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THE fact that the final competition for the Phœbe Hearst Architectural Plan for the University of California has resulted in the awarding of the first prize to M. E. Bénard, Grand Prix de Rome in 1867, and an architect of some eminence in his own country, proves that our own misgivings in the matter were not well founded. It was our belief that the opening of the competition to foreign architects would prove to be merely an ineffective "play to the gallery," and that no foreign architects of distinction would waste their time upon the problem. In fact, few foreigners entered the first competition, and most of these were not men of standing. Whether M. Bénard's plan is ever carried into execution, or whether, as a San Francisco architect, who professes to speak by the card, assures us, the competition is to have no tangible result, is to the architectural world now of no immediate interest; but what is of interest is that an important competition has been conducted in this country in such a manner as not to have aroused the vociferous indignation of unsuccessful contestants. It is noteworthy that although five foreign architects were placed in the first competition, and so entitled to try again in the final one, M. Bénard was the only foreigner who succeeded in winning one of the final money-prizes, his prize being ten thousand dollars and the, perhaps, uncertainties of carrying out the actual work. The other prizes—these being respectively of four thousand, three thousand, two thousand and one thousand dollars—were awarded, in the order named, to Messrs. Howells, Stokes & Hornbostel, of New York; Despradelle & Codman, of Boston; Howard & Cauldwell, of New York; and Lord, Hewlett & Hull, of the same city. That this should have been the result, when the majority of the jury were themselves foreigners, is interesting, and seems to show once more that the native and local practitioner can be depended upon to understand and handle local requirements in a more natural and sensible manner than can a foreigner. In other words, the foreigner is too heavily handicapped by his inevitable ignorance of manners, methods and customs for his efforts to be of much use to those who ask his aid in solving a problem where practical questions of convenience of administration and conformity with national habits of daily life must outweigh considerations more purely architectural and æsthetic.

WHEN, a few weeks ago, we expressed a fear lest the assertion might be made that architecture was neither an art nor a profession, but a trade, we did not anticipate that the lapse of a few days would bring to light a flat and

official denial of the objectionable possibility. French architects, at least, do not propose to derogate from the position which architects have held since the beginning, as is evidenced by a resolution adopted at the late congress of the Société Centrale des Architectes Français, a resolution which recites that, whereas "the architect practices a liberal profession, and not a trade, and is in no sense the head of an industry or undertaking employing workmen," he is not amenable to the regulations that determine the indemnification of workmen who may be the victims of an accident, as formulated in the law of April 9, 1898, an abstract of which law may be found elsewhere in this issue. This new law is one of the ingenious products of the Labor Unions and is a perfect embodiment of the well-known principle, "heads, I win; tails, you lose." It disavows the responsibilities of contributory negligence, and assures to the injured man compensation in every case save that very remote one when he is proved to have been "*la cause volontaire*" of his mishap. As the law materially adds to the burden of whomsoever the indemnity can be extorted from, it was of great concern to the architects to discover whether the law had application to them. The various provincial bodies examined the question, each taking competent legal advice, with the result that it appeared that the law did not, and could not, apply to architects. Yet, when the matter came before the central professional body, it was discovered that a certain section (No. 25) of the law, which assessed an additional tax of four centimes on the "principal of the licenses"—a term we do not comprehend—of certain classes, it became plain that, as architects were licensed, here was a loophole through which they might be dragged to responsibility, if they did not at the outset take steps to protect themselves. It was this necessity that caused the introduction of the resolution of which we recite the preamble above. It is to be noted that the Société Centrale makes it plain that it is speaking for and in behalf of architects, and clearly recognizes that the law does have application to the hybrid who practises as the "architect and builder," or the "architect and contractor." It will be recalled that the Royal Institute of British Architects lately took advice as to a similar new accident-law in England, and apparently succeeded in establishing the fact that no responsibility could be imposed upon architects under its stipulations. But if such dangerous laws have been enacted in France and England, it is more than likely that an attempt will sooner or later be made to enact a similar law for the United States, and architects should be very watchful to prevent an improper responsibility being forced on them by its stipulations. Meanwhile, architects can be quietly thinking whether pecuniary gain from practising architecture as a trade is worth the risk.

IN the days of our boyhood the lad who was lucky enough to have a pocket knife made by John Rogers, of Sheffield, was envied by his fellows who only had American jack-knives, and whenever a blade was broken was sure to have a new one inserted in the old handle, and not seldom, after all the blades had been renewed, found it necessary to replace the handle; but it always remained through all its mutations the same knife. The boy who thus early learned the immutability of mutable things, if he later became an architect, found he could in certain cases apply his early lesson to the advantage of some client who found his intended building operations blocked by the requirements of a building law which compelled the introduction of costly fireproofing in new buildings. The thing to do was simply to insert, first, a new blade and then add a new handle without destroying the integrity of the architectural knife. In other words, the architect had only to take out a "permit for alterations" and build new lower stories under the old top ones, and then after a decent interval of time, say next season, under the ægis of a second permit for alterations, not only replace the original top stories with new ones, but add several more absolutely unrepresented ones on top of them, economical building being thus made possible because the building-laws generally are much less stringent with alterations than with new buildings. Very illogical such laws are, of course, but every one knows where new buildings are to be found that have been in this way erected in defiance of the spirit of the very reasonable building-laws. The latest case of this sort of architectural metempsychosis is now being

wrought-out in Washington, and with it are interwoven very distinct strains of romance and superstition. In that city there is being built for a lady of great wealth a house, or palace, whose intended character may be guessed from the facts that it is to measure one hundred and twenty-three feet by one hundred and twenty-five feet, and that its ball-room is to measure sixty-eight feet by thirty-six feet. It is reported that many of the events of this lady's life have so absolutely coincided with the predictions of a fortune-teller she encountered in her youth that her original half-belief that there might be "something in it" has become a stalwart conviction that every prediction was certain of fulfilment. Amongst the uncomfortable previsions was a prophecy that if the lady should ever live in a new house she would very speedily die, and hence, until now, she has carefully made use of at least second-hand dwellings. But now that it has become necessary to launch in society the young heiress of her wealth, she has been unable to find a ready-made house of suitable size and splendor, and it seemed as if maternal pride and affection had come to a deadlock with feminine superstition. Fortunately, however, her architectural adviser seems to have been once a boy who bought new blades for his old knife, and so an old house has been found, about and surrounding which the new palace is being built, the old building to serve as the living apartments, while the outer new building will contain the gala rooms and others which are not in daily occupancy. The old house is, of course, to be dismantled to its bones and rearranged, altered and decorated in modern style; but this part of the work is to be done so slowly and with such discretion that it will always be, at every stage, the original old house. It will be an interesting question in architecture and necromancy to determine how far it is safe to go with these substitutions of new material for old, if the fortune-teller's blight is to be escaped.

WE believe we once mentioned the fact that the Boston Public Library had decided to gather a proper collection of photographs of architecture, painting, and sculpture, and that the Boston Society of Architects had, with other private citizens, been glad to aid the librarian with subscriptions to start the enterprise at a time when the Library's public funds were exhausted. It appears now, from the annual report of that institution, that the collection already numbers over fourteen thousand photographs and process-plates, most of which are already mounted, classified and accessible to the public. It appears, further, that during the past year the collection has been increased by the purchase of one thousand, six hundred and ninety-five photographs, at an outlay of \$739.63. It is not stated, but is, however, a fact, that just about two thirds of last year's added photographs are architectural in character, about half the photographs being nearly equally divided between views of the English Cathedrals and Miesement's admirable series of French "Historical Monuments," the remaining subjects being drawn from Egypt, Constantinople and Japan. The point in connection with this collection that strikes us is that it is singular that photographs of so small a size should have been procured for a public collection, for, with the exception of the French views, all are eight inches by ten inches, a size which we regard as altogether too small for professional use. Doubtless many architects will disagree with our feeling, through realizing that a large proportion of the prints in their own collections do not exceed this size, forgetting, in all probability, that, if their pockets would have allowed, they would have purchased the larger sizes in every case. Now this matter of size and cost, as compared with quality and usefulness, has a very direct interest for us in connection with our own work, for we have often debated the question whether it was worth while, in view of the fact that so many, even among architects, cannot tell the difference between a process-print and one from gelatine, to go on printing from gelatine; or, if gelatine were to be adhered to, whether a smaller, and so cheaper, size could not be adopted; but recalling how frequently we have to resort to the magnifying-glass, always lying handy on the table, we never have had any trouble in deciding to go on printing our illustrations by the best attainable process, no matter what any one else might be led to do through a money-saving turn of mind. We know nothing more exasperating to an even temper than to use a magnifying-glass on a process-print in the vain attempt to obtain some further enlightenment as to the real form and character of some bit of seemingly interesting detail.

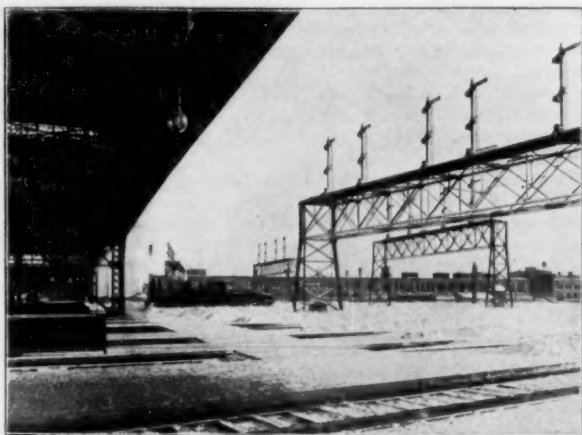
ANOTHER fact deducible from this report has its comfort for us. From the figures given above, it appears that the average cost of the photographs procured last year was about forty-four cents apiece, although the majority of them were smaller in size than those we habitually publish as gelatine prints. Now, as a public institution, buying in large quantities, probably gets the benefit of the most favorable prices, it is not unfair to accept this price as a fair average price for architectural illustrations, and if this price for perishable photographs is applied to our own imperishable output of gelatine prints, it seems, really, as if the complaint, often made, that our subscription-rate is unreasonably high, were not a very reasonable one, and that the assertion that more photographs could be procured for the same money were absolutely beyond accomplishment. Of course there is a great and unreasonable difference in the cost of photographs of the same size and equal merit, as is shown by the fact that the fairly good print that can be found for a lira in Italy costs a couple of marks in Germany and a half-crown in England. Still, the average cost of the collection of photographs which the architect usually makes during a trip abroad is generally found to run somewhere between thirty and forty cents for each print, if he has confined his purchases to the small sizes, and in these days of war-taxes he can hardly hope to get them through the custom-house free of duty.

SINCE we have been led to speak of our own illustrations, we will mention one more fact of some interest. Only once in our experience has a subscriber voluntarily helped us by sending a list of subjects which, in his estimation, would form desirable illustrations for us to publish. This happened a good many years ago, and when we next visited the city he mentioned, we looked up the subjects he named, and later published, perhaps, two-thirds of them. Coöperation of this sort between recipient and purveyor should be very beneficial, and would be very welcome, and we regret there has been so little of it. In the same way, we regret that we have had so little aid from the army of amateur photographers, many of whom operate with large cameras, and who, it would seem, might now and then think of placing at our disposal a selection of their best negatives for the benefit of themselves and their fellow-subscribers. Some of this amateur work is of unquestionable excellence, and as the devotees of the gentle art are ranging in every direction, they, of course, are encountering subjects which never fall within the limits of our more hurried and restricted expeditions. We remember seeing in *Building News*, last winter, a paragraph which called attention to the manner in which the fashion of architectural illustration seemed to be changing, and how markedly the desire for photographic reproductions from nature seemed to be displacing the old regard for the work of the draughtsman skilled in architectural rendering, and expressing the editor's desire to receive contributions of photographs or negatives for reproduction in his journal. At the time of reading it, we were inclined to make it the text for some such appeal as this.

TWO items in the newspaper which catch our eye ought, we suppose, to make our bosom swell with the pride of the expansionist. One declares that the King of Siam has gone into partnership with an American, and is to build a large hotel at Bangkok, he having experienced the delights of hotel-living during his recent European trip. The other declares that the Japanese architect charged with building a four-million-dollar palace for the Prince Imperial, has come to this country to study our steel-skeleton system of construction, and, incidentally, to procure the steel framework for building. The earthquake test is the one force that all users of the steel skeleton have most wished to have applied to the new style of building, since there is never any certainty that a shock may not occur in any part of the country, even if records show that no vibrations have ever been known there, and it is desirable to know whether the steel skeleton, or, rather, its protecting outer skin of masonry, can really maintain its integrity under a severe shock. Such a relatively feeble tremor as that which visited San Francisco last year does not give the sort of test it is desirable to have. So we may hope that, as Japan is certainly a country where earthquakes are both common and sometimes severe, the new palace may have some portion of it carried high enough into the air to afford the kind of evidence, one way or the other, that could have useful application to American practice.

THE NEW SOUTH STATION OF THE BOSTON TERMINAL COMPANY.¹—II.

THE most important part of the station, in order to insure prompt, efficient and safe train-service, was the installation of a perfect system of signals, switches and interlocking apparatus. As there will be about seven hundred and fifty (750) trains per day entering the station, requiring about four thousand (4,000) train



A Signal Bridge.

movements, with the many necessary changes of signals and switches, some idea of the importance of this part of the work may be imagined. After most careful consideration of all the many and various questions, the contract for this part of the work was made through Messrs. Westinghouse, Church, Kerr & Co., with the Union Switch & Signal Company, of Swissvale, Pa., who have installed a most complete system of electro-pneumatic signals and interlocking apparatus, to handle all trains of all the four railways entering the main train-shed, and also the subway incline and loop-tracks. Two interlocking-switch towers have been constructed at the most convenient positions in the yard and in these are the two interlocking-machines. In each of these towers complete operating models of the tracks and switches are placed, upon which every movement of the switches and signals out in the yard is duplicated, so that the operator may know at all times exactly what is going on outside. The mechanism for operating the signals and switches is most complete to the smallest detail and embodies all the latest improvements, the actual movements of the switches and signals being effected by compressed-air, which is transmitted by a complete system of piping from the power-house all over the yard, the operation of the pneumatic machinery being controlled electrically from the two towers. A few of the signals of minor importance are on the ground, but the greater number are placed on the nine signal-bridges erected over the tracks in various parts of the yard. These signal-bridges are forty feet high and of from fifty to one hundred and twenty feet span.

There is also a complete system of steam-piping distributed through the yards, for warming the cars when standing on the side-tracks in cold weather when the locomotive is detached. Compressed-air is also supplied in the same manner, for testing the air-brakes prior to the departure of the trains.

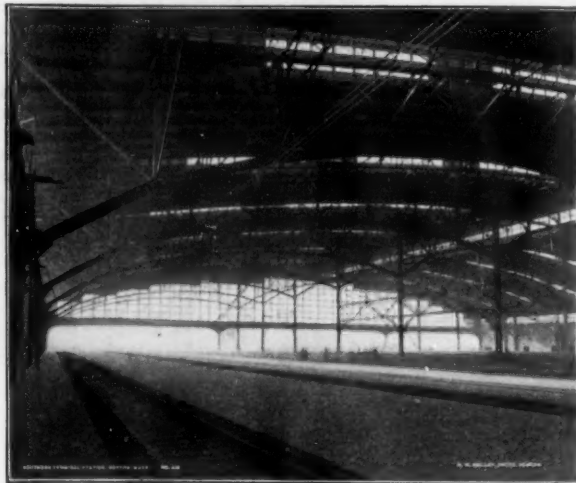
For the protection of the head-house and adjoining buildings, a system of fire-service mains and distributing-pipes is provided, connected to the high-pressure water-supply of the city, with a large number of outlets fitted with hose and reels ready for immediate use. A system of hot-water and steam supply for various purposes is provided in the main building at all times throughout the year, and is entirely separate from the heating system, which is only for use in cold weather.

For special ventilating purposes eleven attic fans, operated electrically, have been installed in the roof to exhaust the vitiated air into the atmosphere.

As the basements and the depressed subway-tracks are below tide-water though waterproofed, it was necessary to provide a very complete arrangement to get rid of any water that might find its way into them in stormy weather or by leakage. A large sump has been constructed near the power-house, provided with electrically driven centrifugal power-pumps to remove the water which is drained into the sump from the various points, drains running under the entire

length of the subway tracks. The pumps are controlled automatically by the level of the water in the sump, and in any emergency a large reserve-pump can also be put in service at a minute's notice. Electric alarms are installed, which notify the engineers in charge whenever the level of the water rises above a predetermined limit.

With such a large area of roofs and awnings, over fifteen acres,



The Train-shed.

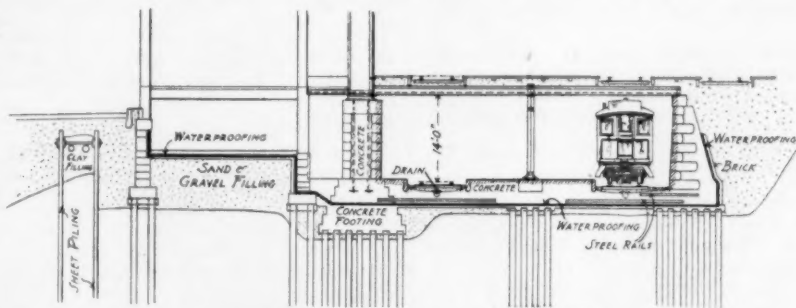
a complete system of drains and large copper conductors was necessary, and these are jacketed and provided with steam-pipes to melt the snow and ice and prevent them from blocking up the conductors in the winter.

The train-shed is said to be the largest in the world. It is used exclusively for the trains, and the baggage and waiting rooms are outside of it. The roof is in one sweep, and consists of three spans, the middle span being two hundred and twenty-eight feet (228') and the two side-spans one hundred and seventy-one feet (171'); cantilever-trusses are used, sixty feet (60') from centre to centre. The extreme height of the shed is one hundred and twelve feet (112').

The train-shed is lighted through asbestos-covered wire-glass, bedded in putty, fastened in with wooden strips in wooden sashes, fastened with brass screws to wooden frames, which are in turn bolted to the steel of the train-shed. All the glass is set vertically, and permanent foot-walks have been constructed, so that it can be cleaned from time to time.

The main roof is of asphalt and gravel, the monitors being covered with copper. It is designed to carry a load of sixty pounds per square foot, including its own weight, and several times this load before there is any danger of rupture. The steel in the frame weighs about twenty-three pounds per square foot, and the covering about ten pounds more.

The whole of the site of the station, as located, was originally flowed over by the ocean, and later covered with docks, wharves and buildings constructed on cribs, walls, piles and rubbish, and a large portion of these had to be removed. Owing to the nature of the subsoil, piling was necessary under the whole of the foundations for the building. The piles were of Nova Scotia spruce and varied in length from thirty-five to forty-five feet, and up to the date of the opening some forty-five thousand (45,000) had been driven, many more being required for the uncompleted portion of the work outside of the main buildings and train-shed. A loading test was made at the beginning of the work, upon three spruce piles, driven twenty-seven



Section through Subway nearest Fort Point Channel.

feet into the ground with a penetration of three to four inches with the last blow of a two-thousand-pound hammer falling sixteen feet, with the hammer-line attached, the load being sixty tons of pig-iron, and no settlement resulted. As the final load of the structure is only fifty per cent of the test-load, this was very satisfactory.

In order to carry out the excavation and foundation work without trouble from tide-water, it was necessary to construct a coffer-dam of timber on three sides of the excavation. This timber wall, consisting of six-inch splined hard-pine planks about forty feet in length, was driven into the hard clay, and, where necessary to resist the pressure of the water, it was doubled. In order to drive this successfully, all stones and obstructions had to be first removed. The cost of this part of the work was about \$75,000.

This cost has, however, been justified by the absence of trouble from water during the construction of the foundations and subway, no flooding having been experienced.

The waterproofing underlying the whole lower floor consists of ten layers of tarred paper, swabbed together with hot pitch. The layers are carefully lapped and all built in place, and upwards of ten acres are covered with this. Where horizontal it is laid on a concrete base, six inches thick, trowelled to a smooth surface, and where it is vertical it is backed by eight inches of brickwork. The horizontal sheet in all cases lies between the pile-heads and the granite masonry above. Where no walls rested on this sheet, a loading of cheap Portland-cement concrete was placed to resist the upward pressure of the water, and, where necessary, inverted arches of concrete were provided.

One of the new departures in the materials employed in the construction of the station is the use of American cement, manufactured at the Alpha Portland Cement Works, at Alpha, N. J. The material of which it is composed is an argillaceous limestone, and the quantity is practically inexhaustible.

One of the most important parts of the construction was the foundations for the head-house and train-shed, as the whole of them had to be set on piles, and some idea of the immensity of the work may be formed when one considers that over forty-five thousand piles from thirty-five to forty-five feet in length, of Nova Scotia spruce, were driven to support the concrete and stone foundations.

Having thus given a brief description of the main buildings and train-shed, it is necessary to add a few details about the power-plant and the machinery necessary to provide for the use and operation of the station. This means the installation of apparatus for supplying heat, light and ventilation, hot and cold water, ice, also the power to operate the elevators, both passenger and baggage, and also for pumping.

Besides these it was necessary to provide the electric current and compressed air required for the operation of the extensive system of electro-pneumatic signalling and switching, the most important features of the safe and prompt handling of passengers and trains.

The power-building is located on the east side of the yard, on the line of Dorchester Avenue, and is built of selected hard-burned red brick, with sills and trimmings of cut granite, the roof being carried on iron trusses. It is four hundred and sixty feet (460') in length and forty feet (40') wide, this shape being determined upon as it was not possible to encroach on the width of the yard and curtail the track-room.

The plant is laid out in what is called "tandem" fashion, with the ice and refrigerating plant at the northern end, with the ammonia and air-compressing plant next, then the engine and dynamo-room, following on with the stack, economizers, central heating-plant and boiler-room, while farther south, in a separate building, is the Pintsch gas-plant.

The boiler-room contains ten horizontal return tubular boilers, each of about one hundred and twenty horse-power. These are equipped with mechanical stokers, in order to burn a low grade of fuel without smoke.

In order to avoid the unsightly brick stack, which would of necessity be very high and also costly, a mechanical-draught plant has been installed in duplicate, and the gases are drawn from the boilers by two specially-designed blast-wheels and exhausted into a short iron stack that barely projects through the roof of the building. By changing the speed at which these blast-wheels, or fans, are run, it is easy to provide any reasonable draught-pressure at a few minutes' notice.

The engine-room contains four similar units, each consisting of a three hundred and seventy-five horse-power vertical compound engine, direct-connected to a two-hundred-and-twenty-volt multipolar compound-wound generator. In cold weather these engines are run non-condensing and the exhaust-steam turned into the heating system, but when heat is not required they are operated condensing. A special arrangement of connections is provided for the generators, so that the load, which is carried on a three-wire system, is properly equalized.

The steam-piping is well designed and ably carried out. It is lap-welded and of heavy steel, with heavy wrought-steel flange welded on, and all piping and flues, etc., are neatly covered with non-conducting material. Iron galleries are provided, to give easy access to any part of the piping system.

The switchboard is of polished white marble and contains the necessary switches and controlling mechanism, besides a proper system of bell-signals between the head-house and the engine-room.

In the basement are the necessary pumps, heaters, etc., and also the condensers, which are supplied with salt-water from an arm of the bay.

A positive hot-water circulating system from a central heating-plant in the power-house, provides a very satisfactory method for heating the buildings at great distances from the source of heat. The circulating water is heated in three large vertical tubular heaters, two of which are used when exhaust-steam from the engines is available and the third when live-steam is necessary, or if reheating is required in very cold weather. Constant pressure is kept on the hot-water system by a pressure-tank in the head-house near the roof, fitted with a ball-valve to keep the mains full of water by replacing the waste. Two special centrifugal-pumps are used to pump the hot water at sixty pounds pressure and force it through the

mains to all parts of the station buildings. The main loop is five-eighths of a mile long and the circulation is so rapid and continuous that the buildings are easily heated. The main corridors are heated by direct radiation, but the waiting-rooms and offices by indirect. Heating coils, or stacks, are located in the various basements, through which pure and fresh external air is forced by blower-fans driven electrically. These heaters furnish what is called tempered air, and some of this tempered air is passed through secondary stacks, or heaters, to still further raise the temperature. The two kinds of air are conveyed in separate flues or ducts to each room, where the proportions can be varied to suit the needs of each. The hot-air flues are covered with non-conducting material, to prevent undue loss by radiation.

There is also a complete ice and refrigerating plant, to supply cold water to the buildings and also to manufacture ice for the restaurant and for the cars. Twenty tons of "Diamond" ice can be made each day.

There are seven passenger and twelve baggage elevators, besides a freight-elevator in the ice-plant. These ensure prompt and efficient service, and are fitted with all the latest safety and automatic devices.

The Pintsch gas-plant is at the southerly end of the yard, and is capable of producing upward of one hundred and twenty thousand cubic feet daily.

The equipment of this station as a whole is the most complete installation of its kind in the world, is proving itself to be in every way satisfactory in actual operation, and reflects great credit upon all those connected with its design and construction.

H. W. WELLER.

ACCIDENTS TO WORKMEN IN FRANCE.



Entrance to Police Station, Theobald's Road, London. From *The Builder*.

UNDER date of May 4, 1899, Consul Brunot, of St. Etienne, transmits a printed copy and a translation of the new law which went into effect on June 1, relative to accidents to workmen in France.

Omitting the minutiae usual to legal documents of similar nature, and which render the report too voluminous for publication, the following abstract covers the vital points of this new law:

Indemnity Accidents.—Accidents occurring in the course of work to workmen and employés in the following occupations: Building, work-shops, yard-work, manufactories, transportation by land and water, loading or unloading, shops, mines, quarries, and every operation, in whole or in part, in which are manufactured or handled explosive materials, or in which use is made of motor-power other than that of man or animals

—give the victim, or those depending directly upon him, a right to indemnity at the expense of the head of the enterprise, on condition that the interruption of work exceeds four days.

Indemnity.—For actual and permanent incapacity, a pension equal to two-thirds the annual wages of the incapacitated; for partial but permanent incapacity, to one-half the difference between his regular salary and his reduced salary, occasioned by the accident; for temporary incapacity, a daily indemnity of one-half the wages of the incapacitated at the time of the accident, the indemnity beginning on the fifth day after the accident.

When the accident proves fatal, a pension is allotted on the following conditions to the persons stated:

(a) A life pension, equal to 20 per cent of the annual wages of the victim, to the surviving widow (or widower) who is neither divorced nor separated, the marriage to have been consummated prior to the accident. Should the widow marry, she forfeits her right to this pension, but will be allotted three times the amount of her annual pension in one sum as a final adjustment.

(b) For the children, legitimate or natural, recognized before the accident, orphans of father or mother, under 16 years of age, pensions, calculated on the annual wages of the victim, of 15 per cent of those wages in the case of only one child, 25 per cent if there are two children, 35 per cent if there are three children, and 40 per cent for four or more children. For children deprived of both parents the pension is 20 per cent for each child, but can not exceed in the aggregate 60 per cent.

(c) If the victim leaves neither widow nor children, as per a and b, each of the ascendants who depended on him will receive a life-pension, and the descendants a pension up to sixteen years. This pension will be equal to 10 per cent of the annual wages of the victim, but in no case can it exceed 30 per cent. These pensions (c) can be reduced proportionately, according to circumstances.

The pensions allowed in virtue of the present law are payable quarterly, and cannot be transferred, nor are they subject to seizure.

Foreign workmen, victims of accidents in France, who cease to reside in French territory will receive as total indemnity an amount equal to three years' pension; members of their families not resident in French territory at the time of the accidents will receive no indemnity.

Employers are also held responsible for medical, pharmaceutical, and funeral expenses. The maximum funeral expenses cannot exceed 100 francs (\$19.30).

Employers can relieve themselves, during the thirty, sixty, or ninety days following accidents, of the obligations of paying to the victims the expenses of the accidents and the temporary indemnities or parts only of these indemnities, as specified herewith following, if they can show —

(a) That their workmen have joined a mutual-aid society and they (the employers) have paid their share of the subscriptions to such society by mutual agreement; but such share shall never be less than one-third the total subscriptions.

(b) That such society assure its members, in case of accidents, during thirty, sixty, or ninety days, medical care and daily indemnity. If such indemnity is less than one-half the daily wages of the injured, the employers must make good the difference.

Full pensions and indemnities are allowed on wages amounting to 2,400 francs (\$463.20) per annum; on all wages above that sum pensions and indemnities are calculated at the rate of one-fourth the regular allowances.

Workingmen and employers cannot, by reason of accidents of which they are the victims in their work, invoke any other provisions than those of this law.

Independently of the action resulting from the present law, the victim, or his or her family, possesses the right to claim damages for the injuries caused by the authors of the accident other than employer or his workmen, according to the rules of common law. The indemnity allowed in such case will exonerate in the same proportion the employer from the obligation imposed upon him by the accident. This action against a third party (responsible for the accident) can be exercised by the employer at his own risk, should the family of the victim fail to prosecute.

At the time of the definite settlement of the life-pension, the victim can ask that one-fourth of the capital necessary to establish such life-pension (calculated according to the tariffs made out for victims of accidents in the reserved-fund for old age) be paid to him in money. He can also ask that his capital, less the one-fourth just mentioned, shall constitute a life-pension for him, revertible as to one-half at most to his widow. The court in council-chamber will decide these questions.

The remaining provisions of the law relate to declarations of accidents and inquiries therein, competence, jurisdiction, procedure, revision, guaranties as to expenses incurred, etc.

In transmitting the text and translation of the foregoing law, Consul Brunot says:

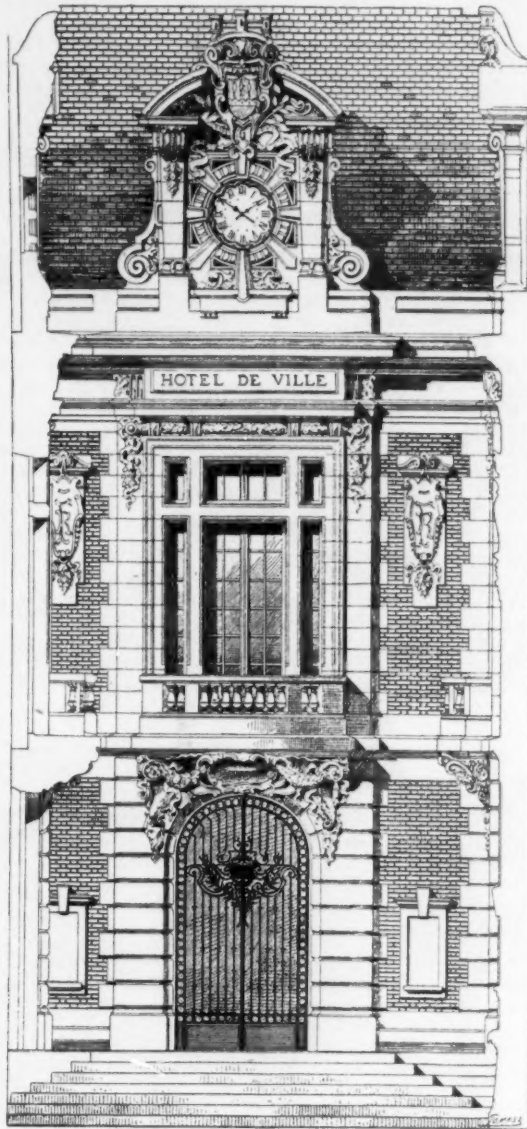
I must state that the law has provoked a great outcry in the public press, while the heads of small industries assert that if it is enforced they will have to throw up their business altogether.

The workmen are, naturally enough, well pleased at the guaranties given them in this law; but it is feared that the result will not be entirely to their benefit, as employers will, in order to minimize their risks, refuse, as much as possible, to employ married men, especially those with children, and will also give preference, especially in the border districts, to foreign workmen.

These and other considerations have agitated public opinion, and this agitation found an echo a few days ago in the Parliament, where the question was warmly debated by the deputies, some of whom denounced the law in strong terms, while others asked the Government to postpone the application of the law until the beginning of the next year. The Government refused to postpone it, but promised to appoint a committee to examine the law and report upon such modifications as might be considered necessary.

DANGERS OF ILLUMINATING-GAS.—For the protection of the public against the dangers of illuminating gas, the *Philadelphia Medical Journal*, in a vigorous editorial, urges the absolute necessity of more safeguards than at present exist. Among the more obvious measures with this end in view, it recommends requiring all companies manufacturing and selling such gas invariably to give public notice of the use of any kind of water-gas, such statement, with an explicit caution as to the danger of the illuminant, forming part of every bill for service sent out by the company. In addition to this, the *Journal* emphasizes the necessity of municipal regulation of the proportion of carbon dioxide in the gas supplied, at least in the resident sections, during what may be called the "sleeping hours," limiting such proportion to about twelve per cent. Nor should the character of the gas-burners and fittings be neglected in such supervision. That such regulations are of immediate importance is evident from the fact that water-gas is distinctly a more lethal agent than the ordinary illuminating-gas, possesses no noticeable pungent odor, is particularly penetrative, and not only acts much more rapidly in producing asphyxiation, but produces effects far more difficult to overcome than does coal-gas. Even when resuscitation and apparent recovery are accomplished, the action of water-gas upon the blood is such that an impaired state of health, temporary or permanent, according to the degree of asphyxiation, must be expected to result. — *N. Y. Tribune.*

A PHASE OF OUR ARCHITECTURAL CONDITION.



Detail from the Hotel de Ville, Fere Champenoise. From *La Construction Moderne*.

THE American citizen has lately waked up to the fact that architecture, the foundation of the Fine-Arts, and yet of them all the least known, is a topic worthy of his — or her — attention. At last, indeed, he has, through his representatives in the national legislature, even gone so far as to officially acknowledge the architect among those entitled to a share of the annual disbursements from the capacious purse of Uncle Sam, and, unofficially, from one end of the country to the other, he devours with avidity the "Architects' editions" of magazines; the series of 10,000,000 beautiful homes, which appear in the most popular of all weeklies; books and portfolios of plates; talks on architecture; university extension; Chatauqua readings. He takes them all, swallows them whole, and calls for more.

"A Tasty Modern Dwelling in the Relieved Colonial Style; cost, including plate-glass in front door, \$3,500." There are probably, at a conservative estimate, 500 journals — daily, weekly or monthly — published in this current month, in which the above may be found, and it is needless to say that the demand is equal to the supply.

Whatever the American people do, they are apt to go at it with a rush, and whatever is done is very naturally apt to become tremendously popular; so it has happened that in this country, and at the present time, an interest in architecture has developed, unsurpassed in any age or by nation.

But in spite of this fact, it must be admitted that we have as yet no generally recognized, distinct American style of architecture. Many of our buildings display a knowledge of engineering and a familiarity with the details and proportions of all the historic styles of architecture in a marked degree. In this combining of engineering and decoration, we perhaps surpass the world. Some of our simpler domestic architecture expresses its purpose truthfully in its design, though this has been pretty thoroughly spoiled of late.

This, however, is not all that architecture should be, nor all that it should express. It is more than mere decoration of vertical walls, than quaint framing of timbers or startling use and misuse of

vegetable and mineral substance for the covering of our habitations. It is even more than the visible expression of certain rules and formulas concerning scale, proportion, axes and units. With us, at present, it has barely reached this last stage.

Now to prophesy concerning the future of American architecture would be presumptuous; to look into the conditions under which it has developed, and is still developing may, however, serve to throw some light upon its present status and give in a broad way some idea of its probable future. First of all, the statement may be made, broadly, that none of the Fine-Arts has ever amounted to anything which was not founded on religion, or was not an out-growth from it. It is only, I think, by accepting this statement without qualification that the wonderful artistic development of certain nations at certain periods of the world's history can be explained, unless their growth can be said to keep step with the growth of civilization. But civilization, apparently, has nothing to do with it. This, of course, depends on the definition of civilization, but taking the word in its generally accepted sense, it cannot be said that those countries which have made the most rapid progress in all that constitutes a well-governed State have shown any marks of superiority in their art, or their architecture. There are rare exceptions to this statement, but they can be explained, and only serve to show the truth of the general proposition. As an example of the most perfect civilization which exists to-day, take England; going back a century, France; two hundred years more, Italy; five hundred more, the Greeks at Byzantium. Farther back than this, it is rather difficult to go, for the modern civilization of the nineteenth century is so absolutely opposed in every one of its principal features to that of the Greeks, the Romans, the Egyptians, or the great nations of the East, that with them we have little to do. In fact, up to the end of the first thousand years of the Christian era, all the architecture which was worthy of our admiration was distinctly religious.

The Egyptian Emperors — gods, deified by their subjects while living, and by their families and brother-rulers when dead — built the tremendous palaces of which a few ruins are now left us, as

England was relatively an uncivilized country — her great civilizing impulse came to her then from Italy — and from these very arts themselves. By King James's time the religion of England had become utterly bound up in formality and pretense — so had the architecture — and the England of James and Charles was far more civilized than the England of Elizabeth. There may have been certain merit in both the architecture and the religion of this later period; but still later — in the eighteenth century — there was no merit left in either; yet, in the eighteenth century, civilization advanced in England with tremendous strides. In the early years of the nineteenth came a virtual revolution in all that goes to make up a well-governed State, politically, commercially, socially — in all the elements that constitute modern civilization; but, save for a few abortive struggles, religion and architecture stood still. Within the last forty years a group of religious thinkers has risen in England, and in that same time there has appeared a new development in architecture. To call all these men — Ruskin, Carlyle, Manning, Arnold, Pusey, and scores of others — distinctly religious would probably open up a subject of discussion, but they have certainly changed public thought in England, radically, in all that pertains to the best religion; so that while England is, as I have said before, the type of the most highly civilized nation on the earth to-day, she has also shown a certain power in the religious world. Now intimately connected with this set of men, a few of whom I have mentioned above, there has appeared in England a type of architecture as varied, perhaps, in its methods and results as the lines of thought developed by these men, but, nevertheless, showing, in a marked degree, beauty, originality and style.

As a second example, take France. It is a generally accepted fact to-day, I believe, that France, especially Paris, is the centre at least of the architectural, if not of the purely artistic, world; that is, that there is in France a school of architecture which has as its foundation a certain fixed set of principles, which, when properly applied, will result in a certain style of architecture, which is radically different from any hitherto known, and which is good. In her



House of C. G. Rice, Esq., Hamilton, Mass. William G. Rantoul, Architect.

symbols of their omnipotence. I am not aware that the Greeks were a very highly civilized people and it is certain that the Grecian architecture which we admire is entirely religious. The same is true of the Roman. In the early periods of Roman history, the worthy buildings were dedicated to the gods; in the height of the Roman power they were still dedicated to the gods, those who dwelt in them as Caesars.

As to the buildings which cover Asia, from Corea to the Red Sea, not one but is the dwelling-place of some household god, be he or she never so insignificant. So we may dismiss the history of art and architecture as connected with civilization up to the beginning of the eleventh century. Till then civilization, as we know it, did not exist. Of civilization, such as it was, religion was up to that period undoubtedly the great moving and inspiring force, and just to that degree were art and civilization dependent upon one another, but after this time, or within one or two centuries, the connection between civilization and religion, and consequently with art, began to weaken, and has kept on weakening ever since.

Now if these two statements are reasonably correct, that civilization has been most fully developed in the countries named, and at the times mentioned, and also that religion and civilization have had for the last five hundred years very little in common, the rest is easy. As to the first, it will undoubtedly be admitted that England is, and has been for some time, the most highly civilized nation on earth. The statement that England is not a religious country would probably be assailed at once, but the statement that it is a religious country would be an extremely difficult one to prove. Still, it has an established church closely connected with its political system, and it would be unfair to pass the question entirely. Now upon examining the architecture of England for, let us say, the last three hundred years or so, what bearing have religion and civilization had upon it? In all that period the best architecture which has been produced has come from that class of people which most truly represented the religious side of the community. In fact, until the sixteenth century,

public buildings, in her private buildings which strive for any architectural effect, and in her ecclesiastical work, France has, in a greater degree than any other nation of modern times, shown an originality which is governed, apparently, by a certain developed intelligence, and just as surely as this is the case, the same is true of France to-day in her religious belief. It is in France, and in France alone, of all the nations of Europe, that an intelligent belief in the doctrines of the Catholic Church is almost universal among the inhabitants. It is to France that the Church turns to-day among all European nations for her most cultivated men, her broadest thinkers; to France, and almost to France only, she looks for the support of that portion of the nation which is the most influential. Now, I do not mean to say that French art, or French architecture, expresses most truly any of the fundamental principles of the Catholic faith, but it does express that particular branch of the Catholic religion which is one of its most powerful supports — the worship of the beautiful.

So far as civilization is concerned, certain phases of civilization in France compare favorably with the civilization of any other of the European nations, but they are the ones that spring most directly from religion and art, or the aesthetic and sensuous side of human nature; commercially, financially, politically, France is a bedlam.

Now turn to Germany a moment. There is no religion in Germany, but there is tremendous political power, financial power; there is commercial power, and there is no architecture.

Italy has produced nothing in the last hundred years worthy to be called art or architecture. In all that space of time Italy has devoted herself, heart and soul, to politics, and her religion has been a mockery even to the lower classes.

Turn to Holland. Holland and Belgium, the Ancient Flanders, have kept as steadily civilized as any part of Europe. In a way, they have been religious too; but for the past three hundred years their religion has been a mere formality, as much a part of their government as the police system; and the architecture of both Holland and Belgium during that period has displayed absolutely nothing save this

same formality, stiffness and sense of propriety which we always associate with the countries themselves.

Switzerland is another example of this same influence, perhaps the best of all the countries in Europe in showing the demoralizing effect of civilization upon art and architecture.

To jump to the other side of the globe, Japan is a remarkably good instance of this same destructive effect of civilization. The art and architecture of the Japanese of twenty-five years ago are now recognized as possessing a quality entirely lacking in their work of the present day. It is hardly necessary to say that Japan has lately taken its place as one of the civilized nations of the earth.

Even in highly civilized countries to-day, we find in some remote districts buildings which have a character entirely lacking in the more favored portions of the same country. This fact, however, is probably due rather to the relative lack of civilization than to the presence of a religious spirit. This brings up, of course, the question whether civilization is more responsible for the stifling of the artistic spirit or religion for the promotion of it. One thing is evident from the very nature of the case. Those countries which become most highly civilized become so through commingling largely with the rest of the world, appropriating to their own use the best of whatever they find outside of their own borders, and so modifying it as to meet their demands, and this tendency applies to the art and architecture of these same countries, and is, undoubtedly, destructive of the spirit which should animate the best architecture.

The increase of general knowledge, also, has the same effect. For knowledge viewed as the accumulation of facts must destroy, to a certain extent, belief in things which are unknown, and check the desire to branch out from the beaten paths of experience. The Italian Renaissance of the fourteenth and fifteenth centuries and the full-grown art of the seventeenth illustrate what I mean. The paintings of Giotto, when compared with those of Titian; the architecture of Brunelleschi, with that of Vignola; the Palazzo Buon-signori, in Sienna; the Palace of the Podesta, and the Church of Or San Michele, in Florence, contrasted with the Church of the SS. Annunziata, and the Uffizi Palace with St. Peter's, at Rome, and St. Paul's, in Venice, are examples. With the acquisition of knowledge, two things are likely to happen—the person who acquires it either feels that he has more than he really has, and with that assumption makes some grievous mistakes, or else he may be rather oppressed with the feeling that it is useless to try to be original when so much has been done in the world. Either of these mistakes is fatal to any originality in art or architecture which can produce permanently good results.

I have given, I think, a sufficient number of examples to show that religion has been and is inseparable from architecture. I use the word religion in the sense in which I think it is understood by nine-tenths of the human race; that is, the varied beliefs in the unknown, coupled with varying moral and ethical codes, all of which are based upon certain direct revelations from God to men, and which must from the very nature of the case be infallible, unalterable and eternal. And in those countries and ages where religion thus defined has prevailed beyond those forces which go to make up civilization, just so surely in those countries has the architecture developed most highly and shown the most marked characteristics.

And now let us see how these statements apply to our own country. If I remember rightly, Max O'Rell, in a trip to the United States, ten or fifteen years ago, made a collection of some two hundred kinds of religions which he claimed to have found in active practice through the country. In addition to this, it is probably not extravagant to say that in no country on earth to-day, not even in England, is the standard of civilization so high for the whole people as in this. This, of course, does not imply that we are the most highly civilized of nations. It does, however, mean a relatively high place in the list of civilized countries, and our most critical observers generally will concede us this. But as to our religion, we are, I fear, despite Max O'Rell, in a harder case; for it must be confessed that the American people are, as a whole, sceptics. Our Puritan ancestors have been described as a people who "founded this country in the fear of the Lord and a determination to do as they pleased," and it is this determination that has been the prevailing element in our growth ever since. At the present writing, even the verbal inspiration of the Declaration of Independence is in question, if it proves a stumbling-block to "expansion."

In architecture it is only in the period antecedent to and directly after the Revolution that we find anything approaching a distinctive style, and this is based wholly upon the Anglicized Italian Renaissance, modified by the rigid Puritanism of the time and by still more rigid necessity; for it is only the simpler and more humble examples of so-called "Colonial" architecture which depart sufficiently from the work prevailing in England at the same period to merit inclusion in a distinct "style."

Since the Colonial period we have been too busy acquiring civilization to pay much attention to the Fine-Arts. Professor Norton has, I believe, named the first three decades of the present century as our Golden Age. Yet in that period, if a building was planned or erected save under the most rigid rules of Greek and Roman architecture, as displayed in the text-books of that period, I am not aware of it. Surely, that is not our highest idea of architecture. As for our later attempts, the reader is respectfully referred to the numerous volumes of architectural works published up to within twenty years. They show every possible variety of style, from the Egyp-

tian to the dwellings of Mansard. And, alas! it is not in books alone that examples are to be found. They are all about us, some of them in imperishable, others, thank Heaven, in perishable, form, living testimonies to our growing knowledge of the world and appreciation of its refinements.

Surely the parallel here is obvious. Our civilization during this period has steadily increased, strengthened, coalesced. The religious spirit, on the other hand, has diminished in its intensity, spread itself abroad, perhaps, but with a thinner coating; disintegrated and changed its forms and standards continually. This is not extravagant. In the great cities, to-day, we hear continually the cry that the churches are deserted; and lately even from the country districts of New England, the cry is echoed. Surely, then, with us civilization and religion have little in common.

And architecture, what of that? We have more of it to-day than we ever had before. We are, as I said at the beginning, overwhelmed with it. And the great mass of it, from Maine to Texas, from Florida to the Klondike, is good or bad, as it follows or departs from whatever example among the buildings of the past the designer may have chosen as his model; but choose some he must. No architect alive in the country to-day would dare, if he cared to win in a competition, submit a design that he could not label with a "style." It would be an abject confession that he did not know the A B C of his profession.

I am not pleading for originality above all things, for a rejection of that which is past. In fact, I am not pleading at all; simply commenting on what seems to me a remarkably interesting phase of our growth as a nation. We have had, now and then, and have still, a few men in the profession who are inspired, if not by religion as I have defined it, then by something that serves them as well, and with these men, it seems to me, the future of the profession rests. They have to combat the greatest of all drawbacks, "popular education" in art, for that education must invariably keep pace with our civilization. It cannot lead nor anticipate. Whether the handicap is too great, only time can show.

GEO. CLARENCE GARDNER.



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

THE WASHINGTON ARCH, WASHINGTON SQUARE, NEW YORK, N. Y.
MESSRS. MCKIM, MEAD & WHITE, ARCHITECTS, NEW YORK, N. Y.

[Gelatine Print issued with the International and Imperial Editions only.]

A COMPETITIVE DESIGN FOR THE ANTLERS HOTEL, COLORADO SPRINGS, COL. MR. T. MAC LAREN, ARCHITECT, COLORADO SPRINGS, COL.

THIS design was awarded second place in a limited competition between Messrs. Varian & Sterner, of Denver; Andrews, Jaques & Rantoul, and Peabody & Stearns, of Boston; N. Mellen, of New York, and the author. Before a final decision could be reached, a second competition had to be held between the first-named architects and the last, which resulted in favor of the architects from Denver.

FRIENDSHIP PUBLIC SCHOOL BUILDING, PITTSBURGH, PA. MR. C. M. BARTBERGER, ARCHITECT, PITTSBURGH, PA.

MAUSOLEUM FOR JUDGE GOTTFRIED KRUEGER, FAIRMOUNT CEMETERY, NEWARK, N. J. MR. GUSTAVUS STAEBLIN, ARCHITECT, NEWARK, N. J.

THE exterior is executed in best Barre, Vermont, granite. The frame of dome is iron covered with Guastavino tiles. The interior is mainly Italian marble. The shafts of columns and pilasters are Etowah, Georgia, marble. The sarcophagi and the binding-courses are Knoxville, Tenn., marble. The ceilings and pendentives are formed with Guastavino tiles covered with mosaic. Statuary is Carrara marble. Doors, window-guards, large ventilator in ceiling and ventilators of dome and trimmings of cells are bronze. Building contains thirty-six cells and two sarcophagi, their position being due east and west. Cost \$95,000.

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

THE CENTRAL HALL: PALACE-HOTEL DES CHAMPS ELYSÉES, PARIS, FRANCE. M. G. CHEDANNE, ARCHITECT.

This plate is copied from *L'Architecture*.

THE RESTAURANT IN THE SAME HOTEL.

This plate is copied from *L'Architecture*.

[Additional Illustrations in the International Edition.]

DETAIL OF THE WASHINGTON ARCH, NEW YORK, N. Y.

[Gelatine Print.]

ENTRANCE TO THE ROYAL PALACE, MUNICH, BAVARIA. PIETRO CANDIDO, ARCHITECT.

[Gelatine Print.]

THE "GOTTENHOF" COURT-YARD OF THE SAME PALACE.

[Gelatine Print.]

NO. 92 KENSINGTON HIGH STREET, LONDON, ENG. MR. F. A. FOSTER, ARCHITECT.

NEW CHANCEL OF ST. PATRICK'S CHURCH, EDINBURGH, SCOTLAND. MR. J. G. FAIRLEY, ARCHITECT.

DETAIL OF DEPTFORD THEATRE, DEPTFORD, ENG. MR. W. G. SPRAGUE, ARCHITECT.



THE RETORT COURTEOUS.—A man who lived on one side of a high board "spite" fence in a Wisconsin town, not wishing to be unjustly blamed for it, painted on his side, in letters that could be seen a block away: "He built this fence. I didn't do it." The man on the other side retaliated by painting this inscription on his side: "I had to do it."—*Exchange.*

A BOSTON PASQUINADE.—A Boston policeman is said to have found these verses pinned to Samuel Adams's statue in Adams Square one morning last month, and promptly confiscated them:—

"Here stand I in conscious pride,
Samuel Adams deified.
'Twas I who taught men to be free—
The Gospel of sweet liberty.

"They placed me here this space to fill.
'From here he'll look on Bunker Hill.
'This spot, 'tis only just and fair,
'Henceforth is known as Adams Square."

"Well done; well said; thou seest my plight,
Not Bunker Hill—by Adamsight."

—*"Pasquino."*

THE ASHMOLEAN MUSEUM.—The Ashmolean Museum, which has largely benefited by Dr. Fortnum's liberality, cannot be considered as altogether satisfactory in its foundation. Elias Ashmole contrived to obtain the reputation which attaches to the creation of such an institution, under false pretenses. The collections belonged to the Trade scants, who had gathered them during a long period. They intended to present their treasures to the University, and Ashmole was consulted on the subject, as he was supposed to be a scholar with more than human wisdom. Ashmole, like Iago, thought he would profane his knowledge in dealing with such simpletons unless for his sport and profit. He obtained credit from the University authorities for his munificence, and succeeding generations have accepted the error.—*The Architect.*

SALE OF SPECIMENS OF PERSIAN ART.—Vice-Consul-General Tyler writes from Teheran, May 17, 1899, in regard to a collection of examples of Persian art that is to be sold in that city. Certain handicrafts in Persia, says Mr. Tyler, have survived, in various forms and degrees of excellence, from a very remote antiquity. In these, the history, the development of the art, and the pictorial representation of the characteristics of national life are the chief elements in the consideration of the æsthetic and commercial value of the product. Comparatively few specimens of the older art industries are now to be found in the country, and soon none will be left. The Persian designer has never, in artistic shape or delicacy of finish, equalled the Greek artist, but in brightness and harmony of color and in the durability of materials, when at his best he has had few superiors. The collection that is to be sold, continues Mr. Tyler, consists of armor, scimitars, hunting-knives, brass and steel work, glazed tiles, porcelain, brocades, embroideries and silver coins. From a careful examination of the articles, he thinks that, with some exceptions, they are representative of the best periods of Persian workmanship.—*Exchange.*

THE ELGIN MARBLES.—Attempts having been made from time to time, and even up to now, to discredit the action of Lord Elgin, the British Ambassador to the Porte in 1799, in removing the sculptures of the Parthenon at Athens to the British Museum, it is of interest to note that an official pronouncement is forthcoming from Bloomsbury which points out that the Parthenon marbles were suffering daily injury, and that there was no prospect of better care being taken of them. In the fifty years immediately before Lord Elgin four figures had entirely disappeared from the west pediment, and others had been much injured. The frieze was suffering in the same manner, and the Athenians of that day thought that they heard the sculptures that were removed groaning for the fate of those that were left behind. A further justification

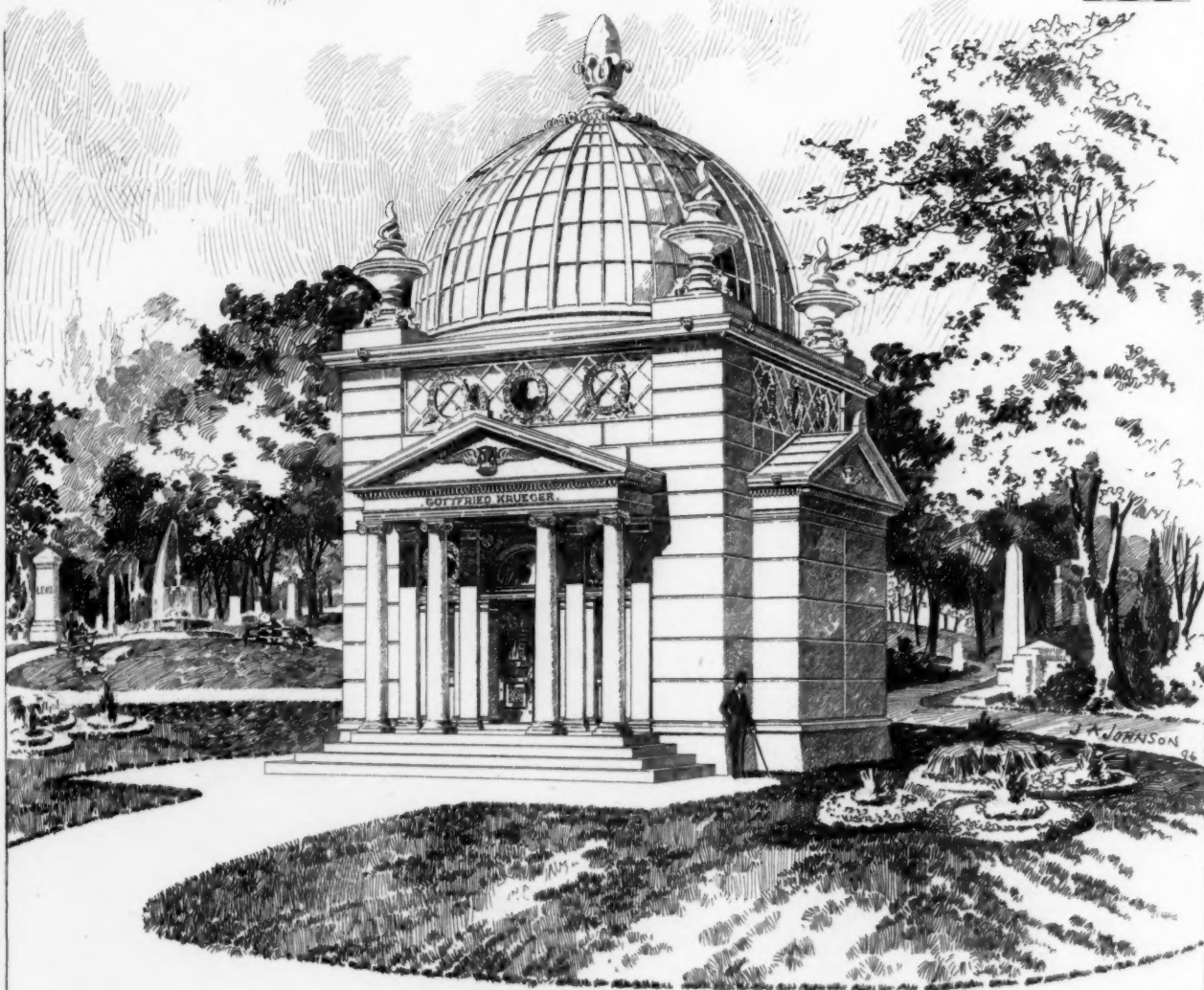
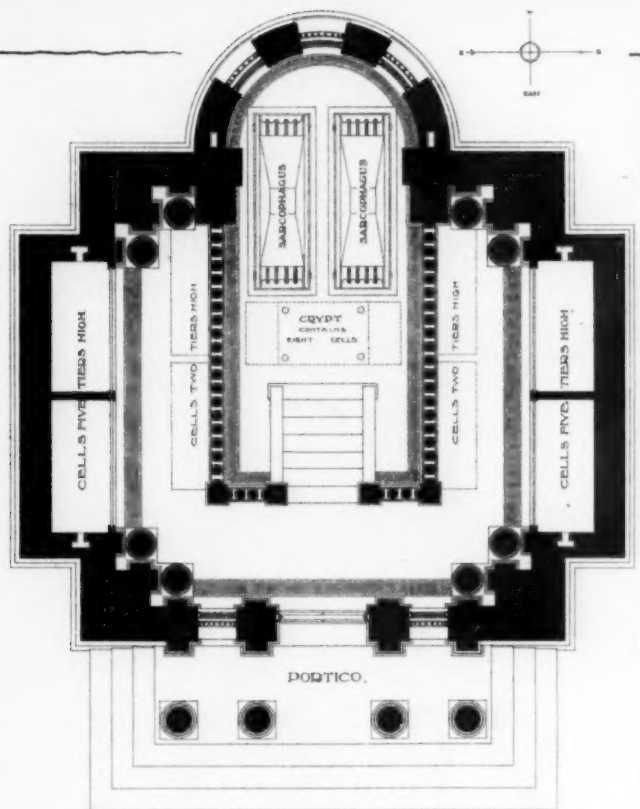
of his action is supplied by the additional deterioration which the sculptures that were left in position have suffered since Lord Elgin's time. Whether this pronouncement on the part of the British Museum authorities will satisfy the advocates of restoration remains to be seen. It may lead to a revival of the controversy, but to the general public the official statement seems likely to carry conviction once and for all.—*Birmingham Post.*

CONVEYING LIQUID-AIR.—Much difficulty has been experienced in keeping liquid-air from evaporating while being conveyed from the place of production to the place where it is proposed to use it. The fluid is very volatile, and it readily absorbs heat from the walls of the vessel which contains it and from the surrounding atmosphere. Professor Dewar devised a receptacle for storing small quantities which was an excellent affair, as far as it went. But an Austrian chemist has gone a step farther. Professor Dewar's plan was to construct a globular vessel with double walls that were half-an-inch or more apart, except at the mouth, where they came together. From the intervening space—which was air-tight—the air was carefully exhausted. The vacuum prevented the absorption of heat from the outside, and acted as an insulator. Nevertheless, a little warmth was able to penetrate and, in consequence, evaporation would occur. The Austrian method resembles this. But it provides a coating of silver amalgam on the inner surface of the outer wall. The coating serves as a reflector for any heat-rays that may fall upon the vessel from outside, and that is the only quarter from which they could come. The Austrian flask differs from Dewar's in form also. Its shape is that of two cones placed base to base. Like the globular holder, it must be supported on a ring standard.—*Invention.*

PROTECTION FROM LIGHTNING.—A monograph on "*Lightning and the Electricity of the Air*," recently issued by the United States Weather Bureau, affords some interesting information upon the question of protecting buildings from lightning. To what extent is it practicable to protect a building and to what extent is it profitable to attempt such protection when it is practicable? Before answering these questions it is necessary to convey a clear idea of the nature of the lightning flash. The old idea is that the flash, like the moderate current of electricity with which we are familiar, follows the line of least resistance, and can be diverted by a conductor of a certain size. In this view, the lightning-rod is like a channel made to convey a flow of water, and a small channel will empty a large reservoir if given time enough. But the Weather Bureau likens the lightning-flash rather to an avalanche, a landslide down the side of a mountain or the breaking of a dam—the whole force is exerted in one instant and there is no after-current. The flashes, however, vary greatly in volume, some of them being mild affairs. And it is always true that a well-constructed and well arranged lightning-rod will, if given time, silently convey away a vast deal of electricity, thus lessening greatly, if not preventing, the ultimate flash. It is on this account that lightning strokes are comparatively infrequent in large cities, where lofty spires and roofs drain overcharged clouds before the stratum of air between the cloud and the houses is strained to the breaking-point. It follows from the avalanche-like nature of lightning that absolute protection of a building is impracticable unless the building itself—as being a steel structure—is itself a good conductor. But a very large measure of protection is within our reach. A chimney or church spire well provided with rods is almost perfectly protected and rods distributed to exposed points will reduce the risks of a wide roof-area as much as 75 per cent. There is no definite "area of protection." The old rule was that a rod protects a radius equal to its height, and the rule may stand for want of a better, but as a matter of fact it holds good only with electrical discharges of moderate volume. Whether it pays in a particular case to invest money in lightning-rods depends upon circumstances. Sometimes the risk is so slight as to be neglected. The cost of the rods may be such as to render fire-insurance preferable. But where the risk of being struck is very great—as in the case of church spires and high brick chimneys—the value of the property threatened renders the lightning-rod a necessity. It may be said to be necessary also where the risk is less, as, for example, for buildings that contain a great number of persons—large summer hotels, large school buildings, asylums and expensive public buildings. A very costly building cannot be wisely subjected to a slight risk from lightning if protection can be obtained. The risk on farm buildings is greater than on any other class of buildings, but where their value is small it is usually preferable to rely on insurance for protection. As to the nature of the rod, it is stated that either iron or copper may be used, and iron is as good as copper, provided the section of the iron rod be enough larger to compensate for its inferior conductivity. A rod of iron weighing thirty-five ounces per foot is held to be equivalent to a copper rod weighing six ounces per foot. A flat conductor is recommended, on the ground that surface counts for more than section. Glass insulators are useless. The rod may be fastened directly to the building to be protected. The matter of greatest importance is the condition of the two extremities of the rod—a matter often neglected with disastrous results. A rod is perfectly useless—in fact, a source of danger—if its lower end is not carried down into the ground far enough to reach wet earth. It should be connected with a good-sized piece of iron buried at the lowest depth reached by the rod. The top of the rod should be pointed and plated for protection from rust. "It is ludicrous," says the *Engineering News*, "to run a rod down the side of a building and neglect the grounding, as is so often done, just as if the lightning were a dangerous bug which could be safely disposed of by being induced to crawl down to the bottom of the rod, and which might then be left to jump off as and where he pleased. The correct way of looking at it is to consider the rod as a channel down a mountain-side to guide a possible avalanche. The larger the channel (or the less the total electrical resistance of the whole rod)—the more surely will the avalanche be confined and led through the channel provided for it."—*Boston Transcript.*

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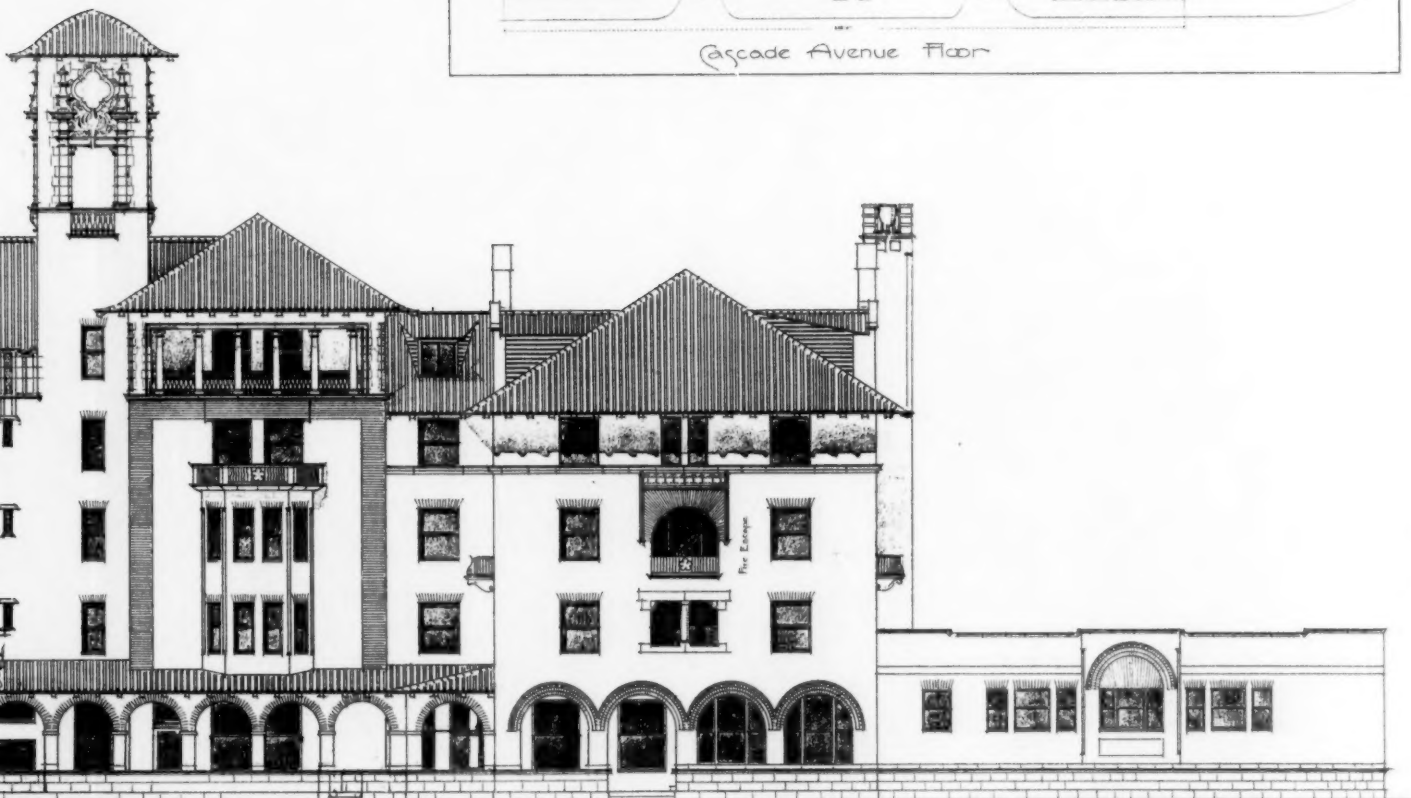
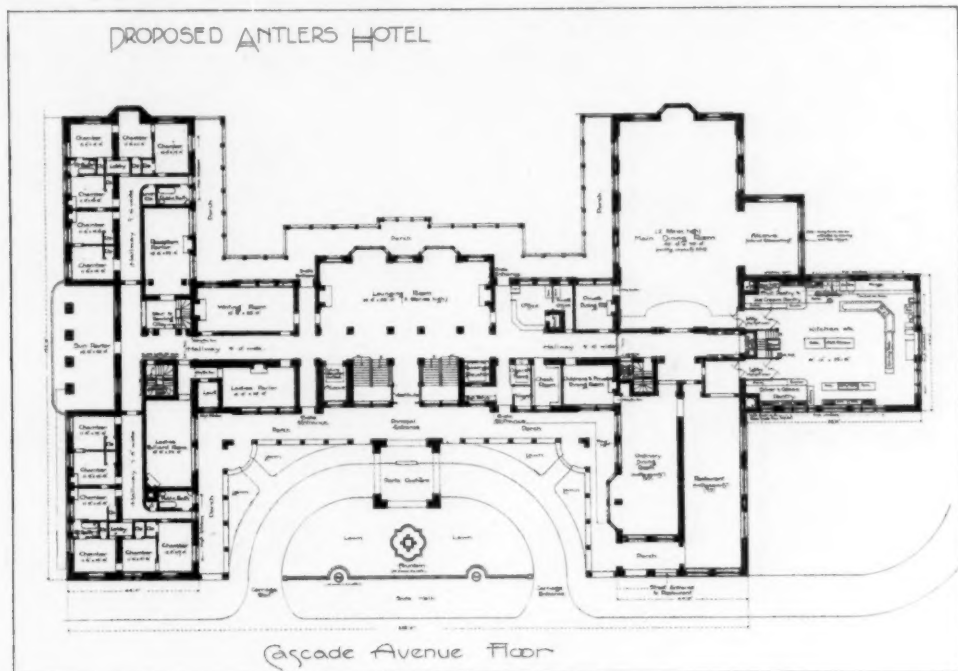






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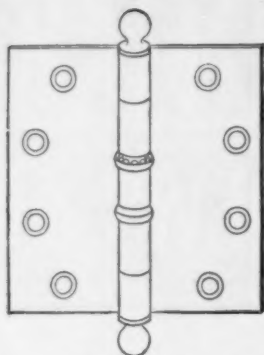
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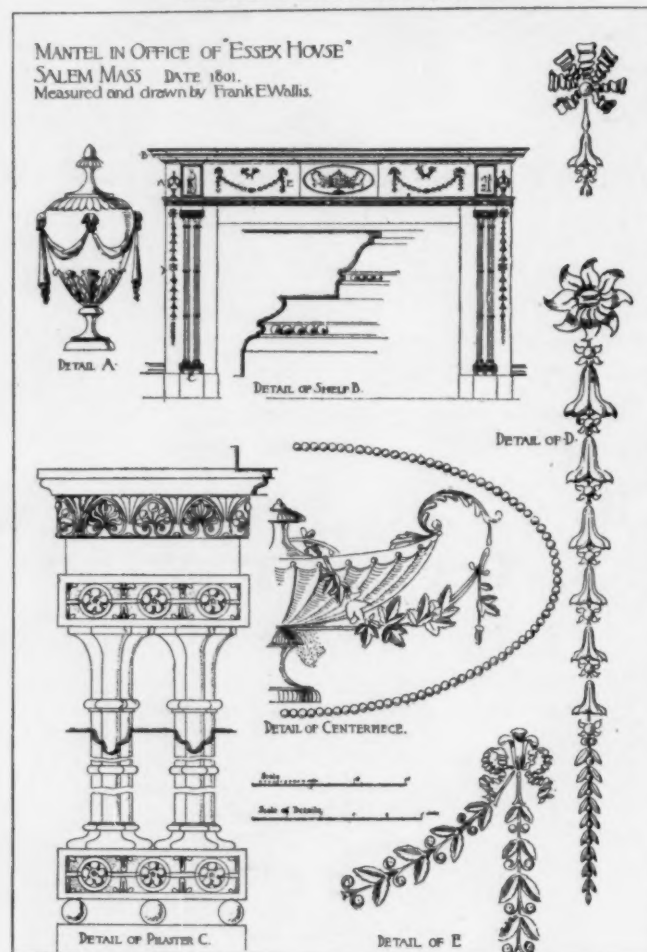
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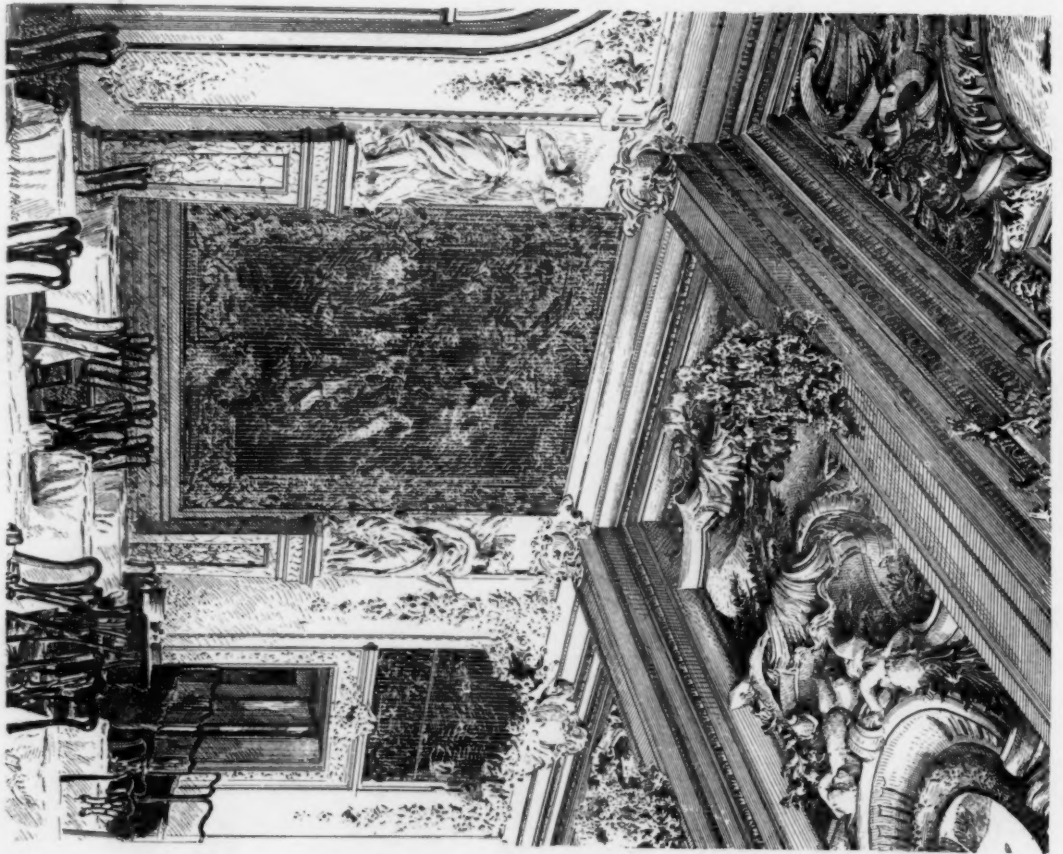
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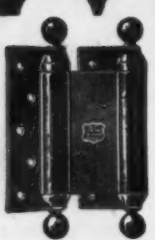
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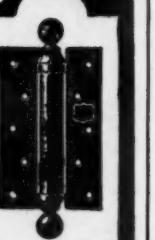
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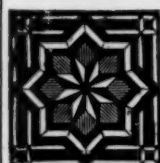
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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Cutting, Bardwell & Co., 104 Equitable Building, have been awarded the contract for erecting the Washburn School-building in Brighton, at \$65,130.

F. G. Tolman & Co. have been awarded the contract for building the Chapman Grammar School in East Boston, at \$85,900.

John J. Cranitch has been awarded the contract for completing the primary school-house on Munroe St., at \$25,830.

The Berlin Iron Bridge Co., of East Berlin, Conn., are erecting the extension of the power plant for the Hyde Park Electric Co.

Bowling Springs, Ga.—The Lookout Sewer Works, recently destroyed by fire, will be rebuilt at a cost of \$100,000.

Brooklyn, N. Y.—The Board of Estimate has appropriated \$85,000 for a new police station in the Brownsville district.

The Board of Estimate and Apportionment has appropriated \$300,000 for the second and central section of the museum building at the Brooklyn Institute of Arts and Sciences, in the Eastern Parkway. This new section is to be the centre, the key, of a magnificent building which, as outlined, is to consist of thirteen sections, to cost altogether \$7,000,000. This main section will be four stories in height. The basement will be used for lectures, and the first floor will be devoted to collections illustrating the history of art and sculpture. The second floor will be used for natural history, collections of paintings and works of art in black and white, and on the fourth floor will be a general reference library. The \$300,000 authorized by the Board of Estimate will be sufficient to complete the mason and brick and iron work of the building. It will take a year to inclose it. The work of fitting up and furnishing the interior will be extra, and when this point is reached it is hoped that an additional appropriation of \$300,000 will be available.

Buffalo, N. Y.—The supervising architect for the Pan-American Exposition in 1901, will be H. S. Kinsam, of New York City, who for some years past has been an associate and general manager with Ernest Flagg, of New York.

Chicago, Ill.—It is reported that the Young Men's Christian Association is considering plans for a \$200,000 dormitory and restaurant building to be erected near the west side medical colleges, and for a \$100,000 building near the medical departments of Northwestern University on the south side. Funds for the erection of the buildings are being solicited from the faculties of the colleges and others.

The Board of Education intends to demand an appropriation for next year of \$10,000,000 for the construction of new school-buildings.

\$2,000,000 has been appropriated for educational purposes for the year 1900, and a special committee will soon be appointed to decide how many new schools will be needed, and in what districts. As soon as sites are decided the work of the architect will begin, and in January plans will be ready and the work of building begun.

Champaign, Ill.—Valentine Jobst & Son, of Peoria, have received the contract for building the Illinois Agricultural College, at \$117,192.

Clearfield, Pa.—Reports state that contracts for the rebuilding of the big tannery and finishing shop, which was destroyed by fire on August 19, are being let. The original plant cost \$400,000, and it is stated that it will be rebuilt on a still more extensive scale and will employ over three hundred men.

Cleveland, O.—Knox & Elliott are preparing plans for a theatre to be erected on Euclid Ave., near Willson Ave., to cost \$150,000.

Collins, N. Y.—Plans have been prepared for a wing to the Collins Homeopathic State Hospital for the insane, to cost about \$60,000.

Council Bluffs, Ia.—The contract for the three-story brick and stone high-school building has been let to Geo. F. Hughes, of this city; Cox & Schrentgen, architects; cost, \$60,000.

Dayton, O.—Sutter & Putnam, 34 Louis Block, have completed plans for a business block, to be erected for Jacob Stickel. It will be built of brick and stone, three stories high, and will cost about \$10,000.

Dedham, Mass.—Luther C. Greenleaf, Tremont Building, Boston, has prepared plans for a two-story brick block, 57' x 166', arranged for stores, offices and hall, and which he will build at the corner of High and Washington Sts.

Denver, Col.—The F. E. Edbrooke Architectural Co., People's Bank Building, has prepared plans

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

for brick stores to be built by P. J. Ryan, at a cost of \$23,000.

Duluth, Minn.—It is stated that New Jersey capitalists will erect a two-story business block at the corner of 1st St. and 4th Ave.; cost complete \$20,000.

Report states that the Board of Normal School Regents have adopted the plans submitted by Palmer, Hall & Hunt, for the Duluth Normal School, the building to cost \$75,000.

East St. Louis, Ill.—St. Mary's Catholic Church is to erect a two-story parochial school-building, to cost \$20,000.

Edgerton, Minn.—W. T. Townner, St. Paul, has made plans for a store building, to be built by F. A. Meacham, at a cost of about \$8,000.

Evanston, Ill.—Patton, Fisher & Miller, of Chicago, are completing plans for the \$35,000 pressed brick school building, 65' x 115', to be built for the West Side Grammar School.

Fairfield, Conn.—Press reports state that Frank Miller, of Bridgeport, and J. Dickman Brown, of Fairfield, are incorporators of the Mohican Spring Water Co., formed to erect a hotel here, to cost about \$1,000,000.

Flint, Mich.—The contract for building the State School for Deaf here has been awarded to Geo. Rockwood & Co., of Kalamazoo, for \$57,000.

Fonda, N. Y.—L. Kinnic, of Herkimer, is to prepare plans for a county almshouse, to cost \$15,000.

Gloucester, Mass.—The Gloucester Street Railway Co. have placed the order for their new fireproof power-house with the Berlin Iron Bridge Co., of East Berlin, Conn. The building will be absolutely non-combustible.

Grand Rapids, Mich.—St. Adelbert's Polish Catholic parish will erect a \$40,000 church to seat 1,200, and a \$6,000 residence for the Sisters.

Great Falls, Mont.—Contractor J. B. Donohue, of Billings, is putting in the foundation for a \$25,000 church for St. Ann's Catholic Society. The superstructure will be erected early next spring.

Greenville, Miss.—J. E. Barnes has received the contract for building the opera-house, at \$17,160.

Greenville, N. C.—Hill C. Linthicum is designing a block of stores for J. B. Cherry & Co. They will be built of brick, and cost about \$50,000.

Holyoke, Mass.—The library fund has increased to about \$85,000 and it is hoped to have the foundation in this fall.

The American Thread Co. have placed the order for their new boiler-house with the Berlin Iron Bridge Co., of East Berlin, Conn.

Kenosha, Wis.—C. A. Dickhaut, architect, has completed plans for the new 8th Ward school-house. It will be constructed of brick with stone trimmings, two-story and basement, 43' x 73'; cost, \$10,000.

Lafayette, Ind.—There is a movement on foot among the County Commissioners to erect a \$21,000 building at the County Farm for insane.

Ligonier, Ind.—H. L. Ottenheimer, 1201 Fort Dearborn Building, Chicago, Ill., is preparing plans for a \$10,000 two-story brick school-building.

Lincoln, Ill.—W. F. Hoyle is reported to have received the contract for the Asylum for Feeble-minded Children; estimated cost, \$200,000.

Marshall, Mich.—The citizens have voted to issue \$20,000 bonds for a high school.

Martinez, Cal.—The Supervisors have voted to build a court-house here, to cost \$100,000.

Milwaukee, Wis.—The Milwaukee Harvester Co. has taken out a permit for the erection of a new \$60,000 foundry on Park St., between 14th and 15th Sts. It will be of brick and stone. The main building will be 100' x 400', and 45' high. The annex will be 30' x 100'. Charles J. Roberts, contractor.

Minneapolis, Minn.—J. & W. A. Elliott has secured the general contract to erect the Hamline Medical Building on 5th St. and 7th Ave., S. The heating contract was awarded to W. F. Porter & Co. MacLeod & Lamoreaux, architects; cost, \$30,000.

Newport News, Va.—J. H. Brinson, of Hampton has received the contract for erecting the Washington Avenue Methodist Church, for \$19,352.

New Waterford, O.—The contract for the new \$10,000 public school-house was awarded to J. C. Devine, of Alliance, O. L. W. Thomas, architect, Canton, O.

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

New York, N. Y.—Plans have been drawn by Rudolph Werner, 3d and Wendover Aves., for five apartment-buildings, to cost about \$100,000, for David Cohen, 54 Thalford Ave. He has also made plans for four apartment-buildings, to be built for Louis Gilbert, 154 Powell St., at a cost of \$100,000.

J. Arthur Vance, Pittsfield, Mass., and F. R. Allen, 220 Devonshire St., Boston, Mass., have designed a six-story fireproof hospital, to be erected for the Women's Hospital, at 50th and Park Aves., at a cost of \$500,000.

Michael Berns'eln, 245 Broadway, has prepared plans for four flat and store buildings for William and Julius Bachrach, 376 Grand Ave.; cost, \$100,000.

Plans have been submitted for a fourteen-story brick and stone office-building, to be erected on the site of the old Niagara Fire Insurance Company's building, Broadway, corner of Cedar St., for the St. Lawrence Realty Co., of 149 Broadway; Bruce Price, architect; estimated cost of building, \$700,000. The facade of the building will be granite in the basement, the first and second stories in limestone, and the superstructure of brick, with blue-stone copings. The building when completed will be known as the International Bank Building.

Oakland, Cal.—Andrew Carnegie will donate \$50,000 for a public library.

Oshkosh, Wis.—It is reported that the Wisconsin Telephone Co. will erect a building on Algoma St., costing about \$15,000.

Paris, Ill.—It is reported that the Presbyterian Society will build a \$25,000 church; Jones & Trumbull, architects, Elgin.

Pender, Neb.—John Latenser, of Omaha, has completed plans for a brick school-house, to cost \$10,000.

Philadelphia, Pa.—Report states that preliminary plans have been made by Joseph Huston, Witherspoon Building, for the Gettysburg Memorial, which will cost about \$250,000.

It is said that plans have been prepared by Willis G. Hale, Weightman Building, for a brick, stone and terra-cotta office-building, to be built at 927-931 Market St., by William Weightman, 9th and Parish Sts., at a cost of \$150,000.

John McCrea, Lippincott Building, is to erect a hotel and apartment-house at 37th and Ludlow Sts. It will be of brick, stone and iron, ten stories high, and cost \$200,000.

The Bernstein Manufacturing Co. will erect a large mattress factory on the triangular-shaped block of ground at 3d St., the Reading Railway and Westmoreland St. Large three and two-story buildings will extend along 3d St. 293 feet, on Westmoreland St. 197.5 feet, and on Allegheny Ave. 139 feet. The structures are to be of iron and brick and equipped with all modern appliances. Plans were prepared by Architects J. Franklin Stuckert & Son.

Milton W. Young will build a \$7,200 stone and brick front dwelling on Drexel Road, below Lancaster Ave., Overbrook, for Wendell & Smith. It will be three stories high, 31' 4" x 66' 3".

The trustees of the Frederick Douglass Memorial Hospital have issued an appeal for subscriptions, looking toward the purchase of a site and the erection of a larger and modern hospital building. \$75,000 are wanted. The site under consideration is in the southwestern part of the city. While the hospital is a colored institution primarily, care of all races and all creeds are treated.

Pittsburgh, Pa.—William F. Trimble & Co. hold the contract for the erection of a storage warehouse at 12th St. and Penn Ave., for the J. N. McCullough heirs. Plans by George S. Orth & Bros. The building will be eight stories high, and will cost \$200,000.

Henry Schenek, Erie, holds the contract for the \$125,000 residence, to be built on Moorwood Ave., for William H. Rowe.

Report states that the Central District & Printing Telegraph Co. will erect a \$25,000 exchange building.

Richmond, Ind.—It is stated the Pennsylvania R. Co. will remodel its depot at a cost of \$25,000.

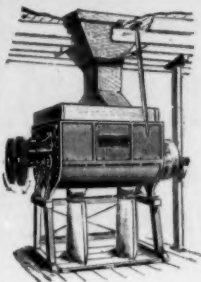
Salem, S. D.—Thos. McKinnon, of Sioux Falls, has been awarded the contract for a school, at \$14,000.

Saltillo, Mex.—Alfred Giles, of San Antonio, Tex., is preparing plans for a bank and hotel building, to be erected by the Bank of Coahuila, at a cost of \$150,000.

Sandusky, O.—Architects Lehman & Schmitt,

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Hickox Building, Cleveland, have been commissioned to prepare plans of homes for friendless children at Oberlin, to cost \$30,000, and at Sandusky, to cost \$20,000.

San Francisco, Cal.—It is stated that Mrs. Phoebe Hearst will erect at least two of the buildings of the new University of California at Berkeley. One of these, the School of Mines, will be a memorial to her husband, who was a mining man, and the other will probably be devoted to the purpose of women. The statement is also made that Mayor Phelan and Miss Jennie Flood will each defray the expense of construction of one of the fine buildings provided for in the plans of Architect Bernard.

Scranton, Pa.—A \$35,000 brick and stone building is to be erected by the St. Joseph's Foundling Home at Green Ridge. Percival Morris, Connell Building, is the architect.

Seattle, Wash.—The Seattle City Railway Co. will erect a convention hall at Leech Park and improve the park, at a total cost of \$100,000.

Sharon, Pa.—An open hearth basic steel mill of 1,000 tons daily capacity, a blast furnace of 400 tons capacity per day and a finishing mill will be erected immediately. An organization known as the Sharon Steel Co. will be incorporated October 2 at Harrisburg, with a capital stock of \$3,000,000. The directors are F. H. Buhl, David Adams, Niven McConnell, James P. Whittle, of Sharon, and George Darr, of Pittsburgh. A tract of land containing 400 acres, between here and the village of Wheatland, has been donated to the company by Sharon citizens. The erection of the steel mill is but the starting-point of a chain of industries of mammoth proportion. The three departments combined will be in operation within a year and a half, giving employment to 2,000 hands. The new company will operate independent of the trusts.

Sheldon, Ill.—The citizens have voted to issue \$16,000 school bonds.

Spokane, Wash.—E. Oliver has a permit for the erection of a three-story addition to the old post-office building; cost, \$12,000.

St. Louis, Mo.—Richard M. Seruggs has donated to the various Bethesda Associations in this city a strip of land, on which he purposes to erect a home for incurables.

St. Paul, Minn.—Architect W. T. Towner has plans for a \$20,000 Episcopal Church. Lauer Bros. are putting in the foundation and mason work for the two-story brick factory of the Villanue Box and Lumber Co. on the West Side. The new building will cost \$20,000.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Topeka, Kan.—It was voted September 9 to issue \$60,000 bonds for the construction of an auditorium.

Waukegan, Wis.—A \$15,000 school will probably be erected this year.

APARTMENT-HOUSES.

Chicago, Ill.—Humboldt and Cornelia Sts., two-st'y bk. & st. flats, 25' x 125', comp. roof; \$14,000; o., K. Storgaard; a., George F. Poulsen.

Wabash Ave., No. 5622, three-st'y bk. & st. flat, 25' x 66', comp. roof, steam; \$8,000; o., C. Swanson; a., S. M. Seator, 34 Clark St.

Fulton St., Nos. 1444-46, three-st'y bk. flat, 45' x 46'; \$15,000; o., Mrs. Minnie G. McIntosh; b., Leafgrien Bros.; a., G. L. Harvey, 115 Monroe St.

Detroit, Mich.—Hancock Ave., two-st'y bk. flat, 58' x 102', slate roof, furnace; \$10,000; o., J. R. Pearson, 19 Wilcox St.; a., E. C. Van Leyen.

Minneapolis, Minn.—Hennepin Ave., nr. 6th St., two-st'y & base. bk. store & flat, flat roof, steam; \$8,000; o., C. W. Prouty, 665 Temple Ct.

New York, N. Y.—Charles St., Nos. 84-86, six-st'y bk. & st. flats, 37' 7" x 81'; \$50,000; o., Peter J. Herter; a., P. Herter & Son, 1032 Lexington Ave.

W. Central Park, cor. 66th St., seven-st'y bk. & st. flat, 95' x 150'; \$300,000; o., James H. Camac, Trenton, N. J.; a., Mulliken & Pruitt, 289 Fourth Ave.

Seventy-second St., nr. Avenue A, 7 five-st'y bk. flats, 25' x 86' 8"; \$175,000; o., John J. Houlahan, 99 Nassau St.; a., Schneider & Herter, 46 Bible House.

Second Ave., cor. 72d St., 4 five-st'y bk. & st. flats, corner, 25' 2" x 59' 4", others, 25' 6" x 49' 4"; \$80,000; o., & b., Egan & Halley, 284 Columbus Ave.; a., Neville & Bagge, 217 W. 125th St.

Broadway, cor. 124th St., seven-st'y bk. flat, 96' 10" x 75'; \$125,000; o., L. J. Mortimer, 3137 Broadway; a., James & Leo, 2585 Broadway.

Mott Ave., nr. 144th St., 3 five-st'y bk. & st. flats, 30' x 90'; \$87,000; o., John E. Doyle, 837 Southern Boulevard; a., E. A. Millner, 81 E. 125th St.

One Hundred and Fifty-first St., nr. Amsterdam Ave., 3 five-st'y bk. flats, 33' 4" x 88' 6"; \$90,000; o., A. C. Elliot, 1666 Amsterdam Ave.; a., P. H. Lynch, 1666 Amsterdam Ave.

Eighty-second St., nr. Broadway, six-st'y bk. & st. apart., 53' x 87'; \$50,000; o., J. MacDonald; a., Edw. Wenz, 1491 Third Ave.

Washington, D. C.—First and B Sts., five-st'y bk. & st. apart., 60' x 100', containing 30 suites, flat roof, hot water; \$75,000; o., Alonzo O. Bliss; b., W. E. Spier; a., A. Goener.

BUILDING INTELLIGENCE.

(Apartment-houses Continued.)

CHURCHES.

Chicago, Ill.—Oakwood Boulevard, one & two-st'y bk. church & Sunday-school, 77' x 140'; \$45,000; o., Memorial Baptist Society; b., James S. Price; a., Fisher & Miller.

Minneapolis, Minn.—Fourth St. and Eighth Ave., S. E., st. chapel & Sunday-school addition to church, 52' x 102', slate roof; \$25,000; o., Andrew Presbyterian Society; c., P. W. DeLancey; a., Chas. S. Sedgwick.

EDUCATIONAL.

Buffalo, N. Y.—Lovejoy and Gold Sts., three-st'y bk. 16-room school; \$60,000; o., Board of Public Works; a., Esenwein & Johnson; not let.

Cleveland, O.—Scranton and Castle Aves., three-st'y bk. high-school building, 132' x 166', slate roof, hot blast system; \$100,000; o., School Board; a., F. S. Barnum.

Trenton, N. J.—Three-st'y bk. & st. high-school, 102' x 138', slate roof, steam; \$100,000; o., Commissioner of Education; a., F. S. Allen, 207 Allen Building, Joliet, Ill.

FACTORIES.

New York, N. Y.—Brook Ave., nr. 167th St., three-st'y bk. factory, 98' 10" x 118' 6"; \$30,000; o., Giles Whiting, 898 Broadway; a., Covell & Smith, 152 Broadway.

HOUSES.

Boston, Mass.—Batchelder St., nr. Burrell St., Ward 19, 4 two-st'y bk. dwells., 21' x 45', flat roofs, stoves; \$24,000; o. & b., I. Rosenberg, 13 Weston St.

Burrell St., nr. Batchelder St., Ward 17, two-st'y bk. dwell., 21' x 45', flat roof, stoves; \$6,000; o. & b., I. Rosenberg, 13 Weston St.

Gardner St., cor. Chester St., Ward 25, two 2½-st'y fr. dwells., 27' x 38', pitch roofs, hot water; \$13,000; o., Mrs. I. N. Tucker; b., Jas. Muldoon, 83 Elmira St., Brighton.

Bayswater St., Ward 1, 2½-st'y fr. dwell., 21' x 24' x 47', pitch roof, furnace; \$4,000; o., Mary S. Woodside; b., S. H. Griffin, Winthrop.

Metropolitan Ave., cor. Maynard St., Ward 23, 2½-st'y fr. dwell., 29' x 76', hip roof, steam; \$12,000; o., Isabella H. Fox; b., Albert Fox.

Hutchins St., nr. Elm Hill Ave., Ward 21, 2½-st'y fr. dwell., 33' x 38' x 41', pitch roof, furnace; \$8,000; o., A. B. Drisko; b., G. H. Drisko & Son, 176 Devonshire St.

Bernard St., nr. Kingsdale St., Ward 20, 2½-st'y fr. dwell., 22' x 28', pitch roof, furnace; \$4,000; o.,

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Brooklyn, N. Y. — St. Marks Ave., nr. Ralph Ave., 10 two-st'y & base, bk. dwells., 20' x 45'; \$50,000; o., a. & b., Frederick Buchar, 1344 St. Marks Ave.
Bunbridge St., nr. Stuyvesant Ave., 6 three-st'y & base, bk. dwells., 20' x 40', hot air; \$54,000; o., Geo. J. Shannon, 1626 Sixtieth St.; a., J. L. Young, 1221 Fulton St.
E. Twenty-fifth St., nr. Avenue E, two-st'y & attic fr. dwell., 25' x 47' 8", shingle roof; \$5,000; o., W. Berlinger, 149 Kenilworth Pl.; a., A. W. Pierce, 1127 Flatbush Ave.
Avenue T, nr. Van Sicklen Ave., two-st'y & attic fr. dwell., 32' x 37', shingle roof, steam heat; \$5,000; o., R. C. Church of Sts. Simon and Jude, on premises; a., F. J. Berlenbach, 260 Graham Ave.
Chicago, Ill. — Drake Ave., nr. Wrightwood Ave., three-st'y bk. & fr. dwell., 20' x 60'; \$6,000; o., Geo. Amend; a., George O. Garney.
Cincinnati, O. — Clifton Ave., two-st'y bk. dwell., 37' x 46', slate roof, hot air; \$8,000; o., Dr. J. A. Haer; a., Des Jardins & Hayward.
Detroit, Mich. — Alfred St., two-st'y bk. dwell., 32' x 60', slate roof, furnace; \$9,000; o., Conrad Ling, 115 Alfred St.; a., Donaldson & Meier.
Smith Ave., two-st'y bk. dwell., 26' x 50', slate roof, furnace; \$5,000; o., Myers & Gutow, 160 Griswold St.; a., G. W. Myers.
Crystal St., two-st'y fr. dwell., 36' x 40', shingle roof, furnace; \$5,000; o., Wm. Foxen, 20 Hodges Building.
Louisville, Ky. — Four 2½-st'y bk. & st. dwells., slate roofs, hot water; \$25,000; o., Theo. Ahrens, Sr., 3d & Lee Sts.; a., John B. Hutchings.
Milwaukee, Wis. — Chestnut and Twenty-eighth Sts., two-st'y fr. dwell., 24' x 46', shingle roof, hot air heat; o., Joseph Sternemann; a., Molerus & Lotter.
Newton, Mass. — Church St., Ward 7, two-st'y fr. dwell., 50' x 60', steam; \$15,000; o., Mrs. H. A. Wellington; b., A. J. Wellington.
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(Houses Continued.)

x 40', hot water; \$6,000; o., F. W. Stevens; b., Burke Bros.
New York, N. Y. — One Hundred and Sixty-second St., nr. Broadway, 12 three-st'y & base, bk. dwells., 16' 16" 6" x 50'; \$180,000; o., J. S. Heisler, 215 W. 125th St.; a., Edwin Wilbur, 215 W. 125th St.
Hoe Ave., nr. Freeman St., two-st'y fr. dwell., 20' x 42'; \$5,000; o., A. L. Rake, Mapes Estate; a., B. Ebeling, Mapes Estate.
Robbins Ave., nr. 150th St., three-st'y bk. stable & dwell., 25' x 104'; \$15,000; o., Winter & Harries, 136 Union Sq. Hill, N. J.; a., H. Horenburger, 802 Melrose Ave.
One Hundred and Thirty-third St., nr. Amsterdam Ave., two-st'y bk. dwell., 25' x 95'; \$5,000; o., Pat'k Fitzpatrick, 547 W. 132d St.; a., F. E. Glaser, 217 W. 125th St.
Morris Ave., nr. Fordham Road, 2 two-st'y fr. dwells., 18' 3" x 42'; \$10,000; o., T. W. Miles, Hull Ave.; a., Arthur Boemer, 751 E. 177th St.
Philadelphia, Pa. — Lehigh Ave., nr. 16th St., 22 three-st'y bk. dwells., 16' x 54'; \$88,000; o. & b., John Loughran.
Broad St., nr. Loudon St., Logan Station, three-st'y bk. & granite dwell., 24' 4" x 56'; \$6,000; o. & b., Joseph Pagnacco & Co.
St. Louis, Mo. — Forest Park Terrace, three-st'y bk. dwell., slate roof, hot air; \$20,000; o., Andrew Sproule; a., Shepley, Rutan & Coolidge.
Shenandoah St., nr. Compton Ave., 2½-st'y bk. dwell., 35' x 50', slate roof, furnace; \$5,000; o., Dr. W. A. Fries; a., Ernest J. Hess, Lincoln Trust Building.

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Cortlandt St., No. 14, nine-st'y bk. & st. office-building, 24' 11" x 115' 4"; \$109,000; o., New York Telephone Co., 15 Day St.; a., Cyrus L. W. Eldlitz, 1123 Broadway.

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New York, N. Y. — Becker Ave., cor. Fulton St., Wakefield, one-st'y fr. stable, 75' x 100'; \$3,000; o.,

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Sedgwick Ave., nr. Cedar St., Section 11, two-st'y fr. stable, 26' x 28'; \$1,100; o., Mary S. Amory, Morris Heights; a., Cooperative B. & L. Assoc., 203 Broadway.
Philadelphia, Pa. — Academy Road and Comly Ave., two-st'y fr. stable, 30' x 60'; o., Charles Edgerton; a., John Samms.
St. Louis, Mo. — Copelin St., nr. Compton St., 1½-st'y bk. stable; \$2,000; o., C. Hartenbach; b., F. E. Schober; a., L. Wessbecher.
Watertown, Wis. — Bk. & st. livery stable; \$6,000; o., Albert Fridrich; a., F. L. Lindsey.

STORES.

Chicago, Ill. — Main and Thirty-second Sts., two-st'y & base, bk. & st. store & hall, 26' x 110', comp. roof, furnace; \$8,500; o., Leon Czeslowski, 32d St., cor. Main St.; a., Martin M. Schultz, 647 W. 21st St.
Marshalltown, Ia. — One-st'y bk. store, 25' x 40', gravel roof; \$15,000; o., S. B. Fredman; a., Prescott & Co.
New York, N. Y. — Twenty-second St., No. 26, eight-st'y & base, bk., st. & terra-cotta store & loft building, 30' x 98' 9"; \$75,000; o. & b., Arndt A. Olsen, 62 Liberty St.; a., John Woolley, 111 Fifth Ave.

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New York, N. Y. — Second St., Nos. 114-116, 2 six-st'y bk. & st. tenements & stores, 24' 8" x 104' 4", 106'; \$55,000; o. & b., Julius Dreyfus, 324 W. 59th St.; a., G. F. Pelham, 503 Fifth Ave.
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One Hundred and Third St., nr. 1st Ave., 5 six-st'y bk. tenements, 25' x 86' 6"; \$125,000; o., Bernhard Galewski, 26 W. 120th St.; a., Schneider & Herter, 46 Bible House.
Second St., Nos. 122-124, 2 six-st'y bk. & st. tenements & stores, 24' 8" x 104' 4", 106'; \$56,000; o., Julius Dreyfus, 324 W. 59th St.; a., G. F. Pelham, 503 Fifth Ave.

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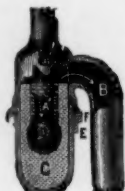
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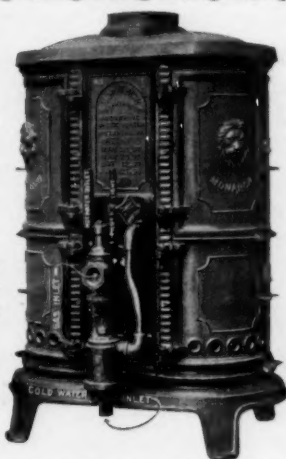
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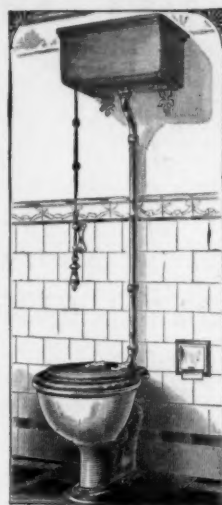
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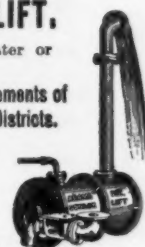
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COMPETITIONS.

CHURCH. [At Roanoke, Va.] Plans for a Catholic church, brick and stone, will be received until December 1. J. J. GARRY. 1239

PROPOSALS.

Treasury Department, Office Supervising Architect, Washington, D. C., September 18, 1899. Sealed proposals will be received at this office until 2 o'clock P. M. on the 25th day of October, 1899, and then opened, for the installation of a wiring system for the U. S. Post-office Building at Buffalo, N. Y., in accordance with the drawings and specifications, copies of which may be obtained at this office or at the office of the Superintendent of Construction at Buffalo, N. Y., at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1241

Treasury Department, Office Supervising Architect, Washington, D. C., September 15, 1899. Sealed proposals will be received at this office until 2 o'clock P. M. on the 16th day of October, 1899, and then opened, for the erection and completion (except boilers and gas fixtures) of the boiler-house and stack for the U. S. Marine Hospital at Cleveland, Ohio, in accordance with the drawings and specification, copies of which may be had at this office or at the office of the Custodian at Cleveland, Ohio. JAMES KNOX TAYLOR, Supervising Architect. 1240

CHURCH. [At Warsaw, N. D.] Sealed bids will be received until October 2d, 1899, by Rev. Frank Gawlowier, at Warsaw, Walsh Co., N. D., for the erection and completion of a Roman Catholic Church for the Polish congregation of St. Stanislaus, located at Warsaw, 5 1/2 miles east of Minto, N. D., after plans and specifications prepared by T. W. Ross, architect, at Grand Forks, N. D. REV. FRANK GAWLOWIER, Warsaw, Walsh Co., N. D. 1239

PROPOSALS.

CONSTRUCTION.

[At League Island, Pa.] Sealed proposals, endorsed "Proposals for Officers' Quarters," will be received at the Bureau of Yards and Docks, Navy Department, Washington, until 1 o'clock, September 30, 1899, and then and there publicly opened, for the construction of four frame officers' quarters, at Navy Yard, League Island, Pa. Plans, specifications and forms of proposal can be obtained from the commandant, Navy Yard, League Island, Pa. MORDECAI T. ENDICOTT, chief of bureau. 1239

SCHOOL-HOUSE.

[At Allegheny, Pa.] Bids are wanted September 28 for an annex to the North Side Public School. F. C. SAUER, archt., Hamilton Bldg., Pittsburgh. 1239

BUILDING.

[At Bridgeport, Conn.] Bids are wanted October 7 for a new building for the Department of Police and Charities. CARROLL B. ADAMS, Clk. Com. on New City Bldgs. 1240

BUILDING MATERIALS.

[At Fort Totten, N. D.] U. S. Indian School Service, Fort Totten, North Dakota. Sealed proposals will be received at this school until October 7, 1899, for furnishing and delivering at said school about 92,000 feet of lumber; 30,000 lath; 15,000 brick; 60 squares steel sheeting; doors, windows, pickets, posts and rails. WM. F. CANFIELD, superintendent. 1240

SCHOOL.

[At Morris, Minn.] Office of Indian Affairs, Washington, D. C. Sealed proposals will be received at the Indian Office until Tuesday, October 10, 1899, for furnishing the necessary materials and labor required to erect and complete a brick school-building at the Morris Indian School, Minn. W. A. JONES, commissioner. 1240

OFFICERS' QUARTERS.

[At Fort Schuyler, N. Y.] Sealed proposals for construction of brick, double set non-commissioned officers' quarters, will be received here until October 16, 1899. H. D. TODD, JR., 1st Lieut., Q. M. 1240

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PROPOSALS.

BUILDING.

[At Bedloe's Island, New York Harbor.] Quartermaster's Office, Governor's Island, N. Y. H. Sealed proposals will be received here until October 9, 1899, for constructing and plumbing two buildings on Bedloe's Island, N. Y. H. MAJOR J. W. SUMMERHAYES, Quartermaster U. S. Army. 1240

COURT-HOUSE.

[At Pipestone, Minn.] The undersigned hereby gives notice that sealed proposals for the erection of a court-house building, including all labor and material, will be received by the Board of County Commissioners of Pipestone County until the 28th day of November, 1899. (Signed) WM. DOMS, Chairman of the Board of County Commissioners. 1240

COURT-HOUSE.

[At New Martinsville, W. Va.] Bids are wanted October 3 for a court-house, cost not to exceed \$30,000. H. R. THOMPSON, Co. Clk. 1239

Sealed proposals will be received at the office of the Light-house Engineer, Tompkinsville, N. Y., until 12 o'clock M., October 2d, 1899, and then opened, for building the east face of North Wharf in accordance with specifications, copies of which, with blank proposals and other information, may be had upon application to D. F. HEAP, Lieut.-Colonel, Corps of Engineers, U. S. A. 1239

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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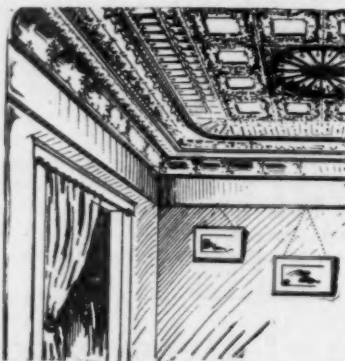
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Enamelled (edge).....

Enamelled (edge and end).....

CEMENT, LIME, etc. (P. cash.)

Rosendale Cement.....

Louisville.....

Utica, Akron, Buffalo, Milw'ke.

Portland, Eng. (Gibbs).....

" (K. B. & S.).....

" (Black Cross).....

" (Burnham).....

" (White's).....

" French (Lafarge).....

" Ger. (Alsen).....

" (Fewer).....

" (Vorwöhler).....

" (Lagerhofer).....

" (Dyckerhoff).....

" (Hanover).....

" Stettin, (Anchor)

Roman.....

Keene's coarse.....

superfine.....

Lime:

Lime of Tell.....

Hydraulic Lime.....

Chicago Lime in bulk.....

Wisconsin Lime.....

Rockland and Rockport, (Com.).....

Rockland, finish.....

Kelley Island Lime, finish.....

State, Com. cargo rates.....

State, finishing.....

Plaster-of-Paris (calcined).....

" (casting).....

Hair (cattle) & bush.....

" (Goat).....

Band, & lead.....

1 75 @ 2 00

4 75 @ 5 00

@

4 75 @ 5 00

@ 4 75

@ 5 00

@ 7 00

@

@ 12 00

@ 12 00

@ 12 00

@ 12 00

37 00 @ 41 00

19 00 @ 21 00

17 50 @ 18 50

@ 29 00

@ 27 00

45 00 @ 70 00

@ 29 00

@ 27 00

85 00 @ 100 00

90 00 @ 110 00

90 @ 1 00

Not sold.

2 25 @ 2 50

2 50 @ 3 00

2 25 @ 2 50

2 50 @ 2 50

2 65 @ 3 00

3 00 @ 3 75

2 90 @ 3 25

2 25 @ 2 40

2 50 @ 2 90

@

2 75 @ 3 00

2 50 @ 3 00

2 35 @ 2 45

2 75 @ 3 00

4 25 @ 4 75

@ 6 50

@ 4 00

@ 1 45

St. John

80 @ 85

90 @ 95

@

@ 65

@ 75

1 30 @ 1 40

@ 1 00

14 @ 16

17 @ 19

1 00 @ 1 25

Domestic Com.

8 50 @ 9 50

Domestic Face

18 00 @ 25 00

Philadelphia

35 00 @ 40 00

10 00 @ 11 00

Phila. mould

50 00 @ 80 00

Enamelled B'k.

Imported

Enam. (edge)

105 00 @ 120 00

" (edge & end.)

120 00 @ 135 00

Domestic

Enam. (edge)

90 00 @ 100 00

" (edge & end.)

110 00 @ 115 00

5 00 @ 1 00

@

@

@

2 20 @ 2 50

@

@ 5 00

2 75 @ 3 00

B'ks, Shoobridge

& Co.,

English 2 30

2 75 @ 3 00

@

3 50 @ 4 00

@ 7 00

8 00 @ 9 00

Not sold.

45 @ 55

45 @ 55

Not sold.

Not sold.

1 00 bulk, 75c.

Not sold.

Not sold.

1 65 @ 1 75

1 75 @ 1 90

12 @ 20

20 @ 25

1 00 @ 1 25

Building 4 50

sewer add 1 00

hollow, add 1 25

Enam. Imp. Bk.

125 00 @ 145 00

Enam. Domes.

70 00 @ 85 00

Select Red Sand-

Mold...10 00

St. Louis Hyd'ic

Press...27 00

Collinsville, do

Findlay, do 22 00

Chicago, do

assorted shades

16 00 @ 20 00

Chicago, do

Brown...24 00

Chicago, do Red

Roman...24 00

Chicago, do Br'n

Roman...27 00

Rushnell Buff

25 00

Not sold.

75 @ 1 00

75 @ 1 00

2 50 @ 2 60

2 50 @ 2 60

2 50 @ 2 60

2 50 @ 2 60

3 75 @ 4 25

2 90 @ 3 20

@

2 80 @ 2 90

3 10 @ 3 30

2 75 @ 2 90

2 85 @ 3 00

2 75 @ 3 25

6 00 @ 7 00

9 00 @ 10 00

Not sold.

White Lime & bush

25 @ 30

White Mash

1 25 @ 1 50

1 00 @ 1 00

Not sold.

Not sold.

1 50 @ 2 25

1 75 @ 2 50

20 @

30 @

In Yard.

Sq. Hard 500 @ 9 00

" @ 7 00

Salmon @ 5 50

Sq. " @ 5 50

Light Stretchers

9 00 @ 11 00

Medium " @ 12 00

Red " @ 12 00

Dark " @ 12 00

Pressed " @ 12 00

Paving " @ 17 00

11 00 @ 13 00

Second " @ 12 00

Third " @ 10 00

Dom. { @ 65

@ 85

1 30 @ 1 60

S.H.Fe'1 20 @ 1 60

@

2 25 @ 3 15

2 30 @ 2 60

2 25 @ 3 15

2 75 @ 2 85

Belg'n 2 10 @ 2 40

Hemmoor

2 50 @ 2 75

2 75 @ 2 85

Josson

2 60 @ 2 75

3 00 @ 3 25

2 75 @ 2 85

B. Egl. 2 50 @ 2 75

3 00 @ 3 50

6 50 @ 7 00

8 00 @ 9