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WE are asked for information as to whether a person who employs an architect and pays him can afterwards give the plans which the architect has made for him to another person; and, if so, whether the person so receiving them is entitled to use them without making any compensation to the architect. Questions of this kind are often submitted to us, and the answer is the same in all cases: that where the law provides, as it does in this country, a copyright system, by means of which the author of any design, on complying with certain formalities, can retain, for himself or his representatives, the exclusive use of that design, a person who makes a design without copyrighting it is presumed to waive his rights to its exclusive use. It is true that an architect's design for a building is not made public in the way that a book-illustration is, and people of honorable feeling usually make a reasonable compensation to the architect whose designs have come into their hands through a third party, if they desire to use them; but it is more than doubtful whether, in this country, the architect could collect such compensation by force. We do not know of any case in a court of record in the United States where the point has been brought up without being complicated with questions of interpretation of special contracts; but the general tendency of judicial decisions has been against the establishment of implied copyrights of any kind. It will be remembered that the matter of securing to architects rights in their designs is a favorite subject of discussion in conventions of the profession, here and abroad, and it is possible that the question whether the delivery of an architect's drawings to his client carried with it the right of the latter to use them again or give them to another person for use might receive from the courts an answer in conformity with the general feeling of the community; but, so far as we know, the experiment has never been tried.

CERTAIN merchants in Chicago are said to have formed a mutual-insurance company, to be similar to the manufacturers' mutual-insurance companies, and similarly managed. It is doubtful whether they can save much money in premiums for the present, mercantile insurance being generally cheap in comparison with insurance on dwelling-houses; but, if they could institute some such supervision as is practised by the factory mutual companies, it would be easy to reduce the cost of insurance very materially. Like the factory mutual companies, the new association takes risks only at tariff rates, returning, presumably, at the end of each year, the surplus of premiums received over losses, expenses and contribution to reserve-fund. As in the case of other enterprises of the kind, the success of the new insurance-association depends very much on its first managers; but, with good men at its head, it may become an important factor in reforming the construction and maintenance of mercantile buildings.

THE noted case of the Tremont-street explosion in Boston, which has been in the courts for more than four years, has been advanced a stage by the submission of the report of the auditor appointed to hear the evidence and fix the responsibility for the damage caused by the explosion. It will be remembered that in March, 1897, there was a violent explosion in the subway at the corner of Tremont and Boylston Streets, by which many persons were injured. The explosion was evidently due to gas collected over the subway, and more than one hundred suits for damages were soon brought against the Boston Gas-light Company in consequence. The Gas-light Company defended itself by claiming that the gas which exploded was not from its pipes, but was generated from the asphalt insulation enclosing the wires of the Edison Electric-light Company, which also ran in the street. In the first case which was tried the jury found the Gas-light Company alone liable; but the auditor now finds that, while it is proved that there was a leak in the large main-pipe of the Gas-light Company, and that the Company, after being notified of the leak, neglected to attend to it, there was also a defect in the Edison wires, by which some of the insulation was decomposed, producing gas which probably contributed to the explosion, and involving the risk of production of sparks, which might, and probably did, cause the explosion of the mixture of gas and air in the subway. The auditor's report, considering that the dangers from leakage of gas, either from the mains or the Edison tubes, might, and should, have been provided against by stationing a man at this point, instructed to throw open and ventilate the excavation on the appearance of any evidence of such leakage, finds the Gas-light Company and the Edison Company jointly liable for the explosion.

MR. JAMES G. BATTERSON, of Hartford, Connecticut, died a few days ago after a short illness. Although best known, perhaps, as President of the Travellers' Insurance Company, Mr. Batterson was, in his earlier years, brought much into contact with architects, many of whom remember with pleasure his frank integrity and his extended knowledge of the building-materials in which he was then interested. Although, as a young man, not of robust constitution, he possessed great mental capacity and energy, and, on being received into his father's business, as a dealer in building-stones, in the town of Litchfield, Connecticut, after it had become evident that his health would not permit him to pursue the study of law, he determined to understand thoroughly his new occupation, and, before long, became perhaps the most noted expert in the country on the building-stones of the Eastern States. Soon after assuming charge of the business for himself, he removed to Hartford, which offered much better opportunities than the little town of Litchfield, and established the New England Granite Works, which soon became famous. As the new concern prospered, quarries were bought, always under the intelligent judgment of Mr. Batterson, who was practically the sole manager. The great Batterson quarry at Westerly, Rhode Island, which has been worked to a depth of more than four hundred feet, producing a beautiful fine-grained stone, is a monument to his skill as an expert in such matters; and the Company subsequently acquired other quarries, producing material for a large part of the most important buildings in the country. In the conduct of the business, Mr. Batterson made many trips abroad, to study new processes and materials, and, in the course of these, he became interested in the English Railway Passengers' Assurance Company, which had then reached financial success. Returning home, he planned a similar enterprise for this country, which, beginning with a capital of one hundred thousand dollars, is now the great Travellers' Insurance Company, the largest corporation of the kind in the world.

THE annual illustrated publications of the great architectural schools have become so bulky that the University of Pennsylvania has taken the sensible course of limiting the distribution of its particular issue to the people who want it. Hitherto, the Year-Book of the School of Architecture has been published by the students of the Department; and, in order to meet a portion of the expense, it has received advertisements which, to say the least, did not add to its attractiveness. This year, the University has undertaken the publication

of the book, and, while improving the illustrations by the employment of better processes of reproduction, it has left out all the advertisements. Naturally the consequence of the change is to make the Year-Book much more expensive, as well as better, and, in order to avoid wasting it on people who do not care for it, the University sends out a small preliminary pamphlet, enclosing a card with a printed request for the larger work, which can be filled out and returned by those who are really interested in the matter. There will be, we hope, many in the profession who will appreciate the offer. While we have doubts as to the expediency of sowing broadcast among the public samples of the work of students of architecture, to be ignorantly admired by some and not less ignorantly criticised by others, there can be no question of the interest to the experienced and devoted architect of everything connected with architectural instruction. He alone can read the school year-books with thorough appreciation of the tendencies of modern instruction and the qualities of mind which this instruction finds and develops in the students who receive it; and we are sure that the profession in this country will find in these exhibits of American school-work, if carefully examined and compared with that of the foreign schools, the greatest interest and satisfaction.

ONE thing which might, it seems to us, be of great value in connection with these reproductions of student work, would be a means of comparing the work of the different schools. Of course every one who is sufficiently interested in the subject to look carefully over the annual school publications forms in his own mind an idea of the relative merit of the work of the different institutions for the year; but it would be an excellent thing for the students to have also an opportunity of making similar comparisons, and, possibly, of hearing comments on them from unprejudiced persons whose opinion would command respect. For example, it is currently supposed that a certain school devotes itself more to architecture as a fine art, while another looks in preference to the engineering side of the profession; and it would be difficult to find a matter of more importance to architectural education than the examination, from year to year, of the students' work of these two schools. Again, two schools equally devoted to the fine-art side of architecture employ different methods of teaching. One, we may say, holds rigidly to what is imagined in this country to be the method of the *École des Beaux-Arts*, while the other sends its pupils to nature for inspiration. It is obvious that the effect of the different systems will be seen in the work of the students of the two schools, and a lesson of the greatest value can be derived from the comparison. As a matter of fact, there is no place where real originality in art is more valued than it is in France, but there is, also, no art in which caprice and eccentricity are so fatal as in architecture; and the problem of determining how far, and in what way, students of architecture can be encouraged in *à priori* design without distracting their attention from those paramount laws of line, proportion and light and shade which it is so difficult to learn without a long course of faithful copying is the most important one in architectural education. Nothing would do more to solve this problem, which has occupied the thoughts of the teachers of architectural art for centuries, than such comparisons of student work as these, followed, naturally, by comparison of executed designs by architects trained under the different systems; and there is no country which affords such facilities for the investigation as our own. In France, where there is but one school and one system, there can be no comparison, except of the work of different men, and this would be misleading; and in England and Germany, where there is no system, the case is still worse; but here, where each school has its own system, the effect of it on the average of a succession of classes can be studied with substantial results, and nothing would be more valuable to the profession than the attempt.

WE are very glad to second, in such modest way as may befit us, the opinion of a writer in the *New York Evening Post*, who thinks that the American marine painter, William T. Richards, has not received from his fellow-citizens the honors that he deserves. Mr. Richards is now an old man, and has been painting for nearly two generations pictures which, in the opinion of the *Evening Post's* correspondent, as well as in our modest one, "surpass pictures of similar subjects produced in any age or in any country"; yet, although his pictures seem to find a ready market, the name of their author

is rarely seen in the newspapers, he is never interviewed by reporters, and, so far as we are aware, he presides over no association for the advancement of art. It should be said, in fairness to his brother-artists, that Mr. Richards's pictures are generally given an honorable place in the few exhibitions in which they appear; but their limited number, the smallness of the public to which marine paintings appeal, and, perhaps, the inapplicability of such subjects to the mural decoration now so popular, have combined to deprive one of the greatest painters of his time of the recognition which he deserves. If his pictures could be shown together, and, particularly, if they could be shown side by side with those of other marine painters, ancient and modern, the public could be trusted to appreciate them at their real value; but it would probably be difficult to accomplish this, and the prospect is that an artist who does honor to American landscape-painting will reach the height of his fame in the future.

EVERY one knows that the asphalt roadways which were formerly characteristic of Paris and London have for many years been replaced with pavements of wood-blocks; and as our own cities, which have begun, half a century behind those of Europe, to pave roadways with asphalt, will probably go through the same experience of finding asphalt too slippery in bad weather, and replacing it with wooden pavement, it is interesting to follow the improvements which have been made in London and Paris in the care of such pavements. In both cities, even the wood has been found slippery when covered with a thin layer of mud. In London, where a very hard tropical timber is used for the blocks, it is found necessary to sprinkle the surface by hand every morning with gravel, which is stored for the purpose in iron bins. These bins are placed in the middle of the street, on little "islands," which have been found so useful in dividing the traffic and promoting the safety of pedestrians that their number has been very greatly multiplied within a few years. In Paris, where islands in the streets, although provided in the Champs-Élysées and other crowded thoroughfares, are much less common than in London, the streets are sprinkled from wagons with finely-crushed porphyry. In either case, the surface of the blocks, in time, becomes brushy from the crushing and disintegration of the fibres. Usually, worn blocks are taken up, and relaid with a fresh side upward, but, in Paris, where it was of importance not to interrupt the traffic for this, attempts have been made to cut off the brushy surface with an adze, thus restoring the block nearly to its original condition, but with its surface a trifle lower than before. This trimming with tools, owing to the hard particles of porphyry imbedded in the wood, is a tedious and expensive operation, and the City Government of Paris has, therefore, been experimenting recently with a machine resembling a lawn-mower, but a little larger and very strongly constructed, and driven by an electric-motor attached to the shaft. In operation, the machine is connected either with the wires of some power-circuit in the neighborhood or with a portable engine and dynamo, and moved about over the pavement to be trimmed. At sixteen hundred revolutions a minute, the machine trims fourteen square yards of pavement an hour, at a total cost of three and one-half cents per square yard, while a man with an adze can trim, at most, only about one square yard per hour.

THE city of Geneva, Switzerland, invites sketch-plans from all Swiss architects and engineers for the improvement of the city on a comprehensive scale. Although Geneva possesses many wide and handsome streets, a large part of the city still retains the narrow and crooked thoroughfares of a century ago, and it is desired to improve these, not only for the sake of securing air and sunshine, but also to provide room for the lines of steam and electric tram-cars, which are rapidly multiplying. The design is to be divided into two sections, one including the portion of the city on the right bank of the Rhone, and the other the portion on the left bank; but plans may be submitted for a combined treatment of both banks. The jury is allotted one thousand dollars, to be divided in its discretion among the authors of the best designs. All designs must be submitted on or before March 1, 1902. Maps of the city, at one-third the scale of the required plans, have been provided, and are furnished to intending competitors for a small sum, which is returned when the designs are actually submitted.

VENTILATION BY ASPIRATION.¹—V.

WE have now reached a stage that enables us to state the class of buildings and the number of occupants for which the aspirating-chimney is appropriate on the basis of both economy of fuel and attendance. Such buildings are those of simple and compact plan, preferably containing one story or, at most, two stories; those limited to a capacity for not exceeding 400 occupants present only a part of the time, or, when occupation is continuous, not exceeding 25 occupants if ventilation must be the best attainable, as in the case of hospitals; or not exceeding 75 occupants where 30 cubic feet per minute is accepted as sufficient air for each person. For all other buildings the fan is the appropriate motive force, and for those where there is no attendant, electric-power is indicated, if it be available.

Although churches and audience-halls in general may present a simple plan and favoring conditions, the aspirating-chimney is not to be commended for them, because it is a promoter of cold draughts from doors, windows and corridors, a fault in such buildings most to be avoided, and only to be overcome by a true plenum. This was, for the first time, practically demonstrated in the Capitol at Albany, and especially in the Metropolitan Opera-house in New York, before the original ventilating-system was destroyed by fire. Here aspiration was employed to assist the weak and small flues as against the strong and large ones, but not to exhaust any air from the building. On the contrary, resistance was applied at the outlet and air could only escape in large volume through the effect of pressure generated by the powerful blower at the inlet; thus, if a door was opened, cold air could not press in, but air escaped from within outwards. Up to the time when the original apparatus was destroyed, this was the only building of its class in the world which was wholly free from cold draughts, or from movements of air from the corridors towards the auditorium, and constituted a real advance in the art of ventilating theatres.

Taking into account the other considerations besides economy of fuel and attendance, it may be good practice to depart occasionally somewhat widely from the boundary-line which has been partially defined above. There may be instances where the possible noise of a neglected engine would be fatal and the fan ought not to be used, but it should never be forgotten that a relatively large fan and an extra powerful engine of the very best make and of the simplest pattern (for refinement of economy in a fan-engine is a superfluity) are substantial guaranties against noise. But to offset this possible disadvantage there is the economy of space and even of apparatus where the fan is chosen, added to which is the paramount virtue of certainty of result. These benefits are so great that they should be allowed to have full effect in influencing the choice. The danger is that they will be underestimated. But where competent attendance can not be had, nor repairs made promptly, the aspirating-shaft must be preferred, even for buildings somewhat larger or more complex than the rule allows. It is not so much in these cases a question of economy as of practicability, and it is to be borne in mind that the superiority of the fan is largely due to its ample power. Let the chimney then have plenty of power, that is to say, let the difference between the pressures inside and outside of the building be equal to a water column $\frac{1}{2}$ -inch high.

As will be understood from what has preceded, if we separate the cost of air-warming for comfort from that for maintaining ventilation, the cost of this power is nothing in zero weather, but it advances with the outside temperature, keeping pace with it, until at about 65°, when it is too cold to open windows and invite dangerous draughts, the cost about equals that of warming alone when it is at zero. If an engine were used, at no time would the cost of fuel for driving it be more than one-tenth of this, even when the exhaust is wasted, and it must be remembered that the ducts, etc., would be only half the size or less of those fit for aspiration, more than doubling the velocity of the air and quadrupling the work to be done by the engine. This is not the only troublesome fact to the disadvantage of the chimney; the strong aspirating effect, which it seems to me is indispensable to a well-designed system of ventilation, signifies a leakage of cold air into the building from all directions and sources, not only through imperfect joints and cracks and pores and permeability of materials, but from rat-holes, drains and the soil—always somewhat tainted with sewage and filth—while the opening of one or two windows will at any time block the whole process.

The pressure upon an ordinary outer door would be about sixteen pounds, and the strain required to open it would be eight pounds: rather too much for a child to manage. Small storm-doors would be imperative, although the pressure is not so great as that of a high wind. It would be important to use care in constructing the building to make it as air-tight as possible, and especially to fit closely all doors and windows, expedients that have no relation to ventilation by a plenum system. The constant liability to obstruction and interference by the commonest trivial circumstances, to which aspirating-systems are exposed, merits a whole chapter at least. It is a gentle breeze that has not a greater force than they, and high winds sometimes accelerate, sometimes reverse the draught. In cities it is not easy to avoid the effect of contiguous buildings, their roofs and towers; one cannot predict how they may act, while every change of temperature, and often every change of wind, modifies the force that is based on the fixed assumptions of a rigid formula, a formula that shuns all the really difficult elements of the problem, those that

cannot be coralled between a pair of algebraic brackets, and abandons its derivative to unlimited modification by every fortuitous influence.

When we come to apply the aspirating-system to a building such as the school-house already spoken of, the principles brought out in the above discussion demand in their application some method of tolerable exactness and certainty of action whereby as the temperature of the heater in the inlet is raised that at the base of the chimney may be lowered, and vice versa. The effect to be reached is that, whatever the out-of-doors temperature may be, the air entering the rooms may be at 70°, and that entering the shaft as much above 70° as the outside temperature is above zero. Sometimes one heater would do the greater part of the heating, sometimes the other, but the total elevation of temperature must always be 70°. So far as I know, this is a result not hitherto proposed, much less achieved, by anybody. As a proposition, this seems to cover the whole ground; it is complete, and not only places aspiration on a perfect scientific basis in strict accord with theory, but it brings it into harmony with the heating as a joint function. The question is, does the plan admit of a practical solution? Let us examine our resources.

A hot-water apparatus would seem to lend itself best to such a variation in heat-emission, and the control would obviously be secured by manipulating valves. The rate of combustion in the boiler, according to the law above given, would be uniform and its regulation would be easy. But we have to carry the local, or supplementary, heaters, whose rate of heat-emission would depend upon the weather. This requirement would make it necessary to vary the temperature of the water in the entire system, which would interfere with the air-heaters. Separate boilers would therefore seem indispensable.

This is an objection, and to it must be added the uncertainty of securing a sufficiently exact regulation in the case of the air-heaters by merely adjusting the valves.

Another mode of adjustment, applicable equally well to hot-water or steam heaters, is the mixing-valve. To accomplish the adjustment required, it would be simply necessary to move the valves (or, as they are often improperly called, dampers) which could be joined by a mechanism in such a way that as the fresh-air mixer gave more heat the foul-air mixer would give less. There are objections to the mixing-valve, however. It does not really mingle the hot and cold volumes of air, which often reach the rooms in distinct masses, a defect which I overcame in 1876 in plenum systems by placing the fan beyond the heater and mixing-valve, an arrangement quite effective in blending the two currents into one of homogeneous temperature. Another method is to subdivide the two currents into a number of small streams, but such valves are costly to make and fit in place. Finally, it is not practicable to shut off the heat wholly by the mixing-valve, as it is often necessary to do. These considerations appeared to me sufficiently weighty to make it worth while to see what could be done with low-pressure steam, and I finally selected it as the better agent and developed a complete scheme, which, even if not yet actually in use anywhere, may prove interesting to engineers as a suggestion of possibilities.

Taking up first the problem of air-heating, we have as data 7,500 cubic feet to be warmed per minute 70°, sometimes by one of the heaters acting alone, but usually by both heaters acting in succession. Since the conditions require the quantity of heat to be constant, the rate of condensation and consequent flow of steam will be constant. Now, imagine this volume of steam to be discharged into two empty chambers by two throttles having inversely variable throats too small to permit a free escape and requiring about one pound pressure to produce a discharge of steam at a rate just sufficient to supply the place of that condensed. It is obvious the volume discharged by each throttle will be proportional to the area of the opening. These throttles may be combined in a sort of two-outlet valve, as shown in Figure 3, where the position of the valve with relation to its ports is indicated by a graduated arc upon which the arm moves. The arc is divided into seventy parts, and is so arranged with relation to the

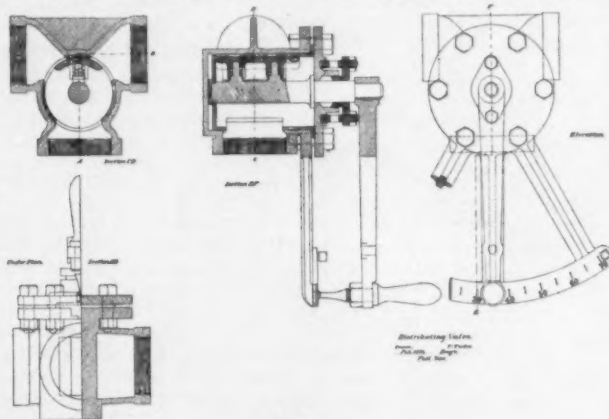


Fig. 3.

valve and its ports that when the arm is set at zero, the port opening into the fresh-air heater is wide open and the other quite closed. The janitor has then only to set the valve-handle at the division corresponding in number to the degree of outside temperature to cause a discharge of steam from the respective ports proportionate to the

¹ Continued from No. 1341, page 77.

needs of each heater, as will be evident from what has been already explained.

The connections of boiler and heaters and the distributing-valve are shown in Figure 4, where *v* is the valve, *h* and *h'* the two heaters, one for the fresh, and the other for the foul, air; *b* is the boiler, and *p* a pipe for venting the heaters and permitting an exchange of imprisoned air from heater to heater. The air is to be vented from the heaters by hand, not allowing all the air to escape, but just enough to produce sufficient condensing-surface to warm the air to the required degree. This point is determined by thermometers visible to the person operating the valves and placed in the two air-currents, the air being aspirated by tubes connected to the boiler-chimney.

When each heater is adjusted to its proper rate, the air-cocks are closed and the valve *v* opened. The condensing-surface is thus fixed for the day. The valve *v*, when open, connects the condensing-space of both heaters and the air within them, and permits the residual air to move from one heater to the other when the position of the controlling throttle is changed, while restricting within the fixed limits the space occupied by steam.

From an engineering standpoint this contrivance has a very attractive look, and, in a mechanical sense, seems to be a truly elegant solution of a heretofore unsolved problem. Its merit consists in its absolute conformity to the demands of theory combined with the utmost simplicity of action and management. Upon the effectiveness of the process as described, depends the whole value of the plan, if it has any, and it is so important that, at some risk of repetition, but with the intention of making the action more clear, it will be advantageous to review the conditions. The whole apparatus is extremely simple; such complications as appear to the untechnical are due solely to an attempt to include every detail of construction in the description.

The apparatus and its operation as above described are designed to fulfill the requirements of the law as already stated, whereby the total heating (or condensing) surface in use at one time shall always be equal to that of one of the heaters only when fully heated, although it may be divided between them; and, if divided between them, it shall be so divided that as the share of one is larger, that of the other shall be less, and vice versa. This condition will be satisfied by causing a portion of the heater-surface to be non-condensing through the presence within it of a fixed volume of air. Moreover, since the proportions of active and inactive surface must be varied from time to time, this result is to be exactly accomplished through the effect of the valve and its power to divide and distribute a current of steam between two condensing-chambers, the total volume being held in check by the retained air, which, while it cannot escape, is yet free to move from heater to heater, as determined by the steam-flow from the distributing-valve when it is shifted from one position to another.

To illustrate further: if the apparatus is started when the outside air is at 20°, in an hour the temperature may have risen to 30°, and the controlling-valve will have to be moved ten divisions, delivering more steam to the chimney-heater and less to that assigned to the fresh air. The air remaining in the heaters will consequently be displaced, being forced through the horizontal air-pipe from *h'* to *h*, taking the place in the latter formerly occupied by steam, until equilibrium of pressure takes place. Change of position of the valve will be required from time to time, as a rule, until the school-hours are ended, when the steam should be wholly shut off from the air-heaters.

In order to secure positive action of the throttle-valve and a truly proportionate delivery of steam, it must be remembered that this effect is not left to depend upon the capacity of the valves or pipes connected to the heaters, which, according to usual practice, is so large that the resistance to the flow of the steam is inappreciable and cannot be depended upon to divide the steam-current into two proportionate subdivided streams. To make the division positive, a certain amount of pressure is expended, as already explained, in passing the ports of the throttle, and this pressure (only a pound at

the boiler to allow for this loss, preventing the return-water from being retained in the heaters by back-pressure, and for keeping the air-pipe dry.

Regarding the heating efficiency of the two heaters, I should use somewhat more radiating-surface than the calculation would call for, the active surface being readily regulated by the amount of air left within the heater when adjusting it for the day. The type recommended for the work in question is a gilled heater (see Fig. 5, amongst the illustrations) that I have named "convector," a word recommended to engineers as more concise and descriptive than the clumsy expression "indirect radiator." This type of convector will heat air from zero to 75° when the steam-pressure is not less than 2 pounds and the velocity of air-current does not exceed 2 feet a second through an imaginary channel whose cross-section area is equal to that occupied by the heater. This design is the most favorable to the flow of air of any that I have yet seen; it divides the air-stream into innumerable small streams (air is heated by contact only, not by radiation) and employs a form opposing little obstruction to its movement. Besides, the gills, owing to imperfect conduction, have a lower temperature than the hollow shell to which they are attached and which is in contact with steam, so that the average surface of the whole convector is lower than a plain surface could be, unless heated by hot water. This is a very desirable quality in a heater. A low temperature of the warming body and a form allowing free movement of air are details not sufficiently cared for by engineers.

FREDERICK TUDOR.

(To be continued.)

THE TRAGEDY OF ARCHITECTURE.¹

PUBLIC appreciation of architecture might almost be described in one word, as *nil*; and, although such a conclusion would be most generally correct, it would ignore the flights of passing fancy and fashion in relation to the great building-art. It is safe to say that there is no real public appreciation of architecture for the simple reason that it has ceased to be an art, and has developed into a fashion. And we don't appreciate a fashion; we admire it for a time, because it tickles our palate, it captivates our idiosyncrasies; then we let it die out and be forgotten. We have styles in architecture just as we have styles or fashions in dress, and the fluctuations of popular taste are as capricious in the one as in the other. The reign of fashion is one of the most arbitrary and senseless forms of government to which human beings have ever subjected themselves; all individuality is crushed, so that we go on blindly following some passing whim like a flock of sheep. And in architecture this despotism is no less idiotic and offensive than in dress. One style is in vogue now, then another, and so our buildings are erected first in this style and then that, all because we want something fresh; a change from the monotony of our everlasting streets—those hideous monuments of our latter-day civilization. The question of variety in street architecture does not affect the contention that our buildings are erected in styles not because one particular mode is more suited to the nature and purposes of the erection, or better adapted for the climate, or even more nearly expressive of our modern civilization and sense of refinement and culture. Then why? For the simple reason that "craze" must be pandered to, we must give evidence of an "improved" taste, and incidentally provide profitable work for the architect and for the laboring classes. Of course, it is the cloven foot of commercialism, and from a utilitarian standpoint it may be right; but morally and æsthetically is it right? It cannot be! The structure should be honestly expressed by the façade; it is what is behind which should suggest the front, which, after all, is but a screen to hide the interior. In modern construction what is behind does not seem to affect either the architect or the client; the building is, from the front, what it appears to be. But it isn't!

A house with an Italian front does not imply necessarily an Italian house, or one with a Moorish front anything appertaining to the Moors. No! It may be that the interior is the most commonplace and prosaic; and it often is. The introduction of variety into architecture of course is commendable, but only where it is honest and expressive of the nature of the structure. It is worthy and welcome that our streets should have some diversity. Too long they have been the nightmares of a pampered and petted conventionality. But surely when all thoughts of convenience, utility, and honest adaptability are thrown at one side in our effort to produce an eccentric line of façades, we have passed from the boundary of sense to absurdity.

Looked at from the point-of-view from which buildings are generally judged nowadays, it is a pity that such erections have to be put to any use. Could they only be arranged and taken care of in the precincts of some huge art-gallery or museum, they would prove good specimens of human "effort," and be no longer the butt of the fault-finder and satirist. Then were this the object and end of the building-designer, and houses built to look at and not to live in, architects and their clients would be at peace, and towers, turrets, façades, windows and doors could be designed without risk of causing inconvenience, ridicule and contention. But we live in a day when everything must be practical amongst the upper classes, as well as amongst the usually called "common people"; the practical man is dictator with a sway as influential as it is effectual. But strange to say, that, as regards architecture, all sorts of incongruous things are permitted and even encouraged, evidently because they are the

¹ A paper by Guy Wilfred Hayler in the *Westminster Review*.

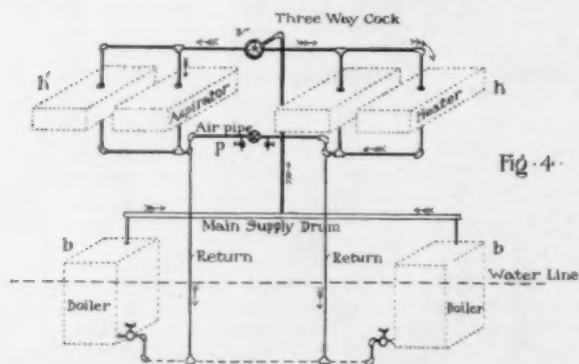


Fig. 4.

most, so that there will be one pound higher pressure in the boiler than in the heaters), being infinitely great in comparison with the loss of pressure due to flow of steam in the pipes, is perfectly effective in securing the requisite division of the steam-current. The heaters must, therefore, be set at a level high enough above the water-line of

latest, most modern, smart, or up-to-date. Towers, turrets, battlements and mouldings are designed where unnecessary, windows where they are not needed, and ornament plastered on where it is absolutely meaningless and silly. Thus there is a constant series of squabbles between architect and client, builder and tenant. And it is to be expected that such will happen and continue to happen so long as this strange craving is pandered to.

The most elementary student of the history of architecture is aware that ornamentation and utility can be combined to produce the most perfect buildings. Then why should these essentials be separated? Without close combination no really successful building can be produced: nothing but a medley of inharmonious disorder.

There is a broad distinction between architecture and mere building-construction. A building without art is simply construction, as a body is dead that is without life. John Ruskin, in his "*Seven Lamps*," says: "The creations of architecture, being not essentially composed of things pleasant in themselves, but of inert substance, depend for their dignity and pleasurable, in the utmost degree, upon the vivid expression of the intellectual life which has been conceived in their production. Thus all things become noble, or ignoble, in proportion to the amount of energy of the mind of man which has visibly been employed upon them." It would seem preposterous to enlarge on this, after an era of work by Ruskin, Morris, and others. But there are times when one almost thinks that they have lived in vain. Yet it cannot be!

It is the failure to realize the difference between construction and architecture which leads to the creation of these building *Frankensteins*, and the diffusion of such perverted views broadcast amongst the people. The true aim should be the proper combination of aesthetics with construction. A factory or warehouse, plain and unadorned, is not architectural. It may answer its purpose, for common needs, but that is not the point. There should be a rhythm or a kind of symbolism in its lines which will influence the thoughts of the observer, otherwise it will be a lifeless and inanimate object, deadening rather than elevating, depressing rather than invigorating. Again to quote Ruskin: "Architecture is the art which so disposes and adorns the edifices raised by man, for whatever uses, that the sight of them may contribute to his mental health, power and pleasure."

The story of architecture through all the ages has been the story of man's attempt to adapt his life to his environment. Indeed, it is the unwritten law of progress, and architecture has always been the reflex of national character. The Greeks gave the evidence of their almost superhuman fineness of intellect and taste in the architecture of their temple. They understood their art, with its balance of voids and solids, contrasts of light and shade, horizontal and vertical line, plain and decorated surfaces, subtlety of curves, exquisite proportions and precisions, etc. Therefore they succeeded. The Romans, apart from the Greek adaptations introduced by Dilettanti, exhibited their national feeling in the solidity and strength of their edifices—buildings reflecting the vastness of their empire, built not for a day but for all time, a symbol of Imperial destiny and Roman eternity.

The American Indian in his wigwam, the Assyrian in his house of clay, the Roman in his villa, and the man of the Middle Ages in his castle, are but types of civilizations influenced by climate, natural and geographical conditions, soil, land produce, temperature, rainfall, manner of living, etc., and evolving themselves into classes of society visibly expressed by their dwelling-places. The influence of environment on architecture is readily realized when we think of the reason why the Assyrian built of clay, the Greek of stone, and why the mediaeval noble lived in a fortified palace. It was because of the abundance of clay in Assyria, of stone in Greece, and because of the unsettled state of the country in the Middle Ages, that such was the prevailing method in these various nationalities at their respective times.

As time progressed the economic and social influence of trade and commerce was apparent, and felt by all sections of the people. Society was revolutionized by the vast changes taking place. The enforcement of law caused the disappearance of the old fortified dwellings, and a free, peaceable, social life was inaugurated which brought about small dwelling-places and villas instead of great huddled collections of houses under the protection of a citadel or fort.

Out of the diverse operations of natural conditions each architectural style originated and each form had an evolution of its own which was as distinct and as easily traced as progress in any other art or attainment. Common-sense, truth, utility, and simplicity were the foundations upon which all the great phases of architecture of old were built; but they were disregarded, and one by one thrown to the winds with reckless abandon, so art developed into fashion and architecture fell. There was the Gothic and monastic spirit which raised buildings as memorials and evidence of a great and long-continued effort to christianize the world; and there was the Renaissance spirit, which sought to revert to the civilization and morality of Paganism. Between the two, the degradation of architecture came, and the spirit of modern architecture—if it can be said to have one—is little better than a reflection of any and every other age, but never of its own. Could the tragedy of architecture be more complete?

In the congested and breakneck state of our present civilization, what should be the legitimate influence of natural conditions on architecture is quite neglected. We are not disposed to "waste our

time," for instance, over exactness in regulating the lines of perspective of our buildings, nor do we use curved lines instead of straight ones to counteract the visual distortion.

When one is practising in a city where land has reached untold value, it is quite evident that there will not be so many chances of utilizing the site as there would have been but for this initial difficulty. History affords no parallel to the extraordinary value of land in the cities at the present day. The compression of multitudes into small areas has created problems almost bewildering in embarrassment. But there are many details in our national architecture which might be much more intelligently treated in spite of this, and if they were, the reproach on architecture which at present exists might be to a great extent removed.

Prior to the great Industrial Revolution which was the characterizing feature of the Victorian Era, architecture had only problems presented by Nature to face; life was simple, and what artificiality existed was little and inconsequential. But with the introduction of machinery, mechanical contrivances entered intimately into everyday life, revolutionizing all forms of building and bringing about untold complexity in architectural problems. Steam, electricity, and free education produced a society different to any that had previously existed. The ends of the earth were united, and the most tremendous action and reaction came into play. Our lives have thus developed into one unending, breathless hurry, a senseless scamper of all classes of society.

The scarcity of land in the cities has developed "the skyscraper," and if this latest innovation is not so far advanced in Europe as in America, there is no doubt as to the tendency of expansion vertically in place of laterally. And it might be added, expansion downward, another and not impractical solution of the land difficulty.

Evolution—mechanical—has advanced the spirit of engineering at the expense of art. One by one, as the various processes of manufacture succumbed to the moloch of machinery, art left them, and expressionless productions have been the result. Again, the genius of invention, though supplying us with what we are pleased to call necessities of civilization, has initiated difficulties which the architect must face and solve. To-day we have the gigantic powers of electricity, steam, heat, and water harnessed to our wants, and with improved sanitation, fire-protection, and a universal regard for law and order, absolutely new conditions have been created. Manufacturing processes are widespread, all kinds of artificial building-materials are made and used, and iron and glass, which now enter so largely into construction, are in themselves almost new elements. Business methods have been reduced to a science as exact as any on the old college curriculum, and the ever-varying change, interchange, and introduction of new trades, are fresh problems with which to grapple. Above all, the gigantic aggregations of capital, powerful and close combinations both of masters and men, the increased dependence of the people on the railways for transmission of both goods and passengers, are staggering questions which demand a correct answer if progress is to be achieved.

Buildings are so very different now from what they used to be. Houses, workshops, factories, railway-stations, theatres, churches, hotels, clubs, etc., need the vigilant application of new ideas and the constant scheming of new methods. The work of an architect to-day embraces almost every trade and occupation under the sun; a moment's reflection is hardly necessary to see the immense field it occupies—a field in which architects must adapt themselves to modern conditions. Our future advancement is intimately interwoven with the influence architects exert on the national life.

There never was a time when a more intelligent architecture was needed as now, and there never was a time when it was more neglected. An intelligent architecture would not sacrifice utility to beauty, or prefer plainness to ornament. A building can have beauty and utility, art and engineering, and still be good architecture and a harmonious whole. The question is, what are the tests of good architecture? Where should the merely mechanical requirements end and the artistic begin? Architecture cannot be judged like the work of a lawyer or physician; with them the number of briefs or patients spell success, but the number of buildings a man builds are no test, necessarily, of his qualification to erect good architecture. There are plenty of buildings built which are successful works of construction, skilful arrangement, etc., which have absolutely no merit whatever when viewed from the architectural and artistic point-of-view. Their designers undoubtedly possess talent of high order, and technical skill in clever arrangement, but attributes of artistic beauty they can not be said to possess. Utility and proper construction are the tests which the multitude consider are quite sufficient for buildings. Like any other art, architecture is only understood by the very few—those who possess either an inherent artistic temperament, or those who have been educated up to a high standard of taste. Popular admiration is not worth much, art is such an intangible quality and so little valued. There is no royal road to the acquirement of the artistic faculty. It often seems a pity that art could not be served out like a commodity. "Please, I've come for father's art." But, like all other paths to knowledge, it is a long and weary one, and only by patient and unrelenting labor is the goal ever reached.

Intelligent architecture does not imply any compromise between the elements of beauty and utility, but it does imply a strict application of common-sense in dealing with them. Is there any reason why architecture should be denied a common-sense treatment like that which is given to any other branch of progress and thought? In

cases without end we see architecture made the victim of downright absurdity. Why should windows be arranged just to suit a symmetrical façade without any thought for the poor rooms behind them? And why should not some attention be bestowed upon the question of the sunlight, that it be given to rooms where it is wanted, and not to minor offices? How often is the door neglected, small and cramped up, and without a porch which might be very properly made a feature of our national architecture, considering the varied nature of our climate. The value of land has spread a wild fear lest an inch should be wasted. This is quite right, but why try to squeeze everything in, and of the very smallest dimensions? What is the good of a "store-room" the size of a match-box, or a "hall" about the area of a bird-cage? Let us get back to intelligence and think of what is the use of a house in which the pieces of furniture cannot often be got in? It is quite a common occurrence for expensive and really good furniture to be taken to pieces, pulled about and eventually ruined, while endeavoring to get it to a certain room. Nor are these structural difficulties the only ones that call for improvement, but in a great many cases the arrangements for heating, lighting, drainage, ventilation, etc., are designed — being considered as adjuncts to the building — without any reference to their surroundings. Thus the most painful and ludicrous results are constantly to be seen. Morris told us that architecture was "the art of building suitably with suitable materials," and that "nothing was more likely to lead to a really living style — a desideratum which everybody is seeking for — than the consideration first of all . . . of the suitable use of material." Was he right or wrong? In his opinion stone was the most noble and satisfactory building-material, wood coming next, and brick to be only considered as a makeshift. But what do we do — build in cheap brick or glaring terra-cotta, and roof in with Welsh slates. Oh, the criminality of it!

Consul Pliny, in a letter written to his friend Gallus in the early part of the first century of our era, described his newly-finished villa of Laurentinum, and set forth the natural conditions which are essential for successful building better than they have ever been set forth. He said: —

"You are surprised that I am so fond of my Laurentinum, or (if you like the appellation better) my Laurens. But you will cease to wonder when I acquaint you with the beauty of the villa, the advantages of its situation and the extensive prospect of the seacoast. It is but seventeen miles from Rome, so that, after finishing my affairs in town, I can pass my evenings here without breaking in upon the business of the day. There are two different routes to it. If you go by that of Laurentum, you must turn off at the fourteenth milestone; if by Ostia, at the eleventh. Both of them are in some parts sandy, which makes it somewhat heavy and tedious if you travel in a carriage of ease, and pleasant to those who travel on horseback. The landscape on all sides is extremely diversified, the prospect in some places being fine pine-woods, in others extending over large and beautiful meadows, where numberless flocks of sheep and herds of cattle, which the severity of the winter has driven from the mountains, fatten in the vernal warmth of its rich pasturage. My villa is large enough to afford all desirable accommodation without being extensive. The porch before it is plain, but not mean, through which you enter into a portico, in the form of the letter D, which includes a small but agreeable area. This affords a very commodious retreat in the bad weather, not only as it is enclosed with windows, but particularly as it is a shelter by an extra projection of the roof. From the middle of this portico you pass into an inward court, extremely pleasant, and thence into a handsome hall, which runs out towards the sea, so that when there is a southwest wind it is generally washed with the waves, which spend themselves at the foot of it. On every side of this hall there are either folding-doors or windows equally large, by which means you have a view from the front and the two sides, as it were, of three different seas; from the back part you see the middle court, the portico, and the area, and by any view you look through the portico into the porch, whence the prospect is terminated by the woods and mountains, which are seen at a distance. On the left hand of this hall, somewhat farther from the east, lies a large drawing-room, and beyond that a second of larger size, which has one window to the rising and another to the setting sun; this has likewise a prospect to the east, but, being at a greater distance, is least needed by us. The angle which the projection of the hall forms with this drawing-room retains and increases the warmth of the sun, and hither my family retreat in winter to perform their exercises. It is sheltered from all winds except those which are generally attended with clouds, so that nothing can render this place useless but what at the same time destroys the fair weather.

"Contiguous to this is a room forming the segment of a circle, the windows of which are so placed as to receive the sun the whole day. In the walls are contrived a sort of case, which contains a collection of those authors whose works can never be read too often. Thence you pass into a bed-chamber, through a passage which, being boarded and suspended as it were over a stove which runs underneath, tempers the heating which it receives and conveys to all parts of this room. The remainder of this side of the house is appropriated to the use of my slaves and freedmen, but most of the apartments are neat enough to receive any of my friends.

"In the opposite wing is a room ornamented in very elegant taste, next to which lies another room, which, though large for a parlor, makes but a moderate dining-room. It is exceedingly well warmed, and enlightened not only by the direct rays of the sun, but by their reflection from the sea. Beyond is a bed-chamber, together with its ante-room, the height of which renders it cool in summer, as its being sheltered on all sides from the winds makes it warm in winter. To this apartment another of the same sort is joined by one common wall. Thence you enter into a grand and spacious cooling-room, belonging to the bath, from the opposite walls of which two round basins project sufficiently large to swim in.

"Contiguous to this is the perfuming-room, then the sweating-room, and next to that the furnace which conveys the heat to the baths. Adjoining are two other little bathing-rooms, fitted up in an elegant rather than a costly manner. Annexed to these is a warm bath of extraordinary workmanship, wherein one may swim and have a prospect of the sea at the same time.

"Not far hence stands the tennis-court, which lies open to the warmth of the afternoon sun. Then you ascend a sort of turret, containing two entire apartments below, and there are the same number above, besides a dining-room which commands a very extensive prospect of the sea, together with the beautiful villas that stand interspersed upon the coast. At the other end is a second turret, in which is a room that receives the rising and the setting sun. Behind this is a large repository, which is a gallery of curiosities, and underneath a spacious dining-room, where the roaring of the sea, even in a storm, is heard but faintly. It looks upon the garden, and the *gestatio* which surrounds the garden. The *gestatio* is encompassed with a box-tree hedge, and, where that is decayed, with rosemary, for the box in those parts which are sheltered by the buildings preserves its verdure perfectly well, but where, by an open situation, it lies exposed to the spray of the sea, though at a great distance, it entirely withers. Between the garden and this *gestatio* lies a shady plantation of vines, the alley of which is so soft that you may walk bare-footed upon it without any injury. The garden is generally planted with fig and mulberry trees, to which this soil is as favorable as it is averse to all others. In this place is a banquetting-room, which, though it stands remote from the sea, enjoys a prospect nothing inferior to that view. Two apartments run round the back part of it, the windows whereof look upon the entrance of the villa and into a very pleasant garden. Hence an enclosed portico extends, which, by its great length, you might suppose erected for the use of the public. It has a range of windows on each side, but on that which looks towards the sea there are double the number of those next the garden. When the weather is fair and serene those are all thrown open; but if it blows, those on the side the wind sits are shut, while the others remain unclosed without any inconvenience.

"Before this portico lies a terrace perfumed with violets, warmed by the reflection of the sun from the portico, which, as it retains the rays, so it keeps off the northeast wind, and thus, warm on this side as it is cool on the opposite, in the same manner it proves a defence against the southwest wind, and thus, in short, by means of its situation, overcomes the force of the winds from whatever point they blow. These are some of its winter advantages. They are still more considerable in summer, for at that season it throws a shade upon the terrace during the forenoon, as it defends the *gestatio* and that part of the garden which lies contiguous to it from the afternoon sun, and casts a greater or less shade as the day either increases or decreases; but the portico itself is even cool when the sun is most scorching, for its rays fall directly upon the roof. To its different benefits I must not forget to add that by setting open the windows the western breezes have a free draught, and by that means the enclosed area is prevented from stagnating. On the upper end of the terrace and portico stands a detached building in the garden which I call my favorite, and, indeed it is particularly so, having erected it myself. It contains a very warm winter room, one side of which looks upon the terrace; the other has a view of the sea, and both lie exposed to the sun. Through the folding-doors you see the opposite chamber, and from the window is a prospect of the enclosed portico. On that side next the sea, and opposite to the middle walls, stands a little elegant recess, which, by means of a glass door and a curtain, is either laid into the adjoining room or separated from it. It contains a couch and two chairs. As you lie upon this couch, from the foot you have a prospect of the sea; if you look behind you see the neighboring villas, and from the head you have a view of the woods; these three views may be seen very distinctly from so many different windows in the room, or blended together in one confused prospect. Adjoining this is a bed-chamber, which neither the voices of the servants, the murmuring of the sea, nor even the roaring of a tempest can reach; nor lightning, nor the day itself can penetrate, unless you open the windows. This profound tranquillity is occasioned by a passage which separates the wall of this chamber from that of the garden, and thus, by means of that intervening space, every noise is precluded. Annexed to this is a small store-room, which, by opening a little window, warms the bed-chamber to the heat required. Beyond this lies a chamber and ante-chamber which enjoy the sun, though obliquely indeed, from the time it rises till the afternoon. When I retire to this garden-apartment I fancy myself a hundred miles from my own house, and take particular pleasure in it. At the feast of the Saturnalia, when, by the licence of that season of festivity, every other part of my villa resounds with the mirth of my domestics, I neither interrupt their diversions nor they my studies."

When it is recollected that this letter was written more than 1,800 years ago, in a civilization radically different to our own, with society, culture and knowledge developed in altogether another spirit, it will be seen what a remarkable account of correct building-methods it is. The principles it illustrates are as much the true ones as they were then, and the lessons they teach are as important to us as they were interesting and instructive to the Roman citizen of so long ago. What matters it that the description is of a building erected more than 1,800 years ago and that it has probably long since perished from the earth? The letter is an honest enunciation of truth, and though from its archaeological interest it is of great importance, it is the more so from its admirable description of a model Roman dwelling. Pliny — not an architect — never showed his common-sense more strikingly and to better advantage than in the erection of his villa, and he showed he was a student of nature and a man of keen observation as well. To him, utility is the chief consideration which should be observed in architecture, and coupled with it are the conditions imposed by environment. It is an economic matter. We should take advantage of the natural situation, direction of winds, heat of the sun, temperature

and climate as well as the added element — aesthetic effect. Adaptation to use was the main feature of Pliny's design. There was no insistence of the beautiful or intrusion of the ugly. Everything was arranged as convenience demanded or sense suggested, as well as fancy pictured, and the consequence was that a house was created which satisfied the everyday wants of its owner as well as the higher ideals.

In contradistinction to the pleasure which Pliny derived from his villa is the general dissatisfaction which is expressed to-day against all classes of modern buildings — whether costing much or little. And architects are largely to blame, for, instead of being leaders of a progressive architectural movement, they show themselves radically unable to give us anything worthy of our age and generation. J. Ernest Phythian, in his "Story of Art in the British Isles," says: —

"Probably the revolt can make but little headway for many years, yet in a country which cannot, or will not, produce its own food, and is forced or thinks itself forced, to push machine-made 'goods' produced first for sale, and then, if at all, for real use, on all the markets of the world. But it may be that we are on our way to a social, economical and political *reductio ad absurdum*, the proof of which may lead to changes, evolutionary, if not revolutionary, after which art may have its chance again."

One wonders: —

"Since earlier men have raised their race
So high above its former place,
Why may not we as well aspire
To lift our place and purpose higher?
To feel within the hungry breast
Some goading spur of grand unrest,
Some glorious aim, in impulse rife,
That urges on to fuller life." — GRANT ALLEN.



AMERICAN INSTITUTE OF ARCHITECTS.

PROGRAMME of the Thirty-fifth Annual Convention, to be held in Buffalo, N. Y., October 3, 4 and 5, 1901.

Thursday, October 3.—Morning Session.

The members of the Institute will meet in the Assembly-rooms of the New York State Building, Pan-American Exposition, at 9.30 o'clock; will register their names; the President will appoint a committee of three on credentials of delegates, and at 10 o'clock there will be short addresses of welcome by Hon. Conrad Diehl, Mayor of Buffalo; Hon. John G. Milburn, President Pan-American Exposition; Hon. Wm. I. Buchanan, Director-General, Pan-American Exposition; George K. Birge, Chairman of Buildings and Grounds Committee, Pan-American Exposition, after which the President of the Institute, Mr. Robert S. Peabody, will deliver the Annual Address, when the Convention will be declared open for business.

Order of Business.

1. Report of the Board of Directors.
2. Report of the Treasurer and reference to the Auditing Committee.
3. Reports of Chapters, a synopsis of which will be read by the Secretary.
4. Report of the Standing Committees: —
 - Committee of Foreign Correspondence, Glenn Brown, *Chairman*.
 - Judiciary Committee, W. S. Eames, *Chairman*.
 - House and Library Committee, Robert Stead, *Chairman*.
 - Education and Publication Committee, H. L. Warren, *Chairman*.
 - Committee on Contracts and Lien Laws, Alfred Stone, *Chairman*.
 - Committee on Applied Arts and Sciences, George B. Post, *Chairman*.
 - National Conference on Standard Electrical Rules, Alfred Stone, *Delegate*.
 - Conference with the Architectural League of America on Competition Codes and Coöperation, R. Clipston Sturgis, *Chairman*.
 - Conference with Heating and Ventilating Engineers, A. J. Boyden, *Chairman*.
5. Report of Committee on the Improvement of Washington, D. C., W. A. Boring, *Chairman*.
6. Report of Committee on Extension of the Executive Mansion, George B. Post, *Chairman*.
7. Appointing of Committees to nominate officers of the Institute for the ensuing year, and to suggest a place in which to hold the next Annual Convention.

(Luncheon will be served at 1 o'clock in the Banqueting-hall in the basement of the New York State Building, for members and ladies in attendance at the Convention.)

Afternoon Session, 2 o'clock.

1. Report of Special Committees: —
 - Legislative Committee on Government Architecture, George B. Post, *Chairman*.
2. Papers on the "Effectiveness of the Tarsney Act and Suggestions for Modifications."
 - (a) Cass Gilbert, New York.
 - (b) W. A. Boring, New York.
 - (c) John H. Rankin, Philadelphia.
3. Appointment of Special Committees to consider and report on recommendations contained in the Annual Address of the President, of the Report of the Board of Directors, of the Reports of Chapters, and of the Standing and Special Committees.
4. Report of Credential Committee.

Evening Session.

The members of the Institute will meet at 7 o'clock at the Triumphal Bridge, to see the electrical illumination. This should be seen as the current is turned on the lamps. Mr. Henry Rustin will give an informal talk upon the electrical lighting at this time.

After the illumination a dinner will be served in "Old Nuremberg," at \$1.50 each, including ticket of admission.

Friday, October 4, 10 o'clock.

1. The following papers will be read in reference to the Pan-American and other Expositions: —
 - (a) "Some Phases of Exposition Making," Mr. Carleton Sprague.
 - (b) "The Management and Design of Expositions," Mr. Thomas R. Kimball.
 - (c) "The Exterior Color Effects of the Pan-American Exposition," Mr. C. Y. Turner.
 - (d) "The Electrical Installation and Decorative Effects of the Pan-American Exposition," Mr. Luther Stieringer.
 - (e) "Government Architecture at Expositions," Mr. E. A. Crane.
2. Vote on proposed change in By-Laws.
3. Report of Committees on President's Address, Chapter Reports, and Director's Report.

Luncheon will be served at 12.30 P. M. in the Banqueting-hall in the basement of the New York State Building, for members and ladies in attendance at the Convention.

Friday, 1.30 o'clock.

1. Election of officers.
2. Unfinished business.
3. Miscellaneous business.

Saturday, October 5.

An excursion will be made to Niagara Falls and Lewiston, starting at 9 o'clock A. M., by way of boat on Niagara, trolley along Canadian side to Queenstown, across the river to Lewiston, trolley up the Gorge on the American side to Niagara Falls, luncheon at International Hotel at 1 o'clock, and return to Buffalo by trolley.

Price for round trip \$1.75; price in addition for luncheon at International Hotel, \$1.00. Return, stopping at electric-power plant, the Falls and other points of interest.

After the adjournment of the meetings and during the evenings of the Convention, the following architects, members of the Buffalo Chapter of the American Institute of Architects, have been appointed to act as escorts to points of interest which members may desire to visit, starting from the New York State Building. Messrs. M. G. Beierl, R. A. Bethune, William Hart Boughton, George Cary, J. H. Coxhead, D. E. Metzger, U. G. Orr, William S. Wicks, F. A. Whelan, H. O. Holland, J. A. Johnson and F. H. Loverin.

Delegates will be distinguished by a red ribbon, and will occupy seats from the front row as far back as is necessary for their accommodation.

Members of the Institute who are not delegates are entitled to enter all discussions, to offer resolutions and motions, and to vote on a proposition that it is "the sense of the meeting."

Prompt and full attendance on the successive sessions at the hours indicated is requested, otherwise the business of the Convention cannot be fully accomplished.

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TYPES OF CONVECTORS.

THIS plate is Figure 5 in illustration of the article on "Ventilation by Aspiration" elsewhere in this issue.

IN STYLE A.—The section at the return end is the same, except that the wide and narrow gills occupy reversed positions. Intermediate sections have one side like the inside of supply section and the other like that of the return section. The gills of the sections interlock. There may be from two to ten sections in a group. The groups may be set in any plane, horizontal, vertical, or at any angle between.

IN STYLE B.—All sections are alike, except in length. They are designed to be made in three sizes, containing 12, 18 and 24 square feet of heating-surface. This style is in use at the Boston Public Library and the Boston City Hospital.

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THE DESIRABILITY OF MODELS AND THE DUPLICATION OF ARCHITECTS.—Professor Aitchison, in a letter which appeared in the *Times*, London, of the 8th June, says: "It is most unfortunate that the two distinguished architects who were to build the new Government offices are both dead when the foundations alone have been completed; and I dare say that no model of either of these great public monuments

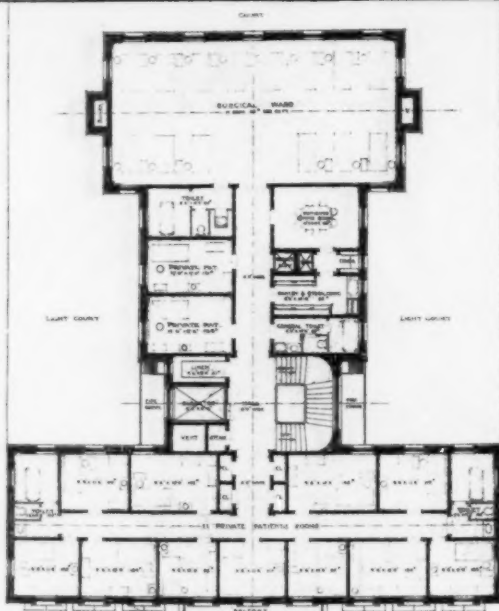
exists. I believe that all the principal buildings of the world, at least since Justinian's time, were built from models, and by the precaution taken by the Pope to have a model made we have now Michael Angelo's dome at St. Peter's. For many of the buildings that have won the admiration of mankind two architects were employed, to ensure, I suppose, that the approved design might not be lost by the death of its designer. The Parthenon had Ictinus and Callicrates for its architects. Anthemius of Tralles and Isidorus of Miletus were the architects of Sta. Sophia at Constantinople. At St. Peter's Bramante was seconded by B. Peruzzi, and afterwards by Antonio da San Gallo the younger. Raffael had Giuliano da San Gallo and Fra Giocondo as aids, and after their deaths A. da San Gallo the younger was first architect; he had Peruzzi as his second. There was no second architect to Michael Angelo, although he had Vignola and Pirro Ligorio as aids. We were lucky in the strength and long life of Wren, who finished our great Protestant Cathedral, and in Sir Charles Barry, who finished the Houses of Parliament; but Elmes, the architect to that triumph of classic architecture St. George's Hall at Liverpool, died before it was finished, though he was fortunate in having so great a master as Professor Cockerell to finish it. But should the proper completion of great public monuments be left to chance? The French Government, I am given to understand, always appoint a first and second architect to all their public buildings, the second being fit to carry out the first architect's design in case of his death. I am afraid the English people are not aware that architecture is the record of the artistic skill of each epoch and tells the state of cultivation of the nation from which all else may be deduced, or else they would not be so regardless of the possible fate that a monument may meet with in case of the death of the original designer—that is, they do not care if a bad history of their time is handed down to posterity."

HARD-WOODS FROM THE PHILIPPINES.—Experiments are to be made in Portland, Oregon, with hard-woods from the Philippines. A trial order has been sent for 4,000 feet, to include ebony, tindalo, and gray and blood-red narra, which is the Philippine mahogany. This wood is expected to take the place of Borneo mahogany, known as ypie-wood in the Philippines, which has been much used in interior car-finishings. It promises to give better satisfaction than the Borneo product, and is expected to supersede it entirely in the Western market. Some of the red narra and ebony will be made into furniture in Portland to show what may be done with it. None of this wood requires staining or painting. Narra is a close-grained, solid wood, somewhat resembling teak in its texture, and, like teak, it has the virtue of not deteriorating when built in contact with iron where it is not protected from moisture. A surprising fact is that this fine wood from the Philippines can be laid down in Portland for from \$125 to \$150 per 1,000 feet board-measure, while the common Eastern oak retails there for \$120 per 1,000. The cost of Philippine mahogany in Portland is only about half as much as that of the South American article. When the facts about Philippine woods become generally known, it is expected a great deal of them will be imported to Portland. — *N. Y. Evening Post*.

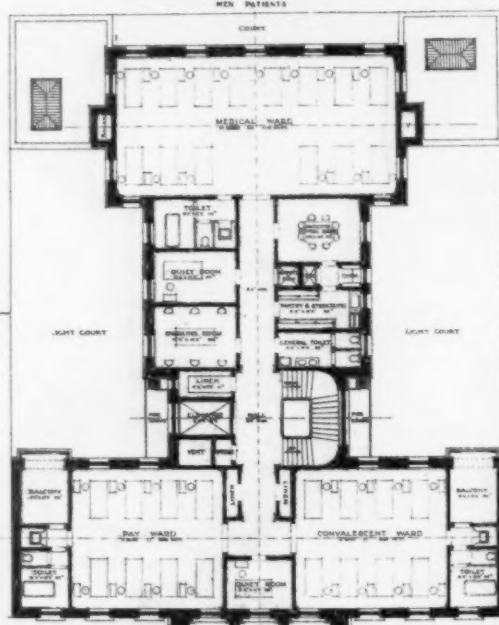
THE FIRE-GUARD OVER INDEPENDENCE HALL.—The following details from the *Fireman's Herald* show the extraordinary precautions taken to guard Independence Hall, Philadelphia, from destruction by fire. Watchmen maintain a patrol every hour of the day and night, and the only lights permitted in the old building are those used to illuminate the clock at night. For the boilers used to heat the building fireproof-vaults have been provided under the archways, and only two electric-wires are allowed. Chief Baxter has provided for the appearance of six engines, two trucks and a chemical-engine within two minutes after an alarm is sent in from the fire-alarm box in the square. There are standing instructions that, if fire should gain headway in the structure, a general alarm shall be sent in, calling to the scene twenty-six fire-engines, six trucks, and another chemical-engine, as well as the chief and nine district-engineers. Every wire in the vicinity of the hall is specially insulated, and officers of the fire-department regularly join the watchmen in inspecting the edifice. Portable fire-extinguishers are scattered about the building, and directions for saving the famous old portraits that hang on the walls are conspicuously posted. There is a peremptory order displayed that reads: "In case of fire get the Liberty Bell out of danger at any cost."

LEGAL LIABILITIES OF LABOR-UNIONS.—Following the two recent English decisions holding the funds and offices of labor-unions pecuniarily and legally liable for the injuries committed under their authority and procurement, comes a third English decision asserting still more emphatically the rights of employers to recover damages against the unions. This last case is that of Quinn against Leatham, an action brought against the officers and members of a trade-union who, in furtherance of the objects of the union, maliciously induced customers to cease to deal with a man not a member of the union, and in addition caused his servants to leave his employment. The House of Lords Court, by a unanimous vote, has just decided in favor of the employer in his suit brought for the damages he had sustained. The effect of this decision, as summarized by a London legal authority, is that "an interference, by threats of serious damage or annoyance, with the right of every man to earn his living in his own way, and to deal with persons who are willing to deal with him, is *prima facie* actionable, even when the coercion is applied not to the man himself, but to others for the purpose of injuring him. Whether in any particular case the interference with a man's business or employment is wrongful must be to a large extent a question of fact." In this Quinn case, the question as to whether the employer had sustained damage was left to a jury. The comment of the London *Times* on this decision is as follows: "Any other result would have been a disgrace to the law of a civilized country. Every bully and ruffian would feel stronger and safer if conduct such as that of some of the defendants passed unchallenged. The result is to be welcomed." — *N. Y. Evening Post*.

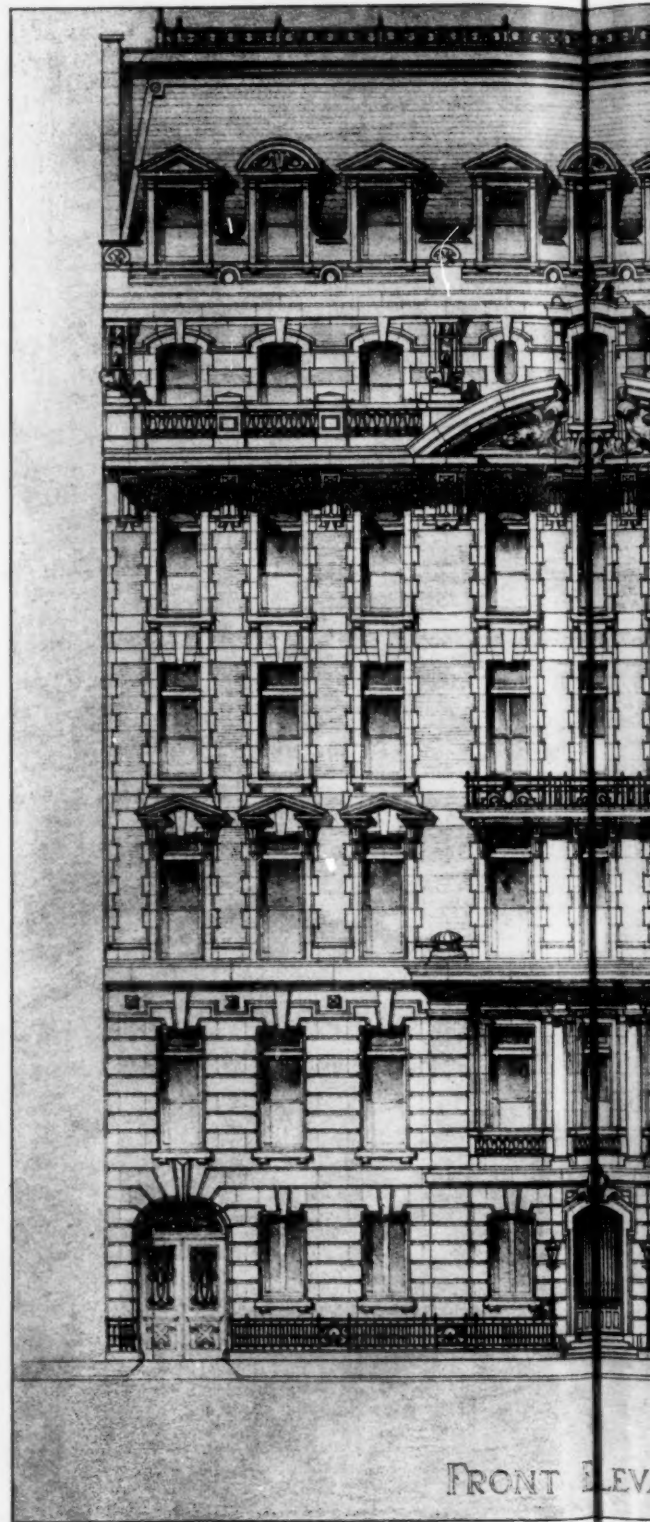
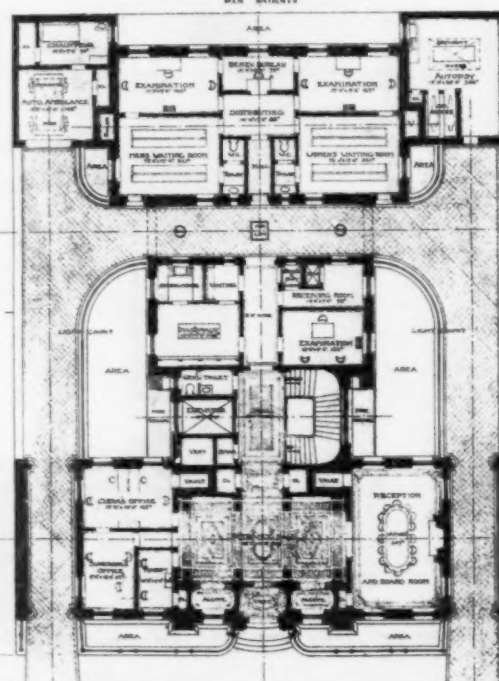
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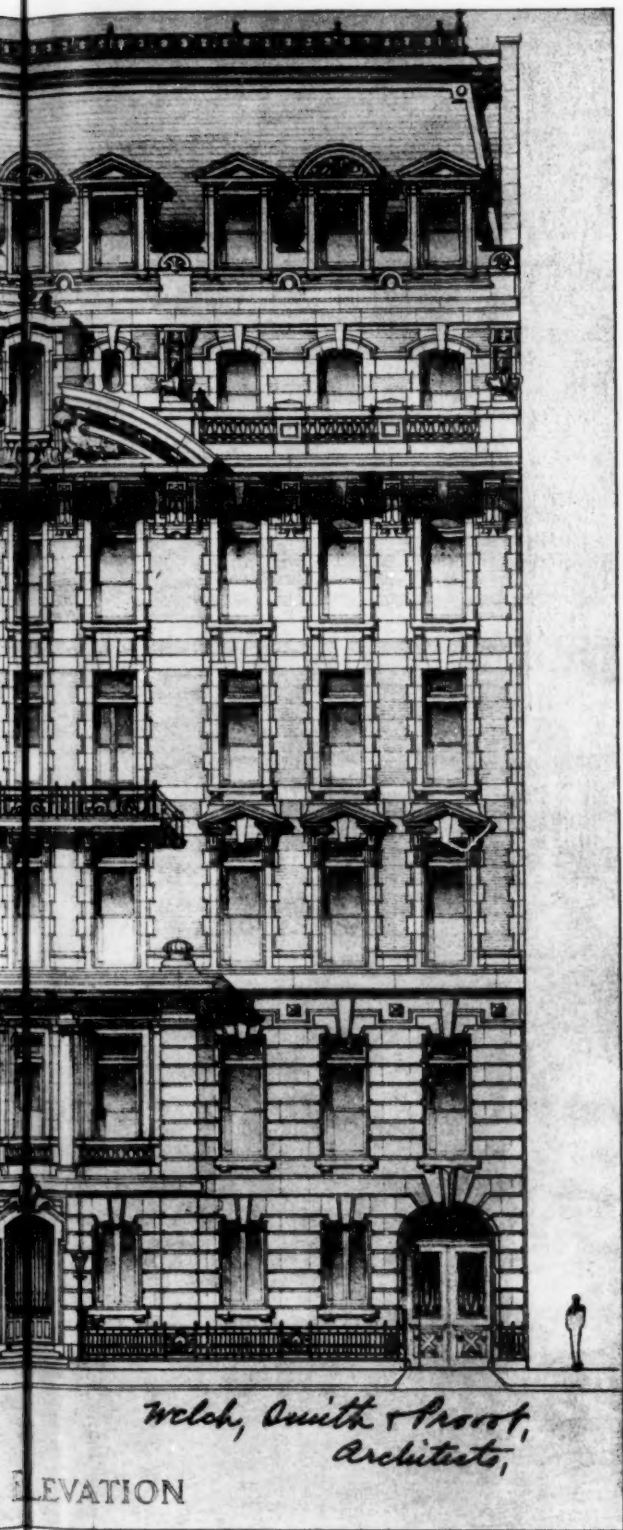
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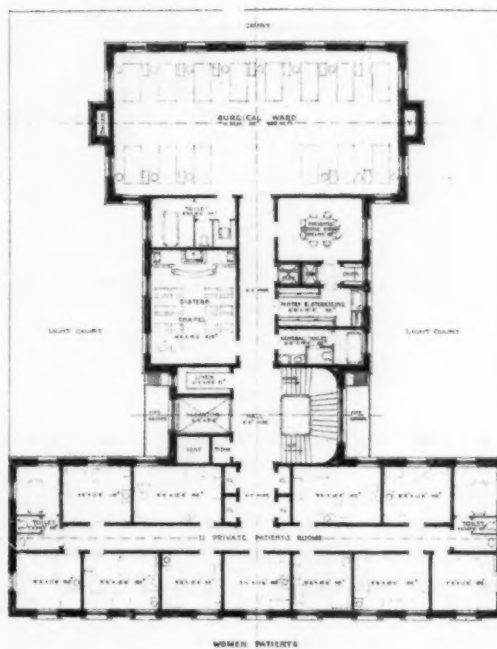
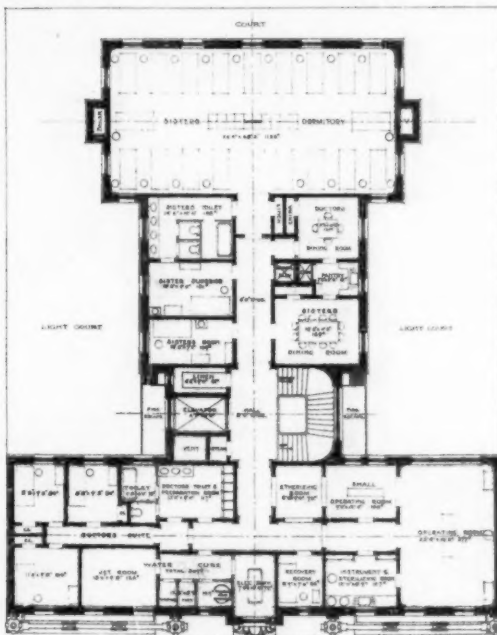
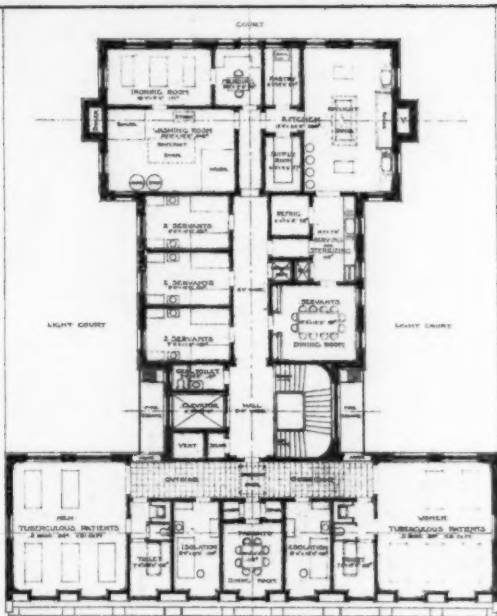
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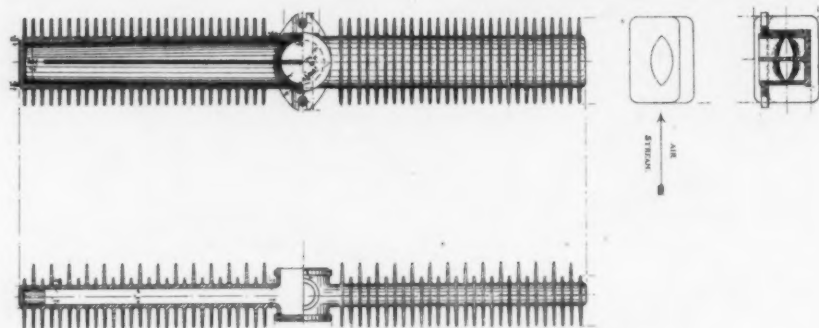
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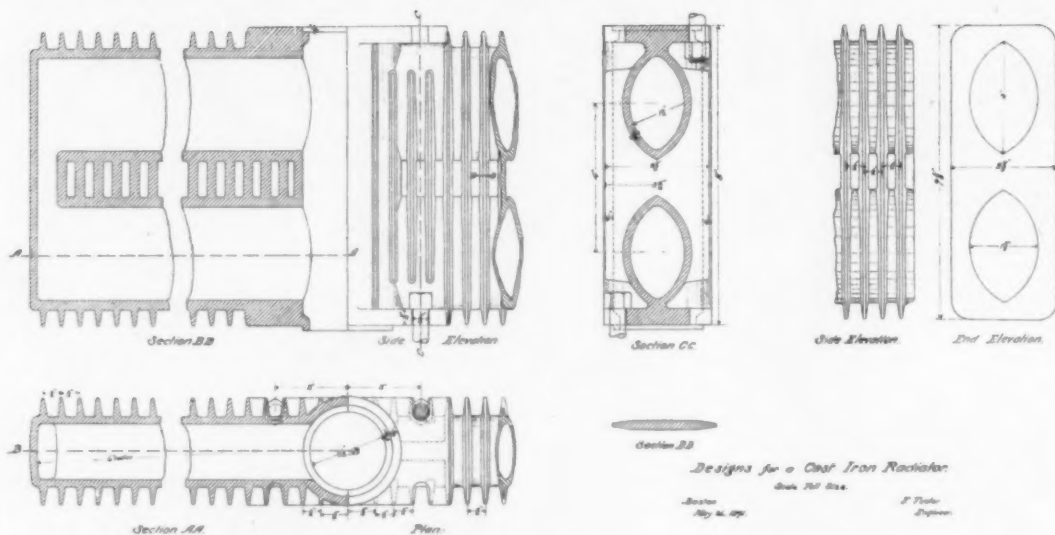
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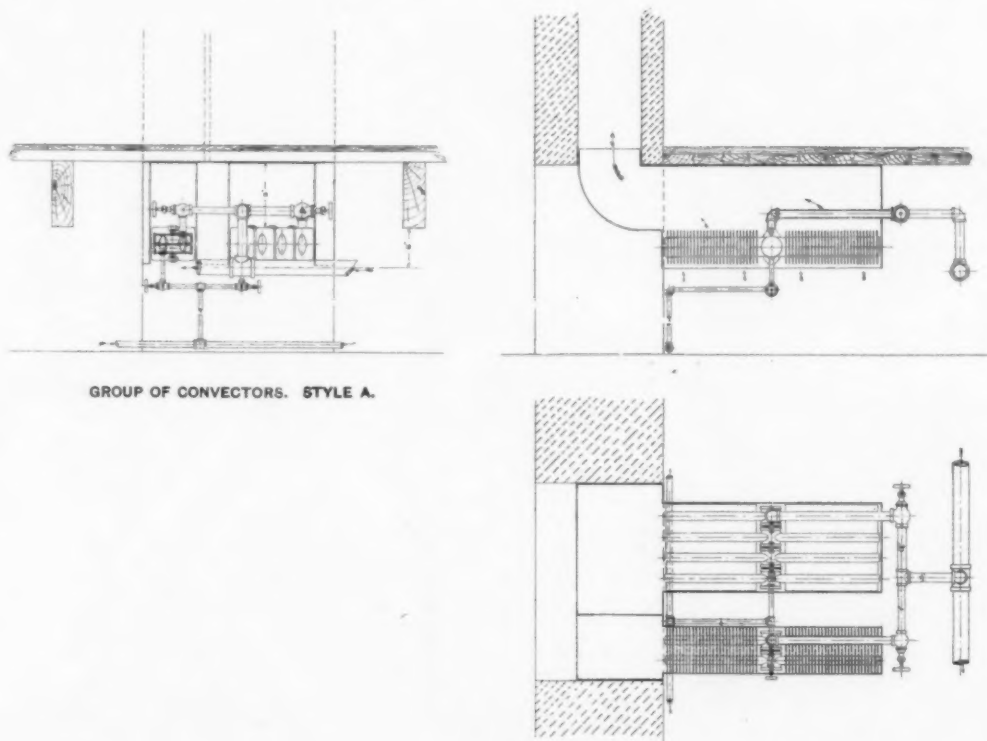
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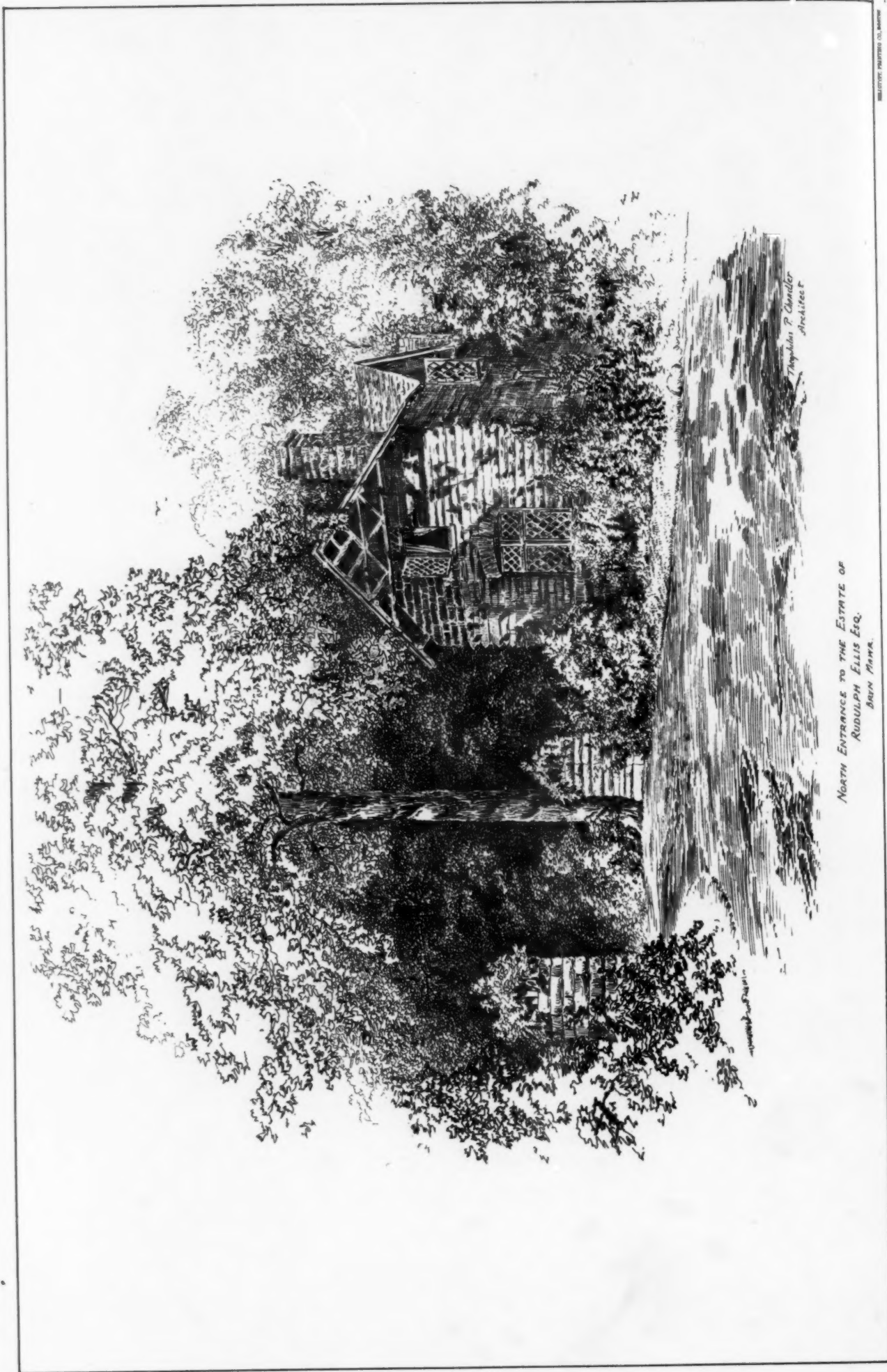
CONVECTOR; STYLE A. DETAIL OF SECTION AT SUPPLY END OF GROUP.



CONVECTOR; STYLE B.

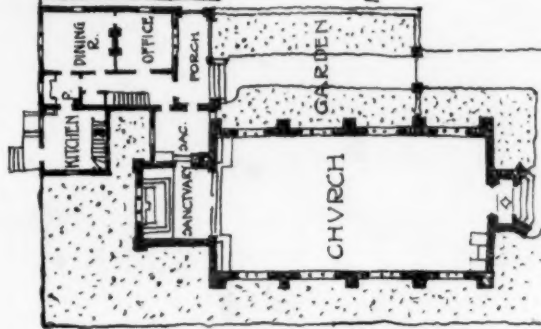


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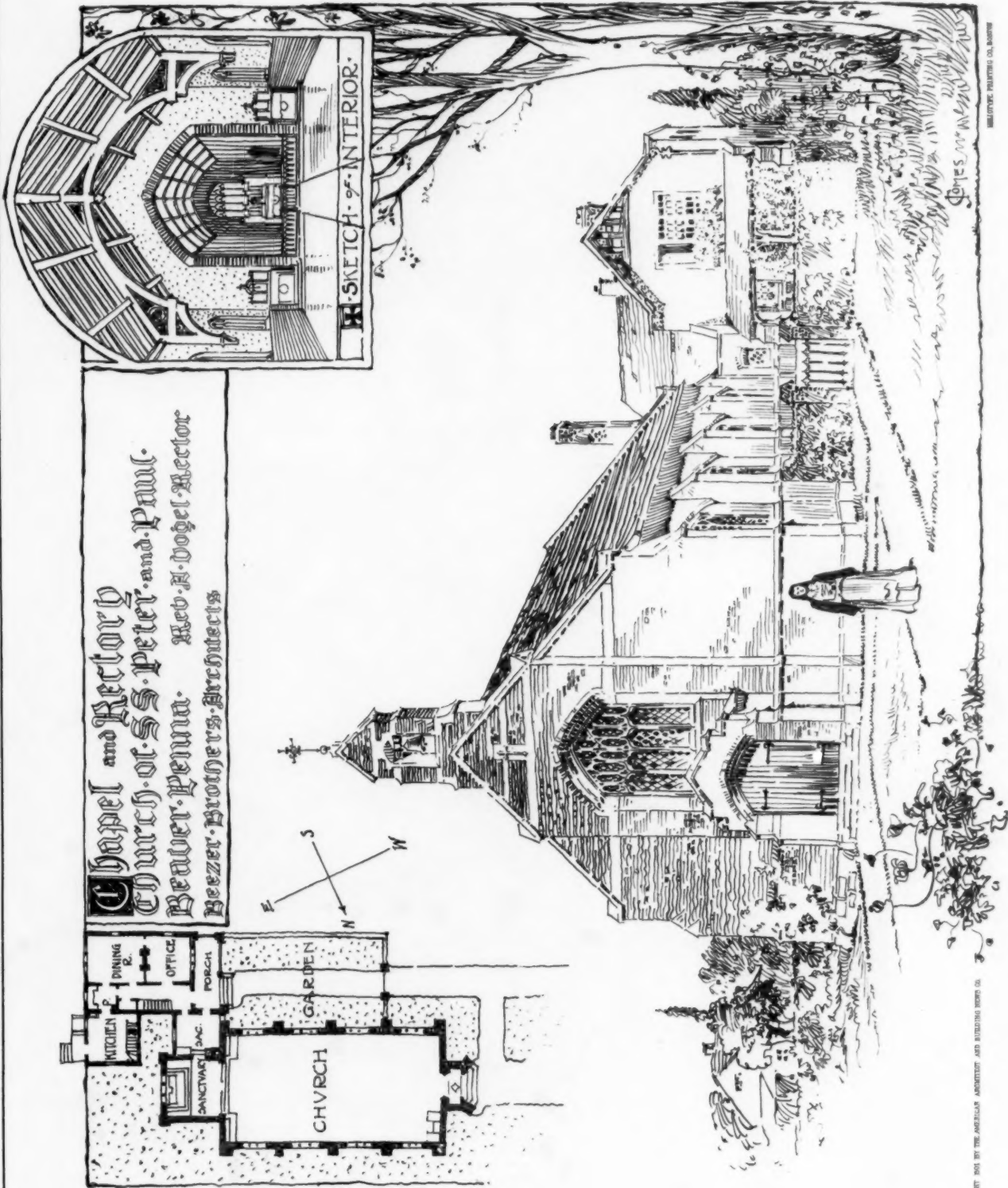


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PUBLIC BUILDINGS

City Hall, New York, N. Y.		Date 1803-12
Old State House, Boston, Mass.		" 1748
Pennsylvania Hospital, Philadelphia, Pa.		" 1755
Carpenters' Hall, Philadelphia, Pa.		" 1770
Independence Hall, Philadelphia, Pa.		" 1729
Faneuil Hall, Boston, Mass.		" 1741
and others.		

CHURCHES

King's Chapel, Boston, Mass.		Date 1749
Seventh-day Baptist Church, Newport, R. I.		" 1729
Christ Church, Alexandria, Va.		" 1767
Christ Church, Philadelphia, Pa.		" 1727
St. Paul's Chapel, New York, N. Y.		" 1764
Old South Church, Boston, Mass.		" 1729
First Church, Hingham, Mass.		" 1681
St. John's Chapel, New York, N. Y.		" 1803
First Congregational Church, Canandaigua, N. Y.		" 1812
St. Peter's P. E. Church, Philadelphia, Pa.		" 1758
Gloria Dei Church, Philadelphia, Pa.		" 1700
and others.		

IMPORTANT HOUSES

Fairbanks House, Dedham, Mass.		Date 1636
Royall Mansion, Dedham, Mass.		" 1737
Philipse Manor House, Yonkers, N. Y.		" 1745
Tudor Place, Georgetown, D. C.		" 179-
Mappa House, Trenton, N. Y.		" 1809
Woodlawn, Va.		" 1799
Mount Vernon, Va.		" 1743
and others.		

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Staircases		21 "
Mantelpieces		81 "
Pulpits		6 "
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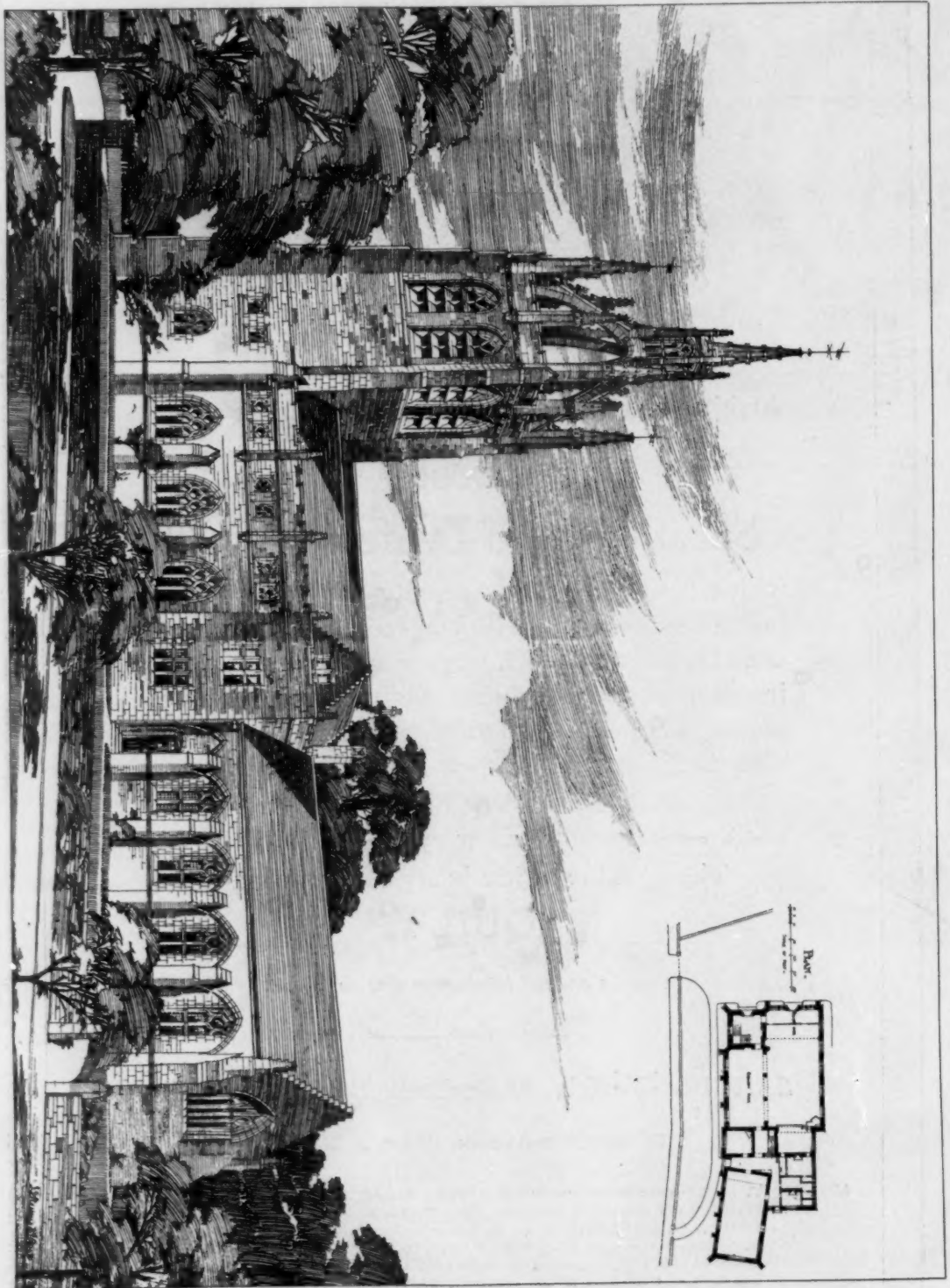
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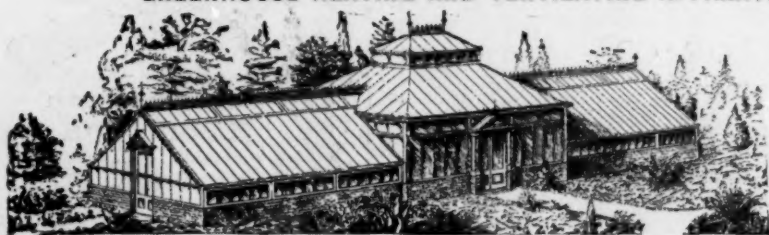
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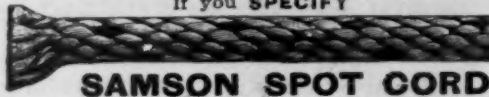
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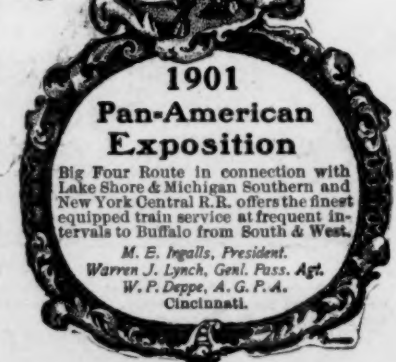
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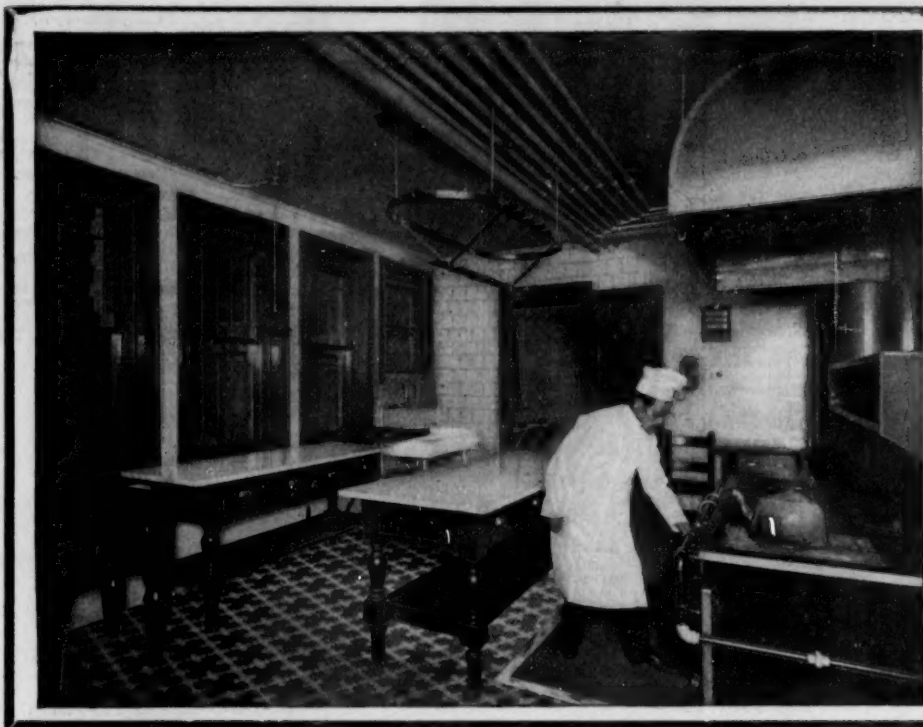
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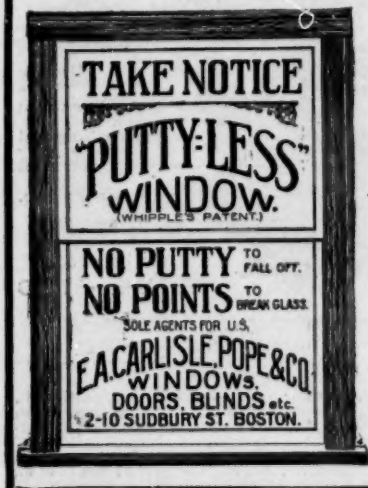
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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

A \$40,000 apartment-building will be erected in Lake View for which Architect Geo. M. Garnsley has prepared the plans.

J. F. and J. P. Doerr, 138 Washington St., have prepared plans for a church and school for St. Raphael's R. C. Church, to be erected on Justine St., near 60th St., at a cost of \$25,000. A parsonage to cost \$9,000 is to be built adjoining.

Fred'k W. Perkins, Montauk Block, has completed plans for a \$50,000 residence which L. Klein will erect on Grand Boulevard at 44th St.

Treat & Adler, Auditorium Building, have prepared plans for reconstructing the American Hide & Leather Company's buildings on Elston Ave., between Ingraham and Blackhawk Sts.; cost, \$70,000.

A. F. Hughes, 429 W. 69th St., is taking estimates for the erection of a \$20,000 apartment-building, 35' x 100', at 67th St. and Prairie Ave., for Charles A. Mitchell. It will have steam heating and all modern improvements.

Cleveland, O. — The White Sewing Machine Co. contemplates building a factory and office-building to cost \$20,000.

J. M. Henderson will build a \$20,000 five-story brick warehouse on Eagle St. Plans by E. C. Smith.

Report states that bids are being received for a \$40,000 eight-story hotel to be built at 250 Erie St., by a corporation recently organized by R. L. Palmer, James K. Sprinkle and others.

Clinton, Ill. — Plans have been prepared for a \$70,000 Catholic church.

Colorado Springs, Col. — President W. F. Sloeum has announced to the trustees of Colorado College the receipt of a gift of \$100,000 toward the erection of the Hall of Science. The building will be larger than at first planned, and will cost \$300,000.

Columbia, Mo. — F. W. Poor is interested in the erection of a \$50,000 hotel here, to be known as the Athens Hotel.

Columbus, Neb. — The cornerstone was laid recently

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

for the North Opera-house. C. J. Scott, contractor. Cost, \$25,000.

Council Bluffs, Ia. — Wickham Bros. have the contract for erecting the new Mercy Hospital for the Sisters of Mercy; cost, \$60,000.

Crowley, La. — It is proposed to erect a \$75,000 court-house for Arcadia County.

Dallas, Tex. — The new Century Cotton Mill is to be erected here. The company has a capital of \$40,000.

Des Moines, Ia. — The Rock Island Railway has begun the erection of a new freight depot. It will be of brick, 40' x 200'; cost, \$20,000.

Duluth, Minn. — A seven-story fireproof building, 100' x 140', is to be erected at once for the Wolvin Building Co. at 1st St. and 3d Ave. It will cost in the neighborhood of \$250,000. Plans by Palmer, Hall & Hunt.

East Hampton, L. I. — I. H. Greene, Jr., Sayville, is drawing plans for a two and one-half story frame club-house for the Maidstone Club, to cost \$25,000.

Easton, Pa. — C. W. Bolton & Co., Philadelphia, have drawn plans for a new Y. M. C. A. building. The structure will be known as Brainerd Hall and will be three stories high, with a basement. It will be built of stone and finished in hardwood throughout, and contain an auditorium capable of seating 350.

Fairhaven, Mass. — It is proposed to build a large brick and stone structure at this place for the manufacture of packing paper. Many prominent citizens are interested in the project.

Fall River, Mass. — A two-story brick and granite addition will be made to the plant of the Stevens Mill Corporation; estimated cost, \$50,000.

Fayetteville, W. Va. — The contract for erecting the \$40,000 jail and sheriff's residence for Fayette County has been awarded the Pauly Jail Bldg. & Mfg. Co., of St. Louis.

Framingham, Mass. — Report states that A. Fales & Sons' Co. have the contract to erect the \$30,000

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

annex to the State Normal School, Stickney & Austin, architects.

Frankford, Pa. — A large woollen mill is to be erected soon by the Wingobocking Mills Co., to be three stories high, of brick, stone and iron, and to cost about \$20,000.

Grand Rapids, Mich. — A stock company has been formed by Henry Pringle and T. H. Camp, of Felleville, Ont., with a capital of \$50,000, to construct a two-story brick factory building for the manufacture of veneered doors.

Houston, Tex. — The German Lutheran congregation will build a \$20,000 brick church, corner Texas Ave. and Caroline St.

A \$100,000 Y. M. C. A. building is to be erected here. S. A. Kineade, gen. sec.

Jacksonville, Fla. — A \$20,000 building is to be erected by the Seminole Club at the corner of Main and Forsyth Sts.

Kalamazoo, Mich. — The Kalamazoo Stone Co., having a capital of \$65,000, will erect a two-story factory, 122' x 300'.

Knoxville, Tenn. — Capt. W. P. Chamberlain and T. I. Stevens, president and manager, respectively, of the Knoxville Iron Co., have decided on a plant to be erected here at a cost of \$450,000. The indications are now very favorable for the erection of this new plant at once.

Lafayette, Pa. — The Newhall Engineering Co. has awarded to Alfred Whitehead a contract to build a factory here. This structure will be a three-story steel-framed stone building costing \$50,000.

Lake City, Fla. — A \$35,000 court-house is to be erected. Plans for construction have not yet been selected.

Lexington, Mass. — Plans have been prepared by Cooper & Bailey, Equitable Building, for a three-story brick and granite school-house to cost \$75,000.

Livingston, Mont. — C. S. Haire, Helena, has completed plans for a \$75,000 four-story hotel for A. O. Newton, manager of the New Albemarle.

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BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Marquette, Wis.—It is reported that Isaac Stephenson will erect a public library building to cost \$30,000 if the city will maintain it.

The German Catholic congregation will erect a \$20,000 church.

Maynard, Mass.—Seventy frame tenement-houses are to be erected here for the American Woolen Co. after plans by Merrill & Gilbert, architects, Lowell. General contract has been awarded E. W. Pitman, of Lawrence.

Memphis, Tenn.—Wilson & Marshall, 218 La Salle St., Chicago, Ill., have completed plans for a three-story residence for R. W. Harris; cost, \$40,000.

Menominee, Mich.—S. G. Maxwell, of Titusville, Pa., and H. L. Flanders, of Chicago, have organized a company with a capital of \$100,000, to build a tannery in this city. S. M. Stephenson and others, interested.

Nashua, N. H.—Cram, Goodhue & Ferguson, of Boston, have drawn plans for the new two-story library building; cost, \$40,000.

Newark, O.—A new fire-engine house is to be constructed in the north side of the city.

Newaygo, Mich.—Plans have been prepared for the \$20,000 warehouse, 50' x 200', for the Newaygo Cement Co.

New Castle, Pa.—H. M. Wirsing, architect, is receiving bids for the construction of the \$75,000 one and two story plant, 132' x 500', for the Shennango China Co.

Newport News, Va.—Thomas C. Kennedy, Baltimore, Md., has plans for a brick and stone school-house, to be erected for the Xaverian Brothers, at a cost of \$30,000.

New York, N. Y.—The American Express Co. is to erect a new building at Madison Ave. and 46th St. It will be a three-story brick and stone structure, 200' x 600', and cost about \$100,000. Plans have been prepared by Architect A. Herckel, Jr., of Philadelphia, and estimates are now being received.

Sass & Smallheiser, 29 Park Row, have plans for 3 six-story brick tenements, 60' x 60', to be erected by Marasco & Abbote, 57 E. Houston St., at Broome and Mulberry Sts.; cost, \$100,000.

James E. Kirby, 722 Tremont St., has plans for a brick and stone rectory, for Rev. Peter McNamee; cost, \$50,000.

Plans have been filed by the New York Telephone Co., 15 Day St., for a four-story office-building, 50' x 94', to cost \$100,000. Cyrus L. W. Eldlitz, 1123 Broadway, architect.

M. J. Garvan, 3307 Third Ave., has completed plans for a seven-story office-building, 46' x 49', to be erected by Matthias Haffen, at a cost of \$60,000.

Northfield, Mass.—It is reported that a gift of \$32,000 has been offered the town by Francis Schell for the construction of a bridge across the Connecticut River.

Philadelphia, Pa.—A \$20,000 brick and steel building, 50' x 100', will be built in Nicetown by the Midvale Steel Works.

Pittsburgh, Pa.—Plans have been drawn by MacClure & Spahr for a residence to be erected on Shady Ave., near 5th Ave., East End, for I. Chalmers Darzile, of the Hecla Coke Co.; cost, \$25,000.

Mr. Charles Bickel, 525 Penn Ave., has drawn plans for a \$100,000 ten-story brick and steel building for Hartje Bros.

J. J. Flannery expects to erect a store and apartment building on Forbes Ave., between Atwood St. and Meyran Ave.; cost, \$200,000.

BUILDING INTELLIGENCE.

(Advance Rumors Continued.)

Five brick residences will be erected in the city after plans by J. H. O'Donnell. Two of the houses will cost \$25,000 each and the other three \$15,000 each.

Portsmouth, N. H.—The contract for a coal-plant to be constructed here has been awarded to Snare & Triest, of New York City, at \$100,000.

Racine, Wis.—F. W. Perkins, Montauk Block, Chicago, Ill., has drawn plans for an enlargement of the J. I. Case plow works; total cost, \$150,000.

Rankin, Pa.—The Croatian Catholics will erect a \$40,000 brick church in the spring.

Richmond, Ind.—A \$400,000 cement-mill is to be built in this city by the Lehigh-Portland Cement Co., of Allentown, Pa.

Seranton, Pa.—The Delaware, Lackawanna & Western Railroad will erect a new \$300,000 depot here.

Spartanburg, S. C.—The trustees of Limestone College are considering the erection of a large dormitory.

St. Paul, Minn.—G. H. Johnston, 712 Hamilton Building, has prepared plans for 2 three-story residences on Summit Ave., one for Chas. Schuneman and the other for J. W. Cooper; cost, \$22,000 each.

A three-story residence will be erected for G. A. Prince on Summit Ave., after plans by Louis Lockwood, 55 Germania Life Building; cost, \$13,000.

Swissvale, Pa.—The Swissvale National Bank contemplates erecting a \$20,000 bank building.

Taunton, Mass.—A two-story brick knitting-mill, 50' x 150', is to be erected here by a syndicate of prominent men including the managers of the Winthrop Cotton Yarn Mill; cost, about \$40,000.

Terre Haute, Ind.—A new \$50,000 edifice will be erected by the Centenary Society.

Uniontown, Pa.—James A. McGonigle, Leavenworth, Kan., has received the contract for the construction of the twelve-story fireproof office-building, 120' x 150', costing about \$700,000 for the First National Bank.

Waynesburg, Pa.—J. W. Wolts, York, has been selected to prepare plans for the \$35,000 school-house soon to be erected here.

Weatherly, Pa.—It is stated that the plans for the \$100,000 school-house have been completed and approved by Charles M. Schwab, president of the United States Steel Corporation.

APARTMENT-HOUSES.

Cambridge, Mass.—Marcella St., three-sty' bk. & st. aparts., 45' x 61', comp. roof, stores; \$20,000; o. Harris Berman; b. J. Walsh.

Chicago, Ill.—Sixty-ninth St. and Jefferson Ave., three-sty' bk. apart., 32' x 120', steam; \$20,000; o. Edward Hartrath; a. H. K. Holman, Y. M. C. A. Building.

New York, N. Y.—One Hundred and Fortieth St., nr. Willis Ave., 4 five-sty' bk. & st. flats, 37' x 66'; \$120,000; o. The Gaines-Roberts Co., 671 E. 137th St.; a. Neville & Bagge, 217 W. 125th St.

EDUCATIONAL.

Tomah, Wis.—Two-sty' bk. high school, fan-heating; \$30,000; a. Van Ryn & De Gelleke.

HOTELS.

New York, N. Y.—W. Forty-seventh St., Nos. 124-126, nine-sty' bk. & st. hotel, 37' x 90', plastic slate roof; \$200,000; o. & a. Henry Andersen, 1183 Broadway.

BUILDING INTELLIGENCE.

HOUSES.

Boston, Mass.—Newcastle Road, nr. Faneuil St., 6 Ward 25, two-sty' fr. dwell., 32' x 35', pitch roof, furnace; \$5,000; o. & b., Brooks Walker, 11 Mountford St.

Hampshire St., No. 71, Ward 17, three-sty' fr. dwell., 28' x 50', flat roof, stores; \$7,000; o. & b., J. J. Reagan & Co., Hampden St.

River View Road, nr. Rameleigh St., Ward 25, two-sty' fr. dwell., 29' x 41', shingle roof, hot air; \$5,500; o. W. N. Parsons, Keene, N. H.; a. G. E. Parsons, 850 Tremont Building.

Carmen St., nr. Faxon St., Ward 20, two-sty' fr. dwell., 36' x 41', shingle roof, hot air; \$5,000; o. C. H. Greenwood; a. J. T. McClintock, 23 Court St.

Blue Hill Ave., No. 94, Ward 17, three-sty' fr. dwell., 26' x 53', flat roofs, furnaces; \$7,000; o. Bridget Quinn; a. T. E. Sheehan, 945 Tremont Building.

Kingsdale St., nr. Bernard St., Ward 20, two-sty' fr. dwell., 25' x 49', pitch roof, furnace; \$6,000; o. Mary H. Hannan; a. & b., R. J. Yee, 7 Stratton St., Dorchester.

Draper St., No. 150, Ward 20, three-sty' bk. dwell., 52' x 50', flat roof, steam; \$8,000; o. Mary E. McLaughlin; a. J. Mulcahy, 66 State St.

Browning Ave., nr. Bernard St., Ward 20, two-sty' fr. dwell., 25' x 49', pitch roof, furnace; \$6,000; o. Mary H. Hannan, 33 Bernard St.; a. & b., R. J. Yee, 7 Stratton Road.

Endicott St., nr. Endicott Ct., Ward 6, three-sty' bk. dwell., 23' x 46', flat roof, stores; \$6,000; o. & b., Nathan Fritz, 70 Barton St.

Draper St., No. 98, Ward 20, two-sty' fr. dwell., 32' x 40', pitch roof, furnace; \$5,000; o. & a. & b., J. H. McKenna, 36 Barry St., Dorchester.

Hobson St., nr. Hobart St., Ward 25, two-sty' fr. dwell., 29' x 46', shingle roof, hot air; \$5,200; o. W. N. Parsons; a. G. E. Parsons, 850 Tremont Building.

Bowdoin St., Nos. 263-65, Ward 25, 2 four-sty' bk. dwells., 28' x 68', flat roofs, steam; \$15,000; o. Mary E. McLaughlin, Sharon; a. J. Mulcahy, 66 State St.

Brooklyn, N. Y.—Engert St., nr. Humboldt St., 2 three-sty' bk. dwells., 9' 3" x 57'; \$12,000; o. Chas. Buehl, 247 Kingsland Ave.; a. L. Berger, 300 St. Nicholas Ave.

Degraw St., nr. Kingston Ave., 17 three-sty' bk. dwells., 20' x 45'; \$76,500; o. Geo. A. Stimpson, on premises; a. C. Wagner, 135 Fourteenth St.

Cambridge, Mass.—Marcella St., three-sty' bk. & st. dwell., 45' x 61', stores; \$20,000; o. Harris Berman; b. J. Walsh.

Memphis, Tenn.—Two-sty' fr. dwell., slate roof, hot air; \$7,000; o. J. Summerfield; a. B. C. Alsop & Co.

Two-sty' bk. & st. dwell., slate roof, hot water; \$9,000; o. Henry Leeb; a. B. C. Alsop & Co.

PUBLISHED SEPTEMBER 15

“RENAISSANCE CAPITALS”

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BUILDING INTELLIGENCE.	BUILDING INTELLIGENCE.	PROPOSALS.
(Houses Continued.) New York, N. Y. — <i>Park Ave.</i>, nr. 138th St., three-st'y bk. dwell. & store, 50' x 80'; \$10,000; o. & b., L. D. Retman, 566 Courtlandt Ave.; a., Cunningham & Bullard, 148th St. & 3d Ave. <i>Seventy-ninth St.</i>, nr. Madison Ave., five & six-st'y bk. & st. dwell., 35' x 77', copper & tile roof; \$55,000; o., Mrs. Sidney D. Ripley, Hempstead, L. I.; a., Warren & Wetmore, 3 E. 33d St. Owatonna, Minn. — Three-st'y & base. bk. dwell., 55' x 66', gravel roof, steam; \$20,000; o., W. H. Kelly; a., F. B. & L. L. Long. OFFICE BUILDINGS. Detroit, Mich. — <i>Park St.</i>, six-st'y bk. & st. office-building, 80' x 90', comp. roof, steam; \$225,000; o., People's Telephone Co., 36 Campan Building. STABLES. Boston, Mass. — <i>Hanson Ave.</i>, nr. Savoy St., Ward 9, five-st'y bk. stable, 36' x 132', comp. roof, steam; \$70,000; o., F. D. Gordon Est.; a., Wheelwright & Haven, Colonial Building. Brooklyn, N. Y. — <i>Maujer St.</i>, nr. Waterbury St., fr. stable, 22' x 95'; \$1,000; o., Charles Frohnhofer, 877 Grand St.; a., A. Rissler, 18 High St., Maspeth, L. I. STORES. Memphis, Tenn. — Two-st'y bk. store, comp. roof; \$7,500; o., R. B. Snowden, Main St.; a., Chigizola & Harker.	WAREHOUSES. Brooklyn, N. Y. — <i>N. Tenth St.</i>, nr. Berry St., six-st'y bk. storage building, 50' x 85', gravel roof; \$32,000; o., S. E. & M. Vernon, 57 Duane St., N. Y.; a., L. Berger & Co., 300 St. Nicholas Ave. New York, N. Y. — <i>Christopher St.</i>, Nos. 10-12, eight-st'y bk. warehouse, 40' x 84', felt & gravel roof; \$50,000; o., The Waverly Realty Corporation, 26 Christopher St.; a., Jardine, Kent & Jardine, 1262 Broadway. <i>E. Sixty-eighth St.</i>, Nos. 501-541, six & eight-st'y bk. beer storage, 99' 10" x 144' 7", concrete roof; \$100,000; o., Central Brewing Co., 68th St. & East River; a., William Griesser Construction Co., 11 Broadway. PROPOSALS. ADDITION TO SCHOOL. [At Chillicothe, Okla. Ter.] Bids will be received by W. A. Jones, commissioner of Indian Affairs, Washington, D. C., until October 7, for the construction of a stone addition to the school-building at Chillicothe, according to plans on file at the following offices: The <i>Traveler</i>, Arkansas City, Kan.; the <i>Journal</i>, Kansas City, Mo.; the <i>Record-Herald</i>, Chicago, Ill.; the <i>Builders' and Traders' Exchanges</i>, Omaha, Neb., and Milwaukee, Wis.; the <i>Northwestern Manufacturers' Association</i>, St. Paul, Minn.; the <i>United States Indian ware-</i>	houses, 815 Howard St., Omaha, Neb., 235 Johnson St., Chicago, Ill., and 77 Wooster St., New York, N. Y., and at the school. 1344 COURT-HOUSE. [At Bainbridge, Ga.] The Board of County Commissioners of Decatur County will on October 15 receive bids for the building and completion of a court-house building to be erected in the city of Bainbridge, Ga., to cost not exceeding \$35,000. B. A. LYTLE, chairman, Bainbridge, Ga. 1345 CONSTRUCTION. [At Philadelphia, Pa.] Philadelphia, Depot D. M. Dept., 1428 Arch St., Philadelphia, Pa. Sealed proposals will be received here until October 14, 1901, for the construction of an addition to office-building at Schuylkill Arsenal, this city, in accordance with plans and specifications to be seen at said arsenal. COL. JOHN V. FUREY, assistant quartermaster general, U. S. Army. 1345 Treasury Department, Office of the Supervising Architect, Washington, D. C., September 23, 1901. Sealed proposals will be received at this office until 2 o'clock P. M. on the 7th day of November, 1901, and then opened, for the general construction of the U. S. Custom-house at New York, N. Y., in accordance with the drawings and specifications, copies of which may be had at the discretion of the Supervising Architect on application to this office, or the office of the

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PROPOSALS.

architect, Cass Gilbert, 111 Fifth Ave., New York, N. Y. Applications must be accompanied by a certified cheque for \$250 which will be held at this office until the return of drawings and specifications. JAMES KNOX TAYLOR, Supervising Architect.

1345

JAIL.

[At Meridian, Miss.]

It is stated that bids for constructing a \$35,000 jail are wanted until November 4.

1344

Treasury Department, Office Supervising Architect, Washington, D. C., September 13th, 1901. Sealed proposals will be received at this office until 2 o'clock P. M. on the 22d day of October, 1901, and then opened, for the installation of a conduit and wiring system for the U. S. Post-office Building at Stockton, California, in accordance with the drawings and specification, copies of which may be obtained at this office or at the office of the Superintendent of Construction at Stockton, California, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

1344

PROPOSALS.

Treasury Department, Office Supervising Architect, Washington, D. C., September 13th, 1901. Sealed proposals will be received at this office until 2 o'clock P. M., on the 4th day of October, 1901, and then opened, for resetting five horizontal tubular steam boilers and installing smokeless furnaces in the U. S. Court-house, Custom-house and Post-office building at Omaha, Neb., in accordance with drawing and specification, copies of which will be furnished at the discretion of the Supervising Architect, upon application at this office or at the office of the Custodian of the building, at Omaha, Neb. JAMES KNOX TAYLOR, Supervising Architect.

1344

SEWERS.

[At Columbia, Mo.]

Notice is hereby given that the City Council of Columbia, Mo., will receive until October 1st, 1901, bids for furnishing material and labor necessary to construct sewers in district No. 6 in said city. Plans, specifications and instructions to bidders can be seen and forms of proposals obtained at the office of the City Clerk. JOHN S. BICKNELL, city clerk.

1344

PROPOSALS.

SEWERS.

[In District of Columbia.]

Office of the Commissioners, D. C., Washington, D. C. Sealed proposals will be received at this office until October 5, 1901, for constructing sewers in the District of Columbia. Specifications and blank forms of proposals may be obtained at this office. HENRY H. F. MACFARLAND, JOHN W. ROSS, LANSING H. BEACH, commissioners, D. C.

1344

BROKEN STONE.

[At Galveston, Tex.]

U. S. Engineer Office, Galveston, Tex. Sealed bids for furnishing about 125,000 tons large riprap, small riprap and broken stone, will be received until October 1, 1901. For information apply to C. S. RICKE, capt., engs.

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COURT-HOUSE.

[At Bainbridge, Ga.]

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

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

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

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

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

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

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

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

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

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

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

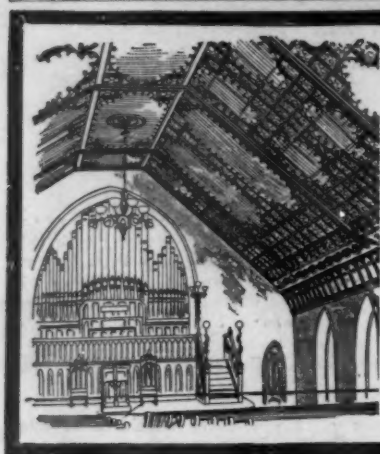
SECTION 12. The American Institute of Architects' "schedule of charges" represents minimum rates for full, faithful and competent service. It is the duty of every architect to charge higher rates whenever the demand for his services will justify the increase, rather than to accept work to which he cannot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

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

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

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

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



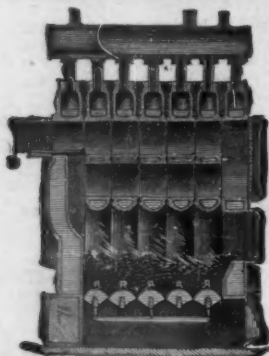
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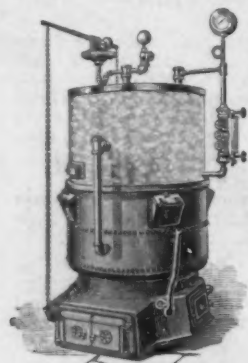
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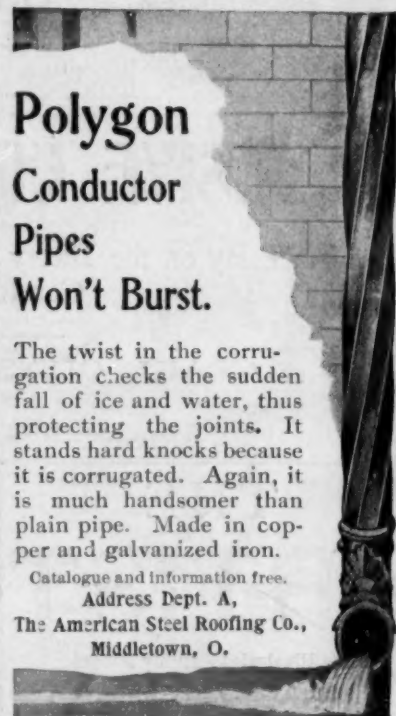
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