

SATURDAY, NOVEMBER 28, 1903

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SOMETHING of a sensation has been caused in New York by the discharge of a large number of clerks, draughtsmen and stenographers, and of all its estimators but one, by the George A. Fuller Company, which constitutes the contracting department of the United States Realty Company. Not unnaturally, this action gave occasion for a rumor that the United States Realty Company was about to abandon the building business, but the officials of the Fuller Company explain their action by saying that the uncertainties of labor tactics, the high prices of labor and materials, and the condition of the money market, have coöperated to check building enterprises for the present, and that they found it necessary to curtail expenses until business should revive. Meanwhile, the Company has about sixteen million dollars' worth of contracts to complete, and will, of course, keep its splendid plant in good condition, and its organization in working order, until the time comes again for employing them profitably.

THE United States Realty Company, whatever may be the truth in regard to the possible abandonment of its construction department, certainly seems to be in process of internal reorganization. Messrs. James Stillman, James Speyer, A. D. Juillard, James H. Hyde and F. P. Olcott, all men as distinguished for their integrity as for their wealth, have called upon the stockholders of the company for the deposit of stock, under an agreement, vesting the control of it for three years in the hands of a Committee to be appointed, which is to investigate the causes of the great decline in the value of the stock, and, if possible, devise means for restoring the prosperity of the corporation. It is rumored in New York that the unpleasant stories in regard to the connection of Parks with the George A. Fuller branch of the corporation, together, perhaps, with the rather curious attitude of Mr. Schwab and others toward it, have moved some of the stockholders, whose good name has never yet been obscured by a questionable transaction, to call for thorough investigation.

"AN Employer" writes to the New York *Evening Post*, confirming, from his experience, the view that we have long maintained, as a deduction from statistics which cannot be questioned, that the high union schedules of wages which they impose upon the public, and still more on workmen, really mean a loss of income to the union journeymen, who partly through the unwillingness of capitalists to invest money in buildings at artificially high prices, and partly in consequence of the attitude of treachery and hostility toward employers which has become habitual in unions, are employed as little as possible, and discharged as soon as they can be spared, their employer feeling himself entirely relieved from the obligation to keep them at his own expense which once

weighed heavily on him. "An Employer" says that there are very few five-dollar-a-day journeymen in the building-trades who would not jump at a chance of a steady position at seventy-five dollars a month; and that it is a curious fact that the men in the trades in which the union scale of wages is the lowest, are, as a rule, the most contented and the most prosperous. Probably most people concerned with building matters have made observations which confirm this opinion, but the difficulty seems to be to convince the workmen themselves that the way to increase their incomes is not to get their claws on the throats of their employers and the public, by means of strikes, boycotts and political manoeuvres, but to do their own work honestly and skilfully, and allow other people to do the same. There is an old proverb, that "Competition is the life of trade," and the history of the innumerable trusts, which, in stifling competition, have ruined themselves and their stockholders, goes far to indicate the wisdom of the maxim.

THERE is something tragic about the disappearance of Parks from the scene of his activities. His second sentence seems to have broken him down completely, and it is said that he gave orders, as he was taken to prison for the second time, that the appeal now pending against his previous sentence, of two and one-half years in Sing-Sing, should be abandoned; so that he will have to serve out both sentences before he is released. The prison physicians, as well as those called in his behalf of counsel, agree that his lungs are fatally affected, so that he will probably not live to complete his term of imprisonment, and he is undoubtedly conscious of this fact. As he was led away to jail, he is said to have advised the bystanders that the whole system of levying fines upon employers should be abandoned. Unless this is given up, as he said, "many a good fellow will find himself where I am now." As the French say when they hear good advice about refraining from bloodshed and evil passions; "Que messieurs les assassins commencent"; and if the "good fellows" will stop demanding blackmail from the employers, they will meet with no objection on the part of the latter.

THE question of the route of the so-called "Washington Street Subway," in Boston, has been settled by the agreement of the various authorities upon a line passing under Washington Street itself, from the present Scollay Square loop to the point where the present line turns into Washington Street from Castle Street. Except for the difficulties of tunnelling the narrowest and busiest part of Washington Street, this route is undoubtedly the most sensible and logical that could be found, and it will, very probably, be found the most economical in the end. By means of it the elevated trains, coming into the city through Scollay Square, instead of being diverted through the roundabout line by way of Park Street, will run directly to Castle Street, there reaching the present tracks; while, as is supposed, the Park Street Station, and the tracks running thence, will all be reserved for surface cars. The removal of the vast through traffic of the Charlestown-Roxbury elevated line from the local system which centres at Park Street will be very advantageous to both; and, while the intricacies of Boston urban transportation are not likely to be lessened by the addition of the new line, there may, perhaps, be people who will have intellect enough to master them.

ONE suggestion that we would like to make is that the convenience of passengers would be wonderfully promoted, and the profits of the Elevated Railway Company, as we believe, sensibly increased, if the conductors on the street cars were compelled, under penalty of dismissal, to call the names of the streets or other stopping-places with decent distinctness. At present, it seems to be a point of honor among them to imitate the incomprehensible gibberish taught in the New York yellow journals. "Spoyes!" is the usual form into which they translate the simple words "Park Street"; and more complicated names undergo, in their mouths, still stranger transformations, so that few people, even lifelong residents of Boston, can understand, at a distance of three feet from a conductor, what names he is pretending to pronounce. To people familiar with the city this manner of sporting with the names of streets is

annoying, but to the stranger it is a serious matter, and strangers are beginning to be numerous enough in Boston to make it worth while to consider their convenience. As compared with the distinctness of enunciation of an English, or French, or German, or Italian railway or tram-car conductor, the speech of an American, or at least, of a Boston conductor is the gibbering of a gorilla, and, amusing as it may be to him to witness the struggles of his passengers to understand him, the latter have some rights in the matter, which they are entitled to call upon the company to defend.

AS our readers know, the Sixth International Congress of Architects will be held at Madrid, Spain, in April next.

The Secretary of the Congress wishes the announcement to be made to American architects that subscriptions for membership may be made at any time until the opening of the Congress, but that it is very desirable that they should be sent as much earlier as possible, in order that proper arrangements may be made for the entertainment of visitors; and those who wish to bring their families with them, which any member is at liberty to do, are, for the same reason, requested to mention the fact. Most of the railways of Spain and Portugal have agreed to give a reduction of fifty per cent on all railway fares to members of the Congress and their families, and the "Company of Navigation of the Transatlantic," which we presume to be the Spanish Transatlantic Company, has accorded a reduction of thirty-three and one-third per cent. As usual in such cases, persons applying for these reduced rates must be identified by their membership cards, countersigned by the President of the Executive Commission of the Congress. The local committee will, as soon as a member's subscription is received, send, with his "card of identity," a list of the principal hotels and boarding-houses in Madrid, and a memorandum of excursions through monumental Spain, together with the programme of the Congress. As we have before said, architects, especially those who speak a little Spanish, will find this an admirable opportunity for seeing the most interesting things in Spain, at the pleasantest season of the year, and under the best and kindest guidance. Those disposed to subscribe can do so through Mr. W. L. B. Jenney, of Chicago, or Mr. George O. Totten, Jr., of Washington, member of the International Committee of the Congress.

A MODEL manufacturing village is described in *Le Génie Civil*. This village is known as Villeneuve, and has grown up around a woollen-mill of the same name, which has become somewhat noted industrially for the perfection of its processes and machinery. Villeneuve lies about three miles from the small town of Clermont-Herault, in the midst of a wool-producing country, but within easy reach of the coal-mines of Carmaux and Decazeville. The mill is surrounded by a tract of fifteen hundred acres of land and farming and woollen manufacture are carried on together. The boundaries of the commune are identical with those of the estate, so that Villeneuve presents the spectacle, unusual in France, of a town entirely belonging to one proprietor. Owing to the perfection of the machinery, and, probably, to the skill of the operatives, only one hundred and fifty-four of the latter are constantly employed, but these turn out more cloth than three hundred did ten years ago. Besides the regular operatives, apprentices are employed, and extra hands are called in, on occasion, from the farm, while the farm servants do the work of teaming. The scale of wages is high, for France, men receiving, on an average, eighty to eighty-five cents a day, while women receive forty to fifty cents, and apprentices forty cents. Each family is, however, allowed the use of a house and garden, for which they pay no rent, provided both are kept in good condition. Each operative pays eighty cents a year, in return for which medical attendance and medicines are provided by two physicians and a druggist in the neighboring town. A further assessment of one per cent on all wages, supplemented by donations from the mill-owner, provides old age pensions and insurance against sickness. In the mill, the comfort of the operatives is carefully looked after. The women weavers have seats at the looms, from which they can watch the weaving, and are protected from flying shuttles by a wire guard, and the looms are set on concrete, on the ground level, to avoid the vibration which is so trying to the nerves of women. The operatives are, as a rule, greatly attached to their mill, and one-third of them have been in its service for thirty years or more. Outside of working-hours their life is comfortable. The total

population of the commune is given officially at three hundred and fifty, and the birth-rate exceeds the death-rate, a very unusual circumstance in rural France. As every man, woman and child in the commune is connected in some way with the mill, there is no need of having free communication with the outer world; and, for greater protection, the whole town is surrounded by a wall, with gates which are closed at night. Although the territory of the commune is tolerably extensive, agriculture is practised only on a small scale. Each cottage has its garden, but, outside of these gardens, only about two hundred and fifty acres are cultivated, the remainder being given up to forest, which, while it does not bring in a large return, affords pure air, recreation and fuel for the villagers.

AN opportunity is offered for architectural draughtsmen who think they would enjoy the climate of the Philippine

Islands to enter the Government service there, and an examination will be held December 9 and 10 for selections among candidates. Those who wish to compete should apply at once to the United States Civil Service Commission, Washington, D. C., for Application Forms 2 and 375, specifying that they wish to take the examination for Architectural Draftsman in the Philippine Service. The papers will then be forwarded to them, and should at once be executed and filed with the Commission. Each candidate will be required to submit with his examination papers a photograph of himself, so that he may be identified, if appointed. Any citizen of the United States between the ages of eighteen and forty is eligible. The salary is fourteen hundred dollars a year, and the person employed must sign an agreement to serve two years, unless sooner released by the proper authorities. The Civil Service Commission thinks that the climate of the Philippines is good, and that American civilians who take reasonable care of themselves enjoy excellent health. We have no wish to question the opinion on this subject of people who ought to know much more about it than we do, but it is reported that the number of American civilians in the islands is now only about one-half what it was two years ago, and, if this story is true, it may reasonably be inferred from it that the climate does not appear so charming to those who are able to get away from it as it does to the official mind. However, there is no doubt that Manila, at least, is an interesting place, and that white people can live comfortably there, so that architectural draughtsmen of an adventurous disposition might do worse than offer themselves for examination.

THOSE of our readers who are experts in alcohol may be interested in the announcement of a competition, instituted

by the Russian Minister of Finance, for the best means of making alcohol undrinkable, without lessening its usefulness in the arts. As the liquor business of Russia has, in the interest of temperance, been assumed by the Government, the solution of this problem is one of considerable importance, financially as well as industrially, and the Minister of Finance, with characteristic Russian liberality, offers a premium of fifty thousand roubles, or about twenty-seven thousand dollars, for a substance satisfying all the conditions of the programme. Each competitor must submit a memoir, setting forth the experiments which have led to his discovery, and giving the composition, properties, and methods of manufacture and use, together with a sample of not less than ten kilogrammes weight, of the substance. If several meritorious preparations are submitted, the premium may be divided among their inventors, and all inventions receiving premiums are to become the property of the Government.

ENGLAND is having experiences which recall those of the people of New York in connection with the Palisades.

American tourists frequently pass a day or two in the Derbyshire Hills on their way from Liverpool to London, and many of them will remember the steep limestone cliffs in the neighborhood of Buxton and Cheltenham. Now the quarrymen have taken possession of the region, and the cliffs are rapidly disappearing, the stone-crushing machine consuming what the quarryman spares. An appeal has been issued by the National Trust for Places of Historic Interest or Natural Beauty, requesting that some one will do something immediately to stop the destruction; but it is obvious that nothing can be done unless the territory is purchased outright, or, at least, the quarry-owners paid something for ceasing their operations; and no one seems inclined to contribute for this purpose.

SUNDRY REPORTS TO THE CONVENTION A. I. A.

REPORT OF THE COMMITTEE ON FOREIGN CORRESPONDENCE.

ON June 5 the Chairman of the Committee on Foreign Correspondence sent a series of questions to the Secretaries of the various foreign societies, requesting information in reference to the methods of selecting architects for Government work in their countries and the methods of conducting competitions, the duties imposed upon architects and the method and amount of their remuneration. They were also requested to give information in reference to the superintendence of buildings and their maintenance and repair after completion.

The following societies have sent carefully prepared answers to the questions. The Royal Institute of British Architects, London, the Société Centrale des Architectes Français, Paris, the Society of Architects and Engineers, Berlin, the Society of Architects and Engineers, Switzerland, the Society of Architects, Buda-Pesth, the Society of Architects and Engineers, Rome, the Society of Architects, St. Petersburg, and the Society of Architects, Belgium.

The reports all show that foreign governments employ architects to design, superintend buildings at the rate of five per cent, or a greater percentage, on the cost, and employ architects for the maintenance and repairs of the building after completion.

The data the Secretary has obtained from the old countries, it is hoped, will be of value in maintaining methods of practice and remuneration in this country.

The next International Congress of Architects will be held in Madrid, April 4, 1904, and we have been in correspondence with the Secretary and President of this Congress. The Institute has been requested to name two delegates to this Congress and the Board has appointed Mr. W. L. B. Jenney, of Chicago, and Mr. J. C. Hornblower, of Washington.

Chapters of the Institute have the privilege of sending delegates to this Congress.

Mr. Locke, Secretary of the Royal Institute of British Architects, has been kind enough to send the American Institute of Architects clippings containing accounts of the honor conferred upon Mr. Charles Follen McKim, the President of the Institute, by King Edward, in the presentation of the gold medal for distinguished merit in architecture, upon the nomination of the Royal Institute of British Architects. (Signed) GLENN BROWN, Chairman,
Committee on Foreign Correspondence.

REPORT OF A. I. A. REPRESENTATIVE TO THE MEETING OF THE NATIONAL FIRE-PROTECTION ASSOCIATION IN CHICAGO, MAY 25 TO 28, 1903, MR. W. B. MUNDIE.

THE Association discussed and approved the following rulings:—
"Buildings of Class 1 shall have the walls, floors, columns, girders, beams, partitions, roofs and roof structures of brick, terra-cotta, concrete, steel, iron or other such fire-resisting materials as shall be approved for this class of construction by the National Board of Fire Underwriters."

"All such structural steel or iron to have standard insulation against heat as described below. No stone bonds or caps or exposed metal column bases to be used in piers."

"This class shall be divided into Class 1-A and Class 1-B as follows:—

"Class 1-A.—Buildings having any considerable amount of combustible contents in any one room, such as warehouses, wholesale and retail stores, factories, theatres, etc."

"Class 1-B.—Buildings not having any considerable amount of combustible contents in any one room, such as hotels, apartment-houses, hospitals, colleges, churches, schools (except trade-schools), dwellings, office-buildings, etc."

The following were also presented, discussed and adopted:—

NO. 1. BRICK-BEARING WALLS.

"Walls of brick (when carrying floors) to be of good hard-burned brick laid in best of cement mortar with joints flushed full; to be not less than 16 inches thick in two top stories, increasing in thickness 4 inches each three stories below or fraction thereof (or to be of an equivalent average thickness). If walls are over 100 feet long, they shall be 4 inches thicker than the above or they shall be strengthened by piers or pilasters placed not over 20 feet apart."

"Example.—Eight-story buildings would have three 24-inch, three 20-inch, two 16-inch walls."

NOTE: Class 1-B may have walls 4 inches less than above but not less than 12 inches in any part.

NO. 2. EXTERIOR BRICK NON-BEARING WALLS FOR SKELETON CONSTRUCTION BUILDINGS.

"Shall not be less than 12 inches thick in any portion. If two such buildings adjoin, the party-walls shall not be less than 16 inches thick in any portion. The frames shall not be tied together." The Institute's representative suggested that the thickness of walls might be left to the architect as a subject for calculation of loads, span of joists, etc., and in the discussion leading into details of calculations he asked if the purpose of the meeting was to frame a national building ordinance, but was answered that it was only to give to the Board of Underwriters rules to secure additional protection from fire. He further referred to the great number of fires from defective flues and suggested a clause in policies making owners liable for fires

due to that cause, quoting the custom in France that one can only insure against fires originating outside of his building.

The Institute's representative further saw no reason why one system of steel fireproof columns in a party-wall should not support the beams of the two buildings, as is often done, when the two buildings are designed at the same time so that the heights of stories for both are settled.

NO. 3. BRICK FIRE DIVISION WALLS.

"Division or section walls, intended as complete fire divisions or cut-offs, shall be of brick not less than 16 inches thick at any point if laid solid, of 14 inches thick including an air-space of 2 inches and tied with metallic ties, and shall extend continuously from ground to and through the roof."

NOTE.—In Class 1-B these walls may be 4 inches less.

No. 3 was passed.

NO. 4. POST OR COLUMN COVERING.

"All vertical metal supports shall be insulated by not less than 4 inches of brick, or of concrete, or of terra-cotta, or of other such insulating material as may be approved by the National Board of Fire Underwriters, independent of any air-space next the metal. No piping or conduits to be located within the covering above required or between same and the column."

NOTE.—Class 1-B may have 2 inches instead of 4 inches.

NOTE.—No plaster, whether or not on metal lathing, shall be considered a part of the covering required.

It was objected by the Institute's representatives that pipes inside the fireproofing do not increase the risk and that such items should be left to the architect to so place pipes that they should not, by sweating, rust the column, nor cause any injury.

No. 4 was passed temporarily with a view to revision in accordance with the ordinances.

NO. 5. GIRDER COVERING.

"All metal girders shall be insulated throughout by not less than 4 inches of brick, or of concrete, or of terra-cotta, or of other such insulating material as may be approved by the National Board of Fire Underwriters, except that the upper face of upper flanges may have not less than 2 inches of brick, or of concrete, or of terra-cotta, or of other such insulating material as may be approved by the National Board of Fire Underwriters."

NOTE.—Class 1-B as above, except that covering 2 inches thick may be accepted instead of 4 inches.

NOTE.—No plaster, etc. (See Note, Sec. 4.)

The Institute's representative stated that cement plastering on metal laths was a good protection and more liable to remain in place during a fire than the usual terra-cotta protection.

No. 5 was then passed.

NO. 6. FLOOR BEAM COVERING.

"All the metal floor beams shall be insulated by not less than 1 inch of terra-cotta or concrete, or other such insulating material as may be approved by the National Board of Fire Underwriters, applied as a solid mass."

NOTE.—No plaster, etc. (See Note, Sec. 4.)

No. 6 was passed.

NO. 7. SPACING OF FLOOR BEAMS

was discussed but without conclusion.

NO. 8. MATERIAL OF ARCHES.

"Roofs and floors shall be of brick, or approved system of concrete, or of terra-cotta, or of other material which may be approved by the National Board of Fire Underwriters for such purpose, with satisfactory insulation of special supports or tie-rods."

No. 8 was passed.

NO. 9. WEARING FLOORS.

"Floor surfaces shall be of non-inflammable material."

NOTE.—In sub-standard buildings, if wooden top floors are used, they shall be laid directly on concrete without air-space under any portion.

No. 9 was passed.

NO. 10. FLOOR OPENINGS.

"Stair, elevator and dumb-waiter shafts not extending through upper floor, shall be entirely enclosed on sides and top in at least 6 inches of brick, concrete, or blocks of concrete or terra-cotta, or other such material as may be approved by the National Board of Fire Underwriters for this purpose, with metal studs at corners and openings, with standard fire-doors placed at all openings to each story. Each shaft extending through the upper floor shall be similarly enclosed to the roof and have a skylight with thin glass in metal sash and frame protected by standard metal screen. (Wired glass not acceptable.)

"All other vertical openings, such as pipe or wire ducts or channels, except ventilating shafts, unless enclosed as above, shall be stopped with masonry or concrete at each floor."

"Ventilating shafts shall be enclosed as required for other shafts except that the necessary ventilating openings shall be protected by wired-glass in automatic closing metal sash, or by metal louvres riveted into metal frames solidly set in the masonry of the shaft, the

louvre being set at an angle to prevent draught from shaft into room.

"There shall be no light-wells within a standard building. No stone treads shall be used on stairs unless backed by satisfactory metal grille or mesh work."

No. 10 was passed.

NO. 11. PARTITIONS.

"All partitions shall be of non-inflammable material. (No wood studs or framing.)"

No. 11 was passed.

NO. 12. FINISH.

"The quantity of combustible finish shall be reduced to a minimum and none shall be placed in vertical shafts."

"Combustible lath and furring is to be avoided."

"We recommend the lining of outside walls with hollow brick that plaster may be applied directly on the bricks."

No. 12 was passed.

NO. 13. ROOF COVERING.

"Roof to be covered with non-inflammable material (slate not to be used unless laid approximately flat)."

"Slate can have fireproofing separating the slate from the building so that should the slate be broken and fall off during a fire the building would still be protected."

No. 13 was passed.

NO. 14. SUPERSTRUCTURES.

"All roof houses to be of brick, concrete or terra-cotta. Unprotected iron structures not acceptable."

No. 14 was passed.

NO. 15. SKYLIGHTS.

"Skylights to have metal frames and sash, and except over fire-proof shafts (See No. 10) to be not less than 1/4-inch wired-glass."

No. 15 was passed.

NO. 16. WATERPROOFING OF FLOORS.

"Every floor to be made water-tight by a special surfacing or stratum impervious to water, with special precautions taken at columns, walls, and at stair, pipe, wire, lighting-fixture or other openings."

NOTE.—This waterproofing to be completed after plumbers, electricians, etc., have done their work. Water-tight curbs at least 12 inches high are recommended as additional precautions at each floor about pipes, etc., which pass through the floor.

No. 16 passed. This is explained as intended to prevent water thrown at a fire in any story leaking through upon goods in story below.

The report closed with the recommendation that the Institute should endeavor to have representation at all similar meetings.

REPORT OF WORLD'S CONGRESS COMMITTEE.

THERE was some interesting discussion in connection with the report of the World's Congress Committee, W. S. Eames, Chairman, as to representation of the Institute at the International Congress of Architects which will be held in Madrid in April, 1904, and the Institute decided to act upon Mr. Eames's suggestion that an effort be made to have the next Congress, after that in Madrid, held at Washington. The last Congress was held at Paris in 1900.

The programme of the Madrid sessions, to be held on the 6th, 7th, 9th, 11th and 13th of April, 1904, includes discussion of the following topics:—

1. Modern art (or so called) in works of architecture.
2. The preservation and restoration of monuments of architecture.
3. The characteristic effect of scientific studies in the general education of the architect.
4. Influence of modern processes of construction upon artistic forms.
5. Artistic ownership of architectural designs.
6. Instruction of building mechanics.
7. The influence of city building regulations upon contemporary private architecture.
8. The appropriation of works of architectural art.
9. May the architect act as arbitrator between employers and workmen?

All of these questions are of international interest; some are new; others, such as the second, fifth and seventh, are unfinished discussions from the Fifth Congress.

Matter relating to these subjects is invited, and should be addressed to the Secretary of Executive Committee, 6th International Congress of Architects, Academia de Bellas Artes de San Fernando, Calle Alcalá 11, Madrid, Spain. (Time now closed.)

Communications should be in French, but each member of the Congress may speak in his native tongue.

There will be excursions to Toledo, Alcalá and Guadalajara, visits to museums and public monuments, and a final banquet.

There will be an exhibition of the works of deceased architects and pensionnaires of Rome, an exhibition of Spanish Architectural Art, and an exhibition of building materials. Women will be ad-

mitted to the excursions and fêtes, and arrangements will be made with steamship and railway companies for special facilities and rates.

The rules are as for preceding Congresses. There will be "donateurs," "adherents" and members.

Those wishing to attend should send their subscriptions with their names and degrees to the Treasurer, D. Louis de Landealio.

REPORT OF COMMITTEE ON IMPROVEMENT OF THE CITY OF WASHINGTON.

THIS committee, through its chairman, Mr. W. A. Boring, of New York, refers to its creation, three years since, to effect the appointment of a commission to provide a general plan for the improvement of the National Capital, the subsequent appointment of such commission, consisting of Messrs. Burnham, McKim and Olmsted, by the Senate Committee on the District of Columbia, and their admirable completion of the task.

The report goes on to state that the Commission has achieved the future removal of the Pennsylvania Railway from the Mall and the provision for a union station "which will centralize the railway traffic of the city in a spacious and dignified group making an important monument," and leaving the Mall open from the Capitol to the monument.

The report points to another result of the Commission in the appropriation by Congress to secure designs for a monument to Lincoln, as a part of the Commission's general plan.

The report eulogizes the late Senator McMillan and Mr. Charles Moore, Chairman and Secretary of the Senate Committee which named the Commission, and deplores the loss of Senator McMillan and the removal of Mr. Moore to the West, which "have left the movement for carrying out the plan of improvements without a strong militant champion in Congress."

The Committee believes "that Congress should be impressed with the importance of carrying on the work by having all improvements, executed by the several branches of the government, conform with the general plan reported by the Senate, and by making, from time to time as may be expedient, such appropriations for the park improvements as may be necessary to finally carry the whole work to completion." And finally it is recommended that this Committee be discharged and one be appointed with authority to promote the execution of the park improvement plans in the National Capital.

REPORT OF COMMITTEE ON THE METRIC SYSTEM.

THE Committee on the Metric System and its use in this country—Chairman, Mr. James Knox Taylor—reported that the bill introduced in the last Congress was reported favorably to the House of Representatives but was not reached on the calendar and therefore failed of passing.

The subject will be taken up again in the coming session, and some action is doubtless to be expected.

The report is accompanied by two letters from Members of the Institute's Committee on the Metric System.

One of these, Mr. Frank E. Kidder, says that he finds a great diversity of opinion as to whether our system or the metric system is the more convenient. Mr. Kidder adds that Mexico has the Metric System and that plans are drawn to that scale, but that beams and much other material are figured in feet and inches, and the draughtsmen seem to do their thinking in that measurement. He deems it would be unwise to recommend the adoption of the Metric System.

Mr. J. Pickering Putnam, however, hopes that the Committee will recommend the Institute to urge upon Congress an enactment to provide that "from and after January 1, 1915, the weights and measures of the Metric System shall be exclusively used in the business of all departments of the United States Government."

He submits a paper by Mr. Frederick Brooks setting forth in full the arguments in favor of such action.

This paper quotes a paragraph from a report presented at the Annual Meeting of the American Society of Civil Engineers by a special committee on Uniform Tests of Cement, which reads:—

"The Metric System is recommended because of the convenient relation of the gramme and the cubic centimetre"; adding that the report itself "uses metric measure very freely, but it also makes use of the older customary weights and measures. There is a great deal of the confusion of old practice yet to be done away with in order that we may fully enjoy the uniformly simple relations of the metric system."

The same is true in electrical engineering:—

"Electrical engineers are said to be largely using the metric system. They are in fact using a mongrel system, comprising the C. G. S. or absolute system, the metric system with the millimetre as the unit, English feet, inches and square inches, and several different wire gauges."

(Appendix to Report of Committee on the Metric System, American Society Mechanical Engineers.) Mr. F. A. Halsey, an opponent of metric reform, says in an article presented at the New York Meeting (December, 1902) of the A. S. M. E.:—

"Scientific and practical men of the front rank, as well as engineering, scientific and trade societies everywhere, are calling for this measure. The Western Society of Engineers, by a mail ballot, voted for it by over 5 to 1. The Franklin Institute has also endorsed it. With the report of the Franklin Institute were transmitted to the

House (of Representatives) Committee twenty-one letters from various large manufacturing firms, particularly of machinery, of which twenty favored the metric system."

A canvass of 223 manufacturers in the National Association of Manufacturers developed 80 who had made more or less use of it, as their managers had thought best. It is used by the United States Post-office Department for international business.

The United States, which is a larger user of weights and measures than any private corporation, is introducing the system in its business. This has been done irregularly and at different times by officers acting independently of each other.

General progress has been made in the use of the metric system by instruction in the schools, by the use of it in coinage, by its extended use in electrical engineering, and by the enormous increase in the foreign commerce of the United States.

The paper sets forth, at further length, evidence and argument tending to establish the view that conservative action and the establishment of a distant period, say 1915, for the abandonment of the old weights and measures and the substitution of the metric system in all public and private business, will effect the desired change without appreciable disturbance, as has happened in other countries.

THE AMERICAN ACADEMY AT ROME.

THE PENNSYLVANIA RAILROAD COMPANY,
PHILADELPHIA, October 13, 1903.

MR. GLENN BROWN, SECRETARY, THE AMERICAN INSTITUTE OF ARCHITECTS, THE OCTAGON, WASHINGTON, D. C.:—

My dear Mr. Brown,—In order that the absence of a formal paper may not be construed as an abatement of interest upon my part in the affairs of the American Academy in Rome, I desire to say informally that I feel more strongly than ever that the work the Academy has been doing in a modest way for nearly ten years has fully demonstrated its value, and I trust that the time is not far distant when it will be established upon a footing that will enlarge its usefulness. To that end, I expect to give as much help as possible, and to continue to serve upon its Board of Directors so long as my services may be required. There is no other subject in which I feel a deeper interest.

It must be conceded that men under whose direction millions of dollars are to be spent annually in the construction of important buildings should receive special training to fit them for the task. I refer to the work of the sculptor and the painter as well as to that of the architects of buildings and landscapes. There is nothing more certain than that the American public is growing more and more critical, and that unintelligent and ill-considered designs, poorly executed, will not be tolerated indefinitely; in other words, men who are not well trained will not be intrusted with important commissions.

More than ever, through increased facilities for travel, our people have been in touch with the great monuments of art and architecture, and, consequently, are no longer satisfied with the mediocre. The real impetus began with the Columbian Exposition, which furnished a most striking illustration of how strongly artistic arrangement, construction and decoration appeal to the public, and how tenaciously it holds the impressions received from the contemplation of beautiful objects.

How shall the demand for specially trained men be met? Simply through the founding of a school upon broad lines, in which our young men may have the unusual opportunities already provided by every other progressive country.

Of all training, that of establishing a standard of good taste is the most difficult, and requires the longest time and best opportunities. It is this training that the American Academy in Rome has undertaken.

Not the least valuable feature of professional training is that it eliminates from consideration young men who, through indolence or lack of natural ability, are not amenable to its influence, and fixes the relative standing of the others. Following this process of elimination there will remain a few young men who have been endowed by nature with exceptional ability, and it is with these, and these only, that the Academy will deal. After competitive examination and selection through the great national societies, the Academy will receive them and give them the special training to which I have referred.

I believe that great and permanent good will come to this country through the efforts of the Academy and I therefore trust that the Institute as a body, and its members as individuals, will aid the Board of Direction whenever possible, in awakening the interest of the public in its welfare.

Yours very truly,
(Signed) THEODORE N. ELY.

REGISTRATION OF ARCHITECTS.¹

THE last Council election was made the occasion of bringing before us again very prominently the question of the compulsory registration of architects, a subject which also made its appearance in the columns of the *Times* and in the list of bills which were presented to Parliament during last session. As stated in a circular sent round to members of the profession, it is some sixteen years

since this matter was first formally brought forward and a bill prepared; but in reality the subject was mooted by members of the Institute as long ago as 1854, and brought up in subsequent years, without, however, any action being taken. I mention these dates to show that inaction on the part of this Institute has been deliberate and intentional, and does not arise from any want of due consideration of so important a matter. For myself, I was honorary secretary of this Institute from 1889 to 1892, when the question of registration was brought most prominently forward, and thus became well acquainted with the details of the proposals and the arguments for and against them. Those arguments appear to me to remain much the same to-day, on both sides, as they were then. Then, as now, there was a considerable body of opinion in favor of the proposal, and I certainly do not wish in any way to minimize the amount of it. Then, as now, there was a considerable body of opinion strongly against it, and under these circumstances I venture to say, gentlemen, the thing for the moment is outside the realm of practical politics; for any experienced politician will tell you that Parliament would never grant compulsory powers of the sort proposed, except at the general request of the members of the profession interested, and at present there can be no doubt that the profession is sharply divided on the point.

I think I ought to say to you quite frankly, as your President, that personally I am not a supporter of the proposal at the present time, though I agree that the large body of opinion in favor of it cannot and must not be ignored. Evils there undoubtedly are, which should be removed; but, personally, I would try every possible alternative before applying such drastic remedies as those proposed by this compulsory registration, which, I believe, must be repugnant to every artist, whether a supporter of the proposal or not. I am well aware that there are a large number of architects, especially among those practising outside the Metropolitan area, who are in favor of compulsory registration; but I find, among the leaders of our profession, those whose work we admire, and on whose judgment we rely, that they are, as far as I know, almost to a man, strongly against the proposal; and I say again therefore to myself, we should hopelessly divide the profession by pressing the proposal at the present time. Consideration it is bound to have, but acceptance is hardly likely to be obtained by putting a pistol at the head of the Institute and demanding registration or our life. Remember, this proposal would not only register certain architects, but would decline to register others. A registration which gives one man a right to call himself an architect, and refuses it to another, is a very difficult and serious matter; and I must say I should be sorry myself to have to pronounce judgment, for while "A" may think "X" a good architect, "B" may not consider him an architect at all. Who, then, is to decide?

I think I clearly understand the grievance against which registration is proposed as a remedy. Put quite shortly it is this: An architect, let us say, in a country town, is endeavoring to carry out artistic work and to uphold the honor of the profession; but he finds much of the work he considers should go to him taken up by others who he knows are not artists in any sense of the word, and are untrammelled by any notions of honorable professional conduct, and have no right to be called architects at all. So he says, let a law be passed that every man must pass a prescribed examination before he can call himself an architect, and then will the public be able to separate the sheep from the goats. I admit the grievance, and sympathize most sincerely with my friend; but I doubt the wisdom or efficacy of the proposed remedy.

I would ask this question of those who favor registration: Is it proposed for the benefit of architecture or architects? I know they will say and believe it is for both. Well, then, take the benefit to architecture first, as it should be taken. It will be admitted, I think, that good architects will do just as good architecture whether they are registered or not; it will therefore make no difference whatever to our best architecture. Our friend replies: That may be so, still it will prevent an enormous amount of bad architecture being perpetrated throughout the country by incompetent men. I take leave to doubt this; I fear that when registration became compulsory, though you would register much *ability*, you would also register much *inability*. That is the danger, and I fancy our friend would find himself worse off than before. Much of our building (it cannot be called architecture) is done by speculating builders, auctioneers, etc., who very properly do not now call themselves architects, and registration would not affect them as far as I understand it. It is true they would not be able to recover their charges as architects in a court of law, but builders are not paid by fees, and they would not call themselves architects. They will continue their work, and be perhaps even helped, for probably some of the best among them would work up and pass the examination and carry on their poor buildings under the full authority and sanction of a Government diploma, and we shall see on the window blind "Estate Agent and Government Architect," and many such like combinations. Will this improve our architecture, or help our friend?

Then, again, we have generally thought a man who has the right to call himself an architect acquires the right by the buildings he has designed and whose erection he has superintended. This is the test we ask of our own Fellows, but this compulsory registration would require that he be hall marked "Architect" by Government examination, probably before he has designed or superintended a single building. Surely this is putting the cart before the horse, and

¹ Extracts from the annual address of the President of the Royal Institute of British Architects, Mr. Aston Webb.

cheapening the title of architect! We admit Associates by examination, but require seven years to elapse and evidence of actual building before he becomes a Fellow. Suppose a man obtains the Government diploma, and his buildings turn out unsatisfactory, what will happen then? In fact, is it possible to decide on paper whether a man is an architect, or on the same evidence to deny him that honorable name?

Another difficulty is: What standard of architectural excellence is to be fixed for the right to this Government diploma? It must, apparently, be the same for the practitioner in a distant country district as for our larger cities. Is this fair or desirable?

Again I would ask, sympathizing, as I do, all the while with this grievance: Is all this ticketing and docketing compatible with our art? Protection is in the air, I know, and I am not rash enough to express any opinion upon it. But I do know that art has always been free. Let us not be the ones to shackle it. An artist is born, not made; no questions or answers admit him into the fold, only his work. We are constantly being told that doctors and lawyers have these Government diplomas, and so ought we; and if we venture to suggest that painters, sculptors and engineers have none and require none, we are told that has nothing to do with it. But why not? Are not painting, sculpture and engineering more nearly allied to architecture than law or medicine? I should have thought so.

Then, as regards its benefits to architects. We are told that this diploma is essential in order to make the lazy ones work; the Institute examination, they say, is not sufficient inducement, and we must therefore compel them to come in. I can only say again, I do not think so. The lazy men we should admit, for this reason, had far better remain outside. Again, as regards the benefit to architects, I would ask you to remember that if this proposal were legalized to-morrow, the engineer, the borough surveyor and surveyor, if members of the Institution of Civil Engineers or the Surveyors' Institution, would be exempted from all restrictions, and would continue to practise architecture precisely as they do at present. The registered architect would come to be looked upon more as a luxury or as a consultant, to be called in on very important matters only, and so a large part of the work, which is already so greatly encroached upon, would finally slip away from architects altogether. It would also be necessary that all those calling themselves architects at the time of the passing of the bill, whatever their qualifications, would receive the Government diploma, so I am afraid our friend in the country town would receive no relief in his lifetime.

The words of the memorial addressed to the Council in 1891 appear to me as true now as then: "That a diploma of architecture would be a fallacious distinction, equally useless as a guide to the public and misleading as an object for the efforts of the student." And, further, "that no legislation can protect the public from bad design." While saying this, I would like those who are in favor of the compulsory registration of architects to believe that we are entirely in sympathy with every effort to raise the status of architecture and the architect in this country, and it is on this very account that I have ventured to discuss the matter at some length this evening. It seems to me that we must first come to some agreement among ourselves as to the standard to be set up, and how it is to be tested, and until this is defined registration would be useless and fallacious.

I am reminded of a story you will probably all remember, told by the late Bishop of London at one of our dinners, of an Oxford Don leaning over a wall and watching two undergraduates trying to induce a tortoise to put his head out of his shell by holding out some tempting bait, but without result; and at last the Don quietly saying to those undergraduates, "Don't you think, gentlemen, you had better try the other end?" And I would venture to say to you, gentlemen, don't you think we had better try the other end? If, as I think, there is no probability of getting what we all want—a higher appreciation of architecture by legislation at the present time—would it not be better to redouble our efforts to gain the same results by raising the standard of architecture among ourselves, by encouraging the higher education of our young men, so that in time superior attainments may make membership of this Institute a recognized qualification in the eyes of the public, as I believe is the case already, to a great extent, not only at home but in the Colonies also? . . .

The visit of Mr. McKim last summer naturally brought into prominence American practice in matters connected with our art, and especially with the control exercised in America over public improvements, and he left in our library a book containing a report which deals with the improvement of Washington by laying it out on a large and comprehensive scale. I commend a study of this book to all interested—and what architect is not?—in the laying-out and improvement of our great cities. This book recounts how a small body of experts were appointed to prepare and submit a general plan for the development of the entire park system of the District. This Committee, I understand, virtually put aside their large and profitable private work for nearly a year, and devoted their time and experience to the service of the nation, a sacrifice made without any pecuniary reward. The Committee consisted of two architects, Mr. Burnham and Mr. McKim; a leading sculptor, Mr. St. Gaudens, and Mr. Olmsted, whose name is identified with what is best in garden architecture in America. For the proceedings of this Committee I must refer you to their report, merely stating here that a short tour to the principal capitals of Europe was made, and then a com-

prehensive plan for the laying-out of Washington was produced and laid down on the noblest and grandest lines, fully illustrated by drawings and models. The Committee describe the realization of the scheme as a stupendous task, much greater than any one generation can hope to accomplish; but they add that the hearty and intelligent coöperation with which the plans have been received by the officers of the Government, the Committees of Congress, and the public generally, make it practically certain that the development of the national capital will be prosecuted on the lines proposed.

Since this was written I understand a large sum has been voted, which will enable a substantial start to be made.

Again, at our annual dinner, I ventured to give some particulars of a Commission appointed under the Charter of New York, composed of experts, who also act without fee or advice, in all art matters in connection with New York. This is carrying out to some extent the more complete system in existence in France, where the care of all public buildings in Paris is entrusted to (1) the Minister of Public Instruction and Fine-Arts; (2) the Minister of Justice and Public Worship; (3) the Prefect of the Seine; and (4) the Prefect of Police. Each of these Ministers is assisted by a Council, mainly formed of architects of distinction. The duties and constitution of these Councils are very fully set out in a book by our late secretary, William H. White, entitled "*Architecture and Public Buildings*," published in 1884, which contains a great deal of most interesting information on this subject. It is under this direction that Paris as we see it to-day has been produced, and the same system is followed all over France. As the author says: "None, having an understanding of these matters, can traverse Paris without feeling that the authority which initiates and controls the great works of architecture in that capital, is a real and competent authority, to which in State turns for guidance and on whose judgment the Parisians rely."

Every public building throughout France, great or small, has an architect attached to it, and, where necessary, an assistant architect, who, commencing in some humble capacity at the Council of Civil Buildings, in due time is admitted as assistant to this Board, or Council, which gives him right of presentation to a public building in course of construction, as subordinate to the architect who is carrying it out, spends his days on the works, and may rise, if he conducts himself well, to be assistant architect or joint architect to a building, and ultimately architect-in-chief. In course of time he is summoned to take the place of Councilor on one of the various Boards, and ultimately the Academy of Fine-Arts, who educated him, will hear of him again, and finally elect him to their body. Thus the State not only assists in providing an efficient system of architectural education, but also provides itself with an efficient body of trained architects to undertake its public buildings, all working on a well-defined tradition, and producing works of great excellence, which we cannot but admire. I do not propose to compare these systems with the course adopted in this country, partly because you are all well aware what that is, and also because I am afraid the comparison could hardly be in favor of this country. Not that I mean, for a moment, that the French system in its entirety would be suitable here; it tends no doubt to a loss of individuality, which would hardly be tolerated here, for though we talk a good deal of working on traditional lines, I am not sure whether we have yet learned the lesson of sinking our own individuality sufficiently to do so.

I have mentioned these systems in force in France and America to draw attention once more, as I ventured to do last year, to the pressing need there seems to be in Great Britain, and which I think most of us feel, for some authority to whom schemes of public improvements should be submitted, not necessarily for sanction, but for consultation and advice. The work could hardly be entrusted to any single individual, but there would surely be no difficulty in finding men of skill, taste and authority enough, and with patriotism enough, to form such a Commission as that established in New York, and on the same terms, if asked to do so by His Majesty's Government.

TOWNS BELOW THE RIVER LEVEL.

THE people of seventy miles of the thickly populated Missouri River valley in Iowa have just discovered that the Missouri River is running above their heads.

Prosperous towns and rich farms of 840 square miles are below the level of the big stream. The people have just been told this by an expert drainage engineer in the employ of the Government. This means it is entirely possible at any time for the mighty stream to leave the elevated trough in which it now runs and put these farms and towns at the bottom of a great lake. Had the Kansas City floods of this year occurred on the upper end of the river it is quite likely this great tract would already have been submerged.

As it is, 70,000 acres of land has stood under water for five months, water that fell in the unprecedented rains of this year and could not be carried off because no outlet had been afforded, and could not be absorbed because there was two feet of rain. The people sent for C. G. Elliott, an expert drainage engineer of the Department of Agriculture. They told him when he came that they wanted to know how they could drain the water that fell on their land into the Missouri River.

Mr. Elliott took his tripod and went over the country. In a few days he came back and told the people the distasteful facts.

"You can't make water run into the Missouri River, for the simple reason that up to date we have discovered no way of making water run up hill. This entire bottom is from eight to twenty-eight feet

below the level of the Missouri. Your town of Whiting is thirty-two feet below the river's level. The only way you can drain your land is to send the water out through the Little Sioux River, which flows parallel to the Missouri, until it finds a chance for an outlet fifty miles below here."

The astonishing statement has greatly alarmed this region. It had never occurred to the people that the reason the Little Sioux paralleled the Missouri so great a distance was that it could not run up hill to that stream.

Plans have been formed for protection. This time it is not to drain lands, but to provide an outlet for the whole Missouri River against the day when the larger stream will leave its present course. So they propose to straighten the Little Sioux River and build a great ditch, forty miles long, affording two outlets for water, whether falling in rains or coming from the Missouri when it wanders across country. To provide these outlets will cost the people of the valley \$450,000, but they are gladly arranging to raise the money.

Were these people situated near the Mississippi River, there would be little cause for alarm. That stately stream has a habit of staying in one place. What it chooses for its course is likely to remain so, except for the slow, gradual change of many years.

With the Missouri it is different. This river has no equal in the world in its capacity for destruction of solid land. The people of Decatur, Neb., have been holding mass meetings this fall to petition Congress for an appropriation to save their town from destruction by the river. The Missouri conceived an idea this summer that it coveted the ground upon which this town stood. The work of devouring the town site began. The river whirled around a steep bluff and hurled itself against the town. The land crumbled before the grinding impact. Already twenty blocks of the town's plat have disappeared. Below Decatur two eighty-acre farms have been completely eaten away.

At Sioux City the river manifested the same power. It had wended its way peacefully in a narrow channel for many years, so the town of Covington, Neb., opposite Sioux City, was laid out clear to the river's bank. No one thought the river would object. But the old stream resented the familiarity and threw itself upon the town. The result is that two-thirds of the plat of the original town is now river bed, and the only reason why the rest is left is that the Government, at an expense of \$40,000, built a stone bank to stop the river's mad career.

At Yankton, S. D., the people established a ferry to bring passengers from the Nebraska side. The ferry advertised it would put people on the streets of Yankton. The river chuckled and began leaving the town. In its path it left a treacherous, mushy sandbank. The ferry business was interfered with. People had to go some miles around. United States Senator R. S. Gamble took up the matter and induced the United States Engineering Department to appropriate \$50,000 to bring the river three-fourths of a mile back to the town. This the department has already undertaken to do by constructing great dikes.

But the people of this seventy-mile valley, ranging from seven to twenty miles in width, cannot build a stone wall all the way from Sioux City to Missouri Valley at a cost of millions of dollars, to keep back the river. They can do nothing but take their chances and prepare to carry off the lake that would be precipitated upon them by an avulsion of the river.

The power of the Missouri is made possible by the great quantity of suspended silt it always carries, which gives it its name of "Big Muddy." This silt is deposited in reefs, which turn the current against the banks. The current is swift and the suspended earth acts as a corroding force, accounting for the marvellous destruction accomplished by the stream. — *Kansas City Star*.

COLOR IN BRICK.

AN examination of the clays used for porcelain or earthenware, which burn pure white, or nearly so, shows that they always contain, as essential constituents, alumina, silicic acid and water, but only very small quantities of other substances. These clays have been formed by the action of the weather upon feldspar, and usually remain in the place where they originated. But if they are transported by means of streams they must inevitably become mixed with other substances which originated in the same manner in other localities, by the action of the weather or by trituration, and which therefore impart a more or less pronounced color to the products made from them. In actual practice, the number of ingredients which affect the coloring of clay is very limited. Apart from the substances which by their nature are of infrequent occurrence, and even then in very small quantities, seldom more than one per cent, and which have no appreciable effect on the color, such as titanitic acid, vanadic acid, etc., there remain only ferric and manganic oxide, and the carbonates of lime and magnesia, to produce the many colors found in brick. There is great variation found in the colors, according to the amount and distribution of the coloring ingredient, the temperature to which the bricks are exposed, the structure of the material, especially in so far as regards porosity, and, finally, according to the difference in the action of the furnace gases. Two clays of precisely the same composition will not of necessity exhibit the same colors in burning, but may differ widely, owing to differences in the distribution of the iron oxide, and the structure of the brick. Therefore, it may happen, that the coloring

of the iron oxide may be less marked in a material containing much iron oxide than in one which contains less. It must be fully borne in mind, before all other things, that the colors in the unburned clay have no connection whatever with the colors which appear after firing, and it is erroneous to assume that the finished product will have the same color as the clay. The iron, which has been washed into the clay in the form of silicate of iron, ferric hydrate, or oxide, or one of the ferrous compounds, may show great variation of color, ranging from red and yellow to gray and bluish-green. Besides this, it is frequently accompanied by organic matter. Aside from the iron oxide, manganic oxide is the only metal which produces any color in the firing, but usually this need not be taken into account, since it always occurs in connection with ferric oxide, and, ordinarily, in small quantities compared with the latter. In many clays the carbonates of lime and magnesia are found in considerable quantities, which, although pure white in themselves, nevertheless modify, by their presence, the action of the ferric oxide. The colors exhibited in clay products are therefore produced by a number of factors acting conjointly, some having a greater influence, others less. The chief influences are the following: 1. The amount of ferric oxide in the clay; 2. The other ingredients of the clay; 3. The composition of the furnace gases during the firing; 4. The degree of slagging; 5. The temperature reached in the firing.

The ferric oxide in its native state is a red substance. When exposed to a low temperature its color is yellowish-red if it is finely distributed throughout the clay. When the temperature is increased it becomes denser and darker, and in an intense heat it has a dark reddish-blue color. But even this red color varies somewhat, according to the manner in which the oxide has been formed from different substances, shading sometimes into brown or blue. This color does not last, however, unless the ferric oxide is heated in an atmosphere containing an excess of oxygen. But if the heating takes place in the presence of reducing gases, such as carbonic oxide or carburetted hydrogen, it is reduced to ferrous oxide, or to intermediate stages of ferrous and ferric oxide, or to ferrous oxide and metallic iron, finally to metallic iron, and in all these compounds it assumes a blackish color. When, on the other hand, these substances are heated in air containing oxygen, they take the last oxygen again, give a further opportunity for the formation of ferric oxide, and the red color is again restored, although it is usually a different shade from the original ferric oxide. In general, all the phenomena of color in clay products take this course. The intensity of color depends, ordinarily, upon the amount of ferric oxide present, the color being deeper the greater the amount of iron. A decided influence is also exerted upon the color by the substances which usually show white in burning, such as alumina, lime and magnesia. Clay containing a small amount of iron oxide and a large amount of alumina will, when fired at a high temperature, assume a more or less yellow or yellowish-brown color, which passes gradually through all shades of yellowish-brown to reddish-brown as the alumina decreases and the iron oxide increases in amount. It is only when there is more than five per cent of iron oxide present that a decided red color appears, which deepens as the iron oxide increases. Just as the color grows paler when a large amount of alumina is present, so it does also in the presence of carbonate of lime, which is often accompanied by a still smaller amount of carbonate of magnesia. In the latter case, as in the former, the color of the iron oxide grows paler as the temperature of the wares is increased. If the amount of lime is twice as great as that of the ferric oxide, the red color of the latter disappears altogether when the temperature is sufficiently high, and gives place to a yellowish-green color. In general, therefore, nothing more can be said than this: a red color will be exhibited only by those clays which contain a large quantity of iron and a moderate or small quantity of alumina and lime. If the alumina decreases in amount simultaneously with the ferric oxide the color will be more or less yellowish-brown or yellow, but if the clay contains carbonates, it will pass into a yellowish-green. If, therefore, other shades of color are desired than those which can be secured from the clay itself, if the color is to be changed from red to yellow in the firing, this can be accomplished by adding a clay which burns white, or with little color, and contains as much alumina as possible. The colors will then range through red, brown, yellowish-brown and yellow. The same result may be obtained by adding some calcareous material such as chalk or lime marl. In order to change the color in firing from yellow to red, a material containing a high percentage of iron must be added, such as ferruginous clay, ochre or swamp ore. This addition will produce the desired result directly if the clay does not contain lime, but if lime is present the effect will be less noticeable in proportion as the amount of lime increases. Of course the heat necessary for firing will have to be changed also, on account of these admixtures. As a rule the firing heat must be increased when a light burning argillaceous earth has been added, and decreased on the addition of carbonate of lime or ferric oxide. — *Stone Trades Journal*.

FRANCHISE FOR ANOTHER NORTH RIVER TUNNEL.—The Rapid Transit Commission has granted a franchise to the Hudson and Manhattan Railroad Company to run a tunnel under the North River, from Cortlandt Street, Manhattan, to Exchange Place, Jersey City. The President of the Company is W. G. McAdoo, who is also President of the New York and Jersey Railroad Company, that has a franchise permitting it to run a tunnel under the North River, entering Manhattan at Christopher Street. — *Exchange*.

ILLUSTRATIONS

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

THE OLD HUNT HOMESTEAD, HUNT'S POINT, N. Y. SKETCHED BY MR. E. ELTON DEANE, NEW YORK, N. Y.

THE VICTORIA AND ALBERT MUSEUM, SOUTH KENSINGTON, LONDON, ENG. MR. ASTON WEBB, R. A. ARCHITECT.

THIS plate is copied from the *British Architect*.

THE JOHN TAYLOR DRY GOODS STORE, BALTIMORE AVE., KANSAS CITY, MO. MESSRS. ROOT & SIEMENS, ARCHITECTS, KANSAS CITY, MO.

HOUSE OF J. H. ESTEY, ESQ., BRATTLEBORO, VT. MR. G. WOOD TAYLOR, ARCHITECT, SPRINGFIELD, MASS.

Additional Illustrations in the International Edition.

FRONT ELEVATION: THE KUNSTGEWERBE MUSEUM, FLENSBURG. K. MÜHLKE, ARCHITECT.

THIS and the following illustrations are copied from *Zeitschrift für Bauwesen*.

REAR VIEW OF THE KUNSTGEWERBE MUSEUM, FLENSBURG. K. MÜHLKE, ARCHITECT.

THE NEW STADTTHEATER, COLOGNE, PRUSSIA. KARL MORITZ, ARCHITECT.

BALCONY STAIRCASE: NEW STADTTHEATER, COLOGNE, PRUSSIA. KARL MORITZ, ARCHITECT.

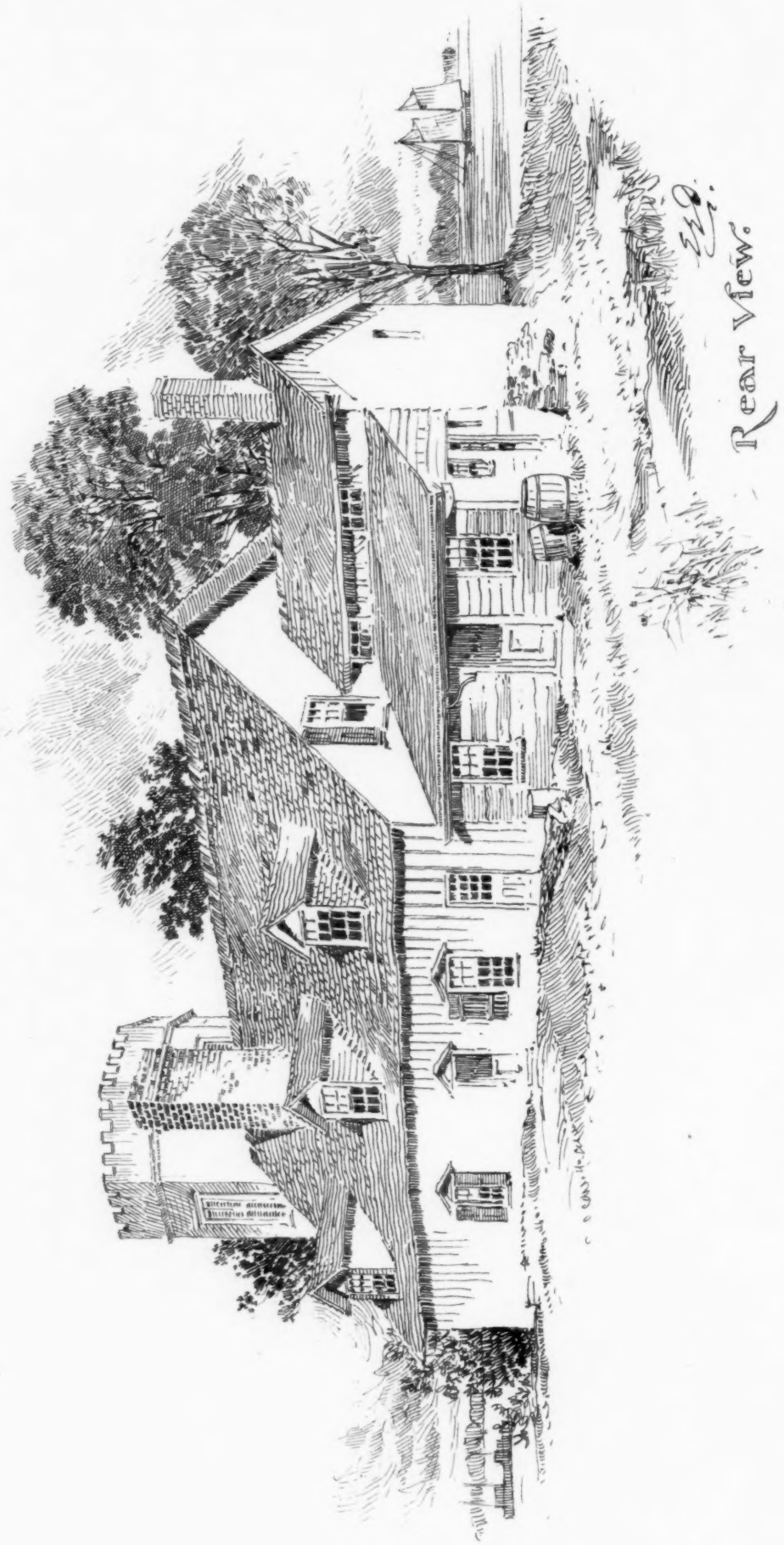
NOTES AND CLIPPINGS

THE ARA PACIS, ROME. — The Ara Pacis, or altar of peace, decreed by the Senate and people of Rome to Augustus Caesar in the year 13 B. C., on his return from the wars in Germany and Gaul, and finished in 9 B. C., is being brought to light near the corner of the Via del Corso and the Via in Lucina. Portions of this monument have been found from time to time during the past centuries, and one piece of sculptured marble belonging to it is in the Louvre. Others found an abiding place on the Pincian in front of the building now occupied by the French Academy. More than a dozen were taken in the sixteenth century to Florence and are in the Uffizi. Some blocks were sawed in two for easier transportation, having sculptures on both sides. Half of one, showing part of a scene of sacrifice, reached the Vatican Museum, while the other side, bearing festoons of fruits and flowers, was discovered on the tombstone of a prelate in the Church of the Gesù and is now in the Baths of Diocletian. The discoveries on the site give warrant in believing that the entire monument can be reconstructed. The ara itself has been found — an altar having cushion-shaped extremities which stood on a square platform covered with marble slabs and approached by a flight of marble steps; also the sacred area paved with Luna marble, and the inclosing wall, about 40 feet each way, entered by a fine door. The walls of the inclosure were built of marble blocks which on the outside have two friezes of beautiful reliefs and on the inside one. The upper outer frieze contains figures nearly the size of life showing sacrifices attended by Augustus, his family, and officers; the lower consists of vines, flowers and foliage, among which birds are flying or sitting. The frieze inside the sacred inclosure consists of festoons of fruits and flowers with instruments of sacrifice from point to point. All these priceless treasures of Greco-Roman sculpture — for it is generally believed that fine carved work of this period was done by a colony of Greeks at Rome — lie so far below the present level of the city that it would be dangerous to re-erect the monument where it stood, owing to the damage that would be sure to ensue from the surface water and springs or the seepings from the Tiber during floods. Signor Rudolfo Lanciani in *The Athenæum* notes the presence in several of the reliefs of tiny figures of lizards and frogs. This unusual decoration leads him to regard them as the signatures of two favorite architects of Augustus, named, respectively, *Sauros* (lizard) and *Batrachos* (frog). Livy says that these two artists with Greek appellations were not permitted to sign their names to their work, and so hit upon the device of carving their "canting arms," or badges of lizard and frog, in spots which were not too conspicuous. If this guess is correct, Signor Lanciani has the credit of discovering who were the artists responsible for this beautiful monument. — *N. Y. Times*.

COLOSSAL BUILDING-STONES. — The lintel over the middle gate of the Propylæa at Athens is 22 feet 6 inches in length, 4 feet in thickness and 3 feet 3 inches in breadth. It must accordingly weigh at least twenty-two tons. That of the second gate is 16 feet 10 inches in length and 3 feet in thickness. That of the smaller gate is 9 feet 6 inches in length and 3 feet in thickness. The largest masses which remain in Greece are the beams of the Propylæan portico, the architraves of the Parthenon, the beams of the Erechtheum, of the Olympeum, and a block at the Pnyx at Athens, the lintels of the treasuries of Atreus at Mycenæ, and of Minyas at Orchomenos, and some stones in the walls of Tiryns and Messene. Some blocks of white marble are found in Italy which vie with those of Greece, particularly two in the Colonna garden at Rome, which are supposed to have belonged to the Temple of the Sun. The largest is 16 feet 3 inches in length and 9 feet 6 inches in thickness. Nor must we omit the architraves of the Pantheon and of the Temple of Antonine. The granite columns of the Baths of Diocletian and of the Forum of Trajan, as well as the Egyptian obelisks at Rome, are also examples of these stupendous masses. The architraves of the temple at Selinus in Sicily are 22 feet in length. Tavernier mentions some blocks of an amazing size in a pagoda at Golconda or Bagnagar. Chardin asserts that most of the stones of one of the temples at Persepolis are between 30 and 50 feet in length and from 4 to 6 feet in height, and some of them are stated to be 52 feet in length. The columns of the famous temple at Cyzicum in Mysia, of one piece, were 50 cubits in height, but the largest mass that was ever moved by human means was the monolithical Temple of Latona at Bubos in Egypt, which was a solid cube of 60 feet. There was another monolith at Sais, of 31 feet 6 inches in length, 21 feet in breadth and 12 feet in height. Wood informs us that in a wall at Baalbec three continuous stones measure 190 feet in length, the longest being 64 feet. — *The Architect*.

A HOUSE OF BEER BOTTLES. — Tonopah, Nev., aside from being famed on account of its vast mineral resources, also occupies the unique distinction of numbering among its inhabitants a man who is able to live in a glass house, and throw unlimited quantities of stones at the same time without suffering any of the serious inconveniences popularly supposed to surround such an association. Not a tree grows within sixty miles of the great mining camp, and very naturally building-material and fuel bring all sorts of fancy prices, the commonest kind of lumber selling for \$66 per 1,000 feet, while inferior grades of scrub cedar command \$22 a cord. Consequent upon this condition, various subterfuges are resorted to in the architectural make-up of Tonopah. There are houses made of straw, of burlap sacks trimmed with blue jean overalls; of tin from five-gallon oil-cans; of dry goods and cracker box lumber; of mud, stone, tents, cloth — in fact, almost every sort of contrivance is resorted to as a makeshift for a place of habitation; but it has remained for William F. Peck, a miner, to devise a house in a class by itself. He has constructed of empty beer bottles a house 16' x 20' in the clear, with ceilings 8 feet high, and containing two rooms. It was built in October of last year by Mr. Peck entirely unaided, at such odd moments as he could spare from his regular duties at the mine. Ten thousand empty beer bottles were incorporated in the structure. The inside walls are plastered with mortar, which is spread to a depth sufficient to cover the protruding bottle necks, thus making a smooth surface. Mr. Peck lived all last winter in his peculiar abode with his wife and two children, a girl of seven and a boy of three years, and says, while the temperature in many residences of Tonopah reached the freezing point quite often, his family found their glass house exceedingly comfortable at all times. — *Kansas City Star*.

SLAG PORTLAND-CEMENT. — The American Consul-General at Coburg, Germany, reports: Portland-cement has been made from blast-furnace slag for several years in various cement works in Germany, Luxemburg and Belgium, and has yielded very satisfactory results, especially in regard to quality. Negotiations are being carried on with some blast-furnace works with a view to the introduction of the slag-cement industry into England, Austria and France. In some respects a blast works has a considerable advantage over other Portland-cement factories because the motive power from the cement works can be supplied by a blast-furnace gas motor with electric transmission, the rubber or waste coke from the blast furnaces can be utilized in the cement kiln, and the principal raw materials — namely, the granulated slag and the limestone — are close at hand. Besides, there are other minor advantages. Portland slag-cement has also some advantages over natural Portland-cement; for while the yield from the raw materials when the former is used is about eighty per cent, the yield when the ordinary raw materials are used is seldom more than sixty per cent. As the cost of production per ton of raw materials is nearly equal in both cases, a saving of about twenty per cent in fuel, labor, etc., is effected in the case of slag-cement. Besides this Portland slag-cement is more trustworthy and more regular, and its manufacture can be more easily controlled than that of the so-called natural Portland-cement, because the raw material — namely, the blast-furnace slag — is, as a rule, a regular product whose chemical composition is easily controlled; consequently, any alterations which are liable to take place are known beforehand, and precautions can accordingly be taken in time. This is not the case when the natural raw materials are used. Some recent tests with Portland-cement from blast-furnace slag, made in the municipal laboratory at Vienna, showed that mortar composed of three parts of sand with one part of this cement gave the following results: 1. After seven days' hardening. — Tensile strength, 383 pounds per square inch; strength of compression, 3,880 pounds per square inch. 2. After twenty-eight days' hardening. — Tensile strength, 551 pounds per square inch; strength of compression, 5,411 pounds per square inch. — *The Architect*.

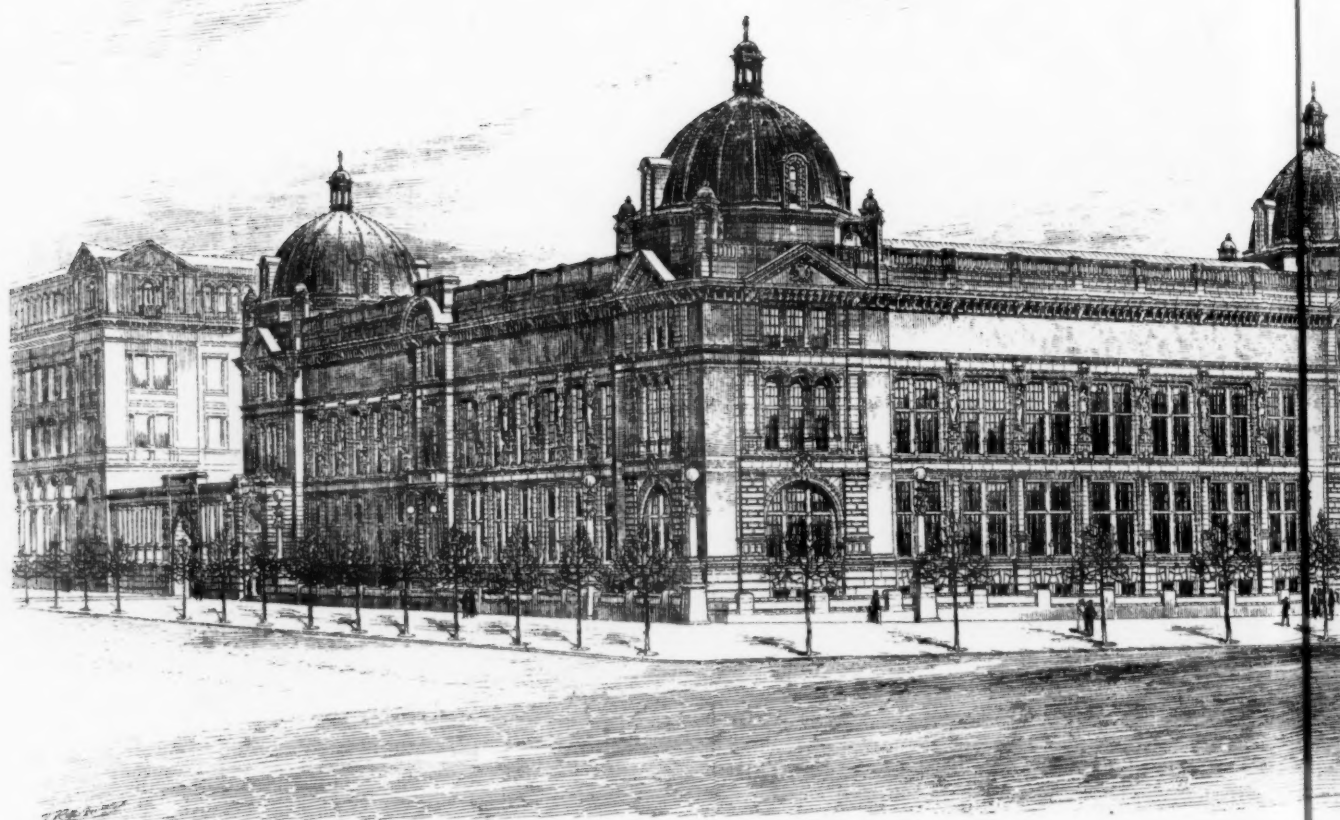




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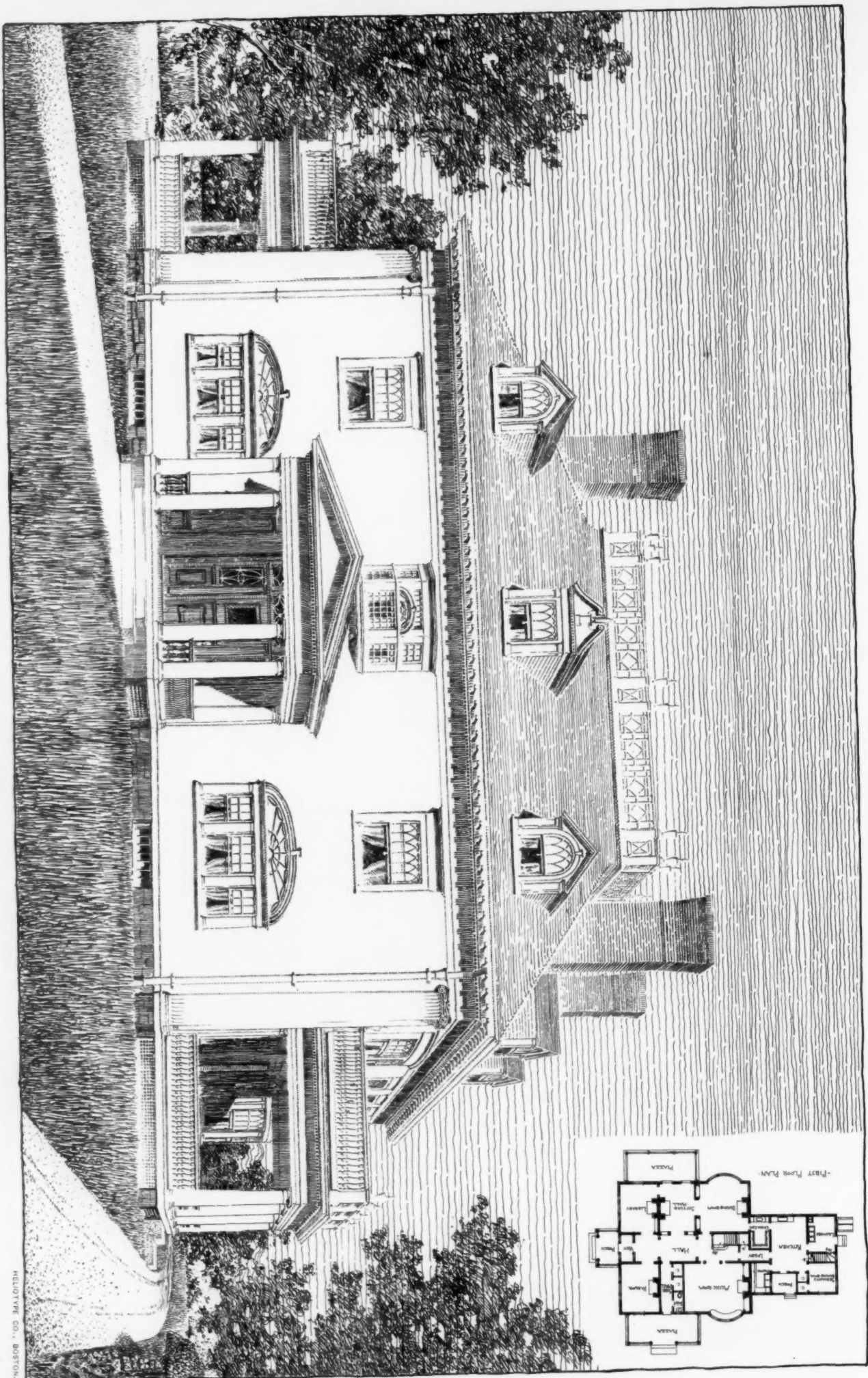
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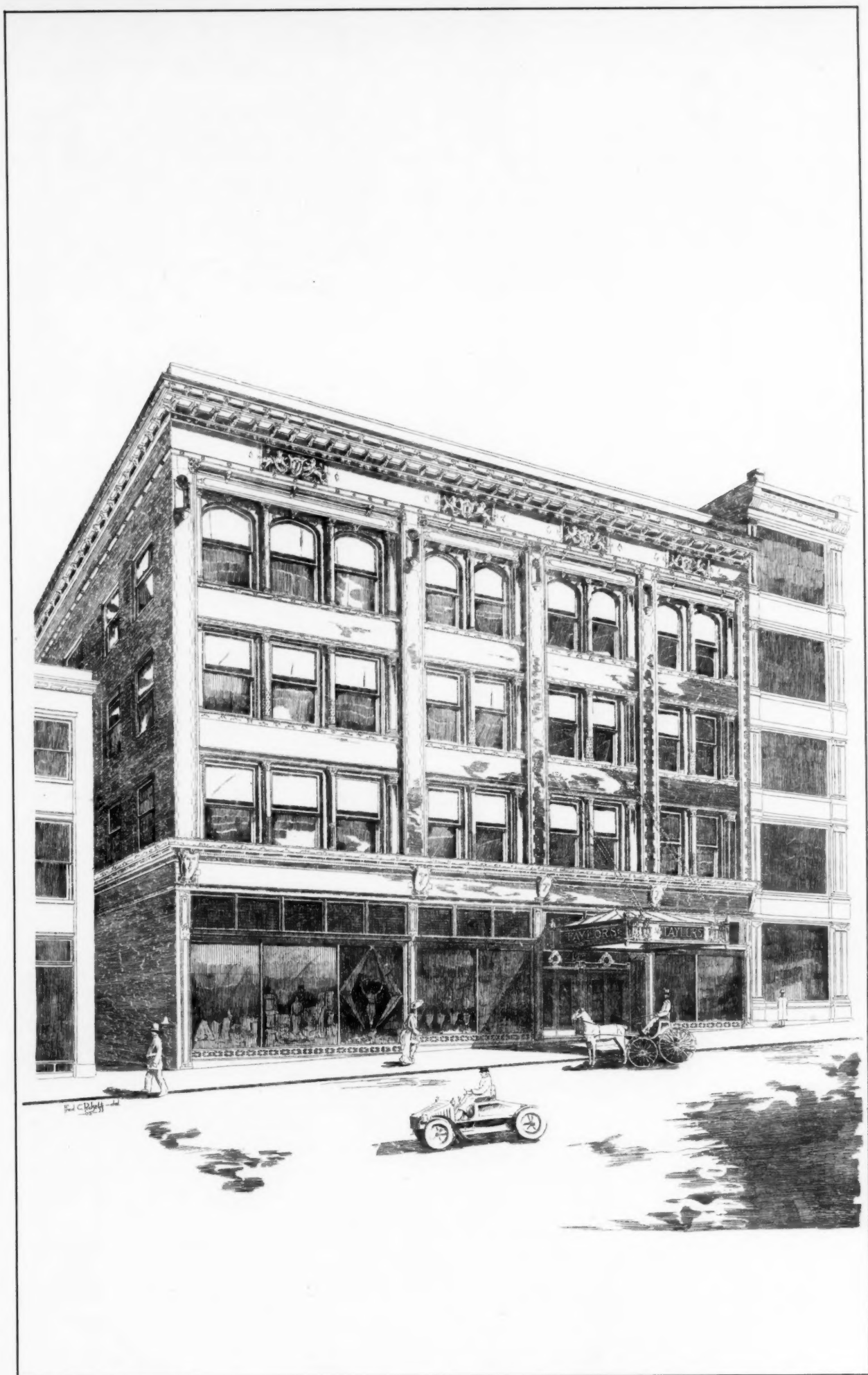
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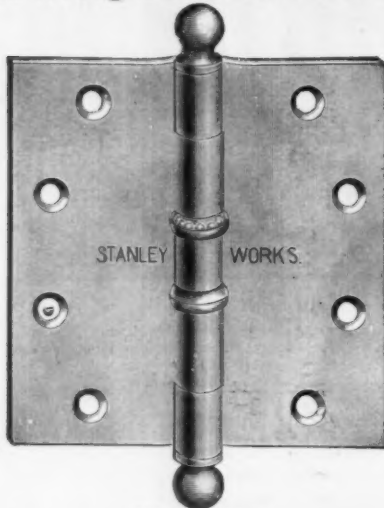
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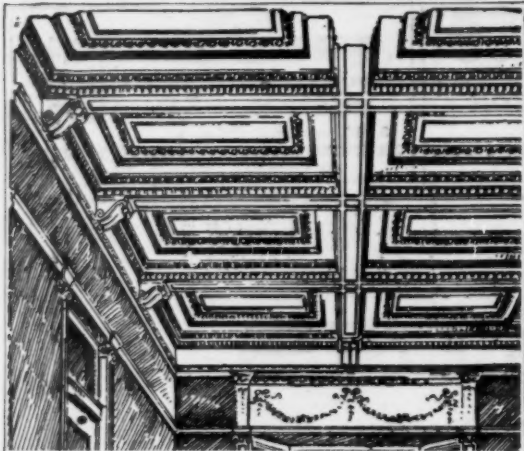
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Obligation of Principal Contractor to Sub-Contractor.

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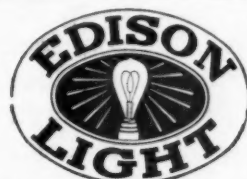
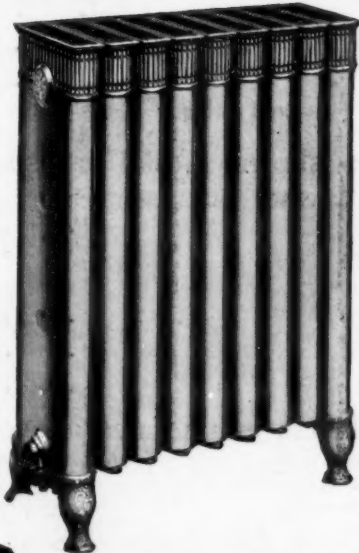
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Carpenters' Hall, Philadelphia, Pa.	" 1770
Independence Hall, Philadelphia, Pa.	" 1729
Faneuil Hall, Boston, Mass.	" 1741
and others.	

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.	

IMPORTANT HOUSES

Fairbanks House, Dedham, Mass.	Date 1636
Royall Mansion, Dedham, Mass.	" 1737
Philipse Manor House, Yonkers, N. Y.	" 1745
Tudor Place, Georgetown, D. C.	" 179.
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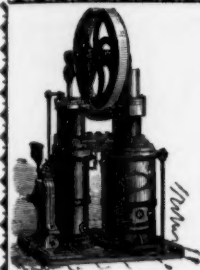
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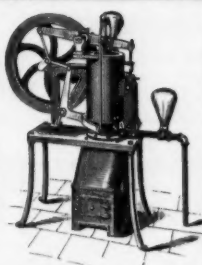
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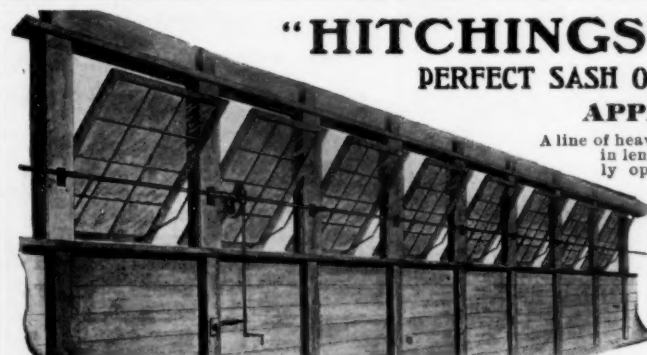
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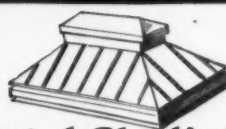
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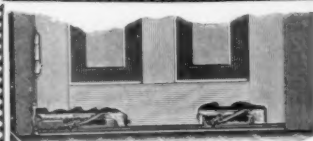
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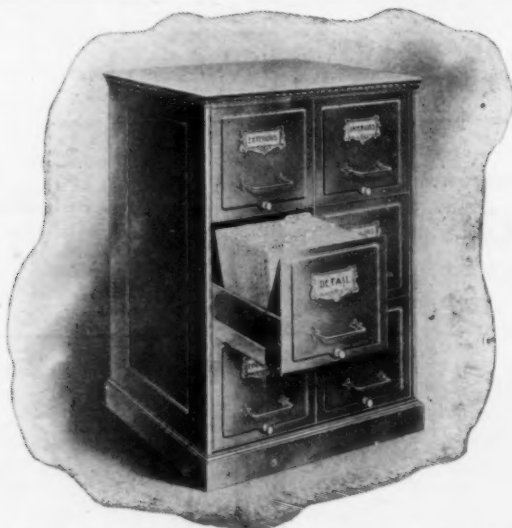


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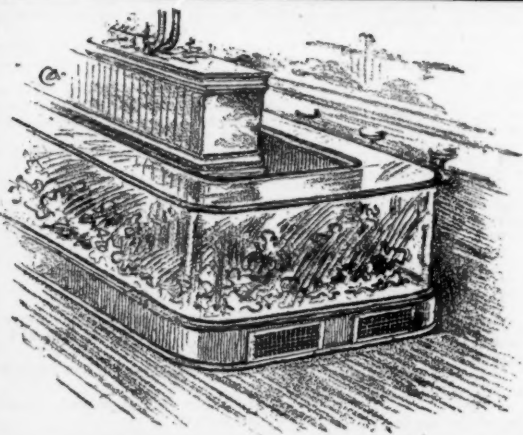
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(Advance Rumors Continued.)

Denver, Col. — Plans have been received by Bishop Oimstead, of the Episcopal Church, of Denver, for a cathedral which it is proposed erecting in this city, at a cost of \$200,000.

Detroit, Mich. — The North Baptist Society has decided to erect a new \$100,000 edifice.

Emsworth, Pa. — The contract for erecting the Polish Orphan Asylum here has been awarded to Dagnun & Katuszewski, at \$100,000.

Everett, Wash. — Messrs. Murphy & Prosser have purchased the hotel property at Madison and will spend \$50,000 in making it a summer resort.

Fort Snelling, Minn. — It is stated that an appropriation of \$500,000 will be asked for further buildings at the fort, among them a drill hall for cavalry to cost \$30,000; an addition to the post hospital to cost \$50,000 and several sets of officers' quarters.

Hoboken, N. J. — A new court-house will doubtless be erected in the spring, costing in the neighborhood of \$800,000. A site for the new building is now under discussion.

Homestead, Pa. — A site has been purchased, and

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

plans prepared for a \$25,000 edifice to be erected for St. Michael's Roman Catholic Church.

Huntington, Ind. — J. W. Gaddis, of Vincennes, has been awarded the contract for architect's plans for the new quarter million dollar court-house to be erected in this city.

Kansas City, Mo. — Huck & Weston will erect a new business block to cost \$28,000.

La Grange, Ore. — It is reported that the members of the Church of the Latter Day Saints are contemplating the erection of a \$36,000 tabernacle in this city.

Little Valley, N. Y. — The Board of Supervisors have voted in favor of the erection of a new jail and sheriff's residence, at a total cost of a little less than \$60,000.

Louisville, Ky. — The congregation of the First English Lutheran Church will begin the erection of a new building early in the spring. It will be put up on the present lot of the congregation on E. Broadway, near Preston St. The plans have been completed by Mason Maury, and the contracts will shortly be let. The new building will be of rough white limestone and will cost about \$40,000. The Barban Stock Yards Co. will erect a \$100,000 building.

Mansfield, Mass. — Mrs. Emma M. Mitchell has sold her farm of 70 acres on West and Tremont Sts., this city. The property was purchased by a Boston business man, who will improve it.

Marion, Ind. — Dr. L. D. Bryan is contemplating erecting a \$30,000 hospital in this city.

Moline, Ill. — The Rock Island Road will erect its main repair shop here. The plans in hand contemplate the construction of no less than 82 buildings, in which it will be possible to make all kinds of repairs, both on locomotives and cars. It is estimated that it will require three years to complete the plant, and the cost of the same will be about \$14,000,000.

Monroe, Wis. — The Commercial Savings Bank is having plans and specifications for a new brick building.

New Decatur, Ala. — L. Waller has contract to erect a new \$20,000 Y. M. C. A. building.

New Orleans, La. — S. R. Durel has completed plans for a \$20,000 church for the First Christian Society. The new theatre soon to be constructed in this city will be one of the finest in the United States, costing \$125,000. The site is at the corner of Dauphine and Iberville Sts.

Newport, R. I. — New barracks at the Naval Training Station will soon be erected, at a cost of \$181,000.

New York, N. Y. — Plans have been filed at the Bureau of Buildings for a new club-house to be built for the Workingman's Educational and Home Association. The new club house is to be a six and a half story and basement building, located on the north side of 84th St., 100 feet west of 2d Ave. It will be 160' x 102' with a decorated facade of granite, brick and terra-cotta. A large gymnasium, two stories in height, will be built on the first floor. The second and third floors will contain the library and small club-rooms, while on the fourth floor will be a banquet hall, with small private dining-rooms adjoining the hall. F. A. Minuth is the architect. The cost is estimated at \$200,000.

The Metropolitan Life Insurance Co. has bought Nos. 11 to 15 E. 24th St. from the estate of David Wolf Bishop. The company will erect a seventeen-story printing house on the plot.

The Fawcett Brewing Co. has leased for 42 years the Reynold and Higgins properties on Broadway, extending from 101st St. to within 50 feet of 100th St., and on the land will build a \$250,000 music hall.

A new court-house may be erected on Centre St. Plans have been filed at the Bureau of Buildings for a new hospital to be built on E. 16th St., near Avenue C. The city is the owner and the cost is estimated at \$1,500,000. The new building will be seven stories high, of brick with stone trimmings, and will occupy a plot 43.6' x 66.6'. Smith, Westervelt & Austin are the architects.

Plans have been filed at the Bureau of Buildings for an underground public comfort station, to be built by the city at the junction of Grand St. and E. Broadway. The structure will cost \$25,000.

The suggested site for the new \$25,000,000 court-house is on Mulberry Bend Park. The site will be near the City-hall and midway between the Brooklyn and Williamsburgh bridges. The building will be an enormous affair, planned and built with an idea of furnishing sufficient court space for a city three times the size of the present one. This, with the establishment of the County Court-house in the Mulberry Bend locality, is believed by city officials to forecast a general redemption of the section and the erection of many important large office-buildings in the locality within the next few years.

A committee has been appointed to select a site for a branch post-office. The bill appropriates \$2,000,000 for a site. The Secretary of the Treasury, the Postmaster General and the Postmaster of New York shall constitute a commission to select plans

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

for a building, which shall cost not to exceed \$1,500,000, which sum is appropriated in the bill.

Oklahoma City, Okla. — The Gross Construction Co., of La Crosse, Wis., secured the contract for the new M. E. Church at \$28,000.

Omaha, Neb. — The boiler-house and laundry and the operating pavilion of the M. E. Hospital, both two-story brick and stone structures, will be carried to completion this fall and the central portion of the main ward building will be carried up to the first story. The plans of the new hospital, now in the office of Architect Thomas R. Kimball, 503 McCague Block, call for a pretentious group of buildings to be located on an elevated plot of ground at Glenwood Ave. and Cuming St.

Ottumwa, Ia. — It is stated that a \$25,000 hospital is to be erected in this city.

Paducah, Ky. — It was voted November 3 to issue bonds to the amount of \$25,000 for a new hospital and \$25,000 for a market house.

Pawtucket, R. I. — The plans of Appleton & Hale, of Boston, have received the first prize of \$500 for the building to be erected for the Y. M. C. A. at a cost of \$85,000. It will be located at the corner of Maple and Summer Sts., will be three and four stories high, of brick with limestone and terra-cotta trimmings.

Philadelphia, Pa. — Mathias Kerstulji has begun work on 14 dwelling-houses which he will build on Redfield St., between Arch and Filbert Sts., at a cost of \$28,000. The buildings will be two stories high, of brick and stone, and measure 15' x 46', 15' x 38' and 16' x 52'. They will have shingle roof and be finished in hard wood, with hot air heat, open plumbing, etc.

Charles W. Bolton & Co. have drawn plans of the Bethel Presbyterian Church, to be erected at the corner of 19th and York Sts.

Theodore Presser, with several musicians, has purchased from Oliver H. Blair, the old Caffrey carriage factory at 1712-14 Chestnut St. Their intention is to transform the building into a temple of music. About \$500 will be expended for the alterations.

Angus S. Wade has completed plans for an apartment-house on the Reading Railway near Tiera Station. It will be nine stories of brick, stone and terra-cotta. The owner's name is withheld for the present.

Portland, Me. — An appropriation of \$250,000 has been asked for a new public building for this city.

Princess Anne, Md. — Press reports state that the County Commissioners are considering the erection of a \$300,000 court-house.

Raleigh, N. C. — The Masonic Fraternity will erect a new temple to cost \$80,000.

Frank P. Milburn, of Columbia, S. C., has prepared plans for proposed additions to State-house, which will cost \$300,000.

Raton, N. M. — It is reported that a \$40,000 hospital is to be erected in this city for the miners.

Reading, Pa. — Seymour & Paul A. Davis, 3d, have won the architectural competition for the drawing of plans for a \$300,000 High School for Boys at this place. Twenty-two firms of architects competed.

The proposed building, which will be located at 4th and Washington Sts., will be of fireproof construction, three stories high, covering an area 105' x 205'. The exterior walls will be of stone, with a granite base.

Redondo, Cal. — F. S. Shiner has accepted a contract to build for F. McGarvin a \$15,000 building on Benita Ave. to contain three stories.

Rensselaer, N. Y. — Plans will be drawn at once for the new City-hall to be erected here at a cost of \$30,000.

Richmond, Ind. — The federal building to be erected at the corner of 9th and North A Sts. next spring will be a handsome structure.

Riverside, Cal. — The Board of Directors of the Riverside City Hospital have had plans and specifications prepared for a brick hospital to cost \$20,000.

Roselle, Ia. — W. J. Zitterell, of Webster City, has the contract to erect a \$25,000 Roman Catholic church in this city.

Santa Barbara, Cal. — Work will be deferred in building the club-house proposed by Pacific Improvement Club until next spring or fall. When built, it is planned to cost \$30,000 and will be located on Hope rancho.

Sault Ste. Marie, Mich. — Marks Bros. intend to erect a modern opera-house here to cost \$150,000. Plans have been drawn for a five-story fireproof building.

Spokane, Wash. — It is reported that Seymour Breh has let the contract for preliminary work for the new hotel to be erected at Mill St. and 2d Ave. Cost complete about \$30,000. The building will be 60' x 70'.

St. Louis, Mo. — The St. Louis & Suburban Co. will erect a brick building to cost \$25,000.

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

The Union Ave. Christian congregation will erect a \$110,000 edifice at Central and Cabanne Aves.

A plant to cost about \$300,000 and employ several hundred men is to be built by the National Ammonia Co. at Mallinckrodt and Hall Sts. on the Burlington Railway in North St. Louis. Contracts have been let and construction has started on the factory, which is to cover an entire block. The building of this \$300,000 plant indicates a great extension of business here, and it is said that the ammonia plant projected will be enlarged within the next year.

Truckee, Cal.—Dr. A. J. Galbreath contemplates the erection of a three-story brick building on the O'Sullivan tract near Reno, next spring. The building will cost about \$25,000.

Valley Forge, Pa.—The contract has been awarded L. H. Foehl, Reading, Pa., for the erection of buildings for the Catholic Protector for Boys at Proctor Station, near Valley Forge, at a cost of about \$80,000.

Washington, D. C.—D. H. Burnham & Co. are the architects for the magnificent new union station to be erected here. Romanesque in style, it will be constructed of white marble, imposing in its massive simplicity, yet sufficiently ornate to rob it of severity in aspect. The building will have a frontage of 260 feet on the north side of Massachusetts Ave., between N. Capitol and 2d Sts. The axis of the station and train-shed extends back 751 feet 4 inches directly on the line of Delaware Ave.

Wilmington, N. C.—The Seaboard Air Line Railway will erect a brick warehouse to cost \$20,000.

HOUSES.

Brooklyn, N. Y.—Eastern Parkway, nr. Brooklyn Ave., 9 three-st'y bk. dwells, 20' x 48', gravel roofs; \$63,400; o., T. H. Fraser, 1066 Bergen St.; a., A. McLean, 883 E. 35th St.

Fourties Ave., nr. 18th St., two-st'y & attic fr. dwell, 32' x 42', shingle roof, steam; \$5,000; o., Owen F. Finnerty, on premises; a., W. J. Dilthey, 1 Union Sq., N. Y.

New York, N. Y.—Stebbins Ave., nr. Westchester Ave., 2 two-st'y & base fr. dwells, 21' x 52'; \$11,000; o., Herman Wauer, 1383 Bristow St.; a., W. C. Dickerson, 149th St. & 3d Ave.

W. Fifty-sixth St., No. 9, five-st'y bk. and st. dwell, 25' x 81', slag roof; \$110,000; o., Fifth Ave. Const. Co., 3 E. 33d St.; a., Warren & Wetmore, 3 E. 33d St.

STABLES.

Brooklyn, N. Y.—Lexington Ave., nr. Patchen Ave., one & two-st'y bk. stable & warehouse, 70' x 100', gravel roof; \$4,000; o., H. C. Bohack, Greene Ave. & Central Pl.; a., L. Berger & Co., 300 St. Nicholas Ave.

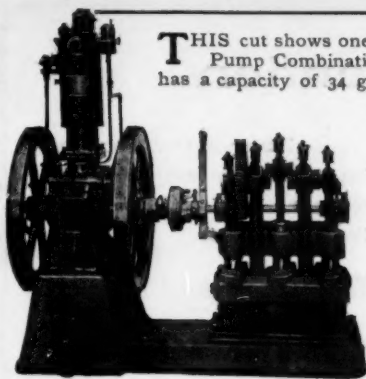
New York, N. Y.—One Hundred and Eighty-ninth St., cor. Tiebout Ave., one & three-st'y & cellar bk. stable, 50' x 20' x 88' & 80'; \$17,500; o., Holland Bros., Highbridge Road; a., Geo. F. Spelman, 307 W. 111th St.

W. Forty-fourth St., No. 550, two-st'y bk. & st. stable, 25' x 97', plastic slate roof; \$6,000; o., Mrs. Agnes McGirr, 550 W. 44th St.; a., James W. Cole, 403 W. 51st St.

STORES.

Minneapolis, Minn.—Hennepin Ave., Nos. 717-719, four-st'y & base store building, 50' x 130'; \$20,000; o., T. B. Walker; a., F. B. & L. L. Long.

New York, N. Y.—E. Thirty-fourth St., Nos. 11-13, six-st'y bk. & st. stores & loft, 50' x 87' 3"; \$70,000; o., Arthur Astor Carey, 50 State St., Boston, Mass.; a., Trowbridge & Livingston, 424 Fifth Ave.



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PROPOSALS.

ROADS AND WALKS.

[At Fort Meade, S. D.]
Sealed proposals will be received until December 7, 1903, for the construction of macadam roads and cement walks at Fort Meade, S. D. Information furnished upon application. C. B. VODGES, Capt. 1457

Treasury Department, Office of the Supervising Architect, Washington, D. C., November 18, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 17th day of December, 1903, and then opened, for the installation of an electric passenger elevator in the U. S. Post-office building at Butte, Montana, in accordance with drawing and specification, copies of which may be obtained at this office at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1458

Treasury Department, Office of the Supervising Architect, Washington, D. C., November 19, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 29th day of December, 1903, and then opened, for the construction (including plumbing, heating apparatus, electric wiring and conduits) of the extension of the U. S. Post-office at Rome, Georgia, in accordance with drawings and specification, copies of which may be had at this office or at the office of the Custodian at Rome, Georgia, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1458

Treasury Department, Office Supervising Architect, Washington, D. C., November 18, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 10th day of December, 1903, and then opened, for the installation of an electric passenger elevator in the U. S. Post-office and Court-house Extension at Dallas, Texas, in accordance with the drawings and specification, copies of which may be obtained at this office at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1458

PROPOSALS.

ELECTRIC PLANT.

[At Holton, Cal.]
Proposals for the erection of the \$75,000 electric plant of Holton Power Co. will be received until January 1. W. F. HOLT, president. 1459

REPAIRING WALLS.

[At Savannah, Ga.]
U. S. Engineer Office, Savannah, Ga. Sealed proposals for repairing training walls, Savannah Harbor, Ga., will be received at this office until December 9, 1903. Specifications, blank forms and all available information will be furnished on application to this office. JAMES B. QUINN, Lieut. Col. of Engrs. 1457

TRAINING WALLS.

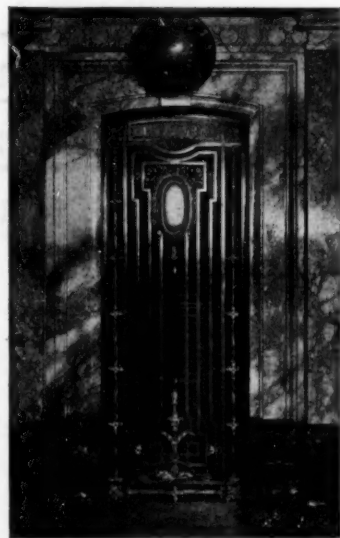
[At Savannah Harbor, Ga.]
U. S. Engineer Office, Savannah, Ga. Sealed proposals for repairing training walls, Savannah Harbor, Ga., will be received at this office until December 9, 1903. Specifications, blank forms and all available information will be furnished on application to this office. JAS. B. QUINN, Lieutenant colonel of engineers. 1457

GRADE RAISING.

[At Galveston, Tex.]
Sealed proposals for grade raising at Galveston, Tex., involving over 11,000,000 cubic yards of filling, will be received by the Chairman of the Grade Raising Board until December 7, 1903. For information apply to E. R. Cheeseborough, Secretary Grade Raising Board, Galveston, Tex. C. S. RICHE. 1457

JAIL AND RESIDENCE.

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



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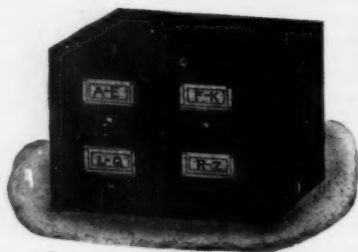
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SECTION 1. No Member should enter into
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SECTION 2. A Member having any ownership
in any building material, device or invention,
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architect, should 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
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SECTION 5. It is unprofessional to offer draw-
ings or other services "on approval" and
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SECTION 6. It is unprofessional to advertise in
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special branch (if such) of practice.

SECTION 7. It is unprofessional to make altera-
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tect, within ten years of its completion,
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SECTION 8. It is unprofessional to attempt
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ings except as an original contributor in any
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remains undecided.

SECTION 12. The American Institute of Archi-
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ELEVATORS, ETC.
Kimball Bros. Co., Connell Bluffs, Ia.
Morse, Williams & Co., Philadelphia.
Whittier Machine Co., Boston.
ELEVATORS (Foundry).
Northern Engineering Works, Detroit, Mich.
ELEVATOR SIGNALS.
Herrig Telescope Co., New York.

ENGINEERS.
Jager Co., Charles J., Boston.
ENGINES (Hot-Air).
Rider-Erriesson Engine Co., New York.
FAN SYSTEM.
Sturtevant Co., B. F., Boston, Mass.
FAUCETS (Combination).
Union Brass Works Co., Boston.
FILING DEVICES.
Art Metal Construction Co., Jamestown, N. Y.
FILTER.
Loomis-Manning Filter Co., Phila., Pa.
FIRE-ESCAPES.
Standard Fire-escape & Mfg. Co., Boston.
FIREPROOFING.
Associated Expanded Metal Co., New York.
Brown Hoisting Machinery Co., The, New York.
National Fireproofing Co., Pittsburg, Pa.
FIREPROOF LATHING.
Hayes, Geo., New York.
FIREPROOF SHUTTERS.
Kinneer Mfg. Co., The, Columbus, O.
FLOOR POLISH.
Rutcher Polish Co., Boston.
FOUNDRY EQUIPMENT.
Northern Engineering Works, Detroit, Mich.