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CONTENTS.

EDITORIAL SUMMARY.
TOWERS AND TURRETS. — II.
THE ESSENTIAL CONDITIONS OF SAFETY IN THEATRES. — IV.
COLONIAL WORK IN THE GENESEE VALLEY. — II.
SAFE LOADS FOR H-SHAPED CAST-IRON COLUMNS.
EGYPTIAN OBELISKS.
BOOKS AND PAPERS.
COMMUNICATIONS.
EXHIBITIONS.
NOTES AND CLIPPINGS.

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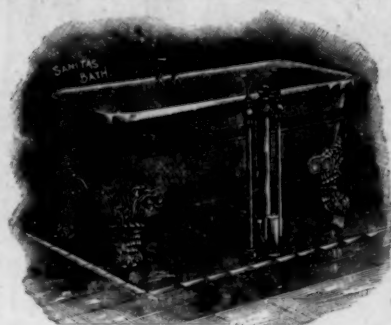
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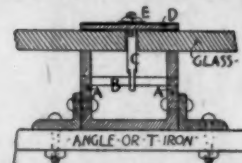
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SUMMARY:—

The McKaig Government Building Bill. — Some of its Good Points. — More Quibbling over the New York City-hall Matter. — Senator Vest on the Influence of Art. — Napoleon Bonaparte's Dislike for Architecture. — His Change of Mind and the Consequences. — Death of Sir Henry Austin Layard, Explorer. — The World's Fair Medal	21
TOWERS AND TURRETS. — II.	23
THE ESSENTIAL CONDITIONS OF SAFETY IN THEATRES. — IV.	25
COLONIAL WORK IN THE GENESEE VALLEY. — II.	26
SAFE LOADS FOR H-SHAPED CAST-IRON COLUMNS.	27
EGYPTIAN OBELISKS.	28
BOOKS AND PAPERS.	29
ILLUSTRATIONS:—	
The Hooper Fountain, New York, N. Y. — The San Francisco Polyclinic, San Francisco, Cal. — Colonial Architecture of the Genesee Valley: Mantels in the Culver Homestead, Brighton, N. Y. — Colonial Architecture of the Genesee Valley: Details of the Tillman House, Geneva, N. Y. — House at Bensonhurst, N. Y. — Central Fire-station, Somerville, Mass. — Colonial Architecture of the Genesee Valley: The Folger House, Geneva, N. Y. — Colonial Architecture of the Genesee Valley: The Holland Purchase Land Office, Batavia, N. Y.	30
Additional: The German Village, Midway Plaisance, World's Columbian Exhibition, Chicago, Ill. — School Board Offices, Reading, Eng. — House at Wrexham, Eng. — Ballard, Coombe Warren, Surrey, Eng.	30
COMMUNICATIONS:—	
The Responsibility of Architects. — Disposal of Garbage in Apartment-houses. — The World's Fair Canadian Building: A Correction.	31
EXHIBITIONS.	32
NOTES AND CLIPPINGS.	32

IN our issue for July 7, last, we published the text of the bill introduced by Mr. McKaig, of Maryland, providing measures for the procuring of designs for Government buildings in substitution for those stated in the Tarsney Bill, which Secretary Carlisle had found, in a measure, unsatisfactory. We made no comment on this bill at the time, partly because it reached us as we were going to press, and partly because the provisions of the bill were too good to be true, and it seemed useless to waste applause on a bill which was so likely to be modified out of recognition when it should be discussed in the House. This apprehension, while it has not been wholly dissipated, has yet been modified by certain facts that we have since learned, and we feel now fairly satisfied that the bill will become a law during the sitting of the present Congress, and that its provisions will not be materially modified. The discussion over the Buffalo Post-office building was of such a nature that it was a delicate matter for the American Institute of Architects to devise a method of procedure which was not likely to provoke antagonism, and yet it was felt that the time was fully ripe, that Mr. Carlisle was really desirous that the methods of procuring designs for Government buildings should be reformed on some practicable basis, and that there really were administrative difficulties in the way of enforcing the Tarsney Bill. It finally seemed best that official action on the part of the American Institute of Architects should give place to associated individual action on the part of the profession at large. Accordingly, a meeting was held in New York, where the matter was discussed in all its aspects, and it was agreed that several members should attempt to draft a satisfactory bill. This was done, and at a subsequent meeting it was found that the bill drawn by Mr. Post practically satisfied every one. Later, a representative body of architects, some thirty or more, including both members of the Institute as well as non-members, proceeded to Washington under the chairmanship of Mr. Hunt, and there consulted with members of the Committee on Public Buildings and Grounds, members of Congress and other officials, discussed and altered the proposed bill until it reached the form in which it was introduced by Mr. McKaig. It is a presage of a successful issue that the architects found every one they consulted with fully alive to the importance of the subject, earnest in the intention to do the best practicable

thing, and ready to believe that the men before them were competent advisers. It is still more auspicious that the modifications which the politicians suggested were all in the direction of making the provisions of the bill more satisfactory from the professional standpoint, simplifying the method, and eliminating further the few possibilities it contained by which it could be made a political machine for the distribution of patronage. Thanks to this sensible attitude on the part of the members of the Committee on Public Buildings and Grounds, the bill is a stronger and more desirable one than that prepared by Mr. Post, which was held to satisfy all reasonable expectations. With the members of the important committee whom it most concerns fully in favor of it, with the support that it seems to be assured of from members on the floor of the House, and with Mr. Carlisle, as we believe, ready to favor a good bill, we feel there will be no difficulty in displacing with it the less satisfactory bill which Assistant-Secretary Curtis prepared at Mr. Carlisle's request. This done, we believe it will not be over-difficult to overcome the opposition which any such bill would excite in the office of the Supervising Architect and from any contractors' rings that may have an interest in securing the continuance of present methods.

AMONGST the best features of the bill is the provision which debars from entering a competition for Government work any architect who has not practised for at least ten years as architect-in-chief, and can, in consequence, cite evidence of his constructive and administrative capacity; as to artistic capacity, the possession of that quality goes without saying, as it is not supposable that the appointive commission, in whom the bill vests the real initiative and responsibility, would ever think of inviting any architect to compete for Government work who was not acknowledged to have this qualification. This single provision, more than any other, will, if the bill become a law, do as much for the profession, and for the architecture of the country, as any that could be devised, since it will establish a means of making an open distinction between the real leaders of the profession and the rank and file, and will give to those who are in the ranks merely because of present youth and inexperience a reason for greater exertion, in the hope of attaining, finally, the distinction of having been entrusted with Government work — a distinction which, at present, few true architects crave. Another good feature is that while the bill preserves to the successful competitor all the rights and duties of the architect in private practice, at the established full rate of compensation, it does not waste public money by giving over-great compensation to the unsuccessful competitors, and so tends to magnify the honor which success brings to the winner, and in a manner testifies to the willingness on the part of the profession to make sacrifices for the ultimate good of the progress of art in this country. In like way, the very modest *per diem* compensation provided for the members of the Commission makes certain that the men who will be found willing to undertake the delicate and time-consuming duties of the position will accept the trust, not for the sake of the money they can make out of it, but because of a generous interest in their art and in the economical and artistic execution of Government building. The economical feature of these two provisions, we believe, will have a real effect in facilitating the passage of the bill.

A CURIOUS complication has arisen in regard to the competitive plans for the New York City-hall. The plans are stored in a room in the Stewart Building, on Chambers Street, and a watchman has been employed to keep guard over them. A question came up lately about the payment of the rent for the storage-room, and the wages of the watchman, and Comptroller Fitch, on examining the subject, concluded that the law which repealed the statute allowing the use of the City-hall Park for the new City-hall "closed the incident," as the diplomatists say, and that thenceforth no authority existed for hiring rooms in which to keep plans for carrying out schemes in contravention of the new law, or for paying watchmen to guard such plans, and that he was not warranted in approving bills incurred for such purposes subsequent to the enactment of the statute. Probably this only means that the people who have furnished

rooms and service will have to apply to the Legislature next winter for a special appropriation to pay them, but it is rather to be regretted that an oversight should have caused them all that trouble.

IN the course of the tariff discussion in the Senate, the much-vexed question of imposing a duty on foreign pictures and statuary came up, and brought on an interesting discussion. Senator Vest, who has a mind of his own, and has always been the firm friend of cultivation and intelligence, assured the Senate that, as long as he remained in it, he should always vote to encourage everything that lifted and elevated the people. In his opinion, "A people who cannot admire art, who eschew it because it is unnecessary, will soon degenerate into fit subjects of despotism;" and he thought that "When a great painting comes to a free people, it speaks to them oftentimes with a voice which oratory cannot rival. It teaches them a great moral lesson. It encourages them to heroic endeavor," and so on. Mr. Vest's experience of imported paintings appears to have been an unusually happy one, and the doctrine that the rejection of art prepares a community for despotism certainly receives very little support from history; but Senator Vest and his associates are quite right in thinking that the United States, if it is to have any art, wants to have it good, and that the way to have it good is to give every possible opportunity for those who produce it to study the work of other people.

M. CHARLES NORMAND, to whose quiet investigations the artistic world owes a great deal of interesting artistic history, has been studying the unpublished journal of Vaudoier, Member of the Council for Civil Buildings, and of the Institute of France, during the First Empire, and has extracted some curious information in regard to Bonaparte's connection with the fine-arts, particularly that of architecture. According to *La Semaine des Constructeurs*, which describes the manner in which this interesting manuscript came into the hands of M. Normand, it seems that Bonaparte at first showed all the indifference, or even hostility, to the fine-arts that might have been expected from a man born in a savage island, and trained in a military school. "The sovereign," Vaudoier writes, "does not like architecture; his ministers, in consequence, hold in aversion everything connected with architects; and, to flatter their prince, say so openly." In a report of the minister of finance to the Emperor, dated 30 Pluviôse, in the year XIII, which Vaudoier quotes, it is written: "The greatness of sovereigns lies not in the vast extent of their States, nor in the fortresses which tempt, rather than check, the efforts of the enemy, nor in the monuments, which the vanity of one generation raises, and the indifference of another generation allows to fall; it lies in the institutions which strengthen souls, preserve morality and extend intelligence." After the same spirit, Napoleon, in the decree of 22 Fructidor, year XII, which established grand prizes, to be given every ten years, by the hands of the Emperor himself, to "all those who had been useful and great," expressly excluded architects, the decree, in specifying the kinds of work in which "greatness and usefulness" could be shown, saying, in so many words, "except in architecture." A year or two later, however, a change came over the conqueror's sentiments. On the 17 Brumaire, in the year XIV, a deputation from the Senate, which had been dispatched to congratulate the Emperor on his victories in Germany, had an interview with him at Lenz. Monge, who was the orator of the occasion, delivered a formal discourse, in which he said, "Sire, it will require many monuments to render credible the history of the prodigies that you accomplish."

THIS struck Napoleon as a new idea. Vain above all things, he soon came to the conclusion that if monuments were going to add to his fame, it was desirable to have plenty of them. The very next year, Vaudoier observes in his journal that "the Emperor has willed that his capital, now become the first capital of the universe, should accord in its aspect with its glorious destination. At one extremity of Paris, a bridge has just been finished, known as the Bridge of Austerlitz; another has been commenced at the other end, which is to be called the Bridge of Jéna; thus the Seine, loaded,

so to speak, with the trophies of our warriors, will attest to future races that, in this century of marvels, the hand which gained a victory, and overthrew a throne, at the same time raised a monument of public utility; and that the author of so many exploits made them serve only for the prosperity of the people whose glory he immortalized." In condescending, however, to patronize the fine-arts for his own benefit, Bonaparte chose his own manner of showing his appreciation. During the Consulate, the municipality of Paris had voted to erect a monument, in the form of a triumphal portico, "to transmit to posterity the gratitude of the city toward Bonaparte, the First Consul." Nothing more was done about the matter then, but, in 1806, the proposition was revived, but with the modification that the monument should consist of a column, to be placed in a square, which should thenceforth be called the "Place Napoleon-le-Grand." A few months later, however, the vote was changed, and a triumphal arch was decided upon, instead of the column, and it was voted to erect it on the site of the Bastille. Bonaparte, however, had other views. He was just laying out his great street from the Tuileries to the Champs-Élysées, and the intersection of this with three other streets formed a point which he thought it desirable to ornament. Accordingly, he directed that the arch should be built there, and informed the municipal authorities that he would furnish the plans himself. With this view, he summoned four architects, the Citizens Bellard, Percier, Demantord and Quatremère, and gave them ten days within which to produce drawings and specifications for what is now the Arc de l'Étoile. In the matter of plans, above all things, "the more haste, the worse speed;" and the completion of the drawings was the signal for an interminable series of discussions and alterations. After the foundations were in, several commissions were appointed, to determine whether the arch should have columns, whether there should be one opening or three, and so on. New designs were made, by MM. Chalgrin and Raymond, and were submitted to a new commission, which included Vaudoier, Allevier, Peyre, Durand and Fontaine. While the discussion was going on over them, Napoleon arrived. Hearing that there was a difference of opinion as to whether there should be columns, he said he would not have any; in regard to the number of openings, he said he would have only one; and he directed that the work should proceed at once. Meanwhile, the Institute of France had been holding a competition for designs for the Temple of Glory, now converted into the Madeleine, and had selected the plan of Doumont. The Emperor interested himself in the matter, examined the designs, and ordered that Doumont's plan should be abandoned, that he should be paid an indemnity of twelve thousand francs, and that Vignon's design, which had been placed second, should be carried out instead.

THE death of Sir Austin Henry Layard ought not to pass without notice from the lovers of architecture and archaeology. It is many years since the publication of "*Nineveh and its Remains*," or "*Layard's Nineveh*," as it was universally called, aroused a fever of excitement in the learned world, but its author has been remembered ever since, and will be remembered for a long time to come, not only as a very successful explorer, but as one of the most enthusiastic and interesting writers who ever treated of archaeological matters.

THE long discussion about the World's Fair Medal has been ended by the adoption, by Secretary Carlisle, of a bicephalous design, Mr. St. Gaudens's model, representing the landing of Columbus, having been accepted for one side, while the other side, for which he designed his celebrated nude figure, is to be occupied by a composition devised by Mr. Charles E. Barber, the designer for the Philadelphia Mint, representing a shield with inscriptions, surmounted by a globe, which has female figures for supporters, while flaming torches, "representing light, or intelligence," cast their lustre from either side upon the shield. In order to connect the composition with that of Mr. St. Gaudens, on the other side, and give it, as it were, a Columbian flavor, a little caravel is seen under the shield, which partly covers it. To the architect, this description conveys an idea of a frightful want of scale among the different portions of the design; but the designers of medals are apparently not subject to ordinary rules in this respect.

TOWERS AND TURRETS.—II.



Fig. 5. Belfry of Evreux.

WE have a number of belfries in France which do not belong to the same class as those of the North, for example those at Auxerre, Beaune, Orléans and Evreux (Fig. 5); the last is the most elegant and finished. The belfry of Compiègne serves, in a way, as a connecting link between the two types. At the beginning of this century, Nantes still possessed a belfry, the celebrated Tour du Bouffay, the architecture of which was less curious than the lead crowning with genii sounding a trumpet.

Sometimes the belfry is erected in connection with the town-hall, as at Arras, Douai, Saint-Quentin and Compiègne, in which case the dimensions are considerable; oftener it is joined to another communal structure, the great

Halle, as, for example, at Bruges and Ypres: more frequently still, it is isolated or towers above a mass of buildings, and then, especially, does it become imposing and monumental. There are examples of belfries built over a street, or rising in the centre of a public square, with a broad vaulted passage in the ground-story. Certain cities utilized towers of defense forming city gates in the fortification walls; others, through properly executed papers, obtained from the clergy the right to use the church towers, and even those pertaining to monastic establishments (Saint-Salvi of Albi, Beaulieu-sur-Dordogne), when they were built on the nave.

Notwithstanding its relationship to the towers of defense

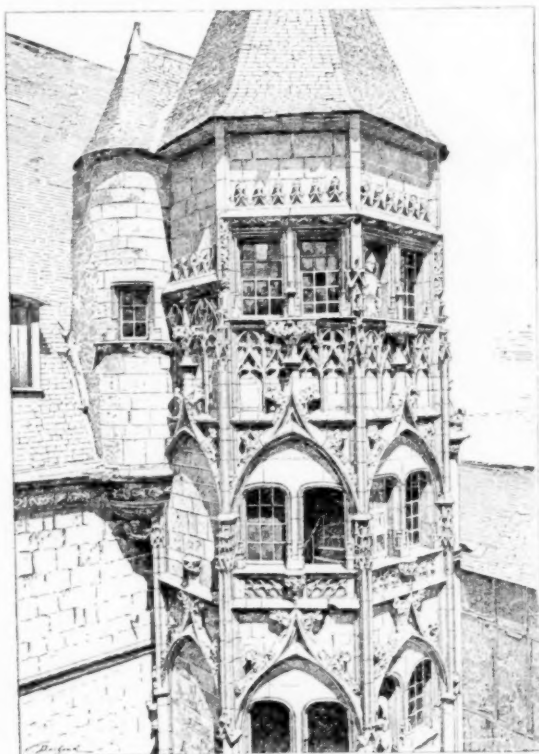


Fig. 6. Turret of the Old Hôtel de Ville, Bourges.

and the bell-towers, the belfry has dispositions peculiar to itself, the most prominent features of which are the turrets—either corbelling or rising from the ground—at the angles of

the square and the timber roofs. Stone crownings are more rare; the crowning of the belfry of Brussels, which is exactly like a church spire, forms an exception. The battlements and other military equipments are merely ornamental, since the belfries, with their broad bays, could by no means withstand an attack. The belfry of Bruges is the king of structures of the kind, not only on account of its height (more than 107 metres), but also because of its happy dispositions. At a certain elevation, four lofty turrets stand out completely from the mass, discreetly covering the oblique walls of a lofty octagonal story, with ample openings.

The characteristics noted above pertain especially to the belfries of the Low Countries and northern France. In other regions they do not follow any system exactly; here, we find them almost bell-towers and there, towers of defense, which the crowning with its bell-chamber alone differentiates from a donjon.

There are belfries dating back no farther than the seventeenth and eighteenth centuries and some even belong to the present century; they reproduce quite accurately the dispositions of the modern bell-towers of classic style.

Turrets.—As we said at the outset with reference to religious edifices, so for civil edifices the tower was an object

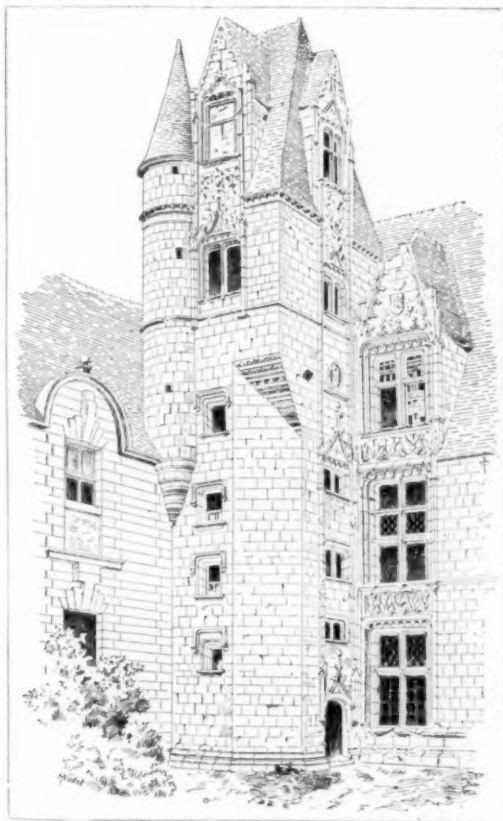


Fig. 7. Staircase of the Château de Haute-Goulaine (Loire-Inférieure).

of luxury or necessity; in fact, from the thirteenth century we find staircases housed in little towers or turrets projecting on the court façades; and toward the end of the fourteenth century, these staircase turrets assumed great importance: they did not interfere with the disposition of the apartments and the staircases occupied the least possible space. They were placed more or less in projection on the exterior, and more decorative enrichment was concentrated on them than on the rest of the façade: such are the celebrated staircases of the old hôtel de ville at Bourges (Fig. 6), that of Blois, etc. It may be said that a vast number of castles and manors still preserve remarkable staircase towers, not only in France, but also in England and Germany; nearly always the grand staircase terminated at the last square story; from this point a secondary flight, in a corbelling turret, led to the roof story and to a room with a fireplace situated above the grand staircase itself. This disposition, of which we offer an example, taken haphazard, in Figure 7, gave a very picturesque character to the façades.

Sometimes the turret is surmounted by a small room or the apse of a chapel in the first story, and forms a porch on the

¹ From the French of Anthyme Saint-Paul and H. Nodet, in Planat's *Encyclopédie de l'Architecture et de la Construction*. Continued from No. 968, page 16.

ground-floor: at the Hôtel de la Trémoille (Fig. 8), at Paris, now demolished, and at the Château de Nantouillet, this general disposition had been adopted with a great deal of art.

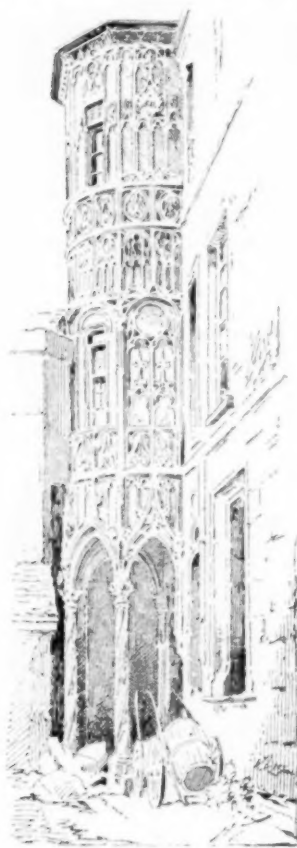


Fig. 8. From the Hôtel de la Trémoille, Paris.

The term "turret" is especially applied to a small corbelling tower. It is a mediæval invention, and particularly Germanic and Anglo-Norman. It was employed at first, from the end of the eleventh century, to adorn the donjons of castles and the gables of churches, and was doubtless in these cases a survival of the ancient acroteria; the introduction of turrets became common in the churches along the Rhine, in the English donjons of the twelfth century and in the churches of Poitou; in these last, it was constructed only at a certain height, and was supported by groups of columns which gradually led to corbelling.

In the thirteenth century, turrets passed into the civil architecture of cities, palaces and castles; they came into more and more general use and survived Gothic architecture. In military monuments, they sometimes occupied the position of flanking towers, but more frequently they simply served as buttresses or as bases for watch-towers.

Not only did the turret enclose a small staircase, an annex to the staircase of honor, but in the dwellings of the bourgeois it contained the only staircase by which communication was established between

in the interior of the dwelling there was the very appreciable gain of half the space occupied by the staircase. We find in France, notably at Villefranche-de-Rouergue, a number of old houses in which this disposition is still preserved intact.

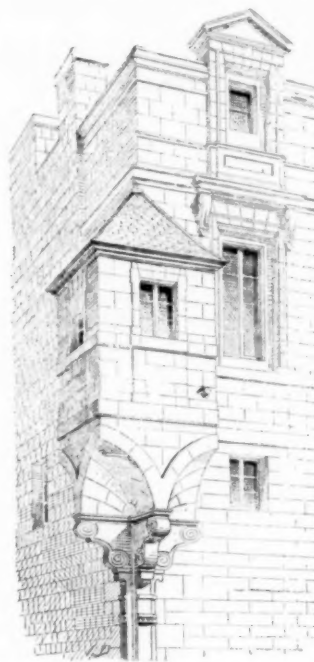


Fig. 11. From the Hôtel Lamoignon, Rue Pavée, Paris.

The turret was, therefore, made to do good service in cases where the space was limited, and the architect was not obliged to take into account highway regulations, but merely the laws of good construction; from the fourteenth century, it contributed to the comfort of the dwelling rooms by extending the view while enabling the inmates to watch the arrivals; often it proudly flanked both sides of the entrance; it was not until a very late date that it was abandoned.

The turret was, moreover, the only means of obtaining side views; it appears, from early times, in the English manor, where, in the sixteenth century, it comes nearer to the ground and is so enlarged as to form an important addition to the adjoining room; it is in several stories and rises to the top of the main roof. In Germany, Austria, and the Low Countries the same desire to enlarge one's horizon induced every bourgeois to adorn his dwelling with a polygonal projection more or less open on the street; this row of turrets, generally disengaged on only a half of their diameter, is not one of the least curiosities of Innsbruck. In France their use was less general and they seem never to have been anything but an appendage of the dwellings of the nobility; few are found in the South; but in Spain the *mirador* really plays the rôle of the turret in Northern countries.

The corbellings designed to support towers furnished an opportunity for technical or decorative combinations as ingenious as they were varied, even under Louis XIII (at the Bank in the Quartier du Marais, Paris; at the Capitole of Toulouse, etc.).

Thus, the turret rests on a corbelling or *culot*, on an engaged column or on a buttress (Fig. 9), on projecting consoles (Figs. 10, 11) or on an overhanging pendentive (Fig. 12). In the fourteenth and fifteenth centuries, corbellings formed of numerous superimposed mouldings were very popular. The corbellings started lower and lower down in proportion to the projection of the turret, not only in order to enlarge the support, but also to balance the weight of the angle masonry. In order to facilitate the solution of the important question of



Fig. 12. From the Hôtel Pincé, Angers.

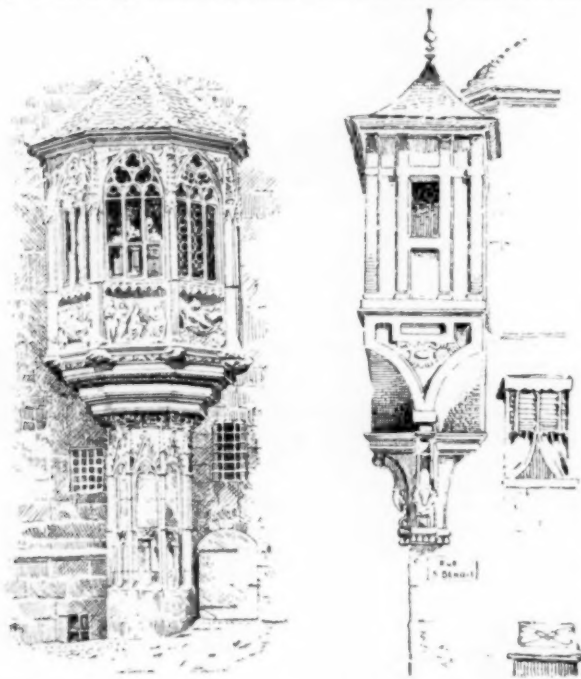


Fig. 9. From a Fourteenth-Century House, Nuremberg. Fig. 10. From a House in the Rue Saint-Benoît, Paris.

the stories; it began on the façade at the height of a semi-revolution a little above the lintel of the entrance door; owing to this contrivance, circulation in the street was unimpeded and

often on a polygonal plan, the angles of which served to

counterbalance the lightness of the *ensemble*; it is rare, however, to see turrets disengaged on three-quarters of their circumference: generally the ratio is not greater than something over a half.

As a remarkable example of construction the turret of the Hôtel Marisy at Troyes (Fig. 13) may be cited. Having become masters in the art of drawing, the architects of the seventeenth century often placed their turrets on pendentives; the one still existing at the Bank of France has often been mentioned.

We seem, to-day, to be appreciating anew the advantages of these retreats from which we can see without being seen and, in returning to the turret of our ancestors, to make it acceptable, we have adopted an English term "bow-window," designating a simple glazed balcony, devoid of grace, but which may be considered as a step toward genuine and elegant turrets.

ANTHIME SAINT-PAUL AND H. NODET.

THE ESSENTIAL CONDITIONS OF SAFETY IN THEATRES.¹—IV.

FIRE-ALARMS.

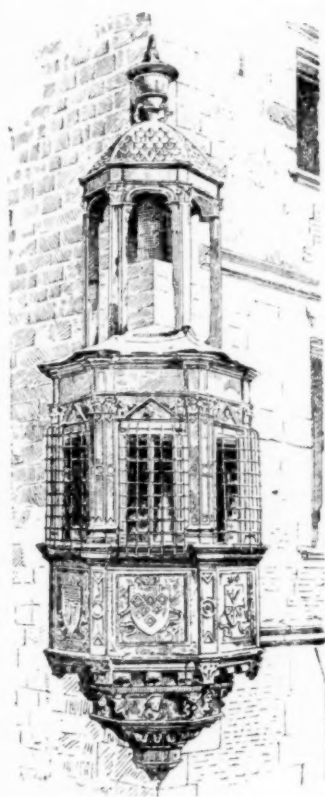


Fig. 13. From the Hôtel Marisy, Troyes (1531).

Every theatre must be fitted up with a complete fire-alarm system. This should include telephonic and telegraphic connection with the nearest fire-engine station, and also with the headquarters of the fire-department, so that in case of an out-break of fire, the firemen may be immediately notified. In large theatres it is desirable to have other means to indicate quickly the presence of flames. Thermostats, or heat-indicators, may be suitably placed and distributed throughout the house, which indicate in the manager's office the presence of undue heat or fire at any point. The automatic-sprinkler system should always be fitted-up with a fire-alarm, which rings a gong on the stage or in the office, and another gong on the outside of the building, as soon as any sprinkler has been put in operation. There should be a fire-alarm telegraph, connecting the manager's office with the pump or boiler-room, so that the engineer can be immediately notified, in case of fire, to look after the boilers and the fire-pump. In some recent European theatres all the doors leading to the stage, and the fire-doors in the proscenium-

QUESTIONS OF MANAGEMENT.

wall are fitted with a system of alarms, indicating in the office when any of the doors is not closed. Such alarms must, of course, be switched off during the rehearsals and performances, but at all other hours they indicate whether the stage is completely shut off from the rest of the building.

There are many points in the management of a theatre which tend, directly or indirectly, to increase the safety of such buildings from the danger of fire, and which likewise affect the safety of the theatre-going public. To some of these I shall make brief reference.

Strict discipline and order should prevail on the stage. The theatre-staff should be called together regularly for fire-drills, and for instruction in the use of fire-extinguishing and life-saving appliances. Each employé should be entrusted to perform a particular duty in case of a fire.

There should be at all times a theatre-watchman, and at night, in particular, a special night-watchman. His duty should consist in making frequent trips, at regular intervals, to all parts of the building, and it is advisable to have his faithfulness controlled, and his inspections recorded, by an electric watchman's-clock.

No open lights or open fires should be allowed in any room near the stage or on the latter. The rooms for the storage of theatrical costumes should, at night, be entered only with safety lanterns. The use of candles or oil-lamps in the dressing-rooms, the use of wax or parlor-matches, and likewise the smoking of cigars, cigarettes or pipes should be prohibited. Smoking on the stage, if required in the scenes of a performance, should be restricted as much as possible. Candelabras with candles and oil-lamps, if used in the play, should be handled with extreme care.

The practice of a sudden and unannounced darkening of the auditorium, during changes in stage-setting with raised curtain, is dangerous and may precipitate a panic.

Special care should be observed, and strict regulations issued, regarding the use of fire-arms, the burning of fire-works, the use of colored and calcium lights, so frequently introduced in spectacular plays, the dancing with lighted torches, or even the representation of actual fire-scenes on the stage. The wads for rifle or pistol shots should be of calf's hair or asbestos wool, and not of paper.

Trained firemen should be in attendance on the stage during every performance. The firemen should be in charge of the appliances for the extinction of fires, and should satisfy themselves by personal inspection shortly before each performance, that they are in good working-order and ready for instant use. The fire stand-pipes and valves should not be obstructed. There should be a penalty enforced for using fire-pails for other purposes. During performances the fire-pump should be constantly kept under the steam pressure required to operate the same.

The safety-appliances should be in charge of a special trusted inspector. He should, if practicable, have on the stage an office or watch-tower, from which, like the operator in a central-switch railroad-tower, he can operate the fireproof curtain, the stage-roof ventilators, the registers of the ventilators in the auditorium ceiling, the perforated-pipe system forming a water-curtain at the proscenium-opening, and the fire-alarm apparatus. He should also have telephone communication with the theatre-manager's office, with the engine or pump room and with the nearest fire-department station.

The fireproof treatment and impregnation of light dresses and gauze costumes should be insisted upon, particularly for the ballet-dancers, and the treatment should be renewed after each washing.

Besides the automatic-alarms on the stage, in the manager's-room and in the engine-room, a theatre should be connected by telephone and by fire-telegraph with the nearest fire-station and with the headquarters of the fire-department.

The constant use of all safety-appliances should be insisted upon. At every performance, the fire-curtain should be lowered to insure its proper working in times of need.

Likewise should all theatre-exits be thrown open and used nightly, so as to have the public become familiar with them. The oil-lamps in corridors and staircases should be lighted every night, and not extinguished until the entire audience has left the theatre. All exit-doors should be plainly marked in large and distinctly legible letters. It is a good plan to mark all other doors, which do not lead to exits, either by the words "no exit," or else to designate them so that they may be easily recognized, as, for instance, "toilet," "buffet," "cloak-room," "office," "ladies' retiring-room," etc.

The exits and staircases should be plainly shown on clearly printed plans of the theatre, hung up in conspicuous places in the foyers or corridors. The theatre plans and the exits should be printed on every theatre programme, and in a way so as to be clearly legible.

The number of persons admitted to a theatre should be strictly limited by law according to its seating-capacity, and it is better still to license each division of the auditorium for a fixed number of persons.

No standing room should be permitted, nor should camp-stools be used in the aisles. The open courts at the sides of the theatre should not be used for temporary storage of theatre trunks or stage scenery, but they, as well as all passages, should be kept clear from all encumbrances.

The utmost cleanliness should be maintained throughout a theatre, not only in the auditorium, but also on the stage, in the dressing-rooms, the toilet-rooms and the places under the stage. The daily removal of all dirt, dry dust, sweepings, shavings, rubbish, oily rags, and other waste materials of all kinds must be performed with regularity. Pending removal, oily rags or cotton waste should be kept stored in metal boxes, closed by iron lids, and raised up from the floor on legs.

The theatre-director and stage-manager should at all times remember, that the safety of the audience is the chief consideration. To accomplish this, the strictest rules and regulations should be enforced, in order, first, to prevent the outbreak of a fire; second, to localize and confine a fire when it does break out; third, to protect the audience against fire and panic; fourth, to secure safe egress in case of fire or panic to the audience and to the theatre employes and actors, and fifth, to extinguish a fire in its incipency before it has a chance to spread and carry destruction.

The law should require every theatre-manager to have in the office of the theatre a complaint-book, which should be accessible to the public and to the press. In this book every person observing some real defect should call attention to the same, so that the complaint may be brought to the notice of the authorities for investigation and remedy.

¹An Essay on Modern Theatre Planning, Construction, Equipment and Management. By Wm. Paul Gerhard, C. E., Consulting Engineer for Sanitary Works. Continued from No. 368, page 17.

No interior alterations, affecting either the plan, or the arrangement and construction should be made in any existing theatre without the approval of the building or fire departments.

PERIODICAL INSPECTION.

A few words, in conclusion, about theatre inspections. Eternal vigilance forms the only assurance of continued safety in a theatre. There should be, to begin with, examinations and visits to all parts of the building after each evening and matinee performance. Then there should be general and frequent examinations, either by the architect who designed the structure, and who is more than any one else familiar with all its features, or by a specially appointed committee of experts. Such a committee would be suitably composed of the following members, viz.: the manager, an architect, a builder, an underwriter, or a member of the fire-department, an hydraulic-engineer and an expert electrical-engineer.

A periodical inspection in detail of all gas and water fittings, frequent tests of the gas-pipes, of the fire-pump, of the automatic-sprinkler system, and of all other fire-appliances, of the electric-lighting system, of the fire-telegraph and fire-alarm systems, and of the various other electric equipments, of the fireproof curtain, the stage-roof ventilators and the lightning-rod protection, these are all necessary to prevent a failure in the working of any of the safeguards in an emergency.

There should be, moreover, occasional official inspections by the authorities, the fire or the building department, preferably without a previous announcement. Repeated inspections of new theatre buildings are necessary to prevent any transgressions of the theatre-fire-law by the theatre-manager, or the engineer in charge of the theatre, after the same has passed inspection and received the approval of the authorities. It also sometimes happens, that after the theatre license has once been obtained, internal changes in arrangement or equipment are made, which would be contrary to the rules, and which would have a tendency to reduce the safety of the building.

WM. PAUL GERHARD.



AT Brighton there is only one important house, the Culver homestead, now owned and occupied by Mr. Howard Smith. It was originally a tavern, the first beyond the historic "Eagle" tavern at Rochester, on the direct road from Niagara Falls to Albany.

This fact accounts for some peculiarities of its arrangement and construction, the second story of the main part being principally given over to one large room—the old ball-room, which extends the entire length of the front of the house, with nine windows, facing in three directions, and two fireplaces, one on each side of the entrance. The ceiling is high and domed, and the floor sets clear of the joists so as to make it springy for the dancers and to facilitate the execution of "pigeon-wings," which were a principal feature of many of the old-time dances.

Geneva, being an old town and well to the eastward, contains many interesting Colonial buildings. The oldest is the Tillman block on Exchange Street, and architecturally considered, it is perhaps the best, following as it does the common New England type of the period in which it was built. Of quite a different character are the houses which line Main Street, the "Faubourg Saint-Germain" of the aristocratic little town. Here the Colonial style has undergone important modifications, in order better to meet unusual requirements. The street skirts the summit of a high bluff overlooking Seneca Lake, and from it the view is magnificent; and the houses are accordingly provided with ample verandas, not only in the first story but in the second also. It is interesting to compare the various solutions of the difficult in design, involved in such an arrangement. The most popular seems to have been some modification of the Classic portico with the second story balcony let in between the great columns, but in a few cases, two superimposed orders have been employed. The Folger house, built about 1825,—a front elevation of which is shown herewith,—is the best example of this class. By making the second-story piazza three spaces wide, above five spaces in the first, a fine pyramidal effect is obtained, not readily apparent from the drawing.

The Hobart College buildings are on Main Street at the summit of the hill. The first one was built in 1821 and the second, identical in appearance, in 1837. Though aside from the subject of Colonial architecture, I cannot refrain from an admiring mention of the

¹ Continued from No. 952, page 142.

beautiful English Gothic church built by Upjohn during our best Gothic period, and worthy to rank in the same high class as Grace and Trinity of New York.

Batavia, though half as many miles to the west of the Genesee as Geneva is to the east of it, was settled at about the same time. In 1800 the village was surveyed for a town, and in 1802 it was



Block of Houses, Geneva, N. Y.

made the seat of government of the county, through the efforts of one Joseph Ellicott, a surveyor and agent of the Holland Land Company, and the principal pioneer of the region immediately west of the Genesee River. The old land-office and the first court-house and jail are still standing. The former is unoccupied and ruinous, but is soon to be put in good condition and converted into a sort of historical museum. The latter, Ellicott Hall, has suffered many alterations, having been used in turn as a court-house, land-office, a fire-insurance office, a roller-skating rink and a storehouse for second-hand furniture, which it remains. It was built in 1802 and was paid for in land, the builder receiving one acre for every day's labor. Immediately beside it, formerly stood a house to which Gen. Winfield Scott was taken, to recover from wounds received in the battles of Chippewa and Lundy's Lane, in the war of 1812; near by was a tavern, Keye's stand, which served as officers' headquarters throughout the same war.

The early history of the region round about Batavia is mainly the history of the Holland Purchase. The land bought from the Indians by Messrs. Phelps and Gorham, through their failure to carry out their part of the agreement, reverted to its original holder, the State of Massachusetts. The part lying west of the Genesee river was then bought by Robert Morris, who sold it in 1792-3 to an association of Dutch and American capitalists, called the Holland Land Company, he still retaining a part, under the title of the Morris Reserve. In 1797, the Company employed Joseph Ellicott to survey their purchase and to open offices for the sale of the land to settlers, who shortly came flocking from the east and south. As before stated, and as the name implies, the Holland Company was composed largely of Dutchmen, and there are one or two amusing incidents recorded in the history of the Purchase,



One of the Hobart College Buildings, Geneva, N. Y.

which are as delightfully characteristic of the race as those narrated in Dietrich Knickerbocker's immortal history. Here is one of them: In the first apportioning of the land, for some reason not readily apparent, four members of the Willink family were given their choice of 300,000 acres in any part of the Purchase. They thereupon located it in a square found in the south-east corner,

which was absolutely the most undesirable portion of all, from an agricultural point-of-view, for no other reason than that it was nearest to Philadelphia!

The pioneer history of the Purchase is barren of romantic interest — of "hair-breadth escapes, and stirring accidents by flood and

ence, — but he had fled at their approach and further search proved unavailing.

It is a sad little story, but the sequel is sadder still: From that time until the day of his death, the father of the Lost Boy became a wanderer in the vain search for his son. If a rumor reached him of a wild boy having been seen in Pennsylvania, or Ohio, or in places even more remote, he would set out on foot, only to be disappointed at his journey's end, or sent upon some equally fruitless quest. Against the plain and commonplace background of the times, the figure of this sad, mad, remorseful father looms large and



Ellicott Hall, Batavia, N. Y.

field;" but there is at least one story, which, though lacking in blood-stirring and hair-raising elements, yet strangely affects the imagination and lingers long in the memory, like some minor air. It is still told to children around many firesides and is called the "Story of the Lost Boy."



The Cary House, Batavia, N. Y.

In 1806, one David Tolles, a farmer living near Batavia, sent his son to watch that no cattle strayed into a newly-planted field, there being no roadside fences in those days. The lad discharged his duty faithfully: when the animals appeared, he followed them out into the woods, but he never came out again. The whole countryside was aroused and search parties organized, but the mystery



House at Canandaigua, N. Y.

of his disappearance was never solved. On the second day of the search some one discovered his tracks; on the third, they found where he had slept, and the bundle of fagots which had formed his pillow; on the fourth day, they came upon a little brook where he had washed some roots, — the water was yet riley with his pres-



Le Roy House (rear), Le Roy, N. Y.

black. One cannot but picture him a very Lear of the wilderness, poor and alone, penetrating on foot the hungry fastnesses of regions little known, in search of the Lost Boy, who, if alive at all, was a boy no longer.

The village of Le Roy contains, at least, one house of more than common interest. This is the Le Roy mansion, at one time the residence of the family for which the place was named. It was built sometime previous to 1812, and was originally a land-office of the Holland Company, of which Herman Le Roy was an agent. In 1821 it was remodelled and enlarged, and occupied by his three sons and a daughter, Catherine Bayard Le Roy; and here, in 1828, came the great Daniel Webster, courting her. They were married the following year, she being his second wife. Shortly after the wedding a grand reception was held at the old house. Webster seems to have been fond of the place and often visited it with his wife in after years. CLAUDE FAYETTE BRAGDON.

SAFE LOADS FOR H-SHAPED CAST-IRON COLUMNS.

ALTHOUGH steel is being more largely used every season for the upright supports in buildings, it will probably never entirely supplant the cast-iron post, and, in fact, it is still a disputed question whether a steel post is better than one of cast-iron, for buildings of moderate height.

For skeleton construction, when the height of the building exceeds twice its width, it seems unquestionable that the riveted steel column, "breaking joint" in alternate stories, and with riveted connections with the beams and girders, is much the best; but for the larger proportion of the buildings in which iron posts are used, cast-iron possesses advantages which the writer believes are not exceeded by the riveted steel post.

The most important of these advantages are: — low cost, quickness of production, and ease in making connections.

The principal disadvantage as found in practice, is the difficulty, if not impossibility, of making rigid connections with the beams and girders. In buildings of not more than five or six stories, however, this is not of great importance.

Cast-iron is, of course, subject to flaws and the columns are liable to be cast of uneven thickness of metal, but by careful inspection, these defects can be discovered, and any columns containing them rejected.

For unprotected columns, cast-iron is unquestionably better than steel, as has been quite conclusively demonstrated by the experiments of Prof. Baas hinger, of Munich. Cast-iron, three-quarters of an inch or more in thickness, is also practically uninjured by rust, while it is claimed that wrought iron or steel may be almost destroyed by it.

Although cast-iron columns may be made in a great variety of shapes, the hollow cylindrical and rectangular columns have thus far been the principal shapes used, and for interior unprotected columns the cylindrical column probably meets the usual requirements better than any others. Every year, however, the requirements of building regulations are being made more strict, so that at the present time, it is required in most of our large cities, that all vertical supports in buildings over five stories in height shall be protected by fireproof material, and for such buildings, the writer would call attention to the H-shaped column, as offering the following advantages.

1. Being entirely open, with both the interior and exterior surfaces exposed, any inequalities in thickness can be readily discovered, and the thickness itself easily measured, thus obviating any necessity for boring, and rendering the inspection of the columns much less tedious.

2. The entire surface of the column can be protected by paint.
3. When built in brick walls, the masonry fills all voids, so that no open space is left, and if the column is placed as shown in Figure 1, only the edge of the column comes near the face of the wall.

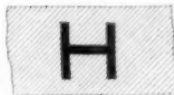


Fig. 1.

4. Lugs and brackets can be cast on such columns better than on circular columns, especially for wide and heavy girders.

5. The end connection of the columns do not require projecting rings, or flanges, which are often objectionable in circular columns.

The cost of columns of this shape should not exceed that of circular columns of the same strength.

As to the strength of such columns, the only experimental data which we have on the subject is that obtained from the experiments of Mr. Eaton Hodgkinson, which give them about the same strength as cylindrical columns of the same diameter, when the length does not exceed thirty diameters and the thickness is not less than three-quarters of an inch. When surrounded by masonry they would probably be stronger than the cylindrical column.

The following table has been calculated with the same stress per square inch of metal, as allowed for cylindrical columns, of a diameter equal to the least dimension of the H-shaped column, using a factor-of-safety of six.

SAFE-LOADS IN TONS OF 2,000 POUNDS FOR H-SHAPED CAST-IRON POSTS.

SIZE OF POST IN INCHES.			AREA IN SQ. INCHES.		LENGTH OF POST IN FEET.				
a.	b.	t.			10	12	13	14	
6	6	1	12	40	33	31	27		
"	"	1	16	52	43	40	35		
"	"	1	19	64	52	48	42		
6	8	1	13	45	37	34	30		
"	"	1	18	59	48	45	39		
"	"	1	21	72	59	54	49		
7	7	1	19	72	59	57	54	47	
"	"	1	23	88	71	69	66	58	
7	9	1	21	80	65	63	60	52	
"	"	1	25	97	79	77	72	64	
8	8	1	16	72	60	55	52	48	45
"	"	1	22	93	79	72	68	64	59
"	"	1	26	114	96	88	83	78	72
8	10	1	24	102	86	79	74	69	65
"	"	1	29	125	105	97	91	85	79
"	"	1	34	146	124	114	107	100	93
9	9	1	25	116	100	96	90	82	75
"	"	1	30	142	122	118	110	102	92
"	"	1	36	167	144	138	129	120	108
9	10	1	26	121	104	100	94	86	78
"	"	1	31	148	127	123	115	106	96
"	"	1	37	174	150	144	135	125	112
10	10	1	28	137	123	116	109	102	96
"	"	1	34	168	151	142	134	126	118
"	"	1	40	198	178	168	158	149	139
"	"	1	46	227	204	192	180	170	160
10	12	1	39	147	132	124	117	110	103
"	"	1	46	180	162	153	144	135	127
"	"	1	53	213	191	180	169	160	150
"	"	1	60	244	219	207	194	183	172
"	"	2	56	274	246	232	218	206	193
12	12	1	34	180	166	159	152	144	138
"	"	1	41	221	205	196	187	178	170
"	"	1	49	262	243	232	221	210	201
"	"	1	56	301	278	266	254	242	231
"	"	2	64	339	313	300	286	272	260
12	14	1	41	235	217	208	198	189	180
"	"	1	52	278	257	246	235	223	213
"	"	1	60	320	295	283	270	257	245
"	"	2	68	360	332	318	304	288	276
"	"	2	75	399	369	353	337	321	306

It is believed that the table will prove useful to architects who may wish to use this shape for their columns.

The columns may be fireproofed in the same way as the Z-bar columns, which it much resembles. The space occupied by the column slightly exceeds that of both the cylindrical and Z-bar column,



Fig. 2.

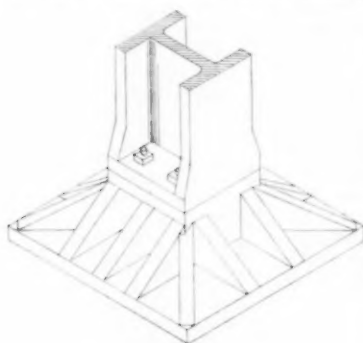


Fig. 3.

but not enough to be of any serious consequence. Figures 2 and 3 show details of end connections and brackets, and of base-plate.

The beams running at right angles to the web should be tied together by wrought-iron straps passing through holes in the web of the column.

F. E. KIDDER.

EGYPTIAN OBELISKS.

MUCH learning and research have been expended by Zoëga and others in endeavoring to ascertain the origin of obelisks, yet without throwing any very satisfactory light on that part of the question. Antiquaries have, in fact, endeavored to find positive evidence where none was to be obtained, for the case itself is not, like that of a particular invention or discovery, referable to some precise period or nation. On the contrary, from the very earliest ages it had been the practice to mark some particular spot, the scene of some important event, by what might serve as a durable monument of it; nor would anything more naturally suggest itself for such purpose than fixing in an upright position a stone of unusual dimensions. The Bible makes mention of this practice, and it prevailed not only in the East and in the early ages of the world, but has prevailed among nearly all nations either in a savage state or in an early stage of civilization. Among the Egyptians, therefore, the practice was not otherwise very remarkable than on account of their continuing it, and bringing such simple primeval monuments to great perfection, making them of stupendous dimensions, working them in the most elaborate manner, and adorning them with hieroglyphics, though not indeed invariably, for there are instances of Egyptian obelisks which are not so sculptured; among others, that in front of St. Peter's, at Rome, and the one before the church of Santa Maria Maggiore.

Small obelisks were sometimes of sandstone or granite, but the larger Egyptian obelisks are all of the red granite of Syene, and it is certainly astonishing how such enormous masses of that material could be quarried out and afterwards removed and placed in their position. We may conjecture that the Egyptians detached the large masses of rock for their obelisks somewhat in the same way that was adopted by the natives of India on the occasion of raising the great granite obelisk at Seringapatam, in the year 1805. In this instance a groove about two inches wide and deep was chiselled out by the workmen in the line where it was required to separate the stone, which being done, a fire was kindled upon it from end to end and kept up until the stone was sufficiently heated, when the embers were blown off, and cold water poured into the groove, whereby a clear fracture in the stone was made without further labor. Indeed, the mode in which the Egyptians worked their quarries is clear enough at the present day from an inspection of the excavations. Among the Egyptians, when the block had been thus hewn out of the quarry, it was conveyed away by a raft on a canal brought up to the very edge of the rock, either at the time of the inundation, when the water would rise to a sufficient level, or by lowering the block down an inclined plane or platform to the raft, or by digging a canal from the river to the site of the block and bringing a boat under the obelisk, in the manner described by Pliny. The granite block was afterwards polished, and probably raised in the same way as the Seringapatam obelisk, by means of banks of earth.

For raising the obelisk before St. Peter's (supposed to be that brought from Heliopolis by Caligula) no fewer than five hundred different projects were submitted by architects and engineers to the pope, Sixtus V, and Domenico Fontana was thought to have accomplished little short of a miracle in rearing it by means of very complex machinery and several hundreds of workmen and horses. The process by which the Lateran obelisk was originally erected at Rome, seems to have been equally complicated and laborious. How the Egyptians raised such masses of granite is not known, but probably by a much simpler mode, whether similar or not to that practised in elevating upon its pedestal the one at Seringapatam. According to Colonel Wilks's account of the operations, this obelisk, a single stone about sixty feet long and six square at its base, was placed horizontally upon a mound or platform of earth, secured by strong walls and level with the top of the pedestal, the base of the obelisk being placed just on the ledge of the pedestal. The shaft having been laid on planks or timber poles, these served as fulcra, by means of which the smaller end or top was gradually raised; wedges were put under it and earth rammed in, which was repeated until the platform became an inclined plane as steep as it could with safety be carried up. The shaft being got thus far out of its horizontal position towards a perpendicular one, ropes were then applied, worked from a strong timber scaffold nearly as high as the obelisk itself and enclosing the other three sides of the pedestal, other ropes being also employed in a contrary direction in order to check its coming down on the pedestal with too sudden a shock.

By the Egyptians themselves, obelisks do not appear to have been raised as isolated monuments or single objects, but as the accompaniments to temples and palaces, where they were placed in pairs, that is, one on each side of a large entrance, or propylea, and it may therefore be inferred that some particular signification was attached to them. They were also sometimes placed in the interior courts of temples. With respect to their proportions, the shafts of obelisks were usually about ten diameters in height, and one-fourth narrower at top than at their base. The pyramidion, or apex, was made much more pointed in some obelisks than in others. One singularity is that few Egyptian obelisks are perfectly square, two of their sides

being generally somewhat broader than the other two, which may be accounted for by what has just been said, namely, that they were placed against buildings, and not intended to be isolated objects viewed from every direction. The face of an obelisk is sometimes slightly convex, instead of being quite plain, as is the case with one side of the Lateran obelisk.

The number of obelisks in Egypt must have been at one time very considerable, yet we are not, therefore, to suppose that the erection of them was a frequent circumstance, since, once formed, they were almost imperishable, and would, therefore, greatly increase in the course of ages. Many that are still remaining are no longer standing, and in some cases several have been found on the same spot, some still standing, others lying on the ground. When the Romans became masters of Egypt they removed many of these monuments to their own capital, among others that of the Lateran, which is the largest now known, its shaft being 105 feet (although it has been reduced, a portion at the lower part, having been cut off in consequence of being fractured), and two of its sides 9 feet 8½ inches, the other two, 9 feet. This obelisk was first conveyed from Heliopolis to Alexandria by Constantine, and by that emperor's son, Constantius, brought from the latter city to Rome, where it was erected in the Circus Maximus. The shaft of the Lateran obelisk weighs about 445 tons in round numbers. Augustus also had previously brought two from Heliopolis. That which was originally placed in the Vatican Circus by Caligula, and now stands in the piazza of St. Peter's, is next in size to that of the Lateran, though supposed to have been somewhat abridged of its original dimensions. The entire height, including the pedestal and the ornament at top, is about 132 feet; the shaft itself is 83 feet, and 8 feet 10 inches square at its base and 5 feet 11 inches at the other end. In the At-Meidan at Constantinople, there is an obelisk about 50 feet high, said to have been erected by the Emperor Theodosius.

During the calamities that befel Rome under its barbarian invaders after the downfall of the empire, the obelisks were damaged and overthrown, but they have been gradually restored under various pontiffs. — *The Architect.*

BOOKS AND PAPERS.

TWO valuable additions have recently been made to the literature of the Greek vases, and although published in such distant cities as London and Boston, the two works are especially adapted to supplement one another. The smaller book is a catalogue of the Greek, Etruscan and Roman vases in the Museum of Fine Arts, Boston,¹ which addresses itself primarily to those who make a special study of Greek ceramics, affording exact details as to what the Museum actually contains, and not only enumerating but describing, and, in most cases illustrating by an outline shape, all the principal vases in the collection. For the benefit, however, of those who are interested in the subject without really knowing much about it, the author has epitomized within the compass of forty-six pages, the substance of the world's knowledge regarding these wonderful remains of Greek art, presenting the facts in so attractive and concise a form, that for the general student there is little left to be desired.

The second work before us² is far more ambitious in detail, though much more restricted in its scope. It is a handsome folio, illustrating very thoroughly the choice examples of Greek vase-painting, considered simply as pictures, with a perhaps unnecessarily exhaustive notice of the different artists whose names have been identified with these creations. It is to be regretted that in the latter volume, so little account is taken of contours and of decoration as such, and it might also be wished that the pictures could have been reproduced in something approaching the original blacks and reds, but even carried out as it is in the crude black and white, the volume places before the student very admirably, the typical examples of a species of decoration which was one of the most remarkable that the world has ever seen.

It is doubtful if any one of the many expressions of the so-called allied arts can be studied by the architect with as much immediate and practical and professional advantage, or with as marked results in cultivation of taste, as is afforded by careful study of the Greek vases. The architect in the practice of his profession has primarily to deal with subtleties of line and harmony of *ensemble*, while such decoration as comes strictly within the line of architecture is governed by almost exactly the rules which apply to the decoration of a vase. Especially is this true of decoration which is applied to moulded or irregular surfaces, in which the lines of color suggest, and at times emphasize, the contour and form, while strictly subordinated to a sense of unity and harmony which should instinctively repel a false note in shape or tone, not as a result so much of reasoning as of artistic intuition. It was precisely this subtle intuition

in the choice of decorative detail from which sprang the most potent artistic feeling of Greek art, whether displayed on the broad field of a Parthenon frieze, or concentrated upon the concavity of a bit of pottery, and while the care bestowed upon the elaboration of the frieze is the result of far more study and refinement, the seemingly rude ceramics show exactly the same spirit and often display it in a freer and perhaps more readily appreciable manner, admitting one almost, as it were, to the processes by which the artist was able to choose the exact species of decoration which appealed to him as preëminently adapted to the form under his hand. It is to be wondered that these Greek remains have been so comparatively little studied by architectural students, but the inaccessibility of the objects themselves and their comparative uninterestingness at first glance coupled with the manifest crudity of technical qualities, doubtless deter the young men whom every year we send to Europe for study from spending a great deal of time over such bits of pottery. It surely is not the intrinsic beauty of the drawing upon the vases which appeals to one, but the charm is rather in that they teach a keen, subtle appreciation of decorative values, a nice feeling for delicacies of form, and, above all, the beauty of pure line and graceful balance, coupled with a recognition of the value of innate dignity, distinguished from mere size, as an essential element in an artistic design whether actually large or small. This it is that makes one who has begun the study of the Greek vases, so enthusiastic in regard to their educational and æsthetic influences. It is the truth to harmony manifest in all of the best of the Greek vases, both in decoration and in shape, that amply atones for the incomplete and often almost childish drawing, and that stamps even the smallest of these productions, with a portion of the same spirit that led to the glorious successes of the Parthenon and the Niké Apteros.

The fact that the first knowledge which Europeans obtained of these pottery fragments was derived from vases found in the tombs of Etruria, led to a misconception of their true antecedents, and for many years the term Etruscan was applied almost exclusively to them. Decorated pottery has always existed and probably always will, but the choice examples of Greek vases date almost entirely from a period beginning in the early part of the fifth century, B. C., and extending until about the middle of the third century, B. C. The art lasted nearly half a century longer in the Greek colonies of Italy, with certain modifications which are easily distinguishable and which consist mainly in an overloading of decoration, and a carelessness in that sense of fitness which is so marked a characteristic of the purely Greek vases. The best period was coincident with the building of the Parthenon, 430-440 B. C., consequently the Greek vases which are most highly prized come to us as, in a way, signed documents, attesting not only the occupations and personal characteristics of the Greeks, but typifying, as well, the art impulses of the highest period of development which that richly endowed people attained. The Athenians were first among the Greeks to recognize the true value of these great documents in miniature. By the end of the sixth century, B. C., Athens led the world in the manufacture of artistic pottery, and for nearly two centuries controlled the market, practically setting the styles, and sending annually ship-loads of pottery to all civilized countries.

The earlier vases are distinguished by figures and decorations, painted with black enamel paint, upon a dull red ground. The later and finer vases are nearly all painted with a black background, leaving the figures standing out in red. There are a number of curious reminders in these vases of the archaism from which, notwithstanding all their development in sculpture, the Greeks never succeeded in entirely freeing themselves. Thus, the flesh of the women was always painted white, while that of the men was left black. A singular convention, which was practised through all the stages of the black-figured style, was that of making the eyes of all female figures, whether women or animals, almond shape, and those of male figures perfectly round. The eye was drawn in full front, even though the face was in profile. It was not until about 460 B. C., when the change from black to red figures took place, a little before the Persian invasion, that the drawing began to lose its stiff and awkward character and to be treated in detail as drawing, independent in a measure of its value as a portion of vase decoration. But in proportion as the technical qualities of the vase-painting improved, the style and the essential characteristics of the work began to decline, the ceramic arts approaching decadence some time before the sister arts of sculpture and architecture began to show traces of deterioration. The hand-made vases disappeared almost entirely in the early part of the third century, B. C., giving way to shapes which were cast in moulds or stamped by crude machinery, the artistic sentiment almost entirely disappearing.

The Boston Museum is specially fortunate in possessing an example of the work of one of the best of the Greek vase-painters, Euphronios, a Kylix decorated inside and out, which was found near Viterbo in 1830, and loaned to the Museum in 1892. With Mr. Robinson's catalogue, and Messrs. Harrison & MacColl's illustrations, the student in this country has an opportunity to obtain a very complete knowledge of this important subject. It is, however, to be regretted, that neither volume considers the exquisite foliage and conventional decorations which are so pronounced on Greek vases, and which so well repay study.

¹ Museum of Fine Arts, Boston. Catalogue of Greek, Etruscan and Roman Vases. By Edward Robinson, Curator of Classical Antiquities. Houghton, Mifflin & Co., Boston and New York.

² Greek Vase Painting. A selection of forty-three full-page pictures with explanatory text. By J. E. Harrison and D. S. MacColl, London: T. Fisher Unwin. For sale by the Century Co., New York.



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

THE HOOPER FOUNTAIN, NEW YORK, N. Y. MR. GEORGE MARTIN HUSS, ARCHITECT, NEW YORK, N. Y.

[Issued with the International and Imperial Editions only.]

WHEN John Hooper died at his home in Brooklyn, in 1889, aged seventy-three years, he had accumulated a fortune, was a large owner of New York and Brooklyn real estate, and from his fortune had been a liberal and regular contributor to the support of charitable institutions. On probate, his will was found to contain, amongst numerous and varied public bequests, one for \$5,000 to be spent in erecting a drinking-fountain, which was to be presented to the City of New York. The selection of a site was a matter of considerable discussion; the place finally decided upon being the junction of One Hundred and Fifty-fifth Street, St. Nicholas and Edgecombe Avenues and the northern end of the Speedway, which has seemed to be a wise one. In the settlement of the estate the original bequest of \$5,000 was reduced by the inheritance tax and in order that the designs of the architect might be carried out without modification, the Washington Heights Association agreed to lay the foundation for the fountain free of expense to the trustees. The latter, Messrs. B. Frank Hooper, son of Mr. Hooper, and William Milne, of the People's Bank, on Canal Street, accepted this offer. Work has been begun on this foundation. The design as accepted, and as it will be executed, shows a horse drinking-fountain or basin of circular form, nine feet six inches in diameter and about one foot three inches in depth, cut from a solid block of pink Italian granite. It is thought this is one of the largest drinking-basins in the country made from a single piece of stone. The south side of this basin is engaged by the base of the column on the opposite side of which, nearly on the line of the southern sidewalk of One Hundred and Fifty-fifth Street, facing down St. Nicholas Avenue, is the drinking-place for the people and at the base of this, on either side, are places for dogs. The large basin is supplied with water through a cast-bronze lion's head, while small replicas of this head furnish the dogs' basins. An artistic arched bronze pipe throws a grateful stream of water into the people's basin. Six upright granite posts protect the sides of the people's fountain from horses, carriages or wheel-hubs. The four basins are grouped around a column twenty-one and one-half inches in diameter, crowned with a richly-carved Ionic cap, which rises fifteen feet above the upper rim of the basin. On top of the column cap and rising from a gracefully-moulded base in bronze is a spherical plate-glass and bronze lantern, which terminates in a bronze ornamental weather-vane about twenty-eight feet from the ground. The column, like the remainder of the fountain, is of Italian pink granite and bears the inscription: "Presented to the City of New York by John Hooper. Erected 1894." The contract for building the fountain was given to the New England Monument Company, of New York City, who have carried forward the work with celerity and skill.

THE SAN FRANCISCO POLYCLINIC, SAN FRANCISCO, CAL. MR. A. PAGE BROWN, ARCHITECT, SAN FRANCISCO, CAL.

[Issued with the International and Imperial Editions only.]

COLONIAL ARCHITECTURE OF THE GENESEE VALLEY: MANTELS IN THE CULVER HOMESTEAD, BRIGHTON, N. Y. MEASURED AND DRAWN BY MR. C. F. BRAGDON, ARCHITECT, ROCHESTER, N. Y.

[Issued with the International and Imperial Editions only.]

SEE article elsewhere in this issue.

COLONIAL ARCHITECTURE OF THE GENESEE VALLEY: DETAILS OF THE TILLMAN HOUSE, GENEVA, N. Y. MEASURED AND DRAWN BY MR. C. F. BRAGDON, ARCHITECT, ROCHESTER, N. Y.

[Issued with the International and Imperial Editions only.]

SEE article elsewhere in this issue.

HOUSE FOR E. SOHMAN, ESQ., BENSONHURST, N. Y. MESSRS. PARFITT BROS., ARCHITECT, BROOKLYN, N. Y.

[Issued with the International and Imperial Editions only.]

CENTRAL FIRE-STATION, SOMERVILLE, MASS. MR. A. H. GOULD, ARCHITECT, SOMERVILLE, MASS.

THE building is practically of two sections, the main part, which is to be three stories high, is to project some ten feet in front of the side portion, which is to be two stories high. The entire frontage is about eighty-eight feet. The depth of the main portion is seventy-

five feet and the depth of the side portion is sixty-seven feet. Selected hard brick is to be the material for construction, with pink granite trimmings and galvanized-iron cornices. The base of the tower is also to be of granite. The roof is to be slated. The main apparatus-room is to be 46' x 40', and is to provide space for three pieces of apparatus; there will, consequently, be three entrances. There is ample stable-room at the rear of this room, and between the two are stalls for eight horses. The apparatus-room in the annex will give space for two additional pieces of apparatus and there will be two stalls at the rear. The second story of the main building will contain a recreation-room, 25' x 35' in size, five good-sized bedrooms, a large toilet and wash room for general use, and lockers conveniently arranged for the use of the men. The rear portion of this floor will be devoted to a large hay and grain loft, with chutes and an elevator running below. There will be also five sliding-poles from this floor to the main floor, and a flight of stairs in about the centre of the building. In the annex will be the rooms for the chief of the department, which will consist of a general office, and opening out of this a private office. The latter will have a fireplace and mantel, and sliding doors will separate the two rooms. There will also be a bath-room in connection with the chief's apartments. Back of these rooms will be a bath-room for the use of the men, two bedrooms, and in the rear a large workshop. The third floor of the main building will be devoted to the electrical department of the fire-alarm system. The central portion of this floor will be used for a large battery-room, 34' x 38', and in the front room will be ample space for the instruments. The rear room will be a wash-room, to be used in connection with the battery-room. The basement is to be concreted, and will contain the heating-apparatus, coal, etc., and will provide room for storage. The tower will be eighty-eight feet high and about ten feet square. Fifty feet of the tower will be used for hanging hose and above will be a striker and bell. The floors throughout the building are to be of hard pine. The ceiling of main floor is to be panelled with hard pine, and there will be a six-foot wainscoting around the sides. At the rear of building are to be manure pits and sheds for drying straw.

COLONIAL ARCHITECTURE OF THE GENESEE VALLEY: THE FOLGER HOUSE, GENEVA, N. Y. MEASURED AND DRAWN BY MR. C. F. BRAGDON, ARCHITECT, ROCHESTER, N. Y.

SEE article elsewhere in this issue.

COLONIAL ARCHITECTURE OF THE GENESEE VALLEY: THE HOLLAND PURCHASE LAND OFFICE, BATAVIA, N. Y. MEASURED AND DRAWN BY MR. C. F. BRAGDON, ARCHITECT, ROCHESTER, N. Y.

SEE article elsewhere in this issue.

[Additional Illustrations in the International Edition.]

THE GERMAN VILLAGE, MIDWAY PLAISANCE, WORLD'S COLUMBIAN EXHIBITION, CHICAGO, ILL.

[Gelatine Print.]

SCHOOL BOARD OFFICES, READING, ENG. MESSRS. CHARLES SMITH & SON, ARCHITECTS, READING, ENG.

WE reproduce this week a perspective sketch of the new offices recently erected by the Reading School Board. The new building is in a central position, and contains the following accommodation: On the ground-floor—clerks' offices, accountants' offices, committee-room and attendance officer's office, with waiting-room and separate side entrance. On the first floor—board-room, the clerk's private office, committee-room and lavatories. On the basement—caretaker's quarters and heating-chamber. The building is of local red brick, with Douling stone dressings.

HOUSE AT WREXHAM, ENG. MR. T. G. WILLIAMS, M. S. A., ARCHITECT, LIVERPOOL, ENG.

This house, which has been erected for Dr. E. D. Evans, is situated at the corner of Egerton and Lord Streets, having main entrance from Egerton Street, and is built in Ruabon brick with terracotta and Cefn stone dressings. It contains on the ground-floor breakfast, drawing and dining rooms, kitchen, pantry, scullery, etc., with side entrance for patients, giving access to waiting-room, consulting-room and surgery. On the first floor are nursery, five bedrooms, lavatory, bath-room and conveniences, with attics over. In the rear are the stable buildings, comprising two-stall stable, loose-box, harness-room, coach-house with loft over, also wash-house, coals and other conveniences.

BALLARD, COOMBE WARREN, SURREY, ENG.

BALLARD is the name of a large house erected at Coombe Warren, near Kingston-on-Thames, in 1873, for Mr. Edgar. It was purchased in 1884 by Captain Lee Guinness, of Dublin, who erected a

new wing, coach-houses and stabling, and other extensive additions, increasing the original length of frontage of the house, etc., from 200 to 400 feet. The new additions, stabling and lodge were erected from the designs of Mr. W. F. Potter, architect, of Hatcham, and are faced with red bricks and Portland stone dressings.



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

THE RESPONSIBILITY OF ARCHITECTS.

DENVER, COL., June 29, 1894.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—I read with interest the rules defining the responsibility of German architects, published in your paper of June 16, and I would like to suggest that it would be an excellent idea for some one, say the author of the papers on "*Architect, Owner and Builder before the Law*," to prepare a similar statement for American architects. While such a statement might not have much effect with the courts, it would give architects a comprehensive idea of the responsibilities which they must assume, and also of those for which they are not liable. The writer has always believed that if the responsibility of the architect in the matter of safe construction and the protection of his client were better understood and more often enforced, it would lead to a weeding-out from the profession of many who would be unable or afraid to meet the responsibility imposed upon them.

Again, payment for any service is generally somewhat in proportion to the responsibility connected with it, and if architects and their clients more fully recognized the responsibility connected with their profession, I believe there would be less cutting in commissions. In connection with this subject, I recently had my attention called to an Ohio State Law relating to the planning of public buildings, which makes the architect liable for any damage or loss of life or limb resulting from failure due to improper or unsafe construction. This is the strictest building law the writer has ever seen, and thinking perhaps some Ohio architects may not have seen it, and that other architects may be interested in it, I quote below the first and last sections of the law:

An Act to prevent the erection of dangerous buildings for public use. (Ohio.)

(Passed Apr. 15, 1889; took effect June 15, 1889, 86 U. 381.)

"Section 1. Be it enacted by the general assembly of the State of Ohio, that it shall be unlawful for any person, society, firm, agent, representative of any private or corporate authority or society; or any committee, commission or board acting under any authority whatsoever, to erect or cause to be erected; or for any architect, engineer, builder or other person to furnish any plan, description or specification for the purpose of erecting in the State of Ohio any structure, room or place where persons are invited, expected or permitted to assemble; or for the purpose of entertainment, judgment, amusement, instruction, betterment, treatment or care; or to make any addition to, or alterations therein, which shall in construction, arrangement, or means of egress be dangerous to the health or lives of persons so assembled."

The law then proceeds to define the necessary provisions for stairways, the loads for floors and roof, and the safe loads for different classes of masonry, and the thickness of walls. Requirements are also made for the providing of fire-escapes, under certain conditions, and for proper heating and ventilation. The penalty of violating this law is as follows:

"Any person who violates any of the requirements of this Act, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined in any sum not less than \$100 nor more than \$1,000, or be imprisoned in the county jail not less than ten nor more than sixty days, or both, at the discretion of the court, and shall be also liable to any person injured by reason of his violation of the requirements of this Act, and shall be also liable for criminal prosecution for loss of life."

It is also made the duty of the prosecuting attorney in each county to see that the penalties of the law are enforced.

This Act does not apply to cities of the first class where the construction of buildings is regulated by statute under the direction of a building inspector.

It will be seen from the above that the failure of any such building, especially if resulting in loss of life or limb, will prove a very serious matter to the person who prepared the plans or specifications for its erection. Any architect, therefore, who would undertake to guess at the proper size of his timbers, piers, trusses, and girders, must be very fool-hardy indeed, or else have nothing to lose,

Yours truly, F. E. KIDDER.

[We agree entirely with Mr. Kidder in the belief that a more just sense of the responsibility of architects for their work would do much to elevate the profession, and improve its position before the public. As to a statement of the liabilities which architects in this country incur, it should be remembered that we have no Code, such as exists in Germany and France,

and that the common-law relations of architects to their clients and the public must be ascertained from the decisions of courts, which often take different views of the law in different States; so that such a statement, to be of any use, would be quite long, and it is doubtful whether any material abridgement could be made of the chapters devoted to the subject in "*Architect, Owner and Builder before the Law*," without unfavorably affecting the correctness of their presentation of the decisions. The completed book is to be published by Messrs. Macmillan & Co., of New York and London, in September. After it appears, if any one wishes further information in regard to any of the matters of which it treats, the author will be happy to give such additional explanation as his notes may afford.—EDS. AMERICAN ARCHITECT.]

DISPOSAL OF GARBAGE IN APARTMENT-HOUSES.

CINCINNATI, O., June 29, 1894.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—We are in need of some information for which we do not know where to look, so apply to you, thinking you may be able to assist us, either with some information bearing directly on the subject, or with some clue as to its probable source.

To every architect who has been commissioned to plan an apartment building, one of the most serious problems to solve satisfactorily must have been the disposal of the garbage from the various kitchens scattered throughout the building.

In our city, there seems to be no satisfactory provision in any of the apartment-buildings for getting the garbage to the cellar or to the street—even some of those recently completed depending on the janitors calling at each apartment every morning and collecting the garbage in galvanized-iron cans and taking it down to the cellar.

Now what we wish to know is, how or where to obtain information as to how this question is solved in the fine apartment-buildings in the East.

It is easy enough to dispose of the garbage when it has once reached the cellar, but to get it there in a satisfactory manner, without having to experiment, is the problem that is confronting us.

We have just finished drawings for a large apartment-building and provided for each tier of kitchens a 16" x 20" brick flue, lined with brick dipped, or rather soaked in, and laid up with melted tar, and at the bottom of each chute we provide garbage-pits and provide these pits with iron doors and frames. In each kitchen we place a "Connor" steel ash-chute. We close the upper end of garbage-chutes about four feet above highest inlet and carry up a 2" cast-iron vent-pipe through roof. From near the foot of each garbage-chute we run a 12" vent-pipe over to a large vent-stack, in which we place a stack-heater and propose, by this means, to exhaust the air from the garbage-chutes and create an inward current from each kitchen through the Connor chutes either when they are partly open or should there be any leakage about or through them. At the bottom of the chutes we have catch-basins with screens and hinged covers, so that the chutes and pits can be washed out with a hose.

This is merely an arrangement we have thought out ourselves and never having tried it, realize it is something of an experiment and would prefer using some device that has been tried and found satisfactory. Any information you can give us on this subject will be much appreciated by

Yours truly, DES JARDINS & HAYWARD.

[The arrangement described is very well planned. In the Eastern cities it is usual to provide very similar shafts made of cast-iron pipes—which are more easily kept clean than brickwork—carried up full size, above the roof, with the top open for ventilation, and with slides with doors, nearly airtight, from each kitchen. The main receptacle is usually above ground, outside the building, in the yard. It is not common to provide special ventilation to a heated flue, although this, if well arranged, would be advantageous. The upward current produced in the shaft itself, by the warmth from the kitchens, is usually enough to keep in foul odors. Various manufacturers of iron goods for building furnish pipes, chutes, covers, etc., of different patterns.—EDS. AMERICAN ARCHITECT.]

THE WORLD'S FAIR CANADIAN BUILDING: A CORRECTION.

DEPARTMENT OF PUBLIC WORKS, CANADA,
OTTAWA, CAN., July 14, 1894.

TO THE EDITORS OF THE AMERICAN ARCHITECT:—

Dear Sirs,—Having reference to the description of the Canadian building at the Columbian Exposition, which appeared in the *American Architect* of June 23, and in which you credit Mr. Edis with making the designs, I have the honor to inform you that the designs for the building in question were made by this Department.

I have the honor to be, Sir,

Your obedient servant, E. F. E. ROY, Secretary.

[We regret the error now pointed out, but as the information printed was furnished by the Director of Works of the World's Fair himself, it seems likely that the mistake may creep into sundry histories and official publications if attention is not directed to it.—EDS. AMERICAN ARCHITECT.]

L'HORLOGE DE LA MORT DU ROI.—In the courtyard of the palace of Versailles is a clock with one hand, called "L'Horloge de la Mort du Roi." It contains no works, but consists merely of a face in the form of a sun, surrounded by rays. On the death of a king the hand is set to the moment of his demise, and remains unaltered till his successor has rejoined him in the grave. This custom originated under Louis XIII, and continued until the Revolution. It was revived on the death of Louis XVIII, and the hand still continues fixed on the precise moment of that monarch's death.—*Philadelphia Record*.



BOSTON, MASS.—Annual Summer Loan Exhibition of Paintings; also, New Accessions to the Print Department: at the Museum of Fine Arts.
 NEW YORK, N. Y.—Twenty-sixth Annual Spring Exhibition: at the Metropolitan Museum of Art, opened May 8.
 Group Exhibition by American Painters—William M. Chase, J. Alden Weir, Childe Hassam and others: at the Galleries of the American Fine Arts Society, 215 West 57th Street.



SALISBURY SPIRE.—The spire of Salisbury Cathedral is believed to have been added when Robert de Wyville was bishop, a prelate of whom this ugly character has been transmitted to posterity, that it was hard to say whether he was more dunce or dwarf, more unlearned or unhandsome. While he held the see, a mandate was obtained from Edward III for taking down the walls of the former cathedral at Old Sarum, and of the houses there which had belonged to the bishop and the chapter, that their materials might be applied, as the king's gift, to the improvement of the church at Salisbury. Not only the spire, but the two upper stories of the tower were added when these improvements were made. This was so bold an undertaking in the architect that nothing but success could justify it. Michael Angelo's conception of hanging in the air the dome of St. Peter's did not imply a stronger confidence in his own skill than was manifested in this ambitious design of raising one of the loftiest spires in the world upon a building where the foundations had already received the load which they were calculated to support. The old wall of the tower, though strong enough when it was the summit of the pile, was slight in relation to the weight which it was now to bear. Half its thickness was occupied by an open gallery, and moreover it was perforated by eight doors, eight windows, and a staircase at each of its four angles. For the purpose of strengthening it, the windows were filled up; 112 additional supports were introduced into this part of the tower, exclusive of iron braces; and 387 superficial feet of new foundation were formed. It is presumed also that at this time the arches and counterarches were raised across the small transept. The difficulties were so evident and so great that it has been said they were enough to have frightened any man in his senses from pursuing so rash and dangerous an undertaking. It has, however, withstood the storms and the sap of more than five centuries, and we are told that, if carefully inspected, it may remain twice five centuries to come. Two stories of the tower were evidently raised at the time when the spire was added. From the centre of the tower the spire rises; four of its sides (for it is octangular) resting on the walls of the tower, and four on arches raised at the angles. The wall of the tower is there 5 feet thick, two of which are occupied by the base of the spire, two by a passage round, and one by the parapet. The wall of the spire gradually diminishes till, at the height of about 20 feet, it is reduced to 9 inches, of which thickness it continues to the summit. A settlement took place in this beautiful structure, it is believed, soon after its completion, at the western side, or rather in the piers or clustered columns, under the northwestern and southwestern angles of the tower. Such methods as were deemed best have been employed at different times to counteract the danger. At the top of the parapet of the tower, the tower declines 9 inches to the south and more than 3 to the west; but at the capstone of the spire the declination is 24 1-2 inches to the south and 16 1-4 to the west. In such an elevation this is not perceptible to the most practised eye, the height being 404 feet, according to the most approved measurement. That of Strasburg is 456; that of Vienna, which exceeds all others, 465; but Salisbury is the loftiest stone building that has ever been raised in this island. The spire of old St. Paul's, which was 529 feet in height, was constructed mostly, if not entirely, of timber and lead. — *The Architect*.

PROTECTION FROM LIGHTNING.—Official German reports show that the number of deaths caused by lightning have increased by about two hundred per cent from the year 1870 to 1882. The author attributes this fact to the gradual disappearance of forests and to the greater use of metals in building construction. Lightning protectors have yielded excellent results in most cases, and it is essential that all high buildings should be provided with them. There are in general use two types: 1, the Franklin lightning protector; 2, the Melsens lightning protector. The former is the older of the two, dating as far back as 1752. It consists of a metal rod placed above the building and connected with a continuous conductor, which must be well earthed in a place where the soil is damp, otherwise accidents may occur. It is also important that the top of the protector should tower well above all other points on the building. This does not, however, afford absolute protection, for in many instances have buildings been struck which were provided with them. The second system, due to Melsens, is of a more recent date and not so well known. It depends on the following principle: that if a building were surrounded by a metallic screen which was well earthed, it would be absolutely protected against lightning. This condition is easily realized in practice. The salient points of the building—preferably metallic parts—must be judiciously connected by a metallic circuit, which must be earthed at a number of points. It is also advisable to fix metallic forks above this circuit. The latter may be of large galvanized-iron wire, phosphor-bronze or copper. The use of the forks is to prevent a discharge, and

to neutralize the charge in the clouds to a certain degree. That such an action takes place has been conclusively proved by M. Courtoy. The existence of such a protector has no influence on neighboring buildings. There is a great economy in this system, as the circuit and forks may be made light, and, consequently, easily fixed. The difference in price between the two systems is considerable. Owing to the number of paths to earth through the building, less attention is required than with the other system. The author states that no building, to his knowledge, has ever been struck by lightning which was carefully fitted with such a system, and where Melsens's principles have been observed. This system is largely used in Belgium; it has been recommended by L'Académie des Sciences in France, notably for powder factories and magazines, and has also been adopted in England for protecting ships. — *Boston Transcript*.

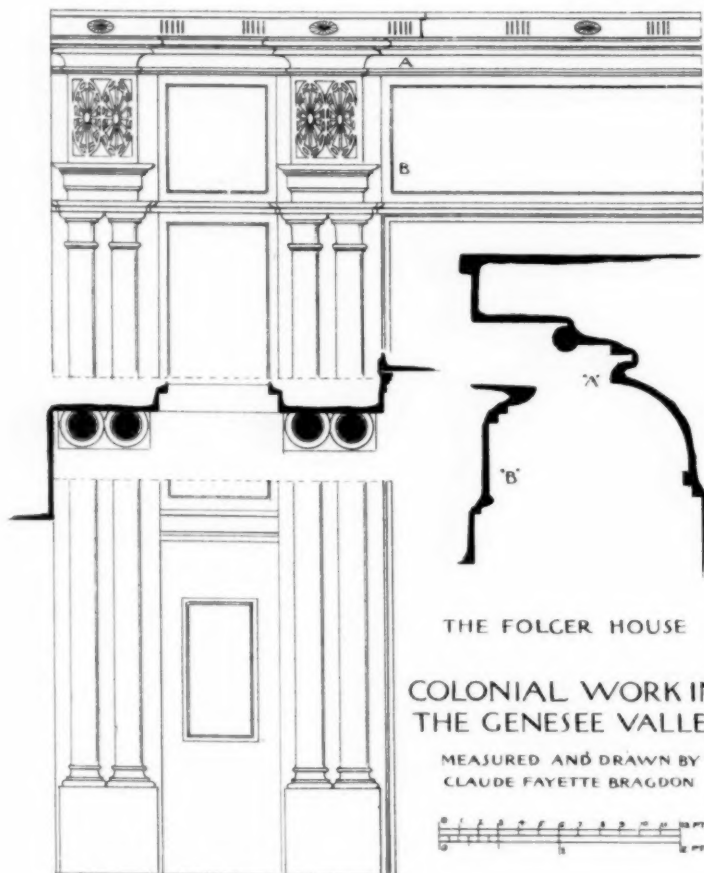
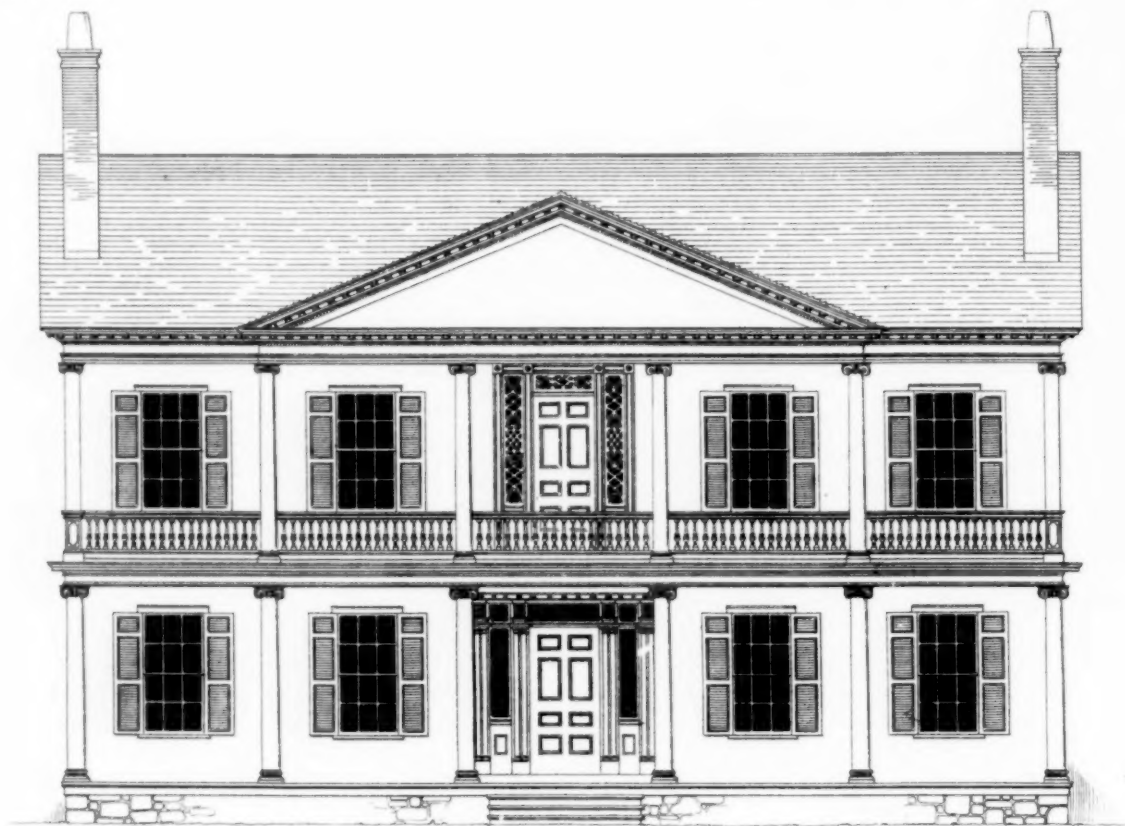
A REGULAR WHO THINKS.—"Carrying a gun and shooting when you are ordered to shoot is a business the same as laying brick or making a boiler to the average regular soldier," said one of the privates of the company now guarding the Custom-house. "These people," he continued, "who call themselves laboring people, and who jeer at us and insult us, seem to forget that when a man enters the regular army in times of peace, he doesn't do it from any particular motives of patriotism. It is a business with him, and it has less of freedom in it than any class of labor that I know anything about. A regular is absolutely under the eye of his superior, day and night. He can't go across the street without permission. He has requirements made of him every hour in the day. He undergoes about as many privations as any laboring man I ever heard of. I wonder if some of these civilians who think proper to jeer at us and insult us, as many have done in Chicago, ever stop to realize what we have done for their welfare and good in other times? I wonder if they think we have been kept, sometimes for months and years, away from the civilization which has given them so many advantages? I wonder if they think we are doing this thing for our health? The regular private is as much of a laboring man as any now on a strike; he is under a contract, the violation of which means disgrace, if not death. And yet it has remained for us, who have been among Indians and snow-storms and all privations, to come here, under orders, to be insulted and spitefully used." — *Chicago Herald*.

ERECT INHUMATIONS.—Clement Spelman, of Narburg, Recorder of Nottingham, who died in 1679, is immured upright enclosed in a pillar in Narburg Church, so that the inscription is directly against his face. Thomas Cooke, who was a governor of the Bank of England, from 1737 to 1739, and who had formerly been a merchant residing in Constantinople, died at Stoke Newington, August 12, 1752, and by his directions his body was carried to Modern College, Blackheath, of which he was a trustee; it was then taken out of the coffin and buried in a winding sheet upright in the ground, according to the English custom. Jonson was buried at Westminster in an upright position; possibly this may have been on account of the large fee demanded for a full-sized grave. It was for a long time supposed that the story was invented to account for the smallness of the gravestone; but, on the grave being opened some years since, the dramatist's remains were discovered in the attitude indicated by tradition. The following quotation from Hearne's "Collection of Antiquarian Discourses," Vol. I, p. 212, shows that the upright position of burial was anciently adopted in the case of captains of the army: "For them above the ground buried, I have by tradition heard that when any notable captain died in battle or camps the souldyers used to take his bodye and to settle him on his feet uprighte and put his launce or pike into his hand and then his fellowe souldyers did travel and every man bringe so much earth and laye about him as should cover him and mount up to cover the top of the pike." — *Westminster Review*.

AN OBJECT-LESSON IN PROFITS: THE OTHER SIDE.—The report just made public of the result of the attempt to operate a rolling-mill at Hubbard, Ohio, on the coöperative plan is extremely interesting. After paying up all outstanding indebtedness there will be a surplus of about 25 per cent to distribute to the stockholders out of the 50 per cent of the wages that have been retained by the managers to create a capital. This is equivalent to a reduction of 25 per cent in wages for the time that the mill was in operation; in other words, in order to get out even, the company could only afford to pay 75 per cent of the wage scale. This should be a practical lesson to rolling-mill hands of the difficulties which now beset employers. If men who are working absolutely in their own interest, and are, therefore, watching every corner and practising the utmost economy in fuel consumption, care of furnaces, breakage of rolls, etc., cannot show better results, how can they expect full wages to be paid by manufacturers whose workmen have no financial interest whatever in the plant? By what *hoc-us-pocus* can the average mill make a profit when a mill run by first-class men, as this one undoubtedly was, shows such a loss? — *Iron Age*.

STEPS TO PRESERVE KARNACK FROM THE NILE FLOODS.—The Society for the Preservation of the Monuments of Ancient Egypt, the headquarters of which are in London, is doing good work at the mines of Karnack. The French engineer, Grand Bey, showed that the Nile water, which floods these ruins annually, takes up from the soil certain salts that gradually eat away the stones of Karnack near their base, and have already caused the fall of many pillars. The Society has made arrangements with M. Jacques de Morgan, Director-General of Antiquities, to pay the expenses of the erection and running for two years of a steam-pump and engine-house, all supplied by the Society. The pump is to carry off the inundation water as fast as it enters. After two years the Egyptian Government is to assume the cost of keeping up the plant and operating it. The Society has collected about \$3,500 and wants \$3,000 more. Donations may be sent to Edward J. Poynter, Honorary Secretary, 28 Albert Gate, London. — *N. Y. Times*.

AT GENEVA

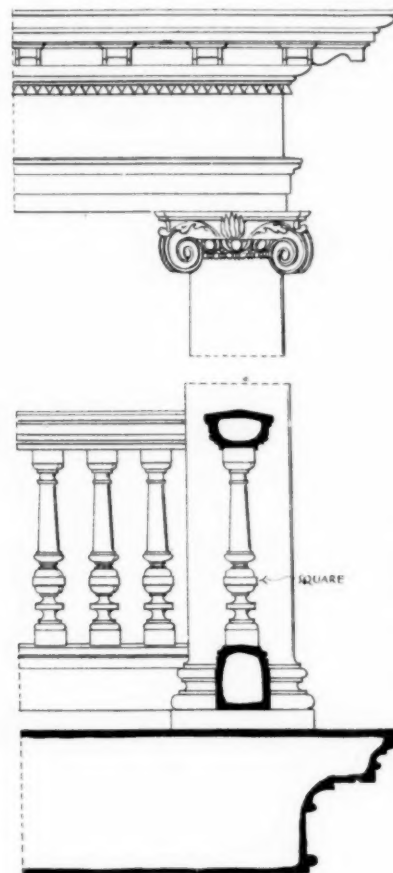
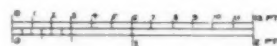


DETAIL OF ENTRANCE

THE FOLGER HOUSE

COLONIAL WORK IN
THE GENESEE VALLEY

MEASURED AND DRAWN BY
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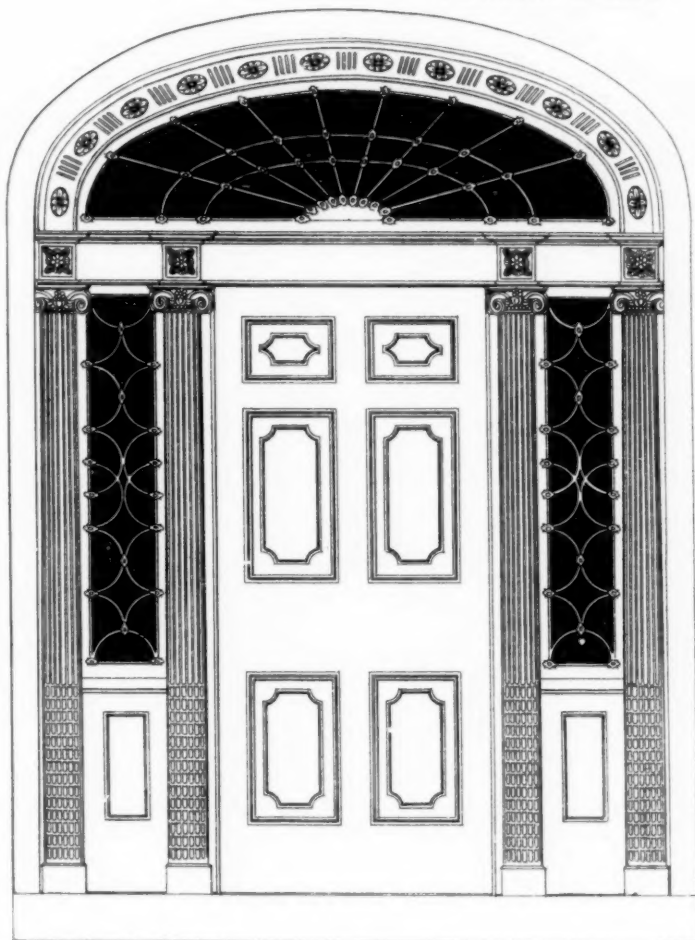
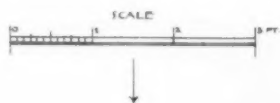
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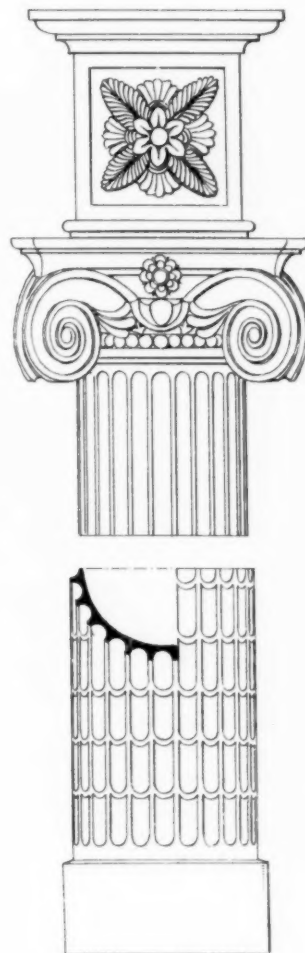
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