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THE various strikes in the building-trades, although troublesome enough to those immediately concerned, have certain features which indicate that the day when a trifle of common-sense will enter into the counsels of working-men is not, perhaps, very far off. One small, but rather independent, union in Boston is said to have voted to abandon the eight-hour day folly, which is playing havoc with so many industries, without the slightest advantage to workingmen, and to work regularly nine hours a day. Of course, the members get pay for nine hours, instead of eight, but their employers are glad to give them this, as, with work going on for nine hours a day, instead of eight, their plant, which costs them just as much when it is idle as when it is busy, is earning one-eighth more money for them, and the greater rapidity with which they can complete their contracts enables them to take more work, and thereby benefit their men, as well as themselves.

THE other cheering symptom in the situation is to be found in the dissensions among the unions themselves. These dissensions are no longer mere individual demonstrations, as they formerly were, when union members would now and then jump up in a meeting, and denounce the "champions of labor" as "thieves and skunks," only to be disciplined as soon as the coast was clear, but are, in several cases, struggles between rival organizations. In New York, where the Brotherhood of Carpenters recently undertook to drive their brethren of the Amalgamated Union of Carpenters out of the trade, by striking against them wherever they appeared, the Amalgamated Union, which undertook to support its men, and to supply carpenters to those contractors who had been "struck" for employing Amalgamated men, is receiving hundreds of new members, who are immediately put at work in place of the Brotherhood men who tried to injure them. The largest contracting firms, some of which employ men by the thousand, have already all the Amalgamated carpenters that they need, and several others, emboldened by this circumstance, and indignant at what they consider a breach of faith on the part of the Brotherhood, have given notice that they will hereafter employ only Amalgamated men. As there is nothing to prevent a Brotherhood man from transferring his allegiance at any time to the Amalgamated Society, the struggle is, obviously, between the magnates, rather than the men, and the former "feel that the charges of the builders are so serious" that unless they do something to keep themselves before the public, "the Brotherhood will be placed in a position that will be almost untenable." Meanwhile, the Housesmiths' and Bridgemen's Union, in the same city, which, it will be remembered, is on strike against the American Bridge Company, does not seem to have been gathered quite snugly under the wings of the dove of peace. It had a meeting the other night which, we are informed, was even more "tempestuous" than usual. All strangers were put out of the hall, and the doors were locked, but the "noise and clamor" which were heard "all through the corridors" indicated that "arguments" were in progress. The discussion was accompanied by sounds of "chairs" being "flung about," while "yells of pain" attested the accuracy of the aim. At intervals the doors were opened, and men, "badly used up," were "forcibly ejected," showing that "expostulation" had been going on. After five hours of social intercourse of this kind the brethren adjourned.

A RECENT case in Vermont casts an interesting light on some of the perils, as well as the joys, of trades-unionism. A certain manufacturing company, which had suffered from a strike, followed by the usual picketing and terrorism on the part of the local union, sued for damages. As a union is not a corporation, its members are legally partners, each being liable for all the debts of the concern, and the manufacturing company attached not only the property of the union, but that of such individual members as had any, to satisfy such judgment as might be obtained. The union defended itself desperately. Its records were hidden, and even the fining of those who had charge of them for contempt of court, in disobeying the order of the court to produce them, was insufficient to bring them to light; while the witnesses denied obvious facts in such a way as to discredit their other evidence. In the end, the jury brought in a verdict of twenty-five hundred dollars for the plaintiff; and, unless the rulings of the court are set aside, which is unlikely, the judgment will be satisfied by the sale of the property attached. As nearly all unions, particularly in time of strikes, are managed by the more reckless and irresponsible members, who have nothing to lose by a contest, this case is likely to make the older and more sober ones, who have saved up a little property for their children, and who see it taken from them to pay for the damage caused by the acts of their irresponsible associates, reflect somewhat seriously upon the situation. If the unions were incorporated, individual members could be held responsible only for their own acts, and it is obviously for the interest of the respectable members to have them so incorporated; but the leaders, and the shouting rabble which follows them, much prefer the present condition of things, under which they dance, while somebody else pays the piper. A few such decisions, however, will open the eyes of the latter class to the fact that they have the worst end of the bargain, and it would not be surprising to see a radical reform of trade-unionism begun before long, where it ought to begin, in the ranks of the unions themselves.

ANOTHER decision, also of great importance to people interested in labor unions, has been given in New York, by the Appellate Division of the Supreme Court. A certain master painter had employed union men on one of his contracts, and was paying them the union wages, when a walking-delegate appeared, and asked a conference with him. The contractor refused this request, and was notified that a strike would be ordered, if he refused to "recognize" the representative of the union. The contractor, whose name is Beattie, applied to the courts for an injunction, forbidding the ordering of a strike, on the ground that his business would be injured by it. A preliminary injunction was ordered, but, after a hearing, was dissolved; and Mr. Beattie took his case to the Appellate Division, which reversed the previous decision, holding that a union was not justified in ordering a strike of its members on account of the refusal of their employer to recognize the union or its representative, so long as he paid the union wages, and made no attempt to employ non-union men. The action of the highest court but one in the State of New York, which is likely to be followed as a precedent in other States, is, perhaps, the heaviest blow that has yet been dealt against the tyranny of the union leaders, and many a poor workman, who has lived in constant fear that the whim of a walking-delegate might deprive him of his daily bread, will breathe more freely in consequence of it. As the responsibility of unions is a rather elusive

Entered at the Post-Office at Boston as second-class matter

affair, it would not always be easy to determine whether a strike came about through the direct order of a walking-delegate, or through "expostulation," of the kind that we are all familiar with; but the fact that a walking-delegate, in New York, can no longer legally call out his men at his own caprice will insensibly stiffen the backbones of those who have so long endured the most insufferable tyranny that ever existed in a free country.

NO one is likely to mourn much over the dissolution, by order of the St. Louis Court of Appeals, of the Association of Master Plumbers of St. Louis. It is not very many years since the master plumbers in all the great cities combined to monopolize the business of plumbing by compelling the dealers in plumbing goods to sell only to them, or to favor them with such discounts as to make it impossible for any one else to sell at retail in competition with them. In most cases, apparently, these combinations have died out, through quarrels among the members, the introduction of new goods, and other changes in the trade; but the one in St. Louis has lasted long enough to bring upon itself a decision which is likely to prevent the formation of similar associations in future.

THE recent fire in the Roosevelt Building, in New York, affords some interesting lessons in fireproof, or rather, semi-fireproof, construction. This building was erected in 1893, and was then supposed to be fireproof. The floors were of steel beams and terra-cotta arches, the flanges of the beams being protected, and the arches being covered with concrete up to the top of the sleepers. The roof was of similar construction, and covered with tiles, laid on tarred felt. The interior columns were of cast-iron, unprotected. In the middle of the building was a passenger-elevator, of iron grillework, and next to the elevator-shaft were the main stairs, with stone treads and landings, on iron frames. The freight-elevator was enclosed in a terra-cotta shaft, with rolling steel shutters over the openings. The building was eight stories high. It was used for retail mercantile business, and there was no subdivision of the stories, except by a single terra-cotta partition, four feet high, in each, carrying ordinary sashes, extending thence to the ceiling. The practical destruction of the building was due to the insufficiency of these partitions, combined with the lack of protection to the passenger-elevator, and the neglect to protect the cast-iron columns. A fire broke out, as is supposed, on the sixth story, and immediately ran up the elevator-shaft to the seventh and eighth stories. As usually happens, the fire gathered intensity as it ascended, and it was hot enough at the roof to melt some of the copper flashings. The cast-iron columns were, naturally, greatly affected by the heat, several being badly twisted, while five broke off, probably on being touched by water from the engine hose. The breaking of the columns in the upper story caused the collapse of the roof, four-fifths of which fell in. A portion of the eighth floor was carried away by the fall, partly breaking through the seventh floor; and part of the roof fell on the upper landing of the stone staircase, carrying it all to the cellar. Except where damaged by the fall of the roof, the floors were uninjured, and the wire-glass of the skylight, although cracked, did not give way; and the freight-elevator shaft, protected by its rolling shutters, showed little evidence of having been reached by either smoke or fire. The inference is plain, that if the partitions had been glazed with wire-glass, instead of ordinary sashes, and the cast-iron columns had been protected, even in such a simple way as by wrapping with metal lath and plastering; and the passenger-elevator had been enclosed in a proper shaft, with wire-glass in the openings, the building would be still practically intact. Without those precautions it was, as *Insurance Engineering* says, "little, if any, better than a building of ordinary construction."

THE burning of the Roosevelt Building makes still more conspicuous the care with which fire-risks have been avoided in the new Macy department-store, on Broadway. This structure covers nearly two acres of ground, and is one hundred and fifty feet high, containing nine stories. Four thousand people are employed in it, and probably ten times that number often visit it during the busy hours of the day, so that the danger in case of fire is frightful to contemplate. The construction is all of iron and steel, the columns being mostly of cast-iron, and the floor-beams of steel; but every piece of structural metal is protected by wire lathing, plastered with cement. A large open staircase, in the middle of the building, extends from the basement to the second floor only. All the other staircases, of which there are seven or eight, as widely scattered as possible, and all the elevators, are enclosed in fireproof partitions, with doors automatically closing, and rolling shutters. All windows on the narrow alley in the rear of the building have double wire-glass glazing. Each story is also divided into two unequal portions by a twelve-inch brick wall, with double fire-doors at the openings; so that, in case of fire in either portion, all the people in that story can immediately take refuge in the other, where they are protected by an impassable barrier. This simple arrangement, although, of course, less efficient than a more complete subdivision, at least provides a protection for the employés and customers of the establishment which will probably be found adequate under any circumstances, especially as the building contains a thorough equipment of sprinklers, alarms, stand-pipes, thermostats, etc., and the employés are carefully organized, and drilled in fire-service.

CERTAIN amendments to the New York Tenement-house Law have passed the Assembly, and will undoubtedly pass the Senate also. Having been framed by Mr. De Forest, the present Tenement-house Commissioner, the proposed amendments are drawn with great caution, and some of them, certainly, are obvious improvements on the existing statute. Among these improvements is a provision permitting the construction, outside of the fire-limits, of wooden tenement-houses, three stories high, arranged for only one family on a floor. It has been found, according to Mr. De Forest, that such houses, in which each family has a floor to itself, conduce to a better social and moral condition than prevails where two families are accommodated on each floor, as is the case in the two-story wooden tenement-houses now legalized. The danger from fire is, of course, greater in the three-story buildings, but this can probably be lessened by judicious construction.

THOMAS W. WOOD, for several years the President of the National Academy of Design, and one of the best known and most respected of American artists, died at the New York Hospital last week, in his eightieth year. Mr. Wood was born in Montpelier, Vermont. He had no advantages of education, his father being a country cabinet-maker, and he himself, as soon as he was old enough to be useful, having taken his place in the shop. He was filled, however, with what seems to have been a sort of romantic passion for an art of which he could have known very little; and, leaving the shop, he started in business as a sign-painter, devoting his leisure to drawing and painting of a more intellectual sort. With true New England perseverance, he made his way to Boston, where he studied for a time, and then to Europe, where he settled temporarily in Düsseldorf. Returning to America, he started out as a travelling portrait-painter, wandering over the country for several years. He was forty-three years old when he finally established himself in New York, but he soon became known, not only for his ability as a painter, but for his amiable character. He was one of the earliest members of the National Academy, and of the American Water-color Society, and served at different times as President of both. He was also one of the founders of the New York Etching Club, and a regular contributor to its exhibitions. Three of his pictures are in the Metropolitan Museum, and many portraits from his hand are scattered over New York.

THE Library Board of the city of Seattle has instituted what comes very near being a model competition for designs for the new public library to be built there. If we had any criticism to make upon the programme, it would be that the requirements are, as is apt to be the case, a little too definite, hampering competitors more than is altogether conducive to the success of the design; but they are, at least, very clearly expressed, and show a thorough knowledge of the requirements of a large library. Among other things, they are judicious enough to insist on ample light everywhere, from skylights as well as windows. So many large libraries fail in this respect that it is positively refreshing to read the stipulation that "Every effort should be made to secure natural light in all parts of the building." The competition is not open, six architects having been invited and paid to compete, and some others having applied for, and received, permission to do so. The Board is to be aided in its choice by Professor Ware, but does not bind itself to accept his decision.

THE FOUNTAIN AT GEORGIAN COURT AT LAKEWOOD, N. J.

AROUND the summer residence of Mr. George J. Gould, "Georgian Court," Lakewood, N. J., there was, not long ago, a muddy place about 50 yards in width, fronting the lake and near the house. By the aid of architects and collectors and the most experienced gardeners, the former marsh-land has been transformed into a sunken garden of Classic style. An immense amount of labor and a considerable expenditure of money were used to bring the estate to its present condition.

Amongst numerous statues gathered in Europe, standing here and there in the garden, vases — part original, part exact reproductions when the original could not be had — are placed upon pedestals, mingled with beautiful seats, carved in white marble.

But the electric fountain, the main feature of the estate, occupies a prominent position at the convergence of the principal lines of the garden. The outer brim of the great basin, being circular in form, measures not less than 60 feet in diameter. The centre of the basin is occupied by a great group showing a young man of strenuous attitude, with robe flaunting back, standing in a colossal nautilus shell which forms a chariot, and driving a pair of charging hippocampi, holding in his right hand the threatening whip, while his left hand holds the governing reins, formed from clinging sea-moss. The sea-horses are half submerged in the water of the basin. On the fish-tail of either is riding one of the daughters of Nereus, joyously blowing the shrilling conch-shell trumpet. Only the human part of their bodies can be seen. In front of the chariot is placed between the two hippocampi an octopus, and before him two cupids are teasing a little fish.

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Electric Fountain: "Georgian Court," Lakewood, N. J. Bruce Price, Architect; J. Massey Rhind, Sculptor.

The whole fountain consists in equal number of animal and human figures, five of each, all different in size. The male figure, ten feet in height, and the chariot are cast in bronze in a perfect manner. The weight of both is more than five thousand pounds. The casting was done in the foundry of Jno. Williams, New York. All the other figures, sea-horses and sea-maidens, cupids, octopus and the brim of the water-basin are carved in a snow-white marble, which possesses peculiar virtues for resisting the weather.

Beneath the fountain, has been concealed in a hidden excavation an electric-engine room with power to pump water to it. When in action, the fountain throws, through thirty sprays, twenty-five thousand gallons of water an hour. The principal stream of water is thrown straight upwards from the mouth of the octopus placed before the chariot, as mentioned above, the stream breaking into spray some 30 feet above the ground. The various other jets of water of different form harmonize with the particular parts of the statue from which they escape. From the nostrils of the sea-horses, for example, a great volume of water is thrown in the form of a spray as though the horses were actually snorting. The water from the conch-shells held by the Nereids escapes in whirling streams. Six other jets around the centrepiece mount nearly 25 feet high into the air.

The inner and outer walls of this bronze boat are sufficiently wide to allow for the electrical attachment and lamps which, when lighted with the different-colored electric-lights, make the whole seem like a glimpse of fairyland.

The architect who designed this fountain is Bruce Price, and the sculptor is J. Massey Rhind.

RICHARD LADEGAST.

ROMAN AND ROMANESQUE FRANCE.[1] — VII.

ORANGE.

ARRIVING at the station the traveller finds public conveyances ready to convey him to the town some half mile away; but, if the said traveller be of an impatient turn of mind, he had better walk off at once, as the omnibuses wait for the west train half an hour later. At Orange one sees the first important specimens of Roman civilization in Gaul. The plains around have been the scenes of many a fight between Roman and Gaul; notably the great battle when the Consul Cœpion [*sic*] and Manlius left eighty thousand soldiers and forty thousand slaves upon the field where they had been hacked to death by the Ambions and the Cimri. Near Orange, at Roquemaure, we are told that Hannibal crossed the Rhone, though other places dispute this glory.

The conquest of Gaul was commenced by Cæsar, Arles, Narbonne, and probably Orange, soon becoming populated by Roman soldiers. The latter town in 45 B. C. changed its name from the Celtic Araïnon to the Roman Arausio.

As conquerors, the Romans pursued their usual tactics. To conciliate the conquered, and to employ their legions as well as the native population, they built circuses, theatres, aqueducts and triumphal arches. Authorities vary as to the builder of the superb arch at Orange. Some attribute it to Cæsar, some to Marius, and others to Domitius Ahenobarbus. It is still in a state of good preservation (possibly over-restored), which it owes to a prince of Orange, Raymond de Baux, who, in the thirteenth century, turned it into a fortress, surrounding it with walls, and raising a huge tower upon its summit. The bas-reliefs represent naval trophies.

The theatre is in wonderful preservation, and has even been the scene of a Classic drama in recent years, the scenery for which I saw upon the upper colonnade, a curious example of modern trash, as regards craftsmanship, compared with the Roman work around it.

The façade of the theatre is 111 feet high, 334 feet long and 13 feet thick. It is built of huge blocks of stone without any cement. It had three doorways below, and still has two rows of projecting corbels (inside and outside), which supported the masts to which the cords of the *velarium* were attached. The great doorway is square, supported by Corinthian columns, with nine round arches on each side separated by Doric pilasters. The semicircular rows of seats are cut out of the rock against which the theatre is built and which rises to a considerable height. On the summit of the rock are the remains of the castle of the princes of Orange. The interior of the theatre formerly contained some hundred or more miserable huts with which the building had been filled, but these have now been cleared away. As one walks up to the top of the seats of the auditorium, one realizes the enormous size of the theatre, capable, as it was, of holding ten thousand spectators. The old inscriptions remain on some of the seats: Eq. C. III. (knights' third row). Three passages run round the semicircle of seats, which has been considerably restored. The width of the auditorium is 340 feet, and it will be seen in the photograph how magnificent are the masses of wall behind the stage. I regret I could not obtain a photograph of the frontage facing the street.

[1] Continued from No. 1420, page 85.

In the days of its magnificence the theatre was encased by precious marbles, fragments of which have been found among the ruins. Above the royal entrance, in a niche, was a colossal statue of a Roman emperor, whose torso was also found in the débris.

When, in 1869, it was determined to represent Méhul's "Joseph" in the ruined building it was feared that the voices would not be heard sufficiently, there being no covering to the stage; but it was found that the voices carried to the farthest tiers of the seats. Since this first performance "Œdipus-Rex" has been played, with M. Mounet-Sully as the King; Mdlle. Bartet has been seen in "Antigone"; and Mdlle. Bréval has sung the "Hymne à Pallas," by Saint-Saëns. There was also a proposition to give the first performance of the same musician's new opera, "Les Barbares," on the antique stage.

Orange takes its name from Philibert de Châlons, Prince of Orange (1531), to whom the Principality had descended from Raimbault de Baux (eleventh century). The Orange family was confirmed in its possession by the Treaty of Ryswick; but, upon the death of William III of England, the then King of Prussia put in a claim, and was allowed by the Treaty of Utrecht to make over the Principality to France, in exchange for other possessions. But the title of Prince of Orange is still borne by the heir to the Dutch throne.

S. Beale.

THE DISMISSAL OF AN ARCHITECT.

THE judgment by Mr. Justice Walton quite recently in Waterman *vs.* London (Riverside) Cold Storage Company, Ltd., is of importance to others besides the architect who was the plaintiff in the case. Although we hear much about the defects of the profession, there are very few precedents to guide a judge when, as on the occasion in question, a claim is made by an architect for damages arising from dismissal. Mr. W. H. Waterman sought £1,108 0*s.* 11*d.* for wrongful dismissal and balance of fees due to him. A dispute arose between him and the Company about the underpinning of a wharf. The directors of the Company came to the conclusion there was a breach of duty, and Mr. Waterman was dismissed. According to Mr. Justice Walton, it is required in such circumstances to prove that an architect was either unwilling or unable to perform his duties. The directors had failed to do so, and his Lordship accordingly gave judgment for £953 11*s.* 9*d.* As certain calls on the plaintiff as a shareholder as well as payments by the defendants were taken into consideration it may be said that judgment was given for the sum claimed, which was a satisfactory conclusion.

Mr. Justice Walton's declaration of the necessity of such grounds for dismissal as unwillingness or incompetence to perform his duties removes a misgiving which has existed to some extent about the status of an architect. In the majority of instances there is no special agreement with the building-owner about the duration of the term of the architect's employment. It is taken for granted that he will be permitted to exercise his skill until the completion of the building and the fulfilling of all the conditions in the contract with the builder. In the formal agreement with an architect which is introduced as a model in Lord Grimthorpe's "*Book on Building*," from being in use by the Commissioners of Works, it is said that if only a part of the works should be carried out the architect shall be entitled to a proportionate part of the remuneration, which is to be a fixed sum agreed on beforehand. If the architect become incapacitated he, or his representatives, shall hand over to the Commissioners all plans and papers relating to the works, and shall be entitled to such equitable proportion of the unpaid part of the said remuneration as may be agreed on. Disputes are to be settled by an arbitrator appointed by the Treasury. That agreement relates to an unusual variety of procedure. The architect is by it recognized as no more than a designer who is to prepare sketch-plans, elevations and specifications, all of which documents are to belong to the clients. But in ordinary cases an employer can act towards an architect as he would towards any other agent and determine the engagement at any time without notice. The architect has, of course, his remedy in an action for damages, when it will be necessary for the employer or building-owner to prove, as Mr. Justice Walton said, unwillingness or inability to perform the required duties. It is, however, not always possible for an architect to enter on a law-suit, and one may be avoided by his simply stating in a letter that the writer is prepared to give his services as architect in connection with the building until it is properly erected and completed for such fees as have been agreed upon.

Building-owners, when they desire to act in an arbitrary manner, and take revenge for some slight or imaginary wrong by summarily dismissing an architect as if he were no more than a dishonest servant, fail to realize that they have only the power to partially dismiss him. By entering into a contract the employer has created a dual office for the architect, in virtue of which he becomes an arbitrator or judge to whom the creator of the office becomes subjected. The building-owner may take steps, for instance, to prevent the architect entering on the works in progress, and he might even put up a printed notice to that effect. But the rights of the architect cannot be set aside in that way, for the contractor can insist on his (the architect's) admission to the premises at any time and under all circumstances. A building-owner can, of course, set the law at defiance and incur pains and penalties for his own gratification, but he has only to consult a solicitor in order to discover that the dismissal of an architect is a more serious affair than is imagined. It is possible, as was the practice of the Commissioners of Works, the admired of Lord Grimthorpe, to regard the architect simply as a designer. Then, of course, he would have no more claim in virtue of his office to go upon works than the designer of a piece of cotton would possess to enter a factory and interfere with the printing of the pattern. But as soon as a contract is taken in building the architect becomes not only a designer, but much else.

Another case which was heard recently before Mr. Pollock, an official referee of the High Court, at Durham, partially resembles that we have just noted. The dismissal was expressed by a demand for the surrender of plans. The plaintiff, Mr. William Perkins, architect, sought to recover £580 from the Bishop Auckland Coöperative Society. The province of such bodies has of late been widely extended. The defendants, in addition to the usual business of competing with ordinary shopkeepers, entered upon building speculations.

In 1895 Mr. Perkins was engaged as architect, the terms being, on works of the value of £1,000, five per cent; from £1,000 to £2,000, four per cent; £2,000 to £5,000, three and a half per cent; and from £5,000 to £10,000, three per cent. Various works were carried out, including houses and stables. There was occasional friction between the architect and the contractor, but the Society generally took the architect's view of whatever matter was in dispute. To his surprise Mr. Perkins, on July 7, 1900, received a letter from the Secretary of the Society intimating that the committee had become so dissatisfied with his conduct that he was instructed to ask him to deliver to the Society all plans and specifications of buildings erected for them, together with a statement of account, with a view to a final settlement. Mr. Perkins replied he was unable to understand the letter, but as it had been sent he could not accept any further work from the Society, although he should take his part in seeing that the contracts entered into were carried out. Afterwards he furnished his account, and was informed it would not be paid until his plans were handed over to the Society. In another letter it was stated that his account had been submitted to the solicitor of the Society, who had recommended that £500 should be offered in settlement of a claim amounting to £690. It was added that if Mr. Perkins did not accept the offer the money would be paid into Court, and then a writ would be issued for the recovery of all papers and documents, that is to say, the plans which it was asserted belonged to the Society. The question of ownership thus appears under a new phase, and other architects would do well to secure themselves against similar demands by making their clients clearly understand at the beginning what is the usual practice.

It might have been possible to have the dispute between the parties compromised on equitable terms but for a circumstance which arose inopportunely and which created a prejudice against the architect. There is so much said about illicit commissions and the tendency of architects especially to insist on them that the least pretext for suspicion is often sufficient to convince people that a wrong has been committed. Mr. Perkins had, it seems, a running account with a firm of ironmongers, and he was allowed ten per cent on all articles debited to him. In one of the contracts for houses £200 was entered to provide fireplaces. In another instance the amount for similar articles was £292. The order for them was given to the firm. Plaintiff brought an action against the ironmongers for £33, which he alleged had been paid in excess, and the firm counter-claimed £89, an excess of commission which they had paid. Mr. Perkins believed he was entitled to take the part of a contractor and receive the trade-discount paid in ordinary cases. But no sooner was the report of the action in the papers than the Coöperative Society informed Mr. Perkins that after the revelation they could not be parties to any arbitration in respect of his fees. He replied he was willing to have all his dealings with tradesmen investigated, but the defendants may have thought that he would be afraid to bring an action in the High Court. His council advised that the commission should be paid into Court, and that was done. But the Official Referee said that although the action might have been honest the retention of the commission could not be justified. After Mr. Perkins had been cross-examined an arrangement was arrived at. It was agreed that plaintiff was to receive £350, and that each side should pay their own costs.

It is evident in this case that the issue was affected by the commission which was given by the tradesmen on account of fireplaces. Whatever may be the custom in the northern parts of England, there is no doubt the receiving of any commissions unknown to an employer is to be reprobated. Here, as in other instances, no loss arose, for if the architect was paid the contractor was not, and there was no allegation that the articles supplied were of inferior quality. Public opinion is, however, becoming more and more unfavorable to secret commissions, and architects are most unwise who will jeopardize their position for the sake of a small sum, but which when discussed in Court assumes alarming proportions. — *The Architect.*

LONDON COUNTY COUNCIL'S MODEL TENEMENTS.

WHERE could hardly be a more agreeable transformation than London has witnessed at Millbank. Where stood since 1821 the grim prison, alias model penitentiary, on which philosophic Jeremy Bentham had lavished so much care, now stands the noble Tate Gallery of paintings and sculpture, not half so much prized as it will be by and by, and to the rear of it seventeen blocks of model dwellings. Prisons are symbols of the failures of civilization; art and improved dwellings count among its triumphs. It befits the

genius of the place that these model dwellings are called after leading British artists: Hogarth, Leighton, Millais, Turner, Ruskin, Romney, Rossetti, Reynolds (2), Gainsborough (2), Lawrence, Maclise, Landseer, Mulready, Morland and Wilkie. If Ruskin was not a leading artist in painting he certainly was in words. Ten years ago the Council came into possession of half the prison site, some eight acres, for which they paid £22,242, reckoned at the rate of £2,500 per acre. For London, that price, although rather more than half-a-guinea per square yard, is cheap. Fifteen acres in Bethnal Green cost to buy and to clear £270,000! That is the crux of the housing-problem in London, which the good people who denounce municipal socialism conveniently ignore. How are the working-classes to have homes provided on sites that cost half-a-guinea per yard at the cheapest as at Millbank, or ten times that amount as in Bethnal Green, before you have laid a single brick?

In this township at Millbank there are accommodated, about 4,500 men, women and children, at an estimated cost, comprising value of the land, of £229,023. The number of tenements is 896, of which two are of one room only, 485 of two rooms, 392 of three rooms, sixteen of four rooms and one of five. Sets of two and three rooms are, it will be observed, mostly in demand. This fact is significant. It is not because the working-man and his wife do not appreciate the health and comfort of having more dwelling and sleeping rooms. It is because they cannot afford more. The poorer people are the greater the proportion of income that goes in rent. In the Peabody Buildings the average weekly earnings of the head of the family are about £1 2*s.*, and the average rent of each dwelling 5*s.* 0½*d.* A clerk or professional man making £500 or £600 per annum rarely pays more than ten per cent of that amount for his house; the artisan earning 20*s.* to 40*s.* a week must perforce pay 7*s.* 6*d.* to 8*s.* a week, say £20 a year, from twenty to thirty per cent of his wages. In London two rooms, even in the Peabody Trust, run from 3*s.* 3*d.* to 5*s.* 6*d.*; while full often elsewhere they cost 7*s.* to 8*s.* At Millbank the latter charge would be general. When all has been done, it is still a wonder how the mass of the people live. To support a wife and three or four children on £1 2*s.*, after deducting 5*s.* for rent, is a harder problem than anything in Euclid. In Great Britain we have about 7,500,000 houses, and of these 5,360,000 are below £20 rental. Five-sevenths of the households are lodged in tenements, for which they pay less than 8*s.* a week. Moreover, the London County Council, the Peabody Governors and the societies which have erected industrial dwellings cannot permit overcrowding; that is the root of all evils in the poorer districts; there is, therefore, and there must be, a restraint of population. In other words, where there is a large family there must be living room in proportion.

Visitors to the Tate Gallery must see these dwellings which the King and Queen are to inspect. They look rather like West-end (so-called) mansions, but the County Council has spent little (too little, one thinks) on external adornment. The first thing that will strike the stranger is the clean asphalt pavements and the playgrounds. If ever this matter is brought right home to the heart of the nation it must be in the name of the children. Of course, everybody knows Wordsworth's inspired line, "Heaven lies about us in our infancy," and everybody who feels recognizes that children are the only pure embodiment of humanity. It was the great Teacher who said, "Of such are the kingdom of Heaven." But when you walk through serried miles of East-end streets, without a playground, and see those pale, dirty faces and wan cheeks, you deprave Wordsworth's lines to this: "Dirt lies about us in our infancy." Hence the pleasure with which one sees a garden on which the Council is spending over £2,000, and areas in which the young ones can sport and frolic.

It will be clear to the reader that if the County Council does not make these clearances nobody else will. The work does not pay. In 1901 the Governors of the Peabody Fund realized 2.44 per cent, the lowest on record, on their capital, and the other philanthropic societies expect to make four or five per cent; but to clear slums and build on the site would mean dead loss. Especially is that the case when bricks, cement and materials generally have risen in price, and the up-to-date bricklayer leisurely lays 330 bricks per day in place of one thousand. The net effect of higher wages, less work, and dearer materials, is that a rod of brickwork which cost £11 in 1890 cost at the end of 1898 £20 15*s.* But, on the whole, the work done and doing in London is great. Here is the latest return, of which few persons probably have any idea:—

Company.	Persons Accommodated.	Cost.			Rentals.		
		£	*s.*	*d.*	£	*s.*	*d.*
Metropolitan Association for Improving the Dwellings of the Industrious Classes.	6,126	285,835 and ground rents.	9	0	25,726	13	9
Trustees of the Peabody Donation Fund.	19,157	1,285,107	2	7	66,023	8	1
Improved Industrial Dwellings Company.	20,000	1,102,427	0	0	112,310	6	6
Artisans, Laborers and General Dwellings Company.	42,000	2,122,846	2	3	157,859	12	4
Victoria Dwellings Company.	4,500	135,786	12	8	10,530	0	2
East-end Dwellings Company.	5,653	264,556	12	2	23,307	12	7
The Four Per Cent Industrial Dwellings Company.	4,240	172,150	0	0	12,831	6	8
Guinness Trust.	8,436	446,783	3	0	24,615	8	2

In short, the several dwellings-companies have provided accommodation for 119,148 persons in 24,105 tenements; they have spent £5,815,492 2*s.* 5*d.* on lands and buildings, and over £6,000 a year on ground rents, and are in receipt of gross rents amounting to £433,-204 10*s.* 3*d.* If we add to these sums £3,148,315 spent by the County Council to erect homes for a further 38,364 persons, we get a total of over nine millions sterling, and homes for 157,512 persons, and this reckoning takes no account of the Tooting scheme, which will provide for 8,592 residents, the Norbury scheme, which will accommodate 5,800, or the Tottenham scheme, creating a new town of forty thousand inhabitants. Nor can an estimate be made of many dwellings raised by private philanthropy and by some of the local boroughs, such as Shoreditch, for example. But is the result worth all this money? Bootless the inquiry; the thing has to be done. It is not a question of Socialism or any other ism, but of sanitation and humanity. The Clare Market and the Boundary-street areas must be swept off the face of the earth. Those fifteen acres in Bethnal Green ranked with the most awful places in the whole world. There lived some six thousand persons in a rookery described as "a sink of iniquity and forcing-house of crime." It was the region depicted in Mr. Arthur Morrison's "Child of the Jago," "the blackest pit in London," as he called it. Go to that spot now — it is immediately behind Shoreditch Church — and you will find in the centre a raised mound, with a garden on the slope and on the top a band-stand, where, on summer evenings, a band plays. From that centre radiate streets of improved dwellings filled by the East-end poor. There is plenty of play-room, and you meet romping boys and girls with clean faces and rosy cheeks. A few years ago the death-rate was forty per thousand! Strange thought, that was the death-rate in the spacious time of Queen Elizabeth and onwards to the era of the Great Plague! In England's brightest intellectual days, when we produced Shakespeare, Bacon, Milton, Newton! And so things went on till the great awakening fifty years ago.

All but those who labor under the advantage of being too young, will remember the sensation caused nearly seven and thirty years ago by Sir Benjamin Richardson's address to the Sanitary Congress, meeting at Brighton, on "The City of Hygeia." It took the country by storm. The public awoke to the fact that this City of Health was not a dreamer's Utopia. In that city no two houses touched each other; Heaven's light and air played freely around and within them; the people ate unadulterated food; infectious diseases were banished, as typhus and the cholera have been, by cleanliness, pure water, adequate ventilation, and perfect drainage; so that the inhabitants of Hygeia lived natural lives and died of old age. The net result was a death-rate of about eight per thousand, as against three times that mortality in towns and double in the best parts of rural England. "Is it a realizable ideal?" people asked; and the answer, of course, was: "Yes, if we pull down our towns and spread them over many times the space; and if we rebuild our houses on sanitary principles; and, not least, carry the public with us in appreciating the blessings of cleanliness, fresh air, and wholesome surroundings." Impossible the full attainment even now, alas! And yet so true was Richardson's prophetic insight that already we have approached pleasantly near his ideal even in London. In the Peabody buildings the death-rate last year was 13.9, which was twenty-one per cent better than London generally, and this with a density of "seven hundred people to the acre, nearly twelve times that of London." If all this metropolis were as densely housed as these dwellings London would hold fifty millions of people, which Heaven forbid! But Mr. Waterlow, L. C. C., reported recently of the Improved Industrial Dwellings Company, founded by Sir Sydney Waterlow, that the mortality in their tenements for 1897 was below ten per thousand. That may have been a specially favored year, or deaths in hospital may not have been allowed for. It is, however, probable that when the County Council is able to make a report for a sufficiently extended period it will be found that Hygeia has taken the place of the slum. The Council insists on cleanliness, and so raises the whole standard of healthy living. That is not done in some of the earlier model dwellings in London. The writer met a foreign tenant in one East-end block, whose grievance, expressed in broken English, was: "My God, why do they keep telling me, 'You must be clean!'"

It remains only to add that of the outlay of the County Council's Housing Department more than four-fifths is remunerative. As the account now stands at the end of sixty years, through the action of the sinking-fund, metropolitan ratepayers will come into possession of an unencumbered property worth some four millions sterling. If, as is devoutly to be wished, rents have then fallen, and the standard of living risen, there will still remain a municipal freehold yielding a handsome annual revenue, a revenue that, rightly applied, will help to make London a City of Health. — *London Daily Telegraph.*

AN ENGINEER'S TRIP TO THE ORIENT.[1]

FRIENDS and fellow-members of the Western Society of Engineers, I have not been on a junketing expedition this time. I have been abroad, going westward. Once before I started to go around the world, twenty years ago, to learn what I might about the world by such a trip, and I started eastward. I took a whole year for an examination of Europe alone, went through every country in it almost, through almost all of the large iron and steel establishments that seemed worthy of close inspection, and I found that I was going the wrong way. There was nothing in them that I had not

[1] An address by Gen. William Sooy Smith, delivered before the Western Society of Engineers and printed in the *Journal* of that Society.

seen before, and I concluded that I would go back home and take a rest and the next time I started I would go the other way. And I would advise you, gentlemen, if you should ever propose to go around this globe with advantage, to go westward. That way the star of empire has taken its way, and that way the star of knowledge has also taken its way. Each thing is explained by what you have seen before as you go westward, and the other way it is all a puzzle.

I have recently gone through Japan, Corea and a portion of Manchuria on a business trip, but I put in my time as best I could, and there are a few things of personal interest that I want to say to you this evening.

And, in the first place, do not get the idea that there are no engineers over there on the other side of the Pacific. There are a great many engineers and there are a great many first-class engineers, not only Americans and Europeans, but among the natives themselves. I was brought into close contact with some of the most prominent engineers in the Orient, and I found many of them thoroughly educated and well posted. Take, for instance, Matsumoto, of Japan. He graduated at the Van Renssalaer Polytechnic Institute, at Troy, N. Y., went out to Japan, and, being of a high family, soon got into a fine position and for a great many years has been at the head of the imperial railways of Japan. I had the good fortune to entertain him at my house when he was here and got quite intimate with him, passed many pleasant hours with him on the other side, and questioned him as closely as I could as to what he had been doing in Japan. I found him "up to date" and admirably informed. I also met N. Shiraishe and many others. They are thoroughly educated. They send their brightest young men to this country and to Europe. They have done so for a great many years, and they are thoroughly trained, and some of them remain in this country and Europe until they get a knowledge of practical engineering in a practical way, and then go back home prepared to take high positions.

There is one thing I would strongly advise engineers. Do not go to the Orient without some previous understanding. Do not think there are not engineers, and good engineers, in that part of the world. Another reason is that wages are exceedingly low, as compared with wages here. I think the wages are not more than half as much as in this country. And also, in Japan especially, there is a strong national feeling. They are a people ambitious to do for themselves, and therefore do not depend upon engineers from outside.

When I started East some twenty years ago I saw a great many things to convince me that we were then neck and neck with the best of them in Europe. Upon one occasion, in London, I was questioned by a party of eminent civil-engineers something like this: "You have been considerably about our country?" "Oh, yes." "And looked at our engineering-works?" "Yes; as well as I could." "Well, won't you be kind enough to give us your impressions?" "Well," said I, "I have recently been up in Yorkshire and walked several miles over one of your lines and crossed a number of your bridges and studied them as well as I could, and didn't think they were as good as ours." "Why not?" "Well, they are box and plate girders of 50, 60 and 70 foot spans. You lay your joists transversely on your bridges and often on the flanges of your girders, giving them a tipping effect; on your girders you then spring brick arches from one joist to another, and on top of these arches put from 2 to 3 feet of gravel. Will you tell me why you build your floor-system in this way? What do you want with the gravel, and what do you want with the arches, except to hold the gravel?" "Well," said they, "how do you do it?" I answered: "In the first place, we do not use box or plate girders to any extent; we can cut out a large part of the material the girder contains and leave it just as strong. We build trusses, putting the material in the lines of direction of the strains. We attach our beams to these at the foot of these uprights, at the point of intersection of our braces, and on these beams put the track-stringers and lay the track on them." "With the floor all open?" "Why not?" "How do your men cross your bridges?" "Why, we employ sober men and put a running-plank on one side of the track and allow the men to walk it; if they don't, they can fall off." They laughed, and some of them said, "The Yankee is right." And so the comparison stood at that time. Wherever I looked over their structures — and some of them were admirably built — nearly everywhere there was a great waste of material. They have now learned to avoid this somewhat.

The circumstances surrounding the American engineer in the beginning were the most favorable possible to develop the true spirit of the engineer, compelling him to do the very best work he can with the least means. We were compelled to economize in every way in order to do that. First was the fact that material was scarce and hard to get and, therefore, dear, and we had to build our structures on proper lines and in accordance with the strictest requirements of economy. We had to borrow capital, for we had no money to build railroads. The builders of the road, who furnished the money, were very careful to get engineers who could do the most work for the least money. That influence has followed our profession in all its work from the beginning to the present day, and that influence I believe has been more potent than all others to develop in this country a high order of engineering science, of which we may justly be proud.

At the same time, let us recognize the merits of engineers in other countries. Of all things, vanity, such as we are liable to, will be the most dangerous to the success of which we now feel that we are justly proud. We have, as a profession, in this country, done our very best to ascertain the laws which govern the substances which we employ. We have analyzed in the most rigorous manner the strains and the different factors which enter into our structures, and we are certainly very far in advance of anything we could boast of ten years ago, and I believe we are neck and neck with the best engineers in the world, if not a little bit ahead. At the same time, when we are speaking of these other men, let us remember that these very men have been taught in our schools, have been upon our works and have been educated here, in our methods, and it is not fair to say that they are merely copyists, because in certain instances which I met with during my recent trip in the East, I found that they have not only adopted our methods, but have developed them in some cases and even improved upon them. While over there, I happened to fall in with Shiraishe. He had met me in this country, at Havre de Grace, while I was building the Susquehanna bridge at that point. I met him in travelling and we fell into conversation accidentally. I soon discovered he was an engineer and handed him my card. He said, "I have met you before," and he referred back to our meeting at Havre de Grace. Then he told me he was about to build a dry-dock at a certain place and was very much puzzled about the plan. He gave me the data and circumstances in detail, and I said, "That is an ideal case for the application of the 'freezing process.'" I explained it to him and was astonished to see how quickly he took hold of it and understood its advantages as applied to the very case he had in hand. That led to correspondence and consultation, and he has gone on and suggested improvements in the application of it that were different and better than any that we knew before. For instance, in this large excavation he suggested that we should only freeze a portion of it at a time, using the same set of pipes, over and over again, thus saving a heavy expense. So they are not mere copyists, for they have the ability to originate, to adopt the proper methods and to improve on them and discover new processes of their own.

I saw a good deal of work that astonished me; some of it very old work. Many of you may have seen such work. I never did in my life. I saw a stone wall laid with blocks that were about that large (indicating), and they were laid in diagonal courses, not horizontal. Give this a little thought and you will see that it has advantages. There is no chance of cracking vertically, the loads are distributed by giving the compressive resistances of the stones a diagonal direction. I never saw masonry built that way anywhere else except in the East.

Now, in doing work they are very far behind American methods. They employ hand-labor, but they have such an abundance of it that you can't wonder. It is cheaper than the best machinery we can employ. They coal a ship quicker and cheaper by hand than we can by the very best machinery. While they work for from five dollars to six dollars a month and take care of themselves, they do not do near the amount of work that our men do. It takes three or four coolies to do as much as one of our laborers, but even then the labor is very cheap. And if they were to substitute machinery much the larger part of those people would be thrown out of employment and starvation would stare them in the face. They have built first-rate ships, from stem to stern. They make all the machinery that goes into them. They man them and they run them as successfully as any other people. The only objection I have to them is that the doors are entirely too low. I continually bumped my head in going through them.

Now, as to the works that are to be done, there is no end of them. Some works as great as the world has ever seen still remain to be done there. The opening of the Yang-Tse-Kiang River is a tremendous undertaking. Great harbors have to be built where there are none now. And the railway-systems are all in their infancy, but the whole country is developing rapidly. It looks very much like our own country, consisting of mountains, hills and valleys, much of it fertile, with products very much like our own. I saw a great deal of Indian-corn growing there, but it is of an inferior quality.

Now, there is another thing that will retard our operations in that country. It is the very low price of everything. It is a cheap country, wonderfully cheap, and this is a wonderfully dear country. They only buy from us the things that they *must* buy. The only things we export to that country in any great amount are our bread-stuffs. Our bread-stuffs are in competition with their rice, which keeps the prices down very low. Almost everything else they can produce much cheaper than we can. Therefore, I don't think that we need expect a great commerce with that country. I suppose we will get it gradually, in the course of a great many years. There is nothing could appear more stupid to any one who looks at the country from that side than the Chinese Exclusion Act. There is a great surplus of labor and the best kind of labor, although their men are not as vigorous as ours. But if men are paid better they will work better. We are short of labor here; there is a conflict here between capital and labor that is becoming more and more troublesome and threatening, and I think none of us can look forward to what must be the status of that conflict without great concern. We, as lovers of this great country, must dread the conflict becoming more and more threatening every year and must use our brains to the best of our ability to discover some way out of that trouble. There is no doubt that the Exclusion Act, instigated first for a very good reason, is now simply maintained through the influence of the labor of this country, to prevent the lowering of wages, which are now away beyond what they ought to be. We know the labor-unions control the elections, and the men to be elected must court their favor. That

is the bottom of the whole thing and ought to be removed. A broader and a higher understanding of it should be obtained and our conduct should be on a broader and higher plane. The conduct of our very wealthy people is reaching down to the lower classes, and instead of living simply and economically, there is a strife that is produced by it that pervades the whole of our national life from top to bottom, and we are on that road which the historians all point out as the one that leads to destruction. Almost every great empire that has existed since the beginning of the world to the present time has met with its end because of the luxury of its people. I think that is our greatest danger.

Now, if we could get, under proper limitations, enough of these laborers to do our work, the prices of everything would be brought down, and we would be getting on to the plane of practical common-sense, and our prosperity would be permanent.

BOOKS AND PAPERS

ONE of the best handbooks that we have ever seen is Professor Howe's little work [1] on "*The Design of Simple Roof-Trusses in Wood and Steel.*" Every architect is familiar with the text-books on graphical statics, and with the principles of connecting the joints of wood and metal framing; but there is a great deal of matter in the text-books which is only occasionally valuable in practice, and Professor Howe's book, which contains a very pretty elementary exposition of such graphical statics as the architect is likely to need in designing simple roof-trusses, with a thorough discussion of the methods of making joints, followed by tables of resistances of materials, according to the modern standards, weights of roof coverings, and properties of all the steel shapes likely to be required in an architect's roofs, is admirably convenient for office use. The book ends with complete drawings of two wooden trusses and one steel one, each of 60 feet span, with every part clearly described and figured. We are not sure that we should always approve the placing of heavy wooden trusses, even with a bolster-piece, directly on a brick wall, as shown in the plates, without the protection of a wall-plate, to keep the brickwork from being damaged; but very much depends on the method of construction, and the precision with which a truss, if put together previously, can be lifted and swung into place, as well as upon the accuracy with which the wall has been built; so that the architect would use his judgment in such cases.

TO those who need a treatise on ventilation brought down to the most modest intelligence, we can heartily commend a little book [2] which, as we are informed in the preface, "cannot fail to be of value to architects and builders, as well as to the managers and caretakers of public buildings." Although "the scientific and technical information regarding the composition of the atmosphere, its impurities, etc., has been omitted," partly because it "can be obtained in any book on physics," and partly to assist the endeavors of the author "to compress much practical matter into the smallest compass," room has been made for some scientific information of extreme importance, which might not, perhaps, be found in all works on physics. Thus, we are told that "it is well to recollect that the germs evolved in breath can work best and decompose the organic matters present at a high temperature." Another principle, which should never be forgotten, is that the doors of buildings "may often be opened with most pleasant and marked benefit in hot weather." Only second in value to this great truth is the observation that "when it is a question of admitting unwarmed air, then the temperature of the outside air is equally important."

Coming down to more practical details, architects and caretakers will do well to note that "If the building has no roof ventilator, and the velocity of the air as it escapes through the cracks and fissures in the roof is too low, streams of cold air enter in through the larger crevices until a point of internal pressure is reached when the outgoing air is expelled at too great a velocity to allow any further quantity of cold air to descend from the roof." It would be interesting to learn when this "point of internal pressure is reached," and how to hasten the process on occasion, but the only suggestion that we find is contained in the remark that "Let that velocity fall below from 2 to 3 feet per second according to the height of the building, the simultaneous movement of the audience, as it sits down after a hymn, or a patriotic demonstration, as the case may be, will be sufficient to upset the equilibrium, and cause down-currents of cold air to enter through the roof exits. We are quite sure that this remarkable fact has hitherto escaped the notice of architects and ventilating-engineers on this side of the ocean, and they will be grateful for having it called to their attention. Even American architects can, however, appreciate and sympathize with our author's exclamation, "How fatal to the introduction of fresh air is the practice of closing every chink and crack by india-rubber tubing!" It is, however, not to be forgotten that "many buildings have fresh-air inlets," but "it will be found very frequently that they are either kept shut, or they are choked by dirt." It is unfortunate that American architects deal chiefly with churches and public buildings which have fresh-air inlets which are not allowed to become "choked by dirt," so that the observations, which fill more than a hundred pages, upon the movement of air in structures which have none are, perhaps, of less value to them than they would be otherwise; but all architects and caretakers may with advantage lay to heart the following maxim, which we find near the end of the book: "Where hot water or steam is used for heating, it will be advisable in cold weather to keep the fires well tended."

[1] "*The Design of Simple Roof-Trusses in Wood and Steel*," with an Introduction to the Elements of Graphic Statics. By Malverd A. Howe, C. E., Professor of Civil Engineering, Rose Polytechnic Institute. New York: John Wiley & Sons. London: Chapman & Hall. 1902.

[2] "*The Ventilation, Heating and Management of Churches and Public Buildings.*" By J. W. Thomas, F. I. C., F. C. S. London and New York: Longmans, Green & Co. 1903.

ILLUSTRATIONS

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

HOUSE OF ROBERT LESLEY, ESQ., HAVERFORD, PA. MR. LINDLEY JOHNSON, ARCHITECT, PHILADELPHIA, PA.

PRIVATE ENTRANCE TO GROUNDS OF ROBERT LESLEY, ESQ., HAVERFORD, PA.

DETAIL OF THE NEW PROVINCIAL MUSEUM, HANOVER, PRUSSIA. PROF. HUBERT STIER, ARCHITECT.

THIS plate is copied from *Deutsche Bauzeitung*.

SECOND PRIZE DESIGN FOR A SCHOOL-HOUSE, CLEVELAND, O. MR. WILBUR T. MILLS, ARCHITECT, COLUMBUS, O.

Additional Illustrations in the International Edition.

THE HALL: HOUSE OF ROBERT LESLEY, ESQ., HAVERFORD, PA. MR. LINDLEY JOHNSON, ARCHITECT, PHILADELPHIA, PA.

THE GRAND TRIANON, VERSAILLES, FRANCE.

THE ARCH OF MARIUS, ORANGE, FRANCE; — THE ROMAN THEATRE, ORANGE, FRANCE.

FRONT VIEW: ELECTRIC FOUNTAIN AT "GEORGIAN COURT," ESTATE OF G. J. GOULD, ESQ., LAKEWOOD, N. J. MR. BRUCE PRICE, ARCHITECT, NEW YORK, N. Y. MR. J. MASSEY RHIND, SCULPTOR, NEW YORK, N. Y.

SIDE VIEW: ELECTRIC FOUNTAIN AT "GEORGIAN COURT," ESTATE OF G. J. GOULD, ESQ., LAKEWOOD, N. J. MR. BRUCE PRICE, ARCHITECT, NEW YORK, N. Y. MR. J. MASSEY RHIND, SCULPTOR, NEW YORK, N. Y.

NOTES AND CLIPPINGS

MARBLE DEPOSITS ON THE COLUMBIA RIVER. — The greatest deposits of marble in the world are probably in Stevens County, bordering the Columbia. Samples in every shade have been brought here by the Columbia River Marble Company, which has acquired 1,320 acres of croppings. At the prices of the best building-stone the marble will yield a profit of fifty dollars a ton. It can be taken out in slabs and blocks to suit any demand of architecture. The polish taken by it shows the most beautiful markings and as regular as the marble of New Hampshire, taken from a depth of 250 feet, while this has been picked from the surface. There seems also to be no limit to most of the varieties, white, mottled, grained and yellow marble equal to the famous Italian Pavonazzo stone being in unimagined masses ready for the taking out. One lake in the district is called Marble Lake. It has marble sides and a pure white marble bottom, making a perfect bath-tub of acres in extent. One cliff on the property is marble from top to base, measuring in height 250 feet. An extension of these fields has already been exploited and the product is being sent as far east as New York, where builders are using it for interior decoration. A plant costing $150,000 is at work on the United States quarries — that being the name of the extensions of the ledges. No bottom has yet been found to the deposits. — *Exchange.*

BRITISH CREMATION RULES. — The new British regulations governing cremation are exceedingly minute and specific, and are expressly framed to meet the objections of those persons who fear that this

method of disposal of the dead will help the concealment of crime, especially that of the poisoner. They provide that every crematorium must have the authority of the Home Secretary, and that no body shall be burned against the expressed wish of its original possessor. Moreover, no body may be burned before registration of death, except on a coroner's certificate, or without official application for a permit on the part of executors or relatives after filing the requisite statutory declarations. Further, no cremation is to be permitted unless (*a*) certificates be given by a registered medical practitioner who can certify definitely as to the cause of death, and by a medical referee; (*b*) unless a post-mortem examination has been made by a medical practitioner, expert in pathology, appointed by the cremation authority, or, in a case of emergency, by the medical referee appointed by such authority; or (*c*) unless an inquest has been held. The written authority of the medical referee, who must be a medical practitioner of not less than five years' standing, must also be produced. Attention has been directed to the whole matter by the recent trial and execution of a publican who poisoned at least three women. He could not have been convicted if the bodies of his victims had not been forthcoming. — *N. Y. Evening Post.*

Forestry profitable in the South. — The direct and immediate advantages of careful lumbering when combined with the practice of forestry have seldom been so forcibly shown as in the case of the University of the South, at Sewanee, Tenn., whose timber-lands have been managed since 1900 under the direction of the United States Bureau of Forestry. Although $3,000 for all of its timber was considered a fair offer by the University in 1899, the Bureau, by its plan and management, has already secured a net profit for the University of $3,200. Four more years of lumbering remain to be done, and for three years at least there is an assured annual profit of $1,500. In a word, timber formerly valued at $3,000 will have been made to yield a profit of over $7,000. — *N. Y. Evening Post.*

The Protection of a Patent. — In the course of a paper read recently before the Engineers' Club of Philadelphia, Mr. H. B. Schermerhorn said, essentially, that there is a prevalent impression that an application for a patent is subjected to so thorough and exhaustive a scrutiny, in its passage through the United States Patent Office, that its final grant and issue amount to a guaranty of its novelty, and that the patent is thereafter safe from attack. In granting a patent, what the Office really does is to say, in effect: "In our opinion such prior patents as already exist along this line constitute no anticipation of your invention. This conclusion has been reached by a more or less qualified expert in this class of apparatus or device, aided by a carefully classified list of all prior limited States patents bearing upon the subject. But we do not and cannot guarantee you the correctness of our conclusion." It is often said that a patent is not a truly valuable, marketable commodity until it has passed the ordeal of an infringement suit. In such a suit the burden and expense of proving anticipation lie upon the infringer, and the more useful or meritorious an invention, the more do the courts incline in its favor when it is thus attacked, and the stricter the proof they require of clear anticipation. — *Exchange.*

The Crown of Saitaphernes. — Details concerning the golden crown of Saitaphernes, upon which fresh doubt has been thrown by the alleged confession of a certain Elina, give some explanation for the fact that it has remained five years or more on exhibition in the Louvre since it was attacked as fraudulent by Herr Furtwängler. This handsome crown of beehive or tiara shape was defended by M. Salomon Reinach, a very competent and very learned writer on Gaulish, Roman and Greek antiquities. Its genuine character was believed by several experts of the British Museum, and it now appears that when it was brought from Odessa to Vienna a number of antiquarians counted it a veritable relic of the art of the Greeks among the colonists on the northern shores of the Black Sea. Some took a middle stand, and, while agreeing that the top was genuine, probably a cup of gold of the period held that the lower part, which consists of zones of gold with *repoussé* animals, monsters, etc., running round them, was a clever forgery by some Russian goldsmith. It is generally believed that the confession of Elina that it was he who made it in Paris is a boast by which he wishes to attract attention, or he has been employed by some one to execute a tiara for the purpose of deceiving the archæologists. Every sign points to South Russia as the place whence it came, whether a genuine find as it stands, or an article part genuine, part "faked," or a piece made out of whole cloth-of-gold. — *N. Y. Times.*

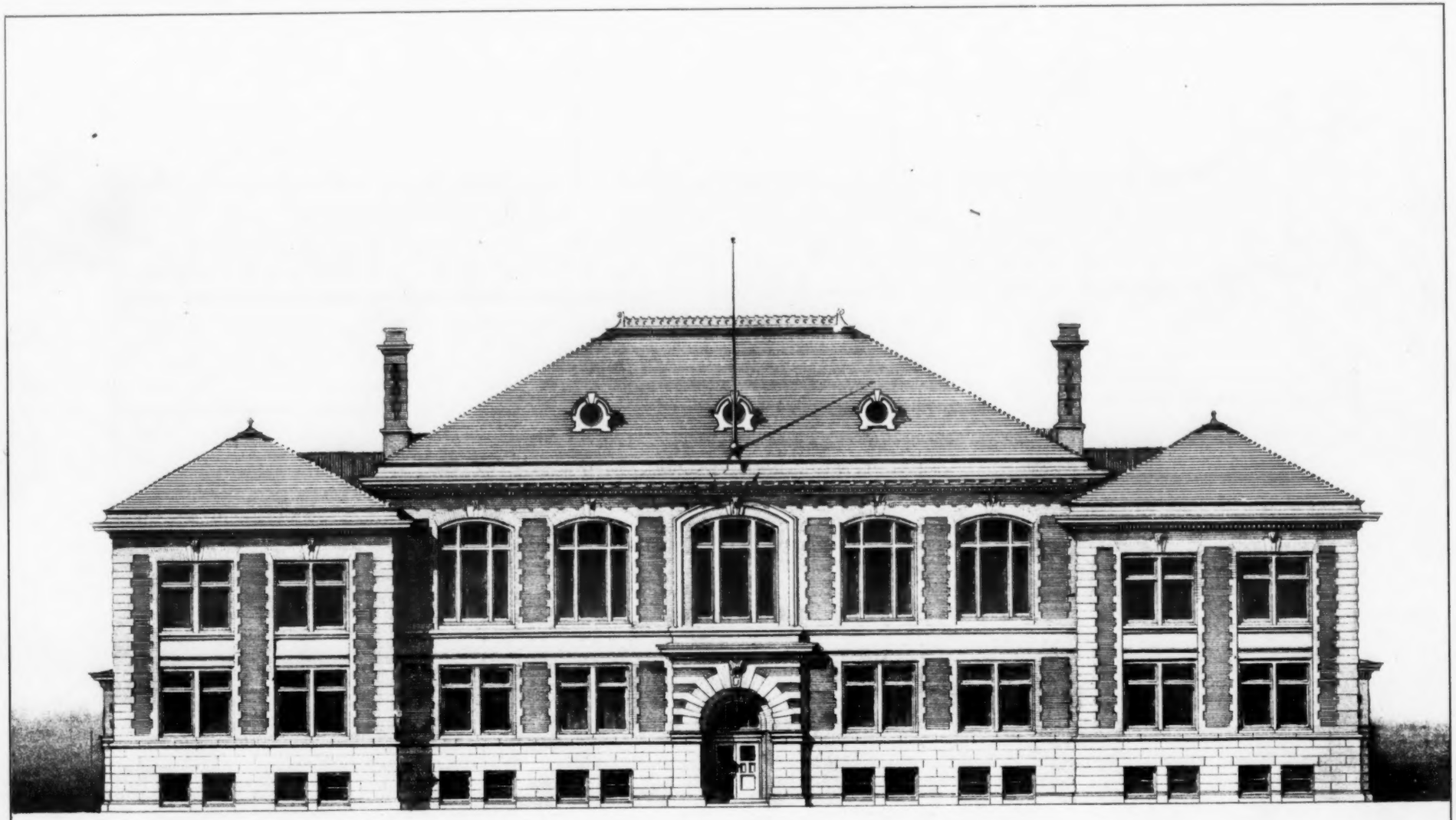
In a later issue the *Times* says: "Another claimant for the honor of having fabricated the disputed golden tiara of Saitaphernes, which has been shown since 1897 in the Louvre, is Israel Rachumowski, of Odessa, who writes from that city that for $240 he will come to Paris and prove that he made it in 1896 at the order of some person in Kertsch, in the Crimea. But a man of this name denied in a letter published in the *Débats* in 1897 that he made it. The Parisian workman, Elina, who was the first claimant of this honor, now acknowledges that he lied, and explains his eccentric conduct by saying that he did so in order to call attention to a piece which he knew was false. It is suggested that the Society of Friends of the Louvre pay the expenses of Rachumowski and hear what he has to say. One difficulty is this: men like Elina and Israel Rachumowski are ready to swear falsely as occasion demands. Perhaps the latter sees a good chance to take a trip to Paris and gain newspaper notoriety. Meantime the authenticity of the tiara has been referred to a committee of one consisting of M. Clermont-Ganneau, professor in the College of France, who has often given proofs of acumen with regard to disputed objects of antiquity."

Our protected Sarcophagus-makers. — A Philadelphian interested in archæology bought abroad a carved sarcophagus of an ancient Roman, and undertook to bring it home, not recognizing the wrong that he was doing to an infant industry. For the manufacture of ancient Roman sarcophagi is, it must be acknowledged, an infant industry with us, and, therefore, must be protected. At the Custom-house Mr. Ingersoll has been made to pay a fine of fifty per cent upon the valuation of this "manufacture of marble." This is for the protection of American labor. It must be so, for it is in the Dingley tariff, and we all know that such is the tariff's only purpose. Mr. Roosevelt assures us that to touch the tariff would destroy our prosperity. It would be interesting to have Mr. Roosevelt's candid opinion of this typical example of a policy that appropriately seeks to protect this country from the competition of the catacombs. — *Philadelphia Ledger.*

A Model Fire-risk. — The Boston Store at Providence, R. I., is looked upon by insurance-men as a most perfectly secured fire-risk. Automatic-sprinklers cover every room, closet, stairway, and elevator-shaft in the entire building. The water-supply for the sprinklers is taken from two 6-inch connections with the city mains, which gives a pressure of about seventy pounds at the curb. A second supply is obtained from an elevated tank, of ten thousand gallons' capacity, located 15 feet above the highest sprinklers. As the new addition to the store on Fulton Street necessitated a third source of supply, and it was also desirable to increase the pressure on the systems so that the sprinklers should be made more effective, it was decided to place on the roof two steel pressure-tanks, with a capacity of six thousand gallons each. All of these supplies connect with a general tie-up pipe, so that, should sprinklers open in any part of the building, they would have the advantage of all three sources of supply. The cylindrical pressure-tanks are 6 feet in diameter and 30 feet long; they are set horizontally, and are filled two-thirds full of water. An air-pressure of seventy-five pounds pumped in over the water gives over fifteen pounds pressure on the highest line of sprinklers, when all the water has been discharged from the tank. Should the system open, there would immediately be a large volume of water at high pressure to supply the sprinkler-system. When the pressure-tank is exhausted or the pressure reduced to the pressure of the city, or gravity-tank, then these sources of supply will be brought into action, and will deliver water to the heads. This pressure-tank equipment is one of the largest ever installed, and weighs when completed and filled with water about fifty-five tons. In addition to the automatic-sprinklers inside the building, there is a system of open sprinklers under the cornice on all sides of the risk. These are turned on by hand, and form a water-curtain which is an effective protection against fire in an exposing building. Another interesting feature in the new addition is the use of windows in which glass, with wire netting imbedded in it, is used. The glass is set in metal frames, and forms an effective fire-stop. — *Fire and Water Engineering.*

A Smoke-washing Apparatus. — We have had an opportunity of witnessing a trial of a smoke-washing apparatus which has been placed on the roof of Romano's restaurant in the Strand, London. A similar apparatus is being fixed in the basement of the Imperial Restaurant in Regent Street, but owing to building operations its application has been temporarily suspended at that place. This is to be regretted, as it is stated that the apparatus does its best work when attached to the lower portion of a chimney, as the fan contained in the apparatus so regulates the draught that chimneys are not required. The inventor is Prof. Giovanni Mugna, of Forlì, Italy, who claims for his patent that it deprives the smoke of all those qualities which are objectionable, whether from the point-of-view of health or of cleanliness. It consists of a metal cylinder, at the top of which are openings for the ingress and egress of smoke. A vertical shaft runs through the centre of this cylinder, carrying on its upper portion a centrifugal fan and near its lower end a "whirler," or paddle. Smoke is drawn from the chimney into the cylinder by means of the fan and the whirler mixes it with water contained in the bottom of the cylinder. After being washed the smoke, now almost colorless, escapes from the upper part of the apparatus. This vaporous residue we have not had an opportunity of examining chemically, but the inventor states that it contains only a faint trace of carbonic acid. The following little experiment was made before us: Pieces of wet blotting-paper were held for a few seconds over a chimney leading from a fire where bones and other refuse were being burned. As might be expected, the paper was quickly covered with soot. The smoke-washing apparatus was then connected with the chimney and clean wet blotting-paper was applied over the washed-smoke outlet. On removing the paper only three or four smuts were to be seen. The experiment was repeated several times with similar results; it is fair to state that even the few smuts may have been blown from chimneys in the immediate vicinity. Without any great inconvenience it was quite possible to hold the head over the smoke outlet when only a faint odor resembling burning wood could be perceived. On the residue at the bottom of the cylinder being drawn off it was seen to be a thick fluid of ink-like blackness, giving off a strong odor of smoke. The apparatus is worked by a small electric-motor of about one horse-power. In a building where some sort of motive power is already in use no special motor is required and an electric-motor can always be used where a continuous current is supplied. The machine itself only requires to be emptied once or twice a day. We understand that the apparatus is already in use in Italy. The London address of the patentee is No. 8 Denmark Street, Charing Cross Road, London, W. C. We have said enough to show that the apparatus is one that deserves careful trial. If it should prove that it is capable of doing a fair proportion of what is claimed for it by its inventor it ought to effect an appreciable difference in the atmosphere of any towns where it may be used. — *The Lancet.*

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




CLASS ROOM
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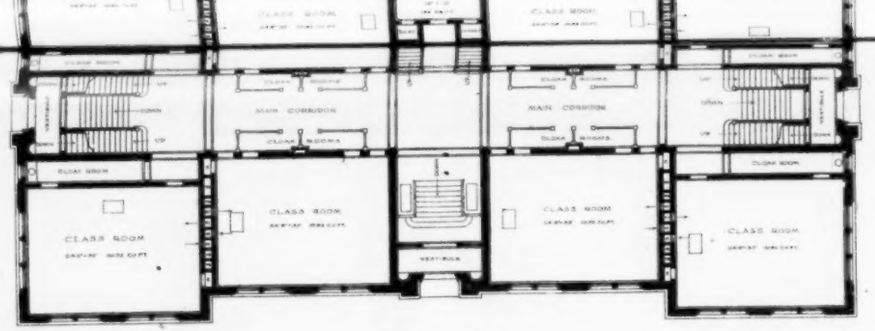
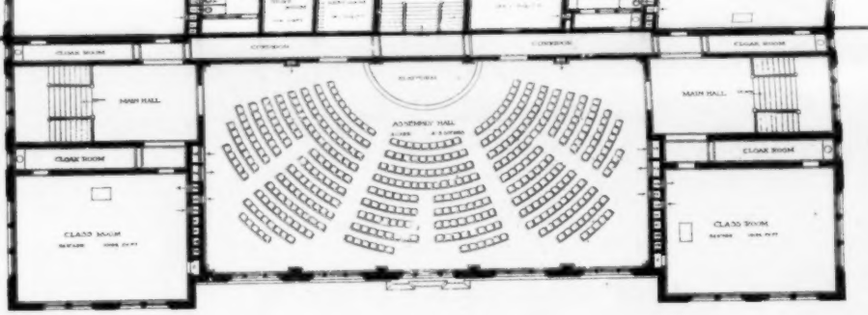


FIRST FLOOR.



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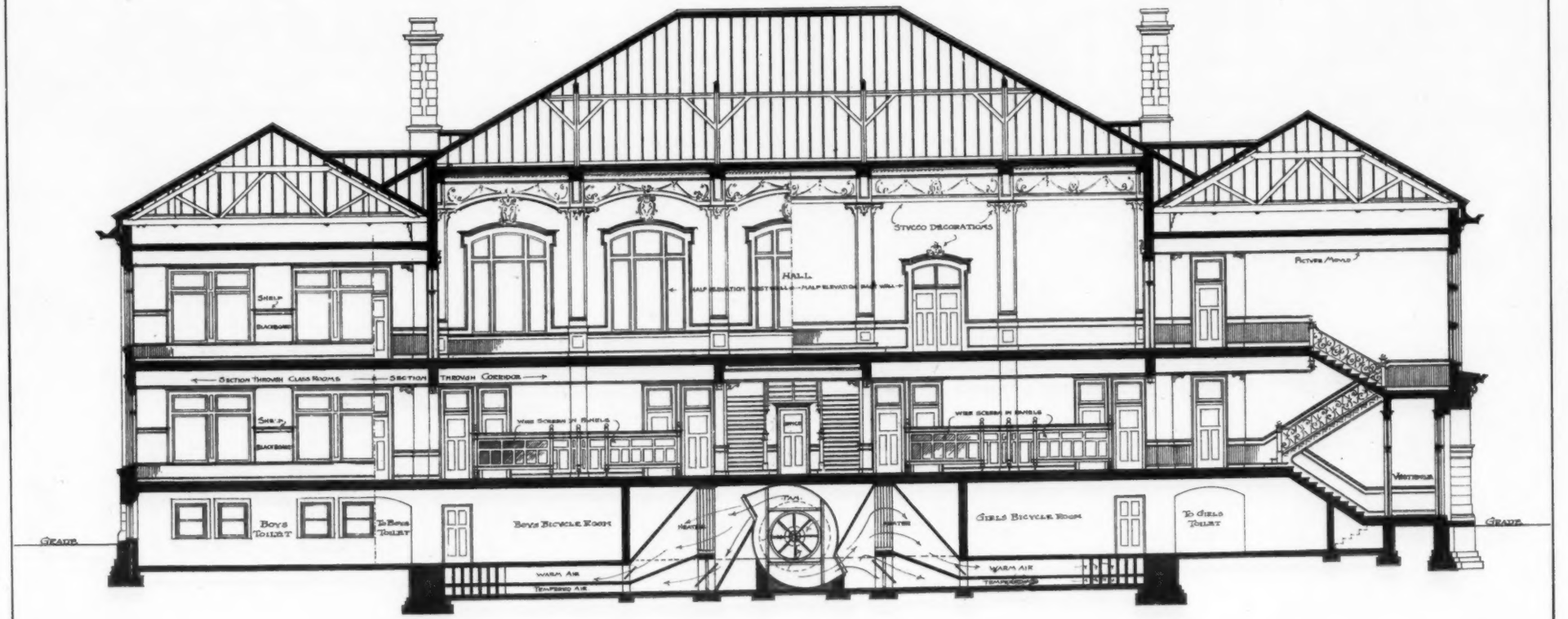

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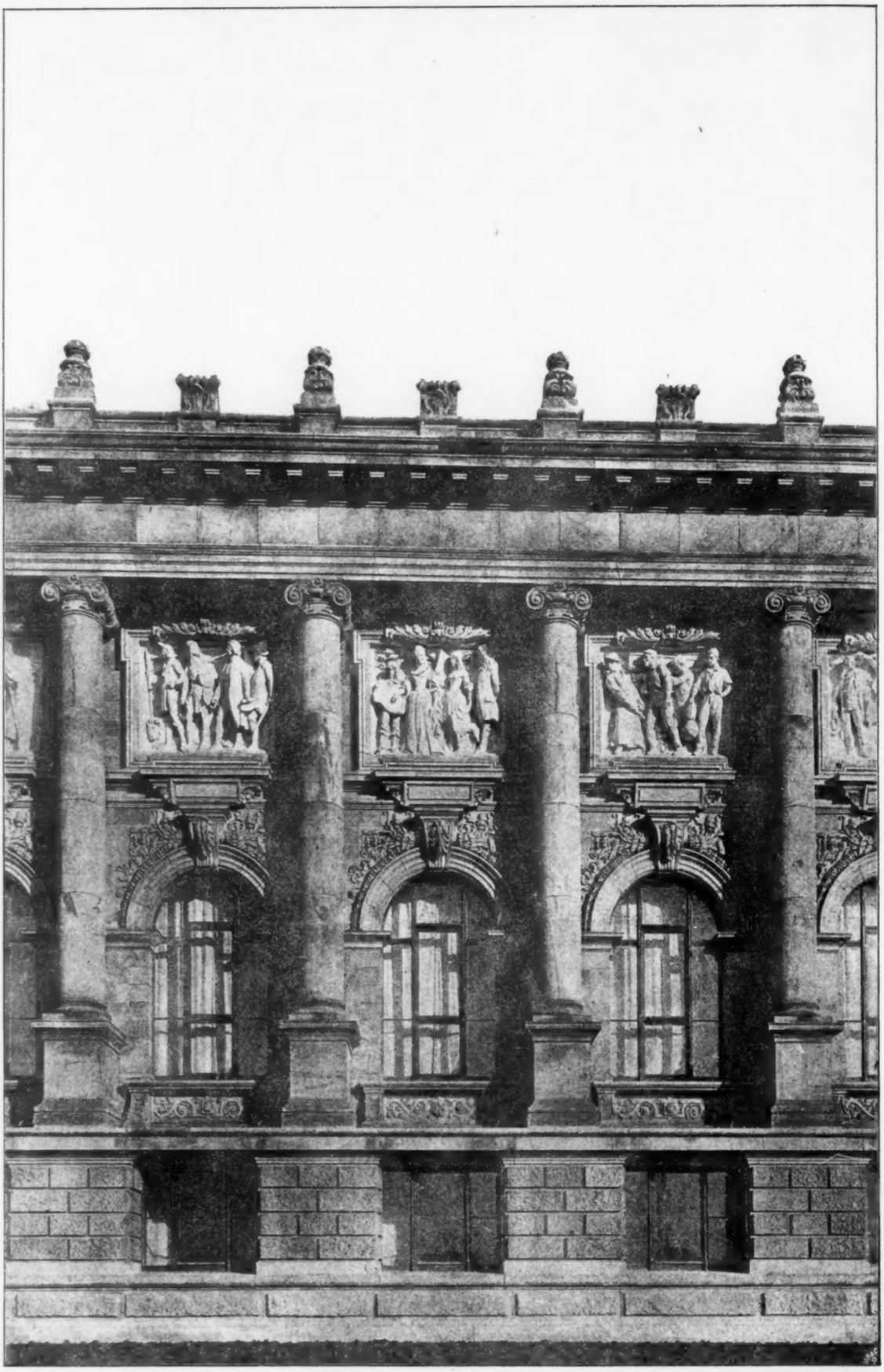
WILBUR T. MILLS, ARCHITECT.

The American Architect
April 25, 1903.
No. 1426.

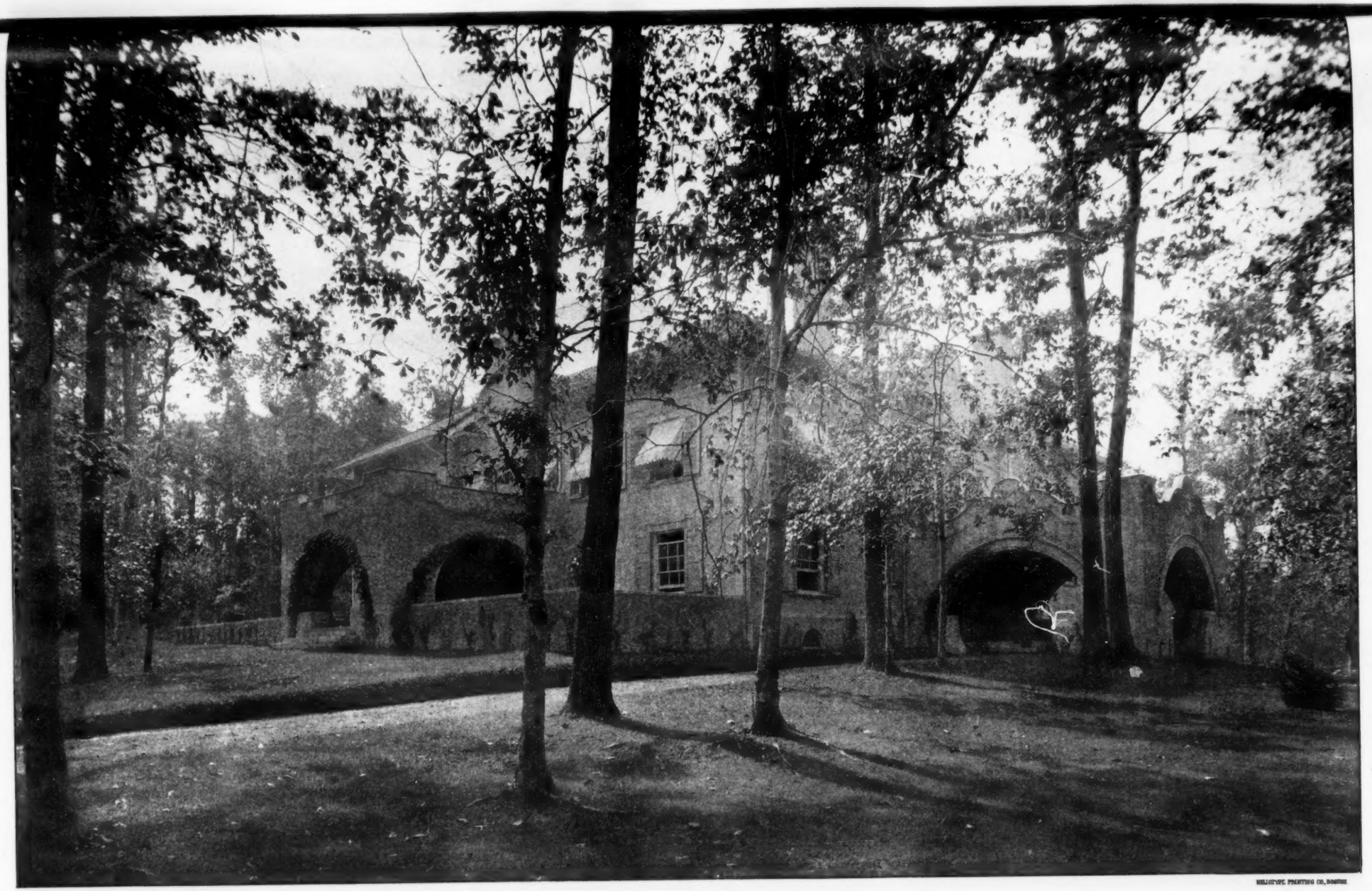


From Deutsches Bauzeitung

DETAIL OF THE NEW PROVINCIAL MUSEUM, HANOVER, PRUSSIA.

PROF. HUBERT STIER, ARCHITECT.

PRIVATE ENTRANCE: GROUNDS OF ROBERT LESLEY ESQ., HAVERFORD, PA.



HOUSE OF ROBERT LESLEY ESQ., HAVERFORD, PA.

LINDLEY JOHNSON, ARCHITECT.

The American Architect
April 25, 1903.
No. 1426.

The American Architect and Building News

A WEEKLY JOURNAL OF CONSTRUCTIVE AND DECORATIVE ART

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Code Of Practice

FOR SUB-ESTIMATING AND SUB-CONTRACTING

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

ARTICLE I.

Obligation of Principal Contractor to Sub-Contractor.

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

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

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

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

ARTICLE II.

Award of Sub-Contracts.

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

ARTICLE III.

Penalty for not Awarding Contract to Lowest Sub-Bidder.

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

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

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

ARTICLE V.

Payments to Sub-Contractors.

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

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

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

ARTICLE VII.

Obligation of Sub-Contractor to Principal Contractor.

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

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

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

ARTICLE X.

Bids to Architects or Owners.

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

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

SUGGESTIONS.

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

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

A true copy.

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

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Nelson, C. T., & Co.
New Jersey Zinc Co.
Pitt, Wm. R.
Sayward, William H.
Tyler Co., The W. S.
Van Kannel Revolving Door Co.
S. Wilks Mfg. Co.

ARCHITECTS' REMOVALS, Etc.

MR. CASS GILBERT, architect, has removed his offices from 111 Fifth Ave. to 79 Wall St., New York City. 1426

A JOINT partnership has been formed by Messrs. Fontaine & Kinnicutt, architects, 58 Commercial Building, Woonsocket, R. I. They desire samples and catalogues from material men. 1426

WANTED.

POSITION. — Architectural draughtsman having more than twenty years' experience on high-class work in some of the leading offices East and West desires engagement, East only. Specialties, steel construction and design. Address "W. B. H.," care *American Architect*. 1428

WANTED.

SUPERINTENDENT. — Employment by practical man as foreman or manager for builder and contractor, or as superintendent of construction. Undeniable references as to ability and integrity. Henry G. Hammon, Oswego, N. Y. 1429

WANTED.

DRAUGHTSMAN — Wanted, first-rate architectural draughtsman of experience. Address Alden & Harlow, architects, Pittsburgh, Pa. 1426

WANTED.

EUROPE. — Any draughtsman who has a desire to visit Europe this summer on an economical basis may learn something of advantage in the fulfilment of his desire by addressing "Europe," this office. t.f.

BUILDING INTELLIGENCE.

(Reported for the American Architect and Building News.)

[Although a large portion of the building intelligence is provided by their regular correspondents, the editors greatly desire to receive voluntary information, especially from the smaller and outlying towns.]

ADVANCE RUMORS.

Albany, N. Y. — St. Peter's Hospital on Broadway is to have a $60,000 extension.

Plans are being prepared by the city architect for a hospital for contagious diseases to be erected in connection with the Albany Hospital. Appropriation, $40,000.

The Albany Homeopathic Hospital is to have a new building on N. Pearl St. It will be 42′ x 100′, costing about $100,000.

Bay Side, N. Y. — The fire department will erect a $30,000 fire house.

Boston, Mass. — The Trus. of the Hospital for Insane have awarded the contract for the new group of buildings for women to be erected at Austin Farm to Alex. A. Sanborn, for $44,399.

Brockton, Mass. — Foundations for a sixteen-apartment block, to be erected for the Bryant estate are going in. It will be erected after plans by J. William Beal, of Boston. A Boston man also has the contract.

Brookline, Mass. — At a recent town meeting, the subject of a new public library was discussed.

Cambridge, Mass. — Plans for the $80,000 dormitory to be erected by Henry Green in Mt. Auburn St. and Mifflin Pl. are being revised. The proposed structure will be 105′ x 165′, three stories high, and constructed of brick and stone.

Corydon, Ia. — It is reported that $5,000 bonds to erect an engine-house and purchase equipment will be issued.

Dillon, Mont. — It is stated that the contract will soon be let for the addition to the State Normal College, to cost $25,000, Haire & Fennell, architects, Butte.

BUILDING INTELLIGENCE.

(*Advance Rumors Continued.*)

Franconia, N. H. — The trustees of Dow Academy have accepted plans for a new building to take the place of the one that was burned last winter. The new building is to be of two stories, of colonial architecture, with a large clock tower in front. The cost is placed at $15,000, and it is understood that of this the town will pay $4,500.

Hartford, Conn. — Plans are being prepared by Architect W. A. Payne, for a new engine-house to be erected on Smith St.

Hazleton, Pa. — Plans have been drawn by Owen McGlynn, of Wilkesbarre, for a school to be erected here, to cost $60,000.

Lexington, Va. — It is stated that a Chicago philanthropist, whose name is withheld, has offered Washington and Lee University a new building, completely fitted out, to be known as the Science Hall. The cost of the new building is stated to be about $40,000. The site as selected is behind the present row of academic buildings. The building will face the athletic grounds, or railroad, and as other buildings are erected they will fill in this site and ultimately change the frontage of the college.

Lynn, Mass. — A large extension is to be built to the Lynn Hospital and it is expected will be ready for occupancy by the first of next November. The extension is to be the gift of the citizens, they having contributed $50,000 for that purpose. The new structure is to be located on the southeast corner of the present hospital site, on Washington St. It will be two stories high, 83 feet long and 37 feet wide, and the two floors will be connected by an elevator. The main building will be of brick and the finishings of granite. The architects are Kendall, Taylor & Stevens.

Natick, Mass. — Plans for new greenhouses to be erected here for the Waban Rose Conservatory Co. have been furnished and are now under consideration. It is probable the contract will be awarded to Lord & Burnham of New York. In dimensions the proposed houses will be 40′ x 700′, covering 28,000 square feet of land, and the estimated cost is $28,000.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

New York, N. Y.—A dormitory of seven stories will be erected by the Knowlton Hall Co. at 124th St. and Broadway, for Columbia University. Estimated cost, $250,000.

Plans have been drawn by John Galen Howard and Everett Waid, 156 Fifth Ave., for the new four-story Fordham Hospital, to cost $500,000. Work will start in August.

G. F. Pelham, 503 Fifth Ave., has completed plans for a nine-story elevator apartment-house, 48′ x 85′, to be erected at 57 and 59 Second Ave., for J. Witner, 302 Broadway; cost, $100,000.

William A. Boring, 32 Broadway, is drawing plans for an eight-story addition, 40′ x 100′, to the Collier Building, at 414 and 416 W. 13th St.; the John Jacob Astor estate is the owner.

Plans have been prepared by G. F. Pelham, 503 Fifth Ave., for a six-story apartment-house with stores, to be erected at the corner of Bleecker and Morton Sts., for Polstein Bros., 9 Bible House; cost, $60,000.

John H. Friend, 148 Alexander Ave., is drawing plans for a five-story stable, 50′ x 172′ 6″, to be erected at 157 and 159 E. 32d St., for Joseph M. Adrian, attorney for the owner. Cost, $55,000.

Norristown, Pa.—A $25,000 school will be erected at Sandy and Walnut Sts., to cost $25,000.

Paterson, N. J.—It is stated that the Second Presbyterian congregation will erect an edifice to cost $100,000. H. T. Stephens, architect, 266 Main St.

Philadelphia, Pa.—The Department of Public Safety will complete plans for engine-house at Old York Road and Champlest Ave.; $15,000 appropriated for it.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

It is stated that $55,000 has been appropriated for an x-ray plant and isolation building for the Hospital of the University of Pennsylvania.

Pittsburgh, Pa.—It is stated that Andrew Carnegie has given this city an additional $1,550,000 for the purpose of enlarging and extending the Carnegie Library.

Plans have been prepared for the three-story brick Free Dispensary building to be erected at Federal St. and Verona Alley at a cost of $50,000. R. M. Trimble, architect, Ferguson Building.

Contract has been awarded J. E. & A. L. Pennock, of Philadelphia, for the erection of the Allegheny General Hospital in this city; estimated cost, $600,000.

This city is to have a great university that will rival the big colleges and universities of the east and west. For its endowment Andrew Carnegie and 20 other wealthy Pittsburghers are pledged.

Plainfield, N. J.—Plans for the proposed new engine-house have not yet been adopted.

Portland, Me.—Watson, Miller & Co. contemplate building a $75,000 business block.

Bids were opened on April 14th at the office of the supervising architect of the treasury for a site for a new federal court building here, for which an appropriation of $60,000 was made at the last session of Congress. Only three sites were received. No examination was taken on these bids, but agents of the treasury department will be sent to this city to examine the sites and confer with federal officials here.

Quincy, Mass.—Ground has been purchased, and a canvass is being made to secure an amount sufficient for a Y. M. C. A. building here.

Rapid City, S. D.—Plans are being prepared for improvements at the State School of Mines. The legislature appropriated $25,000.

Reading, Mass.—Plans have been drawn for a new Y. M. C. A. building here.

Richmond, Ind.—Engineers Sargent & Lundy, 46 E. Van Buren St., Chicago, have prepared plans for

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

a new power-house to be erected here for the Indianapolis-Cincinnati Interurban Co., at a cost of $200,000.

Seattle, Wash.—Plans have been drawn by Bebb & Mendel for alterations to the Hotel Butler, to cost $100,000. Work is to be begun July 1.

It is reported that the Seattle Iron & Steel Co. has been incorporated with $6,000,000 capital, and will establish a large plant.

Sioux City, Ia.—William Gordon will erect a brick building, 100′ x 100′, on the northwest corner of 5th and Nebraska Sts. Cost, $50,000.

Work on the Swasey Building will be started as soon as the ground is ready. Cost, $40,000.

South Bethlehem, Pa.—It is stated that a three-story brick Science building will be erected for the Lehigh University by Prof. H. Williams, Jr., of Andover, Mass., at a cost of $65,000.

Spokane, Wash.—L. L. Rand, Rookery Building, and J. K. Dow, Peyton Building, are preparing plans for a $50,000 temple for the Masonic Assoc.

The Trades Council has endorsed the erection of a labor temple to cost $75,000.

Andrew Carnegie offers this city $75,000 for a library building.

St. Joseph, Mo.—It is stated that the Francis M. E. congregation is considering the erection of a new edifice, to cost $70,000.

St. Louis, Mo.—The plans of Frank L. Packard, Hayden Building, Columbus, O., have been accepted for the Ohio Building, to be erected on the grounds of the La. Purchase Exposition; estimated cost, $55,000.

The Peters Shoe Co. will erect a four-story factory of mill construction, to cost about $75,000. Plans by Matthews & Clarke, architects.

St. Paul, Minn.—The Criterion Theatre Co., with a capital of $50,000, has been incorporated to erect a theatre here. Plans by H. G. Carter, Minneapolis.

Tacoma, Wash.—A three-story building costing $25,000, is to be erected at Ainsworth and 6th Aves., for the Puget Sound University.

The F. H. Goss Constr. Co. has received the contract for erecting a three-story building at 11th and C Sts. Cost, $50,000.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Toledo, O.—The Broadway Savings Bank Co. is stated to have accepted plans prepared by Geo. Mills & Co., Gardner Building, for an office-building to cost $32,000.

Plans have been completed by Architect Liebold for a group of factory buildings for the American Woodenware Co., to be erected on Western Ave., near the Lake Shore Railroad. The buildings will be one and two story brick structures and will cost in the aggregate between $25,000 and $30,000.

Torrington, Conn.—The Bd. of Educ. is to erect two 8-room school-houses at Main and Elm Sts. and Litchfield and Albert Sts., respectively; estimated cost of both structures, $60,000.

Trenton, N. J.—It is said the Governor has signed the bill providing for an appropriation of $125,000 to rebuild or erect an armory for the First Troop of Cavalry of New Jersey.

Walla Walla, Wash.—The Bd. of Educ. has purchased a site for a high school-building to be erected here. Cost, about $50,000.

Waltham, Mass.—The New Church school (Swedenborgian) will be enlarged by the addition of a fireproof dormitory. The plans show a three-story brick building with a basement containing laundry, furnace-room and a large bicycle-room which can be used as a play-room. On the first floor will be the living room, dining-room and reception-room. The matron's room, four rooms for pupils, bathrooms and servants' quarters will be upon the second, while the third floor will have a teachers' room, guest chambers, five rooms for pupils and two bathrooms. The school is greatly indebted to Arthur H. Carey of Newtonville for the generous gift of the building.

Washington, Pa.—Walker & Slater have received the contract for erecting the library for Washington and Jefferson College; probable cost, $50,000.

Waterbury, Conn.—It is reported that bids are being received by Chickering & O'Connell, architects, of Manchester, N. H., for a $50,000 church and a $20,000 residence for Rev. J. J. Curtin.

A syndicate of citizens is to build a hotel here to cost $300,000. The stock has been subscribed for locally. Bowditch & Stratton, Boston, and Griggs & Hunt are the associate architects. Plans not yet completed.

Watertown, N. Y.—The city will spend $100,000 on a mechanical filter plant.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Waterville, Me.—The Waterville Savings Bank is excavating for an office block to cost $20,000. It will be of brick and stone, three stories, 59′ x 90′. Wm. M. Butterfield, 1037 Elm St., Manchester, N. H., architect.

Webster, Mass.—The citizens have voted to issue $60,000 bonds for the erection of a high school.

Winona, Minn.—The Northwestern will expend about $50,000 in enlarging the local shops.

ALTERATIONS AND ADDITIONS.

St. Paul, Minn.—*Seventh and Wabasha Sts.*, two-st'y bk. addition, 68′ x 168′, gravel roof, steam; $35,000; o., Geo. E. Lennon; a., J. Walter Stevens.

APARTMENT-HOUSES.

Chicago, Ill.—*Stony Island Ave. and Sixty-second St.*, three-st'y bk. apart., 50′ x 136′; $40,000; o., W. P. Doerr; a., J. F. & J. P. Doerr, 1222 Chamber of Commerce.

Cleveland, O.—*Pearl St.*, cor. Erin St., four-st'y store & apart., 70′ x 110′; $40,000; o., Chas. Aby; a., A. A. French.

Tacoma, Wash.—Three-st'y bk. & st. apart.; $40,000; o., P. H. Hebb; a., C. A. Darmer.

PROPOSALS.

COLLEGE BUILDING. [At Milwaukee, Wis.]
The Bd. of Trus. of the State College will receive bids **May 6** for erecting the central college building. 1426

HEATING AND PLUMBING. [At Grand Rapids, Minn.]
Bids are wanted **May 8** for heating and plumbing a school. E. B. McCARTHY, Clk. of School Bd. 1426

COURT-HOUSE. [At Abbeville, Ga.]
Bids are wanted **May 4** for erecting a $50,000 court-house. Frank P. Milburn, archt., Columbia, S. C. 1426

COURT-HOUSE. [At Albany, Ga.]
Bids are wanted **May 4** for erecting a court-house. T. F. Lockwood, archt. 1426

PROPOSALS.

BUILDING. [At Jamestown, N. D.]
Bids will be received **May 5** by the Bd. of Trus. for erecting a ward building at the State Hospital for the Insane. M. E. Beebe, archt., Fargo. CHAS. F. MUDGETT, Sec'y of Bd. 1426

HOT WATER SYSTEM. [At Newport, Ky.]
Bids will be received **May 4** by the Fiscal Court for removing old heating apparatus and installing a new overhead hot-water system of heating for the Campbell Co. court-house at Newport. H. D. PHILLIPS, Chmn. of Com. 1426

BUILDINGS. [At Fort Brady, Mich.]
Bids are wanted **May 4** for constructing 2 double brick barrack buildings at this post. W. H. MILLER, Ch. Q. M., U. S. A. 1426

PLUMBING AND ELECTRIC SUPPLIES. [At Washington, D. C.]
Bids are wanted **May 4** for furnishing plumbing and electric supplies, etc., for use of the Government Printing Office during the fiscal year ending June 30, 1904. F. W. PALMER, Pub. Printer. 1426

BUILDING. [At Topeka, Kan.]
Bids will be received **May 6** by the Kansas Comrs. of the Louisiana Purchase Exposition at the State Capitol building for erecting the Kansas State building at said exposition. W. W. Rose, archt., Postal Telegraph Bldg., Kansas City, Mo. Address JOHN C. CARPENTER, Pres. 1426

ADDITION TO SCHOOL. [At Montezuma, Ia.]
Bids are wanted **May 4** for erecting an addition to the high school. H. F. MORTON, Sec'y Bd. of Educ. 1426

CHURCH. [At Carrollton, Ky.]
Bids will be received **May 15** by the Rev. I. M. Ahmann, for constructing the superstructure of St. John's Catholic Church. Leon Coquard, archt., Detroit, Mich. 1427

COURT-HOUSE. [At Lincoln, Ill.]
Bids will be received at the office of the county clerk of Logan County, Ill., **until May 11,** for the construction of the new county court-house. J. M. Deal, architect. X. F. REIDLER, county clerk. 1427

LIBRARY BUILDING. [At Johnson City, Tenn.]
Sealed proposals will be received at the office of the National Home for Disabled Volunteer Soldiers, 346 Broadway, New York, N. Y., **until May 14, 1903,** for furnishing materials, labor, etc., for the construction of a library building, from funds to be provided by Mr. Andrew Carnegie, of New York City, at the Mountain Branch, N. H. D. V. S., near Johnson City, Tenn. Plans may be seen, and copies of instructions and specifications, together with blank proposals and other information had upon application to the architect, J. H. Freedlander, 244 Fifth Ave., New York, N. Y.; at the office of the Superintendent of Construction, Mountain Branch, Johnson City, Tenn., and at the office of Gen. M. T. McMahon, President of the Board of Managers, N. H. D. V. S., 346 Broadway, New York, N. Y. 1427

CEMENT. [At Zanesville, O.]
U. S. Engineer Office, Zanesville, O. Sealed proposals for furnishing about 700 barrels American Portland cement will be received here **until May 18, 1903.** Information furnished on application here to Assistant Engineer Edmund Moeser. MAJOR ERNEST H. RUFFNER, Engrs. 1428

PROPOSALS.

PAVING. [At Norfolk, Va.]
Sealed proposals will be received at this office on **May 14, 1903,** for laying about twenty-two (2,200) hundred square yards of asphalt paving on Clay St., in this city. Forms of proposals, instructions to bidders and specifications for the work may be obtained on application to W. T. Brooke, city engineer, or B. Gray Tunstall, Chairman of the Board. B. GRAY TUNSTALL, Chairman Boards of Street, Sewer and Drain Com. 1427

Treasury Department, Office of the Supervising Architect, Washington, D. C., April 9, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 12th day of May, 1903, and then opened, for the construction, including plumbing, heating and electric wiring and conduits of the extension to the U. S. Post-office and Court-house at Beaumont, Texas, in accordance with the drawings and specification, copies of which may be had at this office or at the office of the Custodian at Beaumont, Texas, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1426

Treasury Department, Office of the Supervising Architect, Washington, D. C., April 11, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 25th day of May, 1903, and then opened, for the installation of a conduit and electric wiring system for the U. S. Post-office at Lockport, N. Y., in accordance with the drawings and specification, copies of which may be obtained at this office or at the office of the Superintendent of Construction at Lockport, N. Y., at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1426

Treasury Department, Office of the Supervising Architect, Washington, D. C., April 11th, 1903. Sealed proposals will be received at this office until 3 o'clock P. M. on the 14th day of May, 1903, and then opened, for the construction (except heating apparatus and passenger elevator) of the extension of the U. S. Custom-house and Post-office at Hartford, Connecticut, in accordance with drawings and specification, copies of which may be had at this office or at the office of the Custodian at Hartford, Connecticut, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1426

STEAM-HEATING PLANT. [At Shakopee, Minn.]
Sealed bids will be received by the Board of County Commissioners of Scott County, Minn., at the office of the County Auditor in Shakopee, Minn., **until May 8th, 1903,** for placing a steam-heating plant in the court-house of said county, according to plans and specifications on file with the said auditor; also at Builders' Exchange, Minneapolis, and Builders' Exchange, St. Paul. J. H. MOORE, County Auditor. 1426

PROPOSALS.

BUILDING. [At Rapid City, S. D.]
Department of the Interior, Office of Indian Affairs, Washington, D. C. Sealed proposals will be received at the Indian Office **until May 1, 1903,** for furnishing and delivering the necessary materials and labor required to construct and complete a frame employés' quarters and frame addition to laundry, and a brick employés' quarters, all with plumbing and acetylene gas piping; also an addition to a brick dormitory with plumbing and gasoline gas piping and a frame acetylene gas-house, with plumbing and heat and a quantity of gas-fixtures, all at the Indian School, Rapid City, S. D., in strict accordance with plans, specifications and instructions to bidders. For further information apply to Sam B. Davis, Supt., Indian School, Rapid City, S. D. A. C. TONNER, Acting Commissioner. 1426

BUILDINGS. [At Flandreau, S. D.]
Department of the Interior, Office of Indian Affairs, Washington, D. C. Sealed proposals will be received at the Indian Office **until May 6, 1903,** for furnishing the necessary materials and labor required to construct and complete at the Flandreau Indian School, S. D., one brick warehouse and office with plumbing and steam heat; one brick shop and one frame laundry with plumbing and electric light, in strict accordance with plans, specifications and instructions to bidders. For further information apply to Chas. F. Pierce, Supt. Indian School, Flandreau, S. D. A. C. TONNER, Acting Commissioner. 1426

SCHOOL. [At Hamilton, O.]
Geo. W. Barkman will receive bids **May 1** for erecting a 10 room school for St. Joseph's Catholic Church, to cost $25,000. 1426

PORTLAND CEMENT. [At Catlettsburg, Ky.]
U. S. Engineer Office, Custom-house, Cincinnati, O. Sealed proposals for furnishing about 5,000 barrels American Portland cement at Catlettsville, Ky., for use at Dam No. 1, Big Sandy River, will be received here **until noon, standard time. May 4, 1903.** Information furnished by MAJOR ERNEST H. RUFFNER, Engrs. 1426

BUILDING MATERIALS, HARDWARE, ETC. [At West Point, N. Y.]
Sealed proposals will be received here **until May 1, 1903,** for building materials, plumbing materials, hardware, tools, paints, glass, furnace and range parts, and other miscellaneous stores specified on schedules to be had upon application here. Q. M., U. S. M. A. 1426

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Professional Ethics.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[See Alphabetical Index on Cover 2 for Pagination.]

CLASSIFIED ADVERTISEMENTS.

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