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CONTENTS

THE important question of the right of artists to copyright, for their private benefit, works of art executed by them in public buildings, and paid for with public money, has made its appearance in the courts. It will be remembered that most of the decorations in the Library of Congress are copyrighted by the artists, and we have ourselves, in preparing the series of plates of the building which we hope our readers will remember, been obliged to avoid, so far as possible, photographing the decorations, in order not to infringe on any interests of the artists. Now, however, it appears that the R. H. White Company, of Boston, disregarding the notice of copyright attached to the work, has been selling photographs of Mr. Frederick Dielman's mosaic panel in the Congressional Reading-room, and Mr. Dielman has sued for an injunction in the United States Circuit Court. It seems, moreover, that the officials in charge of the Library make no effort to uphold the copyright of the artists, but permit the decorations to be photographed by any one who makes proper application; so that the question is not merely between Mr. Dielman and the White Company, but also, indirectly, between Mr. Dielman and the Government, which, by its failure to protect Mr. Dielman's interest, shows a disposition to deny his rights.

WE have before expressed the opinion that the copyright of a mural decoration in a public building, reserved by the artist for his own benefit, without the express consent of the representatives of the public interest, would be found of doubtful validity, and the arguments of Mr. Dielman's counsel, as reported in the newspapers, do not add much force to the artist's claim. Mr. Dielman, according to his counsel, "understood" that he reserved the right to copyright his cartoon, although no agreement was made in regard to the matter, and it does not seem certain that any copyright notice was inscribed on the cartoon when it was accepted by the Government officials, although the notice appeared on the cartoon when it was "completed" and sent to Venice to be copied in mosaic, and the same notice was reproduced in the mosaic, where it is still to be seen. The argument on his side seems to be that the ordinary rule, that such rights accruing to persons employed fall to the employer, does not apply, since the design was a "creation of the intellect;" and that, if it did, the Government, as the grantor of the copyright, would also be the grantee, which his counsel seems to think objectionable; while great stress is laid upon the fact that the mosaic, which belongs, undoubtedly, to the Government, is only a copy of the cartoon, which is the property of Mr. Dielman, and may, therefore, as the counsel seems to think, be copyrighted without question. As it is the design which is copyrighted, not the cartoon, the ownership of the canvas has nothing to do with the case, the simple question being whether an artist employed at the public expense to decorate a public building can claim private rights over the work executed in pursuance of this employment, unless with the express and previous consent of the proper authorities. The case is obviously different from that of the employment of an artist by a private individual, who expects to make a profit from the monopoly of the design so acquired, and it remains to be seen whether the Court will uphold Mr. Dielman's view.

THE Rotch Travelling Scholarship for the present year has been awarded to Mr. William L. Welton, of Lynn, Mr. Charles W. Killam, of Boston, taking second place, with the prize of seventy-five dollars of the Boston Society of Architects. Mr. Welton takes his place in a long line of distinguished holders of the scholarship, and will, it may be hoped, add new honors to the oldest of all the American travelling-studentships in architecture.

THE Westminster Chambers question, in Boston, has assumed a peculiar interest on account of its fortune in the Legislature. Some two years ago, the Massachusetts Legislature, at the instance of property-owners in the neighborhood of the new building, passed a special statute, restricting all new structures within a certain distance of Copley Square to a height of ninety feet, instead of one hundred and twenty-five, the existing limit. As the owners of Westminster Chambers had made contracts for carrying their building to the legal limit, and would obviously suffer great injury by being compelled to take off thirty-five feet of its height, the statute provided that the city of Boston should make compensation for the damages inflicted in what was claimed to be the interest of the public. As the building went on, it was found that ninety feet would give only a portion of a story at the top, and the owners ventured to carry it up to ninety-six feet, hoping to come within the law by ornamenting the upper story with statues, which, by express provision, may extend above the limit. A Supreme Court decision held that the caryatides of the upper story were not statuary within the intention of the law, and the owners were left in the position of simple violators of the statute. This year, as a last resort, they had introduced a bill, revoking, in a certain degree, the previous statute, and enabling them to leave their building undisturbed. The people who objected to the building opposed this bill, claiming that the portion above the limit should be removed. The unfortunate owners found their lot made still more miserable by the refusal of the city authorities to pay any damages, either for the original amputation of the building, or for any subsequent operation, on the ground that the whole statute, including the portion referring to the payment of damages by the city, was unconstitutional and void. When the new bill came before the Legislature, much was made of the "defiance" by the owners of the building of the will of the Legislature, as expressed in the original statute, and the bill was defeated by a large majority; but, on a motion to reconsider, a second vote, taken a day later, after more mature reflection on the sufferings of the owners of the building, showed a majority the other way. The newspapers, which have watched the agonies of the unhappy owners with unfeeling satisfaction, hint at "buying of votes;" but it is not likely that there is much money left in the investment to purchase votes with.

IT is a little curious to read the stories put forth in connection with the consolidation of the principal bridge-building establishments into a single corporation, with a New Jersey capital of seventy million dollars. We are told that one result that the bridge-builders hope to accomplish by combining their interests is to "freeze out the bridge-brokers." These objectionable individuals are, it appears, persons who have no shops, and represent none, but who submit bids on all bridge-work advertised, and "frequently" make the lowest offer, and secure the contract. Then, "knowing the condition which has existed in a majority of the big shops, and the difficulty with which the plants were kept busy," these misguided persons have "taken advantage" of their knowledge, and have sublet their contract to some regular bridge-builder "at a price below the cost of turning out the material." Naturally, this grieves the bridge-builders, and they profess to think that now, through combination, they will escape the broker's machinations. Whether this belief is well founded it is important for architects, who have much to do with bridge-builders, to know. Taking the promoters' own account of the consolidation, it is

plain that the broker, "the most irritating factor with which the builders have had to contend," is simply a man who is familiar, not only with estimating on bridge-work, but with the jealousies and necessities of the shops, and has, by playing off one against the other, generally succeeded in getting the work done at a low price; and the very people who, to get the job away from some one else, took it, as they say, "below the cost of turning out the material," are the ones who now raise an outcry against the broker, and have combined with each other, we are informed, to avoid being tempted by him. That it would not be long before they again fell from grace, broker or no broker, if times should be dull, and competition for work to "keep the plants busy" should become severe, the history of the iron trade, to say nothing of their own mournful tale about the "broker," sufficiently indicates. Even if the new combination included all the bridge building establishments in the country, which is very far from being the case, there is every reason to suppose, judging from the analogy of similar combinations among iron-workers in the past, that the members would not endure a very protracted period of stagnation in business before cutting began, secretly at first, but before long openly. Assuming, as is quite likely, that the various establishments composing the combination have given up their individuality, so as to exclude the possibility of their competing with each other, this only makes it easier for outside establishments to compete with an unwieldy corporation, loaded down with plants which it was necessary to take in, but which cannot be operated at a profit in times of depression; and trusts of this kind usually leave a loophole open by which the component parts can regain a separate existence in case of need. Already, the National Wall-Paper Company, one of the oldest and strongest of the industrial corporations, has begun the process of disintegration by selling one of its factories at auction to the original owners, who were the highest bidders, and it would not be surprising to see the fashion spread.

ARCHITECTS will be interested, not to say surprised, to learn of the prospect before them, due to the development of a new sort of professional man, known to the New York *Evening Post* as the "constructional engineer." At present, we learn, "the training of the architect rarely qualifies him" to "frame specifications," or to have "at his tongue's end" the "cost of each kind of material used," or to assure himself "that the best material the specifications call for is going into the work," or his client "that he is getting full value for his money." To meet these deficiencies in the training of the architect, and to protect him, as well as his client, "from the designs of unscrupulous purveyors," is the beneficent office of the "constructional engineer." In the architectural practice of the future, this functionary "who, of course, will of necessity be a member of the firm," is, "after the plans have been drawn, and the specifications written out," to "assume the entire responsibility for the completion" of the building proposed. "He will then have a personal interest in seeing that the specifications are rigidly adhered to, and that nothing but the best of material and workmanship enters into the building, because he, himself, will attend to the purchasing and overseeing." When this "combination of forces" is fully established, "the architects can guarantee to the investor the erection of the building for a specified sum, and charge from ten to fifteen per cent for the work."

WE must confess that the approaching advent of the "constructional engineer" does not fill us with such joyful anticipation as it does the *Evening Post*. That it would be nice for the architect to get fifteen per cent commission, instead of five, we are ready to acknowledge, and most architects would be very willing to guarantee the cost of an ordinary building under their charge for an extra ten per cent; but the advantage of sharing the transaction with a "constructional engineer" is not so apparent. So far as clients are concerned, analogy does not indicate that a "constructional engineer," who is a party to a guarantee for the erection of a building within a certain sum, and who, himself, "attends to the purchasing and overseeing," can always be relied upon to see "that the specifications are rigidly adhered to, and that nothing but the best of material and workmanship enters into the building;" particularly if his firm should have made a little mistake in their calculations, or should have been the lowest bidders for the job in competition with all the other architects of the locality. No doubt, his "personal interest," in the long run, would be on the side of integrity, but even "constructional engineers," such as architects at present know them, are not always free from a disposition to pocket immediate profit at the expense of their eternal welfare. The fact appears to be that some one has mixed up the profession of clerk-of-works with that of architectural engineering, which is already recognized in the technical schools. While it is very likely that architectural engineers will be employed in consultation by architects, and may even be partners in large offices, there is no probability that the man who "protects" the architect and his client from "the designs of unscrupulous purveyors" by personal supervision will even hold a similar place in the profession, and it is not desirable that he should do so. Every busy architect has at times several important commissions in hand. The late Peter C. Keely is said to have had twenty churches under construction at once, and it would be impossible for any man, whether a partner or not, to perform the service of a clerk-of works for a large office. To attempt it would simply be to make the architect and his clients the helpless victims of any "unscrupulous purveyors" who chose to smuggle in bad work and materials in the intervals between the "constructional engineer's" visits. Naturally, a partner who guaranteed what he knew little or nothing about could be relied upon to bring his firm to grief sooner or later; and for this reason, if for no other, we doubt whether "the proposed combination of forces" between architects and clerks-of-works will ever become popular, or whether architects, even with the assistance of "constructional engineers," will find it for their interest to become contractors on their own account.

THE British Fire-Prevention Committee not long ago threw out a hint that some of the methods of fireproofing buildings sanctioned by the London building laws were very far from being efficient, and announced its intention to bring them, as opportunity might offer, to practical test. The report of one of the tests made in accordance with this intention has just reached us, and is rather amusing, although it will not at all surprise American architects, who are, as a rule, far more familiar than their brethren in Europe with the real value of fire-preventing systems. The floor to be tested was constructed in accordance with the provisions of the Metropolitan Building Act, as interpreted by Mr. Edwin O. Sachs, the Chairman of the Executive Committee, although the Chairman of the Commercial Section of the Committee, Mr. Farrow, thought that the law should be differently understood in some respects. In either case, however, it was such a floor as London builders and architects commonly construct to comply with the law in regard to "fire-resisting floors," consisting of two-by-seven-inch joists, twelve-and-one-half inches apart from centres, with fillets nailed on each side, two inches above the bottom of the joists, and the space, for five inches above the bottom of the joists, filled-in solid with concrete of "coke breeze" and cement, in the proportion of five parts of coke breeze to one of cement. The floor was built over a brick chamber, ten feet square inside, the walls being carried up well above the top of the beams, which were built into the brickwork. A single seven-eighths wood flooring was nailed on top of the beams, and, after the concrete had had twenty-seven days for setting, the planks which served as a centring for it were removed, and the ceiling covered with five-eighths tongued and grooved sheathing, nailed to the underside of the beams. After loading the floor with one hundred pounds of bricks to the square foot, uniformly distributed, the test was made by a gas fire underneath, regulated so as to begin with a temperature of five hundred degrees Fahrenheit, gradually increasing to about two thousand three hundred degrees, followed by the application of a stream of water. Three minutes after the fire was lighted, steam appeared through the joints of the flooring; one minute afterwards the sheathing of the ceiling began to burn, and ten minutes later the charred remains of the ceiling-boards began to fall off, exposing the lower edges of the joists, which immediately began to burn freely. In half an hour the joists were so charred that a space was visible between them and the concrete, and in an hour after the beginning of the test the floor began to deflect in the middle. Fifteen minutes afterwards the concrete between two of the beams fell out, letting the flame through. Water was then thrown on the underside of the floor, but in seven minutes the whole construction, with its load, collapsed, falling into the interior of the brick "heat," where it continued to burn until extinguished by more water.

THE EVOLUTION OF DECORATIVE MOTIVES.[1] — XII.

THE ACANTHUS AND SPIRAL SCROLL.— II.

Fig. 185. The Branching Scroll.

THERE was, however, one element still wanting to give to the combination of the reversed curve and the spiral its full value as a decorative motive. This was the *branching* of the scroll, the addition to one S-scroll of another starting from it by a tangent curve and continuing its movement a little farther. This extension of the original conception of the scroll is so simple, so obvious, that it seems almost inconceivable that the keen and inventive Greek vase-painters should not at once have seized upon and developed it. It is evident that by repeating these branches in continuous progression a running ornament is produced (Fig. 185) of endless possibilities of development and enrichment. It is also evident that this ornament, when stripped of its spirals, becomes a plain wave; it is, in other words, in principle a *plain wave, throwing off tangent spirals on either side* to fill the hollows. Now the Greek vases abound in plain wave-lines, branching into leaves and berries on either side to fill the hollows (Figs. 184, 185). They also abound in continuous-scrolled waves, in which the movement is that of a line coiling up and then uncoiling to renew its onward movement. What more obvious, more natural, almost unavoidable, than the combination of these two decorative ideas by substituting spirals for the leaves and fruit of a vine-pattern? Yet the Greeks painted vine-patterns and scrolled waves for perhaps two hundred years before they effected this combination. The final result was not attained until the fourth century B. C., and only by a series of intermediate developments which preclude the idea that the failure to use the continuous branching-scroll was due merely to Greek conservatism or self-restraint. It was, in fact, reached not by substituting scrolls for leaves in the vine-pattern, but by adding

Fig. 186. Greek Vine Pattern (Grape).

Fig. 187. S-scroll from Melian Vase (Goodyear).

Fig. 188. Greek Anthemion Pattern.

branch-scrolls to the scrolled bands connecting the elements of anthemion patterns.

It was characteristic of the Greek decorators that, while they did not care to cover large surfaces with closely-packed ornament, preferring refinement to magnificence and display, they, on the other hand, avoided emptiness within the restricted spaces of the decoration. Greek ornament of the early and fine periods is neither crowded nor sprawling. The Greek artists felt the importance of good distribution. Whenever, therefore, the pattern employed left vacant spaces between its repeated units, they instinctively sought to add to the pattern something to fill the void. In the vases of the geometric, early Rhodian and other archaic styles, this abhorrence of a vacuum is seen in the sprinkling of rosettes, circles of dots, *swastikas* and other presumably mystic or magic emblems in the voids of the background, in an apparently capricious but really well-studied and artistic manner. The same feeling led them to fill up the angles of many of their scroll-patterns and lotus-motives with anthemion forms (Figs. 187, 192). This is an elementary instinct in decoration, but it was developed by the Greeks with the same taste, restraint and system which are observable in so many features of their ornament. Now

Fig. 189. Greek Anthemion Pattern.

Fig. 190. Marble Antefix, Eleusis.

in painting on vases the various forms of the anthemion border it became necessary to avoid heaviness by spacing the units of the pattern some distance apart; but it appeared equally necessary to remedy the bareness resulting from this wide spacing. The highly-developed decorative sense of the fifth-century artists no longer permitted the powdering of these spaces with isolated and independent forms such as rosettes and *swastikas*. The whole progress of Greek decoration had been in the direction of organized design; of patterns which, however conventional, were composed of elements growing out of each other or related to one another by some organic principle. The problem of filling these voids was solved by the addition of branching scrolls growing out from the S-scrolls which connected the units or from the frames about the anthemions (Fig. 188). These in no way detracted from the movement of the whole pattern nor from the importance of its chief units, but introduced into the voids just the right amount of line and color to satisfy the eye and give balance to the general effect.

Fig. 191. Stele-head, Athens.

It was a simple thing, of course, to branch a few trivial spirals out from the scrolls of an anthemion border on a red-clay jar — as simple as Galileo's asking by what law a lamp swings from a cathedral ceiling, or Newton's conceiving that there must be a law for the fall of an apple. You and I can branch our scrolls *ad infinitum* — having once learned how. But in a thousand years neither the philosophic Egyptians nor the ostentatious Assyrians had discovered the decorative value and possibilities of branching scrolls, any more than they had realized the beauty of the curve of contrary flexure. The Greeks discovered this simple device, to us so obvious, and used it throughout the fourth century with increasing skill and elegance. It appears not only in their pottery-patterns (such as Figs. 183*a*, 188, 189), but in their carved ornament, as in many stele-heads and antefixæ (Figs. 190, 191). In the well-known example from the necking of the capitals of the northern porch of the Erechtheion (Fig. 192) the scrolls under the anthemions each send out three branchings, the last one ending in a rosette. In many of the fine stele-heads of the fourth century the large scrolls beneath the anthemion branch at least once (Fig. 191). The finest example of the branching scroll used in this manner, *i. e.*, not as a running pattern continuing indefinitely, but as a restricted ornament coming to a definite end, is the superb finial which once crowned the summit of the Choragic monument of Lysicrates at Athens. The fragments of it which remain show what the decorators of the Alexandrian period (its date is about 330 B. C.) had learned to do with branching scrolls (Fig. 193). The spiral branch has here emerged from its function as a subordinate detail filling a vacant space, into prime importance, as the chief motive upon which the whole composition depends for its movement and effect.

Fig. 192. Carved Anthemion: Necking of Columns, N. Porch of Erechtheum. (Reproduced from Fig. 134.)

In the Ionic capital we have another example of the development of the spiral from a subordinate and secondary element of design into the distinguishing feature of a national style. The complete history and details of this development will probably never be known.

Fig. 193. Upper Part of Finial, Choragic Monument of Lysicrates, Athens.

It is likely that in this, as in so many other cases of familiar decorative forms, the final product was the result of many and complex influences converging in one direction. The relationship of the Ionic capital to the anthemion is very clear. Both of these forms are

[1] Continued from No. 1268, page 12.

essentially Asiatic in character, and began to appear in Greek architecture and decoration at about the same time; that is to say, in the latter part of the sixth century, when the Ionic element first asserted itself in Greek art. The Ionic capital appears to have received its early development under Asiatic influences, both in Asia

Fig. 194. Voluted Capital from Assyrian Relief.

Fig. 196. Proto-Ionic Capital from Neandreia.

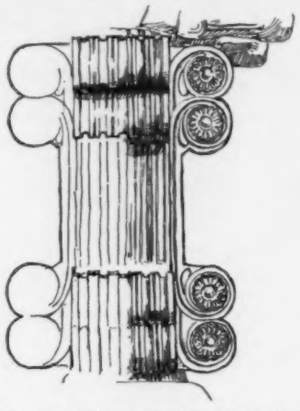


Fig. 195. Volutes from Persian Capital (Perrot and Chipiez).

Minor and in Phœnician and Cypriote art; but these prototypes are very uncouth affairs. In Assyria, as we have already seen, the volute was a favorite detail in furniture and in ornament, and Assyrian reliefs show it applied, in capitals of very Ionic character, to the columnar mullions of palace-windows and the posts of royal pavilions (Fig. 194). Either from the lateral double-clasped volutes of Assyrian furniture (Fig. 179), or from some other source, to us unknown, the Persians evolved the singular four-fold double volutes of the shafts of their palaces and propylæa at Susa and Persepolis (Fig. 195). Under all these influences, which acted on Greek art through manifold channels, and with a growing fondness for the spiral on account of its appearance of life and movement, the Ionic capital was transformed from the Neandreia type of Figure 196, which suggests an atrophied anthemion springing from doubled scrolls at its base enormously magnified, into the magnificent decorative feature which capped the fluted shafts of the Erechtheion and of the interior orders of the Propylæa at Athens and the Temple of Apollo at Bassæ. Whether the Neandreia type, of which many analogues have been found among archaic fragments at Athens, was really a direct derivative of the anthemion — an anthemion adapted to form a capital for a round shaft — or was descended more or less indirectly from Assyrian voluted capitals, by way of Persia and Lycia or other Asia-Minor provinces; or whether it was an independent derivative of the opposed scrolls of which the Greeks of the sixth century were so fond, with the little anthemion as a filling-up detail: these are questions which may be endlessly debated, theories for all of which there is producible evidence, and each of which may have equally well-informed partisans. Probably all three are partly true, and a dogmatic insistence on one to the exclusion of the others is unwise. It is not a question open to mathematical demonstration.

Meanwhile, parallel with this development of the double volute, and of the branching scroll as an independent motive in itself, another element, essential to the decorative completeness of the branching scroll motive, had been discovered and applied, and was emerging from insignificance into decorative importance. This was the acanthus-leaf, so called. It began its world-conquering career as a leaf much more suggestive of the thistle than of the acanthus; and seems at the outset to have been used solely to conceal the junction or branching-point of two diverging scrolls in carved ornament of the fifth century. As the scrolls were V-fluted, there was a difficult and awkward mitreing at their junction, and the Greeks appear to have literally taken a leaf from Nature's book to cover this joint, imitating in this certain plants, which grow a bract at each joint or branching of the stalk. Why this was adopted for this purpose is not clear; but all the early carved scrolls are furnished with sharply-pointed thistle-like leaves at each parting of the scrolls (Fig. 197). The Lysicrates finial, and scores of the finest stele-heads of the fifth and fourth centuries are similarly finished.

Fig. 197. Branching Scroll, Erechtheum (detail of 192).

In time, however, the decorative carvers, whose attention had thus been drawn to the availability of foliage-forms, found in the acanthus (Fig. 198), a common plant in Greece and Italy, a leaf more tractable than the stiff, spiny thistle. That is to say, they borrowed from the acanthus-leaf its structural principle — the midrib and the division into main lobes, serrated or subdivided by more or less marked indentations. There was at first only the barest suggestion

Fig. 198. Acanthus Leaves; *a* Acanthus mollis; *b* Acanthus spinosus.

of the real form of the leaf, but in time the imitation was closer, though it never, in Greece, reached the point of realism.

It was, apparently, the invention of the Corinthian capital that gave the greatest vogue to the use of the acanthus-leaf. No one, of course, credits to-day the Vitruvian legend of the origin of this basket-shaped capital. It seems most likely that it is traceable to funereal and commemorative origins. The pictures on the white funereal *lekythoi* of Athens show the sepulchral *stelæ* almost invariably crowned with a tuft of acanthus-leaves, as if the acanthus grew upon them (Fig. 199). This was probably the origin of the use of acanthus-leaves in the ornamentation of carved stele-heads; and the earliest Corinthian capital known, found in the ruins of the Temple of Apollo, at Bassæ (Fig. 200), probably crowned a votive

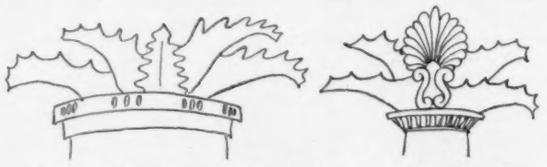


Fig. 199. The Acanthus on Sepulchral Stelæ; from Athenian Funereal Lekythoi.

pedestal or commemorative stele in the temple. If we suppose a shaft or pedestal to support a votive or commemorative offering from the survivors of some devotee of Apollo, what more natural than to carve the funereal acanthus around its spreading capital, and to support the corners of its abacus by scrolls like those used in the ornamentation of stele-heads? The capital of the Choragic monument of Lysicrates (Fig. 201) was a later and fuller development of the idea by the substitution of the leafy bell with its scrolls for the normal Ionic capital, in what was otherwise an Ionic design. The fundamental idea of the capital was still, in spite of its complex form, the branching scroll springing from a nest of acanthus-leaves, which forms the motive of nearly all the finest stele-heads of the fourth century. It will be noticed that this Lysicrates capital, in its outline and masses, strongly suggests one bunch or tuft of acanthus-leaves growing out of another, like the acanthus-plants represented on the *stelæ* in the Athenian *lekythoi*.

Fig. 200. Early Corinthian Capital, from Bassæ.

Fig. 201. Capital from Lysicrates Monument, Athens.

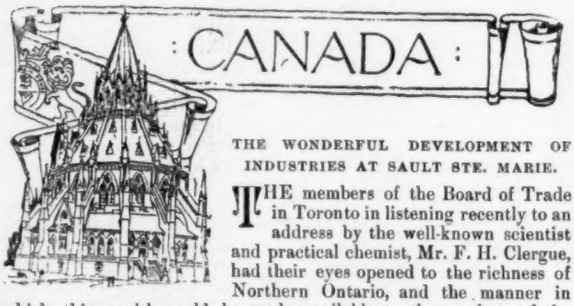
It is an almost invariable rule in the progress of ornament-design that the subordinate details of one period become the essential features of later styles. We have seen this law realized in the case of the curl of the voluted lotus developing into the volutes of the Ionic capital and in the emergence of the branching scroll into importance

in late Greek design. The same thing happened with the acanthus-leaf. Its increasing importance is measured by the development of the Corinthian capital. For a long time the leaf continued to play a secondary part in the design of the capital, but in the latter part of the second century B. C. the architect of Antiochus Epiphanes — or, rather, the carvers employed by him — executed for the colossal temple of Zeus, at Athens, a series of mighty Corinthian capitals so perfect in design that they fixed forever the type for capitals of this order (Fig. 202). In these the main part of the bell was surrounded by two alternating rows of eight acanthus-leaves each, while the sixteen volutes, meeting in pairs under the corners and centres of the abacus, were made to spring in branching pairs from elaborate nests or *caulicoli* of acanthus-leaves, growing from eight stems inserted between the leaves of the second row. In this design were combined the two kinds or uses of the acanthus-leaf — isolated leaves arranged erect in a crown around the bell, and leaves used to swathe the branching scrolls employed as volutes. The erect leaves were given the outward curl at the top, which was ever after to characterize the leaves of the Corinthian capital, and those of the caulicolus were made long and flexible and closely wrapped about the scrolls which formed the volutes.

Fig. 202. Capital from Temple of Zeus, Athens.

A. D. F. HAMLIN.

[To be continued.]



THE WONDERFUL DEVELOPMENT OF INDUSTRIES AT SAULT STE. MARIE.

THE members of the Board of Trade in Toronto in listening recently to an address by the well-known scientist and practical chemist, Mr. F. H. Clergue, had their eyes opened to the richness of Northern Ontario, and the manner in which this wealth could be made available to the markets of the world.

Mr. Clergue has been the practical man in the industrial development of Sault Ste. Marie. He had behind him a large amount of capital from a syndicate of Englishmen looking for investments, and his account of the procedure in the investigations undertaken is of great and general interest.

He said that it was agreed that they should begin a prospecting tour along the basin of the St. Lawrence, which, of course, extends from the Gulf to Lake Superior, in order to ascertain what opportunities existed along this frontier for hydraulic development. Various important water-powers were found and investigated, with various merits and demerits, but none of prime importance until Sault Ste. Marie was reached, and there, with Lake Superior for a mill-pond, and a fall of about twenty feet, there was a plain opportunity for economical and advantageous hydraulic development. "We were interested enough to stop and investigate. In our simplicity at that time, it seemed to us we had simply to go on, construct a dam, establish the water-wheels in place, and that all the manufacturers in the world would come there to seek for power.

"We made the first investment and began the work, but were disappointed in our applications for power, and before our construction was entirely completed we decided that we should have to go still farther than the original and initial development of water-power, into its actual utilization. We proceeded to take the next step. We began the development of that water-power, and having got the water-wheels in position, we then began to study the natural resources of the region to determine to what uses that power could profitably be put, and that is a study I advise any gentleman to make before he makes any investment in water-power. If you go to Algoma you can take up almost any water-power you find without that study, because so resourceful is that region that, in my opinion, there is not a water-power falling down over the hills in Algoma which has not within a reasonable radius enough to occupy all the power now running to waste, and to employ profitably hundreds and hundreds of thousands of people.

"It is my opinion after a residence of over five years in Algoma, and the expenditure already of more than five millions of dollars, and having available more than fifteen millions more, that there is an opportunity for a population in Northern Ontario equal to that of Southern Ontario, and how this is, I shall proceed to explain. Finding it necessary to study the resources of the region, the forests, naturally, first appealed to us. I found of what they consisted. Perhaps one per cent of the whole forests from Ottawa to Rat Portage may consist of pine trees. My personal judgment is that not one per cent of all the forest growth in Ontario is pine, and yet the people of Ontario think their only asset is pine forest. The remainder of the timber can be reduced to the uses of mankind as profitably as pine. The region, however, must be accessible.

"We were bound to look to the water-shed of Lake Superior for our supplies, and we found all the timber-growths in their present condition useless, and most of them inaccessible. Except the spruce and cedar, none of the other woods would float to our mill for the purpose of manufacture, nor could they be utilized at our works for lack of means of transportation from the forests. We found that of all the woods up there, the only one suitable for our purpose was the spruce.

"We began to gather for use in pulp and we proceeded to construct a pulp-mill. We agreed with the Government to the extent of their promising us the right to cut a sufficient supply if we would undertake it for a fixed period at a certain stumpage rate.

"We proceeded on a moderate scale and expended $250,000 in the construction of the works. Well! we had not gone as far as that before we found it cost just as much to run a works of that size practically, except mere labor-charges and the additional cost for the raw material, as a works twice as large, and that our competitors in foreign lands, running on a more extensive scale, could produce pulp for the use of the paper-makers throughout the world at a price beyond our competition. So the first step of evolution was to enlarge the pulp-mill of 20 tons a day until we have an output of 150 tons of pulp a day, requiring the use daily of 200 cords of wood.

"Up to the time we constructed the mill the ordinary method for producing pulp for paper was by attaching the grindstone to a water-wheel. Then, against the grindstone is placed a block of spruce, which is pressed against the grindstone by an hydraulic piston, and the continuous pressure results in pulverizing the wood into liquid form. The pulp in liquid form goes off to another machine where it is crushed round the wooden roller, which expresses from the pulp one-half of the water, and you obtain a sheet of pulp, something like a thick sheet of blotting-paper, containing about forty-five or fifty per cent of wood-fibre and fifty to fifty-five per cent water.

"When the product is shipped to the paper-mill the paper-maker does not pay for the tons of pulp you shipped to him, but for the amount of pulp-fibre, which is about fifty per cent of the shipment. Consequently, the railways pocket the freight on water, which the firm never gets paid for. The circumstances confined our works to nearby manufacturers. And a further reason against shipments to distant markets is the discoloration of the pulp caused by the resinous matter in the fibre under the influence of changes of temperature. This great undertaking, where we had already spent $1,000,000 and more, was simply a source of annoyance and loss.

"Then came the next step in the evolution. We must make pulp that would be marketable all over the world. Search was then made among all the paper-machine makers of Europe and the United States in the hope of securing an apparatus by which this ground wood-pulp could be taken and turned into a sheet like a sheet of paper. Everywhere the process was declared impracticable. No paper-machine manufacturer would undertake it, and in the meantime we were turning out pulp and losing money. *We decided to design a machine ourselves.* I designed a machine myself which seemed practical, but no manufacturer would build that machine, and it became necessary to build our machine-shop. It involved a large drying cylinder of a different form than had ever been attempted. Having decided to build a machine-shop, it was necessary to build a foundry. We built the foundry and then the machine-shop, and we had spent $125,000, and then after all our trouble we got out one of our machines. I took the most skilled foreman we had in the mill and told him to nurse the machine. He started to run it, and in less than a week he was ready to commit suicide. We gave it to all the foremen in the mill and it was six months before that machine ever made a sheet of pulp, and now there is not any other machine in the mill except of that class. Correcting this and remedying that, we evolved a machine which to-day earns net at the mill a profit of $1,000 a day more in that one mill than the profit was by the same output by the process formerly in use. This is the only mill in the world making pulp in that form. No important contract to-day is made throughout the world without first inquiring from Sault Ste. Marie what the price will be."

The speaker then described the processes undertaken to produce a more refined and perfect quality of pulp.

"It was decided to build a sulphite pulp-mill. The only economic source of sulphur and the source of sulphite pulp-mills was the sulphur mines of Sicily, so that the cost of sulphur for a sulphite pulp-mill in Canada was practically $25 a ton, and at the time of the Cuban War was at one time $40 a ton. I looked round for sulphur, and at Sudbury, Ont., I found they were racing sulphurous-acid gas off into the air at a value of $2,000 a day, at an expense and loss. I proposed to take the ore to Sault Ste. Marie, where we could utilize the sulphurous acid. I took an option on a property for a sufficient length of time to allow us to carry on experiments. We found nickel ore there enough to last the world 100,000 years. I was not looking for nickel steel, but sulphur. We began to study the question of taking sulphur out of pyrotite ore, which scientific men said was impracticable, and that was true with the methods in vogue at the time.

We were entirely successful. We went down to Sudbury and paid $100,000 for a mine and established our sulphur-mill. Having got this sulphur pulp business established and under way, the question came up as to whether the residue from the ore could be put to any use. We put it through our chemical laboratory and found we had left in this residue nickel and iron in a natural state of union so perfect that when smelted and reduced to a metal, it produced an alloy of nickel and steel so superior to any yet used that when offered to Krupp, the great gunmaker in Germany, he made a contract at once for a supply for five years. We proceeded to erect our reduction-works and our ferro-nickel plant. When we began to ship this ore out of Sudbury we found that although a very considerable proportion of it consisted of nickeliferous pyrotite, there was a large proportion of copper pyrites. A little copper in steel of any kind ruins its value. It became necessary to devise means of taking out the copper ore with the nickel. This we succeeded in doing and it was the next step in the evolution. Certain alkalies were required for the process. For these we had not to go outside the Province of Ontario. We found ourselves provided through Ontario resources with all the alkalies necessary for the process of refinement.

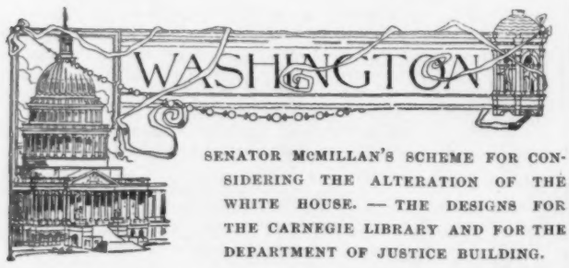
"The next step was the establishment of an alkali plant. This is in course of erection. What we needed chiefly was the sodium; we did not need the chlorine, but we could not allow it to go to waste. Chlorine is universally made into a bleaching powder."

Mr. Clergue then detailed the experiments for the preparation of the bleaching-powder, in which he was successful beyond expectation in securing a larger proportion of chlorine gas than had been obtained before.

"We have allowed no by-product to escape us. When we reduced our ores at the refining-works we found that the amount of ore profitably available was so great that our sulphite pulp-mill could not begin to consume the sulphurous fumes from all these ores, and we must allow these to escape at a loss, or devise some other use for them. We discovered that this gas is by an economical process turned into the sulphurous acid used in oil refineries and in the arts, and again the sulphurous-acid gas can be compressed into liquid sulphurous acid. This will, in my opinion, be used exclusively before long in sulphite pulp-mills in Canada. When our works are once in operation we shall be able to ship this sulphurous-acid gas in tanks at a price about one-half the present price of sulphur.

"We have assembled round these works a large and prosperous population commanding the highest wages. The boy that sweeps the floor gets $1.35 a day."

The lecturer went on to describe the necessities of the district with regard to railways and shipping on the lake. Ships could not be obtained; all were in use. At the opening of navigation there will arrive from England four steamers of latest English model, carrying 2,500 tons.



SENATOR McMILLAN'S SCHEME FOR CONSIDERING THE ALTERATION OF THE WHITE HOUSE. — THE DESIGNS FOR THE CARNEGIE LIBRARY AND FOR THE DEPARTMENT OF JUSTICE BUILDING.

SENATOR McMILLAN'S amendment to the Sundry Civil Bill, providing for the appointment of an architect, a landscape architect and a sculptor, to be associated with the Chief of Engineers in preparing a report to the next Congress embodying recommendations for an extension of the "White House," for the redemption of the south side of Pennslyvania Avenue, and for new sites for public buildings and the development and beautification of the public grounds, seems at first glance an admirable measure. But while unquestionably aimed in the right direction, it is doubtful if this legislation is going to reach the desired mark. The Commission named is not large enough. The appropriation is sufficiently liberal to supply a larger one. Ten thousand dollars should cover a good deal of work.

In a suggestion made on this point in my letter of March 3, No. 1262, I advocated a commission composed of the best men we have in the three professions to study a treatment of the grounds in question, "a treatment on lines within which the national buildings might be increased as needed." But one architect, one landscape architect and one sculptor are not enough to constitute such commission. We want, and the Chief of Engineers will want, a consensus of the best opinion in those professions. We have not forgotten the splendid architectural success of the World's Fair, at Chicago, in '93.

The methods which proved so admirable on that occasion, and the result which gave us the best thought of the professions as to the whole treatment of the problem while leaving ample scope for the development and utterance of individual talent, are the methods we should apply and the result we hope to attain now for the national capital's future growth.

The art professions hope to see in this growth an expression of the nation's advance in intellectual as well as in material greatness.

The McMillan Bill has a serious weakness, in that it leaves room for the working of schemes of self-interest. It invites a job.

An ambitious member of the architectural profession, with a landscape man in his pocket, may, with some knowledge of wire-pulling and a strong array of political backing, bag the plum which this bill so temptingly displays, and lay the foundations of a possible greater and more golden career — at the nation's expense. And while it is not meant to suggest, even remotely, that the President is likely to appoint any but capable men to these places, it is meant to insist that the men who manœuvre for them are not the right men for the work. In short, it is to be hoped that the bill will not pass in its present form. The question it deals with is too important to be exposed to the jeopardy of probable lobbying, and lobbying is inevitable as it now stands.

The amendment should create a commission of not less than three architects, two landscape architects and one sculptor to act with the Chief of Engineers for the purposes defined. The members should be, as far as possible, men who have already served with distinction in the determination of similarly important matters, and whose professional attainments and standing will be universally recognized as preëminent. They should be clothed with the necessary powers to call for persons, papers, etc., and be provided with funds needed to follow out the enquiry submitted to them to the completest solution of the problem.

Congress has before it in this matter a question of which the people will demand, sooner or later, a satisfactory solution. The idea of fixing upon a comprehensive plan within whose lines all future increase in the number of our public buildings and the constant beautification of the capital city may be consistently carried out meets with approval wherever it receives due consideration. This idea has been in the minds and in the mouths of men for a long time.

The session which is drawing to a close has brought forward several propositions for legislation on this line. Members of both houses have introduced bills of this general character. The feature of some of these bills has been, apparently, to raise obstructions in the way of the others. There has been a lack of coherence, to say the least, in the different propositions. So very various is the character of these proposed measures, in fact, that one might be excused, on looking them over, for harboring misgivings that they may have been ingeniously designed, in the possible interest of certain corporations holding and claiming important rights here, to defeat all legislation of the sort through their very irreconcilability.

Much valuable thought has been given and a great deal of important work has been done on the matters involved in this scheme for the development of Washington, by professional men, as well as by cultivated and experienced lay students. The commission should have the benefit of all this effort on the part of thinkers who have foreseen the ripening of this question. And the only commission fitted to handle the problem is one so constituted in qualifications and in numbers as to eliminate the possibility of personal greed, or political or sectional interests, playing any part in its findings.

Mr. Bernard R. Green, Superintendent of Construction of the Washington Public Library has submitted to the Library Commission his report on the bids he has received for its erection. Two bids only were received for the complete construction, of which the lower one exceeds the funds available by eighty or ninety thousand dollars, when the probable cost of equipment is taken into calculation; that is to say, when "a sufficient balance to meet the expenses of furniture, book-stacks, elevators, fees and incidental expenses" is provided for. Mr. Andrew Carnegie's gift of $350,000 is to cover construction and equipment.

As stated in my letter of April 7, Mr. Green's estimates, based upon a survey of quantities, necessitated, in March last, the issuance of instructions to the architects, Messrs. Ackermann & Ross, for a revision of their drawings so as to effect a considerable reduction of cost. The item of exterior stonework and certain details of interior finish were at that time recommended for reconsideration. Mr. Green reports that no change has been made in the stonework, and that the changes elsewhere are insufficient to bring the building within the appropriation, the architects being "persistent in their hope that the full beauty of the original design could be retained."

One cause of high bids which Mr. Green assigns is the "rich appearance" of the drawings notwithstanding the modification introduced in the specification. "He thinks it has been very unfortunate that the original drawings indicated a very expensive building, and that as a consequence the architects have worked rather with an effort to make the money go as far as possible than to keep safely within its limits." (*Evening Star*, May 24.) District Commissioner Ross, president of the Library Commission, is reported as stating that a further revision will be ordered on the part of the architects to bring the building within the limit of cost while preserving in general the "beautiful outlines of the structure."

The bids received were from Charles McCaul, of Philadelphia, for $382,379, and from Norcross Bros., of Worcester, Mass., for $409,784, neither of which may be accepted. It is probable, however, that proposals for making excavations for the building, on its present lines, will be at once invited, in order to save further delay.

Mr. Green's report includes a detailed statement of a number of bids received for portions of the work, such as steel structure,

ornamental ironwork, heating and ventilation, plumbing, electric lighting, etc.

It would seem that much of these difficulties and vexatious delays might have been avoided by an application in the first instance of a careful survey of quantities to the consideration of the drawings originally presented in competition. The importance of so dealing with competitions needs no argument.

Another similar case is that of Mr. Post's building for the Department of Justice for which Congress made an appropriation of $1,000,000. The Attorney-General has asked for $900,000 in addition, and stated to Congress that such amount is necessary to the carrying out of Mr. Post's design. A third of this increase, it is true, is set down to cost of equipment, but, that proportion deducted, there is left a demand for a 60 per cent increase of expenditure, which, of course, the plea urged, advanced prices of material, by no means justifies. In the last case 60 per cent, in the other 30 per cent, over the limit of cost!

On these facts as a text I heard to-day, from an architect now eminently well known in important local practice, a little sermon which merits a wider audience. It pointed out that such results in public work are likely to hurt the cause for which the profession has fought so resolutely, the opening of the public architectural work to public competition within limits, and asked whether such an outcome does not suggest either that architects fortunate enough to be selected for commissions of such importance may allow themselves to be blinded by a too-eager ambition to win more than a due meed of glory from their opportunity, or that private practitioners are, in effect, borrowing methods they have charged to bureaucracy and condemned, in so apparently counting on supplemental appropriations to cover the cost of more imposing parades of talent. In either case the practice is not commendable from the point-of-view of professional ethics, and must bring upon the new order of procedure the same disfavor which properly condemned the old.

No amount of theory will persuade the public that there can be any but the one old time-honored way to try a pudding. The measure of success is the thoroughness with which the thing given to be done is done, not the ingenuity which may substitute something else in its stead. The relation of the architect to his work is an exacting one. Perhaps there are few men who have enjoyed an extensive practice of the art who have not at some time sinned slightly against the severe ethics of their obligation, who have not erred in at least some degree through a desire to put forth what they think their best effort, and doubtless the fault lies not seldom in part with their clients, who are prone to want the most for their money. Perhaps the Library Commission may have fallen into this mistake in the first instance, as Mr. Green's words seem to suggest. It is unlikely that Congress will allow the Attorney-General what he asks. Should the outcome in this case be an abandonment of the present plans and a new design to cover the larger site which has been advocated by the Attorney-General, the country will be the gainer.

BOOKS AND PAPERS

IN her sumptuous and most interesting book on the Mediæval Guild of Freemasons,[1] Leader Scott tells the story of the Comacine Masters, and argues, apparently with much force and some success, that this school of architects, the *Magistri Comacini*, was the link between Classic and Middle Age architecture. It certainly is curious that churches so similar should have sprung up in the twelfth century, in such widely opposed localities as Verona, Mainz, Treves, Lubeck, Caen, Dijon and Canterbury, unless their architects had been trained in the same school, or had held some communication with one another. Again, in the fourteenth century the cathedrals of "Köln, Strasburg, Westminster, Milan, Assisi, Rouen, Laon and Beauvais" are all more or less of the same style. "Is it likely," says the author, "that many single architects in different countries would have had the same ideas at the same time? Could any single architect, indeed, have designed every detail of even one of those marvellous, complex buildings? . . . The existence of one of these churches argues a plurality of workers under one governing influence; the existence of them all argues a huge universal brotherhood of architects and sculptors with different branches in each country, and the same aims, technique, knowledge and principles permeating through all, while each conforms in detail to local influences and national taste. . . . There is another point also to be considered. The great age of church-building flourished at a time when other arts and commerce were but just beginning. Whence out of the dark ages sprang the skill and knowledge to build such fine and sculpturesque edifices, when other trades were in their infancy, and civic and communal life scarcely organized? . . . How, for instance, did Giotto . . . learn to be a painter, sculptor and architect of such rank that the city of Florence chose him to be the builder of the Campanile? . . . and how did he prove to the city that he was a qualified architect? We find him written in the archives as *Magister* Giotto, consequently, he must have passed through the school and *laborarium* of some guild." Such are a small part of the arguments used by the author to prove her position; and she has herself unearthed, or has been helped by others to unearth, much information from the various archives of Italian cities, beginning with one signed by King Rotharis on November 22, A. D. 643, the further to establish her argument, that even as early as the seventh century, the Comacini formed a compact and powerful guild.

The Comacini Masters were much given to symbolism, both in the plan of their churches and in the ornament. The double-lighted windows signified the two lights of the Law and the Gospel; the rounded apse was an emblem of the head of Christ; the threefold nave shadowed forth the Trinity; "the octagonal form of the baptisteries, which St. Ambrose says was emblematical of the mystic number 8, etc." In ornament, "the mysterious Solomon's knot," having neither beginning nor end — emblem of the manifold ways of the power of one Eternal God — was accompanied by strange beasts of various forms. Huntsmen and dogs symbolize the faithful Christian driving out heresies; fishermen are priests fishing for souls in the ocean, or river, of sin. The authoress takes the Knot and the Lion of Judah as eminently what may be called the trade-mark of the Comacine, the former in Longobardic times, the latter for some four hundred years after; and she observes, with reference to the Lion of Judah, that between 1000 and 1200 (Romanesque and Transition), "it is to be found between the columns and the arch" (see Door of S. Giusto at Lucca) — "the arch resting on it, and in Italian Gothic, from 1200 to 1500 it is placed beneath the columns" (see Pulpit at Siena). A Lombard ancestry for Norman architecture and especially for the Church of St. Bartholomew the Great, Smithfield, will cause many persons to exclaim; but a certain Abbot Guillaume is said by chroniclers to have been invited to Normandy by Duke Richard II, "to found monasteries and erect buildings"; and as he stayed twenty years in the Duke's employment and had Italian trained monks working with him, the connection between these and the Comacini is not impossible. Certainly there is a good deal of similarity between the arcading of the Saxon church at Bradford-on-Avon and some of the early Italian buildings. If the Comacini were originally refugee Roman architects taking their knowledge to the principality of Como, it follows that much of the work executed for the Lombards was based upon the Roman orders, and Italian workmen may have travelled to Britain with St. Augustine and his monks.

The author also gives the mysterious Irish crosses and towers a Comacine origin. St. Patrick's mother was a niece of St. Martin of Tours, and his father Calphurmius, so that the Saint was a foreigner and may have imported Comacine ideas and traditions into Ireland. The crosses and towers are, some of them, ornamented with varieties of the Comacine Knot. Everywhere we find the same system of lodges founded, and many celebrated names appear among the masters, no man being considered one who could not build with his own hands, as well as carve and paint. Leader Scott gives a description of the whole system. First, there was a school of novices who were trained in architecture, painting and sculpture. The discipline was severe, and the members were originally bound to secrecy. There was a great workshop where the novices were trained as stone-hewers and carvers, and where all sorts of wood-carving was done. The masters had separate studios, where they took pupils or apprentices. The administration consisted of a ruling council with a president, who was often the reigning prince of the locality. The Guild undertook the building of civic palaces, bridges and fortresses, as well as churches.

The book is most interesting and well worthy of careful study; indeed, the author has left no stone unturned, and has not spared herself in raking up every scrap of information get-at-able; and not the least interesting part is the connection of such artists as Giotto, Giunta, Cimabue, Niccolo, Giovanni, Andrea Pisano, Donatello, Ghiberti and Orcagna with the various lodges of the Guild.

If Leader Scott's theory be fact, one of the mysteries of early architecture is solved — How came the Lombards to leap straight from barbarism into a high form of æsthetic culture? If the Comacine Guild be the Collegia of Rome under another form, we cannot refrain from crediting the revival under the Lombards to the great Comacine Guild. We know that architects and other artists fled from Rome when the barbarians arrived and took refuge on the island of the Lake of Como; but whether the connection between them and the later Comacini be established or not, Leader Scott's book is a valuable addition to our art-libraries, and we owe her our thanks for so fully investigating the subject.

[1] "*The Cathedral Builders, the Story of a Great Masonic Guild*," by Leader Scott. London: Sampson Low, Marston & Co. 83 illustrations. £1 1s.

ILLUSTRATIONS

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

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ST. JOHN'S PUBLIC LIBRARY, HAMPSTEAD, LONDON, ENG. MR. ARNOLD S. THAYER, ARCHITECT.

NOTES & CLIPPINGS

A British School of Archæology at Rome. — All the preliminaries for the establishment of a British school of archæology and classical studies in Rome seem to have been settled, and it is hoped that the institution will be in working order before summer. One of the most active promoters of the enterprise is Prof. Charles Waldstein, the eminent American archæologist and State Professor of Fine-Art, who has been in close consultation with Lord Currie, the British Ambassador to the Quirinal, Sir Lawrence Alma-Tadema, and others, as to the most rapid and effectual means of organization. It is understood that there is a sufficient amount of money on hand to make a good start and keep the school going until it has secured the attention and support of the general public. Communications between the executive committee and various learned societies give assurance that a number of students of archæology, architecture, classical manuscripts, and mediæval history are ready to proceed to Rome as soon as the necessary arrangements have been made for the direction of their studies. Professor Rushworth has been selected as the permanent head of the school, and is expected to assume charge before long. — *N. Y. Evening Post.*

Curious Easter Ceremony at Bow. — A curious ceremony, always carried out on Easter Saturday, was witnessed this morning by a large crowd at a public house known as the "Widow's Son," Devons Road, Bow. The ceremony is the outcome of a story from which the house gets its name, and it dates back long before the present century. According to the story, when the house was occupied by a widow, and was merely a wayside inn on the road to London, her only son went away to the wars to fight for his country, but was never seen again, being probably killed, the means of identifying the dead and the care to do so being not then as now. The almost broken-hearted mother, however, always clung to the belief that her son would return, and every Good Friday, as the years rolled by, she made for him a hot-cross bun, which remained on the table all the day, the son having said he would be home on the Good Friday. On the Saturday, as he had not returned, the widow took the bun, and stored it with those made in previous years, to show him she had always made one. When the widow died the buns were strung together, and hung from the ceiling in the bar, and each successive landlord has always placed a bun on the table on Good Friday, and hung it on the Saturday morning. The buns hang there undisturbed, with their cobwebs and dust, and this morning the bun for 1900 was added. The curious ceremony is always so closely watched that it is beyond possibility of extinction. — *St. James's Gazette.*

Difficulty in erecting the Peace Monument on Lookout. — A serious problem has arisen in regard to the erection of the big New York peace memorial on Point Lookout. The question is how to get the material to the top of the mountain, which is very steep and far removed from any roadway. A freight or broad-gauge line which for years has run to the summit of the mountain has been discontinued, and the rails sold for old iron. The road has not been safe for travel for some time, having many rotten and insecure trestles on it over deep ravines. The largest stones in the New York monument weigh from 50,000 to 55,000 pounds each, and the old roadway has not been considered safe for more than 30,000 or 40,000 pounds of freight at one time. The site of the monument is on the steepest and highest point of the mountain, and the engineers in charge of the work have admitted that they have a serious problem on their hands. — *Louisville Courier-Journal.*

A Town moved Eight Miles. — The town of Ada, in the Chickasaw Nation, was set on wheels and moved a distance of seven miles in a few hours, Wednesday. Ada wanted a railroad, and not being able to get it they moved to the St. Louis & San Francisco Railroad. There were 200 houses and 800 people in the town. Business was carried on en route. — *Chicago Record, April* 30.

Another Equestrian Statue for Washington. — Mr. McMillan, of Michigan, has introduced in the United States Senate a bill appropriating $20,000 for the purchase of a replica of the bronze equestrian statue of Washington, designed by Daniel Chester French and Edward C. Potter, which is to be presented to the French Government by the women of the United States. The replica is to be used in ornamenting one of the squares or public reservations in Washington. — *Exchange.*

Concrete Buildings. — Concrete as a building-material for walls of high structures is to have a test in Washington. There is a factory so constructed in Bayonne, N. J., and a church in Brooklyn, and the Washington permit, recently issued, is for a seven-story structure, with both the inside and outside walls of concrete. Twisted iron rods are to be used in connection with the concrete, and the thickness of the outside walls is to be 12 inches. The walls are of sufficient strength, as calculated, to resist all compressive strains without taking into account the strengthening effect of the twisted iron. The partitions run from the foundation through each floor, and help to sustain the roof. "While the building is a new type of construction," the *Engineer Commissioner* comments, "it appears to be designed upon rational lines." — *N. Y. Evening Post.*

Buildings in Philadelphia. — An interesting statement, showing the number of buildings in Philadelphia, has been compiled by Assistant Clerk Theodore James from data furnished by the Real-estate Assessors. There are 258,685 dwellings in the city, 21,088 of which are partly used as stores, and 26,371 other structures, making a grand total of 285,056. Many of these include churches, hospitals, libraries, and other public or charitable institutions exempt from taxation. The total assessed valuation of all that are subject to real-estate tax is $879,295,355. Besides the dwellings enumerated, the following statistics of buildings were obtained: There are 5,536 buildings used exclusively for business and store purposes, 2,467 factories, mills, and foundries, 2,332 shops not coming under head of factories, 130 breweries, distilleries, and malt houses, 76 banks, savings and trust companies, 390 office-buildings, 239 hospitals, asylums, and other buildings used for like purposes, 147 schools under religious control, 12 colleges, 18 libraries, 261 theatres, halls, etc., 773 churches, 275 public schools, 328 other properties owned by the city, State, or General Government, 234 railroad stations and engine-houses, 10,463 slaughter-houses, stables, and hot-houses, 689 warehouses and storage-buildings, 1,747 miscellaneous small buildings, and 254 steam power-houses. — *Philadelphia Record.*

The Ferris-wheel. — When the Ferris-wheel is sent to the scrap-heap — a thing likely soon to happen, according to the Chicago *Post* — the greatest engineering vagary of the century will have passed into that oblivion reserved for fads, flying-machines and perpetual-motion contrivances. Not that the great Ferris-wheel is any of these, but simply because it never could serve any practical use, because it embodies no distinctly new principle in engineering and because it has a marvellous faculty of emptying the coffers of those who try to make its huge bulk earn even a small part of the cost of maintaining it — to say nothing of the cost of original investment. The Ferris-wheel was constructed and carrying passengers within four months. The idea of erecting this great wheel came to George Washington Gale Ferris, a native of Illinois and an engineer for the Pittsburgh Iron Company, about a year before the opening of the World's Fair. Mr. Ferris was then known as one of the most expert bridge-builders in America, if not in the world, but when his scheme was mentioned to other engineers it was promptly pronounced chimerical. Some went even so far as to laugh at him, and not one dreamed the project ever would get beyond the speculative stage. But Mr. Ferris was persistent, and, besides, had faith in himself. Courageously he set to work and succeeded in interesting sufficient capital to warrant him in ordering material for the wheel. About twenty thousand dollars was spent in plans, tests, etc., before the actual construction of the wheel began. Some thirty firms took part in its making and a Chicago firm saw to its erection. When ready to be turned the Ferris-wheel had cost $362,000 and had consumed about eight million pounds of iron and steel. The movable part of it weighed 4,200,000 pounds, and it required two engines of 1,000 horse-power each to keep it turning. And so nicely adjusted were all the parts, so well balanced was the great steel circle with its thirty-six cars, capable of carrying 2,160 persons, that it was under as full control as a sewing-machine or a pony engine. Once or twice during the World's Fair the motive power needed adjustment, but the only results so far as the public are concerned were humorous incidents, which gave the newspaper men a few columns of anything but dull reading-matter. It is barely possible that had the World's Fair lasted a year or two the Ferris-wheel might have paid for itself. This is based on the assumption that it would have continued to be a novelty for twelve months or more. As it was, the gross earnings of the wheel during the fair were $812,000. About one-fifth of this went to the stockholders as profits. The power necessary to operate the big wheel would have run a cotton factory of 100,000 spindles and 3,000 looms and employing 5,000 operatives. The boilers of the power-plant consumed coal like an ocean liner. No other single feature of the great Exposition represented such an expenditure of energy. But the fair lasted only six months, and the Ferris-wheel ceased paying dividends with the closing of the Exposition gates. Had it gone from its place on the Midway direct to the scrap-pile or to Coney Island, as was at one time suggested, more than one Chicagoan would have been some thousands of dollars richer to-day.

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

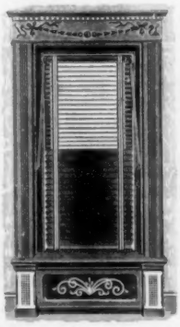
The American Architect and Building News

ADVERTISERS' TRADE SUPPLEMENT.

No. 217. SATURDAY, JUNE 2, 1900. Volume LXVIII. No. 1275.

VENETIAN BLINDS.

The Hartman Sliding Blind Co., of Crestline, O., manufacture Hartman's new, improved Venetian Blinds, which are made on a new and improved principle, combining beauty, durability and lessening of cost.



The Hartman Venetian Blind is the easiest working blind on the market, the operating cords running over steel bearing-pulleys, thus avoiding friction, so objectionable in other blinds.

No modern house is complete in all its details without them; they impart to the building a highly ornamental and completely finished appearance, both in its exterior and interior arrangement. They are simple and convenient. Using the Hartman Blind does away with the objectionable outside blinds, so cumbersome in appearance and so liable to sag down and become difficult to open. There are no hinges to get out of order. There is no damaging, tearing or destroying window draperies. They soften the glare of the sunlight, protect furniture and carpets; exclude the heat, and at the same time allow free ventilation and light in any part of the window, affording comfort and convenience.

Light and ventilation can be regulated in the whole or in any part of the window, as slats work independently and one or all can be turned with one operation. They take up no more room than a common window-shade; are easily dusted and cleaned; in fact, they are the ideal blind for use in modern architecture.

HARTMAN SLIDING BLIND CO.,
CRESTLINE, O.

SUPERIOR ORNAMENTAL AND ARCHITECTURAL WIRE, IRON AND BRASS WORK.

The rage for ornamental wire, iron and brass work has become so widespread that builders desirous of securing the best patronage are compelled to devote considerable attention to this line of building. Builders using ornamental and architectural wire, iron and brass work, naturally want the best, as it presents a better appearance when in place; thereby serving as an advertisement of their skill.

The *American Architect* has an extensive circulation among prominent builders throughout the country, and taking as we do, a keen interest in the welfare of our subscribers, desire to call attention to the high grade ornamental and architectural wire, iron and brass work offered the trade, by the E. T. Barnum Wire & Iron Works, of Detroit, Mich. This wire, iron and brass work is far superior to anything of the kind ever placed by them on the market before. This is proved by the remarkable selling record of these goods in 1899; which, judging from the present indications, will be equalled, if not surpassed, during the present season.

The high commercial standing of the concern assures all persons placing orders with them of honorable treatment at all times.

They have just issued catalogues to the trade as follows: —

No. 1290, to the Hardware Trade; No. 1292, Wire and Iron Fencing; No. 1294, Builders' Wire and Iron Work; No. 1296, Bank and Office Railing; No. 1296, Jail and Prison Work; No. 1300, Lawn Statuary; No. 1255, Fireproof Vault Doors; No. 1075, Cemetery Vault Gates; No. 1080, Elevator Cabs and Enclosures; No. 1301, Sash Bars; Special, Drinking Fountains; Special, Display Fountains; Special, Weather Vanes.

If any of our subscribers have not received a copy of the catalogue in which they are interested, it can be obtained by sending a postal card to them.

ARTISTIC DESIGNS IN METAL CEILINGS.

The employment of metal plates for the decoration of ceilings and side-walls, although it has rapidly gained favor, is a strictly modern innovation and has only of late years attained such perfection as to warrant its substitution, even in permanent structures, for the less durable methods of decoration formerly in vogue.

The Berger Mfg. Co., of New York City, U. S. A., have taken the lead as manufacturers of metal ceilings, side-walls, wainscotings, etc., and claim not only to have contributed materially to the present advancement of the art, but to have originated the idea of manufacturing the metal plates in classified designs, with embossed mouldings, borders, coves, mitres, etc., in complete series, or sets, by which the decorative possibilities of the work have been very greatly increased.

One of the most valuable features of the metal ceilings and side-walls, apart from the artistic beauty of the effects produced, is the readiness with which they can be applied to plastered ceilings and walls in need of repair, rendering them exceedingly attractive at small cost, the effects produced being lastingly durable. In cases of urgent necessity, where club-houses, summer residences, cottages, meeting places, etc., are needed quickly for occupancy, the metal ceiling and side-wall can also be used to peculiar advantage, especially in foreign countries, the readiness with which they can be applied and their durability being as strong points in their favor as the lightness and portability of their materials.

The Gothic style in churches marks a complete departure from anything heretofore produced in metal ceilings. The ornamentation is geometric, in open tracery; the background is of the irregular, stippled type, with stucco effect. Other designs shown by the manufacturers in their illustrated catalogue include Romanesque, Colonial, Empire, Italian, German, French, Gothic, Roman, Greek and Rococo. Their illustrated *New Ideas in Metal Ceilings* will be forwarded free on request.

THE BERGER MANUFACTURING COMPANY.
CANTON, O.

REDWOOD.

To the Editors of the American Architect: —

Boston, Mass., May 28, 1900.

Dear Sirs, — Our attention has again been called to several instances where salesmen have represented that the lumber they are selling is the same as California Redwood, and in some instances orders have been given with that idea.

We wish to say to all who contemplate using California Redwood that if any such representations are made to them and they will advise us before buying, we will give them full particulars regarding the several kinds of woods shipped from the Pacific Coast.

We will say further for the benefit of the readers of your paper that there is no "Sequoia Sempervirens" Redwood that grows in any other State in the Union than California and the extreme southern end of Oregon, where there is a little territory of about one hundred acres, and this is not available for the Oregon markets. This shows conclusively that representations that Redwood cannot be had from Oregon or Washington lands are incorrect, and are made because the woods being sold cannot be marketed in their own name in competition with Redwood.

We consider it the best policy to represent woods what they exactly are, as the class of

(*Continued on page 3.*)

people who have the supervision of the work into which such lumber goes will not be imposed upon. It is to be hoped that salesmen will learn to call a spade a spade and not something else for the sake of making a sale.

To show that California Redwood can be sold on its own merits and not the merits of other woods, we enclose copy of a letter regarding it, which speaks for itself.

BOSTON, MASS., May 12, 1900.

BARTLETT LUMBER CO: —

Gentlemen, — In reply to your inquiry would say that our sales for Redwood doors are constantly increasing, and they give entire satisfaction. A party who bought some from our first car some two years ago for a large building in Cambridge in which he also used a number of Cypress doors, told us a few days since that the Cypress shrunk so the doors would swing right through the rabbets, but all the Redwood remained just as they were jointed in, and took his order for another house. We find this is the experience of all who use Redwood.

Yours truly, E. A. CARLISLE, POPE & CO.

We will say further that the demand for Redwood increases steadily, and those who have had the real article are well pleased with it. Very truly,

BARTLETT LUMBER COMPANY,
O. H. SMITH, *Manager,*
BOSTON, MASS.

NOTES.

The Mackay patent, quick opening, hot-water radiator valve illustrated herewith is not an experiment. It has been on the market for a number of years, and wherever used, it has never failed to give the best satisfaction. The manufacturers claim for it that it is the only valve made which will not "stick" after being used for a considerable length of time. In its construction it is very simple, being operated by a cam movement which is positive, the valve being opened or closed with the utmost ease. Unlike other makes of valves, it has no surfaces, sliding one upon another, to become corroded and

render it useless; on the contrary, the Mackay, after years of use, operates as freely as when first put in place. A quarter turn of the handle opens or closes the valve, and when open it gives full area of water-way, without obstruction. It is well made, of the best of metal, being unusually strong at the point where strength is most required, reducing the liability to breakage and damage from leaky joints to the minimum. The manufacturers invite investigation of the merits of the Mackay valve, and will be pleased to mail catalogue or furnish any information desired, upon request.

THE OHIO BRASS & IRON MFG. CO.,
CLEVELAND, OHIO.

We have just issued our book, "*Modern House Heating*," for 1900, which we are sure will be of interest to all architects, for it contains full description, with half-tone illustrations, of the Gorton Side Feed Boiler.

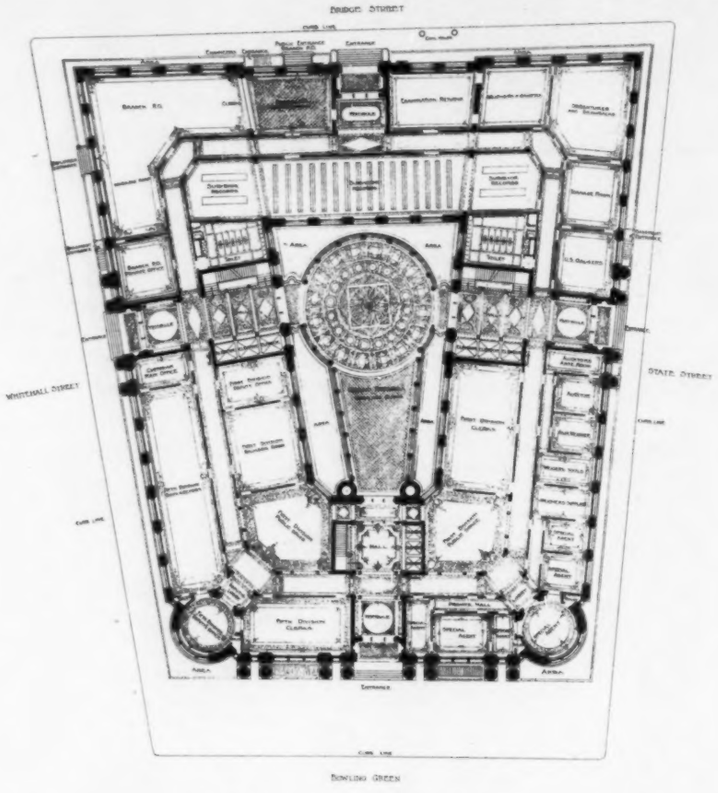
This boiler, owing to its peculiar construction, will maintain a steady pressure of steam for twelve hours without attention, which it is impossible to do with any surface-burning boiler. This is a very important item to be considered in selecting a heating boiler, for it insures your client a warm house, day and night, in coldest weather.

We will be pleased to send to any architect a copy of this book, free of expense, and give any further information he may desire as to the size of boiler or radiators required to heat a given building.

GORTON & LIDGERWOOD CO.,
96 Liberty St, New York, N. Y.

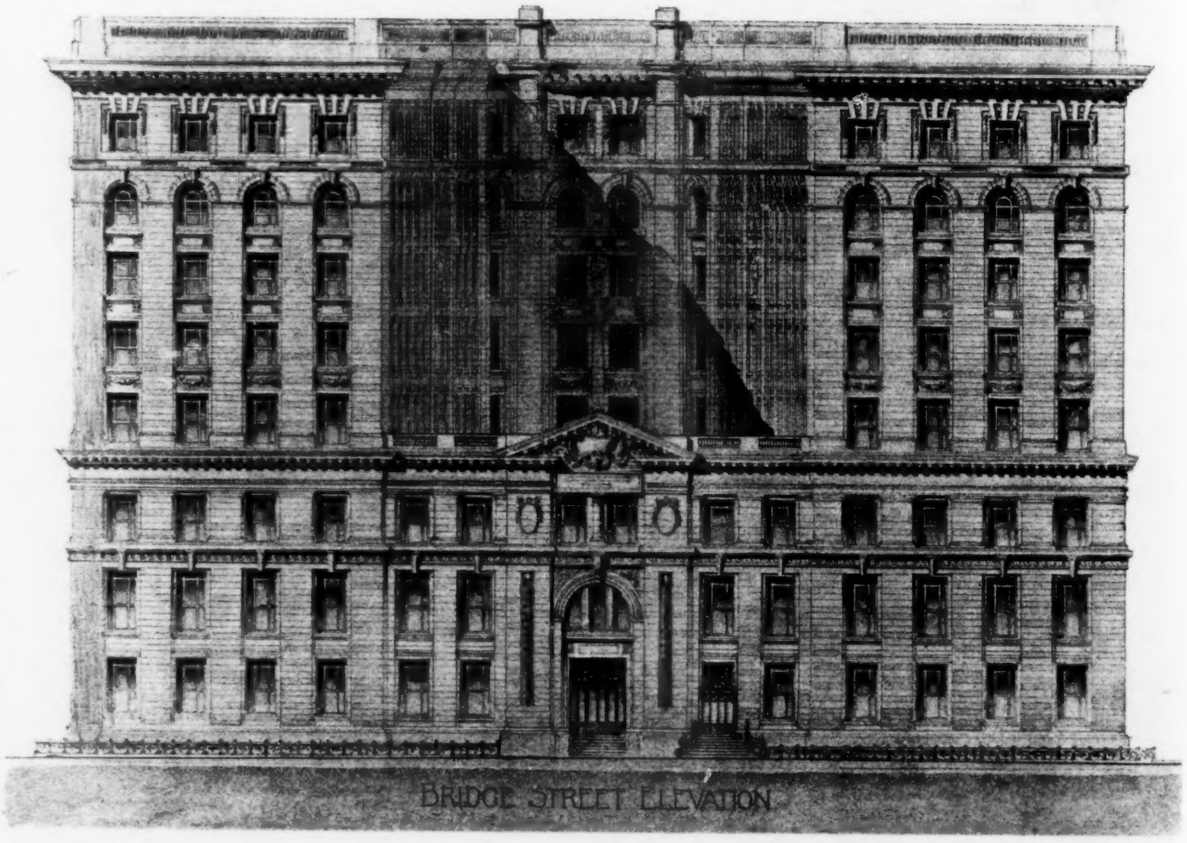
In one of the shops of the United States Cast-iron Pipe and Foundry Co., Cincinnati, the company has fitted up a room with drawing-tables, boards and T-squares as a study-room for the use of a number of its employés who are students of the International Correspondence Schools, Scranton, Pa. The class, which numbers about fifty men and includes the general manager, studies on "company time" and is supplied with drawing-paper by the firm. All promotions in the shops will hereafter be made from students of this class.

The International Correspondence Schools have nearly a hundred courses treating of all branches of mechanical and engineering work. Instruction is carried on wholly by mail, and there are nearly 200,000 students and graduates.



U. S. CUSTOM HOUSE, NEW YORK.

FIRST FLOOR PLAN

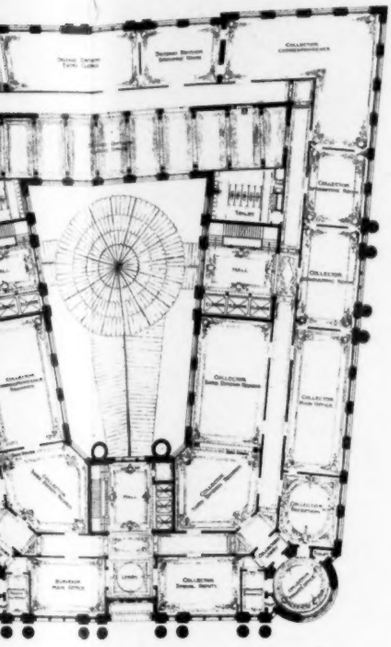


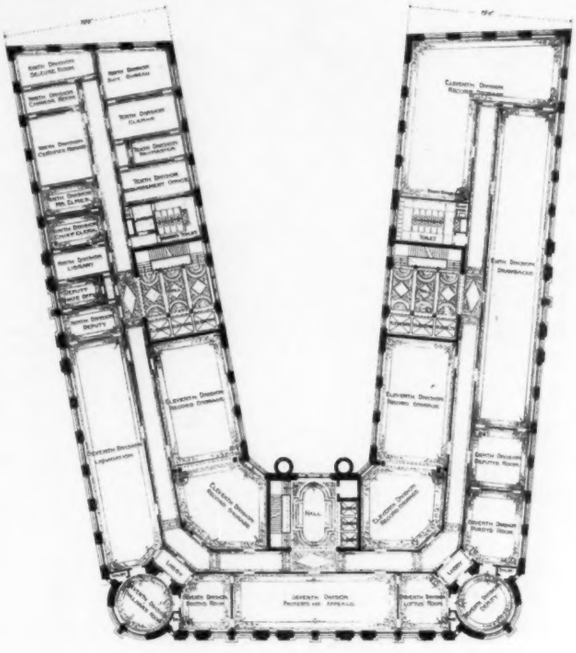
BRIDGE STREET ELEVATION.

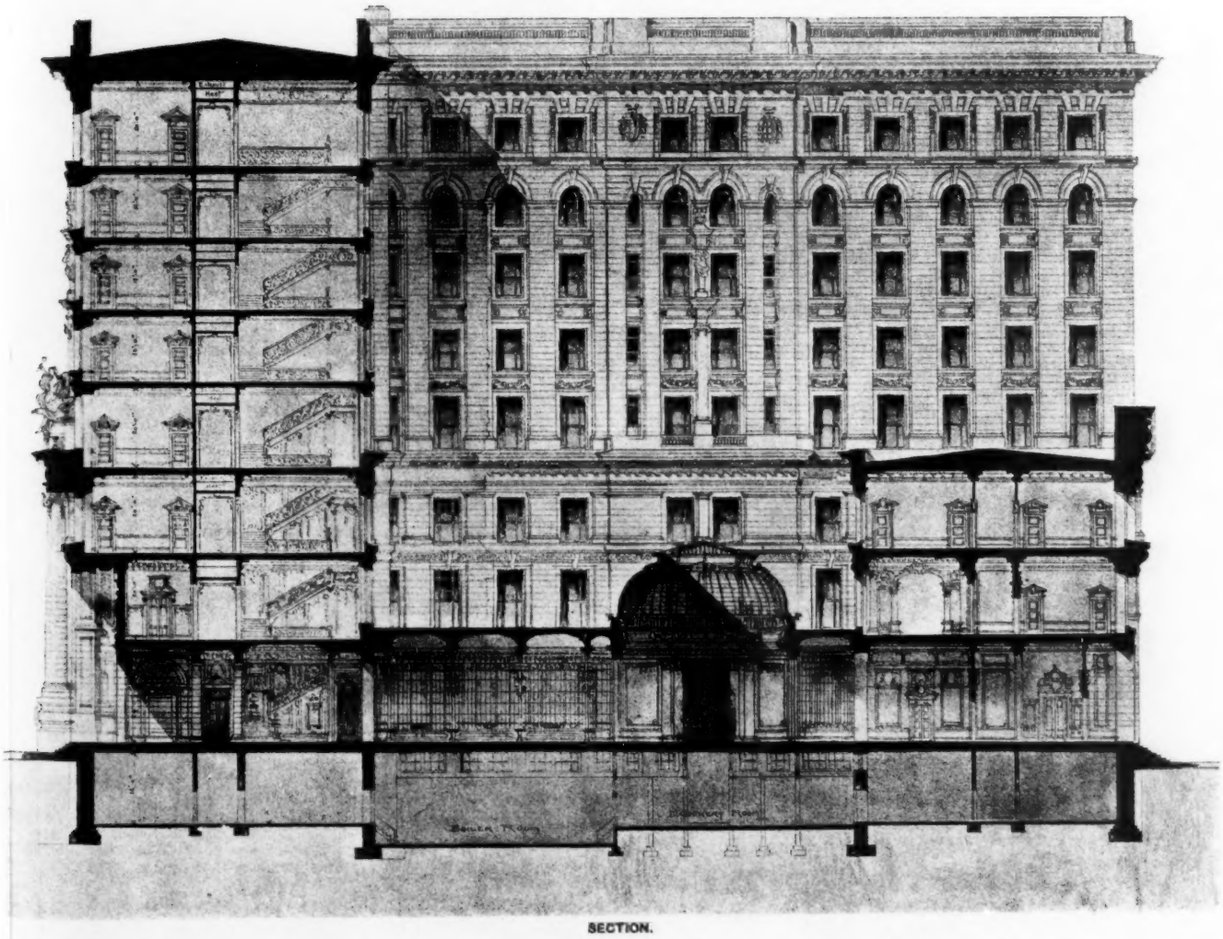
A COMPETITIVE DESIGN FOR THE U.

GEORGE MARTIN

AMERICAN ARCHITECT AND BUILDING NEWS CO.



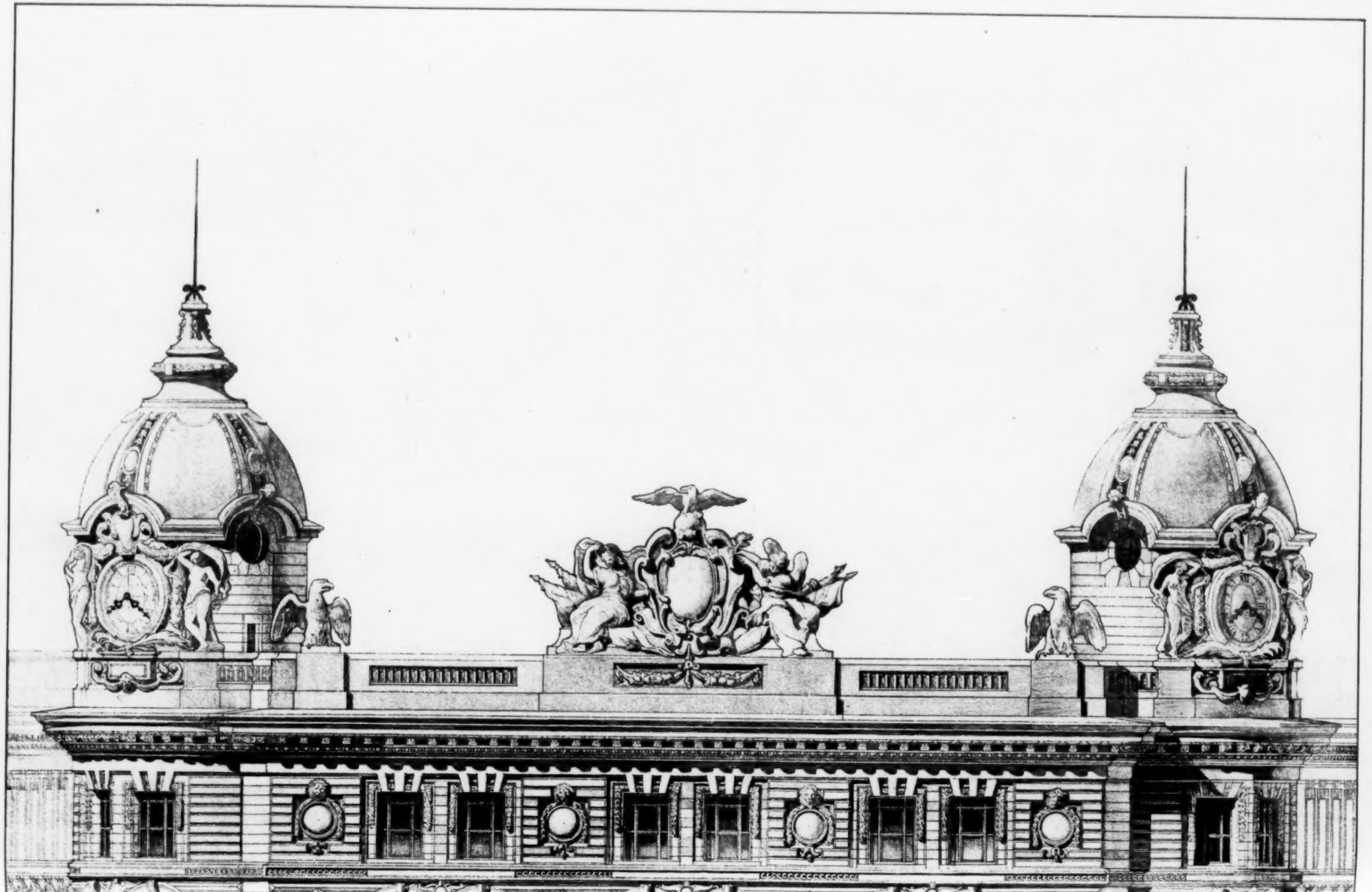




SECTION.

R THE U. S. CUSTOM HOUSE, NEW YORK, N. Y.

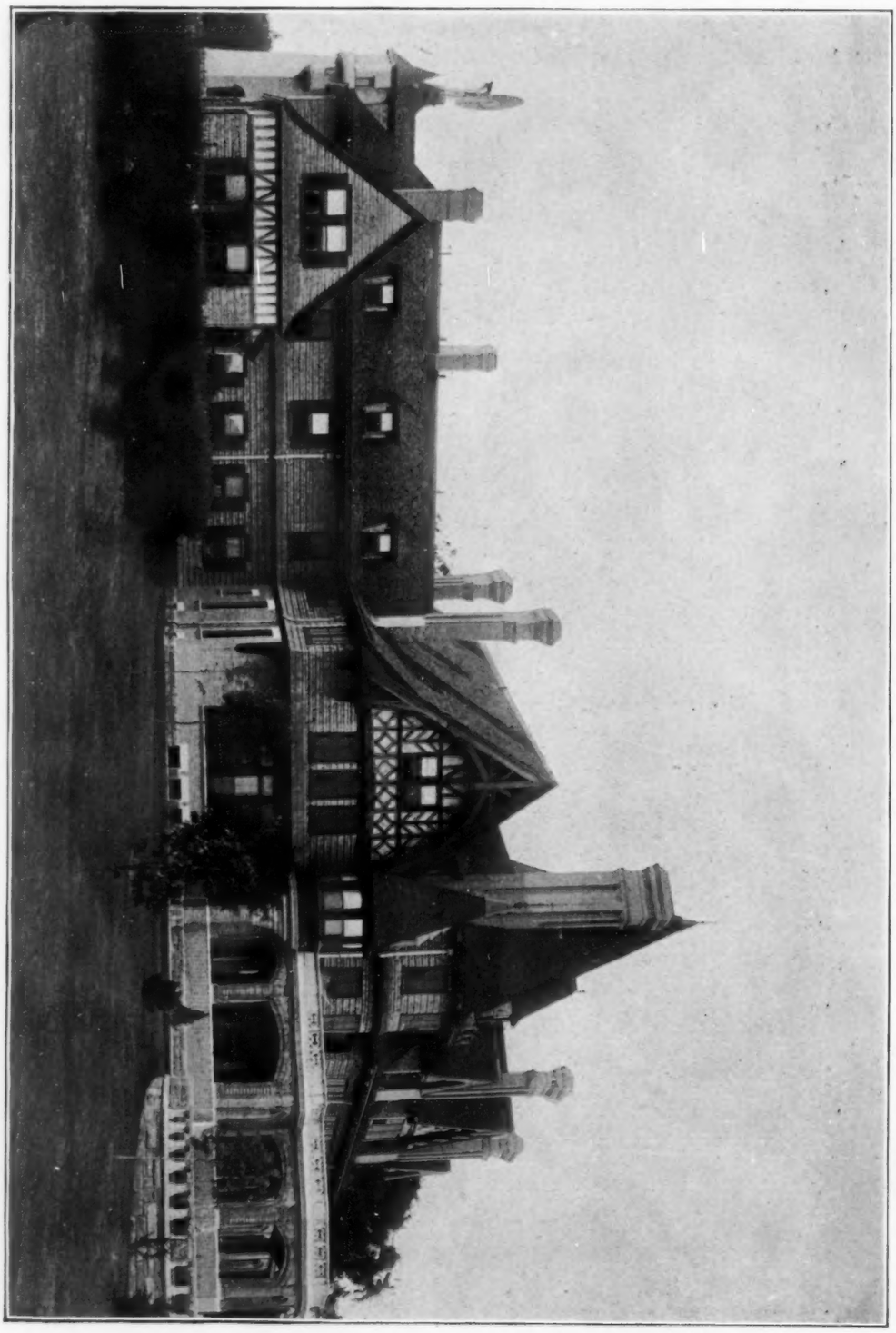
GE MARTIN HUSS, ARCHITECT.



HELIOTYPE PRINTING CO, BOSTON

A COMPETITIVE DESIGN FOR THE U. S. CUSTOM HOUSE, NEW YORK, N. Y.

GEORGE MARTIN HUSS, ARCHITECT.



HOUSE AT RYE, N. Y.

NATHAN C. MELLEN, ARCHITECT.

LAWN FRONT: HOUSE AT RYE, N. Y.
NATHAN C. MELLEN, ARCHITECT.

The American Architect and Building News

A WEEKLY JOURNAL OF CONSTRUCTIVE AND DECORATIVE ART.

VOL. LXVIII. — No. 1275.] SATURDAY, JUNE 2, 1900. PRICE, { INTERNATIONAL ISSUE, 50 CTS / REGULAR " , 15 "

BUILDING MATERIALS.

Reported for the American Architect and Building News.

BUILDING MATERIALS	New York.	Boston.	Philadelphia.
STONE. (₱ *cubic foot, rough.*)	(*Wholesale Prices.*)	(*Prices to Builders and Contractors.*)	
Foundation:			
Dimension	@	5 00 ₱ ton.	@ 5 00
Block	@	4 60 ₱ perch.	Conshohocken
Rubble	@	1 25 @ 1 50	1 45 @ 2 50
Sandstone:			
Longmeadow	@ 80	80 @ 90	
Kibbe	@ 90	90 @ 1 10	95 @ 1 05
Brown (Connecticut)	1 00 @	1 00 @ 1 30	1 05 @ 1 25
Amherst Ohio	90 @ 95	90 @ 1 00	85 @ 95
Berea "	75 @ 1 00	85 @ 90	55 @ 75
Berlin "	75 @ 1 00	80 @ 90	85 @ 95
Belleville	80 @ 1 25	25 @ 1 35	1 00 @ 1 10
New Brunswick (Dorchester)	@ 1 00	75 @ 90	1 05 @ 1 15
Potsdam Red	@ 1 30	@ 1 40	@ 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	55 @ 65
Limestone:			
Bedford	45 @ 1 25	95 @ 1 00	75 @ 85
Joliet	1 00		Richmond
Lemont			₱ 75 @ 1 50
Serpentine		10 50 per ton.	Perch 4 50 @ 5 50
Bluestone: (₱ *sq. ft.*)			1 in. th. 10 @ 25
Sidewalk	30 @ 5 00	40 @ 1 75	37 @ 50
Planed	50 @ 6 00	@ 75	
Marble: (₱ *cu. ft.*)			
Lee, Mass	@	1 75 @ 2 50	2 00 @ 2 50
Rutland, white and blue	@	@ 3 00	2 00 @ 3 00
Sutherland Falls	1 25 @ 1 75	@ 2 00	1 70 @ 3 00
Slate: Roofing (₱ *square*)			
Green	5 00 @ 6 00	4 75 @ 5 25	2 90 @ 3 00
" unfading	5 00 @ 6 00	5 50 @ 6 50	4 25 @ 5 00
Purple	5 00 @ 6 00	5 50 @ 6 50	4 50 @ 5 50
Red	@ 10 00	10 00 @ 11 00	11 50 @ 13 00
Black, Lehigh	4 25 @ 4 75	@	4 00 @ 4 35
" Chapmans	@	@	4 50 @ 5 00
Genuine Bangor	4 35 @ 5 50	4 75 @ 5 50	4 35 @ 5 50
Unfading black	6 00 @ 8 50	6 00 @ 8 50	6 50 @ 9 00
" "	5 50 @ 8 00	5 50 @ 8 00	6 50 @ 9 00
Tiles, Am. ₱ M	@	@	@ 28 00
N. Peach Bottom, war. unfading	@	@	5 76 @ 6 25
Fire Clay Roof Tile on cars at fac.	8 00 @	8 00 @	8 60 @
LUMBER. — ₱ M.			
Boards: (*Ordinary dimensions.*)			
Pine, 1st quality, clear	65 00 @ 75 00	70 00 @ 80 00	47 50 @ 60 00
" 2d quality	55 00 @ 60 00	65 00 @ 70 00	38 00 @ 48 50
" 3d quality	18 00 @ 22 00	55 00 @ 60 00	27 50 @ 36 50
California Redwood	@	50 00 @ 65 00	@
Spruce	@ 25 00	19 00 @ 25 00	15 00 @ 21 50
Hemlock	ea13½ @ 14	15 00 @ 19 00	11 50 @ 13 75
Yellow pine	20 @ 40	24 00 @ 35 00	14 00 @ 29 00
Cypress	@	35 00 @ 55 00	30 00 @ 38 00
Clapboards:			
Pine	@	35 00 @ 55 00	14 00 @ 25 00
California Redwood	@	50 00 @ 55 00	@
Spruce	@	30 00 @ 38 00	*Not sold.*
Framing Timber:			
Pine	14 00 @ 16 00	20 00 @ 23 00	25 00 @ 37 30
Spruce	12 00 @ 16 00	15 00 @ 18 00	15 00 @ 21 50
Hemlock	18 00 @ 21 00	30 00 @ 55 00	14 00 @ 20 00
Yellow pine	@		22 50 @ 30 00
Laths:	@	2 25 @ 2 50	2 75 @ 3 00
Pine Round Wood	3 00 @ 3 25	3 25 @ 3 75	2 30 @ 2 35
Spruce Slab			
Shingles:	5 00 @ 6 00	@	
Pine, shaved ₱ M	4 00 @ 5 00	@ 450	
Pine, sawed "	1 50 @ 2 00	1 50 @ 2 00	
Spruce, sawed "	1 40 @ 1 60	3 75 @ 4 25	30" $35 @ 40
Redwood ₱ 125.		@ 6 00	24" 8 @ 21
Cedar split ₱ M	@	3 00 @ 4 00	20" 35 @ 14
Cedar sawed "	18 00 @ 20 00	5 00 @ 6 50	11 00 @
Cypress, split 7 x 24 "			

Topographical Index of Advertisers.

[*For pagination, see Alphabetical Index on Cover 2.*]

CONNECTICUT.

East Berlin.
Berlin Iron Bridge Co.....[*Steel Structures.*

New Britain.
The Stanley Works.....[*Wrought-Steel Butts.*

New Haven.
Fitch Co., The W. & E. T.....[*Sash Lock.*

Stamford.
Yale & Towne Mfg. Co.....[*Locks.*

Waterbury.
Benedict & Burnham Mfg. Co.....[*Seamless Nickel-Silver Tubing.*

ILLINOIS.

Chicago.
Crane Co.....[*Drainage Fittings.*]
Flanagan & Bredenweg Co.....[*Stained-Glass.*
Northwestern Terra-Cotta Co.....[*Terra-Cotta.*
Pioneer Fireproof Construction Co.....[*Fireproofing.*
Taylor, J. W.....[*Photographs.*
Winslow Bros. Co., The.....[*Ornamental Iron and Bronze.*

MASSACHUSETTS.

Boston.
Amer. Mason Safety Tread Co...[*Stair Treads.*
Bartlett Lumber Co.....[*Redwood Lumber.*
Butcher Polish Co.....[*Floor Polish.*
Cabot, S.....[*Shingle-Stains.*
Campbell, Walter M.....[*Perspectives.*
Carter Ink Co.....[*Ink.*
Folsom Snow Guard Co.....[*Snow Guards.*
Gurney Heater Mfg. Co.....[*Hot water, etc.*
Haberstroh & Son, L.....[*Decorators.*
Heliotype Printing Co.....[*Art Printing.*
Lombard & Co.....[*Architectural Ornamentation.*
New England Felt Roofing Works...[*Roofing.*
Samson Cordage Works.....[*Sash-Cord.*
Spaulding Print Paper Co.....[*Blue Prints.*
Whittier Machine Co.....[*Elevators.*

Cambridge.
Lawrence Scientific School.....[*School.*

Clinton.
Clinton Wire Cloth Co.....[*Metallic Lathing.*

Palmer.
Flynt Building & Construction Co...[*Building Contractors.*

MARYLAND.

Baltimore.
Yaile & Young.....[*Skylights.*

MICHIGAN.

Detroit.
Barnum, E. T.....[*Art Metal Works.*
Berry Brothers, Limited.....[*Shingleine.*
Dwight Lumber Co.....[*Hardwood Flooring.*
Ideal Mfg. Co.....[*Sanitary Specialties.*

Grand Rapids.
Aldine Mfg. Co.....[*Wood Mantels.*
Alexander Mfg. Co.....[*Drawing-tables.*
Fox Machine Co.....[*Pulleys, Sash.*
Grand Rapids Carved Moulding Co.....[*Mouldings.*
Sproul & McGurrin.....[*Grease Traps.*

St. Joseph.
The Compound Door Co.....[*Veneers.*

MISSOURI.

St. Louis.
Ludlow Saylor Wire Co.....[*Art Metal-Work.*
Seifert, Frank A.....[*Plaster Ornaments.*

NEW JERSEY.

Jersey City.
Dixon Crucible Co., Jos.....[*Graphite.*

Paterson.
Passaic Rolling Mill Co.....[*Structural Iron.*

Perth Amboy.
Perth Amboy Terra-Cotta Co....[*Terra-Cotta.*

Trenton.
N. J. Steel & Iron Co.....[*Iron.*

NEW YORK.

Brooklyn.
Moore, Benjamin.....[*Muresco.*

Buffalo.
Bradshaw Window Opener Co., The..[*Window Opener.*

Irvington-on-Hudson.
Lord & Burnham Co.....[*Conservatories.*

Jamestown.
Art Metal Construction Co.....[*Art Metal Work.*

N. Y. City.
Alsen's Cement Works.....[*Cements.*
American Sheet Steel Co....[*Galvanized Iron.*

NEW YORK.

N. Y. City.
Atlas Cement Co.....[*Cement.*
Bicklehoupt, G.....[*Skylights.*
Bostedo Package and Cash Carrier Co.....[*Pneumatic Tubes.*
Deane, E. Eldon.....[*Colorist.*
Fisher & Co., Robert C.....[*Marble.*
Flexible Door & Shutter Co.....[*Rolling-Shutters.*
Frink, I. P.....[*Reflectors.*
Gorton & Lidgerwood Co.....[*Boilers.*
Hayes, George.....[*Metallic Lathing.*
Hitchings & Co.....[*Greenhouses.*
Holophane Glass Co.....[*Holophane Glass*
Hurd & Co.....[*Wall-Ties.*
Jackson & Co., Wm. H.....[*Grates.*
Jackson Architectural Iron Works.[*Iron Work.*
Jenkins Bros.....[*Valves.*
Johns Mfg. Co., H. W.....[*Asbestos.*
Jones, T. W.....[*Vanes.*
Keuffel & Esser Co.....[*Drawing Materials.*
Laughlin-Hough Co.....[*Drawing Tables.*
Mott Iron Works, The.....[*Iron Work.*
National Wood Mfg. Co.....[*Inlaid Floors.*
Neuchatel Asphalte Co.....[*Asphalt.*
New Jersey Zinc Co.....[*Zinc White.*
New York Belting and Packing Co., Ltd.[*Interlocking Rubber Tiling.*
New York Mastic Works.....[*Asphalt.*
N. Y. Metal Ceiling Co.....[*Metal Ceilings.*
Okonite Co. (Ltd.).....[*Insulated Wire.*
Pitt, W. H.....[*Folding-Gates.*
Raritan Hollow & Porous Brick Co..[*Fireproofing.*
Rider-Ericsson Engine Co [*Hot-Air Engines.*
Sargent & Co.....[*Builders' Hardware.*
Smith Co., H. B.....[*Steam Heat.*
Smith & Co., Edward.....[*Varnishes.*
Standard Paint Co.....[*Paint (Roofing).*
Thiele, E.....[*Portland Cement.*
United Correspondence Schools....[*Education by Mail.*
U. S. Mineral Wool Co.....[*Mineral Wool.*
Warren Chemical & Mfg. Co..[*Asphalt Roofing.*
Williams, John.....[*Wrought Metal.*

Rochester.
Cutler Mfg. Co.....[*Mail Chutes.*

Syracuse.
Dunning, W. D.....[*Mixer.*

Troy.
Globe Ventilator Co.....[*Ventilators.*
Troy Laundry Machinery Co...[*Washing Machines.*

OHIO.

Canton.
Berger Mfg. Co., The.....[*Metal Ceilings.*
Canton Steel Roofing Co., The[*Metal Ceilings.*
McLain Co., J. H.....[*Heating-Apparatus.*

Cincinnati.
Barron, Boyle & Co.[*Old English Floor Wax.*

Cleveland.
Glidden Varnish Co., The.....[*Varnish.*
Ohio Brass and Iron Mfg. Co.....[*Traps.*
Osborn, J. M. & L. A.....[*Roofing Tin.*

Columbus.
Kinkade & Liggett Co.....[*Dumb Waiters.*
Columbus Brick & Terra-Cotta Co., The.....[*Pressed Brick.*
Kinnear & Gager Co., The.....[*Steel Ceilings.*
Kinnear Mfg. Co.....[*Steel Rolling-Doors.*
Nelson Co., The C. T.....[*Capitals (Carved).*

Crestline.
Hartman Sliding Blind Co...[*Sliding Blinds.*

Dayton.
Dayton Automatic Elevator Gate Co.....[*Elevator Gates.*

Miles.
Bostwick Steel Lath Co.....[*Metal Lathing.*

Toledo.
Buckeye Paint Co.....[*Paint.*

PENNSYLVANIA.

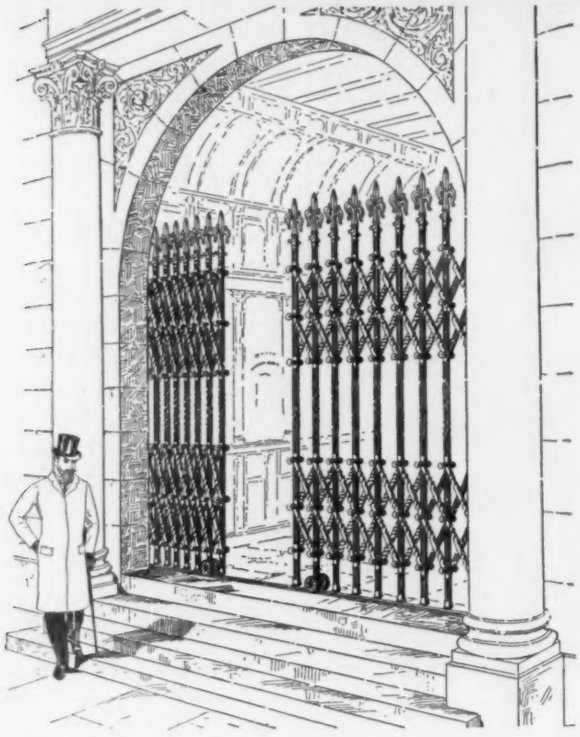
Ambler.
Keasbey & Mattison Co...[*Magnesia Covering.*

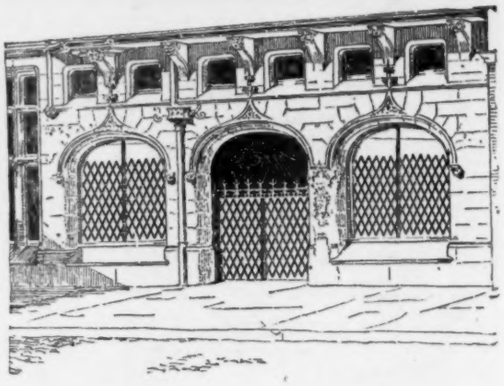
Philadelphia.
Electric Storage Battery Co.....[*Chloride-Accumulator.*
French & Co., Samuel H.....[*Mortar Colors.*
Garn, McGinley & Co.....[*Steel Corner.*
Harrison Brothers & Co...[*Protective Paints.*
Loomis Filters Improved System.....[*Filters.*
Maxwell & Co., J.....[*Gypsum Water Paint.*
Merchant & Co.....[*Tin Roofing.*
Morse, Williams & Co.....[*Elevators.*
Taylor Co., N. & G.....[*Tin.*
Thorn, J. S. Co.....[*Sheet Metal.*

Pittsburgh.
Monarch Water Heater Co.....[*Heaters.*
Scaife, Wm. B. & Sons.....[*Filters.*

Scranton.
International Correspondence Schools, The[*Architecture.*

York.
Vapor Steam Heating Co.,[*Heating Apparatus, Steam.*





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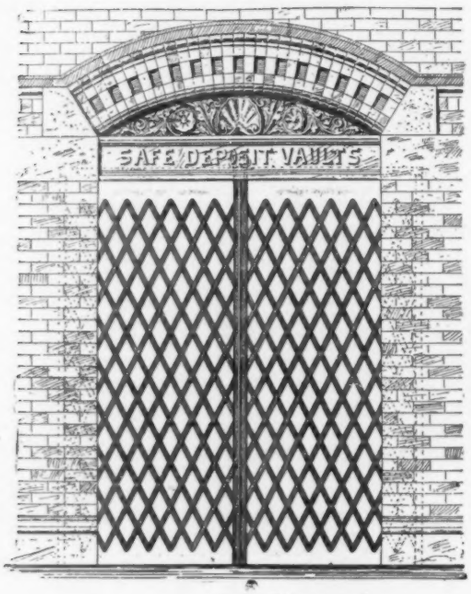

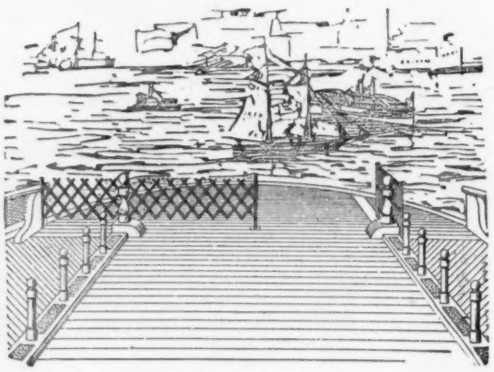

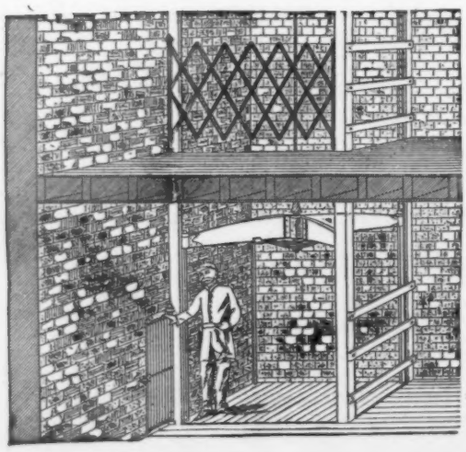

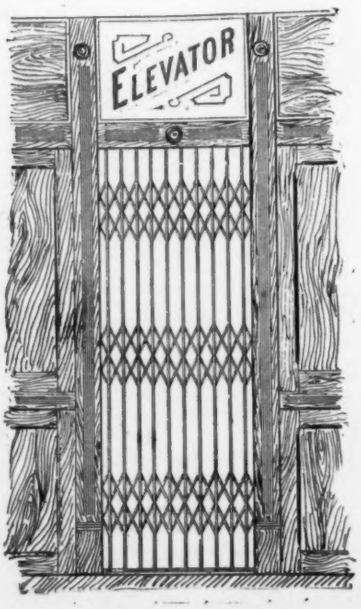

RANDOLPH HALL, HARVARD UNIVERSITY, CAMBRIDGE, MASS.
J. RANDOLPH COOLIDGE, JR., ARCHITECT, BOSTON, MASS.

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New Advertisements.

FOX MACHINE CO. (Grand Rapids, Mich.), Pulleys, Sash. Page x.

See last or next issue for the following advertisements: —

Buckeye Paint and Varnish Co.
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Keuffel & Esser Co.
New York Belting & Packing Co.
Sargent & Company.
T. W. Jones.
Okonite Co.
Samson Cordage Works.
H. B. Smith Co.

ARCHITECTS' REMOVALS, Etc.

COPELAND & DOLE, architects, announce their removal May 1, 1900, to 51 Exchange Pl., N. Y. They would be pleased to receive trade catalogues. 1276

MR. PERCY GRIFFIN, architect, begs to announce the removal of his office from 48 Exchange Place to 9 Hanover Street (corner of Beaver), New York.

HENRY M. CONGDON & SON, architects, 18 Broadway, New York City. The above firm has been formed by the admission into partnership of Mr. Herbert Wheaton Congdon, May 9, 1900. Henry M. Congdon, B. A., Columbia, Fellow Am. Inst. Architects. Herbert Wheaton Congdon, B. S., School of Architecture, Columbia. 1275

WANTED.

DRAUGHTSMAN. — Wanted, architectural draughtsman competent in design and details. Jacoby & Weishampel, architects, Allentown, Pa. 1275

BOOKS FOR SALE.

BOOKS.—Private collection of architectural works: "Gwilt," "Fergusson's Illustrated Handbook," "Glossary of Architecture," "M. Cesar Daly's" (Maisons Priate), "Tredgold," "Vaux," "Downing," "London Builders," etc. Rare opportunity to purchase a small library, about 300 volumes or numbers, at less than one-half cost. For catalogue, address "F. H. M.," 27 School St., Room 30. 1278

WANTED.

SKILFUL DRAUGHTSMAN. — Wanted, by an interior decorator and painter, a draughtsman who excels in colored sketches and ornament, must have knowledge of architecture. Good salary and permanent position to right man. State experience, qualifications, etc. Address "Interior Decor.," this office. 1276

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COMPETITION designs and perspectives lined and rendered by expert colorist and designer. Temporary assistance, perspectives, sketches, etc., at architects' offices within reasonable distance. Address "Artist," 454 Devon St., Arlington, N. J. 1279

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.*]

649,387. Hinge. — Thomas Wright, Rome, Ga.
649,388. Lightning-Arrester. — Alexander J. Wurts, Pittsburgh, Pa.
649,399. Hoist. — Frank H. Cathcart, Blauvelt, N. Y.
649,428. Two-Way Faucet. — Wm. H. Barrett, Channing, Tex.
649,438. Sash-Holder.—Charles F. Davis, Olivet, and Edward F. Pangburn, Battle Creek, Mich.
649,474. Heater. — Randall A. Palmer, Philadelphia, Pa.
649,496. Automatic Cut-off Mechanism for Water-Pipes.—Daniel W. Troy, Montgomery, Ala.

BUILDING PATENTS.

649,502. Heating Apparatus. — James A. Wills, Philadelphia, Pa.
649,505. Elevator-Door. — Harry Bitner, Berwyn, Ill.
649,519. Air-Valve for Steam-Heating Radiators. — Hallah C. Kinnison, Louisville, Ky.
649,530. Cistern-Filter.—George Ritter, Pinckneyville, Ill.
649,661. Electric Signalling Apparatus. — Francis K. Fassett, St. Louis, Mo.
649,662. Elevator.—Francis K. Fassett, St. Louis, Mo.
649,670. Flushing Apparatus. — Eppie J. McCulloch, Manchester, N. H.
649,681. Waste-Valve and Overflow. — Wm. Scott, Medford, Mass.
649,693. Safe or Vault. — William H. Hollar, Philadelphia, Pa.
649,706. Lock. — Byron Phelps, Seattle, Wash.
649,765-766. Sash-Balance. — William Schuch, New York, N. Y.
649,833. Gas Heating-Stove. — Frank P. Gillespie, Erie, Pa.
649,838. Cistern. — Hugh W. Harry, Dallas, Tex.
649,892. Mold for Artificial Stone.—William S. L. Jones and Jesse E. Jones, Dexter City, Mo.

BUILDING INTELLIGENCE.

Reported for the American Architect & Building News.

ADVANCE RUMORS.

Albia, Ia. — Architect C. E. Eastman, Des Moines, has prepared plans for a church for the Christian Society. It will be 50′ x 80′, constructed of brick, and will cost $10,000.

Boone, Ia. — The Ericson library building will be built from plans prepared by Liebbe, Nourse & Rasmussen, of Des Moines. It will be 50′ x 70′, two stories and basement in height, and will be constructed of brick; cost, $10,000.

Bremen, Ind.—Architect H. F. Frazier, Nappanee, will furnish plans for a brick and stone residence, to cost $7,000, for P. E. Dietrich.

Buffalo, N. Y. — Henry Schaefer will erect a store and dwelling at 730 Seneca St., after plans by Architect J. W. Bradley. It will be a three-story brick structure, and will cost $12,000.

Architect E. F. Pickett has furnished plans for a four-story block to be erected at the corner of Niagara St. and Potomac Ave., for Evelina M. Spanner; cost, $40,000.

Architects Green & Wicks have drawn plans for a two-story brick dwelling to be erected at 695 Delaware Ave. for Emma P. Jones; cost, $23,000.

Carlyle, Ill. — Architect J. W. Gaddis, Vincennes has furnished plans for a school-house. The proposed structure will be of brick, stone and terra-cotta, and will cost $20,000.

Cedar Falls, Ia. — Architect F. D. Orff, of Minneapolis, Minn., is preparing plans for a high school building. It will be 80′ x 108′, three stories and basement, with construction material of brick and cut-stone trimmings; cost, $30,000.

Cincinnati, O.—Architect G. W. Drach is preparing plans for a dormitory to be built at the College of Music. The structure will be constructed of brick and terra-cotta, will be 48′ x 98′, five stories high, and cost $40,000.

Davenport, Ia. — The Y. M. C. A. contemplates erecting an association building, to cost at least $60,000.

Detroit, Mich. — A. C. Varney & Co. are preparing plans for an apartment-house, 60′ x 100′, eight stories high, to be located corner Madison and Wilcox Sts.; estimated cost, $100,000.

E. C. Van Leyen has prepared plans for a bank building corner Gratiot and Cheve Sts., for the Peninsula Savings Bank; cost, $10,000.

Spiers & Rohns are preparing plans for a Science Hall for the University of Michigan; cost, about $150,000.

The Boyer Manufacturing Co. will build a large plant corner 2d Ave. and the railroad tracks; cost of buildings, $50,000.

Elyria, O. — The New Century Building Co. will erect a four-story brick and stone office and store building after plans furnished by Architect H. E. Ford, Lorain; cost, $100,000.

Fairfield, Me.—E. J. Lawrence, of Lawrence, Newhall & Co., has offered to give the town a library building to cost about $10,000.

Franklin, Pa. — Reports state that the plans of Edgar K. Bourne, 18 Broadway, New York City, have been accepted for an office-building for the Galena & Signal Oil Companies, to cost about $75,000.

Gainesville, Ga. — A spindle mill to cost $10,000 is to be erected by the Woodside Cotton Mills recently organized.

Glassport, Pa. — The American Axe & Tool Co. has purchased a large plot of land here and will build a factory, to cost $500,000.

Kansas City, Mo. — S. E. Chamberlain is drawing plans for a two-story stone flat-building for Judge L. C. Stevens; cost, $7,000.

Kenosha, Wis.—Dr. C. H. Ripley will erect a frame, brick and stone residence after plans furnished by Architect C. A. Dickhaut; cost, $6,000.

Lewisburg, Pa. — T. P. Lonsdale, Philadelphia, has prepared plans for a $25,000 church for the Lutheran Society; cost, $25,000.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Louisville, Ky.—The Fourth Avenue M. E. Society will erect a stone church, to cost about $55,000, after plans by Dodd & Cobb.

Marlin, Tex.—Samuel P. Herbert, Waco, is preparing plans for a four-story brick and stone hotel to be erected by M. Levy, at a cost of about $65,000.

Middletown, Conn.—Curtis & Johnson have drawn plans for a dining-hall building for the Connecticut Hospital for the Insane; cost, $125,000.

New Haven, Conn.—Brown & Van Beren are preparing plans for the new Y. M. C. A. building. The structure will be of fireproof steel construction, 71′ x 200′, and six stories high; cost, $200,000.

New York, N. Y.—C. B. J. Snyder has furnished plans for the new girl's high school to be erected at 114th and 115th Sts. The structure will be 201′ x 225′, and will be five stories high, with a spire 200′ high on the 114th-St. front. The façades will be of fancy brick and Indiana limestone, with terra-cotta trimmings. The general architecture will be in the French Gothic style; cost, $350,000.

Norristown, Pa.—T. P. Lonsdale, Philadelphia, has prepared plans for a church for the Central Presbyterian Society, to cost $25,000.

Paducah, Ky.—The Illinois Central Hospital will be enlarged soon by an addition to cost about $20,000.

Pittsburgh, Pa.—The American Window Glass Co. will erect a frame and stone sand cleaning and storage building from plans by Architect J. E. Croin, Logansport, Ind. It will be 64′ x 252′, and will cost $7,000.

Port Deposit, Md.—Architects Boring & Tilton have been awarded the competition for the plans for the Joseph Tome Industrial School buildings to be erected at a cost of about $1,000,000.

Providence, R. I.—Architect H. K. Hilton has prepared plans for a two and one-half story brick and stone residence to be erected for Mrs. Sarah H. Cranston; cost, $20,000.

Rochester, N. Y.—Charles F. Crandall has drawn plans for a warehouse, to cost $18,000, to be erected by the T. C. Ham Co.

Rock Island, Ill.—M. M. Sturgeon will erect a three-story, 56′ x 64′, brick and stone flat-building after plans furnished by Architects Drack & Kerns; cost, $15,000.

Sioux City, Ia.—John McDonald will build a brick and stone residence, to cost $8,000, after plans by Architect Henry Fisher.

Spokane, Wash.—Held & Permain are preparing plans for a ten-room brick and stone school-house, to cost about $65,000.

Col. I. N. Peyton will build a five-st'y business block from plans by C. F. White; cost, $150,000.

The Elks will erect a two and one-half story brick hall building, to cost about $.5,000.

St. Paul, Minn.—Architect Anton Dohmer is preparing plans for a church to be erected by St. Mary's Society. It will be built of brick and stone, 60′ x 80′ x 150′, costing $35,000.

Tullahoma, Tenn.—G. H. Freese is preparing plans for a brick and stone hotel to be erected here, at a cost of $40,000.

Victor, Col.—G. W. Roe, of Pueblo, is preparing plans for a school-house to be erected here. It will be a four-room brick and stone structure, costing $16,000.

Walla Walla, Wash.—The Episcopal School will erect a two story and basement dormitory after plans furnished by Cutter & Malmgren, of Spokane; cost, $8,000.

Washington, D. C.—Samuel H. Evans will build a residence on Massachusetts Ave., between 24th and 25th Sts., from plans by Architect H. A. Campbell. It will be a stone and brick structure, 25′ x 60′, three stories and basement, and will cost $6,000.

West Chester, Pa.—Architect Cyrus L. W. Eidlitz has prepared plans for alterations to St. Paul's Episcopal Church, which was injured by fire last fall; cost, about $20,000.

Wilkinsburg, Pa.—Dr. F. S. Pershing is having plans prepared by Architect L. A. Raisig for a store and flat building to be erected on Penn Ave. It will be constructed of brick, four stories in height, and 32′ x 122′, costing $25,000.

Winsted, Conn.—William H. Allen, 32 Church St., New Haven, has made plans for a hospital to be built here. The building will be two stories high, 55′ x 80′, constructed of brick, and will cost about $25,000.

ALTERATIONS AND ADDITIONS.

Columbus, O.—One-st'y bk. addition to guard-house, 48′ x 64′, slate roof, steam; $20,000; o., Columbus Barracks; a., G. F. Richards.

Lincoln, Ill.—Three-st'y & base. st. & bk. addition

BUILDING INTELLIGENCE.

(Alterations and Additions Continued.)

54′ x 58′, slate roof, steam; $13,000; o., Sisters of St. Francis; a., George H. Helmle.

New York, N. Y.—*E. Sixty-third St., No.* 21, four-st'y extension, 6′ x 25′; $20,000; o., Lyman G. Bloomingdale, 21 E. 63d St.; a., Buchman & Fox, 11 E. 59th St.

E. Thirty-ninth St., No. 115, four-st'y extension, 7′ 4″ x 30′ 4″; $10,000; o., Ellen J. Evans, 56 W. 33d St.; a., W. E. Stone, 55 Broadway.

Philadelphia, Pa.—*S. Eleventh St., Nos.* 206-212, seven-st'y bk. & iron addition to factory, 69′ x 89′; $6,000; o., Thomas H. Mills; b., William P. Rea's Sons, a., Chas. Balderston.

Iron-Work.

BUILDING INTELLIGENCE.

APARTMENT-HOUSES.

Athens, O. — Two-st'y bk. flats & business block, 37′ x 75′, comp. roof, hot water; $12,000; o., Drs. Aldman and Biddel; a., Yost & Packard, Columbus.

Brooklyn, N. Y. — *Ralph Ave.*, e s, 25′ n St. Mark's Ave , 3 four-st'y bk. & st. flats, 29′ x 60′; $36,000; o., Emma G. Heeseman, 444 W. Central Park, New York City; a., F. S. Lowe, 186 Remsen St.

Columbus, O. — Two-st'y bk. & st. aparts., 21′ x 129′, comp. roof; $12,000; a., H. Cockell; a., V. S. Julian.
Three-st'y bk. & st. aparts., 25′ x 85′, gravel roof, natural gas; $10,000; o., C. C. Alwood; a., R. A. Roberts.

Washington, D. C. — *Chapon St., No.* 1415, five-st'y bk. aparts., 50′ x 150′, tin roof, steam; $75,000; o. & a., Autenrieth & Goenner.

Yonkers, N. Y. — *Buena Vista Ave., Nos.* 91-95, 2 five-st'y bk. flats, 44′ x 65′; $20,000; o., Mrs. M. Blatzheim; a., Geo. Raynor & Son.

CHURCHES.

Garrison, N. Y. — One-st'y st. memorial church, 60′ x 62′; $10,000; o., St. Phillips Church; a., Harney & Purdy, 35 Nassau St.

Philadelphia, Pa. — *Pennock and Poplar Sts.*, two-st'y Port Deposit st. & limest. trimmed church, 50′ x 70′; $11,000; o., Trinity Baptist Society; b., Lewis B. Bitters.

FACTORIES.

Brooklyn, N. Y. — *Jay and Johnson Sts.*, three-st'y bk. factory, 60′ x 90′; $15 000; o., Wm. Haidrich & Sons; a., J. G. Glover, 186 Remsen St.

Philadelphia, Pa. — *Mill St.*, nr. Frankford Ave., two-st'y bk. factory, 80′ x 160′, peak slag roof; $12,000; o., Robert H. Foerderer; b., Geo. Kessler.

BUILDING INTELLIGENCE.

(Factories Continued.)

Cadwallader St., nr. Montgomery Ave., seven-st'y bk. & steel fireproof factory, 62′ 2″ x 167′ 7″; $125,000; o., John B. Stetson Co.; a., Geo. T. Pearson.

Thirty-fifth St. and Gray's Ferry Road, one-st'y bk. foundry, 45′ x 123′; $6,800; o., J. Alfred Clark; b., S. R. Riley.

HOSPITALS.

New York, N. Y. — *E. Thirteenth St., No* 311, two-st'y & base. bk. & st. hospital, 23′ x 94′, bk. & tile roof; $35,000; o., N. Y. Eye & Ear Infirmary, 2d Ave. & 13th St.; a., R. W. Gibson, 54 Broad St.

Wheeling, W. Va. — Three-st'y bk. & terra-cotta hospital, 80′ x 85′, slate roof, steam; $30,000; o., Giesey & Faris.

HOTELS.

Springfield, Ill. — *E. Adams St.*, four-st'y bk. & st. hotel & stores, 40′ x 114′, tin roof, steam; $15,000; o., William Bekemeyer; a., Geo. H. Helmle.

Sturgeon Bay, Wis. — Three-st'y bk. hotel, 78′ x 160′, gravel roof, steam heat; $25,000; o., B. Hahn; a., F. D. Crandall.

HOUSES.

Bloomfield, N. J. — *Hazelwood Road and Williamson Ave.*, 2½-st'y fr. dwell.; $5,000; o., Henry P. Dodd; a., G. C. Jones, 280 Broadway.

Boston, Mass. — *Graham St., No.* 22, 2½-st'y fr. dwell., 31′ x 33′, pitch roof, furnace; $5,000; o., a. & b., J. P. Campbell.
Tonawanda St., nr. Geneva Ave., 2½-st'y fr. dwell., 28′ x 37′, pitch roof, furnace; $5,000; o. & b., K. S. Dewitt.
Germain St., Nos. 30-36, 4 three-st'y bk. dwells., 19′ x 50′, flat roofs; o. & a., Joseph Green; b., D. W. Thomas.

BUILDING INTELLIGENCE.

(Houses Continued.)

Audubon Road, nr. Beacon St., 4 three-st'y dwells., 25′ x 93′, flat roofs, steam; $40,000; o., J. P. Wright; b., I. Silberstein; a., Benjamin Fox.
Bay State Road, nr. Raleigh St., 4 three-st'y bk. dwells., 27′ x 44′, flat roofs, hot water; $25,000; o., Lorin T. Deland; b., Mack & Moore; a., Andrews, Jacques & Rantoul.
Hutchins St., cor. Graham St., 2½-st'y fr. dwell., 34′ x 48′, pitch roof, hot water; $7,500; o., Frank P. [ ]Webber; a. & b., J. P. Campbell.

Brooklyn, N. Y. — *Third St.*, nr. 9th Ave., three-st'y & base. bk. dwell., 20′ x 48′; $10,000; o., a. & b., P. J. Collins, 67 Clermont Ave.
Eighth Ave., nr. Carroll St., 2 four-st'y & base. bk. dwells., 20′ x 68′; $30,000; o., L. Bonert, 6th Ave. & 3d St.; a., T. Bennett, 198 Fifty-third St.
Buckingham Road, nr. Albemarle Road, two-st'y & attic fr. dwell., 36′ 2″ x 45′ 2″, shingle roof; $11,000; o., Dean Alvord, Albemarle Road & E. 15th St.; a., J. J. Petit, 186 Remsen St.

New York, N. Y. — *Eighty-second St.*, nr. 5th Ave., 2 four-st'y bk. & st. dwells., 25′ x 85′; $100,000; o. & b., Jos. A. Farley, 2787 Broadway; a., Janes & Leo, 2585 Broadway.

Philadelphia, Pa. — *Locust St.*, nr. 21st St., four st'y bk. & limest. dwell., 32′ x 90′ 9″; $45,600; o., Jay Cook 3d; b., Jacob Myers & Sons; a., Kennedy, Hays & Kelsey.

Yonkers, N. Y. — 2½-st'y fr. dwell., 38′ x 48′; $15,000; o., W. G. McAdoo, 15 Wall St., New York City; a., Geo. H. Chamberlain, 1181 Broadway.
Brookside Park, 2½-st'y fr. dwell., 36′ x 38′; $15,000; o , John Daniels, Sr., Broadway & 8th St., New York City; a., Chas. H. Hand, Plainfield, N. J.

MERCANTILE BUILDINGS.

New York, N. Y. — *W. Forty-third St., Nos.* 206-208, seventeen-st'y business building, 30′ x 100′; $180,000; o., The Bates Realty Co.; a., Francis L. Ellingwood, 254 W. 84th St.

OFFICE-BUILDINGS.

New York, N. Y. — *Broadway*, cor. 65th St., four-st'y bk. offices & stores, 81′ 6″ x 116′ 1″; $56,000; o., Jno. L. Miller, 128 Riverside Drive; a., J. Munckowitz, 247 W. 125th St.

COMPETITIONS.

TOWN-HALL. [At Glens Falls, N. Y.]
Plans and specifications will be received by the Board of Trustees **until June 18th**, for a town-hall. T. I. DILLON, clerk. 1277

SCHOOL-HOUSE. [At Natchez, Miss.]
Sealed plans and specifications will be received at the City Clerk's office **until June 14th**, for the erection of a modern school-building. W. G. BENBROOK, Mayor. 1276

PROPOSALS.

Treasury Department, Office of the Supervising Architect, Washington, D. C., May 29th, 1900. Sealed proposals will be received at this office until 2 o'clock P. M. on the 5th day of July, 1900, and then opened, for furnishing the heating and ventilating apparatus, complete in place, for the extension U. S. Post-office Building at Columbus, Georgia, in accordance with drawings and specification, copies of which may be had at this office or at the office of the Superintendent at Columbus, Ga., at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 1276

SCHOOL-HOUSE. [At Provo City, Utah.]
Sealed proposals will be received by the Board of Education **until June 4th**, for the erection of a school-house. J. F. CLYDE, clerk. 1275

SCHOOL-HOUSE. [At St. Bernard, O.]
Sealed proposals will be received **until June 5th**, for the erection of a school building. WM. SCHULHOF, clerk. 1275

HOTEL. [At Forest City, Ia.]
Sealed bids will be received by the Forest City Hotel Co. **until June 5th**, for the erection of a hotel. O. A. OLSON. 1275

SCHOOL-HOUSE. [At Oakland, Ia.]
Sealed bids will be received **until June 9th**, for the erection of a school-house. T. J. JOHNS, sec. 1275

POOR-HOUSE. [At Detroit City, Minn.]
Sealed proposals will be received by the County Commissioners **until July 9th**, for the erection of a poor-house for Becker County. 1275

CHURCH. [At Brookings, S. D.]
Sealed proposals will be received by the Building Committee of the Presbyterian Society for the erection of a church. F. J. CARLISLE, Chairman. 1276

HIGH SCHOOL. [At Chagrin Falls, O.]
Sealed proposals will be received by the Board of Education **until June 11th**, for the erection of a high school. J. W. SCOTT, clerk. 1276

HOSPITAL. [At Columbia Falls, Mont.]
Sealed proposals will be received by the Board of Managers of the Soldiers' Home **until June 10th**, for erecting a hospital building. CAPT. H. S. HOWELL, sec. 1276

JAIL WING. [At Mansfield, O.]
Bids will be received **until June 20**, for an east wing to the Ohio State Reformatory. CHAS. H. WORKMAN, Sec. Bd. Mgrs. 1277

SHUTTERS AND VAULT-DOORS. [At Minneapolis, Minn.]
Sealed proposals will be received by the Board of Court-house and City-hall Commissioners **until June 5th**, for fireproof shutters and vault-doors. LONG & KEES, architects. 1275

COURT-HOUSE. [At Clarksville, Tenn.]
Sealed bids will be received **until June 9th**, for the erection of a court-house. C. W. TYLER, Co. Judge. 1275

SCHOOL-HOUSE. [At West Liberty, O.]
Sealed bids will be received **until June 9th**, for the erection of a school-house. BOARD OF EDUCATION. 1275

HOSPITAL. [At Tomah, Wis.]
Sealed proposals will be received at the office of Indian Affairs **until June 6th**, for the erection of a hospital at the Indian School at Tomah, Wis. A. C. TONNER, acting com. 1275

HOSPITAL ANNEX. [At Toledo, O.]
Sealed proposals will be received **until June 2d**, for the erection of a wing to the hospital building for male patients. H. A. TOBEY, sec. 1275

LIBRARY. [At Tucson, Ariz.]
Sealed bids will be received **until June 1st**, for the erection of a public library building. H. D. UNDERWOOD, Library Commissioner. 1275

Professional Ethics.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BUILDING MATERIALS.

Reported for the American Architect and Building News.

BRICK. — ₱ M.	New York. (*Wholesale Prices.*)	Boston. (*Prices to Builders and Contractors.*)	Philadelphia. (*Prices to Builders and Contractors.*)
Common: *Cargo afloat.*			
Pale	1 50 @ 2 50	Domestic Com. 8 50 @ 9 50	In Yard. Sq. Hard 8 00 @ 9 00
Jersey	4 25 @ 5 00	Domestic Face 18 00 @ 25 00	" @ 7 00
Long Island	@	Philadelphia 35 00 @ 40 00	Salmon @ 5 50
Up River	@ 5 00	10 00 @ 11 00	Sq. " @ 5 50
Haverstraw Bay 2d	@ 4 25	Phila. mould 50 00 @ 80 00	Light Stretchers 9 00 @ 11 00
" 1st	@ 5 00	Enamelled B'k. Imported Enam. (edge) 105 00 @ 120 00	Medium " @ 12 00
Hollow	@ 7 00	" (edge & end. 120 00 @ 135 00	Red " @ 12 00
Fronts:	@	Domestic. Enam. (edge) 90 00 @ 100 00	Dark " @ 12 00
Croton, Brown	@ 12 00	" (edge & end.) 110 00 @ 115 00	Pressed @ 17 00
" dark	@ 12 00		Paving 11 00 @ 13 00
" red	@ 12 00		Second " @ 12 00
Chicago pressed			Third " @ 10 00
" Moulded			
Baltimore	37 00 @ 41 00		Dom. { @ 65 @ 85
Philadelphia	19 00 @ 21 00		
Trenton	17 50 @ 18 50		
Milwaukee			
Moulded:			
Red Pressed	@ 29 00		
Buff "	@ 27 00		
Moulded Red & Buff	45 00 @ 70 00		
Enamelled: *Imp.*			
Enamelled (edge)	85 00 @ 100 00		
Enamelled (edge and end)	90 00 @ 110 00		
Lime:			
Rockland finish	@ 75		
common	@ 65		