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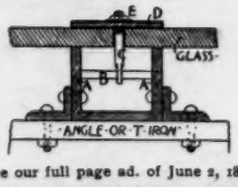

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DECEMBER 1, 1894.

CONTENTS

THE proceedings of the New York Tenement-house Commission are interesting, although they do not promise, as it seems to us, very tangible results. At the last meeting, the dirtiness of such houses appears to have been the principal theme of conversation, after that of the rents. One witness testified that the rent of tenements in New York was twice as great as in London, which, if true, only proves that the tenants of such houses fare much better than those of independent dwellings, the annual rent of which in New York would nearly buy the freehold of a similar mansion in England. Possibly this reflection occurred to some of the members of the conference, for the discussion immediately wandered off to the dirt question, and a clergyman, who had had much experience in tenement-house relief, said that fifty barrels of dirt were taken from a single tenement-house in his district, in the course of the operations undertaken last winter to give employment to needy persons. After the horror caused by this revelation had subsided, a lady, connected with the College Settlement, observed that she thought the tenants themselves were partly to blame for the untidy condition of their dwellings; and the Secretary of the Church Temperance Society, Mr. Robert Graham, acknowledged that much of the evil condition of tenement-houses was owing to the unthriftiness of the women living in them.

THE last admission, as it seems to us, marks the approaching return of common-sense to the tenement-house discussion. We have had enough, and more than enough, of affecting rubbish about the landlords of tenement-houses, and their oppressed victims who are unable, because of the rapacity of capitalists and the neglect of a cold world, to bring their bodies and their habitations into that state of perfect purity for which they yearn; when the fact is, as every one knows, and will say so freely when the deluge of cant has passed by, that two-thirds of the inhabitants of New York tenement-houses believe the application of water to the skin to be injurious, and have never used a piece of soap, or a mop, in their lives, unless compelled thereto by the prejudices of some "oppressor." We once had a controversy with a tenant, a man of very respectable character, too, who insisted on keeping a calf in the cellar of his house. There was no reason why he should do so; he had the use of a large barn, but the calf liked to stay in the cellar, and he liked to have him, and he could not see why the landlord, or any one else, should object to this comfortable arrangement. This man was reputed to be worth twenty thousand dollars, and was probably worth more, yet he preferred the company of his little calf, dirt and all, to the incomprehensible delights of baths and disinfectants, and there are millions more of very good people who agree with him. We, that is, the small fraction of mankind who have studied these things, know that dirt, in the long run, brings disease and unhappiness, and we could tell the hero of the calf episode that the death of his pretty daughter, which nearly broke his heart not long afterward, was probably hastened by neglect of the sanitary precautions of which he thought so lightly; but it is folly to begin by assuming that he and his like really long for scrubbing-brushes and Turkish-baths, and are only prevented from enjoying them by the machinations of landlords. The fact is that the tenement-houses of our cities ought to be cleaned, and kept clean, not because the people who live in them want them so, but because it is dangerous to the health of other people to have them dirty; just as persons who carry on offensive manufactures are restrained, not because they wish to be, but for the sake of other people; and if this is to be done effectually, the fact should be recognized that it must be done against the will of the tenants, and that, if the cleanliness is to be maintained, some sort of force will have to be applied to the very people who will profit most by it.

THE overthrow of the Tammany Hall party in New York appears to have unloosed the tongues of a good many people who have suffered extortion and oppression from petty officials, but who have not dared to complain, for fear of the terrible revenge which these banded ruffians had it in their power to visit on them. Among other persecutions, those practised in the name of the Department of Buildings are now likely to be disclosed. It is no secret that it is prudent to add a certain percentage to the estimated cost of building in New York, to cover the expense of facilitating the necessary transactions with the officials whose approbation is required; but the owners and architects rarely know how this money, which is usually entrusted to a contractor or foreman, is expended. A correspondent of the *Evening Post*, however, lets in a little light on the subject by recounting two actual occurrences. Not long ago, a man desired to add a bay-window to the front of his house on Fifth Avenue. The window was planned, keeping well within the restrictions imposed by the city ordinance, and it appeared as if nothing was necessary but to make a contract and have it built. Just then, however, a representative of the Building Department appeared on the scene, and forbade the construction of the window. He had no authority, so far as appears, either to forbid or consent to it, but, rather than have this question referred to the courts, for decision some years hence, the owner made an amicable arrangement with the official, by which the latter, in consideration of two hundred and fifty dollars, changed his mind in regard to his rights and duties in the premises, and allowed the building of the bay-window to proceed. In another instance, a lady wished to extend the dining-room of her house. The rear wall of the room had just been torn down, preparatory to moving it farther out, when "the representative of the Department to Discourage Building" called, and forbade the prosecution of the work, on the ground that the wall was "unsafe." The lady, in much distress, consulted the contractor, to see whether the wall could be restored to its old condition, and the extension given up. The contractor assured her that a hundred-dollar bill, handed to the official, would at once remove his objections; and the experiment was tried, with complete success.

A CURIOUS accident took place a few days ago in Newark, N. J. A wholesale bakery occupied a two-story building, measuring about sixty by forty feet on the ground. In the rear part of the upper story were stored two hundred barrels of flour, and twelve hundred bushels of rye. Some seventy bakers were at work in the first story, and four or five masons were repairing a wall in the cellar, when the upper

floor gave way, and fell, carrying the first floor with it into the cellar. What became of the bakers in the first story is not stated, but of the masons in the cellar two were badly hurt, and may die of their injuries. The newspapers, with their usual carelessness, say that the weight on the upper floor was estimated at "thirty tons," and that the police thought it was overloaded. When a floor falls down, it is generally safe to presume that it was overloaded, but the newspaper figures leave us quite in the dark as to the amount of the overloading. It is obvious that two hundred barrels of flour, and twelve hundred bushels of rye would weigh nearer sixty tons than thirty, so that we cannot say whether the character of the load or its weight is misstated. Supposing the flour and grain to have been confined to half the floor area of the upper story, the load, if they weighed thirty tons, would have been only fifty pounds to the square foot, a mere trifle for any floor; while, at sixty tons, it would have been only one hundred pounds per square foot. It is hardly necessary to say that accuracy in such statements is very desirable. When men are killed or hurt by the falling of overloaded floors, some one is to blame; and the proper placing of the blame, or of the penalty, if the case is serious, depends upon having the facts correctly stated.

MR. JOHN WELCH, formerly a prominent architect in Brooklyn, N. Y., died suddenly a few days ago, at the age of seventy. Mr. Welch was a Scotchman by birth, and was trained to his profession in Scotland and England. His first important building in this country was a church at Newark, N. J., built in 1859. From that time until recently he had been chiefly engaged in church-building, his best-known work being Dr. Talmage's Tabernacle, built in 1872.

MR. WILLIAM T. WALTERS, one of the best-known collectors of objects of art in the United States, and a generous and discriminating patron of artists, died at his home in Baltimore a few days ago, at the age of seventy-four. Mr. Walters's artistic tastes were the development of a strong natural instinct, to which the circumstances of his early life gave little scope. He was born in a little logging town in Pennsylvania, where his father was the storekeeper and general moneyed man, and was sent to Philadelphia to be educated as a civil and mining engineer. Beginning work in his profession just as railroad-building commenced in Pennsylvania, he surveyed several of the new lines, and located coal-mines in various parts of the State. While still very young, he gave up engineering and came to Baltimore, where he established himself as a wholesale liquor and commission merchant. He was very successful in business, and in the investments which he made of his savings, and accumulated a great fortune, amounting now, as is estimated, to ten million dollars. Very early in life, he began buying works of art, and his galleries now contain one of the largest and most valuable private collections in this country. In 1861, he went abroad, where he remained four or five years, living much among artists, and gaining a thorough acquaintance with French art in particular. Returning to this country, he was chosen by Mr. Corcoran as a Trustee of the Corcoran Gallery at Washington, and was made Chairman of the Purchasing-committee, and represented the United States as Commissioner of Fine Arts at the Paris Expositions of 1867 and 1878, and the Vienna Exposition of 1873. He published, in 1885, a critical notice of Barye, and published also a collection of "Notes upon Certain Masters of the Nineteenth Century." He was also interested in Percheron horses, and did much to introduce them into this country, and published a book on the subject, which he translated from the French.

AN interesting story is told of a part of Mr. Walters's collection. While he lived in Paris, he often went into a little restaurant, frequented by artists, and kept by a man named Léon Bonvin. One day, Bonvin modestly told Mr. Walters, whom he knew to be a kind-hearted picture-lover, that he had tried his hand at "some little things," which he would show him, if he wished. Mr. Walters politely replied that he would like to see them, and Bonvin brought out some seventy-five small pictures, mostly studies of flowers, painted with a sentiment and talent which the experienced collector instantly recognized. He bought at once sixty out of the seventy-five pictures, paying the modest artist much more than he asked for them, and carried them off. A few days later Meissonier, who had heard from Mr. Walters of the artist of the restaurant, made his appearance, and asked to look at the pictures. Bonvin brought out those that remained. "Why did you not tell me that you could paint?" said Meissonier, reproachfully, and bought them all. Three months later, poor Bonvin died, and the collections of Mr. Walters and the Meissonier heirs contain all that represents a great artist.

WE have had the Annual Report of the Boston "Architect Department" lying for some time on our table, waiting for a favorable moment for examining it with the care it deserves, and it is a pleasure to be able to say that we find it more interesting and satisfactory than ever before. We have, in general, a low opinion of official architecture, but Mr. Wheelwright has certainly an extraordinary capacity for combining the administration of the business part of his office with close control of the artistic part, and the designs, which are illustrated in the book by excellent heliotypes, and by reproductions of the pretty perspective sketches for which the Boston City Architect's office is celebrated in the profession, show anything but the stereotyped monotony of ordinary official architecture; while some of the buildings, as, for example, the Austin Farm Chapel, the Contagious Diseases Hospital, the Warren Square Hook-and-Ladder House, the Pierce Farm buildings, and the Fire-Department Headquarters, are of remarkable interest. One of the most curious and instructive portions of the book is the transcript of the accounts with the new buildings of the year. The appropriation is placed on the credit side, and the buildings are debited with all expenditures on them, including contracts and extras, and crediting the deductions for omissions. Every item is put down with the utmost frankness, and we commend the account to people who think that the ordering of extras is an unpardonable sin in an architect, as a good illustration of the way in which a careful and intelligent architect studies his work as it goes on, adding a little to the contract here, and saving something there, but, by this revision, constantly bringing his building nearer to the ideal of economy and utility.

THE Garbage Commission appointed by the Mayor of New York to consider the subject of the disposal of the garbage of that city has submitted its report, in which it says, unhesitatingly, that the present system, under which ashes and garbage are dumped into the harbor, should be abolished, as "unqualifiedly bad," and a new system substituted, under which householders should be compelled, as is done in Boston, to separate ashes from kitchen refuse, or garbage proper, and the true garbage should be treated by some good "reduction" or utilization process, the mineral portions being shipped to suitable points around the harbor, and used for filling. As the city has a large amount of garbage, some eight hundred tons, to be disposed of daily, the Commission, observing that some time will be required for making the necessary preparations, advises that steps be taken at once to invite proposals for removing and treating the garbage, so that the system adopted may be in working order by next summer.

A WRITER in the *Deutsche Bauzeitung*, who has been travelling in the United States, is much impressed with the variety of illustrated books, containing plans and perspective drawings for houses of moderate cost, which he has found there. Reflecting that the taste for independent dwellings is very prevalent in Germany, he thinks that books of this sort would be useful there, and he takes pains to furnish a list of the authors and publishers of those that he has found, with their addresses; so that "The Saving and Sensible Architectural Bureau," of Cleveland, and the authors of a large number of works on "Artistic Homes," "Sensible Low-Cost Houses," "Practical Modern Houses," "Artistic One-story Houses," have had a gratuitous advertisement which we hope may be of profit to them. He gives a page of illustrations, which do not give a very high idea of the beauty of the "Practical" and "Sensible" and "Low-cost" designs, or of the excellence of their planning, but the average German "Einzelwohnhaus" is about as devoid of æsthetic attractiveness as a structure can well be, while its planning is primitive to the last degree, so that even the factory-made designs at which real American architects laugh may give new and valuable ideas to the builders of suburban cottages in the great German manufacturing communities.

STRAINS IN COMPOUND FRAMED STRUCTURES.[1]—I.

DEFINITIONS AND CHARACTER OF STRUCTURES.

THE structures under treatment are assumed to consist of a combination of secondary trusses or frames composed of longitudinal or meridional members, chords, placed at the corners of the polygon, to resist the bending strains from the transverse force, wind, and to support the vertical forces, weight of construction and superimposed load.

Horizontal struts, joining one chord with another, form the sides of the polygon and subdivide the structure into zones or sections; they are to resist the transverse or shearing force and deformation of the polygonal frame, as also the components from the vertical forces in pyramids; these will be termed "ring struts."

The tendency to deformation of the panels of each zone formed by the chords and ring struts, caused by the shearing force, is resisted by diagonal members, either struts or ties; tension members, only, will be considered in the following analysis.

The deformation of the horizontal polygonal planes, already mentioned, that lie between each zone is resisted by any convenient system of bracing. An interlacing of tension members, placed between every alternate joint of chords and ring struts in the plane, has been adopted in what follows: These will be called "ring ties." These, in a sense, rigid planes transmit the shearing force, acting at the plane, equally to all the joints at the corners of the polygon, where it is resisted by the respective diagonals and chords in proportion to their efficiency, depending upon their respective coincidence with the direction of the external forces affecting them.

GENERAL PRINCIPLES OF STATICS APPLIED.

1. All forces acting at a joint shall balance each other.

2. The resultant opposing the displacement of members meeting at a joint is central at the middle of the joint.

3. A compound or primary structure may be subdivided into a combination of simple or secondary trusses or frames to resist the external forces. In such combinations the same members may often form parts of different frames.

4. When the same member forms at the same time part of two or more different frames, the strain on it is the resultant of the several strains to which it is subject by reason of its position in the several frames.

5. In compound structures, several frames, without being distinguishable into primary and secondary, are combined in such a manner that certain members are common to two or more of them, their strains are to be determined as in §4.

6. When the forces act all in one direction, the magnitude of their resultant is their sum, and their resultant will pass through their common centre-of-gravity.

7. When the forces act in contrary directions: Find separately the magnitude and resultant of the forces which act in two contrary directions, respectively; if the two resultants are unequal, find the final resultant; if they are equal, they form a couple, and have no single force as a resultant.

8. When the centre-of-pressure is at the centre-of-magnitude of the pressed surface, the intensity will be uniform throughout the surface.

9. When the centre-of-pressure varies simply as the perpendicular distance from a given axis, the pressure will be uniformly varying.

10. In compound framed structures, composed of secondary frames combined into a primary, each secondary frame will have its own axis of rotation; their common axis, that of the primary frame, may or may not be at the centre-of-gravity of the plane of rotation as in a homogeneous body.

11. If a frame be acted upon by any system of external forces, and if that frame be conceived to be completely divided into two parts by an ideal surface, the stresses along the members which are intersected by that surface balance the external forces which act on each side of the two parts of the frame.

12. If not more than three members are cut by the ideal surface, the problem is determinate; if more than three members are cut, the problem is or may be indeterminate.

[1] By Francis Schumann, Engineer. Theory of strains in compound framed structures: Applicable to towers or piers, prismatic or pyramidal or both combined, polygonal in plan, subject to transverse and vertical forces.

EFFICIENCY OF THE WEB TO TRANSMIT STRESSES.

The theory generally accepted for the flexure of beams of solid section is deficient in that it ignores the efficiency of the web portions for transmitting the stress from fibre to fibre and ultimately to the flanges or outer fibres. By reason of a want of homogeneity and a consequent diminished efficiency, other than uniformly varying stresses may occur in the section; the axis of rotation, or neutral axis, may not pass through the centre-of-gravity of the section but alongside of it.

In framed beams, especially such as contain intermediate chords, the members between the chords, constituting the web, assume an importance, paramount with the chords, for resisting the bending-moment; the shearing force first asserts itself to be resisted by the web, which in turn transmits to the chords, to be finally held in equilibrium by the reactions at the points of support.

When the web bracing of the subdivisions of a framed beam, which are formed by a series of chords, are of equal efficiency, the inner chords, that is those nearest the neutral axis, cease to act as members to resist bending directly, but become web members to transmit transverse forces to the outer chords, which finally resist the total bending-moment caused by the transverse forces. Were the beam a cantilever, for example, the reactions at the points of support would be null for the inner chords, whilst the outer ones would have reactions equal to the bending-moment. The inner chords may come into action to resist bending, if the web divisions vary in efficiency to transmit the transverse forces.

The maximum efficiency of a web is where the plane in which the members lie coincides with the direction of the external force; the efficiency decreases with the inclination between them. A case in point would be a cantilever, rectangular in section, composed of four chords, one at each corner, braced with ties and struts, subject to an external transverse force which would cause the axis of rotation to be at an angle of, say, 30° with one of the sides; the two sides least inclined to the force would be more effective than the others. The proportion of the total bending-moment transmitted to the points of support by a web and its chords will be as its efficiency. Thus, the plane embracing the diagonals of a side perpendicular to the external transverse force would be inefficient and incapable of transmitting any bending-moment.

APPLICATION TO PRISMS AND PYRAMIDS.

When the structure is subject to vertical forces only, the strains in diagonal and ring struts of a prism will be null, and the vertical forces will be resisted equally by the chords acting as columns; whilst in pyramids, the ring struts and chords will resist the horizontal component of the vertical forces and vertical forces respectively.

In prisms, the axis of rotation of the moments from the transverse forces will pass through the centre-of-gravity of the horizontal plane, whilst in pyramids, with web bracing, it moves towards the side from which the forces act, being due to the diminished efficiency of the web of the opposite sides of the polygon; the transverse forces being assumed to be normal to one of the sides of the polygon with an even number of sides.

In a pyramid the efficiency of the diagonals, in the sides, inclined to the direction of the force, tend to diminish towards the apex, hence the centre of action of the external transverse forces, or lever arm of the bending-moment of the respective side is shorter than in a side having more efficient diagonals.

Each side of the polygon, treated separately, will have its own axis of rotation and the common axis of rotation for the combined sides will be at their common centre-of-gravity.

Pyramids without web bracing, to which belong the apex portion of any pyramid, are treated similarly to prisms, each side is considered as a secondary truss or frame. When a side of a pyramid is developed to a normal plane, upon which the lever arms are measured for the bending-moments, the strains found will give reactions in the same plane of development; the vertical reaction for the primary or combined structure will be the reaction in the plane multiplied by the cosine of its inclination, when in final position, with a vertical.

The reactions from the bending-moment in an apex of a pyramid, or one without web bracing, the chords forming a joint, are directly as their distances from the axis of rotation, which will pass through the centre-of-gravity of the polygonal plane of rotation.

When a pyramid surmounts a prism, the strains in each should be obtained separately; the vertical reactions from the moments in the pyramid being first determined and applied to the prism as external forces. Without separate treatment the determination of resultants and strains at the joints of intersection of the prism and pyramid become complicated and confusing.

As heretofore stated, the horizontal plane between the zones must be capable of resisting deformation; they transmit the total shearing force, acting at the plane, to the joints at the corners of the polygon.

The efficiency of a diagonal in the sides of a pyramid inclined to the direction of the transverse force, varies as the cosine of its inclination, on a horizontal projection, with the direction of the transverse force. Where the inclination is 90°, the diagonal ceases to act, and where the inclination is 0° or parallel to the force, it is of maximum efficiency.

METHOD OF PROCEDURE FOR OBTAINING THE STRAINS, SPECIALLY APPLICABLE TO OCTAGONAL STRUCTURES: JOINTS HINGED.

1. Proportion the transverse forces, from the wind, acting as a shearing force at each joint of the horizontal plane, in accordance with the efficiency of the diagonals affected.

2. Develop, separately, each side of the structure, constituting secondary trusses or frames, in which the strains differ, to a normal plane, being the two oblique sides on the windward and leeward sides of the structure and the sides parallel to the direction of the wind; the sides perpendicular to the wind, being, in effect, null.

3. Proceed to determine the strains by any desired method, analytical, graphical or otherwise, using for external forces the allotment found for each separate side of the octagon developed; the development of a side being now a plane in line with the direction of the force.

4. When the strains have been obtained for each separate division of the octagon, conceive the sides to be united on a line central with the chords, in which the strains will now be the resultant of the strains found when separated.

5. The strains obtained for the secondary frames, whose planes are inclined to the direction of the transverse force, must provide for the decrease in efficiency of the members when in their final position in the structure.

RÉSUMÉ.

1. The horizontal planes must be sensibly rigid to resist deformation.

The total shearing force, existing at a plane, is transmitted by it to the joints at the corners of the polygon.

2. The deformation of the sides of the zones is resisted by their respective diagonals in a ratio depending upon the inclination of their vertical planes (of inclined sides with force) with the direction of the external force.

3. The reactions resulting from the transverse force at the apex portion of a pyramid will vary as their distances from the axis of rotation, which coincides with the centre-of-gravity of the horizontal plane from which the apex springs.

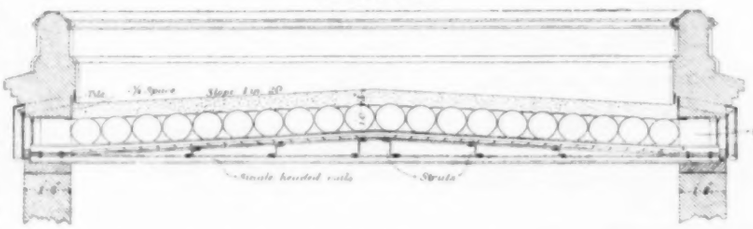
4. The vertical forces, when their centre-of-action coincides with the vertical axis of the structure, will be equally divided between the eight chords.

(To be continued.)

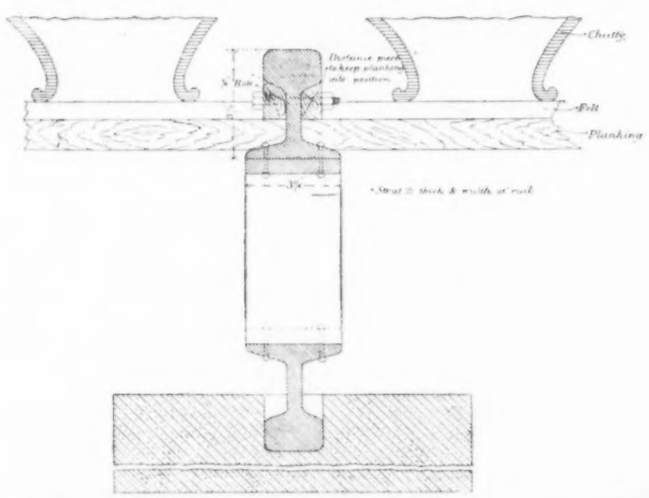
DESCRIPTION OF A CHATTY ROOF.

FIRST and foremost the object of using chatties is to have the coolest roof possible, as it will be seen in the section that ventilating holes are left in the walls so that there may be a constant circulation of air throughout the roof.

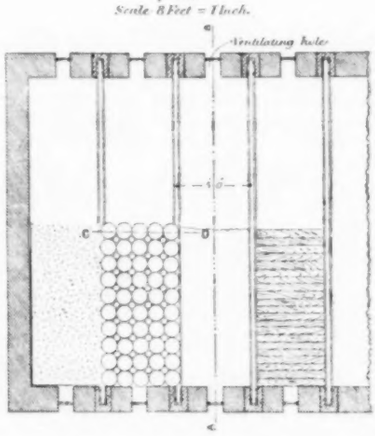
CROSS SECTION ON A.B
Scale 4 Ft. = 1 Inch.



ENLARGED SECTION AT A.



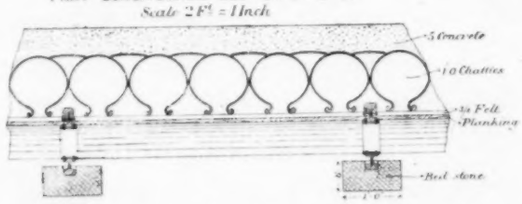
PLAN.
Scale 8 Feet = 1 Inch.



The roof itself is practically double and is made as follows: —

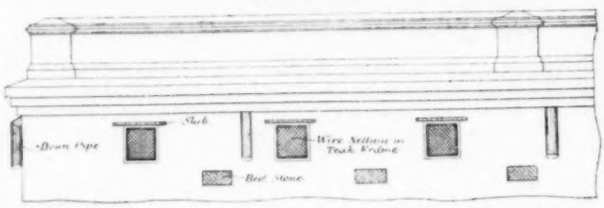
1. The section here shows the use of single-headed steel railway rails for girders, made in the form of a truss, in order that the slope of the roof may not be given by increasing the thickness of concrete in the middle of roof, as also making a girder sufficiently strong enough to bear the weight of roof-covering.

PART LONGITUDINAL SECTION ON C. D.
Scale 2 Ft. = 1 Inch.



2. The spacing of these having been decided upon, planking is laid on the bottom flanges of the upper rail (as in section) and extending throughout the roof, thereby making this a kind of ceiling as well, the width of planks being between 4½″ to 6″, and the thickness decided by the weight of roof and spacing of girders.

PART ELEVATION



3. Over these, ¾-inch felt is laid, and again over the felt the chatties, of 12″ in height, are placed (mouths downwards), and as shown in both plan and section.

The space formed between four chatties is covered by earthen pans, made to exactly cover the opening so formed, which will then bring the whole roof to a tolerably even surface.

4. When these have been laid, the concrete is proceeded with, but great care is required in beating this down, as it requires gentle beating until pretty well set, after which it may be treated as for ordinary terraced roofs, when there will be no fear of the chatties breaking. This is probably the greatest objection to a roof of this kind, but with careful supervision a reliable roof can be made.

5. The object of the felt is to deaden the weight coming onto the planking during the consolidation of concrete, without which both the planks and chatties would be liable to damage.

6. Between each set of girders ventilating holes are left in the outer walls (as in section and elevation), to allow of a constant

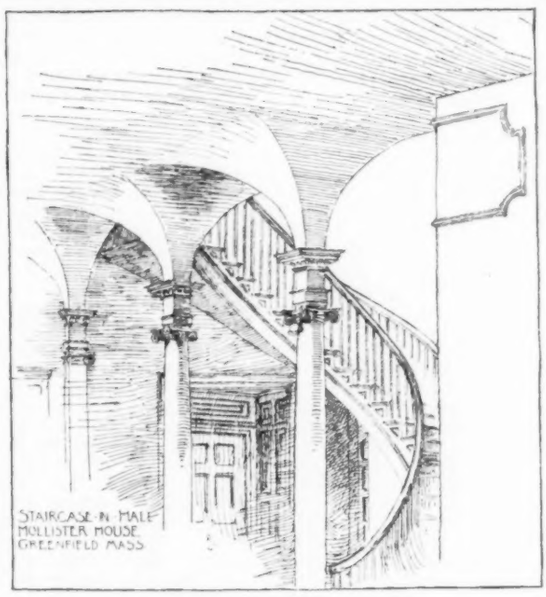
circulation of air, and thereby keeping the roof always cool. The openings to be covered with wire netting on teak frames to prevent the ingress of birds, etc., into the roof.

7. It will be seen in section that the concrete is not allowed to enter the parapet wall, but is kept distant from it three-fourths of an inch. The ends of concrete are made to curve upwards and, to prevent the water from topping this, the inner side of parapet wall is projected over, and a continuous range of tiles cemented on to it and extending to the top of the concrete, the whole afterwards being plastered. The object of this is to prevent the concrete from cracking by the expansion and contraction of roof materials, especially when iron is used, it having been proved that the concrete entering or even touching the walls is the cause of one-half of these roofs leaking, and the only way to prevent this is to allow it to move with the roof during the expansion or contraction of the materials comprising the roof. — *D. Upson, in Indian Engineering.*

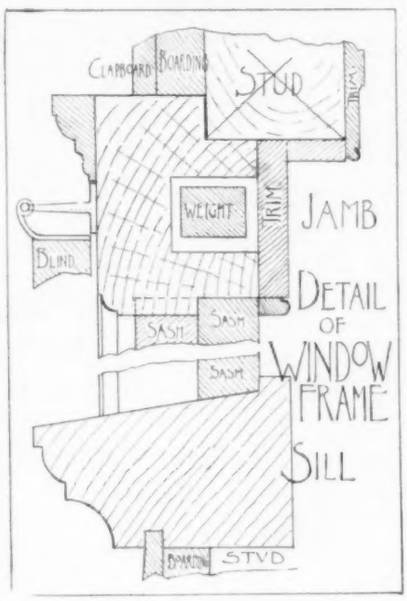
COLONIAL ARCHITECTURE IN WESTERN MASSACHUSETTS.[1] — II.

OF the distress occasioned by the War of the Revolution, the inhabitants of Western Massachusetts bore their full share, for though they were not exposed as were the dwellers on the coast to Great Britain's navy, and their comparative isolation and slight numbers secured them in a large degree from the more important movements and designs of the enemy, they made up a part of the frontier close to that debatable ground, which witnessed the most bloody and barbarous conflicts in the struggle with the mother country, and the Indian allies of the British were a potent factor in their dread, for the generation was still living and active which had seen and felt the horrors of Indian warfare. The very strongholds which had been the colonists' defence, the trails and roads which they had opened, became, on the breaking out of the war, their greatest danger, and an enemy could strike from the depths of the forest about them more terribly than from the wide expanse of the Atlantic. With the fall of Bourgoyne came some relief from immediate peril; but Canada lay always to the North — a continual menace until the war had closed.

So it was that there was but little important building done here during the Revolution — at its close the country was exhausted, and Western Massachusetts bore its share of the general exhaustion. But though many fortunes had been lost, others had been gained; while the war crippled many industries, it built up nearly as many others, and many of these latter were exceedingly profitable ones,



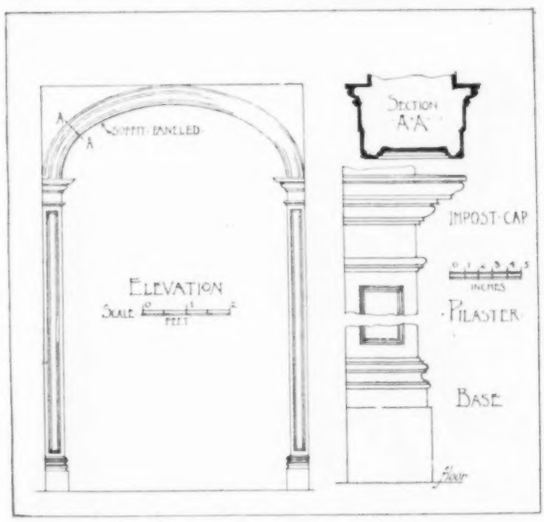
and the natural result of this state of affairs showed itself in the latter part of the eighteenth century in the building of many new houses, larger and more elaborate than any that had gone before. Houses, too, which stood out from the majority in sharper lines of contrast to their neighbors, for until this opportunity presented itself for the accumulation of wealth, the money in these communities had been much more evenly divided. Then, too, the war had moved the people about geographically as well as socially; they had gone from the country to the city, and come from the city to the country, and so it was that new ideas and innovations were brought in.



Even before the Revolution, Boston and its vicinity had apparently had an "Art awakening": the introduction to the "*Town and Country Builders Assistant*," published at "shop near Boston Stone," by J. Norman, Architect, seems to indicate a movement of this sort. He says in this "Introduction" to the volume of plates and texts, which he frankly remarks are "made familiar to the meaneſt capacity": "The greateſt pleaſure that Builderſ and workmen of all kindſ have of late yearſ taken in the Study of Architecture, and the great Advantageſ that have accrued to thoſe for whom they have been employed, by having their Workſ executed in a much neater and more magnificent Manner than waſ ever done in thiſ Country before, haſ been the real Motive that induced me to the Compiling of thiſ Work for their future Improvement.

"Beſideſ aſ the ſtudy of Architecture iſ truly delightful in all itſ Proceſſ, itſ practice iſ evidently of the greateſt Importance to Artificerſ in general, and itſ Ruleſ ſo eaſy aſ to be acquired at leiſure Timeſ, when the Buſineſſ of Day iſ over by way of Diverſion; Tiſ a Matter of very great ſurpriſe to me how any Perſon dare preſume to diſcourage otherſ from the Study thereof, and render them very often leſſ ſerviceable to the Public than ſo many Bruteſ. But to prevent thiſ Infection from diffuſing itſ poiſonouſ effluviaſ any further, and in conſideration that amongſt all ſortſ of people there are ſome in whom nature haſ inplanted that noble Faculty of the Soul called REASON WHEREBY WE JUDGE OF THINGS, I have therefore, at very great expenſe, compiled this Work for the common Good of all *Men of Reaſon*" etc.

This "awakening," the Revolution by its before-mentioned shifting about, undoubtedly spread, and one of its results in this region was the publication at Greenfield, in 1797, of the "*Country Builders Assistant*," by Asher Benjamin. As nearly all of the existing "Colonial" work later than 1793 probably owes what it has of artistic merit either to this eminently practical little volume, or to the author



Archway in Hall, Springfield, Mass.: 1800.

[1] Continued from No. 977, page 100.

— who was a carpenter — it deserves more than a passing mention. The book contains thirty copper-plates with a "Printed Explanation to each," which, taken all together, give a pretty thorough exposition of the construction and artistic detail of a house in those days. A half dozen of these plates I have redrawn; for, intended as they were for working details, they are not without interest.

Plate 1 is mainly of door and window trim, which the author states should be $\frac{1}{7}$ or $\frac{1}{8}$ of the width of the door or window. The frieze over the door or window should be $\frac{1}{4}$ wider than the trim and the cornice $\frac{1}{8}$ or $\frac{1}{9}$ of the trim.

Plate 11 shows "Ionic and Corinthian Frontf . . . with all their partf figured for practice which if plain to infpection."

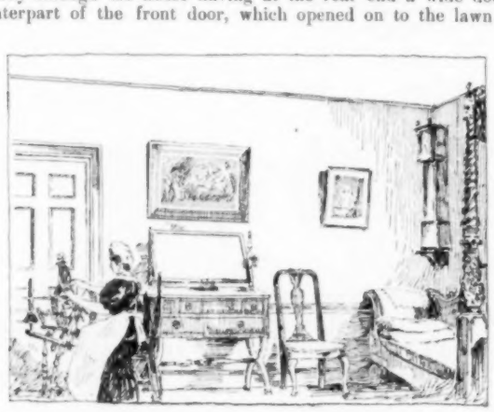
Plate 14 "if a group of cornicef, and to proportion them to roomf or any other place required, divide the whole height of the room in twenty-two, twenty-four, or twenty-fix partf, and give one of thofe to the cornice. . . . If ufed on the outfide of buildingf, divide the height into nineteen or twenty partf, one of which will be the height of the cornice."

Plates 15 and 16 are of pedestals and imposts, the proper depth of the latter being $\frac{1}{10}$ or $\frac{1}{20}$ of the height from the floor to the springing of the arch. While Plates 19 and 20 are chimney-pieces drawn to scale with their details "half size." Of the remaining plates in the book, eight are devoted to the explanation of the orders; there are one or two plans and elevations of houses and a church, details of staircases, doors, windows, etc., in fact, all that an intelligent builder a century ago really needed.

The Colton House, Agawam, Mass.

Of the earlier books printed about this time, some earlier, some later, —"*Builders' Jewels*," "*Gentlemen's and Builders' Repositories*," "*Builders' Companions*" — I know of none that approach as closely the Colonial spirit, as it is embodied in this region, as Benjamin's little book. His plates are poorly done, but here is the translation of the Classic into the vernacular — Jones and Wren adapted to the necessities of pastoral New England.

Just about the time that Benjamin published this book, he built for Mr. Samuel Coleman, of Worcester, the house in Greenfield now owned by Mr. Hollister. It is one of the best examples of the work of its time in this part of the State. Coleman failed before the house was done, (let us hope that the architect was not one of the causes of the failure), and the house was finished by the creditors. Their economy is manifest in the house by the hanging of $\frac{7}{8}''$ doors in frames that are rebated for $1\frac{1}{4}''$ doors. The building is nearly square with two large rooms on either side of the central hall, which runs directly through the house having at the rear end a wide door, a counterpart of the front door, which opened on to the lawn and garden at the back end. The kitchens, pantries and serving-rooms were all contained in an L at the rear, which was built at the same time as the original house. The hall with its coved ceiling cut by semicircular arches which are carried by delicate Ionic pilasters is a very satisfactory piece of work, and the finish in each of the first-story rooms and nearly all of the chambers is evidently carefully studied for each individual room. The fore-runner of the ventilating grate is foreshadowed in the fireplaces of the two parlors where the stone facings are perforated to admit the hot air from the room that the rooms above may benefit thereby. The house has passed through many vicissitudes, but is substantially now as the sketch shows, excepting that a front porch has been added which is omitted in the sketch and which detracts as little as possible from the beauty of the original.



Room in the Alexander House, Springfield, Mass.

It must have been thoroughly well built, for there is hardly a settlement or crack in the whole building.

The house built by Rufus Colton at Agawam in 1806 might have been inspired by this Hollister house so far as its front is concerned, and it is plainly an imitation of some other house. As the owner built it on the strength of a $5.00 lottery-ticket which drew him a prize of $5,000, and had spent a good deal of his prize before he began to build, it is safe to assume that it is a much cheaper house than the foregoing. These two houses are the type in general of the later Colonial work in Western Massachusetts. There are some of the large, square, gable and gambrel roofed houses, but they are all like the ones built earlier, except that their front entrances nearly all resemble the ones which Benjamin shows in his little book, instead of the heavy broken-top pediments like that in the Colton house at Longmeadow. The flat hipped roof was evidently the fashionable roof in those days.

In 1811 was built the Alexander house in Springfield and this house marks the beginning of the Greek revival, in this part of the country at least. Here, again, Asher Benjamin was the architect, and he seems to have spent some part of his time since he built the Greenfield house in the study of Greek work. All his curves in the mouldings about the house, inside and out, are Greek and the acanthus leaves in the composite capitals have become sharp and spiky; he has grown artificial, too, for clapboards on the outside no longer content him for his façade. It is now smoothly covered with matched boards; his balusters have disappeared and slender straight sticks, geometrically arranged, have taken their place. The interior of the house shows these changes too, for the trim throughout is like that which became common fifteen or twenty years later — a flat single member with five beads and imitation corner-blocks, with a small rosette in the centre, though this trim unlike later work is still mitered.

There are a half dozen houses still scattered about Springfield, built from five to fifteen years later than this one and evidently more or less copied from it, which show that this set the fashion, for a time, for the rest of the town. But with this house — possibly indeed with the type illustrated in the Greenfield and Agawam houses, the Colonial architecture so far as it has any individuality ends. After this time the misuse of the materials of which the houses were built became so apparent and so great that the later work is merely interesting as a thing to be avoided.

The earlier work is not always constructed on the best scientific principles nor with a view to special economy of materials and labor, as the little sketch of an eighteenth-century window-frame indicates, but it is far more logical in many ways and certainly better architecture than the later work — at least so far as wooden construction went, and wood was almost exclusively used in this part of the country. Of brick buildings erected before the early twenties in this locality, there are almost none. Fortunately much of this later Colonial work has been thoroughly well preserved and the houses illustrated stand much as they were when they were built. The additions which were made to them forty or fifty years ago have been taken away and there has been very little cutting of new windows and putting up of new partitions, with the attendant barbarities of new doors and window-trim, which so often disfigure the house of that period.

Geo. C. Gardner.

Electric Clocks. — The revenue to the Western Union Telegraph Company for furnishing the time of day to this country amounted last year to about $1,500,000. The Company has a telegraph desk in the Naval Observatory in Washington. Four minutes before noon the wires of the system all over the United States are cleared of business, and the instant the sun passes the seventy-fifth meridian, electricity carries the news to every city. — *Pittsburgh Dispatch.*

A DUTCH CO-OPERATIVE TOWN.

AGNETA PARK, which stands on the outskirts of the little town of Delft, in Holland, exhibits the pleasantest phase of one of the most interesting of all the various attempts that have yet been made to secure a solution of the labor problem, says the London *Times*.

With the Park itself the most prosaic of visitors cannot fail to be charmed. It is some ten acres in extent, and is divided into two parts by a stream of water which broadens in the centre into a lake, bridges maintaining the connection between the two sections. That on the left is well wooded, while that on the right is devoted to flower-gardens, recreation-grounds, and more especially to dwellings, alike for employers and employed, who live here together in a manner quite patriarchal, amid surroundings almost idyllic in their aspect.

The largest of the houses is that of the managing director of the adjoining Netherlands Yeast and Spirit Manufactory, while the smaller houses — constructed with separate entrances, to accommodate two, four or six separate families, as the case may be — are occupied by the work-people.

There are one hundred and fifty of these smaller houses, arranged in "streets" or terraces, or as detached or semi-detached dwellings, between which one gets glimpses of a thoroughly characteristic Dutch landscape in the background. Each has its bit of garden, which is often gay with flowers, and as there is an abundance of trees in every direction, the general effect is pleasing in the extreme.

The total population of the Park is, children included, about four hundred; but a considerable number of the employés live elsewhere, owing to lack of accommodation for all of them, or other reasons. It is, literally, only a stone's throw from the larger house to the smaller, and the "rounds" are as much those of the workmen's houses as they are those of the more pretentious dwelling of the managing director. Near to the lake is an open space, in the centre of which is a well-constructed band-stand, where an orchestra, manned by the workmen themselves, performs twice a week in the interests alike of the community and of any of the townspeople who care to listen to the music and wander about the promenades which the Park offers.

On the lake, boating goes on without seriously disturbing the swans which have their habitat there; and elsewhere one finds playgrounds with swings, etc., for the children, and a "summer casino," bowling-alleys, and archery grounds for their elders. But especially one remarks a large building, known as the "Community," which forms the centre-point of the "life" of the Park. Here is a hall that can be used for festivals, balls, lectures, exhibitions, concerts and meetings, being capable of seating 1,200 persons, though it is generally divided by partitions so as to form a reading-room and a gymnasium. Then, too, there is a variety of smaller rooms used for a kindergarten for the juvenile residents of the Park, for evening classes and for various educational and other purposes. Space is also found for a library of four thousand volumes.

Friendly gatherings of all sorts take place here, from the annual "Festival of Labor and Brotherhood" each 30th of July, down to magic-lantern entertainments for the young people. Still another feature of the Park is its coöperative stores and bakery, which are available not only for the resident population, but for ordinary dwellers in the locality as well.

Agneta Park owes its establishment to Mr. Van Marken, the managing director of the Netherlands Yeast and Spirit Company, founded by him in 1869. That gentleman has ideas of his own concerning the relations which should exit between employers and employed. He believes that the conditions under which workmen live may have a great effect on their development, both personal and as workmen, and that it is to the direct interest of those who employ them to see that they are provided with "homes" in the truest sense of the word — homes, that is to say, which will not only fulfil every requirement of sanitary laws and convenience, but be positively attractive in themselves.

The matter is thus regarded by him as one of more than mere philanthropy. In fact, in all that he has done for his work-people, Mr. Van Marken discards any motive of "philanthropy," and seeks to look at everything from a business or a common-sense point-of-view. "The moral and material improvement of the workingman," he holds, "must increase alike his zeal and his strength, and hence confer a practical benefit on the employer." Having these and a variety of other ideas on the subject of workingmen's homes, and finding that the dwellings available in the town of Delft were not what he thought they should be, he bought, in 1884, the site of Agneta Park, and had it laid out and the various buildings erected on it.

But his idea was that the whole should eventually become the property of the community. Hence, having purchased the land, he formed a limited-liability company, with a nominal capital of 160,000 florins, and himself bought from the company three hundred and twenty shares for 32,000 florins. He then sold the land to the company for 29,000 florins, the amount he actually paid into the company's exchequer, in addition to transferring to them the site for the Park, being thus 3,000 florins, which formed the working-capital. The money for erecting the dwellings, etc., was raised by mortgage on property which, at the time, was really non-existent, so that a certain degree of confidence had to be shown in the matter.

The rents are now paid into a common fund, which is so arranged that, after the deduction of certain proportions for payment of interest and for gradually paying off the mortgages, there is a balance left, which is apportioned among the dwellers in the houses, according to the amount of their rent, and is devoted to buying up the shares in their names. In this way it is calculated that in the course of about thirty years the whole of the original cost will have been cleared off, and the Park, with the dwellings on it, will be held by the community, owing to the gradual transfer of all the shares into their own hands.

When that condition of things arrives, the householders will still pay their rent, as at present, but they will receive it back in the form of dividends on the shares held. This arrangement is thought to be an improvement on the ordinary building-society notion of enabling a man to become his own landlord. The possession of a house of one's own may have its attractions, but it is regarded as bringing trouble and inconvenience as well, more especially in the case of a workman who may wish to remove to another town, or of one who dies and leaves, perhaps, his widow to dispose of the house as best she can. In each instance there is involved not only the question of inconvenience, but of the payment of law expenses as well.

By making the Agneta Park houses the property of the community as a whole instead of the work-people as individuals, these drawbacks are avoided. When a tenant leaves, or dies, his share is disposed of through the directors to some other tenant, and he or his widow will receive the full value of it without any trouble and without any deductions on account of legal expenses. It is, also, to the interest of the community, as a whole, to see that no particular tenant neglects his property, or becomes a source of annoyance to others, as he might do if the house he lived in were actually his own. Thus it is claimed that under the Agneta Park system there are all the advantages of a workman becoming, in course of time, his own landlord, and none of the disadvantages, either to himself or other people.

THE HOTEL CARNAVALET, PARIS.

THE Carnavalet Museum, installed in the house in which Mme. de Sévigné so long resided, is to be enlarged by the addition of the old Paris residence of the Le Pelletier St. Fargean family. It was known before the Revolution as the Hôtel St. Fargean. The Hôtel Carnavalet, or Carnavalet House, was an elegant palace, built as far back as the reign of Henri IV by Bullant and Androuet du Cerceau. When Mme. de Sévigné rented it, the neighborhood of the Marais was going out of fashion. Marie de Medici had, in building the Luxembourg Palace, drawn the wealthy and aristocratic classes into the St. Germain suburb. They had there better air, and could afford themselves the luxury of large gardens and larger rooms than in what was then old Paris, or Paris within the old fortification-walls. Religion was the fashion, and convents sprang up side by side with the new palaces of the aristocracy. The part of the city in which Mme. de Sévigné resided was still the abode of many great families. But its most notable denizens belonged to the legal profession, or to the fiscal or fine arts world. Thus the architect of the Palace of Versailles built himself a house in the Rue St. Honoré, a good deal to the east of the Palais Royal. Mignard became his neighbor. The Le Pelletier St. Fargeans were hereditary Judges of the Parliament of Paris, or high court of judicature. They were a numerous family. Each branch had a house in the Rue Culture St. Catherine, or the street of the gardens of St. Catherine, now Rue de Sévigné. One of them, in the reign of Louis XV, was Advocate-General, and drew up the charges on which the edict was based, ordering the expulsion of the Jesuits from France. He became the heir of the different properties of his cousins, and had the different houses pulled down to build on their site the Hôtel St. Fargean, which is the finest specimen of eighteenth-century architecture, perhaps, in Paris. It has only two stories — the ground floor and the first floor, — but the ceilings are so high-pitched that the roof is nearly on a line with the five-story houses around. Nothing could be more majestic than the carriage-entrance. The court-yard contrasts, by its imposing elegance, with the more delicate style of that of the Hôtel Carnavalet. As to the vestibule and staircase, they are palatial. The stairs must have afforded a bewitching spectacle when the Advocate-General, St. Fargean and his wife were receiving company. They belonged to the tip-top society of Paris, though not of the Court or Versailles circle, but the Orleans, the Condé, the Conti families would have accepted invitations to their entertainments. When their house was new, the judicature was in opposition to the Court, and looked for leadership to the Duc d'Orleans. The banisters are in forged iron, and of priceless value. All the State-rooms and the living-rooms open on each other, and on corridors running behind them. The former afford a stately perspective, and seem of endless length. The windows are as high as those of the mirror-gallery of Versailles.

A suite of what, in the Advocate-General St. Fargean's time, were State-rooms, are to be devoted to a library dealing with the history of Paris and of its Revolutions, while the Hôtel Carnavalet is to be devoted to these subjects. The two old residences will be united by

a gallery. The suites of small, or living-rooms, are to be appropriated to engravings, maps and plans. When great personages formerly wanted to be snug, they lived in small rooms in which there was hardly room to turn round. Those of the Queens of France, at Versailles, were well-named the "cabinets" of the Queen. One of the advantages was, that the inmates could converse audibly without raising their voices. Dr. Sée tells us that heavy food causes Bright's disease, and that a premonitory system of that malady is a buzzing in the ears, and hardness of hearing. I dare say that Bright's disease was very frequent among those who attended the gay suppers given by the Regent at the Palais Royal. The disease must have existed, though it had never been diagnosed. Louis XV, who began to lead a fast life at twenty-five, found at thirty-five that he liked conversation better in little rooms than in big. In the grand apartments of his palace, courtiers had to stand far off when speaking to him. In the small apartments, or cabinets, they had to stand close to him. The laws of geometry there overbore the laws of etiquette, and the increasing deafness of the King was not made manifest. He went on gormandizing with Marshal de Richelieu and Marshal de Soubise, who lost every battle he ever was engaged in, but invented an immortal onion sauce. The King had a little kitchen close to his cabinets, where he could toss pancakes and cook game according to toothsome recipes furnished by De Richelieu and De Soubise. Le Pelletier St. Fargean's small living-rooms were also contiguous to a tiny kitchen, in which members of his family could imitate the royal example, and be out of the ear-shot of servants.

Parisians of quality of the olden time greatly differed from English men and women of their rank and time, in their aversion to having servants present at their jollifications. They liked to talk freely. The servant, they felt, was a hostile watcher and listener, and so they got rid of the valet, and even, sometimes, of the cook. The first "lifts" that were ever made were to hoist up through trap-doors dishes from kitchens to dining-rooms. The "dumb-waiter" stood beside the table to receive the emptied plates and dishes, and was let down by the lift. Attendance was thus dispensed with. Beaumarchais gives one a notion in "Le Mariage de Figaro" of what the domestics in great houses were, in the eighteenth century. Hebert, the revolutionist, who started that scurrilous journal, *Le Père Duchesne*, and, as Procurator of the First Commune of Paris, brought those infamous charges against Marie Antoinette, was a *valet de chambre*, and had never any masters that were not aristocrats. One sees at the Hôtel St. Fargean what ample provision the Advocate-General of Louis XV made, to dispense with servants when he gave his *petits diners* and *petits soupers*. The late Prince Consort had an eighteenth-century taste for small dining-rooms and no servants. He never felt snug when dining in a large room. — *E. C. in the N. Y. Tribune.*

JETTY AND LUMBER.

THE founders of Boston spoke Tudor English. Their names for all sorts of things were extremely picturesque. At the same time they were specific. They used the term "jetty" precisely as we use the word projection; but they confined the word to projections from buildings. When Robert Turner put up the house which occasioned the deflection of Beacon Street at the corner of Somerset Street, he was "alowed to have his new house to jet out farther into the streat." The permit was given on the 5th of October, 1652, and became memorable in the history of Beacon Street, which was intended originally to go up Beacon Hill, reaching the top where the State-house extension now stands. Nor was it bad English to say that his house might "jet out" into the street. We say "jut out"; but the men of 1652 were right. The word *jut* is corrupted from *jet*. It is as gross a corruption as it would be to say projuction, instead of projection. The word *jet*, and the derivative *jetty*, emanate from the same term, still retained in *projection*. This word may have come into English either from mediæval Latin or from the French. It was naturalized at an early day. The first dictionary of English, the "*Promptorium*" of 1440, has the word, and tells us that it denotes the projecting upper story of timbered houses. When Banquo praises Macbeth's castle, he does not fail to mention the *jutty* with the frieze, the buttress and other things. In 1663, the Town of Boston made a rule that "no jetty nor pendill that shall be erected, but shall be full eight foot in height from the ground, upon penalty of twenty shillings a week, after notice given to the contrary." Frequently these jetties were supported by pillars. When these pillars stood in the street, the town charged an occupation fee. When the jetty was not part of the house frame, it was called porch. In 1658, Captain Waldren received a permit "to set up two pillars under his porch, and to pay two shillings every first of March to the Town Treasurer." In Boston, Massachusetts, the Tudor period of rich English, comfortable living and affluence ended about 1720. Up to that year the town had grown steadily, and enjoyed what in 1659 was called "unparalleled enjoyments." This expression was used in the official Thanksgiving proclamation of that year. I beg to say emphatically that from 1630 to 1720, Boston was in its heyday, architecturally and otherwise; after 1720 a period of stagnation and decline set in, and was not overcome until after 1790.

A time of growth and joy is always reflected in language. The Tudor period of Boston, 1630 to 1720, abounds in happy terms, — some brought over from England, others created in Boston. The point where the Charles, the Mystic and the harbor of Boston meet, was called "Centre Haven," a name of infinite beauty. The chief article of trade in early Boston was wood in all its forms, especially for fuel and building purposes. The article had to be brought to Boston by boats. These boats, with their cargoes of masts, ship timber (Boston was a great shipbuilder), sawed wood and fuel were apt to discharge at random. The harbor front and wharves were accordingly "lumbered up" with all sorts of forest products, to the inconvenience of the public, which travelled preferentially by boat and frequented the wharves relatively more than we do. It was for this reason that the earliest Boston police, in addition to the constables, were the water bailiffs. They had to perform important harbor, wharf and shore duties. In 1663, they were instructed to "clear the ends of all streets and wharves that but upon the water, from all *lumber* and other goods." This is the first use of the word lumber for sawed wood. The Boston Town order of April 27, 1663, called the sawed wood, the timber (hewn), the masts and other wood brought to town by boats "lumber," because the cargoes lumbered up the harbor-front. The new meaning was immediately adopted, and lumber, in the sense of sawed wood, is the least restricted, as well as among the earliest of all Americanisms. The men of Boston before 1720 coined many words of interest to builders. "Lean-to" is a typical Boston word. But the point of chief interest is that Boston and Colonial architecture flourished from the very beginning, that there was a joyous growth up to about 1720, and that the age of the Georges was, on the whole, a period of decline so far as Boston is concerned. In that age of relative decline the monuments of Colonial Boston were incontinently and ignorantly destroyed. The relics of our Tudor age, if I may apply that term to Boston from 1630 to 1720, are most precious. They tell of a great age, since forgotten. Fortunately, the written documents of our heroic and romantic age, from 1630 to 1720, have survived the period of decline which is properly called the Provincial age of Boston.

C. W. Ernst.

Boston, November 5, 1894.

CONSTRUCTION.[1] — XXV.

AS was always their custom, however, these builders carry the consequences of an established principle to its utmost limits; they do not seem to understand those obstacles which our modern art places in the way of bold attempts in the shape of the academic veto. Construction is not for them that science which consists in saying: "Here are the rules, here are the examples, follow them out, do not go beyond them." On the contrary, Science for them says: "These "are the general principles, they are broad, they indicate nothing "but methods. In their application extend them as much as the "material and your experience allow you; we ask nothing of you "except to remain faithful to these general principles; moreover, "everything is possible to him who knows how to apply them." Is that a stationary art, hieratic, alien to the modern spirit, as they have undertaken for so long a time to make us believe? Is it retrograding to study it, to investigate it? Is it the fault of this art if very many imitate only the exterior appearance of it, if they compromise its further development by maladroit copies? Do we impute to antiquity the bad copies of its art? Why then blame the arts of the Middle Ages in France for the false applications which have been made of them, whether in Italy before the Renaissance, or at home in our own time? Since the moment when it was admitted that there was no architecture except in Italy, since the architects have flocked like sheep marching in each other's footsteps, to study their art in that country, academic instruction has been willing to see the Middle Ages only there. But the mediæval edifices in Italy, from the structural point-of-view, evince but a passable comprehension of the subject. Almost always they are nothing but constructions derived from Roman antiquity, invested with a pretty bad covering borrowed from the arts of the North or the Orient. Assuredly it is not necessary to cross the Alps to study that. For construction, there are neither settled principles nor coherence, but a disordered mass of confused traditions, influences which combat one another, a barbarous love for luxury alongside of evident feebleness.[2]

What are these basilicas in Rome for example, reconstructed for the most part in the thirteenth century, if they are compared to the edifices built here at home at that epoch? Miserable brick walls, badly put together, on fragments and capitals torn from antique monuments. In these barbarous structures, where is the study? If we consider them with respect and curiosity, is it not because they

[1] From the "*Dictionnaire raisonné de l'Architecture Française*," by M. Violllet-le-Duc, Government Architect, Inspector-General of Diocesan Edifices, translated by George Martin Huss, Architect. Continued from No. 975, page 83.

[2] A single example to show that we do not exaggerate. We have noticed in this article as a result of what persistent efforts the constructors of the North mastered the thrusts of vaults and in what conditions they were satisfied with the stability of these vaults. But, in Italy, the spreading of the arches of vaulted monuments during the Middle Ages and even the Renaissance is prevented by exposed iron bars at their springings. At this rate one can easily dispense with the whole train of flying-buttresses and devices to secure equilibrium. They take good care neither to show these iron bars in the drawings which they give us, nor to speak of them in their treatises on the subject. But, in truth, is that a method of construction? Is it not rather a confession of inability?

offer us the spoils of magnificent edifices? If we marvel before rich stolen jewels, in a palace, is it the thief who excites our admiration? Let us then be sincere and put things in their right places. If the Romans of the Middle Ages found a soil covered with antique débris; if the Baths of Caracalla were still standing and almost intact up to the thirteenth century, as well as the Colosseum, structures on the Palatine and so many other edifices, shall we go out of our way to admire the works of men more barbarous than the Vandals and the Huns, who have in cold blood destroyed these monuments in order to erect bad buildings, in which these débris themselves are unskilfully used, coarsely handled? We see in all this only the vanity of a powerless people; intelligence, ideas, art itself are completely wanting. What a different spectacle in this country! The lay architects in France were then laboring assiduously; without a thought for their personal glory, they sought only to develop the principles which they had discovered; they believed that the future was theirs and this was not an illusion, for they were the first to commence in the modern era the great struggle of intellectual man against brute matter. The constructors of antiquity are the allies and frequently the slaves of matter; they are subject to its laws; the lay constructors of mediæval times declare themselves its antagonists; they maintain that mind ought to gain the mastery and render it subject and that it will obey. It is indeed to be expected that we who pierce mountains so as to travel easier and faster, who no longer pay any attention to distances and who defy natural phenomena, should scorn those who, by their inquiring and subtile spirit, their disinterested faith in principles based on reason and calculation (disinterested certainly, for scarcely have the names of even a few of them come down to us) have been centuries in advance of us and who have only made the mistake of living too early, of being too modest and of having believed that other people would understand them. They tell us that history is just; we hope so; but its justice sometimes has to be waited for a long time. We admit that from the twelfth to the fifteenth century, political society is in disorder; the clergy were usurpers, the feudal lords were tyrants, kings were sometimes pliant, sometimes false and always ambitious; Jews were usurers and the peasantry were miserable brutes; that this society is permeated by ridiculous superstitions and pays little attention to morality; but we see quietly appear in the midst of this chaos a class of men who are neither monks, nobles, nor peasants, seizing upon the most abstract art — the one which lends itself to calculations, to logical developments; the art to which every one must have recourse, for it is necessary that people shall be lodged, protected, defended, shall make temples, dwellings and fortresses. We see this class attract to itself all the artisans and submit them to its discipline. In less than half a century this association of indefatigable workers discovered entirely new principles, capable of infinite extension; it has brought into all the arts analysis, reasoning, investigation, in place of routine and decrepit traditions. It establishes schools; it goes on without stopping a single day, isolated, but systematized, tenacious, subtle, in the midst of anarchy and general indecision. It mounted the first steps of the modern industry, of which we are with good reason proud; and because of the fact that this association devotes its time to work, instead of inditing memoirs in its own praise; because its members, more solicitous of making their principles triumph than of obtaining personal glory, write their names on a few stones; that by reason of researches they even arrive at abusing these principles; because finally this association is overwhelmed under the last three centuries whose vanity at least equals their distinction, shall we be so ungrateful to-day as not to recognize what we owe it, so senseless as not to profit by its labor? And wherefore this ingratitude, and this foolishness? Because a few lazy minds secure in their positions pretend to preserve the principles of a dead art, which they take good care not to put into practice; which they do not even clearly announce? Who are the retrograde minds? Are they those who would condemn us to reproduce for ever and ever the incomplete or ill-digested attempts made by the last three centuries to regenerate the architecture of the Romans, or those who seek to restore to honor the resources of an art at once systematic and audacious, lending itself to all the combinations and to all the developments necessitated by the varying requirements of modern civilization? The balance of the history of the arts would be exact if it were held by an impartial hand, if, instead of names, deeds were put into its scales, monuments in place of individualities. What have we, in fact, to offset such names as Dioto Salvi, Arnolpho di Lapo, Brunelleschi, Michelozzo, Baltazar Peruzzi, Bramante, San Micheli, Sansovino, Pirro Ligorio, Vignola, Ammanati, Palladio, Serlio, Jean Bullant, Pierre Lescot, Philibert Delorme, Ducerceau, and so on? Two or three names scarcely known; but if our French mediæval monuments could speak; if they could give us the modest names of their authors — if, especially in face of the works of the men we have just cited, they could show us all the mysteries of their construction, then assuredly history would do them justice and we should cease to be the dupes, to our own detriment, of a mystification which has lasted through more than three centuries.

Occidental Europe can boast with good reason of having provoked the great intellectual movement of the Renaissance and we are not among those who regret this return towards the arts and the ideas of Pagan antiquity. Our century follows that of Montesquieu and Voltaire; we do not renounce those great minds, — we profit by their perspicuity, their love for truth, reason and justice; they have opened the way for criticism, they have extended the domain of intelligence; but what do they teach us? Is it, perchance, to subject ourselves to eternally reproducing their ideas, to conform ourselves without scrutiny to their personal tastes, to share their errors and their prejudices, for they are no more exempt than others from these? That would be to understand them very poorly. What do they say to us on every page? "Enlighten yourselves, do not stop, "put to one side opinions already made; these are almost always "prejudices; intelligence has been given to man so that he may ex- "amine, compare, collect, choose but not conclude, for to conclude is "to end; and he is a fool who pretends to say: 'I have closed the "human book!'" Is it then the particular task of a given philosopher that should be taken for a model, or his way of reasoning, his method? Voltaire does not like the Gothic, because Gothic art belongs to the Middle Ages, whose last prop he undermines: that only proves that he knows nothing of this art and that he obeys a prejudice. That is a misfortune for him; it is not a rule of conduct for artists. Let us try, if we can, to reason as he does; let us bring to the study of our art his spirit of analysis and criticism, his good sense, his ardent passion for that which he believes to be just; and we shall succeed in finding that mediæval architecture is founded on new and fruitful principles, different from those of the Romans; that these principles may be more useful to us to-day than are the Roman traditions. The rare spirits who have acquired in their times a great influence are like torches which illumine only the spot where they are placed; they can only enlighten distinctly that which surrounds them. But shall we say that there are no more objects in the world than those on which they have shed their light? Put them in other surroundings, — they will shed upon other objects the same light. But we are thus constituted in France: we look at the illuminated objects without noticing the torch, without even transporting it elsewhere to utilize its light in examining everything. We prefer to adhere to the judgments pronounced by distinguished intellects rather than to use their method of examining facts, so as to reach our own conclusions. In truth, this is much easier. We admire their boldness, the range of their vision; but we do not dare to be bold like them, to see further than they or anything else than that which they have been willing or able to see. But we have wandered from our mediæval master-workman.

Let us come back to them, especially since they probably never suspected that it would one day be necessary to blacken so much paper, in their own land, in the endeavor to make their efforts and their progress appreciated. In advance of their century, by the breadth of their ideas and still more by their independence as artists; disdained by more enlightened centuries, which have not wished to give themselves the trouble to understand them; in truth, their destiny is hard. Will the day of justice for them never come?

The necessities of civil construction are much more varied than those of ecclesiastical construction; thus civil architecture affords the mediæval architects the opportunity of manifesting the numerous resources which are to be found in the principles by which they were governed. It is necessary to define fully these principles, for they have great importance. The architecture of the Romans (not that of the Greeks, let it be well understood)[1] is a structure clothed with a decoration which thus becomes, in virtue of the fact, architecture, visible architecture.

If one undertakes to measure a Roman monument he must perform two operations: the first consists in taking account of the methods employed to rear the carcass, the construction, the structure itself; the second to find out how this construction has taken a visible form more or less beautiful, or more or less well adapted to this body. We have elsewhere given an account of this method.[2]

This system possesses its advantages, but it is frequently nothing but a clever falsehood. Roman construction can be studied independently from Roman architecture, and that which proves this is that the artists of the Renaissance studied that exterior form without taking account of the body which it covered.

The architecture and the construction of the Middle Ages cannot be separated, for that architecture is nothing else than a form commanded by that very construction. There is not a member, however minute it be, in Gothic architecture, at the epoch when it passed into the hands of the lay-workers, which is not prescribed by a constructive necessity; and if the Gothic structure is very varied, the needs to which it must submit itself are themselves numerous and varied. We do not hope to present to the eyes of our readers all the applications of the system of civil construction among mediæval people; neither can we undertake to show in outline the principal paths followed by this system; for one of the most striking qualities of mediæval art, as of manners, is its individuality. If one undertakes to generalize, he falls into the strangest errors, in the sense that the exceptions are more important than the rule; if he undertakes to give an account of some of these exceptions, he does not know which one to choose, and he narrows the picture. We can, we

[1] For those architects who have somewhat studied the arts of antiquity, the difference between the architecture of the Greeks and that of the Romans is perfectly well defined: these two arts follow opposite roads as we have said many times; but it is not so for the vulgar, who confound these two arts, just as if one was only a mere derivative from the other. How many times has it not been written, for instance, that the portal of Saint Gervais, at Paris, is a Grecian portal? It is scarcely more Greek than Roman. It is, nevertheless, on judgments as blind as this that the criticism of the arts of architecture has been based with us for a long time and that is because we, architects, perhaps from indifference, are the only ones in France who do not write about our art.

[2] See "*Discourses on Architecture.*"

believe, bring out the principles, which are simple and rigorous and pick out from among the applications those which best and most clearly express these principles.

The few examples which we have given show, we hope, the consequences of the principle received by the secular architects of mediæval times: manifestation of the means used in the structure of edifices and appearances really producing architecture — that is to say the visible form; solution of the problems met, by the natural laws of statics, of equilibrium of forces and by the employment of materials in the ratio of their properties; acceptance of all programmes, whatever may be their variety and subjection of the construction to these programmes, consequently of the architecture itself, since this architecture is only the frankly-admitted appearance of this construction. Having meditated on these principles, having chosen some examples among the applications of these principles, there is no architect who cannot construct, as did these mediæval masters, proceed as they did and vary forms in proportion to the new necessities which perpetually arise in a society like ours, since each new need should provoke a new application of principles. If we should be accused of wishing to cause our art to retrograde, it would be well, at least, to have it understood in what manner we intend to pull it backwards; the conclusion of all that we have said being: "Be true." If truth is a sign of barbarity, of ignorance, we shall be happy to be classed with those who are barbarous and ignorant and proud to have drawn some of our *confrères* with us.

[To be continued.]

SOCIETIES

SAN ANTONIO ART LEAGUE.

THE first exhibition of the San Antonio Art League took place last week, opening on Monday and continuing six days. The League is yet in its infancy, having been formed only last spring, but the Exhibition would have done credit to a much more mature organization, and, happily, received from the public the encouragement it deserved. The exhibits numbered over three hundred and comprised paintings in oils and water-colors, pastels, pen-and-ink sketches, sculpture, china-painting, wood-carving and tapestry, mostly work of the members of the League. The architectural subjects were unfortunately few in number, but these were well done, the designs for an Art League Building — a subject for competition — by P. M. Knight and A. B. Ayres being well drawn and rendered.

In water-colors the work of Bernhardt Wall was noticeable, while in oils Mrs. A. E. Kroeninger, J. J. McCann, La Vern F. Wheeler and E. L. François were well represented by paintings of merit. A musicale was given each evening by the best talent of the city and the attendance was gratifyingly large.

The officers of the League are:

Burnhardt Wall, *President.*
Mrs. A. E. Kroeninger, *Vice-President.*
Mrs. C. M. Rounds, *Secretary.*
P. M. Knight, *Treasurer.*

THE ARCHITECTURAL LEAGUE OF NEW YORK.

The Tenth Annual Exhibition of the Architectural League of New York will be held at 215 West 57th Street, New York City, in the American Fine Arts Society's Building.

DATES.

Exhibit entry-blanks returnable, Tuesday, January 29, 1895.

Last days for reception of exhibits, February 4 and 5, 1895. Positively no works received after these dates.

Press View, Wednesday, February 13, 1895, 10 A. M. to 2 P. M.

Annual Dinner, Wednesday, February 13, 7.30 P. M.

League Reception, Thursday, February 14, 8 P. M.

Public Exhibition from Friday, February 15 to Saturday, March 9, 1895, inclusive.

The Exhibition will consist of:

Architectural Drawings in Plan, Elevation, Section, Perspective and Detail; Drawings of Decorative Works; Cartoons for Stained-glass; Models of Executed or Proposed Work; Completed Work, such as Carvings in Stone, Wood, Bronze, Wrought-iron, Mosaic, Glass, Textile Fabrics and Furniture; Sketches and Paintings of Architectural or Decorative Subjects.

Photographs will be admitted only when they serve to elucidate an accepted exhibit.

Plans, if neatly rendered, colored or blacked-in with indication of floors and ceiling, will receive equal consideration with the elevation and perspective, and large scale-drawings or details of some portions of the works are especially requested.

It will be the special object of this Exhibition to show complete illustrations of individual, rather than a larger number of incomplete works.

Models of architectural sculpture and details are particularly desired.

All exhibits must be properly labelled.

Drawings must be either framed or mounted.

The omission of glass is suggested, as superior, for the purposes of this Exhibition.

Exhibits of non-resident members are to be sent to William S. Budworth & Son, 424 West 52d Street, and J. Harrison Mills, 147 East 23d Street, New York, who will deliver them at the Fine Arts Society's Building, and return them to the exhibitor at the close of the Exhibition.

The League will collect and return, free of charge to exhibitors in New York City, Brooklyn, Philadelphia and Boston, all drawings that have been entered; all other exhibits, as above specified, must be delivered at the Fine Arts Society's Building, carriage prepaid and ready for exhibition.

Collections will be made in New York City on Monday and Tuesday, February 4 and 5.

In Brooklyn, Saturday and Monday, February 2 and 4.

In Philadelphia and Boston, Thursday and Friday, January 31 and February 1, 1895.

(Special arrangements will be made for the transfer of exhibits from the Pennsylvania Academy of Fine Arts as may be so designated on the League's entry-blanks, subject to the acceptance of such works by the League jury.)

SUB-COMMITTEE ON ARCHITECTURE.

George Keister, *Chairman*, 140 West 34th Street.
Julius Harder, 194 Broadway.
Charles A. Rich, 265 Broadway.

SUB-COMMITTEE ON DECORATION.

Daniel C. French, *Chairman*, 125 West 11th Street.
Fred S. Lamb, 360 West 22d Street.
Francis C. Jones, 253 West 42d Street.

For the Committee on Annual Exhibition,
George Keister,
Chairman Sub-Committee on Architecture.

The Eighth Annual Competition for the Gold and Silver Medals of the Architectural League will be held in connection with the Tenth Annual Exhibition of the Architectural League of New York.

CONDITIONS.

First. — The competitors must be residents of the United States, and under the age of twenty-five.

Second. — The drawings shall be made in conformity with the following programme, and entirely by the hands of the competitor.

The awards will be made under the direction of the Committee on Competitions and Awards.

All the drawings complying with the conditions will be hung at the Exhibition, the first and second prize drawings being so indicated, and these latter shall become the property of the League.

PROGRAMME: THE MAIN STAIRWAY OF A NATIONAL LIBRARY.

The stairway, which is to start with a single flight on the axis, should be entered on the ground-floor through a spacious vestibule or entrance hall, and should lead to the main story where the large public reading-rooms are placed.

The ground-story is to be twenty feet high, from floor to floor. The total width between the side walls of stairway is forty-five feet. The length is not given.

In an edifice devoted to learning, the first impression should be that of seriousness, and such as will prepare the mind for tranquillity and reflection. Literature, Science and the Fine Arts are suggested has te subjects of the decoration, which should be employed with moderation, and be impressive rather by its character than by its elaboration. It should be kept in mind that this is a problem of a monumental stairway, and not of entrance halls or reading-rooms.

The drawings are: Plan of the first and second stories to a scale of three-sixteenths-inch to the foot; longitudinal and transverse sections to a scale of three-eighths-inch to the foot.

The rendering: Wash-drawings, either in monotone or color. No perspective.

Each sheet must be distinguished by a motto or cypher. A sealed envelope bearing the same motto or cypher must contain the name, full address, place and date of birth of the author, and must be mailed to the Committee on Competitions and Awards of the Architectural League, No. 215 West 57th Street, New York.

Drawings are to be delivered flat, carriage paid, at the same place on or before February 5, 1895. They will be returned at the close of the Exhibition at the expense of the contributor.

Thomas Hastings,
Will H. Low,
George L. Heins, *Chairman,*
215 West 57th Street,
Committee on Competitions and Awards.

CLEVELAND ARCHITECTURAL CLUB.

Thursday evening, November 22, the Cleveland Architectural Club was organized with a membership of fifteen charter members and officered as follows: John W. Russell, *President;* Harry S. Nelson, *Vice-President;* Herbert B. Briggs, *Secretary;* B. S. Hubbell, *Librarian;* E. E. Noble, *Treasurer;* W. D. Benes and Wilbur M.

Hall, *Members of Executive Board.* These with Robert Allen, Frederick Baird, G. B. Bohm, P. G. Griffin, Williard Hirsh, Ray Rice, C. S. Schneider and Albert E. Skeel constitute the charter membership.

The study of Architecture and the Allied Arts will be the object of the Club and any one interested in this study may become a member.

Meetings will be held on the first and third Thursday evenings of each month, the last meeting of the month being for competitions. The competition subject for December is: "A Stone Entrance to a Residence."

All communications should be addressed to the Secretary at 40 Blackstone Building, Cleveland, Ohio.

HERBERT B. BRIGGS, *Secretary.*

THE ARCHITECTURAL LEAGUE OF NEW YORK.

THE regular monthly meeting and dinner of the League will be held at the Club-rooms on Wednesday, December 5, at 6.30 P. M.

The Committee on Current Work has arranged with Mr. Wm. Paul Gerhard to read a paper on "Improved Methods of House Drainage."

The drawings in competition for the Special Prize offered by the League, for a Scheme for the Decoration of the League Rooms, as set forth in the circular issued in October, will be on exhibition.

The following have been elected members of the League since the October announcement:

Resident. — William H. McCabe, Alex. S. Locke, Herman Behlen, Teunis J. Vander Bent, Arthur A. Hodges, Elmer Ellsworth Garnsey, Albert E. Davis, Irving P. Davis, P. Henry McDonough.

Non-Resident. — William S. Eames, C. F. Schweinfurth.

CHARLES I. BERG, *Secretary.*

SKETCH CLUB OF NEW YORK.

THE Sketch Club of New York will hold their Third Annual Exhibition next week at their Club-rooms, 1473 Broadway.

The Exhibition opens with a ladies' reception Wednesday evening, December 5, and will remain open the rest of the week.

In addition to the regular club work the exhibition will include the drawings submitted at the first Inter-Club Competition of the Sketch Clubs of the country and at the first competition for the medal of the Beaux-Arts Society.

The exhibition is open to the public. All who are interested in architectural art are welcome.

ALFRED F. EVANS, *Chairman Exhibition Committee.*

THE ILLUSTRATIONS

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

HOUSE OF DANIEL BAUGH, ESQ., 16TH AND LOCUST STS., PHILADELPHIA, PA. MESSRS. HAZELHURST & HUCKEL, ARCHITECTS, PHILADELPHIA, PA.

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

THE HOLLISTER HOUSE, GREENFIELD, MASS. MEASURED AND DRAWN BY MR. G. C. GARDNER, ARCHITECT, SPRINGFIELD, MASS.

SEE article elsewhere in this issue on "Colonial Architecture in Western Massachusetts."

THE ALEXANDER HOUSE, SPRINGFIELD, MASS. MEASURED AND DRAWN BY MR. G. C. GARDNER, ARCHITECT, SPRINGFIELD, MASS.

SEE article elsewhere in this issue on "Colonial Architecture in Western Massachusetts."

DETAILS DEVISED BY MR. ASHER BENJAMIN.

SEE article elsewhere in this issue on "Colonial Architecture in Western Massachusetts."

CHURCH FOR THE FIRST PARISH, BRIGHTON, MASS. MESSRS. CABOT, EVERETT & MEAD, ARCHITECTS, BOSTON, MASS.

DECORATION IN THE VESTIBULE OF THE TOMB OF G. P. MOROSINI, ESQ., WOODLAWN CEMETERY, NEW YORK, N. Y. MESSRS. JARDINE, KENT & JARDINE, ARCHITECTS, NEW YORK, N. Y.

THE decoration is the work of Mr. H. T. Schladermundt.

[Additional Illustrations in the International Edition.]

THE BANK FOR SAVINGS, FOURTH AVE. AND 22D ST., NEW YORK, N. Y. MR. C. L. W. EIDLITZ, ARCHITECT, NEW YORK, N. Y.

[Gelatine Print.]

THIS structure is built of white marble.

THE COLUMBUS MONUMENT, 8TH AVE. AND 59TH ST., NEW YORK, N. Y. SIGNOR GAETANO RUSSO, SCULPTOR.

[Gelatine Print.]

THIS monument, the offering of the Italians of North America, was unveiled October 12, 1892. The total height of the structure is 75 feet; the marble figure of Columbus being 14 feet high, while the marble figure of the Genius of Geography measures 10 feet. The shaft is of Baveno granite, while the bas-relief panels, the rostral beaks and other ornamentation are of bronze.

A SHOP-FRONT IN EAST 17TH ST., NEW YORK, N. Y. MR. VAN CAMPEN TAYLOR, ARCHITECT, NEW YORK, N. Y.

[Gelatine Print.]

ARNCLIFFE, HEADINGLEY, ENG. MR. FRANCIS W. BEDFORD, ARCHITECT.

HALL, ARNCLIFFE, HEADINGLEY, ENG. MR. FRANCIS W. BEDFORD, ARCHITECT.

ON August 25 we published a view and description of this house. The name has, however, been changed from Shireoak to Arncliffe.

ENTRANCE, MARYLAND HOUSE, HEADINGLEY, ENG. MR. FRANCIS W. BEDFORD, ARCHITECT.

BILLIARD-ROOM CHIMNEYPIECE, MARYLAND HOUSE, HEADINGLEY, ENG. MR. FRANCIS W. BEDFORD, ARCHITECT.

COMMUNICATIONS

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

SPREAD EAGLEISM IN ART.

MARDI GRAS, *Fin de Siècle.*

TO THE EDITORS OF THE AMERICAN ARCHITECT: —

Dear Sirs, — I take pleasure in calling your attention to the inclosed clippings from daily newspapers as indications of the wonderful progress of the arts in this country.

"Architect —— has drawn plans for a very handsome residence costing $25,000 for ——, at the northwest corner of —— and —— Street. It will be of brownstone, red brick, slate and terra-cotta, with a minaret on the corner entirely of copper. The house will occupy a space fifty by seventy-eight feet. It is of the style of architecture known as *pure* Romanesque. . . . The music room is finished in Louis IV style with white and gold, and has a recess for a pipe-organ and raised platform for two grand pianos. Back of the main entrance hall is a large dining-room, finished in *old German style*, with a raised platform at one side for the table.

"Mr. —— has planned several smaller houses to be built at ——. One for —— will be built at a cost of $6,000. It will be frame and of the *Colonial* type. One will cost $4,000. It will be an imitation of a Swiss cottage. Another Colonial house will be that of ——, which will cost $5,000. —— will build a $3,500 house, which will be of the *Queen Anne* pattern. —— has also designed a $4,500 residence for —— on —— Place, near ——. It will be of stucco work, of the *early English style.*"

"Mr. Chadwick has published a symphony in the exact style of Beethoven, a pure Rossini opera, a noble Mass like Palestina, and a volume of songs in the pure Grieg style."

"Mr. Sargent has completed a portrait of Mr. Vanderbilt that the most intelligent connoisseur could not distinguish from a Holbein. His new portrait of Mrs. Astor will be an exact Titian. Senator Hill has commissioned the famous artist to portray him in the pure Rembrandt style. It is to be hoped that the painter will do a pure Hals and a pure Velasquez before he returns to Europe. It is said that he is tired of the European styles, and intends to introduce the Pompeian and, later, the Chinese styles of portrait-painting."

"Mr. Alexander Harrison hangs in this year's Academy a fine Corot, a perfect Venetian Canaletto and two pure Turneresque sunset seas."

"Professor Sedgwick publishes this month an exhaustive treatise on Biology in the manner of Hippocrates. The Greek is said to be absolutely pure and no single anachronism has been found in the thought. It will be a most valuable contribution to the shelves of libraries."

"Mr. William Morris has written a poem in eighty-three cantos in the exact style of the Finnish literature of the tenth century, but a man at Athens, N. Y., has surpassed that by composing an epic in pure Indian. He has chosen an extinct Iriquois dialect, known to only three scholars, to embody his theme. The poem contains over one hundred thousand lines, and is so pure in spirit that a translation is impossible. The fighting in it is said, by the author, to surpass anything Mr. Andrew Lang has ever conceived of. This country is to be congratulated upon this life-long work, an enduring monument to the sense and taste of the author."

This cutting from the *Red Rag* puzzles me. "We must not forget that the architects of the country are heart and soul for one cause, and are taking great pains to disseminate a wide-spread desire for the free use of dynamite at the great upheaval." Of course, I could understand it if I believed that they desired to injure their fellows in order to benefit themselves, but the profession has never been of that stripe. Yours respectfully, SOCIAL OBSERVER.

A QUESTION OF COMMISSION.

Boston, Mass., November 21, 1894.

To the Editors of the American Architect:—

Dear Sirs.— I should be pleased to have your opinion, or that of any of your professional readers, in regard to what would be considered a fair rate of compensation, for professional services as architect in the below stated case:—

An architect was employed to prepare plans for a college building. After obtaining the views of the Faculty and a knowledge of the uses of the new building, preliminary plans and designs were made and submitted for the consideration of the Faculty. A more ornate building was desired than these designs showed, and new designs were made, embodying a tower and other elaborations, and again submitted, and approved; and the contract-drawings and specifications ordered to be prepared, and estimates obtained. These orders were complied with, but the estimates submitted were found to be in excess of the amount the Faculty desired to spend, and new designs and specifications were prepared to meet their views in this respect, estimates obtained, and the contract awarded. The buildings were constructed under the architects' supervision until the plastering was about finished, and the erection of the standing finish commenced, when it was burned down.

Considerable labor was entailed on the architect in adjusting claims between the builders, underwriters and Faculty, and new sketches were made showing a slightly different treatment of elevation from that of the original building; the terms of a new building-contract arranged, and the buildings finally completed under the supervision of the architect. Yours truly, Puzzled.

[Perhaps the simplest answer to this is to say that the fair compensation for the services described is what the architect, at the time he did the work, thought that his client expected to pay him. If the architect, when his original design was abandoned, and a more elaborate one substituted, told his clients that he should make an extra charge for the additional work, and they ordered him, or suffered him, to go on with it, he is entitled to such extra pay as he gave them to understand he would require; and the same is the case with regard to the third set; but if he simply went on and made three sets, without mentioning to them that he would make any extra charge, and without the occurrence of any circumstances indicating that they expected to be called upon to pay for more than one set, he will find it difficult to collect payment for the extra work. However, men do not, as a rule, stand strictly upon their legal rights, and, if "Puzzled" has a time-book, from which he can show that he spent so many hours on work made necessary, not by any defect of forethought or knowledge on his part, but by the contradictory instructions of his clients, it is likely that the latter will allow him a reasonable sum for the time so spent for their benefit. The same rule applies to the services included in adjusting accounts with the Underwriters after the fire, and in making new drawings, and going over the work again, except that there is a much stronger presumption in the latter case that the clients must have known, or supposed, that they would have to pay the architect an extra sum for his additional services. In fact, the presumption in the latter case is too strong to be set aside by anything except some sort of waiver by the architect; and, in default of this, it is probable that a jury would award a reasonable extra payment. What would be reasonable would depend upon the circumstances. In such cases, the time-book is an invaluable aid in convincing clients, juries and judges of the propriety of a claim which they would scout if based on nothing but an arbitrary percentage. Of course, we assume that the regular five per cent is payable for the work on the building as executed, and that the question is as to the proper charge for extra work.—Eds. American Architect.]

A QUESTION OF ETHICS.

November 24, 1894.

To the Editors of the American Architect:—

Dear Sirs,—Some time ago I executed plans and specifications for a structure and superintended the erection of same. When completed, an architect from out of town visited it and without the consent or knowledge of the owners or architect presumed to take measurements, *et cetera*, necessary for the erection of a similar structure, a most despicable undertaking. Kindly inform me if I have any redress, and if so, the means to arrive at such.

Respectfully yours, J. A. O'B.

[We do not believe that you have any redress. In theory, the law permitted you to copyright your design, and, as you did not care to avail yourself of this protection, it is presumed that you were willing to have all the world make use of it. Perhaps the owners of the structure could get damages for the injury done them by imitating their property, but a jury would have to be convinced that there was a real damage to them, measurable in dollars and cents.—Eds. American Architect.]

EXHIBITIONS

Boston, Mass.—*Exhibition of Millet's "Sower" and other Paintings loaned by Quincy A. Shaw, also, the Works of Adolf Menzel, and Drawings by John Trumbull:* at the Museum of Fine Arts.

Drawings by Charles Dana Gibson: at Doll & Richards, 2 Park St.

Pictures by Joseph Lindon Smith: at the St. Botolph Club, November 26 to December 12.

Water-colors by Sears Gallagher: at Foster Bros., 164 Boylston Street, closes December 1.

Exhibition of Pictures of New England Life by New England Painters: at Jordan, Marsh & Co.'s, opens November 27.

Dielman's "Marriage of Dr. Le Baron," and Water colors by William Adam: at Williams & Everett's, 190 Boylston St., opened November 26.

Water-colors by George H. Clements: at J. Eastman Chase's, 7 Hamilton Place, November 21 to December 4.

Chicago, Ill.—*Seventh Annual Exhibition of American Oil-paintings and Sculpture:* at the Art Institute, October 29 to December 17.

Water-color Exhibition: at F. Keppel & Co.'s, 1 Van Buren Street.

New York, N. Y.—*Loan Exhibition of Portraits of Women:* at the National Academy of Design, November 1 to December 1.

Fall Exhibition of the National Academy of Design: opens December 10, closes January 5.

Loan Exhibition: at the Metropolitan Museum of Art, New North Wing opened November 5.

Fifth Annual Exhibition of the New York Water-color Club: at the Galleries of the American Fine Arts Society, 215 West 57th Street, December 1 to 22.

Zschille Collection of Arms and Armor: at Tiffany & Co.'s, Union Square.

Exhibition of Historical Book-bindings: at the Grolier Club, December 6 to 27.

Drawings by "Life" Artists: at "Life" Building, 19 West 31st Street, closes December 1.

Illustrations of Shakespeare, by Edwin A. Abbey: at F. Keppel & Co.'s, 20 East 16th Street, closes December 7.

Pictures by Adolph Artz: at William Macbeth's, 237 Fifth Ave., opens December 1.

"Little Girl Pictures" by Miss Maria Brooks, and Water-colors by Dutch Artists: at H. Wunderlich & Co.'s, 868 Broadway, opened November 24.

Third Annual Exhibition of the Sketch-Club of New York: at 1473 Broadway, December 5 to 8.

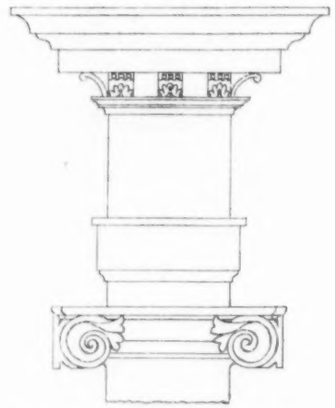
Philadelphia, Pa.—*Sixth Annual Exhibition of the Art Club of Philadelphia:* opens November 19, closes December 16.

Sixty-fourth Annual Exhibition of the Pennsylvania Academy of Fine Arts: opens December 17, closes February 23.

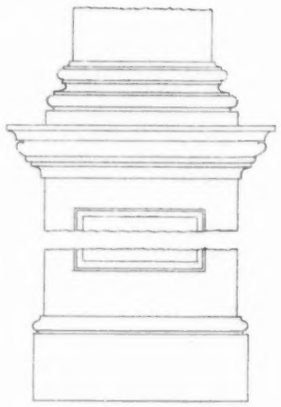
NOTES AND CLIPPINGS

London Water supply.—In his interesting address as President of the Engineering and Architectural Section of the Sanitary Congress at Liverpool, Mr. G. F. Deacon took occasion to differ from the recent report of the Royal Commission on London Water-supply, and to maintain the opinion that such waters as those of Loch Katrine, Lake Vrynwy, or Lake Thirlmere were alone fitted for the supply of a great town. Mr. Deacon lays great stress on the fact that filters may fail and apparently imagines that for efficient filtration, there must be an unbroken film of gelatinous matter over the whole surface of the filter bed. The experiments of the Massachusetts State Board of Health prove that no such "unbroken" film is required. In one case their filter consisted of a bed of pebbles the size of robin's eggs, five feet thick, and when sewage was passed through this stratum at the rate of 36,000 gallons per acre per day, 98.6 per cent of the organic matter present in the sewage was destroyed, together with 99.6 per cent of the bacteria. Even when the rate of filtration was increased to 100,000 gallons per acre per day, nearly equal results were obtained. Now river water is comparatively pure to start with, and a decrease of 99.6 per cent of the pathogenic germs in it would suffice to render it innocuous, as a considerable dose of these organisms is required to produce disease. Indeed, there is at least a possibility that a minute dose might be beneficial as a kind of vaccine. Apart from this, however, the filter-beds actually used are, in their upper layers, of a much finer texture than the pebble bed used in the experiment referred to, and hence there is every reason to believe that the uncertainties of filtration on which Mr. Deacon laid so much stress, have no existence in towns in which filtration is performed in a rational manner. This is fully confirmed by experience. The town of Altona, situated on the Elbe below Hamburg, and drawing its drinking-water from the same river lower down than Hamburg, enjoyed an almost complete immunity from the cholera, which was raging in the latter. Whilst Altona filtered its water, Hamburg did not. The vital statistics of our great towns show the same thing. Typhoid fever is known to be frequently spread by the water-supply, and hence, if there is any force in Mr. Deacon's contention, the deaths per million from this disease should be markedly more in London than in Glasgow. The two cities are, in many respects, very similar; but London draws the bulk of its water-supply from a polluted source and filters it, whilst Glasgow gets its water from Loch Katrine. The mortality returns for the eleven years ending 1891 show an average of one hundred and eighty-four deaths from typhoid per million in London, and two hundred and sixty-four deaths per million in Glasgow. Naturally no one considers that the bad-showing of Glasgow in this respect is due to the loch water, but the figures at least go to prove the London supply cannot be responsible for much fever. One of the worst epidemics of typhoid near London broke out in the Caterham Valley, where the water is drawn from deep chalk wells, and is exceedingly pure. Accidentally it got contaminated, and being so pure had but little self-cleansing properties, and the consequence was three hundred cases of typhoid amongst the consumers served by the company. Of course, other things being equal, a mountain lake source of supply would be preferred by most people, if even only for sentimental reasons, but until it has been definitely shown that properly filtered river water does give rise to epidemics, there seems no reason for spending millions of money in the search for a theoretical perfection. Filtration may occasionally fail, but when it does, a change is wanted in the engineering department of the town or company. It is to be feared that many of the advocates of a supply for London from the Welsh hills, are swayed rather by hatred of the water companies, than by a public-spirited regard for the common health and the common purse. This, of course, does not apply to Mr. Deacon.—*Engineering.*

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



CAPITAL AND IMPOST

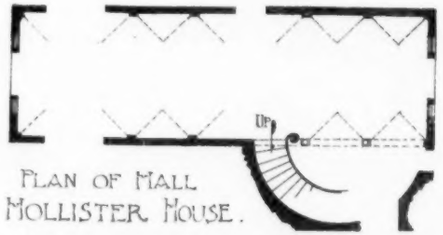


BASE AND PEDESTAL OF PILASTER.

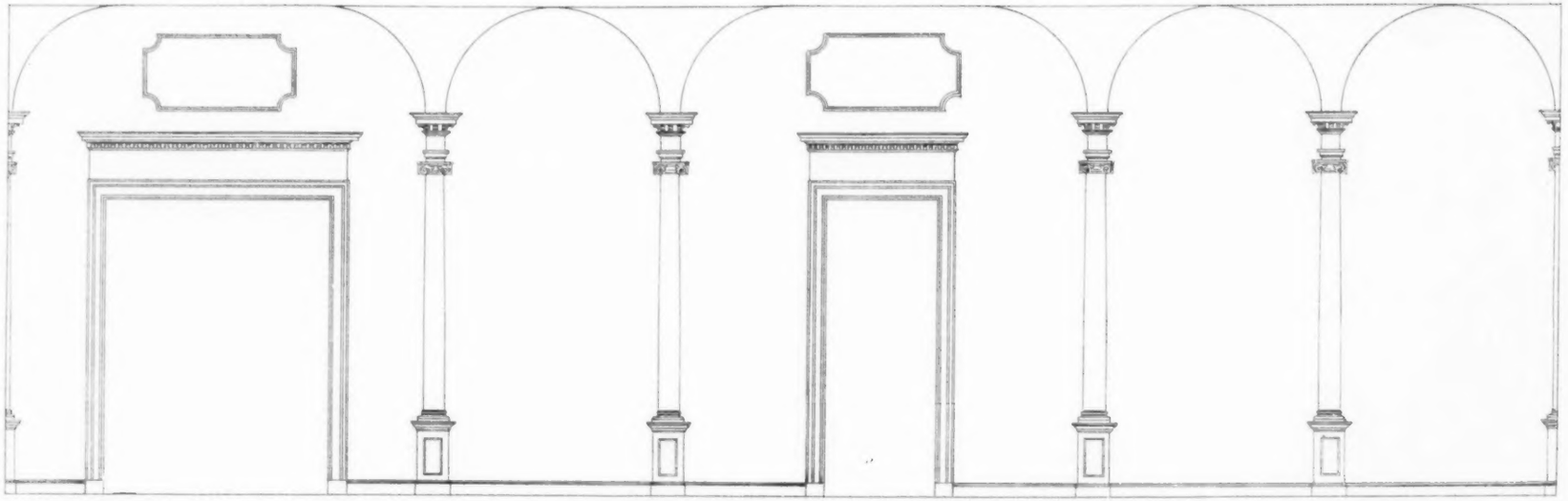
HEAD CASING OF DOOR

DOOR TRIM

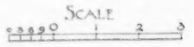
ELEVATION AND DETAILS OF HALL IN THE HOLLISTER HOUSE GREENFIELD, MASS BUILT BY WM. COLEMAN 1797



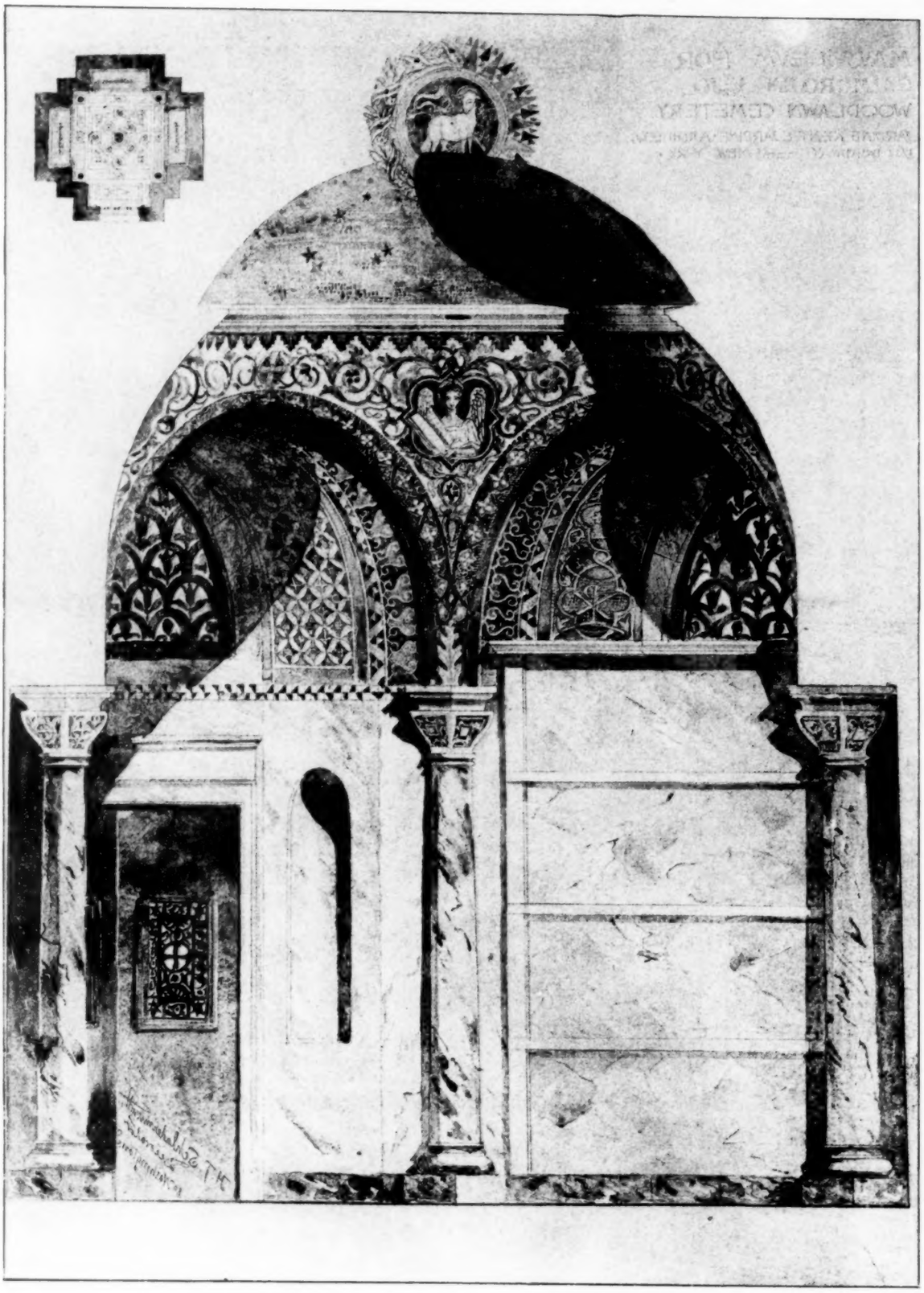
PLAN OF HALL
HOLLISTER HOUSE.



ELEVATION · OF · SOUTH · SIDE · OF · HALL

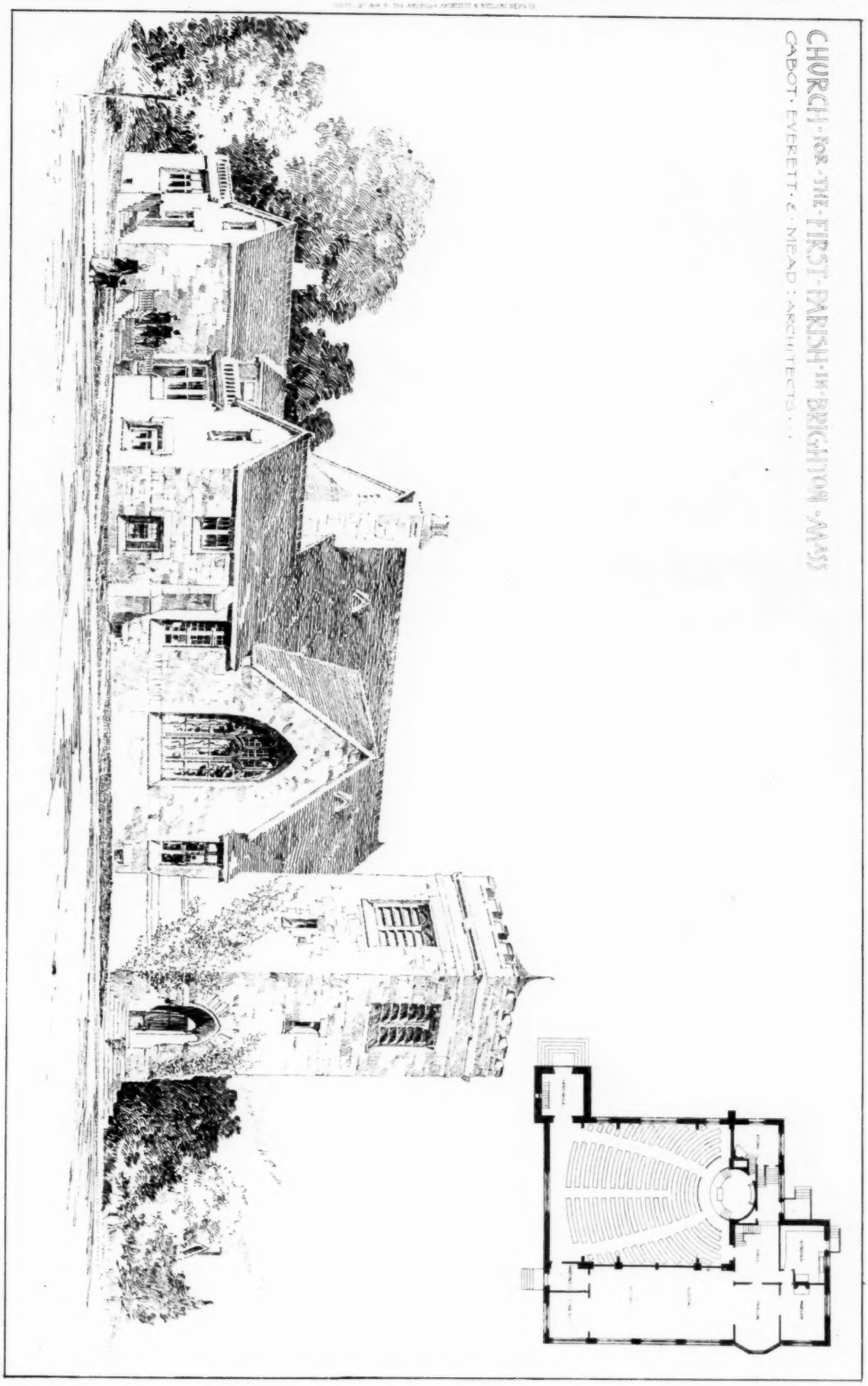


HELIOTYPE PRINTING CO. BOSTON



MAUSOLEUM FOR G. P. MOROSIN, ESQ., WOODLAWN CEMETERY.

JARDINE, KENT & JARDINE, Architects, 1262 Broadway, New York.

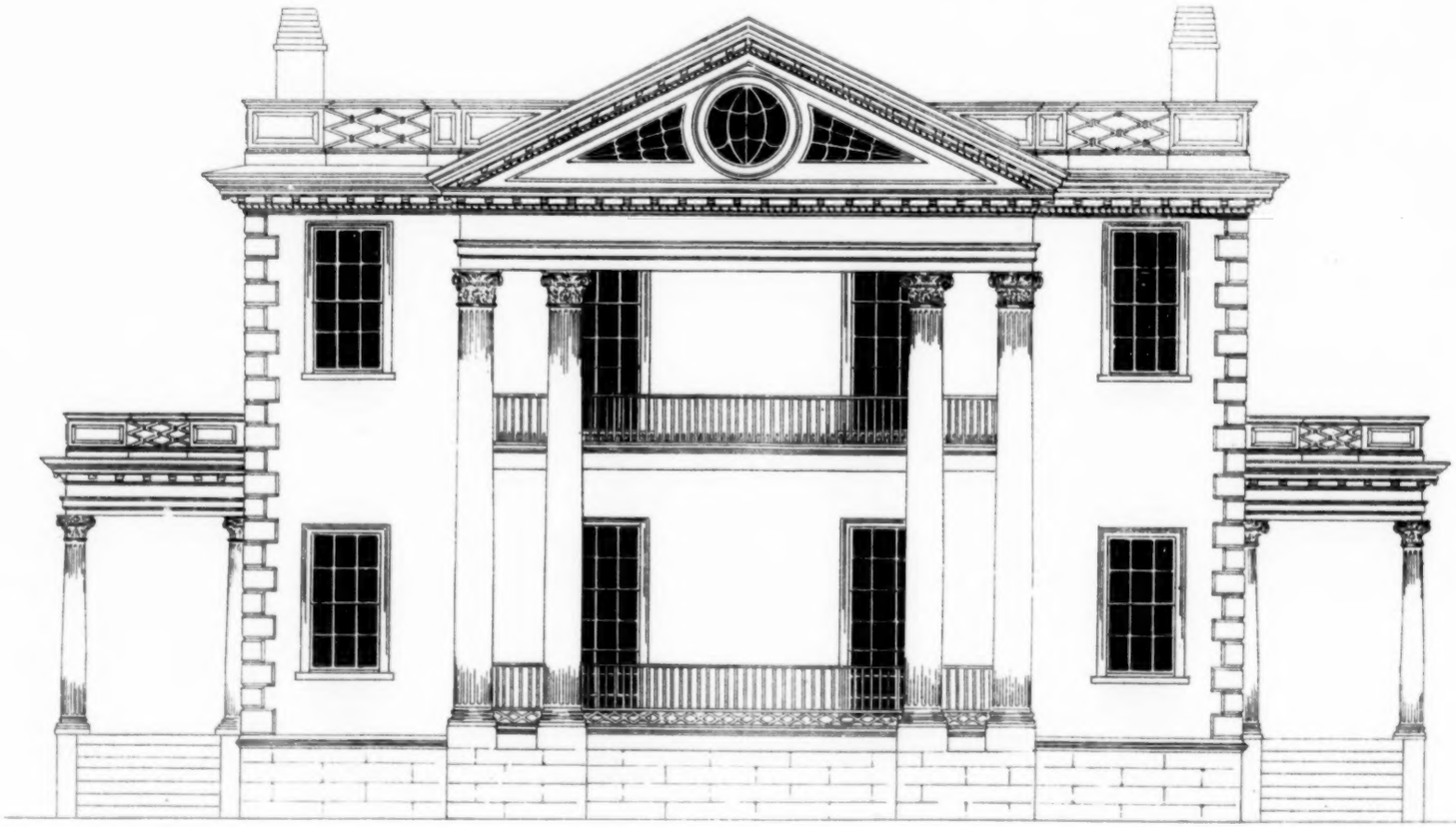


CHURCH FOR THE FIRST PARISH IN BRIGHTON, MASS.

CABOT, EVERETT & MEAD, ARCHITECTS.

No. 975. American Architect and Building News. Dec. 1. 1894.

The Alexander House, Springfield, Mass., Built 1811



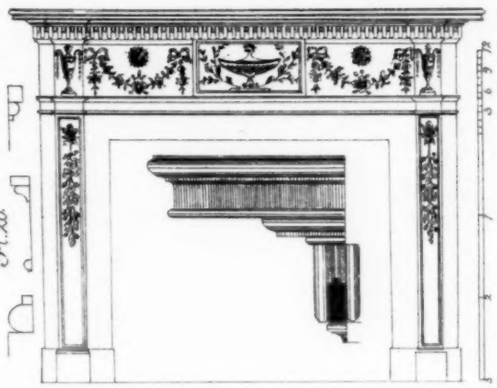
· Front · Elevation ·

Scale.

Heliotype Printing Co. Boston

PUBLISHED BY THE AMERICAN ARCHITECT & BUILDING NEWS CO.

Pl. 20



Pl. 19

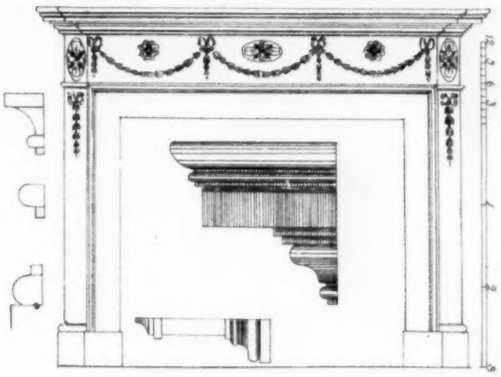
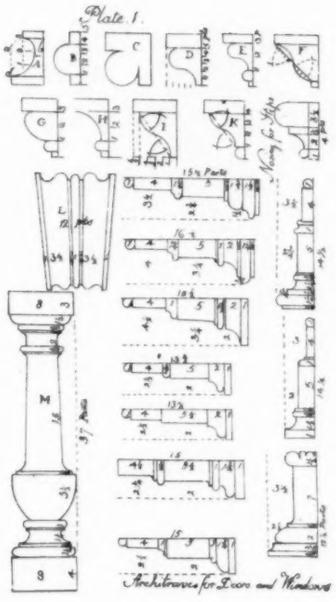


Plate 1.



Architraves for Doors and Windows

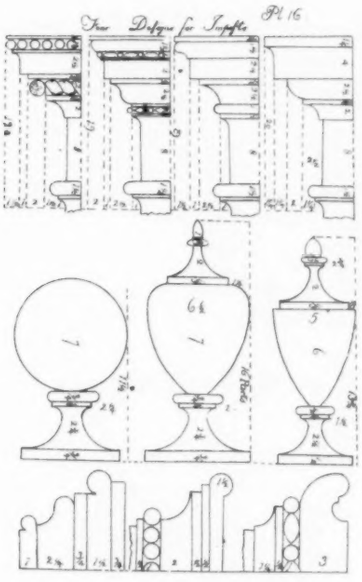
Pl. 11.

Ionic

7D 14m
14 Modillions

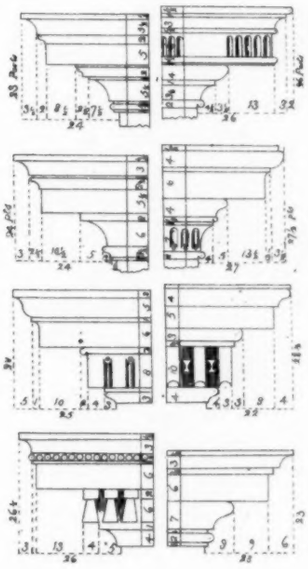
Pl. 16

Four Designs for Supports



6 Parts

Pl. 14.

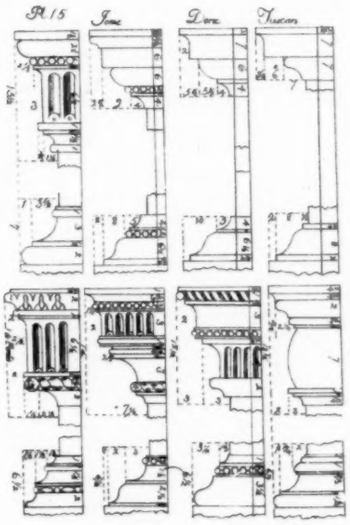


Pl. 15

Ionic

Doric

Tuscan



Corinthian

7D 35m
15 Modillions

BALLOU'TYPE PRINTING CO. BOSTON