THE AMERICAN ARCHITECT AND BUILDING NEWS.

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

JULY 9, 1898.

CONTENTS.

IN these days men are thinking many unaccustomed thoughts and looking with much foreboding to certain changes that seem to be inevitable in our political system, since it seems to be impossible that we can risk foreign complications by taking men from private life and putting them into control over affairs relating to foreign countries, when the slightest mismanagement due to ignorance of history and precedent may be followed by the gravest of consequences. We fancy that some such thought as this is in many minds just now and is receiving careful consideration, not because of its real gravity but by reason of its sheer novelty, and it is possible that a cure may be found by some extension of the civil-service tenure of office, coupled with a special training to be undergone by those officials, from the lowest to the highest, who are to deal with foreign affairs. But while attention is momentarily turned to this matter we overlook an even greater evil, simply because we are familiar with it, an evil that seems to be part and parcel of our boasted system of democratic government. The most immoral thing in our political life to-day is not the manner in which our laws are broken, but the way in which they are made by one body of men one year, and unmade by another body of individuals sitting as the same enacting body, and the chances are that in one case as in the other there was no very good reason, so far as the general public welfare is concerned, why the law should have been placed upon the statute book or expunged from its pages. It is not our place to discuss the failings of representative government, though as individuals we suffer from its shortcomings, but now and then an incident occurs which brings the matter to attention in such a way as to make it seem impossible to avoid hinting at the existence of a real, radical difficulty.

AS is well known, one of the most beautiful suburbs a city can have is the town of Brookline, Mass., whose inhabitants are not only amongst the wealthiest, but amongst the most intelligent citizens of that State, and they are such firm believers in the American system that they even go so far as to adhere to its fundamental principle — that it is the duty of each citizen to attend the primaries — and so have preferred to retain the old-fashioned township government, where each man can make himself heard and felt at regular and special town-meetings. In a general way, the system has been found to work satisfactorily, in spite of the rather unwieldy size of the meetings, and the town is well governed and in most ways has been progressive. Amongst other steps in advance, there was established by town vote an ordinance appointing an art commission and it was declared that thereafter no public building should be erected until a majority of the art commission should have signified in writing their acceptance and approval of the design of such building. Such an ordinance as this is seemingly exactly such a one as should be found in force in so intelligent and progressive a community as Brookline, and if proper care were taken to appoint the right kind of men as members of this commission there seems to be every reason for believing it would prove a most desirable advisory body. But who can say what men are the "right kind" to vest with the art censorship of public buildings? We do not chance to know what men were appointed, nor what qualifications they had for their duties, nor do we know how many times during their term of office they have been called upon to pass judgment, nor how well satisfied the citizens have been with their previous decisions. But last week the town, at a special meeting, passed a vote that took from its art commission — even if it did not actually abolish the commission itself — its right to stand in the way of erecting buildings which it could not approve of on their artistic merits. Having in this way, in real good democratic fashion, measurably stultified itself the town went further and supplemented its action by, in rather Hibernian fashion, appointing a committee of three "to look into the matter." The particular cause of this action was a deadlock which had arisen between the school committee, who desired to build a couple of school-houses after designs which satisfied them, and the art commission, who resolutely refused to approve of these designs, and, as neither party would yield and as there is no stronger body known to our body politic than a school committee, it is not surprising that they won the day. At the same time, we venture to express the belief that this action was unnecessary in fact, and wholly wrong in principle, and that, if the matter had been "looked into" before in place of after action, a better course would have been found than to take such distinctly retrogressive action. Possibly, the art commission was merely whimsical and wholly in the wrong, but on general principles we believe that a good art commission is harder to create than a good school committee, and it might have been the part of wisdom to dispense with the service of that body which could be most easily replaced.

A BUILDING-ACCIDENT took place recently in London, which not only illustrates very clearly the dangers of careless planning on the part of architects, but shows the imperative necessity for combining with the inspection of buildings a more complete official control over the plans of projected structures than has yet been attempted by any public authority. A large fireproof apartment-house was in process of erection at Westminster, and the roof, which was of iron beams and concrete, was already on, when, just as a heavy weight was being lifted by a tackle attached to a beam placed across a skylight opening, a considerable part of the structure fell, killing seven men. It was proved at the inquest that the concrete was of inferior quality, but a much more serious trouble was found in the arrangement of the portion of the building which fell. This comprised a room, about twelve by twenty feet, one side of which was separated from a staircase only by a light partition, with a brick pier in the middle. This arrangement was found in each story, from the foundation to the roof; but in the basement and first story the pier was connected to the street walls by a cross-wall. Above the second floor the pier was isolated, extending upward eighty-five feet without any further connection with the other masonry of the building, and stayed only by such beams as entered it from three sides, the fourth side, which was next the staircase-well, being entirely without support. The pier diminished in size toward the top, but averaged about twenty by forty-five inches. It is conceivable that an isolated pier of this sort might be sufficiently stayed by girders on three sides, if these were well arranged, and well tied into neighboring work; but the evidence showed that, instead of this, beams were inserted almost at random into the pier, some of the larger ones being placed within six inches of the edge; while many beams, instead of being properly built-in and anchored, were inserted, after the pier was built, in holes roughly cut for the purpose, and the space around them filled-in with bits of brick and cement.

IT is not surprising that such a construction should fail, and it is certainly natural that the architect who designed it should be called to account. It is quite likely that he, like most architects who work for speculating builders, left all responsibility, in matters of construction, to the contractor; and he might, if this had been the case, have pleaded such a practice in extenuation of his own carelessness; but he produced a bad impression by exhibiting to the jury a set of drawings, purporting to show the construction involved, which turned out to

have been made after the accident, from vague data derived from persons not specifically mentioned. The profession in this country knows well enough the sort of architect who builds apartment-houses a hundred feet high without making plans of the piers; but it is due to our Building Commissioners to say that architects of this kind rarely get their projects approved by the Department officials in our large cities. In London, as appeared from the testimony of the District Surveyor, the official authority has jurisdiction over the plans of cross, external and party walls, and over designs for girders which carry walls, and can exercise no control over interior walls and piers, or girders not supporting walls, except to condemn them, if necessary, after they are erected. This limitation of powers would be intolerable to a conscientious commissioner in this country. The late Inspector Estabrook, of New York, one of the most intelligent and faithful servants that the city ever had, used to send for architects whose plans he found open to criticism, and, unofficially, point out questionable bits of construction, and discuss loads and resistances, in a friendly way which endeared him to all architects who were reasonable enough to appreciate his faithfulness and experience; and, as a rule, the relation between our city commissioners and architects is one of mutual regard and respect, which does much to smooth the administration of the law and to improve the practice of building; but much still remains to be done in this direction, and it is desirable not only that the approval of plans should be committed, as it is in London, to a considerable number of accomplished architects, who would be able to devote to each set the time necessary to study them thoroughly, but that the examiners should be empowered to require the submission of drawings and specifications covering all doubtful points, and to reject applications in which they found anything which appeared to them objectionable.

WHEN we heard on Wednesday afternoon that the dome of the Massachusetts State-house was afire, we felt the comfortable assurance that it was not likely to be much of a blaze, thanks to the recently completed partial fireproofing that had been applied to the building. If it had not been for their knowledge of the actual condition of the building, we fancy the firemen would have felt they were approaching a task that would signally defeat their efforts, as they recalled the wooden timbering of the dome as it formerly existed, timbering that would but have acquired additional inflammability under the excessive heat of the days before. The dome is, of course, still at risk from incendiary attack and from accident when it may happen in the right — or wrong — place, for the recent protective work was applied merely as against fires originating in the interior of the building; but the trivial damage that resulted in this case is satisfactory evidence of the physical and moral good effect of the recent fireproofing work. The accident was caused by the overturning of a roofer's soldering-pot, for not only is the process of regilding the dome now going on, but electricians are at work arranging a system of electric-lights for the external illumination of the dome on gala occasions. There is no more dangerous article brought into a building than the standard form of plumbers' or roofers' soldering-pot, and it causes no inconsiderable fire-loss each year; but, with the increasing use of electricity for heating, it may be hoped that some form of electric soldering-pot may be introduced to common use in which the centre-of-gravity is so low that an overturn is impossible.

VERY evidently one of the buildings in Paris that will not escape the notice of the itinerant sculptor hereafter is the new Museum of Natural History at the Jardin des Plantes, "the Museum" *par excellence* since, for this occasion only, the Frenchman abandons his own language and reverts to the Latin. Some account of this building was published in December, 1893, with illustrations, at a period ante-dating the completion of the building which houses one of the most valuable collections of its kind; but, as the chief end of the establishment is for the encouragement and facilitation of scientific study and research, it is doubtful whether the new building and its contents will be much of a drawing card for the once famous and seemingly undyingly popular Jardin des Plantes, which, as a show, has during the Republic lost much of the scenic attractiveness which made it one of the most popular resorts of citizens and tourists during the Empire. Architects while they may not greatly admire the character of the architecture can, doubtless, profit by a study of the plan and museum fittings, and they can certainly, if lately turned from a visit to the Natural History Museum at Oxford, with its stiff and repellant carvings of naturalistic foliage — stiff with excess of botanical accuracy — study with pleasure the method by which the more artistic Gaul teaches both botany and artistic decoration, even when working in metal and not the more yielding stone and marble. But we fancy that it is neither in architecture nor in decoration that the visitor will find that the chief charm and interest of the building lies, but rather in its applied and contained sculpture. Frémiet, greatest of modern sculptors in his chosen field, is also professor and lecturer in natural history at the Jardin des Plantes, and it is rather obvious that either through his direct influence or else out of compliment to him that sculpture should in no small measure be called on to add grace and attractiveness to the building and furnish at the same time easily assimilated instruction for those who have eyes to see more than the glazed exhibit cases enclose.

THE place of honor is naturally given to M. Frémiet himself, for his well-known group of a gorilla strangling a man stands in the vestibule; but just as those in charge of the World's Fair knew how to get good work out of Kemeys, Proctor, Taft, Potter and others, so M. Dutert, the architect of the building, has known how to unite the work of many of the best of living French sculptors in enhancing with instructive art the necessarily somewhat bare and barren architectural features of a museum interior. So we have on the exterior of the building over the main entrance a large bird — eagle or condor — carrying off a lamb, by M. Gardet, while on the garden front are two bronze bas-reliefs, one by M. Marqueste showing the training of the horse, the other by M. Barreau presenting an alligator hunt, which is relieved against a gold background. Besides these there is a series of marble bas-reliefs: a wild-boar by M. Tony Noël, an ape by M. Fagel, a family of reindeer by M. Maniglier, a group of St. Bernard dogs by M. Hector Lemaire, and other equally interesting subjects by artists as well known and as able.

OF the several unusual and interesting things that have developed as novelties in modern war-making — the hospital-ship, the refrigerating-ship, the repair-ship and so on — there is none that is more interesting than the new regiment known as the Engineers, which is now being recruited and which is seemingly intended to combine the functions of the ordinary sappers, miners and military engineers of former times with a great efficiency in the engineering walks of civil life. Thus far we have noted in the published lists of recruits for this regiment the name of but a single architect, and he, judging by his name, may have been a lately arrived foreigner who found it was not easier to make a living in this country than it was at home. We fancy that, if this conglomerate and cosmopolite body ever gets to the front, it will be found from its peculiar constituency of much greater value in actual work than would be a similar body brought up in the regular schools of military engineering, for the simple reason that, for the greater part, the men have been wonted to solve their problems independently and not all in the same way in conformity with the prescribed rules of military science. Doubtless they are all Joe Millers, but a reader is constantly coming upon military ancedotes, the scene being laid now in one country and now in another, which tell how a commander, finding his fleeing enemy had destroyed a bridge, called on his engineering staff to replace it and, after waiting days, found the military geniuses were not yet satisfied with their strain-sheets, and so in sheer despair asked if there was no one who could bridge the river, only to find that some practical man had knocked together a bridge of trees, bamboos, or whatnot, before morning. An amusing variant of this often-repeated story, and one that has an air of verisimilitude, comes from Burmah, and is told by Sir James Westland, to the effect that during the Second Burmese War the British tried to ship to Calcutta a great bell, weighing some forty tons, that they had looted from a temple, only to have it, through some mishandling, drop into the Irrawaddy. The military engineers exhausted all their science in trying to get the huge mass of metal out upon the bank again and finally had to give it up. Then came the chance of some of the Burmans, presumably prisoners, and they accomplished the task by timbering up the tapering end of the bell until they had brought the mass to a regular cylindrical form, and then, without too great difficulty, succeeded in rolling it out onto the bank ready for a better guarded attempt to ship.

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

THE THREE-LEAVED LOTUS AND DERIVATIVES. — I.

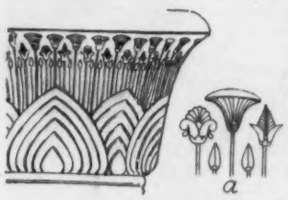

Fig. 77. Ornament on Bell-capital: Detail at *a*.

ALTHOUGH in the ornament, as distinguished from the decorative pictures of Egyptian art, the lotus figures most abundantly in border-patterns, examples of its use as an isolated motive are by no means rare. The reliefs on temple-walls and pictures in tombs furnish many representations of its employment as a finial or cap, and as a decoration for vases, while Egyptian architecture supplies numerous types of columns in which the lotus or lotus-bud constitutes the capital, either singly or clustered in groups. The surface of the great bell-capitals so often used for the central aisles of hypostyle halls in the temples was almost always decorated with the lotus, often alternating with the papyrus, or with other plants sometimes difficult of identification[2] (Fig. 77). Whether these bell-shaped capitals were of floral origin, and intended to represent particular plant-forms, or whether they were evolved out of purely artistic considerations, it is noticeable that they always received a floral-decoration in color, and that the plants painted upon them were always treated in a formal and architectural fashion, the blossom or head forming a well-designed finial or cap. A similar decoration is found on some shafts and on wall-surfaces, especially of tombs; and in many of the examples there is an alternation of the voluted lotus having two sepals and a bud, with a curious form in which the place of the bud or central sepal is taken by a very tall triangle, whose identification with any particular flower is problematic (Fig. 78). Apparently related to this are certain carved decorations on late quadruple bell-capitals of the Ptolemaic and Roman periods, in which there seems to be a clear suggestion of the palm-leaf, affected

Fig. 78. Palmiform Lotus, from a Tomb (after Goodyear).

Fig. 79. Evolution of Voluted Lotus: *a*, *b* from Tombs; *c* Type of the Karnak Stele-lotus; *d* Painted on a Capital in the Rameseum.

by the habit or tradition of the trident or three-leaf lotus, or lotus-and-bud. The Cypriote lotuses with central triangle (Figs. 63*e* and 85) suggest a kinship with these nondescript Egyptian plant-forms, but how close the relationship is, or whether we have here only an accidental resemblance is not, I believe, capable of absolute demonstration.

The three-leaf lotus with voluted side-sepals was not, it seems to me, a purposed representation of the wilted lotus with recurved sepals,[3] because there is nothing in Egyptian art to suggest any such pictorial representation of particular phases of a flower. Egyptian art is too conventional, in a sense too elementary, too little removed from primitive conceptions, to occupy itself with anything beyond the simplest delineation of type forms. The botanical analysis and the realistic picturing of flowers in decoration belong to modern times and to South Kensington. The voluting of the diverging curved sepals is one of the most natural and instinctive decorative modifications of the trefoil or trident motive. Given a bell-shaped outline to the lotus with suppression of the petals (Fig. 79*a*), and

Fig. 80. Lotus-palmettes: *a* Amulet in Enamel (Owens College, Manchester); *b* from a Tomb; *c* Assyrian Ivory in British Museum (Goodyear).

decorative evolution would surely bring about in time the exaggeration of the outward curve of the lateral sepals (Figs. 79*b*, *c*, *d*). The volute is an elementary spiral, and the spiral is one of the most primitive, as it is one of the simplest and most obvious, of decorative devices. If there be such a thing as decorative development of patterns or motives, the lotus of the Karnak stele (shown in Fig. 59, No. 1170 of the *American Architect*) must surely have resulted in time from the lotus-trident, and there is no need of any controversy about recurved sepals in wilted lotuses to account for it.

Fig. 81. Assyrian Double-volutes: from a Relief of a Throne.

We have already seen, in Figures 61*a* and 63*f*,[4] two Assyrian voluted details probably derived from or influenced by the Egyptian voluted lotus. These are only two among countless variations of the motive. In Egyptian jewelry it becomes a species of fleur-de-lis, sometimes alone, sometimes as the calyx of a compound motive in which it is associated with a half-rosette (Fig. 80). This is the prototype of the anthemion, and will be discussed later. The fleur-de-lis (as we may now for convenience call the voluted three-leaf lotus) was widely disseminated throughout the ancient Eastern world, not only in the form of Egyptian amulets and jewelry but in countless Phœnician counterfeits and imitations, and no doubt exercised a strong suggestive influence on Assyrian, Phœnician and Mediterranean art. The endless variety of voluted forms in Cypriote art, the elaborate spirals on Melian and Rhodian vases, the clasped ribbon-scrolls or volutes of Assyrian lotus-borders already alluded to, and the frequently recurring pairs of horizontal or vertical double-volutes similarly clasped together, in representations of Assyrian furniture (Fig. 81), are all related to this simple but prolific fleur-de-lis motive. Out of these various versions of branching volutes flanking a central finial, bud, leaf or triangle, were developed in Cyprus, in Assyria and in Asia Minor the earliest forms of voluted capitals, prototypes of the Ionic capital, while the double clasped volutes of Assyrian furniture were exaggerated by the architects of ancient Persia into the extraordinary scrolls of the Persepolitan columns (Fig. 82). Figures 83–89 illustrate a number of intermediate forms between the Karnak lotus and the Ionic capital. This line of development had been more or less definitely suspected or hinted at by archæologists as far back as 1857, but in most cases the pedigree of the Ionic capital had been carried back no farther than to Assyrian art, and it was Professor Goodyear who first worked out in a thorough manner the thesis of its origin in Egyptian lotus-forms, publishing his results in a remarkable article in the *American Journal of Archæology* (1887). Taking the Neandreia capital discovered by Clarke in 1886 as proving the derivation of the Ionic capital from the lotus-and-palmette and its consequent close relation to the anthemion, he established beyond question that the lotus was the parent-form of both. The only thing to be added to this proposition as developed by him is the observation that the palmette is not an absolutely essential link in the

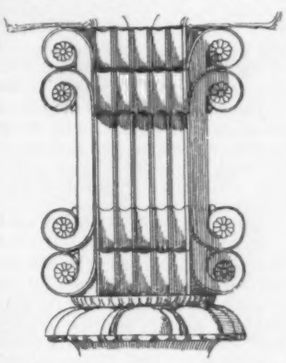

Fig. 82. Persian Capital-volutes, Persepolis.

Fig. 83. Assyrian Voluted Colonnette: from Relief on a Bronze Platter.

Fig. 84. Detail from Sippara Tablet (Goodyear).

Fig. 85. Cypriote Voluted Lotus (Goodyear).

Fig. 86. Cypriote Flat Capital.

evolutionary chain: the voluted or fleur-de-lis lotus and its derivatives in Phœnician, Cypriote and Assyrian art supply, independently of the palmette and anthemion, a complete sequence of developments leading up to the Ionic capital, as may be seen, for instance, by comparing Figures 79, 83 (lower part), 84, 85 and 89. Apparently a line of descent from the lotus by way of the fleur-de-lis converged with another by way of the palmette to produce the Neandreia type of Figure 88; and it is not open to question that in Greek art the anthemion, derived from the lotus-and-rosette or palmette of Figure 80,

[1] Continued from No. 1170, page 68.

[2] I do not here discuss the question whether these campaniform capitals are really meant to represent the lotus or the papyrus. Professor Goodyear has presented strong and ingenious arguments for calling them lotus-capitals, and even questions the appearance of the papyrus in any phase of Egyptian decorative designs. Personally, I cannot accept this conclusion, being convinced that the papyrus and many other plants may be clearly recognized in Egyptian decoration, and that to confound these with the lotus is to mistake the influence of a decorative habit resulting in convergence towards lotus types for the intentional representation of the lotus itself.

[3] See Goodyear "*Grammar of the Lotus*" for the theory here referred to; also "The Lotiform Origin of the Ionic Capital" in *Architectural Record*, Vol. 3, No. 2.

[4] No. 1170 of the *American Architect*.

is most intimately associated with the Ionic volutes, and is the characteristic ornament of the Ionic style. It is also noticeable that the pendants of Figures 80*b* and 96*b* are replaced by three-leaf lotus-forms in the angular spaces formed by the volutes in the capital

Fig. 87. Assyrian Capital (Relief of a Table, Koymijik).

Fig. 88. Proto-Ionic Capital from Neandreia (Clarke).

(Fig. 89), and that this little nested ornament becomes a half-anthemion in the perfected Greek capitals and persists even in the Roman type.[1]

In studying the Greek Ionic capital, the origin of the graceful depressed curve in the band connecting the volutes is seen to be no mere caprice, nor even a decorative necessity. It is a survival of the spandrel between the branching volutes of the primitive form of the capital, and is most marked in the earliest examples. In the Roman Ionic it disappears altogether.

The voluted lotus was the parent of a great number of decorative forms in architecture and the industrial arts, and many of these motives possess an extraordinary vitality, which has survived every influence of time and change. Some of them will be discussed later. The spiral, more or less developed, is an essential element in all or nearly all of these motives, and this has given rise to the theory that all spiral ornament in historic art is to be traced back to the voluted lotus as its prime source. But this extravagant theory is not justified by the facts, and is indefensible on *a priori* grounds. It denies the fact and even the possibility of the independent discovery or invention of spiral forms by the designers of primitive times, and contravenes inherent probabilities far more convincing than the somewhat speculative and unsubstantial arguments by which it is sought to support it. It is, moreover, based on the fundamental error that the presentation of a continuous sequence of intermediate forms or developments between two extremes of itself demonstrates the derivation of the last from the first, and excludes all other lines of descent. This is a fatal mistake, because it is often possible to produce a

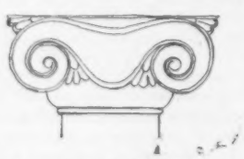

Fig. 89. Cypriote Capital, from Citium.

Fig. 90. Spirals from a Melian Vase (Goodyear).

number of series leading back with equal plausibility to totally different sources. It ignores cross-currents and converging influences, accidental resemblances and apparent reversions, and casts aside as immaterial the elements of fancy, imagination, and individual choice and invention, which are constantly operating to modify and disturb the influence of tradition, symbolism and custom.

We may, however, while refusing to accept these extreme conclusions, readily concede that the Egyptian fleur-de-lis lotus motive was the prolific parent of a remarkable series of ornament-forms in subsequent ages, and that it was one, and probably the most important, ancestor of the Ionic capital and of a considerable number of minor motives which persisted for long periods of time. It is no doubt one of the sources of derivation of spiral ornament in the art of the Mediterranean islands, but by no means the only one. Take, for instance, the pattern in Figure 90 from a Melian vase. It is quite evident that it shows reminiscences of the lotus, and it may even be conceded that it is as a whole a decorative elaboration of the voluted lotus, symmetrically doubled. This does not prove that its watch-spring spirals, coiled in many concentric turns, came from the

Fig. 91. Greek Anthemion Pattern (Owen Jones).

Fig. 92. Greek Lotus-ornaments, from Vases.

voluted lotus. It indicates rather that the Melian artist was so familiar with the spiral and so fond of its decorative movement that he applied it to the doubled open lotus, upon the slight suggestion offered by the voluted fleur-de-lis. The abundance of spirals in Mediterranean ornament, as shown by Melian vases and Mycenæan art, argues an independent development. There is considerable

Fig. 93. Anthemion and Lotus-ornament.

Fig. 94. Carved Ornament from Erechtheum.

evidence that metal wire-work was the original source of the Mycenæan coils, and it is also probable that their development in the later art of the seventh century (to which the Melian example belongs) was influenced to some extent by Egyptian spiral patterns. These last cannot be proved to have originated in the voluted lotus, which they probably long antedated; they were disseminated through the East by various means: by scarabæi, by textile fabrics, by enamelled amulets and other objects of commerce, sold and counterfeited by Phœnician dealers, and mingling with the various local forms of spiral design. Of this I shall have more to say in another chapter.

Fig. 95. Egyptian Gold Jewelry: Lotus-palmettes.

One very beautiful form in which the fleur-de-lis lotus has been preserved to us is presented in Greek pottery decoration. In the rich and wonderfully varied anthemion bands which the Greeks delighted to paint upon their red clay jars and vases, the principle of alternation is always observed by the use of a contrasted motive between the repeats of the anthemions. The contrasted motive is generally a modified lotus, though its ancestry is often only faintly discernible under the manifold variations of detail in its design. In most cases the central leaf or blade nests between the other two (Fig. 91), as in the Karnak type of fleur-de-lis lotus, instead of following the more common type of open lotus, in which the middle leaf overlaps the lateral ones (see Fig. 48 in No. 1167 of the *American Architect*). In a large proportion of the Greek examples, both from painted and carved bands, one recognizes also a secondary calyx (Fig. 93), apparently derived from the Asiatic or Assyrian lotus (see Fig. 52), but also recalling the leaves at the base of the Karnak fleur-de-lis. In others, the lotus survives in a many-leaved form, like that shown in Figure 94. It is evident here, even more convincingly than in the preceding illustrations, that the Greek artist was himself wholly unconscious of any lotus-origin or lotus-significance in his design. He was simply using a decorative motive made familiar by generations of tradition, varying its details as taste and fancy — in other words, as his conception of decorative propriety — demanded or suggested. In doing this, it would seem that he often drew inspiration or suggestion from the local vegetation, and imitated, without copying, those plants which grow, as it were, from the inside; the young central shoot, leaf or blade growing up tall and slender, wrapped or swathed in the older leaves, which curl over and fall away towards the ground, like the lettuce, acanthus, and some thistles (Fig. 94). In other words, he discovered in familiar plants about him a certain

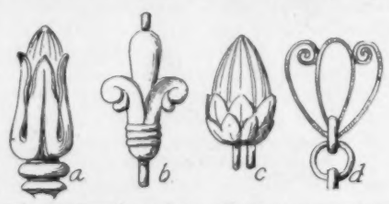

Fig. 96. Egyptian and Etruscan Jewelry: *a* Head of a *Fibula* or Hair-pin; *b* Egyptian Jewel from a Necklace; *c* Etruscan Pendant in Gold; *d* Etruscan Filigree.

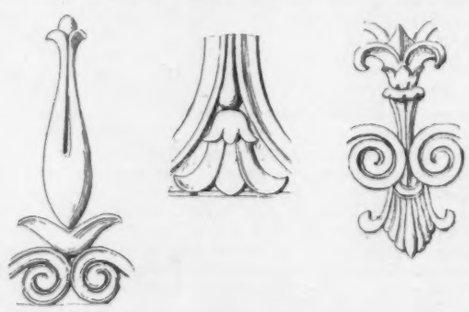

Fig. 97. Trefoil Motives from Etruscan Terra-cottas (Campana Collection in Louvre).

[1] See the article by Professor Goodyear in the *Architectural Record*, Vol. III, No. 2. For permission to copy illustrations from this and other articles by Professor Goodyear I desire to express my thanks to their author.

structural law or habit which he could turn to decorative account in his treatment of familiar motives which had come down to him, without his knowledge, from a hoary antiquity in Egypt. These forms in Greek pottery, endless in their variety, but conforming to one general structural law, and always designed to contrast with the anthemions with which they alternate, are not lotuses, and only in rare instances resemble the Egyptian three-leaved lotus in appearance; there is no technical name for them, though there ought to be. They are the remote descendants of the lotus-race in ornament, changed by change of treatment and admixtures of foreign elements, and illustrating the wonderful variety of decorative effect of which the three-leaved motive, represented in the parent-lotus of the Karnak stele, is capable (Figs. 91–94).

Fig. 98. Roman Carved Ornament.

It would be claiming too much to say that all three-leaved and three-point motives in ornament are traceable to the lotus as their first parent. Nature is too full of suggestions of the motive, especially in plant-life, and it is too easily produced in primitive carving and painting, to allow of the belief that it has never occurred as an independent invention. But it is nevertheless a remarkable fact that in historic ornament a very large proportion of its various occurrences can be traced by reasonably clear and definite historical sequences back to classic versions of the lotus-type. It would take too long to follow out in detail these lines of historic development. The examples, when marshalled in order, speak more forcibly than words, even with all due allowances for the many cases of accidental resemblance and reversion and independent origination which must have occurred in the progress of these developments. Etruscan jewelry offers many graceful finial and pendant forms derived obviously from Egyptian prototypes: the fleur-de-lis lotus-amulet was a common detail in Egyptian jewelry (Figs. 95, 96). The late Etruscan terra-cottas of the Campana collection in the Louvre furnish other variations of the motive (Fig. 97), which appears in Roman carved ornament in an entirely new guise, as an independent

Fig. 99. Byzantine and Early Gothic Tridents: *a*, *b* from St. Mark's, Venice; *c* from a House at Metz, 12th Century.

Fig. 100. Arab Fleur-de-lis: Mosque of Hassan at Cairo (F. S. Meyer).

floral object, in carved mouldings and in frieze decorations (Fig. 98). The Byzantine carvers operated a very curious change in combining the trident with the acanthus leaf, which they subjected to a treatment suggestive of the anthemion. In Byzantine design the trident is, however, not an isolated and complete motive by itself, like the examples given from Roman carving, but a subordinate detail between the more important acanthus-palmettes (Fig. 99). Byzantine traditions are plainly traceable through the Lombard period in Northern Italy, and the Romanesque styles both of Italy and of Western Europe, and their influence is even recognizable in Gothic carving, although the elaborate foliation and semi-naturalism of mediæval art often obscures the evidence of the prime origins of many of its motives. Arabic and Moorish ornament makes frequent use of the trident and fleur-de-lis, which it first borrowed from Byzantine art (Fig. 100).

The trident-motive may also be recognized in all finials in which a central point or spike is surrounded at its base by a number of outward-curving or spreading volutes or leaves (Figs. 101, 102).

Fig. 101. Gothic Finial: Amiens Cathedral.

Fig. 102. Gothic Finial: Milan Cathedral.

Fig. 103. Phœnician Capital, from a Terra-cotta Chest.

This is, in fact, what the original Egyptian trident-motive or voluted lotus may be taken to represent — a bud standing erect in the centre of a lotus-calyx, the latter being shown as if set diagonally so as to display two sepals instead of three. This is, perhaps, a far-fetched explanation: it is doubtful if any such definite pictorial idea was ever in the artist's mind. But it is evident that when the decorative idea of a trident-motive in flat ornament had been once established, and its value as an isolated form recognized, its adoption as a finial or terminal motive would naturally follow in the course of time, and that it would for this purpose be so designed as to present a like appearance on all sides. This seems, indeed, to be the true explanation of the Phœnician capital in Figure 103, which is simply a fleur-de-lis lotus "done in the round." In other words, the finial consisting of a central point or cone or stem emerging from a calyx of four radiating leaves is the natural interpretation in solid form of the flat fleur-de-lis or trident. It would be absurd to say that Gothic finials were lotuses; but it is reasonable to believe that it was the lotus which first embodied and made known to early European art the three-leaved or trident motive of which these finials are a derivative or development.

When we come down to the art of the Renaissance we find in the main a repetition and elaboration of Roman motives. In the decorative art of modern times since the dawn of that great movement, there is hardly a motive which is not already familiar in Classic art, except those directly and consciously derived from floral and natural forms. It is hardly worth our while to select from the immense mass of material available further illustrations of the history of the fleur-de-lis or trident motive. The student can easily supply these *ad libitum*.

A. D. F. HAMLIN.

(To be continued.)

SIR EDWARD BURNE-JONES.

GREAT BRITAIN has to lament the loss of yet another great personality, by the passing away of the distinguished artist, Edward Burne-Jones. Only the other day it was Millais; a short time before, we lost Leighton; and now a third great painter has passed to the great majority. Of the old friends and fellow-workers in their several capacities — Millais, Burne-Jones, Rossetti, William Morris, Ruskin, Holman Hunt and Watts — only the three latter are left to us.

Possibly, of the group of pre-Raphaelites, Millais has influenced the painters of his time the most; but starting as they did as exponents, more or less, of the Oxford movement, Burne-Jones and Mr. Holman Hunt alone remained faithful to their early views upon the treatment of religious art. Millais's "Carpenter's Shop" was an original venture to realize the scene as it might have taken place anywhere and at any period — not necessarily in Palestine in the first century. But it failed to be convincing to the general public, and so the artist abandoned this line of work, and dropped into the fabrication of more popular subjects.

Rossetti's "Annunciation" might have been designed by any of the early Florentine masters; but that, too, failed to impress, and he drifted off into the sensuous, sumptuous style of the Italian Renaissance.

Mr. Holman Hunt's might be called localized art; and he has remained faithful to his peculiar manner and rendering of subjects, mainly taken from the Old and New Testaments.

Burne-Jones's art has always been purely decorative in character; and he, too, remained faithful to his early ideals, whether upon canvas or other material.

The training he received as a young man was the last that was considered correct for an artist; and, unlike Millais, he does not seem to have had any particular love of drawing as a boy. He was sent to Oxford to become a graduate, and eventually to enter Holy Orders; and possibly it was the religious fervor of some of the Oxford men of the period (1852) which first guided him into the stream of art. Born at Birmingham and brought up a strict Puritan, he had Bishop Lightfoot and Archbishop Benson as schoolfellows, and William Morris as his college companion. At Oxford he met Mr. Ruskin, and, through him, became acquainted with Dante Rossetti, to whose influence we owe Edward Burne-Jones the artist. Through Rossetti, the young man found employment at the White Friars glassworks, and made friendships with all the intellect of the day — Tennyson, Browning, Gladstone and others. Of technical study he had had none up to this time, except in Classics; and it is probably to this fact that we can trace the origin of the indifference of the Royal Academy to this great artist. Academicians, either in London or Paris, do not believe in self-taught men; and they especially look askance at an artist who begins his technical career at twenty-one years of age. This, probably, is the explanation of the slights he received. Formerly, the rule of the Royal Academy was for a man to offer himself as a candidate for honors. Whether Burne-Jones ever put his name down for the Associateship or not, we

cannot say, but it was only in 1885 that he was elected. He never exhibited but one work there, "The Depths of the Sea" (the mermaid embracing a drowning man); and as the council did not give him full membership, he retired in 1893. This is just the sort of red-tape stupidity which academical bodies display. Naturally, an artist must be judged by his work; but the academicians had every opportunity of observing this painter's talent outside their own walls; why, therefore, withhold an honor from a man because he prefers to exhibit elsewhere than at Burlington House? and why diminish the interest of their own exhibition by practically boycotting the fine works of a great painter because he was too proud to solicit admission to the ranks of Royal Associates. The loss was the Academy's. Nor is this the only loss of its kind through the same cause — that of not acknowledging a world-wide reputation which is made elsewhere than in Piccadilly.

At the opening of the Grosvenor Gallery, in 1897, Sir Edward exhibited eight pictures, after having shown none for some years; these were: "The Days of Creation," "The Beguiling of Merlin," and, I think, the "Mirror of Venus," which only the other day was sold at Christie's for £5,722 — an enormous price for the work of a living painter. At the Grosvenor he continued to exhibit year after year; indeed it was probably mainly for this artist that Sir Coutts Lindsay started the Grosvenor Gallery. There we first saw the "Wheel of Fortune" (possibly his most complete work), "King Cophetua and the Maiden," "The Briar Rose," "Love among the Ruins" and the "Perseus" series. At the New Gallery, some few years ago, there was a collection of the artist's works which filled the three rooms.

Burne-Jones's types of beauty were conventional; like Rossetti, he had his ideal, which one recognizes in all his work — but it is a purer style than that of Rossetti. He has been likened to Botticelli; but the latter's works have not nearly so much ideal beauty in them as the modern master's. Sir Edward's type of face is spiritual, pure and lofty — erring somewhat in emaciation, but fitted to his subjects. His management of armor and his treatment of rich stuffs and hangings is as fine as, or finer than, that of his forerunner, Mantegna. His faults are a certain morbidity of style and unhealthiness of color — one feels that all his models are suffering from the same ill-health or disease. But truth to nature was not his aim; and, unlike Millais, he never went through various phases of style. The latter was a restless spirit, always searching; convinced that what he had found was the right and only course, until another mood had given him something totally different and opposed to his former ideal. Burne-Jones, on the contrary, made up his mind early in his career, was satisfied with his ideal, and followed it to the end. In this he resembled Leighton and Rossetti. Can you ever mistake a picture by any of these three men? Or one by Corot, or by Israels, or Puvis de Chavannes? But Millais is so diverse that a novice, or a stranger, having seen the "Huguenot," might stand aghast when told that the "Yeoman of the Guard" was by the same hand.

Sir Edward was created a baronet in 1894 by Mr. Gladstone, and was elected an Honorary Fellow of his college and a D. C. L. of the University. In Paris he met with unqualified success and appreciation and was made a Corresponding Member of the Academy of Fine-Arts and an Officer of the Legion of Honor. In private life he was modest and retiring, hating the interviewer, and indeed, like many another, wondering what interest the public can take in the every-day doings of a distinguished person. "By your works be known" was his theory of life; and possibly no calling illustrates this text more truthfully than that of a painter. We admire or dislike a man's work; why should we wish to pry into his private life? We may wish to know what colors he used, or how he primed his grounds, but whether he breakfasted at 6, 7, or 8 o'clock cannot be the least interesting except in so far as the every-day mode of life may account for the artistic results. Query, does it? Is it not rather the fact that the temperament governs the manner of life?

One of the last works of the painter was the stained-glass window which he designed for Hawarden Church, a gift from the Gladstone family in pious memory of the Great Statesman. Both painter and statesman have passed away ere the work is finished, but the result will doubtless, if possible, add to the glory of both men. One may not always admire Burne-Jones's work, but it is, nevertheless, great work, and not the least great is that which he designed for stained-glass. The best example of modern glass at Salisbury Cathedral was his work.

S. Beale.

A WESTMINSTER CAMPO SANTO.

In a letter to the *Times* Mr. Shaw Lefevre writes: Four years ago Mr. Yates Thompson made a most generous offer to the then Government to contribute 40,000*l.* for the erection of a monumental chapel, as an annex to the Abbey, after the design of the late Mr. Pearson, provided the Government would bear the cost of clearing away the houses in Poets' Corner and Old Palace Yard, on a part of the site of which it was proposed that the chapel should be erected.

Being then at the Office of Works, I was able to use this offer as a lever to induce the Government and the House of Commons to undertake, in combination with the Ecclesiastical Commissioners, the clearing away of the houses as proposed, and I officially informed Mr. Thompson that, until this was accomplished and until the effect of the opening out of the chapter-house and Abbey, and how far they would again be obscured by the erection of the proposed chapel could be appreciated, it was impossible for the Government to give a definite answer to his handsome offer, and that they would therefore defer doing so until the clearance should be completed.

In the course of the two following years the houses were removed and their site cleared, at a cost of about 50,000*l.*, of which about 30,000*l.* was voted by Parliament, with the result that every one can now appreciate the beauty and noble effect as regards the Abbey and chapter-house. Although but a very small part of this site at its southern end would be occupied by the proposed chapel, it must be admitted that the preponderance of public opinion is adverse to the erection of a building which would hide any part of the view which has been opened up, however small. I presume that it has been in view of this fact that no official answer has been made by the present Government to Mr. Thompson, and that the matter has been allowed to rest.

I would, however, venture to point out that there is a very obvious alteration of the scheme which would remove the objection, namely, that the site of the chapel should be shifted somewhat to the south, to the position of the only remaining house in Old Palace Yard, opposite to the House of Lords, that now occupied by Mr. Labouchere, and which, it must be admitted, is now an eyesore to the view. It must be obvious to any one who looks at this house and its surroundings that if the chapel were erected on this site it would not in the smallest way detract from the view of the chapter-house and Abbey which has been opened out. In the opinion of most competent experts a building such as was designed by Mr. Pearson, if erected there, would group most effectively with these other buildings. It would also be connected, as was proposed, with the Abbey by a cloister under the buttresses of the chapter-house. I may add that, in 1888, when an important committee was originally formed for the purpose of promoting this general scheme, it was at first proposed that the chapel should be erected on the site now suggested. It was only at a later stage, in part with a view to reducing the cost of the scheme and in part with the hope of disarming the opposition of Mr. Labouchere, that it was proposed to shift the site of the chapel somewhat farther to the north so as to avoid taking this house. The result, however, shows that the original scheme was undoubtedly the better one.

It may seem somewhat venturous, after what has occurred in the past, to propose the erection of the chapel on the site of Mr. Labouchere's house, but it is generally understood that he no longer makes a point of residing in that quarter. He has recently stated in the *Press* that he had come to terms with the syndicate for the Westminster improvement, who proposed to clear away all the remaining houses in Old Palace Yard, and that he was ready to remove his lares and penates elsewhere.

I am not in a position to say whether Mr. Thompson still holds open his original offer. The lapse of time has relieved him of any responsibility for it. But if it should be determined by the Government that the chapel, as proposed by Mr. Pearson on the site now suggested and for which the design was originally prepared, is the true solution of the difficulty, and if the site of Mr. Labouchere's house should be provided out of public funds, I feel no doubt whatever that the cost of erecting the building could be raised without difficulty by public subscription.

BOOKS AND PAPERS.

A CONCISE and comprehensive historical manual of the decorative arts has long been a desideratum. The existing works on the subject are for the most part monographs on particular arts or styles, or, like Blanc's "*Grammaire des Arts Décoratifs*," too cumbrous and costly for general use. This *lacuna* Mr. James Ward has recognized and sought to fill, in the second volume of his "*Historic Ornament*,"[1] the first volume of which we reviewed some time since. The new volume is really an independent work, treating not the subject of ornament, properly speaking, but the decorative arts as such. These it takes up not historically, but by topic, giving more attention to their technique and to the names of artists and schools than to the broader historical survey of the origin, development and relations of the several arts. While Mr. Ward has in this work avoided the glaring disregard of proportion and balance in the various divisions of the subject which disfigured the first, he cannot be said to have ordered his materials with adequate system, and it is not clear whether his object was to produce a text-book or a book of reference, for it is something of each, but not completely one or the other. It lacks the classified subdivisions, the subject-headings, the lists of references, and (like so many English books) the indexes, of a good reference-work; while there is not enough sequence and connection in the treatment to make it agreeable to read or satisfactory as a class text-book. It is marred by many inexcusable violations of the elementary rules of syntax, which make its lack of literary quality still more conspicuous. "This ware has been found in nearly all parts of Europe, the design of which" (p. 5). "The shape and decoration of . . . the vase . . . points to its Persian origin" (p. 13):

[1] "*Historic Ornament*": Treatise on Decorative Art and Architectural Ornament, Pottery, Enamels, Ivories, Metalwork, etc. By James Ward, author of "*The Principles of Ornament*." Imported by Chas. Scribner's Sons, New York.

"in a furnace, sufficiently open so that the progress of the fusing can be watched while firing and withdrawn when perfectly fused" (p. 109). These are a few out of many similar exhibitions of carelessness and haste in writing. The style, such as the book has, is that of a laborious and painstaking compilation: it lacks freshness and spontaneity.

In spite of these drawbacks the book will be found very useful in its field. It is full of the most varied information, such as the student could only glean, at the cost of great labor, by consulting a great number of authorities. This work of consultation and assimulation Mr. Ward has done for us, gathering together a great, and, for the most part, useful mass of facts, names, dates, technical details and processes, and historic illustrations, and the information thus garnered is for the most part trustworthy and accurate. The *conspectus* of the subject is not a very broad one, and some important branches of art are inadequately treated or wholly omitted. Thus stained-glass is dismissed with forty lines; the beautiful sedilia of Italian, French and Flemish church choirs are not mentioned; mediæval furniture gets but a hundred lines; the splendid achievements of the Moslem schools of decoration receive very scanty notice; there is no mention of *intarsia* and wood inlay. Of course, something has to be omitted in a brief treatise like this, but it would seem as though space could have been found for the above subjects by omission of much relatively unimportant detail, like the page of quotations from Arabic writers on lustred ware (p. 8).

The 316 illustrations are excellent, whatever is thought of the selection of their subjects. The book is handsomely printed, agreeable to look at, inside and outside, and the proof-reading has been carefully done. There are very few typographical errors, even in the multitude of foreign names used. The book is a good one to have, though the field is still open for a better.

ILLUSTRATIONS

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

THE LIBRARY: HOUSE OF FREDERIC B. PRATT, ESQ., BROOKLYN, N. Y. MESSRS. BABB, COOK & WILLARD, ARCHITECTS, NEW YORK, N. Y.

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

THE NEWARK HIGH SCHOOL, NEWARK, N. J. MESSRS. HOWARD & CAULDWELL, ARCHITECTS, NEW YORK, N. Y.

THE materials used in the construction of the Newark High School are as follows: —

Concrete footings, hollow brick lining on inside of all exterior walls. Face brick, gray, speckled, with terra-cotta trimmings to match. Slate roof with copper trimmings. Lavatory stacks of iron framework and hollow terra-cotta blocks plastered on outside with Portland cement. Fireproof floor-construction of concrete with iron tension-rods. Partitions of expanded metal lath, iron studding and rock wall-plaster. Corridor and lavatory floors of artificial stone with slate wall-base; class-room and other floors of maple. Wainscoting in corridors and lavatories of Keene's cement. Woodwork and trim of North Carolina pine, natural finish. Heat and vent flues of galvanized-iron and brick.

The first and second floors of the building and all the corridors and lavatory floors throughout are built of fireproof material. For this purpose a concrete and iron construction has been used in which all iron beams and girders are encased in concrete, and all intervening floor-spaces are formed of monolithic slabs of concrete in which the tensile strain is taken up by the use of twisted iron rods set in the concrete. As the encasing of the iron floor-beams in a solid mass of concrete has the effect of reinforcing and strengthening the beams to a very appreciable extent, a considerable saving in the ironwork has been effected through the use of this method of construction.

On account of the limited amount of the appropriation it was found necessary to use wooden framing for the roof and for that portion of the floor under the class-rooms on the third story; with this exception the building is fireproof throughout.

The staircases are of iron with slate treads. All partition-work is built of iron studding covered with expanded-metal lath and plastered with rock wall-plaster. All corridors and lavatory rooms have their walls wainscoted in Keene's cement with slate wall-base. The floors of corridors and lavatories are finished in artificial stone. All class-rooms, etc., have a finished floor of maple laid on sleepers imbedded in cement. The woodwork throughout is North Carolina pine with natural wood finish.

The exterior brickwork is faced with a speckled gray, plastic brick, with terra-cotta trimmings to match. The roof is covered with black Bangor roofing slate; all metal-work trimmings, ventilators, gutters, etc., are of cold-rolled copper.

In the design of the façades of the building the attempt has been made to secure a simple, robust effect, using ornamentation only in so far as the same could be used without increasing the cost of construction.

The heating and ventilating system adopted for this building contemplates the use of fresh air drawn through two shafts erected outside of the building in the south court. After passing through the coil-room the air is distributed by means of galvanized ducts running on the ceiling of the basement and is mixed under each upright stack, supplying each room separately. The foul air is exhausted from each room through brick stacks which connect with underground ducts in the basement. The air is supplied and exhausted by a double fan system operated by gas-engines.

The lavatories are located in isolated stacks built in each court-yard. An independent system of ventilation is provided for these lavatories by means of which the foul air is drawn from every urinal and water-closet compartment and discharged above the roof. The water-closets are of the latrine order, with enamelled iron troughs and automatic flush-tanks. The urinals are of slate, operating with constant flush of water and ventilated in the same manner as the water-closets, the air being at all times drawn from the room through the fixtures.

The building is piped for gas and wired for electric-light.

The following table gives a list of the various contracts with price of each: —

Excavating and grading	$3,006
Mason work	76,711
Ironwork	43,202
Carpenter work	39,300
Plumbing and gas-fitting	3,346
Heating and ventilation	21,348
Electric wiring	5,000
Electric-clock and telephone system	2,000
Total cost	$193,913

The total cubical contents of the building from basement floor to mean point in roof is 1,803,000 cubic feet, which gives a cost per cubic foot of about 10¾ cents.

The remarkably low rate, 10¾ cents per cubic foot, which represents the cost of construction of the Newark High School is in part due to the following reasons: —

"A" Compact arrangement of plan reducing the number of running feet of masonry wall to a minimum.

"B" Utilizing the space on the third floor over a portion of the auditorium.

"C" Concentration and simplicity in the arrangement of plumbing system.

"D" Reduction in the amount of material used in the heating and ventilating system by reason of compactness of plan.

"E" Reduction in the amount of ironwork by means of the system of reinforcing the beams with concrete.

PLANS OF THE SAME BUILDING.

THE WILSON BUILDING, BROOKLYN, N. Y. MESSRS. J. G. GLOVER & H. C. CARREL, ARCHITECTS, BROOKLYN, N. Y.

THIS building is arranged for and occupied by several independent clubs and societies who are here provided with lodge-rooms, restaurants, galleries and exhibition-rooms.

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

A GROUP OF URBAN MONUMENTS.

A GROUP OF CHURCHES.

[Additional Illustrations in the International Edition.]

THE PARLOR: HOUSE OF FREDERIC B. PRATT, ESQ., BROOKLYN, N. Y. MESSRS. BABB, COOK & WILLARD, ARCHITECTS, NEW YORK, N. Y.

[Gelatine Print.]

THE NORTHWEST TOWERS AND PINNACLES OF PETERBOROUGH CATHEDRAL.

THE CHOIR OF PETERBOROUGH CATHEDRAL.

USES OF THE "TOP-HAT" IN SCULPTURE. — Mrs. Krüger, mindful that "water was made for man and beast, and not for man alone," has requested that the proposed life-size statue of her famous husband be adorned with his customary stovepipe hat, and, furthermore, that the crown of the hat shall be made concave, so as to preserve rain-water for the refreshment of the birds of the air! — *London News.*

COMMUNICATIONS

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

STAMPING BUILDING-CONTRACTS.

July 2, 1898.

To the Editors of the American Architect: —

Dear Sirs, — In your next issue will you please give us your opinion on the following question: —

Does a building-contract require a ten-cent internal revenue stamp, and, if so, where it is the usual custom to fill out two blank forms would it be necessary to stamp both or only one, and mark the other "duplicate"? Architect.

[We do not profess to have fathomed the war-revenue law yet and must refer you to the collector of your district. The method of the whist-player is a good one, however, and as you are in doubt it would be a good plan to stamp everything in sight. It is a safe method and will help the Government. — Eds. American Architect.]

NOTES AND CLIPPINGS

Symmetry. — Lord Selkirk had a formal garden — an Italian garden, as it is called — and his gardener was very proud of it. One day, Lord Selkirk found a boy shut up in the summer-house at the end of the terrace at St. Mary's Isle, and was informed by his gardener that it was for stealing apples. On reaching the other end of the terrace, where there was another summer-house, Selkirk beheld the gardener's son looking dolefully out of the window. "Eh, John, what 's this? Has your boy been stealing, too?" "Na, na, my lord," was the answer; "I just put him in for symmetry." — *Philadelphia Press.*

Uprooting of the Paris Bouquinistes. — A great stir is reported among the *bouquinistes* of the Rive Gauche in Paris and their faithful customers. The extension of the Orléans railway line to the Quai d'Orsay has displaced for a time the book-stalls established along the parapets. The booksellers of the Quai d'Orsay are the first to go; they betake themselves to the Quai de la Terrasse, and will not come back again, it is said, for two years. Those of the Quais Conti, Voltaire, and Malaquais are exiled only for some months. They are going across the river, and will set themselves up temporarily on the right bank of the Seine. About a hundred and fifty booksellers in all are scattered, but their annoyance, it may be supposed, will be far less than that of the much greater number of the quiet frequenters of the book-stalls, whose daily visits to their favorite haunts will be sadly disarranged. — *N. Y. Evening Post.*

The Chimes of St. Germain l'Auxerrois, Paris. — Dwellers near the Louvre in Paris are treated twice a day to some old-fashioned music by the chimes of the Church of St. Germain l'Auxerrois. Formerly the bells played tunes four times daily, but as their mechanism went wrong they became silent for years. These chimes have now been restored in the tower between the church and the town-hall of the district, where they were before, and they have been formally handed over to the city. The airs, which have been arranged by a Conservatoire professor, are Lulli's "Marche de Turenne," Rameau's "Tambourin," and an old French ballad. These will be heard at eleven every morning, and in afternoons at four o'clock. The carillon consists of thirty-eight bells with fifty-two hammers and comprising three octaves. The tunes will be evolved by a clock-work mechanism, and the old wooden cylinder has been replaced by one of brass. Arrangements have likewise been made for special holiday airs, such as the "Marseillaise" on July 14, and Christmas chimes on December 25. — *Boston Transcript.*

Destroying the Mazas Prison, Paris. — Workmen have begun to demolish the sombre walls of the Mazas Prison, which stands in Paris, opposite the Paris-Lyon-Méditerranée Railway station. A few months ago the 200 odd prisoners were removed to the great modern prison at Fresnes, about five miles from Paris. For the last ten years the French Government has been constructing huge modern prisons at convenient and healthful sites far removed from the city, and one by one the prisons of Paris, made famous in history, will disappear, sharing a peaceful fate with the Bastille. La Grande Roquette and Ste. Pélagie will be next attacked by the workmen. The Place de la Roquette is where Monsieur de Paris, M. Deibler, as he is known in private life, performs the executions with the guillotine, and Ste. Pélagie has probably confined more famous personages than any other prison in the world. At the time of the Revolution it was a political prison, and after a brief career as a jail for poor debtors it became a political prison again. Another prison to go will be the Santé, built on land that was once occupied by the celebrated Madelonnettes, that convent where, in the old régime, women that moved on the fringe of the Court society were shut up by means of a simple *lettre de cachet*. Probably the last prison to be torn down will be Saint Lazare, the woman's prison, made famous in the detective stories of Gaboriau and Du Boisgobey. — *N. Y. Times.*

Roofing Slates in Uruguay. — There is an increasing demand for roofing slates in Uruguay, the modern architect having found that he can build cheaper and better roofs with them. The slates used are the smaller size, 9″ x 13″. They cost here $20 per thousand, but to that must be added the duty of $11.55 per thousand. The round slates are valued at $21.80 per thousand, but the duty is the same The retail price, as used in carpenters' estimates, is from $34 to $36 per thousand, with extra for putting them on. None of the 10″ x 20″ or 12″ x 12″ sizes are used, the smaller ones having been found satisfactory. The monetary values here stated are in Uruguayan *pesos* (1 *peso* = $1.0352 in United States currency). The slates come in weight freight from England at an average of 15*s.* ($3.50) per ton on board of lighter, ordinary breakage at owner's risk. The demand for slates will increase; but, should an American firm deem it worth while to enter the market, it should do so by establishing a depot and keeping it well supplied with the article, including the hardware necessary. The best American slate can find a market here — small at first, it is true, but as slate is the coming roofing material the future may be relied upon. But it must be borne in mind that stocks must be maintained here, so that orders may be filled at all times. Failure in this direction has been ruinous in many other lines, not only to American interests but also to those of the English, who persisted in knowing more about the business methods of the country than residents here, and preferred to have only samples on exhibition. These samples are yet to be seen — and that is all. The Italians and Germans have profited by the advice given them in Consular Reports and are doing a good business. — *Albert W. Swalm, U. S. Consul.*

"Topping out" in Washington. — "What was once a very general custom in this city, 'topping out,' as it was called," remarked an old bricklayer to a reporter, "has nearly died out, and some of the new generation of bricklayers have never participated in it. 'Topping out' occurred the day the last course of bricks was laid in a house and was to celebrate the event. On the morning the 'topping' was to take place a flag was raised on the building. It was also a signal for the owner of the building to prepare a lunch and the customary drinkables, especially the drinkables, for all hands engaged on the building. Of course, it generally wound up in a mild kind of a spree, but it was the custom, and no one who amounted to anything ever refused to give a 'topping out.' The best kind of punches were often provided for 'topping out,' though in later years it ran down to beer. In the days when ale was the drink I have known of a barrel of ale being used at a 'topping out,' besides a barrel of sandwiches. The day Dr. Hall 'topped out' his house on C Street, near Four-and-one-half Street, which, by the way, was the first brownstone front ever put up in this city, he not only furnished all the ale and porter necessary, but used up three baskets of fried chickens, cakes and other things. It was the talk of the town for years, especially among mechanics. There were also a number of other famous 'topping outs.' Mayor Berret 'topped out' his house on H Street, between Fourteenth and Fifteenth Streets, with fine champagne, as did also Mr. Galt, the jeweller, who built a house next to him. Many of the hod-carriers were given bucketfuls of cakes, cookies and sandwiches at the close of the 'topping out.' But those days have passed, and when anything is said to the owners of houses being built these days they express ignorance of the custom, and decline to observe it when it is explained to them." — *Washington Star.*

Gas made from Slag. — Preparations are being made at Hammond which is within a short distance of South Chicago, for the utilization of blast-furnace slag in an entirely new manner. A Chicago chemist has discovered processes for utilizing waste products of blast-furnaces in the manufacture of carbolite, from which ethylene gas is produced, defined as an improvement on acetylene, but having the same characteristics. Carbolite is a combination of carbide of calcium, aluminium, and silicon, and for its production blast-furnace slag is especially suitable. The slag is almost as fluid as water, and by means of great ladles operated by hydraulic power it is passed into converters similar to those used for the manufacture of Bessemer steel. The pipes are so arranged that finely pulverized coke may be fed through them. Before the slag is poured into the converter a strong gas blast is forced through the pipes to keep the molten mass from running in and filling them up. As soon, however, as the slag is poured into the converter the pulverized coke is fed into the molten mass. This is continued until the slag is thoroughly impregnated with the coke. To ensure uniform mixture the converter may be tipped backward and forward as desired, thus increasing the agitation. When the mixture is complete the converter is turned on its shaft so as to allow the mass to flow between a series of carbon bars or electrodes which serve to introduce a powerful electric current. Coke is an excellent conductor of electricity, while slag is a resistant. The result is that the particles of slag in connection with the particles of coke form innumerable electric arcs, producing a most intense heat within the mixture. In the course of about 20 minutes the mass becomes so superheated that the slag is fused or carburetted with the coke. When this fusion is effected the material is finished. It is then poured into moulds of any desired form or size. When cool it is of crystalline formation, has a metallic glitter, and is nearly twice the weight of coal. The finished product is carbolite, which can be kept indefinitely and transported without difficulty. Protected by wood-jacketed tin cans from water and air moisture, it can be kept as a common article of merchandise and supplied to the consumer with much less difficulty than illuminating oil. Each pound of carbolite will produce 5 feet of gas. Each cubic foot is equal in illuminating power to 15 feet of ordinary coal or water gas. The unused Bessemer plant at Hammond has been secured for the manufacture of carbolite, and is now being fitted with the necessary electrical appliances. If the claims of the inventor are substantial, he will turn out a product which will make a better gas than acetylene for isolated lighting at a much lower cost. If the slag can thus be made valuable the cost of producing iron may be considerably diminished. — *Invention.*

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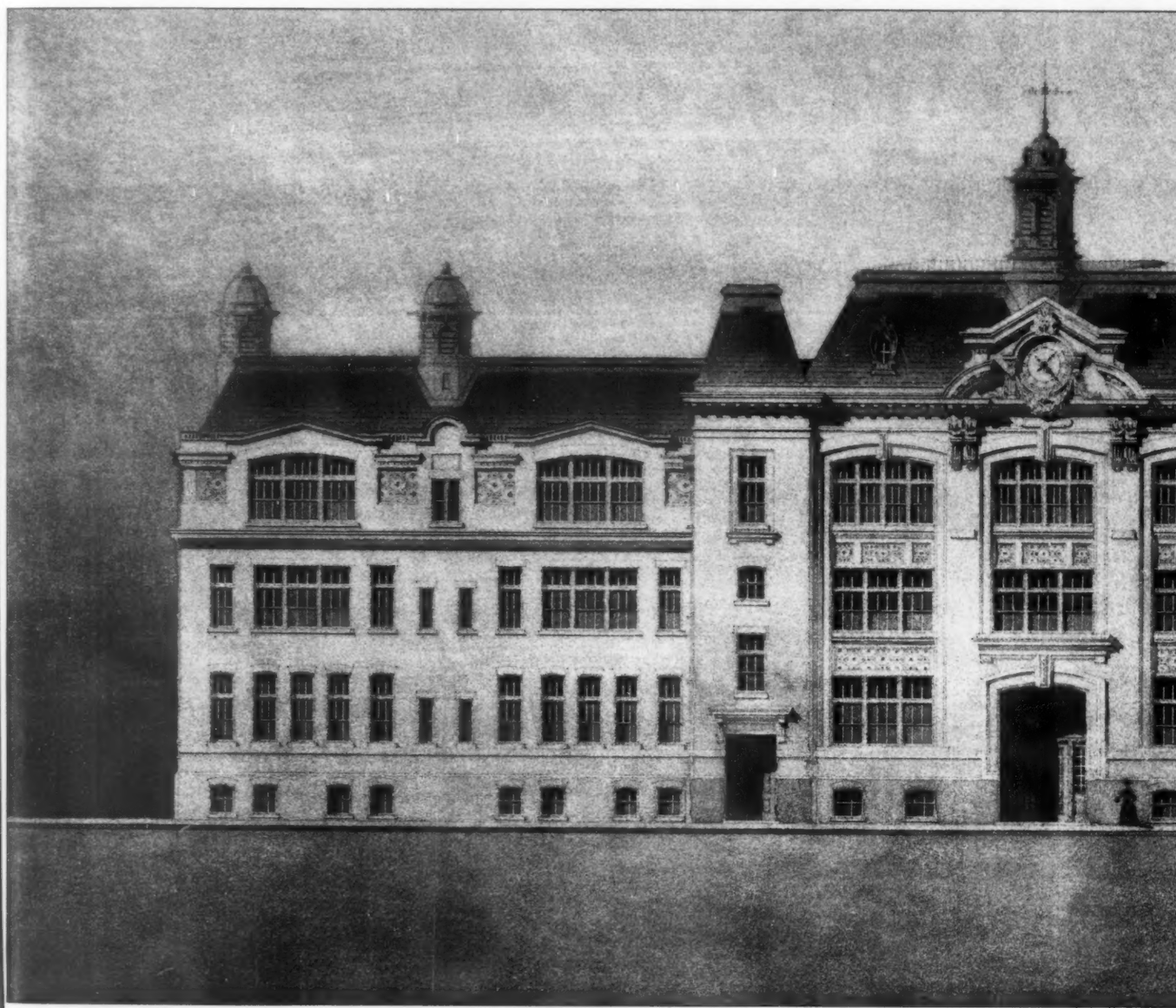

THE NEWARK HIGH SCHOOL, NEWARK,

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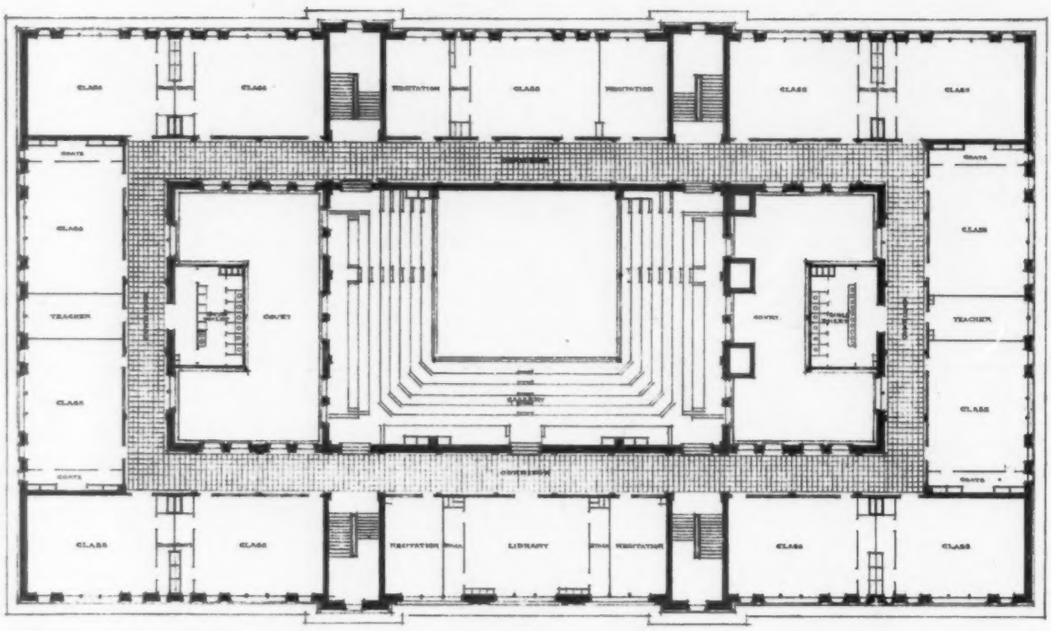

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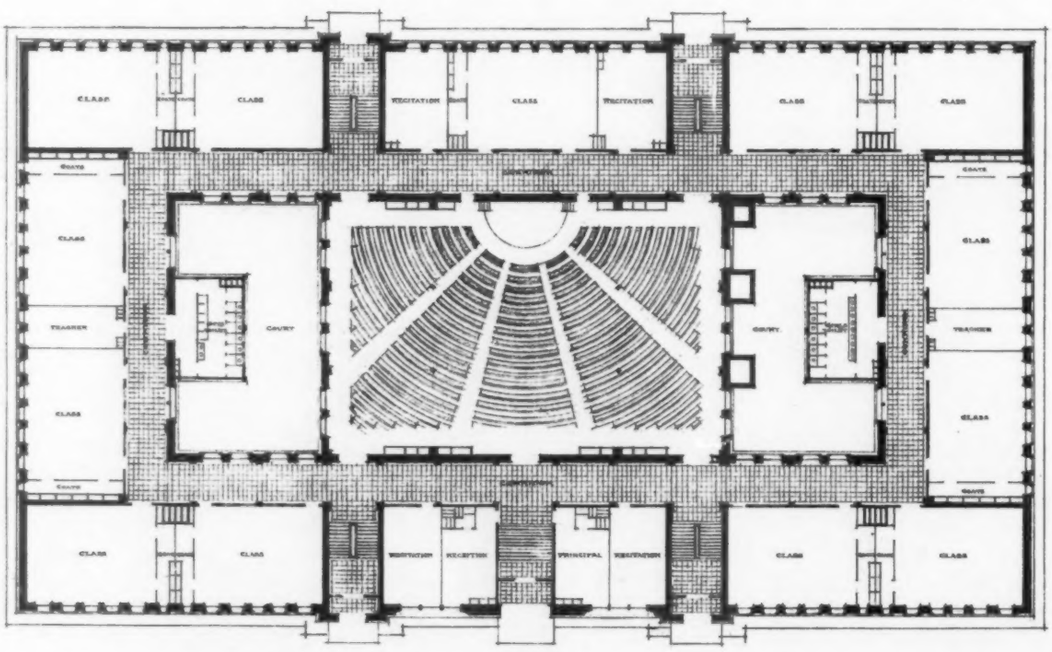

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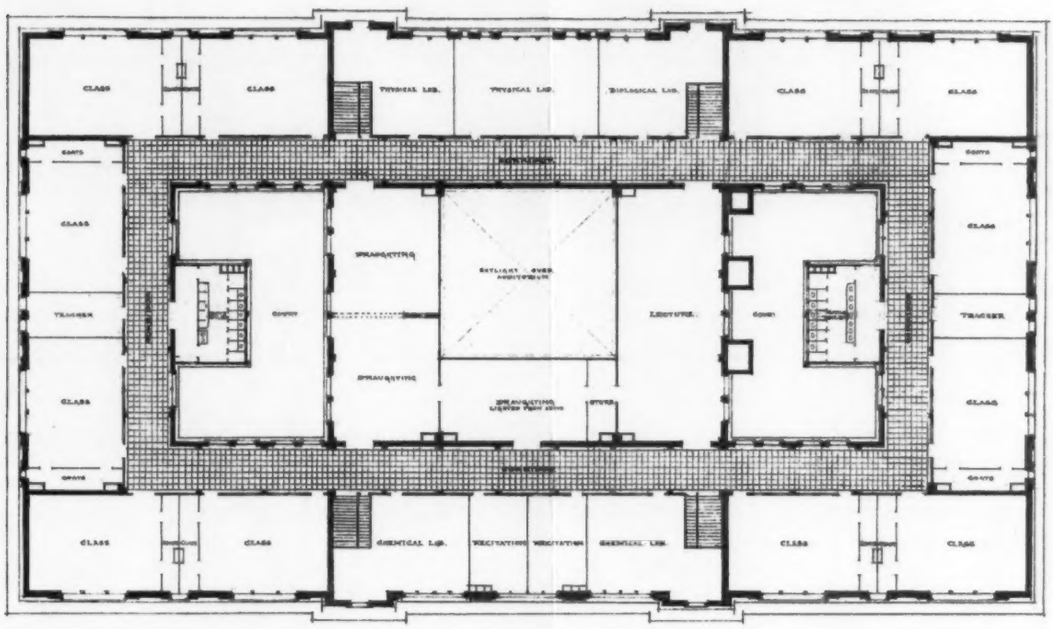

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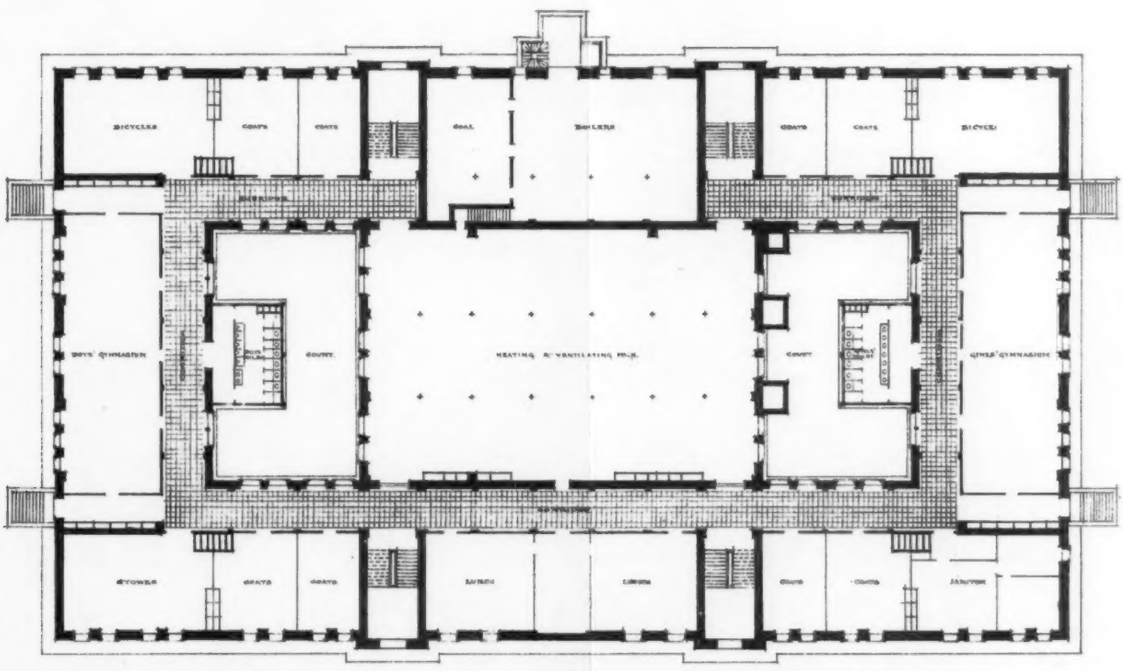

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HELIOTYPE PRINTING CO., BOSTON.

SCHOOL, NEWARK, N. J.

ARCHITECTS.

THE WILSON BUILDING, 153-157 PIERREPONT STREET, BROOKLYN, N. Y.

J. G. GLOVER AND HENRY CLAY CARREL, ARCHITECTS.