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IT is impossible not to feel a little sympathy with the firm of architects upon whom the reporters and sub-editors of certain New York newspapers are now exercising their powers of vituperation. While we strongly disapprove of the practice of employing architects to examine or criticise the work of other architects, who are carrying out their commissions honestly and skilfully, and we are sure that Mayor Van Wyck, if he thought that the new Hall of Records was likely to cost too much, would have found Mr. Thomas ready to listen to his suggestions, and entirely competent to arrange necessary economies with the least practicable injury to the artistic effect of the building, without calling upon outside architects for advice, the part that Messrs. Horgan & Slattery took in the affair is very far from justifying the abuse which has been showered upon them. No doubt, it would have been creditable to them if, when called in by Mayor Van Wyck, they had declined to interfere in any way with matters which had been entrusted to Mr. Thomas, but the laws regulating public works in New York provide for a good deal of supervision of one professional man by another, as, for example, in the case of Mr. Post and Messrs. Withers & Dickson in the matter of the Tombs prison; and Messrs. Horgan & Slattery probably considered that they would hardly be justified in disregarding a mandate which derived from its official character a certain claim to their obedience as citizens.

EXCEPT as to the principle of invasion of a brother architect's province, there is no fault to be found with the report of Messrs. Horgan & Slattery on the finishing of the Hall of Records. The copy of the report, which they have been kind enough to send us, shows a straightforward, intelligent and sensible examination of the subject, accompanied by sincere commendation of the skill and care shown by Mr. Thomas in his designs and specifications. Professional history is not without examples of the substitution, with their own consent, of consulting architects in the place of those of their brethren whose work they have been called upon to examine; but Messrs. Horgan & Slattery are careful not to cast the slightest imputation of any kind on Mr. Thomas, and, so far as the report suggests, the idea of superseding him seems never to have entered their minds. Supposing them, therefore, to have fulfilled the Mayor's request frankly, their conclusions can hardly be criticised. Mr. Thomas's specifications call for verd antique marble throughout the basement of the building; for Monterrenti Sienna marble as the material of all stairs from the basement to the roof, and for the finishing of all halls and passages from the basement to the fifth story; for green Connemara marble for the finish of all rooms in the first story; pavonazzetto marble for all second-story rooms; verd antique in third-story rooms; Lake Champlain jasper in fourth-story rooms; yellow Numidian marble in sixth-story rooms, and so on; while one of the court-rooms is finished with "Old Convent Monterrenti Sienna," and the other with Connemara green marble. In addition to such extraordinary richness of material, much of the figured marble is elaborately carved. As the building is not destined for public festivals, but simply to hold piles of dusty books, to be consulted by a few lawyers' clerks, Messrs. Horgan & Slattery may well be excused for saying that the intended marble decoration is unnecessarily elaborate, and the fact that by modifying it in the manner which they suggest, and leaving out certain groups of statuary on the exterior, which are hardly necessary, however desirable they may be, they estimate that a million dollars can be saved to the taxpayers, is quite sufficient to justify their opinion. It is rather unfortunate for Mr. Thomas that his natural vexation, at having his work interfered with, has led him to expostulate against destroying the artistic effect of the building by the economies proposed, thus putting himself into the category of those architects who will not listen to any suggestions from their clients, and so far justifying the appointment of other architects to revise his work. What he should have done, as it seems to us, and what other architects might wisely do under similar circumstances, would be to say that he was ready and willing to make all these economies, and even more, if he had known that the Mayor desired them. As he was obviously the proper person to revise and modify his own designs, an assurance of this kind of his willingness to conform to the wishes of those who employed him would have made the action of the Mayor in bringing outside architects into the matter seem treacherous and unjustifiable, and would have won for him the popular sympathy and support which is likely to be driven over to Messrs. Horgan & Slattery by the scandalous abuse which is showered upon them by persons professing to be Mr. Thomas's defenders; and we trust that, even now, the profession in New York may do something to clear up the misunderstanding, for the benefit of all the architects concerned.

A LETTER from the West gives an account of a curious matter. Under date of July 8, the Superintendent of Schools of a certain town issued a circular letter to architects, informing them that plans and specifications would be received until noon of August 7, for a high-school building, to be built of stone, or of pressed brick with stone trimmings; to contain accommodations for six hundred pupils, including "a large number of good class-rooms"; an assembly-room with six hundred seats, "a spacious library or reading-room"; laboratories, "plenty of cloak-rooms, wide hallways, broad and easy stairs, etc.," and to cost complete, including ventilating apparatus, plumbing, electric-wiring and blackboards, not more than forty-five thousand dollars. For such plans and specifications as might be accepted by the School Board, which did not bind itself to accept any, one thousand dollars was offered, payable only when a contract had been signed for the erection of the building for a price within the limit of cost fixed. Certain architects to whom this invitation was sent forwarded it to us, with a copy of their letter in reply, in which they point out that the compensation offered for the accepted design is entirely inadequate, while it would be impossible to secure a building of the style and accommodation required for the amount specified. Most probably the cost would be at least twice the specified limit, and these architects expressed their conviction that no conscientious architect would enter the contest.

EVERY architect whose opinion in such matters is worth anything will be of the same mind, and one can only wonder that intelligent men, such as the members of the School Board, judging from their statement of their requirements, seem to be, should deliberately involve themselves in the perplexities, if not disasters, which are sure to follow from their action. For the benefit of other laymen who may be tempted to entangle themselves in similar difficulties, we may be permitted to point out, not for the first time, the inevitable consequences of this method of managing public building-work. It is obvious enough that men with common-sense,

especially the members of a city School Board, who have had school-buildings to pay for, and know something of the cost of erecting them, cannot really expect to get a ninety-thousand-dollar building for forty-five thousand dollars, and their unavowed, and probably half-conscious, intention in setting their requirements and their limit of price so wide apart is to mislead, or, to put it plainly, to defraud somebody. The desire to deceive and mislead, which is generally sufficiently strong in the human heart, thrives under the influence of municipal politics, and an opportunity to delude taxpayers and voters by a display of the extraordinary advantages which the Board expects to obtain for half their value, joined with the hope of getting the better of some architect incautious enough to promise impossibilities, is too strong for most School Boards to resist. Unfortunately, the architects who accept terms that the honorable members of the profession refuse are more than a match for School Boards, and universal experience shows that the public buildings erected by architects who accept such terms are those in which the worst results are obtained at the greatest cost. In the present instance, the fact that only four weeks are allowed for preparing the plans and specifications suggests, to the experienced professional man, the idea that the Board has already privately fixed upon its architect, and that its "competition," in which terms are fixed which will make it easy to escape from paying for any of the competitive designs, is simply intended to secure, without expense, plans and suggestions from other members of the profession, to be utilized for the benefit of the favored one and his friends. All architects know that this trick is played every day in municipal work, and although we do not pretend that every one's intentions in the present case are not perfectly pure, they are unfortunately indicated. The circumstance, mentioned in the invitation, that plans and specifications only are desired from competitors, superintendence being otherwise provided for, suggests at once to architects hardened in worldly ways that the future superintendent is the person for whose benefit the competitors are "invited" to exert themselves, and in their minds arises a vision of a pleasant scheme, by which the "superintendent," who, not being a competitor, is not bound by any of the terms of the competition, is given virtually *carte blanche* to extract such ideas as he likes from surreptitious tracings of the "competitive" drawings, and carry them out in such way, and at such cost, as he, and the School Board, and the contractors, may think desirable. If the building, erected in this way, costs three or four times as much as the professed limit, and twice as much as an honest and skilful architect could have got it built for, the blame is readily shifted upon the authors of the plans which have been utilized, and the infirmities which usually develop later in the construction of buildings thus carried out are laid at the same door; so that the taxpayers, when the bills are paid, and they look ruefully at the contrast between the intended and the actual cost, are easily led to believe that they have been the victims of the wickedness of architects, and that only the vigilance and industry of their School Board and its supervisor of construction have saved them from a fate still worse.

EVEN where such Boards are perfectly honest, and really believe that, by some happy interposition of Providence, they are destined to obtain for their constituents a school-building for less than one-half of its value, the result is not very different. It must be a wise School Board that can tell, from a builder's proposal, whether he has really bound himself to deliver the building that they desire, complete in every detail. The best architects alone are competent to protect their clients in such matters, and Boards which cannot, or will not, employ such assistance are practically at the mercy of their contractors, who, after the contract is signed, find excuses for extra work to an amount exceeding, in some cases, the whole contract price; and it is needless to say that such extra work, not being under the intelligent control which would be provided for by a first-class architect, is done at an enormous profit.

WE do not believe that architects realize how much their over-willingness to solicit employment, and to do work for nothing, in the hope of securing a client, discredits them in the eyes of the world. Not only are their incomes greatly diminished by the necessity for paying draughtsmen to do the gratuitous work which they have led the public to expect of them, but their authority as artists and men of science is far less than it should be, and than it would be if they did not degrade themselves in the eyes of the public by what appears to people in general to be an unseemly habit of scrambling and fighting with one another for employment. Among all the professions, there is none which requires for its successful practice greater natural aptitude, more thorough preparation and higher probity, than that of architecture; yet the incomes, and the standing in public opinion, of the best architects cannot be compared with those of eminent lawyers, for the reason, as we believe, that good lawyers, unlike architects, never cheapen their services by undignified solicitation of employment. More than this, the effect of the lavish offers of gratuitous assistance by architects is to persuade the public that the value of such service is really about that which the architects themselves seem to place on it; and, while a good lawyer's opinion on the most trivial question is listened to with awestruck respect, liberally paid for and scrupulously followed, the advice of architects is questioned, criticised, and often wantonly disregarded, apparently for no other purpose than to show them that it is considered worthless. Fortunately for the architects, this manner of treating them sometimes brings retribution. The older members of the profession will remember Sir Edmund Beckett, now Lord Grimthorpe, and his "*Book on Building*," in which he expressed vigorously the views current among laymen on the subject of architects. Having become in some way enormously rich, he undertook to show how much better building-work could be carried on by an intelligent lawyer than by an architect, and obtained leave to restore and rebuild the Cathedral of St. Albans, at his own expense. The designs for this work were what might have been expected, but it seems now that the materials were defective; and, although the building is hardly yet finished, the stone, according to the *British Architect*, has begun to decay so badly that some portions of the work, completed only a few years ago, have been replaced with new stone, and symptoms of disintegration are visible in many other places. Considering that the eminent amateur considered, as he tells us in his book, "an eye for defects" to be the most valuable possession of a supervising architect, it is strange that he should himself have overlooked a "defect" so common, and so easily guarded against, as perishable stone in the building upon which he lavished not only care but money. We once knew a client who was quite sure of his ability to superintend the construction of his house, and undertook to do so. It is hardly necessary to say that the time spent by the architect in making suggestions, and helping him out of difficulties, would have gone far toward furnishing complete superintendence; and, after the house was done, the client meekly remarked that he "had not supposed there were so many things about a house." So Lord Grimthorpe, like many another man, has probably discovered that there are more things about good building than he had imagined, and if architects would only set the proper value on what they know, his example would do a good deal to discourage amateur building, at least in England, to the advantage of the professional architects.

M. FROSELL, of Stockholm, has patented a cement for making artificial stone, consisting of calcined carbonate of magnesia, or magnesian limestone, mixed with a solution of chloride of zinc or chloride of magnesium. It is explained that these latter substances are converted into insoluble oxychlorides, and whatever we may think of the chemistry, it is asserted that the mixture makes a very hard and durable cement. M. Frosell adds to it from two to five per cent of "a carbonate, a sulphate or stannate," with the object, apparently, of having something to patent, for the mixture of calcined carbonate of magnesia with chloride of magnesium was patented many years ago, by M. Sorel, and was long used, under the name of "Union Cement," by the Union Stone Company, of Massachusetts. In their hands it was made so fine and white, as well as strong, that billiard-balls were cast from it, and it was in great request for cementing emery into emery-wheels. Sorel, we believe, afterwards made the mistake of adding an alcoholic solution of shellac to his artificial stone, but nothing of the kind was employed in the original mixture. The building world is greatly in need of a strong, white cement, and if M. Frosell can bring about the manufacture, at a low price, of a revised form of the magnesian cement, the materials for which are abundant in many parts of the United States, he will deserve well of the public, even if his patent should not be worth much.

PAINT-FACTS AND PAINTING SPECIFICATIONS.[1]—IV.

THE EARTH OR IRON PIGMENTS.

Escutcheon from the Monument to Alexander III, Moscow, Russia.

FROM the architect's standpoint, the next most important pigments to the two metallic whites, white-lead and zinc-white, form a group of pigments of strong coloring, yellows, reds and browns, which are many of them of natural origin, requiring only washing and grinding to make them suitable for paint, or else they require only a simple treatment of roasting. These are generally known as the earth pigments and comprise the ochres, siennas, umbers, Venetian and Indian reds and mineral or metallic reds and browns. An essential element in their composition is iron, and as it is to the different oxides of this metal that these earth pigments owe their coloring they are also known as iron pigments. While these are used to produce light tints when mixed with a white base, they are probably more often used without the addition of any white base, and when pure all of them produce paint of great durability compared with either white-lead or zinc-white, owing to their great capacity for absorbing oil, and also owing to the fact that they are practically inert chemically with respect to the oil, and hence do not combine with it to form a soap, but are merely held in suspension by the oil, which when it dries to form a leather-like skin holds these particles of pigment in itself, the same way that the sand is held by the lime in mortar, the whole uniting into a homogeneous mass of greater strength and capacity to resist the wearing action of the weather than would be possessed by either the dried linseed-oil alone or the pure lime. Paint made by the mixture of these earth pigments with pure linseed-oil perishes by chalking or flouring off, the same as white-lead paint, but much more slowly, and when the paint has perished it is always in suitable condition for repainting by simply brushing on a thin coat of new paint, the oil of which will unite with the loose particles on the surface to cement them together and form a smooth substructure for any subsequent coats of paint that may be placed upon it. Were it not for the fact that the colors of most of these earth paints are too strong to satisfy modern taste in house-painting, they would make ideal paints in every way, for not only are they very durable, but they are comparatively inexpensive. These factors have made them standard in all cases where durability and the property of protecting the surface against the action of the weather are primarily sought for and where color is a secondary consideration, as, for example, in painting freight-cars, bridges, barns, fences, wharves, sheds and out-houses; in short, for all classes of wooden structures where something better and more durable than whitewash is needed.

As these pigments are mostly of natural origin, there is a greater range of quality in the genuine pigment than is possible in artificially-made pigments like white-lead. Not every earth that is properly termed an ochre because of its chemical composition is fit for use as a paint, and some of those ochres which best answer the chemist's definition of pure are utterly unsuited for the purpose of the painter. A laughable instance of error from this mistake on the part of a chemist of ability, but without any special knowledge of paint manufacture, occurred a few years ago. A well-known Boston chemist who was employed by a member of the Massachusetts Society of Master Painters and Decorators to analyze a number of ochres which had been purchased at different supply-houses in Boston reported that all the samples submitted to him for examination were largely adulterated because none of them were pure hydrated oxides of iron. But, as was immediately shown in one of the leading painting-trade magazines, the very samples which the Boston chemist condemned were proved by the analysis which he gave to be ochres of excellent quality from the standpoint of value to the painter, however they may have appeared to the chemist without special training in the analysis of paints. The best French ochres, about whose purity there is absolutely no question, contain from 16 to 24 per cent of ferric oxide, from 40 to 50 per cent of silica, and from 16 to 20 per cent of alumina, which are the natural constituents of all true paint ochres. The French ochre which contains the highest percentage of ferric oxide has but 28.91 per cent of this material. The architect should guard against the error sometimes committed of specifying that any of these earth pigments (except Indian red) should be free from other ingredients than the particular oxide of iron peculiar to that pigment.

Rich finds of ochre are frequently announced in various sections of the country, and most of these so-called ochres are rich in ferric oxide, entirely too rich to make them of any value whatever as paints. Much money has been sunk by over-enthusiastic investors, who have been led away by the reports of chemists as to the value of these ochres only to find that they were unable to market them because the material obtained from these "paint mines" was utterly unsuited for use as paint. Very little American ochre has been found that is of any value for the highest grades of painting, though some beds have produced fairly good ochres for rough work. If the architect wishes to specify the quality of ochre to be used on his work, probably he can do no better than to follow the specifications of the United States Navy Department, which read: "Must be equal in color and quality to the best French ochre, and be free from clay, chromate of lead or foreign coloring matter. The dry pigment must contain at least 20 per cent of oxide of iron, and not more than 5 per cent of lime in any form."

The use of ochre has already been mentioned for priming, either alone or in combination with white-lead. Experience has proved that next to pure white-lead there is no material for priming superior to pure ochre of the French type, because it possesses a peculiar property of holding fast to the grain of the wood. But the mistake of using cheap ochres for priming purposes must be avoided. These are usually low-priced native ochres doctored with cheap chrome yellow and loaded with barytes to further cheapen them. They are coarse in texture, and as barytes is a very poor absorbent of oil, they will not hold the quantity of oil which gives ochre its value as a priming paint. Such cheap ochres may be made to closely resemble genuine French ochre in appearance but not in quality. There is no reason to believe that any reputable manufacturer will attempt to sell such doctored and adulterated ochres as pure, and it is always possible to get good quality French ochre if the painter is willing to pay the price. It may be well to mention that where yellow is desired for a body color, either pure ochre, or a tint formed of white-lead and ochre will hold its color far better than a tint formed from chrome or lemon yellow, and is much to be preferred in every way. While it is not possible to get quite as bright a yellow at the start with the ochre, the difference will be in its favor at the end of a few months.

Siennas, the best grades of which are of Italian origin, owe their coloring-matter to hydrated ferric oxide and manganese oxide, the latter of which gives them their excellent drying properties. They have a smaller percentage of alumina than the ochres. Raw sienna makes a very valuable pigment for the painter, giving strong yellow tones both alone and for tinting a white base, and the finer grades, which are transparent, are also used by grainers and for the production of pigment stains. Burnt sienna, obtained by roasting the raw sienna, is a beautiful rich brown. But as sienna is comparatively expensive, it is not so generally used for brown tones as the cheaper umber. This color is one of the stand-byes of the painter, and is used both for tinting and for a body color. Like sienna, it owes its color to iron oxide and manganese oxide, its other constituents being the same as ochre. The difference in quality of umbers in the crude state, both raw and burned, is something remarkable, the difference in the staining power of two samples being often as much as fifty per cent. Umbers of a rich brown tone are much more diffcult to obtain than those of a red tone, and are consequently higher priced.

Umber makes a very durable paint owing to its large absorption of oil. It requires nearly twice as much oil to grind one hundred pounds of umber to a stiff paste as it does to thin one hundred pounds of white-lead to the proper consistency for painting. As the durability of any paint is directly proportional to the quantity of oil it contains, it will readily be seen that umber ought to be of great durability, and experience justifies this reasoning. One of the most durable brown paints that can be obtained is composed of a mixture of ochre, umber and sienna with a little lamp-black. In color it is exceedingly pleasing, and will far outlast either white-lead, zinc-white or any combination paint based upon these pigments. It gives a soft velvety foundation for subsequent coats of paint, hence is well adapted for a priming paint, and is always in good condition for repainting without special treatment. Where the window-frames and other woodwork in a stone house are to be painted of a dark-brown color, it would be better to specify a brown based on such a combination as this than to call for a lead-paint tinted to a dark shade.

Venetian-red was a term originally applied to a natural earth-paint brought from the far east by the Venetians, but while some Venetian-red is made to-day from natural reds, or from the red cinder resulting from the burning of pyrites in sulphuric-acid manufacture, by far the greater part of it is made by driving the sulphuric acid from copperas by heat in the presence of lime. This acid unites with the lime to form sulphate of lime, one of the constituents of Venetian-red. The ordinary Venetian-red contains about twenty per cent of oxide of iron and the balance is sulphate of lime. This red carries a large quantity of oil, spreads out well and is an economical and durable paint, of a permanent red color. It is the red so much used for barns and the like, and was the red that made "the little red school-house" so famous.

Indian-red is the only one of the iron colors that is nearly pure oxide of iron. The best grades should analyze from ninety-five to ninety-eight per cent of this material. Until quite recent years Indian-red was a natural product, most of that used coming from Ceylon, from which circumstance it derived its name, but now most of that sold is of artificial origin, and is a product of the iron liquors of the tin-plate industry.

Mineral-brown, or metallic-paint, is formed by roasting a special iron-ore adapted for the purpose, which changes the iron into

[1] Continued from No. 1225, Page 92.

peroxide of iron, the highest form of iron-oxide. Though not beautiful in color, this material makes an exceedingly durable and ecomical paint, and is largely used for bridges, freight-cars, barns, outhouses and tin-roofs. The quantity of this class of paint sold in this country is something enormous. On account of its durability and its oil-absorbing powers, this makes an excellent priming for use under dark colors. Being absolutely inert chemically, it undergoes no change, and it will hold as long as the oil endures, only perishing and crumbling off in powder when the oil has completely wasted away and decayed. It combines with oil to form a paint in about the proportion of one pound of pigment to one pound of oil, nearly three times as much as white-lead or twice as much as zinc-white. While mineral brown has little use in ordinary dwelling-house painting, except for roof painting, it is a valuable pigment for certain classes of work and one that the architect can safely specify wherever a rough paint of great durability is required.

The foregoing earth or iron pigments are rarely mentioned in the ordinary architect's specification, in which "pure white-lead and linseed-oil," or the name of some brand of mixed paints, is usually inserted, as though these comprised the sum of all paint knowledge, but they deserve as careful attention as the quality of stone, brick or lumber. There is no more reason for dismissing the painting in a brief line or two than there would be for similarly specifying the brickwork, plastering or the lumber, for the paint which protects the house from the destructive action of the elements is certainly as much a structural portion of the building as the clapboards to which it is applied. In fact it deserves even more attention, for it is subject to greater wear, and its renewal is a source of constant expense, which can be materially modified by good judgment in specifying the best and most suitable material in the first place.

Edward Hurst Brown.

SMOKE CONSUMPTION AND ECONOMY OF FUEL.

Rev. Arthur Brooks, Church of the Incarnation. Bruce Price, Architect; Daniel C. French, Sculptor.

INDUSTRIAL economists in Germany are just now greatly interested in the development of an invention which promises to solve more effectively than has been done hitherto the problem of consuming bituminous coal, slack, sawdust and other inferior forms of fuel without smoke and under conditions of extreme economy. This is the process of Mr. Paul Cornelius for the consumption of low-grade fuels, patent No. 100,437 in Germany and No. 613,359 in the United States, although the practical process has been greatly modified and improved since the original patents were issued.

The process consists simply in distributing heated and slightly compressed air through hollow grate-bars to the whole lower surface of the furnace, which, being injected upward through the mass of burning fuel, secures equal and perfect combustion and an intense, regular heat from materials that would not be available if burned by ordinary methods. This system has been in practical use since September last at the works of Messrs. Reissner, Wahl & Co., manufacturers of cloth at Guben, in this district, and since December last at a large hotel in Berlin, where a steam-engine supplied by two boilers is kept in service to drive a dynamo that generates electric current for lighting purposes, elevator, etc.

In view of the extraordinary interest which attaches to this subject and its prospective importance in abating the smoke nuisance in cities and bringing into use vast quantities of material which are now practically worthless, I have visited the installation in Berlin, and this is what was there exhibited:

The two boilers are of the ordinary flue pattern, placed side by side and their furnaces separated by a dividing wall, so that one can be thrown out of use or turned on, as occasion may require. The furnaces are about 4′ x 10′ in area and the smoke passes by subterranean flues to a stack chimney standing in a central court and rising above the roof of the building. Near the furnaces is located an ordinary fan blower, driven by an electrical motor of one-half horse-power, the speed of which is easily controlled and which drives the air through a 6-inch pipe into a hollow iron chamber about 10 inches deep, which forms the front section of the hearth of the furnaces. Into this air chamber is fitted one end of the hollow grate bars, which are about 2½ inches in diameter, extend backward the length of the furnace, and are supported by ordinary bearings at the farther end. These hollow grate bars are round on the bottom, but at the top are hexagonal, presenting three faces, each pierced with holes about 2 inches apart and beginning with a caliber of one-eighth inch, which increases slightly throughout the length of the bar, to equalize the discharge of air from the gradually decreasing pressure within. The hollow grate bars are laid about 6 inches apart, and there is placed between each pair three solid triangular bars, which assist in sustaining the weight of the burning fuel. The air being forced by the fan-blower into the hollow chamber, is there heated from the fire on its upper surface, then passes into the hollow grate bars and is injected upward in three rows of jets, one vertical and two inclined to right and left, so that the entire under surface of the burning mass resting on the grate is fed constantly by jets of fresh heated air, which generate from the most ordinary grades of fuel an intense white heat, which can be perfectly controlled by regulating the speed of the fan blower and produce a combustion so natural and perfect that the smoke is entirely consumed.

At the time of my visit, the fuel in use was what is known as "Coaksgries," or coke dust, the fine slack that comes from screening gas coke, the scrapings of retorts, etc., which has hitherto been regarded as worthless, except for ballasting roads and footpaths. The bed of burning fuel was maintained over the surface of the grate about 5 inches deep, and the fire was white, intense, and evenly distributed. The air current being stopped, the fire at once dropped to a reddish tinge and began to smoke.

Mr. Cornelius's original invention contemplated reinforcing the combustion by impregnating the injected air with a small proportion of cheap oil-gas; but experience soon taught that pure heated air was quite sufficient, and, further, that the air-chamber, instead of being located at the front end of the furnace, should be at the rear or farther end from the door, where the heat is most intense and whence the current in the grate bars is injected forward — that is, in a direction opposite to the draught of the furnace itself. The hollow grate-bars are of cast-iron, made in sections about 3 feet in length, with pierced flanges which enable them to be bolted together at the ends, so that the bar may be lengthened to fit any furnace. Being protected by the current of air, the bars are practically indestructible by fire; those in use since September being still in good condition.

With an apparatus so simple and natural in principle as this, some surprising results have already been obtained, although the practical application of the process is in its infancy. The proprietor of the hotel, who has had the apparatus in use since December, gives it the highest approval, stating deliberately in his certificate that it has reduced by three-fourths his outlay for fuel, worked with efficiency at all times, and completely eliminated the smoke and soot which formerly, when the best Silesian lump coal was used, blackened the walls and floor of the hotel court and formed a nuisance of which his guests frequently complained. It was in fact for the purpose of abating the smoke and soot plague, rather than of saving expense of fuel, that the system was adopted for trial. The coke dust used as fuel contains a high percentage of inorganic matter and the yield of ashes is thereby necessarily increased; but, all elements duly considered — cost of fuel, labor of removing ashes, etc. — the fuel-cost of running the engine, month by month, as compared with the previous year, has been less than one-fourth of the fuel-cost for the same boiler, engine and electric current, generated with Silesian lump coal.

At the cloth works in Guben, the problem was somewhat different. (1) To get rid of the smoke and soot which poured from the furnace chimney and defiled the premises, and (2) to use as fuel a kind of

brown coal found in large abundance near the factory, which contains about 2,400 calorics, and is therefore a fuel of too low a grade to be used by ordinary means. For this reason, the market price of this brown coal delivered at the factory was only six cents per centner, or $1.20 per metric ton (2,200 pounds) — a very cheap fuel, indeed, for Germany — but with the Cornelius grate-bars it was so absolutely smokeless and otherwise so satisfactory that after three weeks' experience with one boiler, the managers had their three boiler furnaces converted to the new system, and after eight months' constant use certify that: —

(1) Their saving in fuel by the use of brown coal, instead of Silesian steam coal, has been 110 marks ($26.18) per week.

(2) The smoke and soot from which they previously suffered have been entirely suppressed.

(3) The grate-bars remain in as good condition as when first used, and the fire burns easily and under perfect control, so that no injury has resulted to boilers or furnace walls.

Exhaustive tests of the new system have been made by Mr. Gustav Dürr, directing engineer of a large tubular-boiler factory at Düsseldorf, who writes in most convincing terms, declaring that the Cornelius system of furnace construction will bring into use as fuel for steam and many other heating purposes, not only the vast product of coke dust from the Westphalian coal and iron district, which has hitherto been used for road-making and ballast for railway tracks, but also the immense brown coal and peat deposits of Germany. This, in many manufacturing districts of this country, will revolutionize the whole economy of heating for steam and other purposes, and German economists are already counting upon the sudden advantage that this new method will give to certain of their industries, which now have to use expensive coal brought from long distances.

Another series of tests, extending over a period of six weeks, has just been made in Berlin by M. Ternberg, chief engineer of the Government of Sweden, as a result of which negotiations are now in progress for the sale of the Cornelius Swedish patents to the Government of that country, in order to enable the people to utilize the vast deposits of peat, which cover thousands of square miles in Scandinavia, where little or no coal exists and almost the entire supply has to be imported from Great Britain.

From the standpoint of general utility, the advantages which seem to have been secured by this system, and which will render it important to the United States, may be summarized as follows: —

(1) The smokeless consumption of bituminous slack and other waste of mines and coke-works in cities and towns.

(2) The use for steam and heating purposes of the lowest grades of western bituminous coals, peat, sawdust, etc., and the vast mounds of anthracite waste that now encumber the mining districts of Pennsylvania.

(3) In naval vessels, notably torpedo boats, to secure such complete consumption of bituminous fuel as to eliminate smoke, which serves to indicate the presence and location of a war vessel to an enemy.

It will be understood that while any fuel — lump or nut coal, for instance — burns fiercely on a Cornelius grate, perfect combustion with consumption of smoke gases requires the fuel to be pulverized, so that for naval purposes lump coal would have to be crushed in order to secure the best results.

FRANK H. MASON, *U. S. Consul-General, Berlin.*

THE TOMB OF ROMULUS.

Door-head, Rue Saluces, Avignon, France.

THE words in which Cicero described one of the chief attractions of Athens, saying that at each step we meet with an historical monument, may be fittingly applied to the whole city of Rome, and in a particular manner to the Roman Forum. May 30, a series of discoveries was announced as having been made which strikes the historical imagination as suggesting the memories of a very distant period, back even to the mythical age. The famous pavement of black marble, *lapis niger*, brought to light last January in the vicinity of the triumphal arch of Septimius Severus at the northwest angle of the Forum, and which was considered as marking the site of the tomb of Romulus, is the scene of the new discovery. Underneath this pavement of *lapis niger*, which is now propped up by wooden posts, the new discovery has been made. The under soil being partially cleared away, a series of ancient objects were found. Nearest the spectator, who descends beneath the level of the Forum, are two great quadrilateral bases, formed of the stone called *tufo* — the earliest building-stone employed in Rome — each four feet broad by eight long and one foot in height. These lie rather close to one another, being about three feet apart. On these are large fragments of the "*torus*" or base moulding, wrought in a noble manner and of the same stone. It is considered as probable enough that these were the bases for the two figures of lions which were placed at the tomb of Romulus, according to Varro's account. It appears that Dionysius of Halicarnassus mentions but one lion as having been placed here. But this agreement of the two authors regarding the existence of a site known as the tomb of Romulus, however they differ regarding the number of lions, is rather fortunate for those who bestow this name on the recent discovery.

We are still looking beneath the propped-up pavement of *lapis niger* into the darkness which prevails further in, where two men are working by the light of a candle. I behold large, unfamiliar forms of letters, excellently cut and clearly defined, covering the surface lighted by the candle. Three sides of this stone, which has been called a *cippus* or monumental column, have been freed from the débris which underlay the black marble pavement. This débris is, perhaps, more interesting than any of the other discoveries yet made. When I visited the Forum to see these new discoveries and especially to hear from Signor Boni his account of them, I found him here, sitting upon a wooden box, with an iron hook in his hand, carefully and slowly digging out this débris that lay beneath the "black stone," known as the Tomb of Romulus. A sort of canvas tent was rigged over the spot, for the June sun burns fiercely in the Forum; a young workman was busily engaged in polishing the outer edge of a portion of the "black stone," and revealing the marvellous closeness of its texture and its ebony blackness streaked with rare veins, snow-white, contrasting vividly with the ebon hue of this rich marble.

The débris consists of ashes, among which the calcined bones of animals are met with. This soft mass contains fragments of terra-cotta, the circular bases of vases; tiny vases, evidently playthings for children; semi-circular fragments of stone; small statuettes about three or four inches in height, formed of bronze, ivory or terra-cotta; and, finally, some very ancient specimens of the earliest coinage of Rome, the *aes rude*. This is the piled-up and closely-packed mass of ashes, says Signor Boni, of some great sacrifice. No less than a hundred animals have been offered up in one great holocaust. Considering the characteristics of the tiny statuettes of the Lares, or household gods, thrown into the flames by the people who witnessed that huge sacrifice long ages ago, and the coins and the other fragments, Signor Boni concludes that this is the spot on which Camillus offered sacrifice to Romulus on the site of the tomb of the founder of Rome when the Romans returned to the city after its invasion and destruction by the Gauls. That scene has been vividly depicted by Livy: "The Romans, beholding from the citadel the city filled with the enemy . . . . were neither able to preserve their presence of mind nor even to have perfect command of their ears and eyes. To whatever direction the shouts of the enemy, the cries of women and children, the crackling of the flames and the crash of falling houses, had called their attention thither, terrified at every incident, they turned their thoughts, faces and eyes, as if placed by fortune to be spectators of their falling country and as if left as protectors of no other of their effects except their own persons, so much more to be commiserated than any others who were ever besieged, because, shut out from their country, they were besieged, beholding all their effects in the power of the enemy."

And when these disasters had passed and Camillus returned to Rome, he "first of all," as Livy notes, "proposed matters appertaining to the immortal gods; for he was a most scrupulous observer of religious duties." Here, in the opinion of Signor Boni, at this tomb of Romulus, the founder of the city, one of the greatest sacrifices of renewal of devotion to the gods was enacted, and during its progress the people — men, women and children — cast into the flames the tiny objects they held most dear. Hence the little gods of the household, archaic in style, with that simpering smile on their faces so distinctively traced on the archaic statues of the first period of Greek art. Hence the little earthern pots, with the clay pinched at the sides to form handles for them, which were evidently children's toys, revealed to our eyes from this mess of ashes after the twenty-four centuries that they have lain buried here, several feet below the level of the Forum and unheededly trodden over by millions of feet during the long ages that have elapsed since they were lost to sight. Here, indeed, you feel that the curtain of time is folded back, and that the historical imagination, stimulated in presence of such genuine aids, freely ranges with Livy amid the ruins of Rome after the Gaulish invasion, or stands beside Camillus as he makes this huge sacrifice in order to propitiate the immortal gods who were to guide the destinies of eternal Rome.

A well-informed journal of Rome declares that from what has been gathered concerning the new excavations of the Roman Forum, it is a discovery of the first order, confirming the inferences and hypothses made recently by some archæologists regarding the so-called

"Tomb of Romulus." It was known that at the sides of the place sacred to Romulus — whether he is to be considered as a myth or merely as a name, but who was deemed the founder of their city and as such venerated — there were placed two lions. In the excavations of these days the bases of these two figures have been brought to light, and there is reason to believe that they date from the fifth century before the Christian era. But more important still are the objects taken out of the débris between these two bases. Among other objects is one which I have not seen — an admirable fragment of a fine terra-cotta Greek vase with black figures on a red ground.

The inscription which has been brought to light, near to the base already mentioned, which is to the right of the spectator, is of extreme importance. It is said now, and in this imperfect mode of seeing it, to be written in the most ancient Latin alphabet; that is to say, the alphabet of Chalcis. A squeeze of imprint on wet paper of some of the letters of this inscription has been made to show the forms of the letters, which are more akin to the Greek than to the Latin alphabet. The Chalcidian alphabet has, it appears, been the source from which all the Italian alphabets were derived. These alphabets fall into two families, which differ considerably from each other. The first family contains the Etruscan, Umbrian and Oscan alphabets; the second the Latin and Faliscan. The Latin alphabet agrees with the Chalcidian, says an able English authority on this subject, in the retention of Koppa, which the Romans developed into Q. This letter in its older and ruder form — a complete circle with a downward oblique stroke from it — is a notable feature in the inscription just discovered. Signor Boni inclines to think that there are remnants of Greek form — not the Dorian Greek — in the letters brought to light, but he wisely says that it is impossible at the present moment to pass judgment either on the character of the lettering or on the contents of the inscription until these are carefully studied and read by experts. Before leaving this question of the alphabet in which the inscription at first sight seems to be written, it is to be noted that this Chalcidian alphabet is that of the Chalcidian colonies of Sicily and of the west coast of Italy — Cumæ, Neapolis or Naples, etc. — and that from all this was derived the Latin alphabet, the direct progenitor of that we use to-day. It is well known that Chalcis, one of the islands of Eubœa, in the Ægean Sea, sent numerous colonies into Magna Græcia and Sicily, such as Cumæ, the modern Cuma, and Rheigium, the modern Reggio di Calabrit, in the south of Italy.

The language of the inscription that lies under the "Tomb of Romulus" is supposed to date from the seventh or the sixth century before the Christian era. Another conjecture is that it is "*bustrofedica*," as an Italian writer terms it, which means that it may be alternately read from right to left and from left to right. It is well known that Greek writing in ancient times, following the example of Phœnicia, was read from right to left. Then the practice of writing from left to right came into use. In the interval between the adoption of the latter mode there was in use the combination of both, where the eye, ranging from left to right, read them back from right to left, alternately. This is called "*boustrophedion*," because, says a learned author, "the lines were made in the same way as the furrows by oxen in ploughing."

There is an opinion prevailing that this is a dedicatory inscription, probably placed here to record the fact that at this spot there had been offered to the gods the great expiatory sacrifice, the ashes of which underlie the pavement and have surrounded for so many ages the inscription itself. This explanation was, if the conjecture regarding it should be right, that which was made after the departure of the Gauls. — *Rome Correspondence of the Baltimore Sun.*

BOOKS AND PAPERS

THE Cathedral of Southwell,[1] although small compared with Durham, York, Lincoln, Exeter and Norwich, is as interesting as any of its larger sisters, by reason of its extensive Norman work. The solid masonry of the western towers reminds one of St. Denis; but the west front,[2] as a whole, is marred by the great Perpendicular window of seven lights, which must have been put in about 1450. More or less modern vandalism has always reigned supreme at Southwell. Not only was the roof lowered, but various portions of Norman ornament were taken away from one part of the building where they were originally placed and refitted into other parts where they had no business. The bells, too, have been remodelled, partly in consequence of the disastrous fire of 1711, and partly for other reasons. The original mottoes of four of them — "Peace and Good Neighborhood," "Prosperity to this Town," "From Lightning and Tempest," "Good Lord, deliver Us" — have been changed to the name of the founders, Mears, of London, *fecit*, 1819.

One of the peculiarities of Southwell is the clerestory of the nave, which consists of circular windows of a Romanesque character. The triforium arches are of the same breadth as those of the nave, without being subdivided, as at Romsey; and above these the small circular openings of the clerestory have a very singular effect.

[1] "*The Cathedral Church of Southwell.*" By Arthur Dimock, M. A. G. Bell & Sons.

[2] See the *American Architect* for December 3, 1898.

The porches at Southwell are very fine, with rich ornamentation round the mouldings; and within the north porch we find an exquisite example of Norman arcading.

The choir and chancel are Early English, with square terminations similar to York and Salisbury. The plan of the church is an oblong with short transepts, and a central tower dividing, almost equally, the nave from the choir. From the latter is a passage leading to the chapter-house, which may be looked upon as the glory of Southwell. "In design and execution alike, in its general proportions and in its minutest details, it is impossible to conceive anything more beautiful" — [*Leach*]. And George Street compared it to Cologne, Ratisbon, Amiens and the Sainte-Chapelle in beauty. "What these are to Germany and France, what the Scalegere in Verona are to Italy, so are the choir of Westminster and the chapter-house at Southwell." The doorway is of five orders, but there are no doors. All the capitals are exquisitely carved with foliage. "The slender clustered shaft in the centre of the doorway has base and capitals similar; and the two subordinate arches have filleted round mouldings with foliage. They are trefoiled, and the circle above quatrefoiled; and in the arches and circle the cusping is moulded with the fillet and pierced." . . . "One of the most beautiful specimens, within the range of Gothic art" — is the verdict of M. Louis Petit. The date of the building is the end of the thirteenth century, upon the evidence of the arms of Eleanor of Castile, which appear in the border of one of the lights. As she died in 1290, and as her armorial bearings are not likely to have been inserted any length of time after her death, it is probable that that date about tallies with that of the chapter-house. There is no monotony in the carvings of the capitals — a man lies under a tree blowing a horn; a goat is gnawing the leaves of a tree; a bird pecks the berries; or a pair of pigs grub up the acorns; or a hare is seized by a pair of hounds — such are the subjects.

The sedilia is composed of five seats — rather an uncommon number — probably, says the author, the number of the prebendaries who were generally in residence at one time; but may it not have been that the canons, being independent of episcopal authority, and exercising many of the privileges of bishops and abbots, were allowed four deacons when celebrating mass instead of the two allowed to simple priest-celebrants? Southwell was not originally the seat of a bishop, but had a chapter of canons resident and non-resident. It appertained to the archbishopric of York, and was the minster of the southern part of the diocese, having its palace where the archbishop resided when visiting his flock south of York.

It was to Southwell that Wolsey retired after his fall in 1530; and having been, to say the least, a careless churchman, and a non-resident bishop and pluralist (holding York, Winchester and the abbacy of St. Albans at one time), he became a model bishop. He worked in the diocese, riding out to distant parishes to say mass on holydays. He dined with the simple parish-priests, inquired into their ways and means, and restored churches to their proper use. He was beloved by every one, great and small; his kindness to rich and poor was proverbial; and he became a peacemaker and mender of quarrels and squabbles.

Among the prebendaries (canons) who became distinguished, Lancelot Andrewes (subsequently bishop of Ely, Chichester and Winchester) was the most celebrated.

Southwell is situated near Newstead Abbey, the family seat of the Byrons; but when the poet succeeded to the title his mother took a house at Southwell, being too poor to keep up the Abbey-domains. Here, at Burgage Manor-house, Lord Byron passed his holidays from Harrow; and here, too, lived Miss Pigot, the "Eliza" of his youthful efforts at versification. He frequently passed his evenings singing with her; and it was to her that he rushed for sympathy for his latest effusions.

The chapter of Southwell was dissolved in 1840. From their foundation the canons had been their own masters and had the power of punishing for ecclesiastical offences. It was a perpetual fight between them and their archbishop, just as it was between the monastic orders and the bishops. They could prove wills and hold assizes; and their lands enjoyed the privilege of being free from the authority of the sheriffs. At first the archbishops were head of the chapter, and the canons were their curates, but in the twelfth century the latter became independent. In 1884 Southwell became a separate see, Bishop Wordsworth giving up a portion of his income, to endow the new bishopric.

The church was dedicated to St. Mary the Virgin, which, perhaps, accounts for there being no Lady Chapel in the usual sense; the one so called was separated from the cathedral, and outside it.

Reconstructing Old Rome. — At the risk of using language hardly in keeping with a strictly classical subject, it might be said that the recent finds in the Roman excavations are "knocking the wind" quite out of the archæologists. So many dogmatic things have been written about old Rome and Roman matters that what the excavator's pick and shovel actually bring to light does not in the least accord with what has been printed in the innumerable long and dull essays. One fragment of marble, seen in 1899, gives the lie to several chapters of speculation. Rome and some of its monuments will, then, have to be rewritten, and the Forum especially will have to be reconstructed. — *N. Y. Times.*

THE STATUE TO SENATOR VANCE.

IT is only fair, in view of what we said last week about the competition for the statue of Senator Vance to reprint the following letter to the New York *Times* from the Treasurer of the association in charge of the matter:

The members of the committee here on the selection of a statue to the late Senator Vance are much surprised to see the article in your paper of the 15th, headed "Sculptors Are Indignant." So far as we are concerned they had no cause whatever for their indignation. No member of the committee, except one, had any acquaintance whatever with any of the competing artists. This member knew very favorably Mr. Hastings of New York City. The only object of the committee was to get the best statue and best likeness possible of Gov. Vance, as the people of this State knew him. A dozen models, all from good artists, were presented and exposed to the inspection of the committee and of the community. It was the unanimous opinion of all who saw them that the models were very good, but it was also the unanimous opinion that the model of Mr. Ellicott of Washington City best presented Gov. Vance in the attitude of addressing an audience. In pose and in representation of his figure it was nearly perfect. Only one model approached it in this respect, and that was the model of Mr. Dunbar of Washington.

The Washington artists had the advantage of the others in that they had often seen Gov. Vance personally, had had access to a good portrait in Washington, and doubtless had had suggestions from those nearly connected with him.

We had no intention in the world of limiting the competition to the New York artists, and no one was authorized by the committee, or any one representing it, to limit the competition. In reply to a courteous letter from Mr. W. Granville Hastings, one of the New York artists, the writer explained the matter, and he has a reply from Mr. Hastings, in which he says that he was perfectly satisfied with the explanation given of the matter, and had tried to explain it to the representatives of the newspapers which had made publications reflecting upon the committee and that he had asked a publication stating that he was perfectly satisfied, and the other sculptors whom he had seen were too. We have had no other communication from any other sculptor in New York in regard to the matter.

We flatter ourselves that those who know the committee personally would not suspect any one of them of having any other motive but to get the best statue and the best likeness possible of our lamented friend, Gov. Vance, with the means at our command.

We hope you will see proper to publish this, to right an unintentional wrong. JOS. G. BROWN, *Treasurer.*

RALEIGH, N. C., July 17, 1899.

THE ILLUSTRATIONS

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

THE DINING-ROOM: UNIVERSITY CLUB, NEW YORK, N. Y. MESSRS. MCKIM, MEAD & WHITE, ARCHITECTS, NEW YORK, N. Y.

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

A COMPETITIVE DESIGN FOR THE PHEBE HEARST PLAN FOR THE UNIVERSITY OF CALIFORNIA. SUBMITTED BY MR. B. J. S. CAHILL, ARCHITECT, SAN FRANCISCO, CAL.

OBVIOUSLY nothing but the merest suggestion of the plan and design of each building is presented, entire stress being laid on the position, purpose and levels of the different groups in plan, and in design their general character.

For convenience in presenting ideas the groups of the Departments of Instruction are named "Letters," "Science," and "Industry." These constitute the higher or "Mental" area. Lower comes the Military and Athletic group, or "Physical" area, and lowest and nearest the Railway the Habitation group and that S. W. reservation constituting the "Social." This arrangement presents three architectural integers or systems, each blending in form and sentiment with the group next to it, all of which is clearly summarized in the *Precis* or analytical plan herewith presented.

Were the buildings thrown up in a towering mass on the hillside above the 500-foot level the architectural effect would be stupendous, but they would be inconvenient of access and enormously costly. Such a *tour de force* would be well enough in a Grand Prix exercise on paper, or for a monument to some hero; for a university it is unsuitable.

Again, the buildings might form a long, thin crescent from the middle 340-foot level on the northern boundary and around and along to the 428-foot ledge. This arrangement fails on æsthetic grounds; precluding subordination of parts it yields only weak attenuation instead of strong mass; moreover it throws the buildings on to the boundary, with the foreground entirely on one side, hence the unvarying aspect would prove monotonous. And last, were the buildings all grouped together either in the centre on an oblique axis, or on the University-Avenue axis, while the plan might seem harmonious and monumental and be excellently conceived in every way, yet it would either be too low to be imposing from the bay, or, were the structures high enough, their plan would be too large to be apprehended as an integral concept from anywhere but a balloon.

A glance at the plan herewith shows that the scheme presented, while affording simplicity, aims to avoid all these faults. The central façade, with its cortile and dome or whatever feature may ultimately crown this mass, set on an elevation of 428 feet, dominates the entire scheme. In front of this façade, nearly a thousand feet long, is a sloped lawn and road, and then a terrace 20 feet above the covered arcade, which passes under the sidewalk. This arcade and stone retaining-wall seen from the bay below at a distance of a few miles is intended to blend with and to form a base to the buildings above, thus giving height to the mass. The entire group of pale-gray stone and terra-cotta is conceived to stand out clear above everything, white and glorious on the bosom of the dark hills. The scale of this group is bolder than the rest, and the modulus adopted will be greater in this instance. In all others it will be constant.

The buildings flanking the main "Literary" group will arrange themselves somewhat lower down in picturesque variety according to the angle at which they are seen, all in strong contrast to the unchanging serenity of the dominant group.

From the varying mass of each of these flanking groups will ascend two lofty towers — the chimney tower from the Industrial group and the tower of the College of Physics.

So much for a long-distance aspect from anywhere in the field subtended by the angles of the different axes.

The focal point of chiasm where these axes cross is in the Grand Plaza, opposite the Grand Entrance. Here, then, is the *coup d'oeil*, of which some idea can be had in the general elevation.

The three openings on a quadrant plan with intervening Doric colonnade are flanked by the *Faculty* and *Maintenance* branches of the Administration. The bold triple entrance planted well up in the centre of the scheme at once strikes the key-note of the entire disposition of the Departments announcing their triple character, "Science," "Letters," "Industry."

That the three groups face one another in a triangle indicates the interchange between the colleges necessitated by the various courses of the curriculum. The four bold terminal buildings that confront the visitor on passing the gates together with the monumental arcade and peristyles fill the eyes sufficiently until they are passed and other colleges draw nearer, envisage themselves, and in their turn focus attention.

The Science group is placed on a double slope. While the cornices are all on one level there is an additional story to the buildings on the west side. These colleges require the additional space thus obtained.

West of the Science group is the large lake — the Botanical Gardens, etc., and Zoological annex, forming a picturesque transition to the Military and Athletic Zone. The outer slope of the curved embankment forming the lake is used to support the grand-stand, and an elevated sidewalk or terrace. Under this terrace is a colonnade connected by subway with the armory for drill and exercises in wet weather.

Through oversight the plan omits showing a driveway as well as arcade crossing the lake, thus more effectively connecting the residence belt with the departments of instruction.

The residence quarter is laid out with axes north and south, so that all sleeping-rooms receive the sunlight at some time, a *sine qua non* in California.

Covered communication is provided throughout connecting all departments, as shown in the block plan. Mechanical conveyance is not considered at this preliminary stage, nor many other items which are obviously problems for the second competition.

A STUDY FOR THE CHAPEL OF THE NEW CHURCH THEOLOGICAL SCHOOL, CAMBRIDGE, MASS. PROF. H. L. WARREN, ARCHITECT, BOSTON, MASS.

FIRST CHURCH OF CHRIST, SCIENTIST, ST. JOSEPH, MO. MR. F. R. COMSTOCK, ARCHITECT, HARTFORD, CONN.

STILLMAN HALL: HOSPITAL FOR HARVARD UNIVERSITY, CAMBRIDGE, MASS. MESSRS. MONTAGUE & KINGSBURY, ARCHITECTS, BOSTON, MASS.

HOUSE AT INDIANAPOLIS, IND. MESSRS. BACON & HILL, ARCHITECTS, BOSTON, MASS.

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

ACCESSORIES OF LANDSCAPE ARCHITECTURE, NO. LXXII: THE DOLPHIN CASCADE: PALAZZO REALE, NEAR CASERTA, ITALY. LUIGI VANVITELLI, ARCHITECT.

[Additional Illustrations in the International Edition.]

THE ROTUNDA, LOOKING INTO THE LOUNGING-ROOM: UNIVERSITY CLUB, NEW YORK, N. Y. MESSRS. MCKIM, MEAD & WHITE, ARCHITECTS, NEW YORK, N. Y.

[Gelatine Print.]

SEAL OF THE UNIVERSITY CLUB. DESIGNED BY KENYON COX, AND MODELLED BY GEORGE F. BREWSTER.

[Gelatine Print.]

ROCHESTER CATHEDRAL, LOOKING SOUTHWEST.

"BLUE POSTS," ARLINGTON ST., W., LONDON, ENG. MESSRS. EEDLE & MEYERS, ARCHITECTS.

COMMUNICATIONS

[*The editors cannot pay attention to demands of correspondents who forget to give their names and addresses as guaranty of good faith; nor do they hold themselves responsible for opinions expressed by their correspondents.*]

THE AMERICAN ART EXHIBIT AT PARIS IN 1900.

Department of Fine Arts, United States Commission to the Paris Exposition of 1900.
120 Broadway, New York City, July 20, 1899.

To the Editors of the American Architect: —

Dear Sirs, — The next general circular will be issued from this department early in September, announcing the names of the various juries of selection in the United States, stating the date in November when they will convene and giving a large amount of information that will be of interest to all intending exhibitors. Meanwhile, I wish to take you into my confidence as far as the circumstances will permit.

While the space at our disposal is certainly inadequate, it is apparently the equal of, if not more than, that of any foreign country, France alone excepted. Morever, instead of being sandwiched in between two of the smaller European states, in second-story galleries, as we were in 1889, our present location is excellent, with England and Japan as our adjoining neighbors. Although it is rumored that complaints and protests are very general on the part of the Continental nations at the insufficient art space allotted them, we are saying less, but at the same time quietly making strenuous efforts to have ours increased.

I have been criticised by some who are unfamiliar with the general situation for an apparently unnecessary delay in announcing the personnel of my juries. I am perfectly content to assume all responsibility for this action, having excellent reasons for deferring the matter until September. But I do not believe that this delay will cause any material inconvenience to painters, for the scope of this exhibition is in one sense retrospective. It is the decision of the French Authorities that it shall cover the period of eleven years since the Exposition of 1889, so that nearly all the work to be exhibited will have been already completed. Further, I feel sure it is contrary to the interests of the exhibit that any work should be specially created with the view of appealing to any given jury.

On the other hand, I appreciate the fact that many artists may desire to know the composition of the juries before sending in their works. This they will have ample opportunity of doing, for the blanks which were sent out in company with the first general circular, issued in May last, were only intended to serve in a tentative way, and were in no sense binding. All exhibitors will be given the greatest freedom in this respect up to a reasonable period before the juries begin their work. I would, however, state that a very large number of our prominent painters and sculptors have already sent in their blanks filled up, thus assuring the most hearty co-operation with the work of this department.

What I have just stated applies almost equally to the exhibitors of sculpture, illustrations, miniatures, water-colors and architectural drawings and models. The arrangements for the installation of our sculpture exhibit are not yet complete, and I am not fully satisfied with the French system of distributing the exhibit through the buildings. I see, however, nothing to prevent our placing a small but dignified exhibit on the ground floor of the Grand Palace of Fine Arts. Our display of illustrations will be an important feature, and the prospects for the architectural section are most hopeful. In the latter we shall lay special stress on the more thoroughly American buildings, such as country houses and steel structures, illustrating the latter with plaster models.

A General Advisory Board will shortly be selected, composed of prominent painters, sculptors, architects and amateurs conspicuously identified with American Art.

The juries for painting and sculpture will be composed entirely of professional painters and sculptors, with the sole exception that I shall probably act *ex-officio* on all juries. While the members will be selected so as to give local representation to the principal art centres of the country, I consider it of the first importance to obtain such as will sink every other consideration in the determination to secure a thoroughly representative exhibit, composed of the best examples of recent American Art that have ever been brought together. Respectfully yours, John B. Cauldwell.

NOTES & CLIPPINGS

What the Profession of Forestry Demands. — These are the things which forestry offers. Now as to what it demands. In the first place success in forestry, as in any other profession, must come largely from the possession of what we know as "Yale spirit," the habit of accomplishment and the willingness to do the work first and count the cost afterward. It is interesting to note here that a majority of the young Americans who have fitted themselves for technical forest work are Yale men. Whatever the connection or the special fitness may be which brings Yale men into this line of effort and achievement, I should like to see the recruits from Yale come in fast enough to maintain something like the old proportion. After the "Yale spirit" come soundness of body and hardiness, for foresters must often expect the roughest kind of life in the woods. The helpmeet of hardiness is a contented spirit. There is no more pernicious character than a grumbler in camp, and nothing will help so much to get field-work done as the willingness to bear privation cheerfully. A man who takes up forestry will often find the field-work exceedingly or even unexpectedly hard, for it combines severe mental work with severe bodily labor, under conditions which make each one peculiarly trying. Work in the woods differs profoundly from camp-life as it is usually understood. Foresters get a certain amount of hunting and fishing, and every forester will do his work better for a wholesome love of the rod and gun, but the line between work and play is still sharply drawn. I have been speaking of the fundamental qualities which are more or less necessary to success in any vigorous outdoor life. There are several additional capacities with which the forester should be well endowed. The first of these is the power of observation. It is often difficult to say *a priori* whether a man has it or not. In many cases it makes itself known as a love of hunting or fishing, or a general pleasure in all outdoors. To the forester it is one of the most essential qualities in his mental equipment. Finally, perseverance, initiative, and self-reliance are peculiarly necessary, because the forester is so often withdrawn from the inspection of his superiors and altogether dependent on his own steadfastness and devotion to keep him up to the high standard he should set himself for his work. In a new field of effort this is especially likely to be true. It is one of the distinguishing characteristics of the profession of forestry. — *Gifford Pinchot in the Forester.*

Cologne Cathedral and the German Empire. — The restoration, or rather completion, of Cologne Cathedral was one of the causes which led to the creation of the German Empire. Many writers in the early part of the century advocated the work on that ground. It was not easy to obtain coöperation between the various States, but the building offered an occasion which could not be neglected. The cathedral was taken to be the crowning effort of German architects, and the whole Fatherland could aid in realizing the intention of the designer without any sacrifice of particular interests. Subscriptions were therefore invited from all lovers of German art, and the response was worthy of the object. The blessing which followed should inspire liberality in aiding funds for restoration. In 1824 the work began, and it has been conducted under three architects — Ahlert, Zwirner and Voigtel. The outlay, according to the last report, has exceeded a million sterling, but in a political sense the result was worth the money. The estimated expense was a quarter of a million less, but with so vast a building an approximation was the most that was to be expected. Writing in 1820, Wordsworth appeared to think there was no possibility of completion without the help of angels, and that so much is realized is creditable to the patriotism of the Germans. If some among them are disappointed, we suppose that is an inevitable consequence of the combination of old and new work, and is not confined to building. — *The Architect.*

Monument to Myles Standish. — The memorial monument to Captain Myles Standish, on Captains Hill, South Duxbury, has been unveiled. The monument is of massive blocks of rough granite from Maine, and is 116 feet high from the grade to the parapet; the statue surmounting it is 14 feet high. The diameter of the shaft is 28 feet at the base and 16 feet at the top. The arch of the entrance is built of stones contributed by the different New England States, and the keystone was presented by President U. S. Grant and represents the United States. The monument cost about $40,000, and fully $30,000 of that amount was furnished by a dozen or more men. For many years things were at a standstill, as there were differences among the members of the association, and at one time it was feared that the monument would come down, as the earth had washed away around the foundation. It was the desire of the Monument Association to have a monster celebration and dedicate the structure this season, but now it will probably not take place before another year. — *Boston Transcript.*

Dangerous Paper. — Not a great while ago librarians and book lovers in general were discussing the deterioration in the quality of paper of late years. It is curious to learn from her Majesty's Waste-paper Office that one result of the change of materials has been a decided increase in liability to fire wherever paper-waste is accumulated in any great quantity. It is the rarest thing to find paper made of rags nowadays. It is made from wood and other vegetable materials which, chemically, are not very different from the component materials of a hayrick. If paper-waste is stacked in large masses, and especially if it happens to be a little damp, heating takes place just as with a prematurely stacked hayrick, and spontaneous combustion may at any time break out in flame, as it has often been known to do in the farmyard. Of late years the greatest care and vigilance have been necessary to guard against this. — *London Daily News.*

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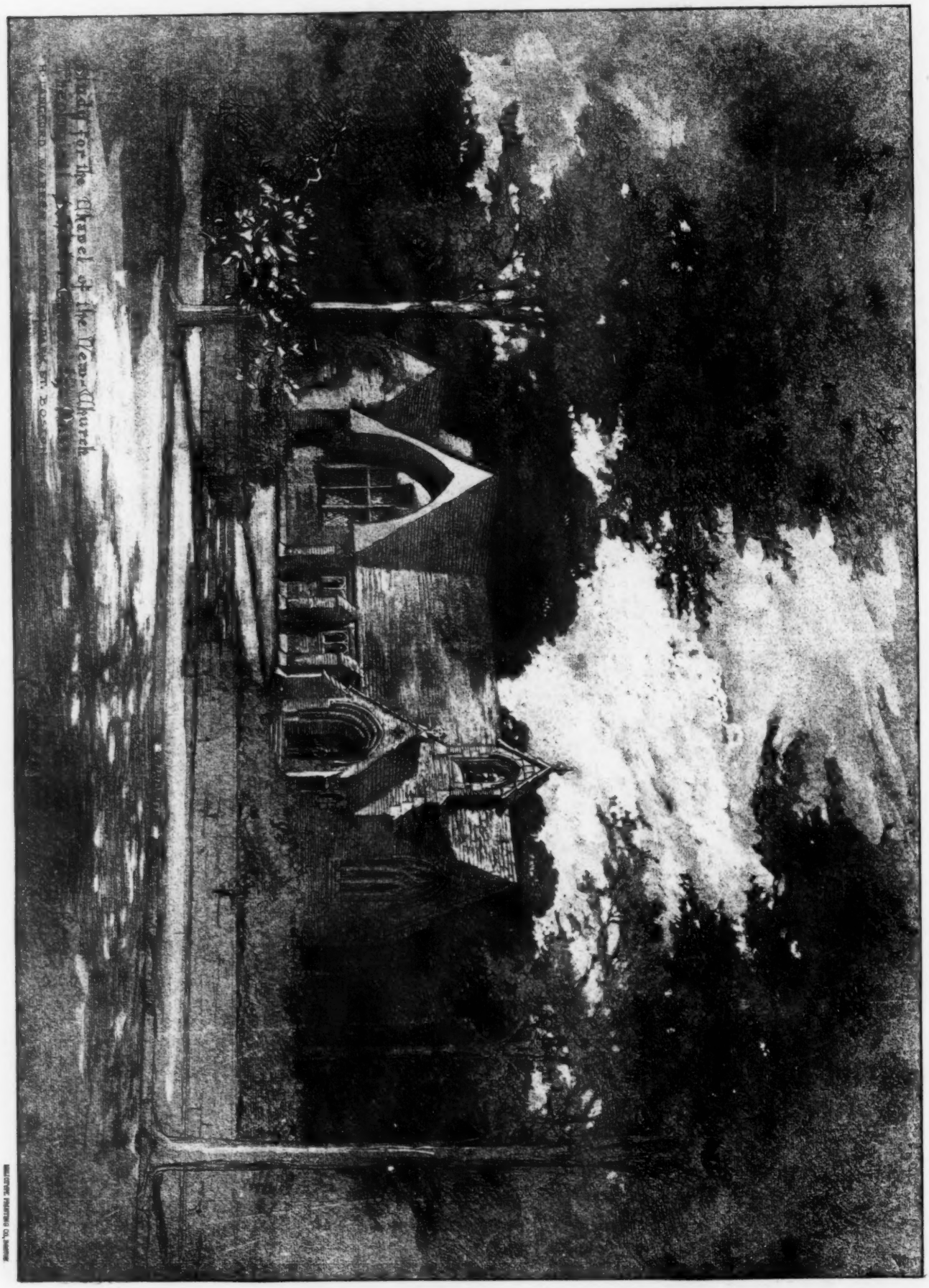

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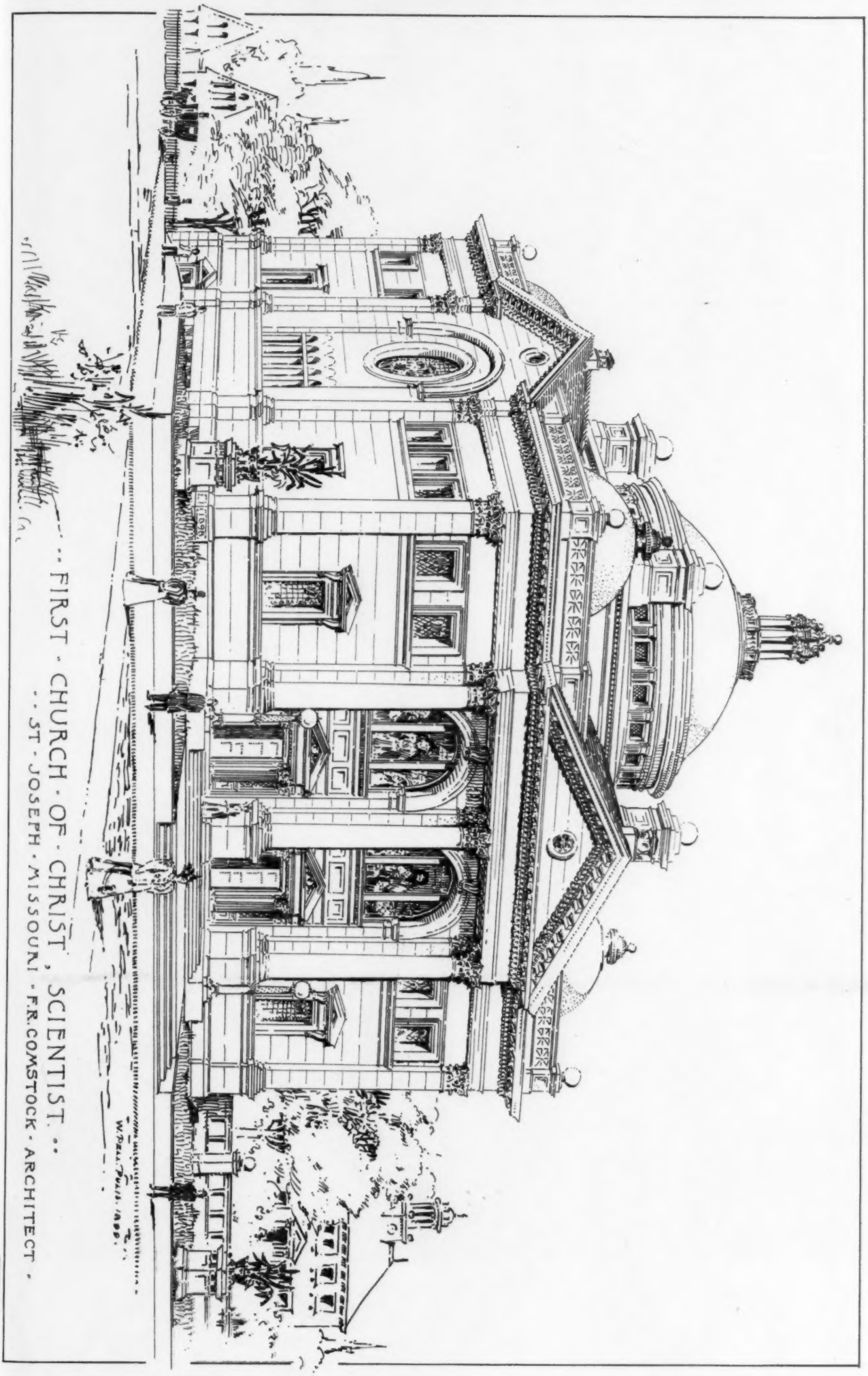

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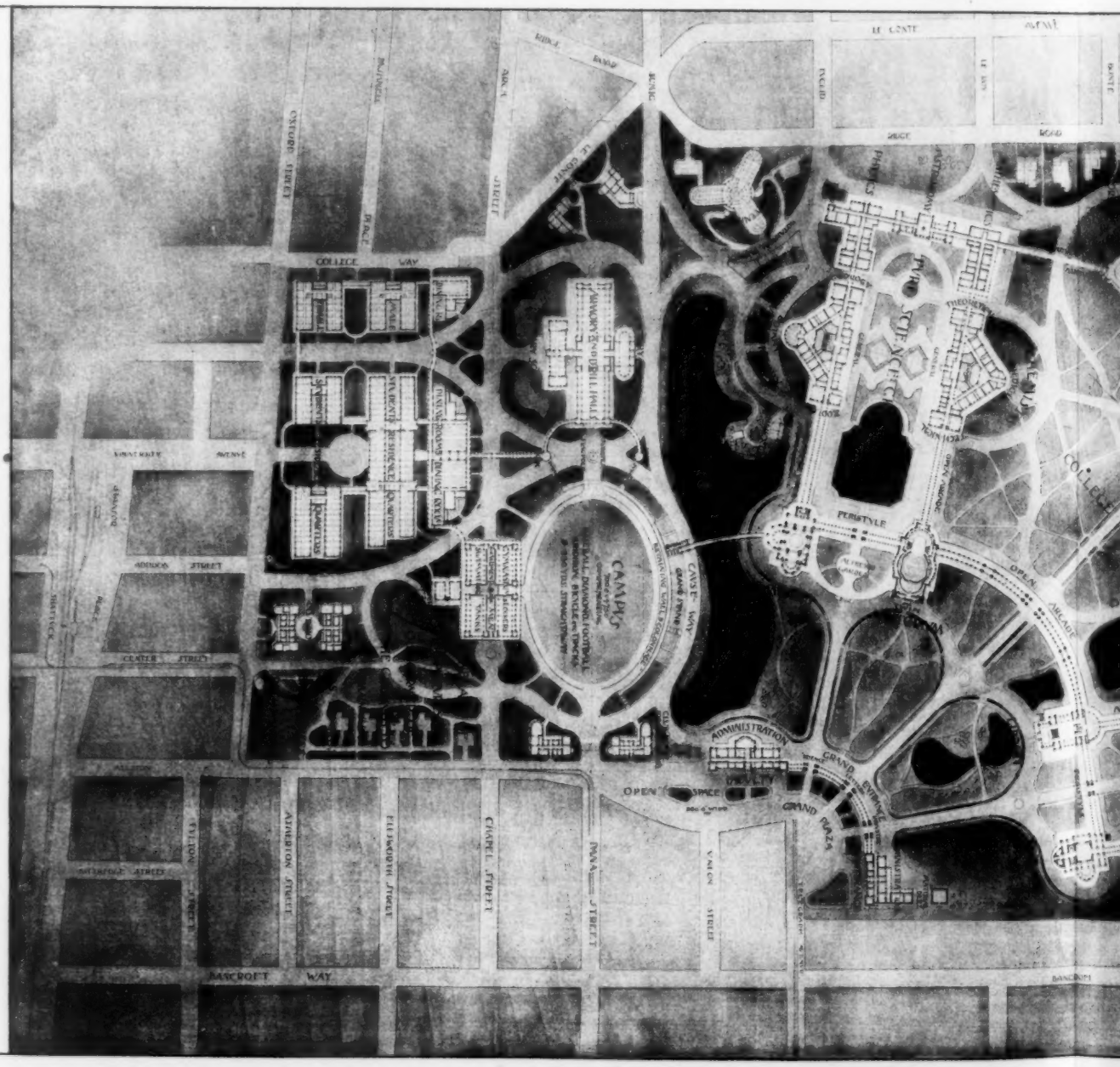

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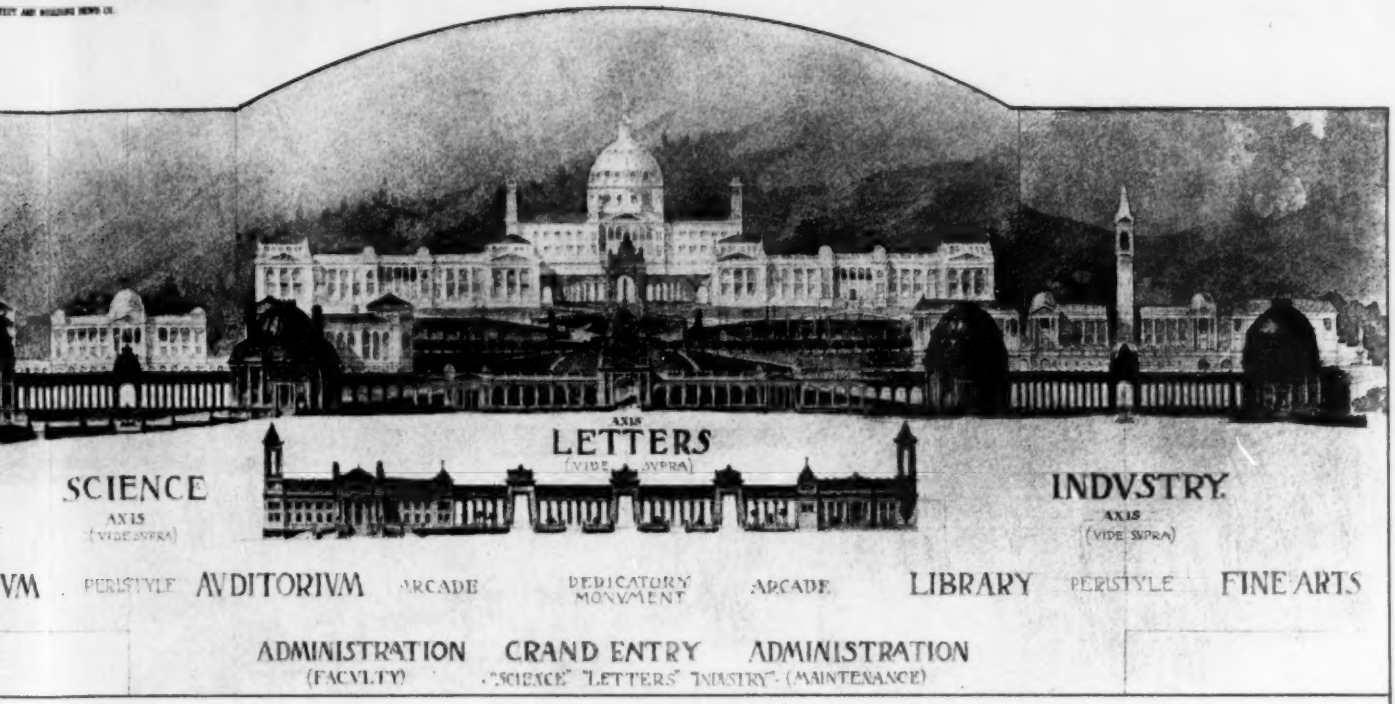

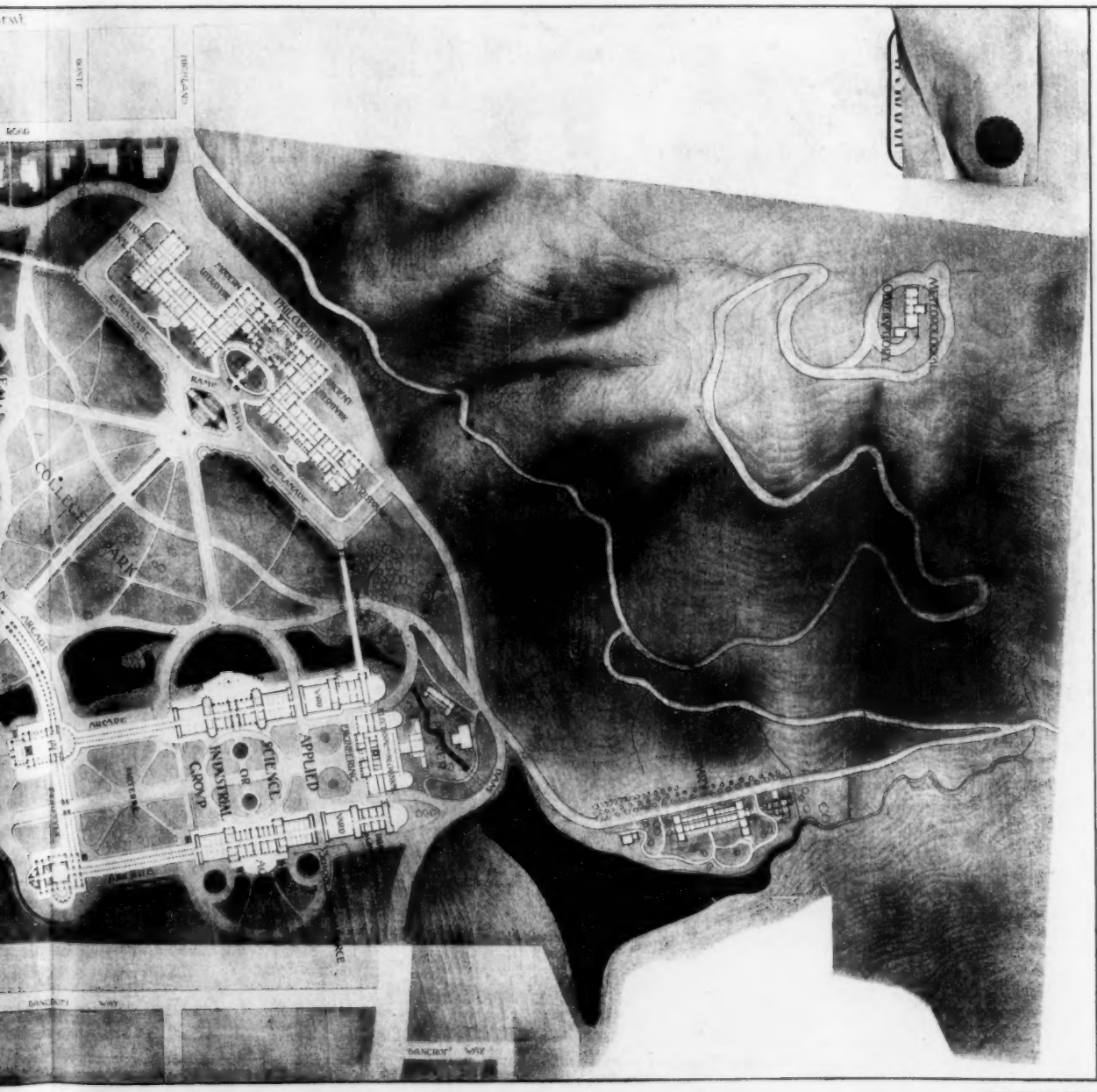

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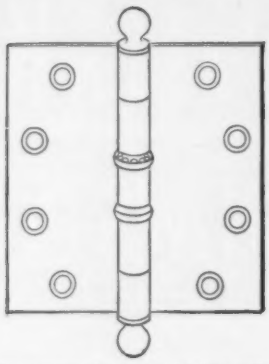

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Block	@	4 60 ₱ perch.	10 00 @ cord	Conshocken
Rubble	@	1 25 @ 1 50	9 00 @ "	1 45 @ 2 50
Sandstone:				
Longmeadow	@ 80	80 @ 90	@	95 @ 1 05
Kibbe	@ 90	90 @ 1 10	@	
Brown (Connecticut)	1 00 @	1 00 @ 1 30	1 50 ₱ cub. ft.	1 05 @ 1 25
Amherst Ohio	90 @ 95	90 @ 1 00	45 @ 55	85 @ 95
Berea "	75 @ 1 00	85 @ 90	45 @ 55	55 @ 75
Berlin "	75 @ 1 00	80 @ 90	45 @ 55	85 @ 95
Belleville	80 @ 1 25	25 @ 1 35	@ 1 25	1 00 @ 1 10
New Brunswick (Dorchester)	@ 1 00	75 @ 90	*Not sold.*	1 05 @ 1 15
Potsdam Red	@ 1 30	@ 1 40	@ 1 55	@ 1 40
Caen	@	@ 2 00	@	1 25 @ 1 35
Carlisle. English	@ 1 05	@ 1 05	@	95 @ 1 05
Corse Hill (Scotch)	@ 1 05	@ 1 05	@	95 @ 1 05
Granite: (*Maine*)		@ 60	80 @ 1 50	55 @ 65
Limestone:				
Bedford	45 @ 1 25	95 @ 1 00	20 @ 40	75 @ 85
Joliet	1 00		@	Richmond
Lemont			@	₱ 75 @ 1 50
Serpentine		10 50 per ton.	@	Perch 4 50 @ 5 50
Bluestone: (₱ *sq. ft.*)			cub. ft.	1 in. th. 10 @ 25
Sidewalk	30 @ 5 00	40 @ 1 75	1 00 @ 1 25	37 @ 50
Planed	50 @ 6 00	@ 75	1 00 @ 1 25	
Marble: (₱ *cu. ft.*)				
Lee, Mass	@	1 75 @ 2 50	*Not sold.*	2 00 @ 2 50
Rutland, white and blue	@	@ 3 00	3 50 @ 6 00	2 00 @ 3 00
Sutherland Falls	1 25 @ 1 75	@ 2 00	3 50 @ 6 00	1 70 @ 3 00
Glens Falls, black	@	@	*Not sold.*	4 00 @ 4 50
Italian, blue-veined	@	@	@ 4 40	2 50 @ 2 75
" Sienna	@	@	*Not sold.*	@ 5 00
Tennessee, red	@	@	@ 4 40	4 00 @ 6 00
" Knoxville	@	@	@ 4 40	3 00 @ 4 00
Pennsylvania, blue	@	@	*Not sold.*	2 00 @ 3 00
Vermont, white	@	@	3 50 @ 6 00	2 25 @ 3 00
Slate: Roofing (₱ *square*)				
Green	5 00 @ 6 00	4 75 @ 5 25	3 75 @ 5 00	2 90 @ 3 60
" unfading	5 00 @ 6 00	5 50 @ 6 50	5 25 @ 6 00	4 25 @ 5 00
Purple	5 00 @ 6 00	5 50 @ 6 50	5 25 @ 6 00	4 50 @ 5 50
Red	@ 10 00	10 00 @ 11 00	10 50 @ 12 50	11 50 @ 13 00
Black, Lehigh	4 25 @ 4 75	@	4 50 @ 5 50	4 00 @ 4 35
" Chapmans	@	@	5 30 @ 6 15	4 50 @ 5 00
Genuine Bangor	4 35 @ 5 50	4 75 @ 5 90	5 25 @ 6 50	4 35 @ 5 50
Unfading black	6 00 @ 8 50	6 00 @ 8 50	4 25 @ 8 95	6 50 @ 9 00
" "	5 50 @ 8 00	5 50 @ 8 00	5 50 @ 9 20	6 50 @ 9 00
Tiles, Am. ₱ M.	@	@	Salt-glazed tiles	@ 28 00
N. Peach Bottom, war. unfading	@	@	9" 8c. per ft.	5 76 @ 6 25
Fire Clay Roof Tile on cars at fac.	8 00 @	8 00 @	6 00 @ 6 50	8 60 @
LUMBER. — ₱ M.				
Boards: (*Ordinary dimensions.*)				
Pine, 1st quality, clear	65 00 @ 75 00	55 00 @ 75 00	50 00 @ 60 00	47 50 @ 60 00
" 2d quality	55 00 @ 60 00	@ 55 00	42 00 @ 50 00	38 00 @ 48 50
" 3d quality	18 00 @ 22 00	@ 45 00	20 00 @ 28 00	27 50 @ 36 50
Spruce	@ 25 00	14 00 @ 20 00	*Not sold.*	15 00 @ 21 50
Hemlock	cal3½ @ 14	13 50 @ 18 00	10 00 @ 12 00	11 50 @ 13 75
Yellow pine	20 @ 40	22 00 @ 40 00	18 00 @ 25 00	14 00 @ 29 00
Cypress	@	28 00 @ 55 00	30 00 @ 35 00	30 00 @ 38 00
Clapboards:				
Pine	@	35 00 @ 55 00	25 00 @ 30 00	14 00 @ 25 00
Spruce	@	24 00 @ 40 00	*Not sold.*	*Not sold.*
Framing Timber:				
Pine			15 00 @ 25 00	25 00 @ 37 30
Spruce	14 00 @ 16 00	17 00 @ 20 00	*Not sold.*	15 00 @ 21 50
Hemlock	12 00 @ 16 00	14 50 @ 17 00	10 00 @ 15 00	14 00 @ 20 00
Yellow pine	18 00 @ 21 00	25 00 @ 50 00	16 00 @ 25 00	22 50 @ 30 00
Laths:	@			
Pine ..... Round Wood	@	2 00 @ 2 50	1 90 @ 2 00	2 75 @ 3 00
Spruce ..... Slab	2 15 @ 2 20	2 25 @ 2 75	*Not sold.*	2 30 @ 2 35
Shingles:				
Pine, shaved ₱ M.	5 00 @ 6 00	@	*Not sold.*	
Pine, sawed " "	4 00 @ 5 00	@ 450	2 60 @ 2 75	
Spruce, sawed " "	1 50 @ 2 00	1 50 @ 2 00	*Not sold.*	
Redwood ₱ 125.	1 40 @ 1 60	3 25 @ 4 00	4 60 @ 6 00	30" $35 @ 40
Cedar split ₱ M.		@ 6 00	*Not sold.*	24" 8 @ 21
Cedar sawed " "	@	2 75 @ 3 75	2 50 @ 2 90	20" 35 @ 14
Cypress. Split.....7 x 24 " "	18 00 @ 20 00	5 00 @ 6 00	@	11 00 @ 14

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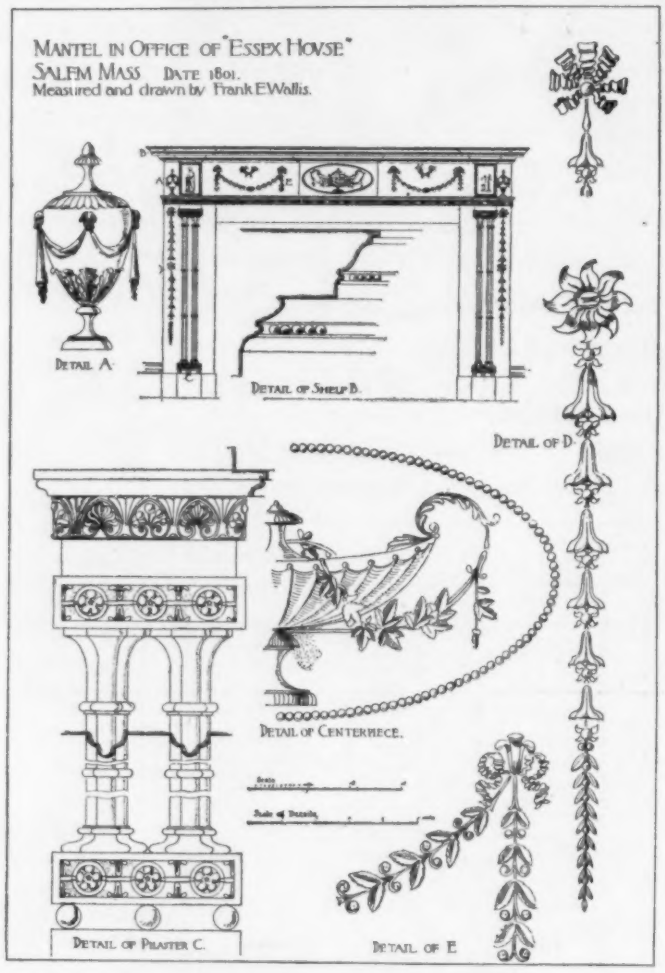

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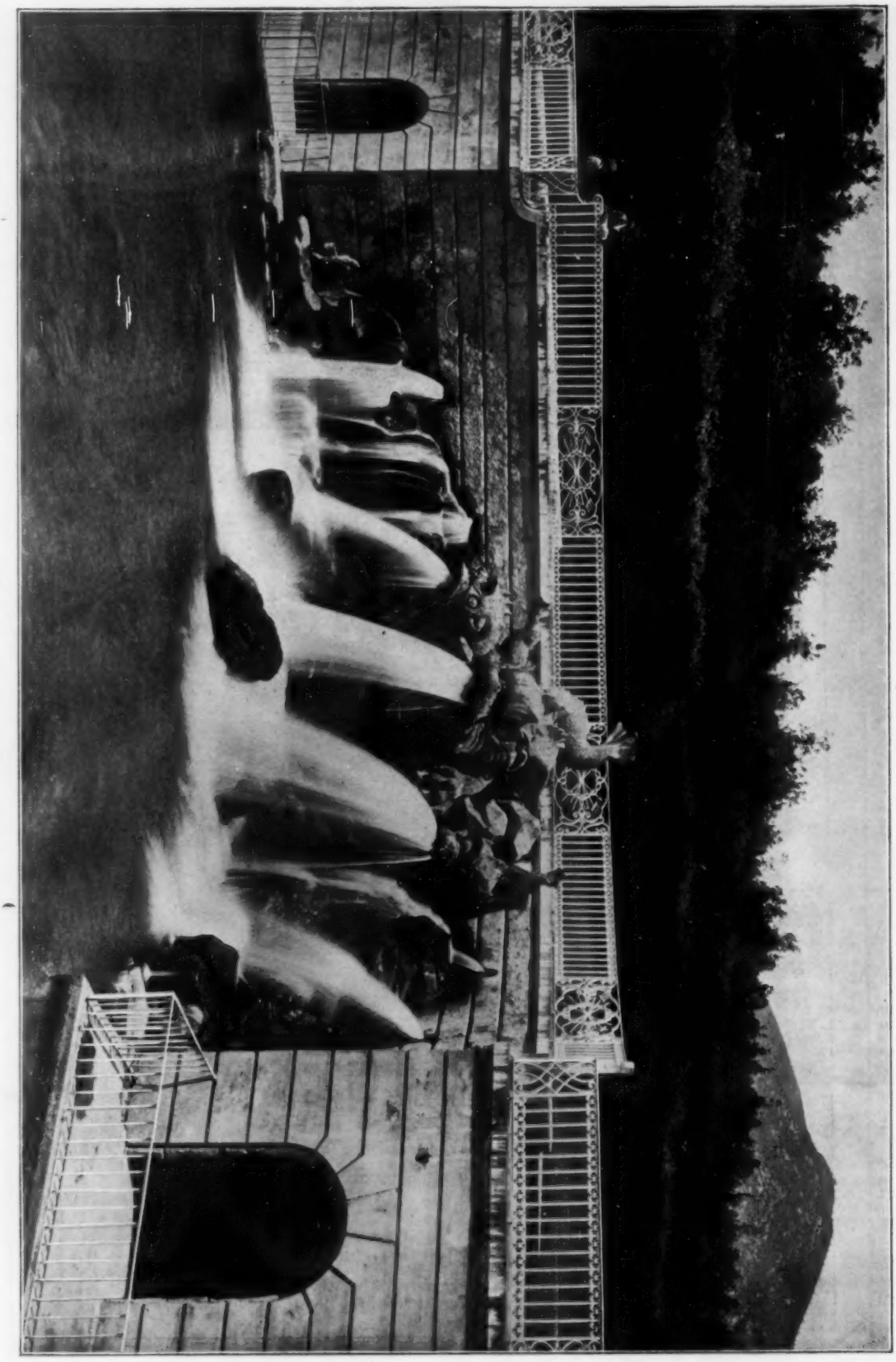

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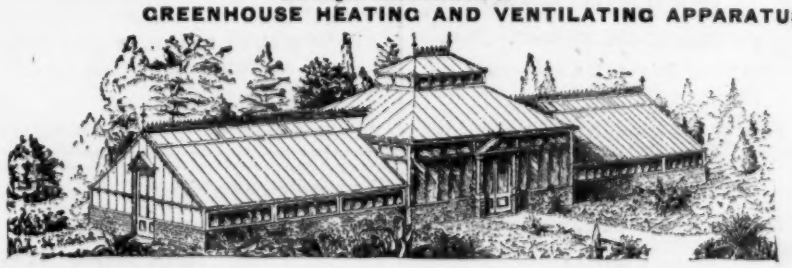

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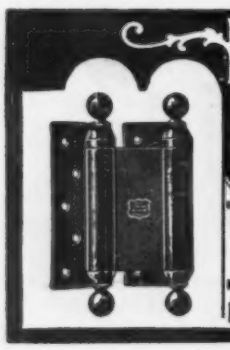

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New Advertisements.

BOSTWICK STEEL LATH CO. (Niles, O.), Metal Lathing. Page vii.
HOLOPHANE GLASS CO. (New York, N. Y.), Holophane Glass. Page iii.

See last or next issue for the following advertisements: —

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BUILDING PATENTS.

[Printed specifications of any patents here mentioned together with full detail illustrations, may be obtained of the Commissioner of Patents, at Washington, for five cents.]

628,916. DOOR CHECK AND SPRING.—Harry Bitner, Berwyn, Ill.
628,925. ELEVATOR-GATE.—Fredrick W. Daeuble, Louisville, Ky.
628,942. SEWER OR DRAIN PIPE OR CONDUIT FOR WATERWAYS.—Wm. Jefferys, East Orange, N. J.
628,962. PILE-DRIVER.—Abram C. Speer, Woodville, Oreg.
629,019. DRAFT DEVICE FOR CHIMNEY-STACKS.—John G. Thomas, Washington, D. C.
629,041. PARTITION-PACKING.—Henry J. Mark, St. Louis, Mo.
629,060. DOOR-BOLT.—Alfred G. Bayles, New York, N. Y.
629,095. HOT-AIR PIPE FOR FURNACES.—Isaac Stearns, Detroit, Mich.
629,100. COVERING FOR WALLS.—Sidney R. Blanchard, Ottawa, Ill.
629,123. KNOB ATTACHMENT.—Herbert W. Davis, Fall River, Mass.
629,147. SASH-LOCK.—John Blasius, Union Hill, N. J.
629,153. ELECTRIC-HEATER.—Mark W. Dewey, Syracuse, N. Y.
629,165. DOOR-HANGER.—Frederick Larson, Chelsea, Mass.
629,166. LATCH.—William E. Lott, Mineola, Tex.
629,175. AUTOMATIC WATER-HEATER.—Robert Schlumberger, Allegheny, Pa.
629,196. WASTE-PIPE PLUG.—Joseph H. Little, New York, N. Y.
629,197. VAULT-LIGHT OR ILLUMINATION-TILE.—Jacob Mark, New York, N. Y.
629,203. FLOOR-SURFACING MACHINE.—Henry McLoughlin, Leavenworth, Kan.
629,223. STEAM OR HOT-WATER RADIATOR.—Charles F. Walther, Buffalo, N. Y.
629,247-248. DOOR-CHECK.—Charles F. Haningtion, New York, N. Y.

BUILDING PATENTS.

629,253. CHIMNEY TOP OR VENTILATOR.—Joseph A. Hodel, Baltimore, Md.
629,261. SASH-LOCK.—Frank H. Knight, Washington, D. C.
629,277. CISTERN.—William J. Slack, La Grange, Ind.
629,284. SASH-FASTENER.—William H. Akens, Linesville, Pa.
629,294. LOCK-MORTISING MACHINE.—George H. Heady, Los Angeles, Cal.
629,302. APPARATUS FOR OPERATING ELECTRIC-SIGNALS FOR ELEVATORS.—Henry Pedersen, New York, N. Y.

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.

Agasalientes, N. M.—The Mexican Central Railroad have plans completed for the new hospital which will be built here; estimated cost, $100,000.

Akron, O.—Mead & Garfield, Cleveland, have prepared plans for a six-story brick office-building, 108′ x 200′, for the Akron Street Railway & Illuminating Company; cost, $280,000.

Amesbury, Mass.—St. James' Episcopal parish is about to replace its church, which was destroyed by fire last March. It will be in the Gothic style of architecture with gray stone front and sides.

Ashland, Ore.—$12,000 has been voted for a new school-house.

Auburn, Neb.—The plans of George A. Berlinghof, Beatrice, for the new court-house for Nemaha County, have been accepted. They call for a brick, stone and terra-cotta building, with slate roof; cost, $40,000.

Baltimore, Md.—A one-story fireproof bank building is to be erected on East Fayette St., for the National Union Bank of Maryland; estimated cost, $50,000; Baldwin & Pennington, architects.

Baldwin & Pennington have completed plans for a $300,000 ten-story fireproof office-building, 48′ x 158′, to be erected at the corner of Calvert & German Sts., for the Guardian Trust & Deposit Company.

Bellville, Ill.—The work of remodelling the St. Agnes Orphan Asylum has been commenced. The improvements will cost about $10,000.

Boston, Mass.—A handsome dwelling is to be erected on the water side of Beacon St., at the corner of Hereford, for Mr. E. C. Swift, and one adjoining for Mr. E. V. R. Thayer.

Thomas W. Lawson proposes to build a magnificent palace on the water side of Beacon St. and Charlesgate East.

Buffalo, N. Y.—H. O. Holland, 680 Main St., has prepared plans for a brick, stone and frame house and stable to be built at the corner of Delaware and Auburn Aves., for J. L. Saperston; cost, $15,000.

August Esenwein has prepared plans for changing the music hall into a modern theatre. The estimated cost of the work is $100,000.

A one-story stone church is to be erected at the corner of Lafayette St. and Greenwood Pl. after plans by A. A. Post; cost, $45,000.

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BUILDING INTELLIGENCE.

(*Advance Rumors Continued.*)

Chicago, Ill. — Plans have been drawn by Paul Gerhardt, 1303 Schiller Building, for a $250,000 textile factory, which some German capitalists contemplate erecting near this city.

It is stated that $40,000 will be expended in remodelling the Grand Opera-house. George Garnsey, 185 Dearborn St., architect.

Colorado Springs, Col. — Dr. B P. Anderson contemplates erecting a $60,000 sanitarium here. Plans have been drawn by Douglas & Hetherington, Gazette Building.

Cynwyd, Pa. — Architect Henry J. Crump has drawn plans for the erection of a church and Sunday-school. The buildings will be of granite and limestone, one and one-half stories in height; cost, $16,000.

Des Moines, Ia. — A $50,000 addition will be made to the Savery Hotel. Liebbe, Nourse & Rasmussen, architects.

Detroit, Mich. — Parke Davis & Co. will build adjoining their present quarters a warehouse from designs by Donaldson & Meier; cost, $50,000.

The Board of Education have let contracts to Messrs. Boomer, Mason and Whittaker Carpenter for the construction of an addition to the Western High School; cost, $50,000.

The Detroit Home and Day School will build a $10,000 gymnasium and kindergarten addition to their present building.

Grafton, Mass. — Earle & Fisher have prepared plans for a proposed new brick high-school building in the town of Grafton. The scheme for building has not been fully decided, but there will probably be a new brick high-school building costing about $18,000 at Fisherville, and additions to school buildings at Grafton and Grafton Center.

Holyoke, Mass. — Report states that C. B. Prescott has purchased the A. H. Page lot and is having plans prepared by Architect W. B. Reid for a residence.

Indianapolis, Ind. — Frederick W. Wolf & Co., 139 Rees St., Chicago, Ill., are preparing plans for the erection of a large fireproof brewing plant for the Indianapolis Brewing Company, to be erected on Madison Ave. The main building will be of brick and stone, six stories high; estimated cost, $675,000.

Jefferson City, Mo. — It is stated that the M. E. Society will erect a $15,000 church.

Kansas City, Mo. — Report states that the Chicago, Burlington & Quincy R. R. Co. will erect a $50,000 freight depot at 12th and Liberty Sts.

It is stated that J. W. McClair & Co., of Birmingham, Ala., have prepared plans for a ten-story office-building for H. G. Smith, to cost $100,000.

Lansing, Mich. — Plans have been prepared for the erection of a $22,000 brick building at the Industrial School for Boys, containing shops, laundry, engine-room, etc. J. E. St. John, superintendent.

Lebanon, Pa. — Simon P. & Harry H. Light, of the Lebanon Iron Co., have just purchased 90 acres of land belonging to the Krause estate, for $80,000. It is probable that a steel and billet mill will be erected.

Los Angeles, Cal. — Austin & Skilling have completed plans for a new $15,000 church to be erected at Burlington Ave. and 8th St. for the Methodist Episcopal Society.

The Friday Morning Club have purchased a site

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BUILDING INTELLIGENCE.

(*Advance Rumors Continued.*)

and will erect a $10,000 club-house on South Figuero St.

Many, La. — M. L. Lewman & Co., of Louisville, Ky., have received the contract for a court-house at $17,000.

Memphis, Tenn. — G. M. Shaw has drawn plans for a building for the American Biscuit Co.; cost, $60,000.

Minneapolis, Minn. — J. & E. C. Haley have prepared plans for a three-story brick flat building, 64′ x 132, for Elisa Schreyer; cost, $25,000.

New Albany, N. Y. — It is reported that a three-story building to cost $25,000 will be erected for the West Albany Railroad Y. M. C. A., on Watervliet Ave.

New Haven, Conn. — The Plymouth Congregational Society will build a $40,000 stone church at Chapel St. and Sherman Ave.

Newton, Ill. — A new jail building is to be erected here; cost, $7,900.

New York, N. Y. — A nine-story building is to be erected on the corner of 2d Ave. and 17th St. for the Lying-in Hospital. It will be 82′ x 165′ x 185′, of brick and stone, costing $800,000.

A three-story brick and lime-stone office and store building is to be erected on the corner of 5th Ave. and 55th St., for the John J. Astor Estate. Estimated cost, $70,000. Lord, Hewlett & Hull, architects.

Plans have been prepared for a three-story brick and limestone office and store building to be erected on 5th Ave. and 55th St. for the John J. Astor estate; cost, $70,000.

North Adams, Mass. — The plans of J. McArthur Vance, of Boston, have been accepted for the new Richmond House at the corner of Main and State Sts. It will be of brick, containing stores on the first floor, the office, dining-room and parlors on the second floor. The other three stories will contain rooms and suites of rooms. The contract for the steel frame has been let to Harrington, Robinson & Co., of Boston, and that for the fireproof equipment to the Roebling Co. of New York.

Northampton, Mass. — A new armory for Co. I is under consideration.

Omaha, Neb. — Plans have been prepared for a new school building, to be erected at the corner of 45th St. and Boulevard Ave. for the Nebraska Institute for Deaf and Dumb.

Plans have been drawn by Fisher & Lowrie for a brick and stone addition to the Grant Memorial Hall at the State University of Lincoln; cost, $25,000.

Philadelphia, Pa. — Contractors George F. Payne & Co. are about to reconstruct the fire damaged plant of the Charles Scott Spring Works, at Germantown Ave. and New Market St. A substantial new factory will be built, at an estimated cost of $56,000. The new building will have a frontage of 185 feet on New Market St., 130 feet on Germantown Ave., 285 feet on Hancock St. and 159 feet on the rear end.

Thomas A. Lynch will make extensive interior improvements, costing $15,000, to St. Malachy's Catholic Church, Eleventh St., above Master, of which Bishop Prendergast is pastor.

Plans for a six-story building to be erected on the corner of Broad and Sansom Sts., for Thomas B. Wanamaker, are being prepared. The church now on that site is being torn down.

Architects are making competitive designs for a modern new edifice for the congregations of the Chambers-Wylie Churches.

Contractors J. E. & A. L. Pennock will build the combination police station, patrol and fire engine house, at the northwest corner of 7th and Carpenter Sts., for the city. The lot is about 70′ x 136′, and will be entirely covered by the connected structures, which are estimated to cost $50,000. They are to be of brick, ornamented with terra-cotta and a limestone base. On the corner will be built the police station, three stories, 70′ x 70′. Both the patrol and fire houses will be two stories high, the former being 18½′ x 48′ and the latter 22′ x 70′ in dimensions.

Report states that the National Export Exposition has awarded a contract to Thos. M. Seeds, Jr., 1216 Race St., for an auditorium. It will have two connecting wings with an open court; cost, $80,000. Wilson Bros. & Co., architects, Drexel Building.

The work of removing the old white front of St. Michael's Catholic Church, at the corner of 2d and Jefferson Sts., is soon to begin, preparatory to constructing a fine new elevation. The new front is to be of Pompeiian brick and terra-cotta,

BUILDING INTELLIGENCE.

(*Advance Rumors Continued.*)

with granite base. The present tower, rising from the northern end, will remain unchanged.

Pittsburgh, Pa. — Herbert Dupuy is to erect a twelve-story office-building at the corner of Liberty Ave. and 5th St., to cost $300,000, after plans by Architects Topp & Craig.

Richmond, Va. — A depot is to be erected for the Southern Railway Company, 70′ x 175′, of granite and pressed-brick, and costing $60,000. Plans by Frank P. Milburn, Charlotte, N. C.

Roslyn, L. I., N. Y. — Perry Belmont has purchased a large portion of the William Cullen Bryant estate in this town. It is stated that he has also leased the old mansion, once the home of the poet, and is having it redecorated and refurnished. The land purchased amounts to a hundred acres, and as soon as Mr. Belmont returns from Europe work will be commenced on a country residence situated on the highest ground in the estate. Mr. Belmont's new acquisition is adjacent to Harbor Hills, recently purchased by the Vanderbilts, and to the estate of William C. Whitney.

Saginaw, Mich. — The Germania Society is to erect a business building on Genesee Ave.; cost, $50,000.

Salt Lake City, Utah. — C. M. Neuhansen is preparing plans for a six-story business block to cost $100,000. It is to be erected at 216-20 S. Main St. for Frank M. Wilson.

The people of All Hallow's College will erect a $150,000 college building on their 40 acre tract on the east bench overlooking the city. The building will be erected this fall.

Plans have been drawn by F. A. Hale, Commercial Block, for a $40,000 warehouse for the Coöperative Wagon & Machine Co.

It is stated that the Consolidated Implement Co. will erect a $30,000 warehouse.

Sandusky, O. — Plans have been completed by S. H. Shively, Fremont, for a $20,000 brick and stone business block for A. Schmidt.

Seattle, Wash. — A $30,000 edifice is to be erected for the Church of the Sacred Heart of Jesus. Rev. Thos. Brown, pastor.

Sonoma, Cal. — The Pacific Construction Co. have been awarded the contract for the work at the new Court-house at $11,973.

Springfield, Ill. — The corner-stone of the new Odd Fellows' Temple has been laid. The new building will cost $16,000.

Springfield, Mass. — A new structure for the Mechanic Arts School is being considered. The lease of the building it now occupies expires shortly, and the question is whether to renew it for four years or to put up a building of its own.

St. Louis, Mo. — Plans have been drawn by J. L. Wees, Commercial Building, for a four-story brick and stone addition to the Homeopathic Hospital at Jefferson and Howard Sts.; cost, $40,000.

The Anderson Bros. Construction Company is to remodel the building occupied by B. Nugent & Bro., corner Broadway and Washington Ave.; cost, $75,000.

Titusville, Pa. — Press reports state that Capt. George W. Barber, of Akron, will build a $75,000 sanitarium in this city.

Washington, D. C. — At the second session of the Washington Public Library Commission, held recently, it was decided to accept the plans of Ackerman & Ross, of New York City. The architects will have to modify their drawings so as to bring the building within the limit of cost. The successful competitor will superintend the construction of the building and furnish all other professional service except the awarding of contracts, which will be done by the commission.

Wausau, Wis. — It is stated that the plans of the Pauly Jail Bldg. & Mfg. Co., of St. Louis, Mo., have been accepted for a jail to cost $24,500.

Watertown, Ill. — A $20,000 infirmary is to be erected for the Watertown Hospital.

Westfield, Mass. — The Normal School boarding-hall is undergoing extensive repairs.

Worcester, Mass. — Architects Earle & Fisher are preparing plans for a Colonial style house containing 15 or 16 rooms for Mr. M. J. Whittal at South Worcester.

Earle & Fisher have completed plans for a two-story brick engine-house to be erected on Providence St. The building will be 40′ x 80′, with a hose-tower 50 feet in height.

Architect W. H. Harvey has prepared plans for the Greendale engine-house. This building will be two stories in height, 46′ x 64′.

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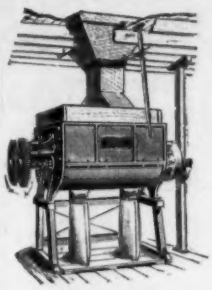

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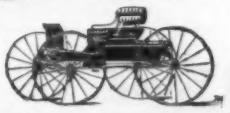

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

James A. McDermott has the contract for the erection of a new convent to be built on Vernon St. for the Sisters of Notre Dame. This will be of brick, three stories in height; Patrick W. Ford, of Boston, architect; cost, $43,729.

Plans have been prepared by P. W. Ford, of Boston, for a $50,000 brick convent for the St. John's R. C. Church on Vernon St. Thos. Griffin, Mgr.

APARTMENT-HOUSES.

Detroit, Mich. — *Davenport St., Nos.* 57-59, bk. flat; $10,000; o., M. B. Moore; a., F. J. Grenier.

New York, N. Y. — *One Hundred and Twenty-ninth St.*, nr. 8th Ave., six-st'y bk. & st. flat, 49′ x 89′; $84,000; o., Emil Eugelman, 564 Amsterdam Ave.; a., Henry Anderson, 1180 Broadway.

Thirty-third St., nr. 8th Ave., six-st'y bk. & st. flat, 60′ x 87′; $90,000; o., Jas. J. McCaffrey, 35 E. 19th St.; a., John C. Burne, 102 W. 42d St.

One Hundred and Twenty-fourth St., nr. Broadway, six-st'y bk. flat, 88′ x 94′; $105,000; o., Lewis F. Mortimer, 602 W. 125th St.; a., Geo. F. Pelham, 503 Fifth Ave.

Ninety-ninth St., nr. Park Ave., 4 five-st'y & base. bk. flats, 25′ x 86′; $80,000; o., Sam'l Ginsberg, 171 W. 102d St.; a., F. J. Miller & Co., 974 Boston Ave.

One Hundred and Thirteenth St., nr. 1st Ave., 9 five-st'y bk. & st. flats, 25′ x 88′; $225,000; o., David Cohen, 54 Thatford Ave., Brooklyn; a., Rudolf Werner, 34 & Wendover Aves.

Lenox Ave., cor. 112th St., 2 seven-st'y bk. & st. apart., 50′ x 95′ & 50′ x 90′; $200,000; o., Marcus Hofferd, 212 Delancey St.; a., Geo. Fred. Pelham, 503 Fifth Ave.

Broadway, cor. 108th St., eight-st'y bk & st. flat, 93′ x 100′; $400,000; o., Wm. Noble & Co., 307 Madison Ave.; a., Joseph Wolf, 1125 Broadway.

CHURCHES.

Worcester, Mass. — *Endicott St.*, one-st'y fr. church, 50′ x 60′; $8,000; o., Immanuel Cong. Church; a., E. T. Chapin; b., Fred J. Goff.

Greenwood St., two-st'y fr. church, 53′ x 80′; $11,500; o., Swedish Cong. Church; a., E. T. Chapin; b., Fred J. Goff.

EDUCATIONAL.

Detroit, Mich. — *Seventh St.*, nr. Pine St., bk. school; $50,000; o., Board of Education, City of Detroit; a., Malcomson & Higginbotham.

Twenty-fourth St. and Ivy Pl., bk. school, $43,000; o., Board of Education, City of Detroit; a., Malcomson & Higginbotham.

Bellevue Ave., nr. Agnes Ave., bk. school; $28,000; o., Board of Education, City of Detroit; a., Malcomson & Higginbotham.

FACTORIES.

Philadelphia, Pa. — *Juniper and Cherry Sts.*, eight-st'y bk. building, 60′ x 100′; $60,000; o., George F. Lasher; c., W. W. Rea's Sons; a., Chas. Balderston.

Worcester, Mass. — Three-st'y bk. & granite machine shop, 50′ x 131′; $14,000; o., F. E. Reed & Co.; a., Benj. S. Newton; b., Henry Mellen & Son.

HOSPITALS.

Columbus, O. — *W. Grant Ave.*, three-st'y bk. hospital, 68′ x 116′, comp. roof, steam; $20,000; o., Dr. J. G. Baldwin; a., Richards, McCarty & Bulford, The Ruggery.

HOUSES.

Boston, Mass. — *Clement Park, Nos.* 11-19, Ward 20, two 2½-st'y fr. dwells., 27′ x 46′, pitch roofs, furnaces; $10,000; o., Annie R. Foster; b., Howard Bros., 412 Dorchester Ave.

Fisher Ave., nr. Parker St., Ward 19, 2½-st'y fr. dwell, 33′ x 38′, pitch roof, stoves; $5,600; o., John Roessler & Otto Weller; a. & b., Fouhs & Wangler, 17 Mansur St.

Claybourne St., nr. Dakota St., Ward 20, 2½-st'y fr. dwell., 32′ x 46′, pitch roof, furnace; $6,000; o., & b., Jas. D. McKay, 109 Glenway.

Alleghany St., nr. Pontiac St., Ward 19, two 2½-st'y bk. dwells., 23′ x 53′, pitch roof, stoves; $14,000; o. & b., J. A. McCloskey, 118 W. Selden St.

Main St., Nos. 478-490, Ward 4, 4 two-st'y fr. dwells. & stores, one 24′ x 65′, one 20′ x 24′ x 65′, two 23′ x 76′, flat roofs, stoves; $22,000; o., Est. A. H. Allen; a., H. B. Alden, Dedham, Mass.; not let.

Dennison St., cor. Haley St., Ward 21, 2½ st'y fr. dwell., 32′ x 39′, pitch roof, furnace; $5,500; o. & b., Oscar Kopplitz, 159 W. Springfield St.

Park St., nr. Centre St., Ward 23, 2½-st'y fr. dwell., 27′ x 39′, pitch roof, furnace; $5,000; o. & b., Allen McLellan; a., Jas. Murray, 120 Tremont St.

Hutchings St., nr. Elm Hill Ave., Ward 21, 2½-st'y fr. dwell., 35′ x 40′, pitch roof furnace; $7,000; o. & b., W. A. Davidson, 190 Harvard St., Dorchester.

Wabeno St., nr. Wyoming St., Ward 21, 2½ st'y fr. dwell., 28′ x 48′, pitch roof, hot water; $5,500; o., Phebe A. Minee; a. & b., Z. E. Cliff, 345 Summer St., Somerville.

Langdon St., nr. George St., Ward 17, 6 two-st'y bk. dwells., 20′ x 45′, flat roofs, stoves; $35,000; o. & b., Wm. Sorsher, 97 Fifth St.

Buttonwood St., No. 108, Ward 16, two-st'y fr. dwell., 22′ x 41′, flat roof, furnace; $5,000; o., Hugh J. Young; a. & b., Howard Bros., 412 Dorchester Ave.

Brooklyn, N. Y. — *Ocean Parkway*, 2½-st'y bk. & st. dwell.; $15,000; o., Dr. G. Merolla; a., C. Maldura, 36 Wall St. and Eugene Ciccarelli.

Hampden St. and Virginia Pl., 52 two & three-st'y bk. & st. dwells., 19′ & 18′ x 45′; $364,000; o., Camel & Haines, Arbuckle Building; a., F. S. Lowe, 186 Remsen St.

Chattanooga, Tenn. — *Fort and Wood Sts.*, 2½-st'y bk. dwell., 400′ x 400′, tile roof, hot water; $20,000; o., Dr. R. T. Isbester; a., Adams & Rearden, Adams Block.

Clayton, Mo. — Two-st'y fr. dwell., 40′ x 50′, shingle roof, furnace; $6,000; o., Judge G. W. Wolf; a., Wm. Abesser, 418½ Olive St., St. Louis.

Galveston, Tex. — *Avenue I*, cor. 17th St., two-st'y bk. dwell., slate roof; $15,000; o., C. Clarke; a., G. B. Stowe.

BUILDING INTELLIGENCE.

(Houses Continued.)

Germantown, Pa. — *Underhill St.*, nr. Chelten Ave., 4 three-st'y bk. dwells., 16′ x 53′; $16,000; o., David Manley; b., John J. Brown.

Mayfield, Ky. — Two-st'y bk. dwell., 50′ x 60′, bk. veneer roof; $6,000; o., J. W. Griffith; a., Wm. L. Brainerd, Paducah.

Milwaukee, Wis. — *Twenty-first and Cherry Sts.*, two-st'y fr. dwell., 50′ x 52′, shingle roof, furnace; $5,000; a., Wolff & Etwens, 12th & Walnut Sts.

Newton, Mass. — *Bralmore Road*, Ward 7, two-st'y dwell., 30′ x 30′, furnace; $6,000; o., H. E. Bothfeld; b., E. U. Soulis.

New York, N. Y. — *Prospect Ave.*, nr. 169th St., 10 three-st'y fr. dwells., 21′ x 48′; $50,000; o., Wm. T. Lavelle, 772 Jackson Ave.; a., J. A. Lavelle, 772 Jackson Ave.

One Hundred and Fifty-sixth St., nr. Kelly St., 12 two-st'y bk. dwells.; $16,000; o., Geo. F. Johnson & Son, on premises.

Seventy-eighth St., No. 7, five-st'y bk. & st. dwell., 25′ x 80′ & 102′; $25,000; o., Percival Kuhne, 22 W. 56th St.; a., Hoppin & Koen, 160 Fifth Ave.

Philadelphia, Pa. — *Woodbine Ave.*, nr. 59th St., 2 three-st'y st. dwells.; $24,000; o., Wendell & Smith; b., Milton W. Young.

Ashland and Thomas Aves., fifty-seven 2½-st'y bk. dwells.; $182,000; o. & b. Wilson R. Ker, 1226 S. 58th St.

Sixty-ninth St. and Lawnton Ave., Oak Lane, three-st'y granite dwell., 48′ x 68′; $7,500; o., W. B. Lowell; b., J. Renton White.

Somerville, Mass. — *Broadway*, nr. Sycamore St., two-st'y dwell., 37′ x 40′, hot water; $7,000; o., Walter S. Sawyer, State St.; b., Geo. E. Hutchinson, 202 School St.

Worcester, Mass. — *Plimpton St.*, three-st'y fr. dwell., 28′ x 58′; $4,400; o., J. Godfrey Elberg; b., Clarende E. Anderson.

Whipple St., three-st'y fr. dwell., 27′ x 55′; $4,300; o., A. F. Engdahl; a., J. Hedstrom; b., Axel Erickson.

Gardner St., three-st'y fr. dwell., 25′ x 45′; $4,000;

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Vernon St., three-st'y & base. bk. block, 31′ x 60′; $4,500; o. & b., F. Meagher Morrison.

Clifton Ct., three-st'y fr. dwell., 27′ x 52′; $4,000; o., O. K. Banister; b., Fred J. Goff.

Whitman Road, two-st'y fr. dwell., 32′ x 42′; $4,500; o., Mason O. Wheeler; a., H. Lapoint; b., Fred J. Goff.

Millbury St., three-st'y fr. dwell., 48′ x 64′; $5,000; o., James Manning; b., Carroll & Hudson.

OFFICE-BUILDINGS.

Macon, Ga. — *Second and Cherry Sts.*, three-st'y bk. store & office building; $15,000; o., Mrs. M. A. Pearson; a., Alexander Blair, 673 Cherry St.

New York, N. Y. — *Park Row, No. 3, and Ann St., No. 5*, eight-st'y bk. & st. office building & stores, 25′ x 62′ 8″; $60,000; o., Park Row Construction Co., 23 Park Row; a., R. H. Robertson, 160 Fifth Ave.

STABLES.

Boston, Mass. — *Newbury St., No. 332*, Ward 11, two-st'y bk. stable, 22′ x 81′, flat roof, furnace; $8,000; o., S. H. Whitwell; a. & b., A. S. Drisko, 166 Devonshire St.

Brooklyn, N. Y. — *Classon Ave.*, nr. Park Ave., two-st'y bk. stable, 30′ x 50′, gravel roof, $3,500; o., W. Brunne, 332 Wallabout St.; b., Libbey & Keese, 519 Flushing Ave.

Fort Hamilton Ave., cor. 60th St., three-st'y bk. stable, 115′ x 130′, tar & gravel roof; $40,000; o., Borden's Condensed Milk Co., 71 Hudson St., New York; a., G. H. Chamberlin, 1181 Broadway New York.

Liberty Ave., cor. New Jersey Ave., three-st'y bk. stable, 100′ x 160′, tar & gravel roof; $40,000; o., Borden's Condensed Milk Co., 71 Hudson St., New York; a., G. H. Chamberlin, 1181 Broadway, New York.

Newton, Mass — *Essex Road*, Ward 6, one-st'y stable, 38′ x 40′, hot water; $5,000; o., Caro. H. Lee; b., A. Hathaway & Son.

New York, N. Y. — *Eleventh Ave.*, cor. 30th St., two & three-st'y bk. & st. stable, 49′ x 175′; $3,000; o., Estate Richard Roy, New York Life Ins. & Trust Co.; a., C. F. Rose, 1 Madison Ave.

(*Stables Continued.*)

Ninety-ninth St., No. 149, six-st'y bk. stable, 35′ x 75′; $12,000; o., Wm. F. Weber *et al*, 151 W. 99th St.; a., Edw. L. Angell, 108 Fulton St.

Tarrytown, N. Y. — *Grassmere*, 1½-st'y fr. barn for cattle, 60′ x 200′; $7,000, o., Wm. F. Cochrane, on premises; a., C. C. Chipman, 220 Broadway, New York City.

White Plains, N. Y. — Two-st'y bk. & st. stable, 60′ x 100′; $18,000; o., Brandon Brothers, 132 Park Ave., New York City; a., Geo. H. Budlong, 132 Park Ave., New York City.

MISCELLANEOUS.

Boston, Mass. — *N. Harvard St.*, Ward 25, 1½-st'y fr. boat-house, 96′ x 138′, pitch roof, hot water; $15,000; o., Harvard Athletic Asso.; b., F. B. Forbish, Cambridge.

Worcester, Mass. — *Vernon St.*, three-st'y bk. convent; $43,729; o., Sisters of Notre Dame; b., James A. McDermott; a., P. W. Ford, Boston.

COMPETITIONS.

CHANGE OF SCALE. — Society of Beaux-Arts, Class B. Order Programme No. 9, Competition No. 34. The scale of finished plan has been reduced from 1-8″ to the foot to 1-16″ to the foot. ERNEST FLAGG, Chairman.

WARD BUILDING. [At Patton, Cal.]
Plans and specifications for a new ward building for the Southern California State Hospital will be received **until August 7.** Approximate cost to be $35,000. M. B. CAMBELL, medical superintendent. 1231

PROPOSALS.

BUILDING. [At Washington, D. C.]
Bids are wanted **August 5** for an additional building for the Girls' Reform School; separate bids are wanted for a steam heating apparatus. JOHN B. WIGHT, Commr., D. C. 1231

Treasury Department, Office Supervising Architect, Washington, D. C., July 24, 1899. Notice is hereby given that the date for opening the bids for the construction (except heating apparatus, elevator, electric wiring and conduits) of the U. S. Public Building at Boise, Idaho, is extended from August 7, 1899, to 2 o'clock P. M., August 28, 1899. JAMES KNOX TAYLOR, Supervising Architect. 1232

CEMENT. [At Bellevue, Pa.]
U. S. Engineer Office, Custom-house, Cincinnati, O. Sealed proposals for furnishing at dam numbered six, Ohio River, 18,000 barrels, more or less, of natural hydraulic cement will be received at Davis Island Dam, Bellevue, Pa., **until 2 P. M., August 12, 1899.** W. H. BIXBY, major engineers. 1232

SCHOOLS. [At Rockport, O.]
Bids will be received **until August 12** by J. C. ANDREWS, Clerk of Lakewood School Board, for two school-buildings. 1232

COURT-HOUSE. [At Ellaville Ga.]
Bids are wanted **August 31** for a two-story brick and stone court-house for Schley County. W. D. MURRAY, Clk. Co. Commrs. 1232

Y. M. C. A. BUILDING. [At Scranton, Pa.]
Competitive plans will be received **until September 15** for a new $150,000 Y. M. C. A. Building. The first prize will be $1,000 and $750 will be divided among the three next best designs. 1232

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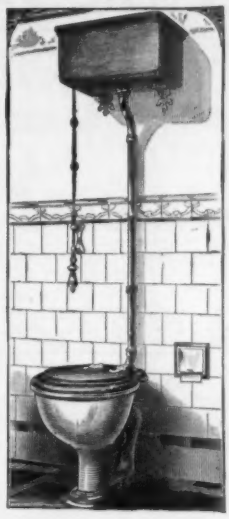

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PROPOSALS.

SCHOOL. [At Oakhill, O.]
Bids are wanted **August 10** for a school. J. J. WILLIAMS, Chmn. 1232

SCHOOL. [At Shadeville, O.]
Bids are wanted **August 10** for a school. E. M. EARHART, Clk. 1232

LODGE BUILDING. [At Woodbine, Ia.]
The undersigned hereby gives notice that sealed proposals for the erection of a two-story brick building, including all labor and material, will be received by him **until the 15th day of August, 1899.** (Signed) G. N. YOUNG, Chairman Bldg. Com. I. O. O. F. 1232

HEATING. [At Dallas, Tex.]
Bids will be received by the Commissioners' Court of Coryell County **until August 17,** for plans and specifications and heating apparatus for the Coryell County Court-house, bids to be either for steam or hot air heating. W. B. WOODWARD, County Clerk. 1231

PROPOSALS.

Treasury Department, Office Supervising Architect, Washington, D. C., July 11, 1899. Sealed proposals will be received at this office until 2 o'clock P. M. on the 8th day of August, 1899, and then opened, for the plaster models and granite carving for the U. S. Court-house, Custom-house and Post-office Building at Omaha, Nebraska, in accordance with the drawings and specification, copies of which may be had at this office or the office of the Custodian at Omaha, Nebraska, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1231

Treasury Department, Office Supervising Architect, Washington, D. C., July 14th, 1899. Sealed proposals will be received at this office until 2 o'clock P. M. on the 16th day of August, 1899, and then opened, for all the labor and material required for the ornamental ironwork of the main buildings at the U. S. Immigrant Station, Ellis Island, New York, in accordance with drawings and specification, which will be furnished at the discretion of the Supervising Architect on application at this office, or the office of Boring & Tilton, architects, 32 Broadway, New York City. JAMES KNOX TAYLOR, Supervising Architect. 1231

PROPOSALS.

Treasury Department, Office of the Supervising Architect, Washington, D. C., July 18, 1899. Sealed proposals will be received at this office until 2 o'clock P. M. on the 15th day of August, 1899, and then opened, for the foundations, superstructure and roof covering of the extension to the U. S. Post-office, Court-house and Custom-house Building at St. Paul, Minn., in accordance with the drawings and specification, copies of which may be had at this office or at the office of the Superintendent at St. Paul, Minn., at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1231

Treasury Department, Office Supervising Architect, Washington, D. C., July 15, 1899. Sealed proposals will be received at this office until 2 o'clock P. M. on the 10th day of August, 1899, and then opened, for removing the old steam heating apparatus, etc., and furnishing new steam heating apparatus for the U. S. Marine Hospital building at Cleveland, O., in accordance with the drawings and specification, which will be furnished at the discretion of the Supervising Architect on application at this office or at the office of the Custodian at Cleveland, O. JAMES KNOX TAYLOR, Supervising Architect. 1231

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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.

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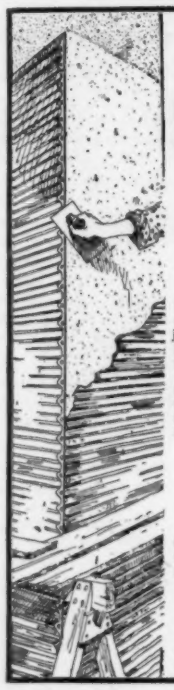

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Common: *Cargo afloat.*			Building 4 50	
Pale	1 75 @ 2 00	Domestic Com.	sewer add 1.00	
Jersey	5 00 @ 5 50	8 50 @ 9 50	hollow, add 1.25	In Yard.
Long Island	@	Domestic Face	Enam. Imp. Bk.	Sq. Hard 8 00 @ 9 00
Up River	5 09 @ 5 50	18 00 @ 25 00	125 00 @ 145 00	" @ 7 00
Haverstraw Bay 2d	5 00 @ 5 25	Philadelphia	Enam. Domes.	Salmon @ 5 50
" 1st	@ 5 62½	35 00 @ 40 00	70 00 @ 85 00	Sq. " @ 5 50
Hollow	5 25 @ 5 50	10 00 @ 11 00	Select Red Sand-Mold...10 00	Light Stretchers
Fronts:	@		St. Louis Hyd'le	9 00 @ 11 00
Croton, Brown	@ 12 00	Phila. mould	Press..27 00	Medium "
" dark	@ 12 00	50 00 @ 80 00	Collinsville, do	@ 12 00
" red	@ 12 00		.....22 00	Red "
Chicago pressed		Enamelled B'k.	Findlay, do 22 00	@ 12 00
" Moulded		Imported	Chicago, do	Dark "
Baltimore	37 00 @ 41 00	Enam. (edge)	assorted shades	@ 12 00
Philadelphia	19 00 @ 21 00	105 00 @ 120 00	16 00 @ 20 00	Pressed
Trenton	17 50 @ 18 50	" (edge & end.)	Chicago, do	@ 17 00
Milwaukee		120 00 @ 135 00	Brown..24 00	Paving
Moulded:		Domestic.	Chicago, do Red	11 00 @ 13 0
Red Pressed	@ 29 00	Enam. (edge)	Roman..24 00	Second " @ 12 00
Buff "	@ 27 00	90 00 @ 100 00	Chicago, do Br'n	Third " @ 10 00
Moulded Red & Buff	45 00 @ 70 00	" (edge & end.)	Roman..27 00	
Enamelled: *Imp.*		110 00 @ 115 00	Bushnell Buff	
Enamelled (edge)	85 00 @ 100 00		.....25 00	Dom. @ 65
Enamelled (edge and end)	90 00 @ 110 00			@ 85
CEMENT, LIME, etc. (₱ *cask.*)				
Rosendale Cement	90 @ 1 00	5 00 @ 1 00	*Not sold.*	1 30 @ 1 50
Louisville "		@	75 @ 1 00	S.H.Fa'l 20 @ 1 50
Utica, Akron, Buffalo, Milw'ke.	*Not sold.*	@	75 @ 1 00	@
Portland, Eng. (Gibbs)	2 25 @ 2 50		2 50 @ 2 60	2 85 @ 3 15
" (K. B. & S.)	2 50 @ 3 00	@	2 50 @ 2 60	2 30 @ 2 60
" " (Black Cross)	2 25 @ 2 50	2 20 @ 2 50	2 50 @ 2 60	2 85 @ 3 15
" " (Burnham)	2 50 @ 2 50	@	2 50 @ 2 60	2 75 @ 2 85
" " (White's)	2 65 @ 3 00	@ 5 00	2 50 @ 2 60	Belg'n 2 10 @ 2 40
" French (Lafarge)	3 60 @ 3 75	2 75 @ 3 00	3 75 @ 4 25	Hemmoor
" Ger. (Alsen)	2 90 @ 3 25	B'ks, Shoobridge	2 90 @ 3 20	2 50 @ 2 75
" " (Fewer)	2 25 @ 2 40	& Co.,	@	2 75 @ 2 85
" " (Vorwohler)	2 50 @ 2 90	English 2 30	@	Josson
" " (Lagerdofer)	@	2 75 @ 3 00	2 50 @ 2 90	2 60 @ 2 75
" " (Dyckerhoff)	2 75 @ 3 00		3 10 @ 3 30	3 00 @ 3 25
" " (Hanover)	2 50 @ 3 00	@	2 75 @ 2 90	2 75 @ 2 85
" " Stettin, (Anchor)	2 35 @ 2 45	3 50 @ 4 00	2 85 @ 3 00	B. Egl. 2 50 @ 2 75
Roman	2 75 @ 3 00	@ 7 00	2 75 @ 3 25	3 00 @ 3 50
Keene's coarse	4 25 @ 4 75	8 00 @ 9 00	6 00 @ 7 00	6 50 @ 7 00
" superfine	@ 6 50		9 00 @ 10 00	8 00 @ 9 00
Lime:				
Lime of Tell	@ 4 00		*Not sold.*	White Lime ₱ bush
Hydraulic Lime	@ 1 45	@		25 @ 30
Chicago Lime in bulk	St. John		45 @ 55	White Mash
Wisconsin Lime	@		45 @ 55	1 25 @ 1 50
Rockland and Rockport, (Com.)	80 @ 85	@ 90	*Not sold.*	1 00 @ 1 00
Rockland, finish	90 @ 95	@ 95	*Not sold.*	
Kelley Island Lime, finish	@	@	1 00 bulk, 75c.	
State, Com. cargo rates	@ 65	*Not sold.*	*Not sold.*	*Not sold.*
State, finishing	@ 75	*Not sold.*	*Not sold.*	*Not sold.*
Plaster-of-Paris (calcined)	1 30 @ 1 40	1 85 @ 2 00	1 65 @ 1 75	1 50 @ 2 25
" (casting)	@ 1 60	@ 2 25	1 75 @ 1 90	1 75 @ 2 50
Hair (cattle) ₱ *bush*	14 @ 16	25 @ 30	12 @ 20	20 @
" (Goat)	17 @ 19	@ 30	20 @ 25	30 @
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