.37 inches) and about one-half a metre (19.685 inches) wide and one-half a metre high. Behind the machine is a reel capable of holding 300 metres (984.25 feet) of hose, two lances, a ladder with hooks, an axe, a hydrant-key, a nozzle, etc. The weight of this reel, equipped, is 330 kilogrammes (727.518 pounds). The idea of this pump, which is the only one of its kind in France, if not in the world, was suggested to M. Robert Lefebvre, the captain of the Rouen Fire Company, by a conversation he had last year with a German engineer at the Berlin Fire Extinguishing Exposition. This latter had conceived the idea of an electric-pump for cleaning the walls of buildings, etc. If sand thrown by an electric-pump could clean buildings, why could not water thrown in the same manner extinguish fire? In the solution of this question, the electric fire-pump was born." — *N. Y. Evening Post*.

SEWAGE-DISPOSAL AT PITTSFIELD, MASS. — About two years ago the authorities of Pittsfield, Mass., decided that some more advantageous method of disposing of the sewage than allowing it flow into the Housatonic River was necessary, and active measures were taken to install a more hygienic system. The sewage is now pumped a distance of two miles and a half from the outskirts of the city to large filter-beds, where it trickles through the filtering-material, consisting of sand, to under-drains, and thus is discharged, clarified, into the river. The pumping-station, by means of which the operation is performed, is believed to be the first electrically driven pumping-station for sewage-disposal in this country. According to the *Electrical World and Engineer*, the pump is especially designed for this class of work. The valves are of the clapper type, leather-seated and are free from any possibility of becoming clogged. The pump is triple-acting, and has a capacity of 2,000,000 gallons in ten hours, delivering at a pressure of seventeen pounds per square inch, the lift to the filter-beds being about 54 feet. The pumping-plant is operated only during the daytime, and to provide for the disposal of sewage during the time it is not in operation large storage reservoirs of some 1,500,000 gallons' capacity have been built underground between the pumping-station and the screen-house in the rear. These reservoirs are three in number, and are roofed with brick arches. To prevent any offensive odor from escaping from the reservoir, ducts are provided for carrying all gases, etc., to the base of the chimney on the power-station. Should the draught of this chimney be insufficient to carry off such vapors as may arise, a rotary-fan has been placed at the base of the chimney to assist in the ventilation. This fan is not yet in operation, but as it is to work both day and night, and as the circuit to the pumping-station is cut off at the central lighting-station when the pumps are not in operation, it is probable that a water-motor will be used for running the fan. A complete system of hot-water heating, with radiators, has been installed. — *Fire and Water*.

THE USE OF PETROLEUM IN MAKING PIG-IRON. — Two Russian engineers, named Piterksy and Ivanoff, have devised a process by which petroleum can be utilized in the production of pig-iron in connection with a certain quantity of solid fuel. In a paper read before the Baku Technical Society, the following description of the process was given: The solid fuel is placed in a special generator, into the lower part of which are introduced the heated gases from the combustion of petroleum. The fuel, charged from above, gradually falls to the bottom and becomes heated; dry distillation results, and the gaseous products are drawn off from the upper part of the generator and utilized for fuel, while the resulting coke continues to descend. The products of combustion entering the lower part of the generator pass over the incandescent coke, are deoxidized, and are thus available as reducing agents, which can afterward be used in the second furnace. This furnace, which is used for producing iron, resembles an ordinary blast-furnace, from which it merely differs in having a tube running down the centre. The ore and fluxes are placed in the circular space between the walls of the furnace and the central tube, the latter being charged with a quantity of coal sufficient to supply the iron with the required equivalent of carbon for converting it into pig-iron, also, if necessary, with fluxes for changing the composition of the slags. The circular space and the central tube are provided with covers to retain the gases. The heated reducing gases from furnace No. 1 are made to enter the lower part of furnace No. 2 through several openings. The gases at first melt the ore and slag. In ascending, without changing their composition, they convey their heat to the materials, and they begin to act chemically,

by reducing the iron-oxides, absorbing their oxygen, and becoming converted into carbonic-acid. Although the gaseous medium gradually acquires pronounced acid properties, the effect of the carbonic-acid is counteracted by the fall in the temperature. The spent gases collecting in the upper part of the furnace are utilized as fuel, the reduction process being preferably carried out by means of carbonic-oxide. The central tube terminates at the place where a temperature of 900 degrees Cent. prevails. The atmospheric medium at this horizon being of a reduced nature, the carbon dropping into the charge could only be utilized in combining with the iron to form pig-iron. The pig-iron and slags produced are tapped in the usual manner. The molten pig-iron from furnace No. 2 is run into the Bessemer converter. The pig-iron is converted into steel; the gases are led into generator No. 1 and serve for producing pig-iron in furnace No. 2. — *Iron Age*.

JOKES IN BRICKS AND BRASS. — In the year 1679 the Danes made a descent on Hamburg, then, as now, the great seaport of the German Confederacy. But the good people of Hamburg had had warning of the contemplated attack. They were ready, and the Danish soldiers met with so hot a reception that they were only too glad to take a hurried departure, leaving many of their number dead and dying behind them as a result of the conflict. The Hamburgers struck a coin to commemorate the event, and one of these coins has lately been sold among a collection which belonged to a deceased collector in Berlin. On one side are these words: "The King of Denmark has been to Hamburg. If thou wouldst know what he achieved, look on the other side." You turn the coin over, and the other side is — a blank! There are more than one of these historic jokes to be seen in various parts of the world. A notable one is a monument in the market-place at Coblenz. When Napoleon's conquering army marched through this city on its way to crush Russia, a French general erected this monument to celebrate this victorious progress, and on it carved an inscription setting forth the fact that Coblenz had been added to the French Empire, and signed with his own name. A few months later and a Russian general entered the town, but in pursuit of broken regiments of starving Frenchmen. He saw the monument and read the grand inscription. He did not blot it out, but, with grim irony, he carved beneath it, "Seen and approved by me," and he added his name. So the words remain to this day. There is a curious old almshouse in the Herefordshire town of Leominster. On the outside wall is a rude carving of a man armed with a heavy hatchet. Underneath are these words: "He who gives away all before he is dead, let him take up this hatchet and chop off his head." A former inhabitant of the town was the builder of these almshouses, and so charitable was he that at the age of about sixty he found himself penniless. He ended his days in the very almshouse he himself had built, and before he died requested that this amusing warning might be inscribed for the benefit of posterity. — *Answers*.

BAMBOO. — The increasing importation of bamboo seems to indicate that Americans are beginning to appreciate the exceeding utility of that remarkable plant. In the Orient it fills so large a place that it may be compared with iron and steel in the Occident. When dried and cut into slivers it makes nails which never rust. These bamboo nails have recently appeared in a Broadway shop as souvenirs. When a portion of its surface is removed, steamed or heated in a fire, it becomes pliable, and may be bent into various angles. These two properties enable the Eastern cabinet-maker to manufacture it into stools, chairs, tables, screens, étagères, trunks and armoires. In the United States bamboo and rattan are made into ornamental furniture on a small and delicate scale, but the use of the large-sized bamboo for massive and durable furniture has not yet been attempted. Builders in the cities on the eastern coast of Asia use the bamboo for masts, poles, ladders, step-ladders, scaffoldings, painters' stagings, and other purposes where both strength and rigidity are demanded. With equal weights, bamboo is five times as strong as wood, and with equal strength is but one-third as heavy. The joints in the stems enable a workman to lash two poles together without any possibility of slipping, which is not the case with ordinary timber poles. This does away with the necessity of nails, and so increases the life of scaffoldings indefinitely. Every bamboo is practically a series of air-chambers. A boat-hook whose shaft is one of these stems is a life-preserver which will support one or two persons; while a bamboo gaff or boom will keep a dozen persons afloat. In household furnishing and decorations the Eastern reed offers unlimited variety. Thus far it has been employed in this country for picture-frames, easels, fancy chairs, and curtain-poles. In the Orient the larger sizes, which range from 3 to 12 inches in diameter, are sawed into various lengths and used for card-receivers, sugar-bowls, cigar-boxes, hand-trays, spoon-holders, umbrella-stands, drinking-utensils and jewelry-boxes. The larger ones are cut through and sawed with scroll-saws into various patterns, which are utilized as jardinières or the holders of pewter boxes, incense cases and mantel-ornaments. When softened by hot water and split into thin strips these can be woven with cord into veranda and window shades, door-mats, and hall-matting. When split still finer the strips can be braided into table-mats, chair seats and backs, dado wall-covers and a floor-covering which is almost indestructible. — *N. Y. Evening Post*.

WATERFALL NEAR CHIHUAHUA, MEXICO. — William P. Dunham, a prominent Denver mining-man, has returned from Mexico recently. In addition to a tale of the vast mineral wealth of the Mexico district, Mr. Dunham also has a story of a wonderful waterfall, which probably enjoys the distinction of being the highest waterfall in the world. The fall is known by the Indian name of Basaseachic, and is located about 190 miles west of the city of Chihuahua, near the summit of the Sierra Madre Mountains. The elevation of the mountain is 6,500 feet above sea-level. The cascade falls 978 feet. — *N. Y. Tribune*.

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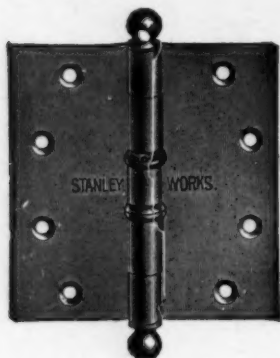
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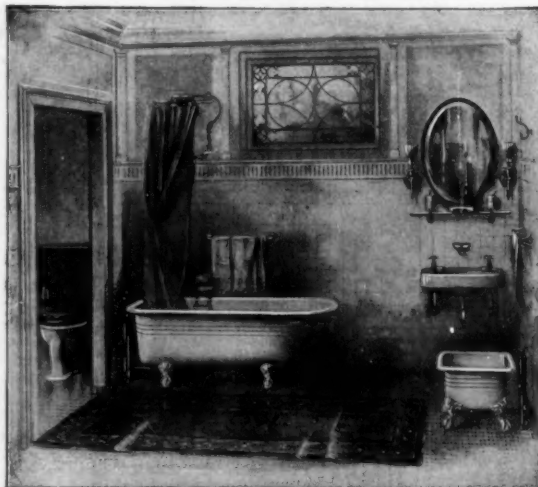
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Professor of Architecture, Columbia University

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"THE AMERICAN VIGNOLA"

PART I

The Five Orders of Architecture

By WILLIAM R. WARE, Professor of Architecture, Columbia University

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Carpenters' Hall, Philadelphia, Pa.		" 1770
Independence Hall, Philadelphia, Pa.		" 1729
Faneuil Hall, Boston, Mass.		" 1741
and others.		

CHURCHES

King's Chapel, Boston, Mass.		Date 1749
Seventh-day Baptist Church, Newport, R. I.		" 1729
Christ Church, Alexandria, Va.		" 1767
Christ Church, Philadelphia, Pa.		" 1727
St. Paul's Chapel, New York, N. Y.		" 1764
Old South Church, Boston, Mass.		" 1729
First Church, Hingham, Mass.		" 1681
St. John's Chapel, New York, N. Y.		" 1803
First Congregational Church, Canandaigua, N. Y.		" 1812
St. Peter's P. E. Church, Philadelphia, Pa.		" 1758
Gloria Dei Church, Philadelphia, Pa.		" 1700
and others.		

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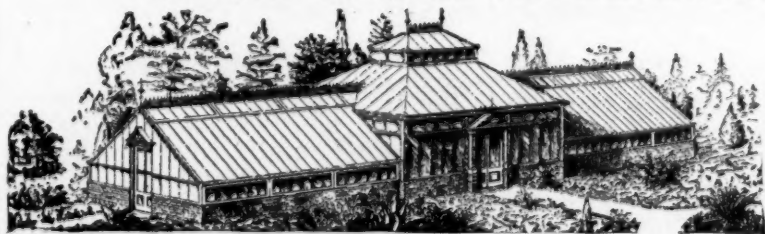
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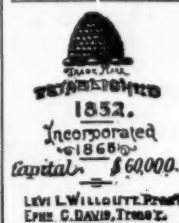
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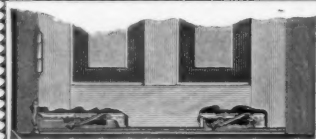
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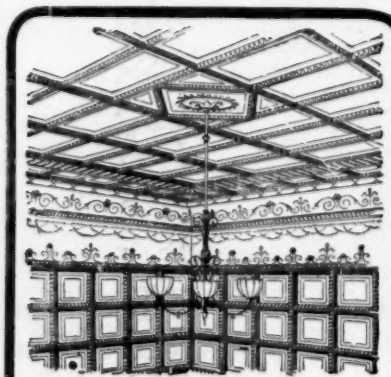
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THE KEASBEY & MATTISON CO., the owners of the patents for magnesia covering, have commenced a suit in the United States Circuit Court for the Southern District of New York against the Philip Carey Mfg. Co., George D. Crabbs, J. E. Breese, Schoellkopf, Hartford & Hanna Co., J. F. Schoellkopf, Jr., James Hartford, W. W. Hanna, C. P. Hugo Schoellkopf and Jesse W. Starr, to restrain the defendants from making and selling magnesia covering for boilers and steam pipes containing more than 50 per cent of magnesia, and especially coverings containing 85 per cent magnesia.

The Bill prays for a preliminary writ of injunction, to be continued during the pendency of the suit, and upon the final determination thereof to be made perpetual, and also demands an accounting and damages.

☞ All persons are respectfully requested to refrain from purchasing covering infringing these patents, as such purchasing must of necessity lead to suit. ☞

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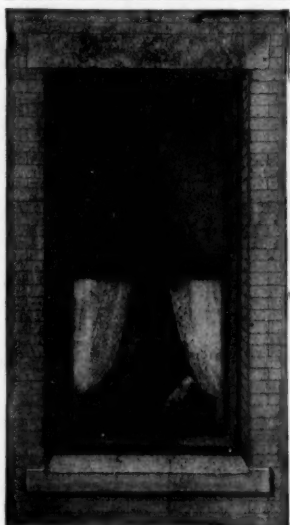
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WILLIAM R. WARE

Professor of Architecture, Columbia University

Text and Plates 86 pp., 9"x12"

PRICE, 3.00

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

R. R. The building will be two stories high, and cost \$75,000.

The Iroquois Theatre Co. has secured a permit for the erection of a two-story theatre at 79 to 83 Randolph St.; cost estimated at \$300,000.

Cleveland, O. — The Brooks Co., stationers, will erect a seven-story building at 122 Superior St., at a cost of \$60,000. Architects, F. S. Barnum & Co., New England Building.

Crookston, Minn. — The Common Council has approved the contract of the city with the Barber Asphalt Paving Co. for the paving of the principal business streets. Cost, \$60,000.

Duluth, Minn. — The French Catholics will erect a church and school at 23d Ave. W. and Michigan St. Cost, \$90,000.

Elwood, Ind. — Geo. H. Johnson, of St. Louis, Mo., is interested in the erection of a hotel here.

Flint, Mich. — Clark & Munger, Bay City, have prepared plans for a three-story store and office building to be erected for the Supreme Div. Knights of the Loyal Guard.

Fresno, Cal. — The Knights of Pythias are reported to be considering the erection of a \$50,000 society building.

Laconia, N. H. — The Masonic Temple, destroyed by fire December 5, will probably be rebuilt at a cost of \$80,000.

Lorain, O. — Patton & Miller, Chicago, Ill., are to prepare plans for a \$30,000 Carnegie Library.

Los Angeles, Cal. — Murphy & McLennan, 119½ S. Spring St., have the contract for erecting (exclusive of plumbing and interior finish) the Chamber of Commerce Building on Broadway and 2d St. for \$125,000. It will be six stories high, 132' x 185'.

Meadville, Pa. — The trustees of the Meadville Theological School have decided to erect a \$26,000 building.

Minneapolis, Minn. — A \$30,000 two-story brick business building, 72' x 155', will be erected for Mrs. S. F. Moon after plans by L. A. Lamoreaux.

Monessen, Pa. — The School Bd. is stated to have decided to erect a \$50,000 school in the spring.

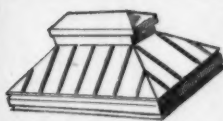
Monmouth, Ill. — The Warren County Commissioners are reported to have decided to build a \$30,000 almshouse.

Montclair, N. J. — A dwelling will be erected on N. Mountain and Watchung Aves. for Adlai E. Stevenson, at a cost of \$180,000.

New Haven, Conn. — Vanderbilt Hall, the gift of Frederick W. Vanderbilt, of New York City, '76 S.

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

the first of the projected series of Scientific School dormitories, will be built in Wall St., running from College St. to Temple St., on the north side. The new dormitory has received close attention by Mr. Vanderbilt and will be one of the most sumptuous dormitory structures in the country. It will be of granite and limestone and will be built on Gothic architectural lines. The contracts have been awarded to Sperry & Treat, of this city. Kirtland Hall, the new "Sheff" laboratory, will be placed on Hillhouse Ave. and will have a frontage of 92 feet. It will be used exclusively for laboratory work in mineralogy, physical geology and physiography. The work of demolishing the old Wall St. houses for Vanderbilt Hall will be begun at once. Both buildings will be finished by June, 1904.

New York, N. Y. — A press report states that \$500,000 will be expended in erecting several brick, stone and terra-cotta college buildings for the Manhattan College for the Christian Brothers, after plans by Architect John E. Kerny, 1432 Broadway. Slate roofs, electric wiring, metal ceilings, steam heat, etc.

The trustees of the Ancient Order of Hibernians are negotiating for funds for the erection of a \$250,000 hall at 116th St. and 5th Ave.

Between January 1 and December 31, this year, the Building Committee of the Board of Education will have given out 32 contracts for new school-houses or additions to those in existence, providing 48,790 new sittings. Ten of these contracts have not yet been let, but will be awarded before the end of the month, unless some unforeseen difficulties arise.

Plans have been filed for alterations to the five-story brick building on the northwest corner of Lexington Ave. and 52d St. The building has been occupied as a maternity hospital, and when alterations are completed will be occupied as a tenement-house with stores. R. Hoe, of No. 504 Grand St., is the owner. The estimated cost is \$25,000.

Brickmaler & Stephens, of No. 131 W. 18th St., have the general contract for making extensive alterations and additions to the building on the corner of 5th Ave. and 31st St. for the Mauser Mfg. Co., silver-smiths, No. 14 E. 15th St. The estimated cost is \$40,000. Jas. A. Elliott, No. 131 W. 18th St., is the architect.

M. S. A. Wilson has had plans prepared by Sass & Smallheiser, 23 Park Row, for 2 six-story flats, to be built on W. 137th St., near 5th Ave. Estimated cost, \$70,000.

Sass & Smallheiser, 23 Park Row, have completed plans for a six-story tenement with stores, to be built for Hillman & Golding, at Nos. 61-63 Columbia St., at a cost of \$45,000.

Sass & Smallheiser, 23 Park Row, have made plans for a six-story tenement and store building at Nos. 312-314 E. 8th St. for John Katzman. The estimated cost is \$45,000.

Neville & Bagge, No. 217 W. 125th St., have completed plans for a nine-story apartment-house, 100' x 115', to be built at the corner of Central Park West and 66th St. at the cost of \$500,000. Owners, George Daily and J. A. Carlson, 504 W. 146th St.

Plans have been drawn by John E. Kerby, 1432 Broadway, for the new Manhattan College buildings for the Christian Brothers. The plans are for 3 five-story basement buildings and a two-story and basement power-house, to be located on Spuyten Duyvil Parkway, west of Broadway. They will be fireproof with exteriors of brick, stone and terra-cotta and will contain a chapel, library, dormitory, class and study rooms, etc. The cost will be in the neighborhood of \$500,000.

George Vassar, Son & Co., 5 E. 18th St., are the general contractors for the five-story brick dwelling, 20' x 92', to be built at 120 E. 70th St., at an estimated cost of \$30,000. Plans by W. S. Post, 33 E. 17th St.

It is stated that James McGovern, president of the Park Construction Co., 4 Warren St., will receive estimates in the new building at 107th St. and Manhattan Ave. for 2 six-story brick tenements,

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

73' 9" and 67' 3" x 87' 11", to be built on the north side of 106th St., 55 feet west of Manhattan Ave., at a cost of \$200,000. Moore & Landsiedel, 148th St. and 3d Ave., are the architects.

Report states that a nine and one-half story apartment hotel will be built on the premises Nos. 70 and 72 W. 49th St., by the Collins Building and Construction Co. The size of the plot, which is between 5th and 6th Aves., is 41' x 100' 5".

St. Matthew's Roman Catholic Church has bought a plot 100' x 100' 5" on the north side of 67th St., 125 feet east of West End Ave. A church and parochial house will be built on the premises.

The estate of William M. Ryan has sold to George W. Loft a triangular plot at the southeast corner of W. Broadway and Barclay St. The plot has a frontage of 106.7 feet in W. Broadway, one inch in Barclay St., and the other dimensions are 103' 9" and 22' 10". Mr. Loft owns No. 54 Barclay St. He intends to erect a building on the combined parcels for his own business.

An ambitious project engaging the attention of the New York City Teachers' Association at present is the building in this city of a teachers' club-house, which is intended to be the centre around which will gather many of the activities of the teachers' profession. It is calculated that to build and equip such a structure as is desired would cost from \$200,000 to \$300,000, and to maintain and run it between \$15,000 and \$20,000 per annum. The tentative plans for the building provide for a ground floor containing offices and an auditorium, a mezzanine floor for offices and committee rooms, a second and a third floor providing dining and club-rooms, a library and small meeting rooms. The project has received the indorsement and support of the leading members of the Board of Education.

A six-story tenement with stores is to be built at Nos. 125-127 E. 4th St. for Hillman & Golding. Cost, \$45,000. Architects, Sass & Smallheiser, 23 Park Row.

Plans are in preparation for a six-story flat, 47' x 26' 10", brick, stone and terra-cotta front, for Jos. Witner & Son, to be built at Nos. 225 and 227 E. 53d St., at a cost of \$45,000. Sass & Smallheiser, 23 Park Row, are the architects.

The contract for the construction of new public school No. 82, in the Borough of Queens, has been awarded to F. J. Walsh at \$145,000.

The Hudson Realty Co., 135 Broadway, will erect a fifteen-story office-building, plans for which are now in preparation, on the northwest corner of 5th Ave. and 21st St., the present site of the Union Club.

Rev. J. C. Henry, pastor of the Church of the Guardian Angels, on W. 23d St., recently announced that the building of a new church was in order, the church debt having been all paid.

The Hanover Fire Insurance Co. has purchased No. 36 Pine St. At the present time the company owns and occupies No. 34, a ten-story and basement office-building adjoining the property just purchased. Its intention is to alter its present building in the improvement. Upon No. 36 will be erected a thirteen-story office-building. The present structure will be increased in height three stories, and the whole made one large building.

Norwood, O. — Plans have been prepared for a \$200,000 plant, consist of 11 buildings to be built by the Queen City Yarnish Co., W. 8th St., Cincinnati. Harry Hake, 140 Union Trust Building, architect.

Osbrook Point, R. I. — Fifty acres of valuable land for summer building purposes have been sold at Osbrook Point, or Pawcatuck Point, to Jacob Litt, the well known theatrical manager of New York. Mr. Litt, it is understood, paid the Davis heirs of Lower Pawcatuck \$12,000 for the property. It is thickly wooded and extends southerly into the waters of Little Narragansett Bay, with the Pawcatuck River at the left, separating it from Watch Hill. The new owner of the property is expected to start a summer residence on his new property before next season opens, though there is no definite information on this point. It is thought that a

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

prosperous summer resort may be built up in the near future. The purchase has suggested the possibility of building at some time in the future a road straight eastward from Stonington Borough to the Pawcatuck, skirting the shore of Little Narragansett Bay and opening up many sites for summer cottages.

Perkasie, Pa.—Estimates are to be filed at the office of Charles W. Bolton & Co., Witherspoon Building, Philadelphia, on or before December 31 for the handsome new church to be erected here for St. Stephen's Reformed congregation.

Philadelphia, Pa.—J. Horace Cook, 3107 N. 15th St., has made plans for a manual training school to be erected at 7th St. and Lehigh Ave. Cost, \$200,000, including equipment.

The Select Council has passed an ordinance providing for the purchase of Macalester Farm, as the site for the Municipal Hospital.

The Bd. of Supervisors have approved the ordinance introduced at the last meeting of Common Council to place on the city plan an avenue 300 feet wide, extending from Broad and Cayuga Sts., north-easterly for 8 miles; estimated cost, \$2,500,000.

Pittsburgh, Pa.—Plans are being prepared for a brick and steel warehouse, to cost \$200,000, for the Pittsburgh Dry Goods Co., 409 Penn Ave. Rutan & Russell, First National Bank Building, architects.

Plans are now being prepared for a \$300,000 building, to be erected on Diamond St. and Cherry Alley by Kaufmann Brothers.

The congregation of Holy Rosary R. C. Church is planning to erect an edifice on Lincoln and Lemington Av. s., to cost \$30,000.

Henry Shenk, 900 Lewis Block, has received the contract for erecting a \$25,000 shelter home in Schenley Park.

The Sisters of Divine Providence will erect a school, convent and chapel on Lincoln and Verona Aves. Cost, \$60,000.

Plans have been drawn by A. F. Link for a brick

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

building on Locust St. for D. H. Crisman, to cost \$24,000.

John McSorley will erect a four-story brick apartment house on Centre and Craig Sts., at a cost of \$65,000.

Plymouth, Wis.—The Plymouth School District No. 8 has voted to erect a new high-school building costing \$22,000.

Providence, R. I.—The successful architects in the competition of plans for a State sanatorium for consumptives are Thornton & Thornton of this city. The cost comes well within the prescribed limit of \$60,000. Lewis J. Pierce, a local contractor, will furnish material and build the sanatorium, including heating and plumbing, for \$55,150. The price of the site already selected on the shores of Wallam Pond in Burrillville is \$5,000 for 250 acres. A bill now before the General Assembly appropriates \$100,000, which should complete the institution with a reasonable margin for incidental expenses. The accepted plans call for four buildings, all connected, and the arrangement is such that more room may be added from time to time without interfering with the symmetry of the whole. They are to be constructed of wood, with wooden shingles and stone underpinning. In the centre is the administration building, three and a half stories in height. The business quarters, for heating apparatus and the like, are in the rear. On each side of the administration building, connected by corridors and reaching out in front, are two ward rooms, each two stories high.

Pueblo, Col.—A company having a capital stock of \$100,000 has been formed for the erection of a new foundry building for the manufacture of malleable iron castings and tray iron.

Racine, Wis.—Plans have been adopted for a \$30,000 addition to Garfield School.

Richmond, Va.—J. E. & A. L. Pennock, Philadelphia, have the contract for the large Roman Catholic cathedral to be built here from plans by J. H. Maguire, of New York. It will be of gray Virginia granite and Indiana limestone, cruciform in shape, 70' x 200', in dimensions, expanding to 130 feet at the transepts. In the front will be an architrave, supported by six Corinthian columns. The roof will be of unglazed green tiles. The interior will be finished in marble wainscoting with oak panels and the floors of marble mosaic and dappled Terrazo. The building will cost about \$400,000.

Ridgway, Pa.—A \$40,000 stone and steel church building will be erected at this place by the Methodist Episcopal congregation.

San Bernardino, Cal.—F. P. Burnham and Wm. Ziesner have prepared plans for a Carnegie Library, to cost \$20,000.

San Francisco, Cal.—Wm. Koenig, 120 Sutter St., has prepared plans for an apartment hotel to be erected on Bush st. and Burritt Pl., for Harry N. Stetson, to cost \$125,000.

Seattle, Wash.—The Ladies' Relief Society are discussing the erection of a new building for the Children's Home. Plans have been prepared.

Sedalia, Mo.—The citizens have voted to issue \$40,-

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

000 bonds to erect a school, to replace the Broadway School.

Spokane, Wash.—L. I. Rand, Rookery Building, is the architect for a three-story brick building, 90' x 130', to be erected for S. Heath.

St. Joseph, Mo.—Dr. John Logan contemplates the erection of a \$20,000 two or three-story store and office building, 80' x 140', on Edmond St.

St. Louis, Mo.—Wilson H. Rowley is manager of the Rowley Lend Co., recently incorporated with a capital stock of \$250,000, for the construction of a white lead plant at the intersection of Theresa Ave. and the railroad tracks.

For several weeks St. Louis and Boston capitalists have been considering plans for the erection of a large and costly hotel building at the southwest corner of Garrison and Washington aves. The property belongs to the Robert A. Barnes estate and has a frontage of 275 feet on Washington Ave. and 135 feet on Garrison. The promoters are planning a building to cover the entire lot, eight stories high, to cost about \$700,000. Architects Matthews & Clark, of this city, have been taking measurements and levels on the site, with a view to drawing up the plans for the building. The plans contemplate three stories and a buffet on the Garrison Ave. side, a drug store on the corner and the main entrance to the building in the middle on the Washington Ave. side.

A building permit has been issued to the Anheuser-Busch Brewing Association for the erection of a stockhouse on the west side of 9th St., between Pestalozzi and Arsenal Sts. The building will cost \$60,000.

Mayor Wells has issued a permit to the Ruemell-Dawley manufacturing company for the erection of a frame factory to be covered with corrugated iron, on Cherokee St., at the intersection of the railway tracks. The building is to cost \$15,000.

Toledo, O.—It is stated that the St. Louis Catholic Society will erect a \$50,000 school.

Toronto, Ont.—The City Council has decided to adopt the recommendation of the City Engineer that a system of sewage disposal east of Woodbine Ave. be constructed as a local improvement at an estimated cost of \$45,000.

Warren, Ark.—The Bradley County Commissioners have adopted plans by Architect F. W. Gibb, Little Rock, for a two-story brick court-house, to cost \$40,000.

Washington, D. C.—The plans of Cope & Stewardson, 320 Walnut St., Philadelphia, Pa., have been accepted for the new municipal building to be erected on 14th, D and E Sts., N. W., to cost \$900,000.

Winchester, Mass.—The question of a new fire-station is being agitated.

Worcester, Mass.—The Fin. Com. of City Council has voted to recommend a loan of \$300,000 to enlarge and equip the City Hospital.

York, Pa.—Local press reports state that \$44,000 has been appropriated for the building of the Richmond Ave. bridge.



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PROPOSALS.

BRIDGES.

[At Montezuma, Ia.]
Proposals for the construction of county bridges during the year 1903 will be received by the county auditor until January 5. 1409

STOREHOUSE.

[At Fort Baker, Cal.]
San Francisco, Cal. Sealed proposals will be received here until January 5, 1903, for construction of frame ordnance storehouse at Fort Baker, Cal. Information furnished on application to D. D. WHEELER, A. Q. M. G., chief Q. M. 1409

ROAD.

[At Fort Myer, Va.]
Sealed proposals for construction of macadam road will be received until January 10, 1903. Information on application. CAPT. W. F. CLARK, Q. M. 1409

PLUMBING, ELECTRIC WIRING, ETC.

[At Fort Greble, R. I.]
Office Constructing Quartermaster, 209 Thames St., Newport, R. I. Sealed proposals will be received here until January 7, 1903, for constructing, plumbing, electric wiring and installing hot-water heating system in 12-bed brick hospital, Fort Greble, R. I. Work to commence April 1, 1903. Information furnished on application. CAPT. THOMAS H. SLAVENS, Q. M. 1409

HEATING AND VENTILATING.

[At Austin, Tex.]
Bids for putting in machinery and complete apparatus for power, electric lights, water supply system and steam heating and ventilating at the Epileptic Colony at Abilene, Tex., will be received at the office of comptroller of public accounts until January 3. Plans and specifications can be seen at the office of M. R. Sanguinet, Fort Worth, or E. M. Worsham, superintendent insane asylum, Austin, or W. P. Preston, superintendent of buildings, Abilene. JOS. D. SAYERS, governor. 1409

SUPERSTRUCTURE OF BRIDGES.

[At Cumberland, Md.]
Bids will be received January 5 by the Bd. of Co. Comrs. for constructing the superstructure of several steel highway bridges. JOHN N. FRANTZ, Clk. 1409

REMODELLING JAIL.

[At Morristown, Tenn.]
Proposals for furnishing labor and materials and remodelling the Hamblen County jail will be received until January 7. R. S. HALE. 1409

BRIDGE.

[At Webster, S. D.]
Bids will be received January 7 by the Bd. of Co. Comrs. for constructing a 1-span steel bridge, 24 feet long and 18 feet wide over Blue Dog Lake. WM. EGELAND, Co. Aud. 1409

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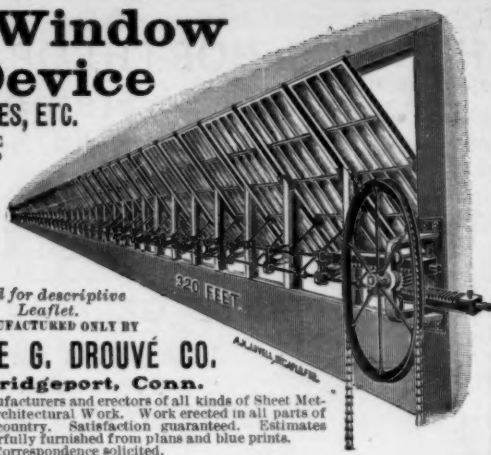


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CODE OF PRACTICE FOR SUB-ESTIMATING AND SUB- CONTRACTING

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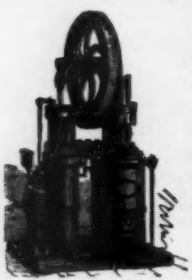
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SECTION 2. A Member having any ownership
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proposed to be used on work for which he is
architect, should inform his employer of the
fact of such ownership.

SECTION 3. No Member should be a party to
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SECTION 4. No Member should guarantee an
estimate or contract by personal bond.

SECTION 5. It is unprofessional to offer draw-
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address, profession, and office hours, and
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SECTION 7. It is unprofessional to make altera-
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tect, within ten years of its completion,
without ascertaining that the owner refuses
to employ the original designer, or, in event
of the property having changed hands, with-
out due notice to the said designer.

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

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

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

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

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

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

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

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

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

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