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NOTE.—The term of office of members of the above standing committees terminates in January, 1891.

Selection of Columbian Exposition Architects.

As predicted in our last issue, the work of the committee on buildings and grounds of the Columbian Exposition has progressed so that the active work of planning will now begin in earnest, as a board of architects is established, five architects having been selected, although at this date their names have not been made public, but will be as soon as their acceptances are received. This action of the directors was brought about through a report submitted by the consulting architects and engineers to the committee on buildings and grounds, and adopted by the directors at a meeting on December 12, that portion relating to designs being as follows:

Preliminary work in locating buildings, in determining their general areas, and in other elementary directions necessary to proper progress in the design and erection of the structures of the Columbian Exposition has reached a point where it becomes necessary to determine the method by which designs for these buildings shall be obtained. We recognize that your motion in the matter will be of great importance not only in its direct effect upon the artistic and commercial success of the exposition, but scarcely less upon the aspect presented by America to the world, and also as a precedent for future procedure in the country by the government, by corporations and individuals. In our advisory capacity we wish to recommend such action to you as will be productive of the best results, and will at the same time be in accord with the expressed sentiments of the architectural societies of America.

First. The selection of one man to whom the designing of the entire work should be intrusted.

Second. Competition made free to the whole architectural profession.

Third. Competition among a selected few.

Fourth. Direct selection.

The first method would possess some advantage in the coherent and logical result attained. But the objections are that time for the preparation of designs is so short that no one man could hope to do the subject justice, even were he broad enough to avoid, in work of such varied and colossal character, monotonous repetition of ideas. And, again, such a method would evoke criticism, just or unjust, and would certainly debar the enterprise from the friendly coöperation of a diversity of talent, which can be secured only by bringing together the best architectural minds of our country.

Second. The second method named has been employed in France and other European countries with success, and it would probably result in the production of a certain number of plans possessing more or less merit and novelty.

But in such a competition much time, even now most valuable, could be wasted, and the result would be a mass of irrelevant and almost irreconcilable material, which would demand great and extended labor to bring into coherence.

It is greatly feared that from such a heterogeneous competition the best men of the profession would refrain, not only because the uncertainties involved in it are too great and their time too valuable, but because the societies to which they almost universally belong have so strongly pronounced on its futility.

Third. A limited and fair competition would present fewer embarrassments, but even in this case the question of time is presented, and it is most unlikely that any result derived through this cause, coming as it would from necessarily partial acquaintance with the subject, and hasty, ill-considered presentation of it, could be satisfactory, and the presentation of an individual would be open to the same objections made above as to a single designer.

Fourth. This is to select a certain number of architects, choosing each man for such work as would be most nearly parallel with his best achievements. These architects to meet in conference, become masters of all the elements of the problem to be solved, and agree upon some general course of procedure. The preliminary studies resulting from this to be compared and freely discussed in a subsequent conference, and with the assistance of such suggestions as your advisers might make be brought into a harmonious whole.

The honor conferred upon those selected would create in their minds a disposition to place the artistic quality of their work in advance of the mere question of emolument; while the emulation begotten in a rivalry so dignified and friendly could not fail to be productive of a result which would stand before the world as the best fruit of American civilization.

The report was signed by Architects Burnham, Root, Olmstead & Co. and Engineer Gottlieb, and recommended the fourth plan, that involving the appointment of architects, the committee indorsing the report as follows:

If the foregoing is approved by you (and your committee earnestly hope that this will be the case) we recommend that your committee be authorized to select five architects, or firm of architects, as the case may be, to carry into effect the plan recommended by the construction department and concurred in by your committee.

This recommendation received the prompt approval of the directors, and this much discussed matter of "architects for the world's fair" was permanently settled. It is probable that these five architects will not constitute the

entire board, but will design the buildings already arranged for, other appointments being made, if needed. For instance, if those appointed were all engaged upon the Jackson Park quadrangle there would still be the electric, agricultural, horticultural and other buildings at Jackson Park, and the art building, music hall, etc., on the lake front calling for other appointments. It will be observed that the broad policy indicated in these columns regarding the designing of world's fair buildings, is being carried out to the letter. No competition except the competition of chosen talent, no monopolizing of work by any one architect, but a plan by which the best possible illustration of American architecture is inevitable. The clearness of the consulting architects' report leaves no room for doubt regarding their intention to aid the committee on buildings and grounds in every way to secure the best possible results from an architectural standpoint, and as a professional document the report stands higher than any expression upon ethics or practice ever issued to the profession or the public in this country. It establishes a precedent that will more strongly influence the manner in which public as well as private work will be done, than any other measure, less than a congressional or state enactment. It will aid in destroying the court house competition evil. It is a document that in effect will advance professional practice many years, and as such its authors deserve the thanks of all architectural practitioners, and the country as well, in the improvement in public and private work that will result from the example set of selecting the best talent rather than procuring designs by more or less disreputable competitions.

World's Fair Board of Control Appointed. It has been apparent to those who have watched the proceedings of those directing the Columbian Exposition, that the government commission and also the directory were so large as to be too cumbersome for prompt and effective work. This having been realized by the commission a board of control, of eight members, was established at the last meeting, which will represent the commission as a whole, with almost absolute powers. The eight members of the commission will have different functions from those of the directory, as the functions of those bodies differ, but to the joint board all disputed points will be referred. The board representing the commission appointed by President Palmer is as follows: T. W. Palmer, Michigan (republican); J. A. McKenzie, Kentucky (democrat); E. B. Martindale, Indiana (republican); William Lindsay, Kentucky (democrat); M. H. De Young, California (republican); Thomas M. Waller, Connecticut (democrat); George W. V. Massey, Delaware (republican); J. W. St. Clair, West Virginia (democrat). At the last meeting of the directors a board of reference was appointed by President Gage, as follows: Lyman J. Gage, Thomas B. Bryan, Ferdinand W. Peck, Edwin Walker, E. T. Jeffery, Potter Palmer, F. S. Winston and D. C. Cregier. The board of reference will act for the directory in all questions of difference which are referred to it with power to act, while the combination of the two boards under the title of Board of Reference and Control will form a court of last resort for both bodies. The preliminary work of platting the ground, arranging for proper sanitation, etc., is being rapidly pushed, to advance this work William S. McHarg, a sanitary engineer of national reputation, having been appointed as engineer of

sewers and drainage, and John W. Alvord as surveyor. The President of the United States is about to issue his proclamation, having received ample proof of the assured progress of the work.

**Acoustics
of the Royal
Theater
at Vienna.**

The acoustics of the Royal Theater in Vienna have not proved satisfactory and there has been much diversity of opinion among experts as to the causes of the difficulty. The Vienna *Bau-Industrie Zeitung* mentions a novel theory advanced by Herr Moritz Alter, which is said to have many supporters, ascribing the trouble chiefly to the ventilating apparatus. He thinks the currents of warm air propelled by the ventilating fans, in circulating through the auditorium break up and divert from their proper direction the waves of sound, which should be allowed to expand and flow equally in all directions, and that these ventilating currents also convey within the theater noises from the streets. Herr Alter therefore recommends that the operation of the ventilating apparatus be suspended while performances are in progress, being resumed, if need be, between the acts. Thus he thinks the acoustic troubles may be relieved without seriously impairing the sanitary condition of the theater.

**Amateur
Management
of Chicago
Drainage.**

The progress of one of the most important as well as costly drainage schemes ever inaugurated in this country — that of the Chicago sanitary district — after a year spent in mismanagement, has finally been brought to a full stop by the action of the trustees, who with a brief resolution summarily discharged Chief Engineer Leroy E. Cooley, whose discharge was immediately followed by the resignation of the five chiefs of divisions, whose self-respect would not allow them to retain their positions. The cause of this disastrous move on the part of the drainage trustees is that same disposition for amateur management that pervades almost every project of a public nature that is started in this country, from a world's fair to the management of a street-car line, and in the architect's practice, always found in the man who knows more than his architect. It is the same reasoning that said, because Grant is a great general why should he not make a great president; that argues that the greatest financial authority in the country is the best fitted head for a world's fair directory; that makes an eminently successful stockjobber the manager of a street-car cable system that is a nuisance to its patrons and a loss to its stockholders, because the successful manipulator of stocks knew more than his engineer. Now, an eminent jurist is placed upon a sanitary board and, with a majority of his colleagues, assumes a greater knowledge than any engineer living, and they now propose to run this great engineering scheme themselves, at least till another engineer is found to occupy the position. But this will be a hard matter, as no first-class man can afford to take the position in the face of such a precedent as the discharge of Mr. Cooley has established and allow himself to be managed in such an undertaking by amateurs, knowing that his work would certainly result in a gigantic failure and his professional reputation be forever destroyed. The growth of this country has been so rapid from the day of log-house raising and plank-bridge building, which every man did in his own way with his own hands, that it is hard for the average man to acknowledge that there is anything in science or art that he does not fully comprehend. And this country of ours can never become successful in its transition from

primitive execution to a nation renowned for the extent and quality of its engineering feats, until the amateur learns the homely phrase, "every man to his trade," that was so slowly comprehended by the amateurs at Washington, who "ran the war" for three disastrous years, and then reluctantly called a general into the field that, having been given full power, brought victory out of defeat. It may not be too late for the drainage trustees to repair their error. Select an engineer, give him full confidence and full powers and never question his acts, or else ask the state legislature to recall the law and abandon the drainage scheme.

Chicago
Carpenters
and their
Employés.

On another page is printed a paper upon the relation of employer and employé that both might read with considerable benefit. It is apropos at this time, since the recent convention of the Federation of Labor at Detroit sought to reverse the principle that the creator is greater than the creature, and assumes that the employé, whom the federation represents, has and should have the entire control of all questions relating to their labor. Both employers and employés too often absolutely ignore natural laws, especially that of supply and demand, and imagine that a vote of the majority and a mutual pledge is all that is required to establish and control a condition. The strike among carpenters in Chicago last spring and summer resulted in the city becoming filled with men looking for work at extraordinary wages, and the supply was so far in advance of the demand that when the union ordered another strike in September no one was found willing to obey its commands and leave his work. The contractors' association resolved that they would pay a certain scale of wages in order that figuring might be done on an equitable basis. It is now found that a number of members, taking advantage of the oversupply, have hired men far below the established rate. This shows the futility of trying to bind either body when this natural law comes in opposition. The appointment of a committee by the Carpenters' and Builders' Association to meet the arbitration committee of the union with instructions to settle upon hours and wages for the year, and acting upon the platform of the association, which is identical with that of the National Association of Builders, is a move that shows a wish for fair and honorable relations between the association and its employés. It is a move dictated by a spirit of fairness and a regard for placing the association right in public opinion. If the desire of the association is (which everyone who watched its determined opposition to the union and its methods last summer, is sure it is not) to recognize the union, which means to be controlled by it in its business of hiring and directing men, then this policy of meeting this committee is wise. If not, and it is intended to maintain the rights declared by the platform to be unassailable, then it is, in our opinion, a mistake to attempt to compromise the matter. If persisted in this policy will lead to one of two results: either a struggle in which many of the advantages won so hardly last year will be lost, or a total capitulation to the union and its methods. The question should be seriously considered by every member of the association, and either a general rejection of all negotiations immediately made, or else an agreement entered into with the recognition of the union for its foundation principle, as this is what any negotiation will finally end in, and it is better to have it settled amicably now than in two years from now with the intermediate

struggles for supremacy that will certainly occur. How binding or how just any agreement would be when the association represents but does not control all the city contractors, or the union the carpenters, need not be commented upon. But the appointment of the committee will certainly be viewed with favor by the public, and shows the strong desire of the carpenter contractors of Chicago to be entirely just, with no disposition to unduly press the advantage gained through the thorough demoralization of the union in the late strike. While we doubt the policy, and the effectiveness of any attempt at a compromise that will be permanent in its results, we admire the spirit that prompts it.

Architectural
Competitions
from a European
Standpoint.

In another column we publish the code on competitions adopted by the Austrian Association of Architects and Engineers, which we quote from a late issue of *La Semaine des Constructeurs*. The accomplished and experienced editor of *La Semaine* introduces the subject with the following remarks on the conduct of competitions at home and abroad:

In France architectural competitions are rarely attended by the abuses so grievously complained of in England and yet more in America, where such schemes are often the most barefaced frauds. Nevertheless, in France we are yet far short of perfection in this regard, the numerous complaints received being ample evidence of the need of better regulation.

Architectural competitions seem more satisfactorily managed in Germany than anywhere else. In a region where discipline, method and system pervade everything, as in Switzerland, Austria and North Germany, we find in the announcements of competitions a careful attention to details and a provision of safeguards quite characteristic of the Teutonic race. There seems to be a uniformity of procedure upon a thoroughly matured plan, which has gradually been developed by the leading architectural associations, and which aims to anticipate as far as possible every contingency and to provide for it. We can render no better service in this cause than by publishing this plan in detail, and for this purpose we have selected the Competition Code of the Austrian Association of Architects and Engineers, a code which we consider a model in many respects.

A Subject
for Illinois
Chapter
Discussion.

A pertinent subject for discussion by the Illinois Chapter of the American Institute of Architects at its next meeting would be the best method by which a department of architecture could be established in the Columbian Exposition. No other profession stands in so close relation to industrial and applied art as this, and, indeed, it is difficult to conceive of anything that, in its progress from the raw product to the finished object, does not call upon some branch of architectural skill for its completion. A building being arranged for with the directors of the exposition, the chapter could collect American materials. Communication with the architectural associations in foreign countries would interest them in the project, with similar results in their respective localities. Proper management and earnest work on these lines would evolve the greatest special exhibit of this exposition, and one of the most valuable and productive of information that has ever been collected. Of course, a hall for lectures on architecture and for meetings, departments for drawings, models, etc., would be provided, and the interest aroused by the collection of foreign exhibits would make the calling together of a well-attended world's congress of architects a certainty.

Architecture and the Environment.

UNDER the above title Mr. Barr Ferree, writing in the current issue of the *Popular Science Monthly*, directs attention to the natural conditions that are essential for successful building, stating that they have never been better set forth than in a letter written by the consul Pliny to his friend Gallus in the early part of the first century of our era, in which he describes his newly-finished villa of Laurentinum, which letter Mr. Ferree quotes in full, but of which only that portion referring to architectural features is given:

"You are surprised," writes Pliny, "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 sea-coast. It is but seventeen miles from Rome; so that, having finished my affairs in town, I can pass my evenings here, without breaking in on the business of the day. My villa is large enough to afford all desirable accommodations, 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 bad weather, not only as it is inclosed with windows, but particularly as it is sheltered by an extraordinary 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 toward the sea; so that, when there is a southwest wind, it is gently 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 another 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 sea, lies a large drawing-room; and beyond that a second of smaller size, which has one window to the rising and another to the setting sun; this has likewise a prospect of the sea, but, being at a greater distance, is less incommoded by it. 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 cases, which contain a collection of those authors whose works can never be read too often. Thence you pass into a bedchamber through a passage which, being boarded and suspended, as it were, over a stove which runs underneath, tempers the heat 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 lighted, not only by the direct rays of the sun, but also by their reflection from the sea. Beyond is a bedchamber, together with its anteroom, 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 the 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 costly manner; annexed to this is a warm bath of extraordinary workmanship, wherein one may swim and have a prospect, at the same time, of the sea.

"Not far hence stands the tennis court, which lies open to the warmth of the afternoon sun. Thence 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, near to 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* runs a shady plantation of vines, the alley of which is so soft that you may walk barefoot upon it without any injury. The garden is chiefly 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 banqueting room, which, though it stands remote from the sea, enjoys a prospect nothing inferior to that view; two apartments run around the back part of it, the windows whereof look upon the entrance of the villa, and into a very pleasant kitchen garden. Hence an inclosed 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 toward the sea they are double the number of those next the garden. When the weather is fair and serene, these are all thrown open; but if it blows, those on the side the wind sets are shut, while the others remain unclosed without any inconvenience.

"Before this portico lies a terrace, perfumed with violets, and warmed by the reflection of the sun from the portico, which, as it retains the rays, so it keeps off the northeast wind; and it is as warm on this side as it is cool on the opposite; in the same manner it proves a defense against the southwest; and thus, in short, by means of its several sides, breaks the force of the winds from whatsoever 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 all 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 then coolest when the sun is most scorching—that is, when its rays fall directly upon the roof. To these, its 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 inclosed air 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 inclosed portico.

"On that side next the sea, and opposite to the middle wall, 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 feet 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 either distinctly from so many different windows in the room, or blended together in one confused prospect. Adjoining this is a bedchamber, which neither the voice 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 it, 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 stove-room, which, by opening a little window, warms the bedchamber to the degree of heat required. Beyond this lie 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 license of that season of festivity, every other part of my villa resounds with the mirth of my domestics; thus I neither interrupt their diversions nor they my studies."

"This remarkable letter," says Mr. Ferree, "was written in a civilization different from ours, when society and culture were developed in another spirit; yet the principles it so clearly illustrates are as much in force today as they were then, and the lessons it teaches as important to us as they were interesting and profitable to the friend to whom they were addressed. It matters not that the description is of a building erected more than eighteen hundred years ago, which has long since passed from the face of the earth. The truths involved in its construction are as real today as when the letter was freshly written, and great as is its archæological interest, its chief merit is the admirable way in which it describes the model dwelling. Pliny was not an architect, but he was a man of keen observation, a student of nature, and possessed of sound common sense, which he never exercised to better advantage than in the erection of this building. His description shows us that utility is the chief consideration, first, last, and all the time, that should be observed in constructing a house. Coupled with this are the conditions imposed by the environment, the taking advantage of the natural situation, the direction of the wind, the heat of the sun, the requirements of temperature and climate, all of which must receive due attention in good and economic building. Ornamentation, decoration, design, esthetic effects, and other elements which are popularly supposed to compose architecture, are either neglected altogether or put to one side as matters which may receive attention after essential things have been considered. The Romans were fond of ornament, they loved to overload their structures with decorations of all kinds, and the number of statues employed in some of their public buildings was prodigious; but Pliny's letter shows there were at least some among them who looked at architecture through the lens of common sense, and it is to them we must go in our search after truth.

"Adaptation to its use was the chief element in Pliny's villa, the basis on which it rested, and the plan on which it was designed. There was no insistence on the beautiful or the elevation of artistic form to the chief place, but everything was arranged as convenience dictated or sense suggested, and all was in consequence admirably suited to the requirements of the owner. It was in these things that he found satisfaction, while if any part was arranged with elegance, so much the better; but as long as he was comfortable, as long as his windows opened on refreshing views, as long as every advantage was taken of the shade in summer or the heat of the sun in winter, as long as there were convenient and accessible places of retreat as well as ample rooms in which to entertain the guests, there was no fault to be found, and as the owner was satisfied, who could complain?"

According to the writer, "the pleasure that Pliny derived from his villa is in striking contrast to the dissatisfaction that is expressed with modern buildings of all kinds—not dwellings alone, but stores and offices, churches and public buildings; with those erected in an inexpensive way, and those on which unlimited sums have been expended. The fault-finding is not a subdued murmur, but is general and outspoken, and, in the absence of any other object, is aimed at the architect, sometimes with a vigor that should be sufficient to arrest his attention. And the architects are largely to blame; for, as the leaders in the architectural movement, they naturally have a fuller acquaintance with the subject than a man who builds but one house in a lifetime, and if they do not correct errors in construction, it is difficult to see who else is to be held responsible. The reasons for this state of things are obvious. Every man who undertakes to build a house seeks to make it a model dwelling, in which the faults of every other building he is acquainted with will be corrected, and everything arranged to suit his ideas of comfort and utility. He begins with well defined views, knows exactly what he wants, and lays them before the architect. The latter undertakes to please his client as best he may and prepares—a design. Possibly the plan is in accordance with the programme laid down, but it is by a picturesque exterior, a pleasing elevation, a beautiful drawing that he hopes to captivate the eye and fancy of his customer. Other architects have made their reputation by their exteriors, and the most successful of all has obtained his fame by some great structure whose façade surpasses in beauty any offered by his competitors. Like a flock of sheep blindly following the leader, they go on preparing design after design, such as it is supposed the client will like, until an immense portfolio of pictures will be accumulated which may be very pleasing to look at, but which are simply drawings intended to catch the eye. The plan, the arrangement of the parts of the house, the convenience of the occupants and all similar questions are too frequently left to be filled in afterward, and made to fit the exterior instead of the exterior being made to express them."

Here occurs the remarkable statement that "architecture, in fact, has ceased to be an art, and has become a fashion. We have styles in architecture just as we have styles in dress, and the changes in public taste are as capricious in the one as in the other. The rule of fashion is the most arbitrary and idiotic form of government to which human beings have ever submitted themselves, and it is not less so in architecture than in dress. Our buildings are put up now in one style, now in another, not because one is more suited to the purpose of the structure, not because it is better adapted to the climate, not because it more freely expresses our culture and our civilization, but because we want a change—because our streets are growing monotonous, because we must alter our structures to conform to the new style, and thereby give evidence of an improved taste and furnish profitable work for the architect and good jobs for the laboring man. As to what is behind all this—the structure itself, the part which calls the façade into being, to which it is really not more than a lid or screen to shut out inquisitive eyes—it does not matter. An Italian front does not necessarily imply an Italian house, nor a Moorish façade suggest the rich, luxurious, sensual life of the south. Variety is indeed the spice of life, and it is an admirable idea to give a diversity to our streets and erect ornamental façades to our buildings; but when we pass over all thought of convenience, of utility, of adaptation to natural conditions, and judge of buildings solely because one is better looking than another, we have passed the dividing line between sense and absurdity."

The deduction from the above is that "from the modern point of view it is a misfortune that buildings must be used. Were they only intended to be looked at, could they but be preserved in glass cases in the galleries of some gigantic museum, there would be no complaints, no fault-findings, no grumblings. If houses were not to live in, architects could pursue their occupations without inconvenience, and design fronts and windows and turrets and all sorts of knick-knacks to their heart's content. Unfortunately, this ideal state can never be realized; and, as people must conform to the designs of architects—must have turrets where they do not want them, windows where they are least needed, and all sorts of beautifications because they are in the latest style—there is constant conflict between builder and occupant, between architect and client. Nor could anything else be expected when buildings are judged solely by their esthetic appearance. The history of architecture carries the comforting assurance that structures can be both beautiful and useful; and, in fact, in the best buildings the two elements are so closely united as to be scarcely distinguished. In our time, however, attention is paid to only one of them, and it is, therefore, impossible to obtain satisfactory results."

"Writers on architecture make a broad distinction between construction and architecture, claiming that they are two different things, and that, while all architecture is construction, all construction is not architecture. Never was a difference productive of more perverted ideas. A factory is not architectural, because it is plain, unadorned construction. Put on some ornament, add a fancy roof, a cornice, and a balcony, and it at once becomes architectural, though none of these things have aught to do with the uses of the building, but frequently conflict with them. Such a definition may be maintained in order to have certain limitations, but it is clearly absurd to say that a building only properly comes within the province of architecture when certain adjuncts are added to it which, while they may increase its esthetic appearance, detract from its usefulness."

"The history of architecture is the story of the attempt of man to adapt his life to the environment in which he is placed. The Abipone under his mat, the Assyrian in his thick-walled house of brick, the Roman in his conveniently arranged villa, the medieval baron in his castle, the French monarch in his richly appointed palace, are but so many instances of the influence of climate and geological conditions,

nature of the soil, products of the land, extent of intercourse with other peoples, temperature, rainfall, manner of living, and many other phenomena which have caused the evolution of various grades of society, and which thus express themselves in visible form. In Assyria the buildings were of clay, because that was the only substance the land afforded. In Greece they were of stone, because it was abundant and easily obtained. The medieval baron intrenched himself in a heavily guarded fortress, because the country was in an unsettled condition and was infested with freebooters. A change passed over society; laws were enforced, police regulations made, society became settled and calm, fortifications disappeared, and in their place arose châteaux and pleasant villas that were admirably suited to a free and peaceful life. Each style, in fact, originated in the various operations of natural conditions; each form had an evolution of its own, that had as definite and as readily ascertained causes as those which produced the evolution of any other form of culture. Reason and common sense, usefulness and intention, were the great factors on which all architecture rested; and when these things were neglected—when an arbitrary decree of fashion or the development of a new "taste" became the criterion by which all buildings were judged—architecture fell. This calamity occurred with the introduction of the Renaissance in the fifteenth century, and its results are still apparent."

"Natural conditions are apt to be forgotten in this busy life of ours. We have no time to spend in applying the problems of perspective to architecture as did the ancient Greeks when they used curved lines instead of straight, in order to correct the distortion caused by distance. Our crowded cities, where land has reached fabulous prices per foot, afford no opportunity for taking advantage of the conveniences of an ample site. But, though we may not be able to concern ourselves with such matters, there are a multitude of other details, that can be attended to which are now more or less neglected, and which, were they intelligently treated, would remove much of the present reproach from our architecture."

"For many hundred years architecture has been occupied with solving problems presented by nature. In earlier times life was comparatively simple, and artificial needs were few and easily satisfied. Now, however, we have countless mechanical contrivances that have entered closely into our lives, and the problems of architecture take a different range. Steam and electricity have revolutionized society. They have brought the furthestmost parts of the earth into intimate connection. Our lives are one continuous hurry, and the laggard is soon left behind in the rapid march of progress. In the cities land is scarce and valuable, and room is only to be had by expanding upward instead of laterally. Inventive genius has supplied us with elevators, steam heat, electric light. Questions of public safety, correct sanitation, guards against fire, protection against burglary, safe means of rapid ingress and egress, have formed other conditions. The spread of manufactures, the making of artificial building materials, as iron and glass, have given us new forces. New methods of business and the constant and rapid introduction of new occupations have presented fresh problems with which to deal. The increase of great corporations, the building of railroads, new forms of transportation by water, the changes of life in every state, have caused new difficulties for the architect, all of which must be correctly solved if we are to make any true progress."

"In our houses, stores, office buildings, hotels, homes, factories, machine shops, depots of construction, warehouses, churches, dwellings and places of amusement, there is a constant need for the application of new ideas and the devising of new methods. The work that is before our architects is immense, and the way in which they apply themselves to it will largely influence our future advancement. Yet in the face of all this the battle of the styles waxes furious; and if one obtains a handsomer building than his neighbor, he is told not to complain of its inconveniences, but to be satisfied that he has got so much. There never was a time when the need of a practical architecture was more pressing than now, and there never was a time when it was so persistently neglected."

Mr. Ferree concludes by asking: "And what is a practical architecture? Is it one in which beauty is sacrificed to utility, where plainness is to be preferred to ornament, where art is subordinated to engineering? Not at all; we can have beauty and utility, art and engineering, all in one building, and still be practical and in line with good architectural work. It is true that many "practical" buildings are extremely ugly, and many great works of engineering eminently hideous. It is small wonder at times that there is a revulsion against the practical and a demand for more of the beautiful; but the error here is as great as when beauty is sacrificed to utility. Use is by no means synonymous with ugliness, and it is quite as important to combat such a view as to condemn beautiful things because they are useless. Practical architecture does not imply any compromise between the two elements, but it does imply a strict application of common sense to all material things. There is no reason why architecture should be denied the treatment from the point of view of sound sense that is given to every other department of thought and progress; it is too closely connected with the necessities of life to be made the victim of absurdity."

"There is scarcely a limit to the number of examples of the neglect of natural conditions that may be gathered from the architecture that prevails among us. In the search for the beautiful, the demand for impressive façades, the taste for complicated ornament, and a most singular appreciation of the odd, the grotesque, and the ugly, there is little attention paid to matters which seem self-evident and are of really vital importance. Windows are arranged to suit a symmetrical façade, whether they are just what are needed for the rooms or not, and, even where it is possible, little attention is given to the direction of the sunlight in order that the living-rooms may receive

the full benefit of the natural warmth, nor are those rooms where it is not needed, or minor offices, relegated to the exposed side. The most important external feature, the door, is seldom adjusted to the climate. Even in large office buildings, hotels and churches, where there should be ample space for every structural convenience, the door is frequently of cramped dimensions, and, instead of being preceded by a porch, which would be an integral part of the architecture, and which is absolutely essential in our long, cold, damp winters, is boarded up with "storm doors" that are not only hideous in design but an actual obstruction. With the rapid increase in the value of land which has taken place in all our large cities in late years, a wild fear lest any inch be wasted has resulted in a compactness of plan that is frequently painful. The housekeeper longs for the roomy closets and ample storerooms of the old buildings; the fine hall that once formed an imposing and appropriate entrance has given place to the narrow entry through which it is frequently impossible to carry the larger articles of furniture. The same difficulty is experienced in the sharp, frequent turns which characterize so many stairways. Bedrooms are pushed into corners where they seldom have the benefit of pure, free air and the heat of the sun, for no other reason than that space is required for ample reception rooms and state apartments.

"The same indifference to the true ends of building are to be noted in public edifices as well as in private ones. Offices are small and frequently without light. In many churches it is impossible either to see the preacher or to hear him, and some of our public halls are not much better, while, as a crowning touch, the seats are placed so close together as to render them the very acme of discomfort to all but dwarfs. Nor are these structural differences the only ones that call for improvement. There are a multitude of modern contrivances that are yet in an undeveloped state. Questions of drainage, of heating, of artificial light, of elevators, of protection against fire, of ventilation, and the very means of supporting life, are not seldom denied us in structures that astound us by their size and which have cost vast sums. It is not because these things are expensive that they are neglected, nor because they are out of the range of our mechanical powers, but because they are looked upon as adjuncts to the buildings to be taken up at some later time and are then never given the strict attention they require. A draftsman who has prepared a design that captivates him by its beauty, and seems destined to win a much-desired prize by its mere art superiority over other drawings, is too apt to forget that, after all, he has neglected the consideration of utility; and that on the perfection of the adaptation of the structure to human needs must depend its real value, its true measure of success.

"The Great Pyramid of Egypt, which is among the most ancient monuments in the world, has survived for thousands of years because each stone had a definite place, in which it was set with the greatest care. It owes its size and its endurance to a strict attention, on the part of its builders, to small things, and the exercise of an almost limitless patience. It teaches a profound truth, that in architecture no single thing is too unimportant to be treated in the best way; and, though we need not seek to erect buildings whose permanency will be of the type of the Pyramid of Cheops, we can at least apply to our structures the same care for the minor parts, believing that, as the members are, so will the whole be.

"Architecture must express the life of any people in order to be successful. It is this which makes former styles so admirable, and it is this element that is so sadly wanting in our own. We must not make our lives conform to our buildings, but our buildings must conform to our lives. They must express not only our culture and our tastes, but the land in which we live and the environment in which we are placed. This can never be accomplished by erecting buildings for their exterior only, and until our architects learn to treat the plan and disposition of the building as the chief part of the structure we can never hope to be rid of the discomfort that makes so much of our daily life unbearable. The Gothic builders achieved success, not because their buildings were beautiful only, but because they filled every natural requirement. It is impossible to delude ourselves with the thought that we are equally successful simply because we happen to live in a house with a Gothic front, but which subjects us to hourly annoyances by the total absence of the conveniences and necessities of modern daily life."

A New Office Building at San Francisco.

ARCHITECTS BURNHAM & ROOT have been employed by D. O. Mills, of New York and San Francisco, to design an office building in the latter city, about the size of the Mills building in New York.

The gentleman is now considered one of the wealthiest men in this country. Starting as a banker in Sacramento in early days he amassed a large fortune there, and has since been known for his connection with great banks, railways, landed properties and newspapers. He owns the great estate of Milbrae, just out of San Francisco, and is now having a beautiful estate laid out near New York. The *New York Tribune* is controlled by his family, and Hon. Whitelaw Reid, its editor, and present minister to France, is his son-in-law. He is a man, in fact, of widest knowledge of men and of buildings, able to go where he will and do what his judgment may dictate.

His action was after mature consideration and careful examination of the work of all the architects in this country. The final event was characteristic of the man's whole career. He wired that he would like to see one of the firm in New York, and within an hour of the gentleman's arrival, had made a written contract according to the Institute schedule and also an appointment for a meeting in California. The work is now well under way and bids fair to outdo any previous performance of these architects.

An English View of the Convention.

IT is sometimes well to "see ourselves as others see us," and under the title "Congress of American Architects" the *Architect*, of London, reviews the report of the last convention of the American Institute of Architects. The reading of these deductions of the *Architect* can be beneficial to every member of the Institute, as even its very evident misconception of the extent and influence of the Institute, or the real status of architectural affairs here, will show how carefully each report should be written and each measure considered before being presented to a convention. It is sufficiently instructive in many respects to be given in full.

It is difficult for any one out of America to assess the value of the convention which was held a month ago in Washington. The reports of the meetings do not convey a notion to a stranger that advantageous results followed so much speaking and voting. Nor can it be said that the resolutions appear to represent the opinion of American architects, for there were only about a hundred members present, and at most seventy-six took part in the voting. If the architects who met in Washington, however few in number, could be all considered as representatives of various local bodies, the proceedings might then be taken as indicative of the desires of the profession throughout the states; but all that can be stated is that some of the members who were present are sufficiently prominent to secure attention for whatever they may say or do, although they may not appear on behalf of a chapter or a town. Apart from the reported proceedings of the meetings, it may be assumed that something was gained by bringing a hundred architects together. The struggle for existence is not less fiercely fought out in America than in England, and it is well to have occasional intervals when combativeness is not exercised. The president, Mr. R. M. Hunt, in the address which he prepared, although through illness he was unable to attend or read it, gave prominence to this consideration. Everybody who attended the conventions would, he said, be able to appreciate the gain in fellowship, and he testified that out of personal acquaintance had grown both mutual respect and esteem. It must be said, however, that nothing was manifested to denote much of a change in the relation between architects in practice since the conventions were inaugurated.

The failure to establish a professional code is evidence that as yet individuals think more of their own success than of any community of interest, unless when the latter can be made to aid the former. It should be remembered that the committee on ethics have been three years at work. What have they discovered? A tendency toward a business rather than a professional conduct of architecture; the business men "look with contempt upon the older methods," while "those who follow time-honored methods look askance at the new, and are irritated and ruffled by any departure from what they regard as the strictly legitimate." There is also a class of architects, and we fancy numerically they are the most important, "who are much more concerned in filling their bellies than in splitting hairs with nicety, and who look with cynicism on all methods, including their own." What bond can be found to unite men whose theories of conduct are so much opposed? It has to be admitted that "these three elements have representation in the Institute," but as it is unknown what are the proportions, a code for one class would hardly satisfy the others. As is common with reformers who have to succumb to necessity, the committee comfort themselves by fancying "that in due time the varied interests and views held in the profession will have coalesced and unified through a gradual series of modifications." It is to be hoped the adherents to old-fashioned canons of morality will eventually gain predominance, as "between him of social equipose and professional dignity at the upper end of the scale, and the hustling gorilla at the lower, are to be found all the transitional gradations," but the chances are in favor of the cynics, for their methods have become a sort of national institution. An architect with an aversion to "splitting hairs with nicety," in morals as in art, on that account can claim to be akin with the majority of Americans. As Mr. Emerson says, "The darlings of nature, the great, the strong, the beautiful, do not come out of the Sunday-school, nor weigh their food, nor punctually keep the commandments." They see that nature is no saint, and who can wonder if they think of the profit which a commission can render, instead of theories of moral obligations? The late T. U. Walter did believe in ethics as well as in style. His buildings in Washington, according to the president of the convention, "show careful study and are characterized by dignity and repose strikingly in contrast with much in their surroundings," but "while the nation has thus just reason to be proud of his work, congress remains indifferent to the appeal of Mr. Walter's family for just remuneration for the faithful services his work represents." Could there be a more forcible argument for the wisdom of the cynics, if not of the gorillas, who provide for themselves and their heirs at all costs, and thus save congress from unfavorable judgments of critics like Mr. Hunt.

The educational problem appears to offer almost as many difficulties as ethics. A report from the committee was not forthcoming. The secretary, however, suggested that interference with existing schools was not advisable, and it would be well to limit the operations of the committee to collecting information about attempts made by small local architectural societies, chapters, or individuals to provide and spread information of a generally useful sort. According to Mr. Hunt it is no longer necessary for the American student to go abroad for education, unless he may have obtained one of the traveling scholarships which were lately founded. As Mr. Hunt has had experience of European training he is not likely to undervalue it, but he advises students from technological art schools to spend a couple of years in an architect's office prior to crossing the Atlantic.

When the American student settles down as a practitioner, is he to stand alone or to become a member of a society? In theory the

American Institute is a national institute, in which a place for every respectable architect is to be found. Hard-headed critics, who believe that power is to be tested by finance, cannot of course think much of a body of men who are unable to obtain more than \$4,096 from a year's initiation fees, dues, fines, etc., and who have a balance of \$1,605. In spite of all the eloquence that is expended, members of congress and other public bodies must look down on an Institute that in wealth is so far below the humblest laborers' society. It is no wonder, therefore, that the executive committee of the Institute should desire to see a large increase of members, from whom supplies can be drawn; and accordingly it was recommended "that the utmost encouragement should be given to the formation and the continuance of the chapters." But in order to insure that profit should arise to the central authority from the chapters, they are to consist of members and associates of the Institute. If otherwise constituted there is no recognition of a chapter. Five members of the Institute are sufficient material to form one of those bodies; but where, as at San Francisco, there are four members with thirty-two non-members; or at Pittsburgh, where there are three members with sixteen non-members; or other chapters, where the members of the Institute are also in a minority, they were disregarded as illegitimate. Although it may be wise to obtain as much money as possible, the fact cannot be ignored that too much exercise of authority at headquarters may cause the chapters to ask what is gained by being bound to so volatile a body as is the Institute? If the chapters stand on their independence the Institute must share the fate of all unsubstantial pageants. It was therefore well that Mr. Adler came forward in time to use his influence, by declaring that further proposals for meddling with the chapters was inopportune. Next year the subject is to be further considered, if a report on the organization of the chapters be forthcoming.

It is not to be supposed that the chapters are inspired by any more generosity than larger societies. A revelation of the spirit which actuates them is to be found in an affair which has busied the San Francisco chapter. A Mr. Laver, a member, was the architect of the city hall. When the main part of the building was sufficiently advanced, he prepared two designs for the tower. The city authorities, with Mr. Laver's consent, submitted them to the chapter. He received a report from his fellow-members, which expressed their approval of one of the designs; but he was surprised to learn that, instead of a duplicate, a report of an adverse character was sent to the city council. Mr. Laver withdrew from the chapter. It is needless to say that when the matter was submitted to the convention there was a resolution passed in favor of treating the case with neglect. "Masterly inactivity" invariably inspires the policy of architectural societies when the reputation of a member is at stake, and the course adopted at Washington was strictly according to precedent.

That the people of America are not at present prepared to indorse all that may be recommended by the Institute is evident from a report of the committee on the employment of clerks of works. It is stated that "in large cities, especially in the East, there is a growing inclination to recognize that an architect is not paid for constant and continuous superintendence, yet it will be many years before the same feeling is general and before the Institute can attempt to demand the employment of assistant superintendence throughout the country." As far as may be judged by what is known in England of the Institute, it seems likely that such demands will be entirely disregarded, for although, according to a practice that is too common, credit may be taken for many things, the Institute as a body has hitherto seemed to have gained nothing for American architects. The committee admit that clients believe, "and in this they are supported to a surprising extent by legal opinion, that an architect is in the position of chief builder in the commercial and responsible sense, as well as in the technical, and they put him in the position of the contracting party, with the real contractor as his employé or subordinate." The committee make no attempt at denial of the architect's responsibilities. They recommend that an explanation be given of the value of his services, and that seventeen or eighteen per cent would have to be paid if the supervision were not limited. It is also said that there should be an addition to the authorized schedule showing the rates at which the services of a clerk of works could be obtained. Thirty dollars a week was named as the average sum to be paid. There are so many amateurs who get hold of contracts in America, especially for public works, the necessity for constant watchfulness ought to be evident to all who have to pay for building. But since there was a show of combined action on the part of some architects, clients have become suspicious of arrangements which may be advantageous to them.

The report appears to admit this when it states, "It seems strange in these days of carefully-written agreements there should be such frequent misunderstandings of common relationship of architect and client." Misunderstandings will more often arise if the relation of responsibility by the architect, as proposed by some members, should become common, and as the Americans are not disposed to follow ancient examples, it is not improbable that one day they will insist on having two independent classes of architects—one for the preparing of designs, and the other for carrying them out. It is difficult to see how in all cases a clause can work which announces that "the architect's superintendence shall not include liability or responsibility for any breach of contract by the contractors." That is whittling away the agent's position until nothing remains, and it might be supposed the clause was intended for the benefit of the "hustling gorilla." Although a building-owner must adhere to an agreement of the kind if he should sign it, we doubt if such a declaration of independence would be long tolerated in England. The decision lately given against the engineers of the Broadstairs drainage works shows that the courts now apply a very rigorous test to discover the liabilities

of agents when they represent employers in works of construction, and that it is no easy matter to make it clear in case of failure that care and judgment were exercised. In America also the judges do not want discernment, and the architects, in endeavoring to make assurance doubly sure, would do well to remember that the adoption of their agreements is not compulsory, and the building-owners can insist on very different conditions if they please. One of the members said it was necessary to have an agreement of which they could say, "This is authorized by the American Institute of Architects," the same as the Supreme Court could say, "This is the decision of the Supreme Court"; but words of that kind are only imaginative, and signs of a deficiency in discriminating between things. One reason brought forward against an assumption of responsibility is that incompetent or dishonest contractors are often employed because they send in low tenders. But a resolute architect can overcome men of that class and compel them to carry out conditions faithfully. As a matter of fact and of law, responsibility cannot be easily evaded by an architect, even when he practices in America. Mr. Upjohn, who is one of the oldest members, declared, in giving a certificate, there is an admission of responsibility for the accuracy; and if the figures are incorrect the architect becomes accountable if a loss should arise. He put it in another way when he said that the failures of doctors can be put underground, but a building stands always as evidence against an architect. It is no doubt onerous to have so much responsibility; but if architects are afraid, men of another sort will be glad to take their places.

Like most other subjects brought forward at the convention, there was a postponement of the decision about the liability of architects. They will act wisely if there is a further adjournment when that time comes. American clients are like those of other countries who give commissions to architects, because it is believed there is an advantage in doing so. The clients may say, like the compilers of the French code, "*La bonne foi est toujours présumée*"; but when the risks are so great they believe it is well to have something else. Sometimes in America security is supposed to be given by making the architect a party to the contract; but, whatever may be the extent of the precautions, nobody can imagine that an American client would be satisfied if an architect failed to restrain a contractor when he was not faithfully carrying out the conditions of the contract. Is it not dangerous to the profession to give grounds for the supposition that the architect will not worry himself about such matters, and is indifferent to the disappointment of a client when he discovers that the employment of an architect affords him no security, and that it is cheaper and quite as safe to trust the contractor? When we find an architect saying at the convention, "I believe that the owner should look to the contractor and to the contractor alone for the enforcement of the contract—the supervision of the architect to the contrary notwithstanding," is it not plain that the supervision is a superfluity, if not a sham?

The conclusion to be drawn from the convention is that the reports were immature, and when so much was left over for another annual meeting the architects are not likely to profit much by the proceedings. But as the committees can amuse themselves with preparing additional reports, and as numerous opportunities are given for issuing new circulars, some members may say the purpose of the convention was realized. However, the day seems distant when the reports or circulars will be accepted by the American people as being of equal value with the recorded decisions of the Supreme Court of the United States.

An Age of Steel and Clay.*

BY W. L. B. JENNEY, ARCHITECT.

LONG ago, architects recognized that the tombs, the monuments, the temples that are left to us by people long passed out of history, are a sure indication of the habits, manners, customs, religion and the arts of the people who built them, as adapted to the material obtainable. Moreover, these buildings, often magnificent, are but the enlargement in a more permanent material of the homes and the tombs of the prominent citizens, and even of the huts of the common people. The columns of the great temples on the Nile are often but an imitation in stone of bundles of papyrus reeds, and the entire temple shows its origin in a house built of these reeds and clay. Here was at first an age of reeds and unburned clay, and later, as civilization advanced and the nation became powerful and the government more thoroughly organized, there was an age of stone. Like the old subdivisions of the ethnologist, an age of stone, rude or polished; an age of bronze and an age of iron, which were reproduced over and over again by different people according to the state of civilization; so the different ages of building, such as the age of reeds, of clay (unburned and burned), the age of stone and the age of iron have appeared and held sway for more or less centuries, influenced by the environment. The age of reeds still exists in China and among the Malays, and among many savage tribes. The same is true of unburned clay. The age of bricks existed in Chaldea and Assyria, where the broad alluvial plains furnished abundance of clay, while all other building materials were difficult to obtain. So long did these nations exist in a high state of civilization that they invented most of the forms and methods of brick and brick construction known today: the unburned brick of clay and straw, the kiln-burned brick of numerous forms, enameled brick, plain and decorated and of many colors. The old stories that the round arch was of Etruscan invention, and pointed arch Gothic of the middle ages, is here given the lie. Both of these arches are found built in brick with radial joints in the valley

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of the Euphrates and the Tigris, dating some twenty centuries before Christ, some of them in beautiful figured enameled brick.

The age of stone existed in all its perfection in Central Europe in the middle ages. There stone was used in the great cathedrals with all the skill and all the knowledge that has ever been applied to similar stone construction. The most careful analysis of the construction of such great cathedrals as Rheims, Amiens and Rouen develops a knowledge of the arch and the pier that the architects of today could not excel. The entire interior is of cut stone. The arch ribs carry a stone ceiling. The thrusts are taken by an elaborate system of graceful flying buttresses. The walls reduced to piers between great windows filled with painted glass. The least amount of stone consistent with stability; and yet this thirteenth century work is in good preservation today, magnificent monuments illustrating the science and the art of the age.

This age of stone passed away and a more complex age appeared: an age of stone, brick and wood, cheap and quickly constructed, made necessary by the advance of civilization, the increase of commerce and manufactures and the rapid growth of the cities. Brick walls sometimes faced with stone, wooden joists (interior posts of wood or iron), columns in the street fronts of cast-iron. These buildings with their wooden joist, stud partitions and wooden lathing were combustible, and great fires often occurred, at times destroying entire cities and causing great losses. Something more stable was necessary. Iron had long been in partial use. The iron industries were extending, new mines opened, new furnaces and rolling mills established. The demand for structural iron increasing. The I-beam was invented and recognized as the most economical shape for floor joist and girders. Iron, although classed as an incombustible material, is nevertheless, if unprotected, destroyed by the heat of a burning stock of goods. The early fireproof buildings were floored with brick or concrete arches between I-beams. These arches were heavy and left a ceiling not pleasing to the eye, beside the lower flanges of the beams, and the columns were not protected. Progress was slow and but few fireproof buildings were erected in this country.

The hollow terra-cotta fireclay arch was invented, strong, light and of less cost than the old methods, and more effective. With this material it was easy to entirely cover the I-beam and form a flat ceiling that only required plastering, and to protect the columns; for it could be readily molded into the shapes most convenient for each purpose. We then entered upon an age of iron. All important public, and some private buildings, were of masonry or of iron backed with masonry. The interior columns, girders and beams of iron; the floors and partitions of hollow fireclay tile. One step more and in the outside walls iron columns inclosed in masonry took the place of the old masonry pier. This was first introduced extensively in the Home Insurance building in this city.

Steel had been long known but was too costly for building purposes. The Bessemer process had changed the railway rails from iron to steel, and Carnegie rolled some I-beams of steel and sent them with his compliments to be used in the Home Insurance building, instead of iron. This only about four years ago. The advantages of steel were soon recognized. The tensile strength of good, mild steel as compared with iron is twenty to twenty-five per cent more, or 60,000 to 64,000 pounds per square inch for steel and 48,000 to 50,000 for iron. Hence steel construction is lighter than iron and as the price per pound is the same there is a large saving in cost. Hence as a natural consequence steel rapidly took the place of iron and we entered upon an age of steel, our important buildings becoming literally and completely a steel construction fireproofed. The masonry reduced to the very minimum, not only carrying no weight, but being itself carried by lintels of steel from column to column over each window, as in the Home Insurance building, the Tacoma and the Leiter buildings, the Rand-McNally building, etc. (all in Chicago). The steel is only covered by thin terra-cotta, brick or stone. As an immediate consequence of this method of construction our Chicago buildings rose rapidly from six stories to sixteen, for the lightness of this construction enabled the architects to find room on Chicago's soft compressible clay for their footings. Steel has now become such an all-important factor in the construction, not only of all our important buildings, but also of all the navies of the world, of the railways, their rails, bridges, stations, rolling stock, etc., that we may fairly claim that steel is today an important element of our civilization, rendering possible and profitable what would otherwise be quite impracticable, so that I hope to be able to make interesting a brief account of the manufacture of constructional steel, such as has so suddenly burst from an unknown industry but a few years ago into such universal use today. The use of steel in building construction is increasing faster even than the means of manufacture. Today in Chicago it is impossible to obtain steel beams as rapidly as they are wanted and many of our buildings are badly delayed. As well as one can judge, the demands for the coming year will be beyond the present output of the mills. The Illinois Steel Company are building a great plant and have again commenced rolling steel beams at one of their mills, and soon Chicago will become one of the centers of steel, which will greatly facilitate our building operations. Carnegie, I am informed, is now preparing to run continually night and day, that he may keep up with the demands and fill his orders.

Structural steel is a special kind that experience shows to be best adapted to constructional purposes. It contains a little more carbon than iron and is known as mild steel. Speaking broadly, wrought iron contains 0.00 to 0.10 carbon; structural steel contains 0.12 to 0.15, about $\frac{1}{4}$ of 1 per cent; high grade steel for tools, machinery, etc., contains 0.18 to 1.15; pig iron contains 2 per cent to 5 per cent, or even 6 per cent. Most of the structural steel in use is made by either the Bessemer process or the Open-hearth process. Rails, and

beams in large part are made by the Bessemer process, while boiler and armour plates are made by the Open-hearth process, though some beam mills use the Open-hearth process, which is becoming cheaper by the ability to use cheaper pig. In all cases the first process in the manufacture is to reduce the ore to pig iron. The ores of the Illinois Steel Company come from the Lake Superior region. Those used in Pittsburgh from everywhere, Spain, Elba, the coast of Africa, etc. The ores are reduced in the blast furnace, of which there are many forms, although they vary but little in all the essential particulars.

(Here the speaker gave a description of the modern blast furnace, the Bessemer converter and the Open-hearth furnace, illustrated by large diagrams, and the process of manufacture from the ore to structural steel, such as is commonly used in building construction.)

It is necessary that the architect should be certain that he obtains the quality of steel upon which his calculations are based.

His specifications are substantially as follows in the essential particulars:

"From each blow of the converter, or from each charge of the furnace, an ingot shall be cast and rolled into test bars, which shall be pulled and the test sheets sent to the architect with each shipment. The tests shall be as follows: The elastic limit not less than 3,200 pounds per square inch. The elongation to be not less than 22 per cent. For all plates, angles and Z bars there shall be in addition to the above a quench test. The bar to be heated to cherry red and plunged into water at 82° Fahrenheit, and then bent cold over a bar of diameter equal to the thickness of the bar to be tested. This bending to be made without any signs of fracture. After the foregoing tests have been made and the metal has been accepted, the rolled material shall be examined for surface defects. All beams, plates, angles, Z shapes or other material shall be free from any injurious surface defects and shall be straight and true, and free from any twisting. All riveted work shall be put together with hot steel rivets of superior quality, such as are used for steam boiler work. They shall bend cold on themselves without showing any signs of cracks. All riveted work shall be true and straight and free from any injurious defects. All columns shall be straight and free from any twist. The seats or bearings of all columns shall be true and square so that the column shall stand plumb with an even bearing over the entire surface of the connection. Should it be necessary to put in any filling, said filling shall be of plate steel and shaped to fit exactly, and to bring the column plumb and to the proper level. No material that does not fill these specifications will be accepted.

Structural steel is by no means confined to beams: it includes also plates, angles, Z's and other shapes used for making steel columns, plate girders, etc. The steel column is coming into general use in our new buildings. Only a year ago it was an open question which should be used, the cast-iron columns or the rolled and riveted steel column. Our specifications for cast-iron columns demanded that from each heat of the cupola or melting furnace two or three bars should be cast 1 inch square and 5 feet long and tested by placing on firm supports 4 feet 6 inches apart and loading in the center with 470 pounds without breaking. This guarantees the metal to be of sufficient strength so that, as far as metal alone is concerned, cast-iron can be obtained of a thoroughly satisfactory quality. The same is true of the rolled steel. A heavy cast-iron column made with all possible care and skill is liable to hidden defects. Our specifications demand that the column shall be drilled twice at right angles, so that the inspector can measure the thickness in two places, from which he can judge of the balance, but it must often be the case that other parts are deficient on one or more sides. Equally dangerous are spongy or honeycomb like places caused by the gases blowing through the metal, and also what are called cold shuts, formed by the metal cooling so much as it runs through the mold as not to thoroughly unite, when from two sides it comes in contact. Sometimes defects from either of these causes are readily discovered, at others they are only detected after the most thorough examination an inspector can make by a careful scrutiny and by tapping all over the column with a light hammer, listening for any change in the sound. Sometimes the sound enables the expert to detect a very serious defect, that otherwise would entirely have escaped his notice. As the cast-iron column can only be examined on the outside, one can never be sure of a perfect column; for this reason architects only load a cast-iron column with one-eighth of the breaking load, supposing the column to be perfect. The rolled steel column is made up of pieces that are all inspected for metal and on all sides for surface defects before the column is built up, and then after the column is finished the workmanship is again inspected, so that one can be reasonably sure that a steel column is perfect. Hence the architect feels safe in loading the steel column with one-fourth the breaking load. Hence steel columns weigh much less—only about one-half the weight of cast-iron columns. This reduction in weight is an important item in the construction of tall buildings on our compressible soil, which can only be safely loaded with one and one-half tons per square foot on the foundations, for Chicago soil is soft compressible clay of some sixty or more feet in depth and any greater load per square foot than one and one-half tons causes too great settlement.

It is a very difficult problem to adjust the foundations to the ground so that the weights shall be uniformly distributed, for they practically cover all the ground under our tall buildings and spread out as far as practicable under the sidewalks and into the alley. Hence it is easily understood why it is that the steel column is so generally taking precedence. From this day on it will be the rule, and the cast-iron column will only be used in unimportant structures. In conclusion, the question naturally arises, what is the near future of steel? It is probably greater than anyone would have the courage to foretell. Inventions that permit the use of cheap, easily mined

ores; improvements that increase the production of a given plant; the inventions of labor-saving appliances for every branch of the work; the concentration into immense plants carefully planned by skillful engineers, running continually 24 hours a day, and 365 days a year, increasing the output and reducing the expense of production, and with all this, a steady improvement in the quality of the metal, will make steel cheaper and more and more popular. Its use will be extended in every direction. Before long every hotel, apartment house, theater and schoolhouse will be fireproof. Architects have already commenced to design fireproof dwellings, and ere long they will be the rule rather than the exception. Iron railroad ties were used in India years ago, because of the perishable nature of wood in the tropics. We can certainly look forward to steel railroad ties in the near future and to its use for many purposes not thought of today.

The interest that the world is taking in the manufacture of steel is well shown by the recent visit of a large delegation of European metallurgists, who were recently entertained in Chicago. They paid many a compliment to the American manufacturer for his admirable system and the many labor-saving appliances, and his methods for increasing production; and they left with their notebooks well filled with useful hints.

In buildings of all classes steel will supersede all other material for the construction, but steel alone is insufficient; it must be fireproof and there must be external walls. For the floors and partitions we have made some recent improvements, principally in making better and lighter material. Something new is required for the exterior. Light, durable, fireproof, non-absorbent, easily cleaned by the rain and pleasing in appearance, and susceptible of artistic effects. Such a material is clay. We have long used brick and terra-cotta; they were known to the ancients; brick is too solid, that is, too heavy, and becomes white with alkaline salts and absorbs dirt. Terra-cotta is mostly hand pressed and is too costly. We want a terra-cotta made rapidly by machinery at low price, its surface dull glazed, impervious to moisture, hard baked, uniform in quality and color, using hand work for the few carved pieces. There is a great plant now nearly ready to commence operations at the Stickney tract in the southwest part of the city, out on the prairie, that promises to give us just what we require for the cheaper portions. They already have two kilns each, 672 feet long, of the tunnel pattern. They are very ingenious. The material to be burned is piled on steel cars, fireproofed. The car enters the kiln tunnel on a railroad track and when it leaves the tunnel at the other end the bricks or terra-cotta are burned and cooled and are ready for shipment.

With cheap steel of a very superior quality and a light, dull glazed terra-cotta and a strong, light fireproofing, we are ready to build as never before—light, strong and at a reasonable price, within reach of every one that can afford to build at all; and we enter upon a new age—an age of steel and burnt clay.

Notes from French Exchanges.*

INDUSTRIAL ARTS IN FRANCE, ITALY AND BELGIUM.

THE French National Society of Sciences and the Industrial Arts held its annual exposition lately at Paris; but, according to *La Semaine des Constructeurs*, the finest portion of the exhibit does not seem to have been a startling success. In the way of stained glass, one exhibitor displayed the transparent decorations of the bedroom of Sara Bernhardt, while another showed some ornamental work on a telephone closet! As for artistic manifestation in this temple of industry, there were only the *concerts*, which were extremely remarkable for their execution. As for the scientific manifestations, there was an enormous number of small pavilions under the shadows of the galleries, where charming young women with gracious smiles dispensed various drinks. Most people, possibly, are ignorant that gastronomy constitutes one branch of industrial art, but such appears to be the case. Instruction in the industrial arts has for several years made immense progress in France, and the numerous designs sent to this exhibition by the pupils of the city schools prove this most abundantly. Their work and the wise manner it is directed merits the highest praise. Especially the exhibits from the girls' schools give proof of the finest taste. All these may be judged by comparison with the displays of the national or governmental schools protected by the state, since these institutions also exhibit the work of their most illustrious scholars. Underneath splendid coats-of-arms upon which are inscribed in letters of gold such glorious mottoes as "Honor and Country," "Valor and Discipline," etc., one sees embroideries for the uniforms of sub-prefects and generals, accompanied by some classical charcoal drawings and monotonous water colors. All these, alas! grow decidedly pale beside some of the modest essays, so full of natural taste, made by the little working girls of the Paris faubourgs. If the French section is not gratifying to a native fortunately the foreigners furnish some *motifs* that may be profitable for them to study. Italy in the fifteenth century, at the time of Michael Angelo and Raphael, was incontestably the instructor in architecture and the fine arts. Later, Flanders, in the times of Rubens and Van Dyck, gave masters to France, and now, if care is not taken, Rome and Florence, Antwerp and Brussels will again reconquer the place that France pretends to hold today at the head of European nations.

In an article of some length, Monsieur Raison begs the French not to be too assured of their present position, and he called their attention to certain facts brought out by this display. "There are in the Italian exhibit pieces of furniture in an absolutely new style, which

equal in execution the finest that can be produced by the best houses in France. As far as chairs of Louis XV and tables and beds of Louis XVI are concerned, we are greatly superior to the Italians and Flemish. In this department the foreign workmen are content to imitate us, and they do it badly. The spirit of the eighteenth century in France was so strongly marked with a French note that it will not stand translation, and when turned into an Italian or Belgian patois it loses all its delicacy.

"But among the Venetian and Milanese workmen there are some, however, who are doing a modern Italian style, and in this line they are greatly distancing our own workmen, some of their pieces being veritable marvels of beauty. In the same manner, the Belgians in their nineteenth century renaissance are far ahead of us. In the industrial arts our neighbors at the north and south are advancing with prodigious strides. They have no schools supported by the state and following official traditions, and possibly here lies the great secret of their success. Let us profit by the lesson they are giving; and honor calls us to prevent the nineteenth century renaissance, so well commenced by us, from (as in the sixteenth century) borrowing its principal glory from the Florentines and Flemish."

CONDEMNATION OF PRIVATE PROPERTY FOR PUBLIC IMPROVEMENTS.

The laws of the little town of Auvilar in southern France, written in 1270 in the old *langue-d'oc*, speak of condemnation proceedings as in occasional use in the cities of the south of France from the remotest antiquity. *La Semaine des Constructeurs*, September 20, 1890, says that in Paris the first record of such proceedings is an act of parliament, dated May 30, 1572, enabling the city officials to acquire a certain piece of property. In 1584 an act was passed by the parliament ordering a private individual to sell his garden to the church of St. Martin, to be used for increasing the size of the cemetery belonging to that church, and again, in 1612, a strip of land was by special act condemned in order that a street might be increased three feet in width.

THE INTERIOR DECORATIONS OF THE MUSEUM OF RELIGIONS (GUIMET MUSEUM), AT PARIS.

The architect, M. Terrier, in charge of this work, has inaugurated a new method of decoration, which has been thought out with so much care that it merits most careful study.

According to *La Semaine des Constructeurs*, of September 27, 1890, it is only within a few years that the authorities decided to cover the dreary and monotonous walls of the sculpture galleries of the Louvre with a coat of color; and yet, statues only show their full worth against a background that throws them out. Already, in the Assyrian collection, the winged bulls of Korsabad, and the bas-reliefs of the Temple of Nimrod, are brought out by a background of red ochre. In a similar manner the rooms of the Renaissance and the Middle Ages have also been painted, and there is now talk of covering the walls of the staircases with dark colored marbles so that the eye may become gradually prepared to contemplate the treasures accumulated in those rooms. The Guimet Museum, destined for religious subjects, has been decorated with this idea in view, in a most masterly and scientific manner. Upon entering the building a circular vestibule, ornamented with columns, initiates one into that which is about to be studied. The tints which decorate the walls of this vestibule, and the ornaments which cover them, are sober and chaste. Mounting several steps, the long galleries open before one, and prepared by this introduction, the entrance is full of charms. Nothing shocks; nothing distracts; but all goes toward giving a subdued and religious impression. The first floor is devoted to Buddhism, Brahmanism, and the religions of India, China and Japan. Above, on one side, is Egypt, and on the other Rome, Greece and ancient Gaul. In the Oriental portion, the walls are covered with designs which are simplified translations of the decorations of vases that one sees distributed here and there; all permitting one to enjoy, with a feeling of perfect unity and rest, the majestic grandeur of the gilded statues seated upon the lotus or the bas-reliefs, and other objects in the cases made only of glass and the smallest strips of black wood.

In the Egyptian department one sees the works of the inhabitants of the banks of the Nile; funeral processions and prayers of the devotees of Ammon, Osiris and Phta are on every side, and form, as it were, a commentary upon the figurines, altars and offerings that have been grouped with great intelligence. In the rooms containing the Gallo-Roman and Pompeian collections the decoration again changes, but always calm, always restful and always in harmony with what the room contains, so that one is almost forced to comprehend the spirit of those who adored and made offerings.

When one comes to leave it is with a mind filled with pleasure, having the feeling that a great deal has been learned in a short time; and one only wishes that the directors and curators of other museums, who now display their collections like the common goods of a country-store, would go and learn at the Guimet Museum the art of exhibiting a collection.

THE *Century* magazine is running a fast press day and night in order to print the first installment of the delayed "Talleyrand Memoirs" in the January number. This same magazine was the first to print, before its appearance in France, the life and literary remains of the great French artist, Jean François Millet, and now the *Century* is to bring to light, before they appear in any other country, the long-hidden memoirs of the most famous of French diplomatists. This first article will be preceded by what is said to be a brilliant pen-portrait of Talleyrand, by Minister Whitelaw Reid, who has made the selections from the most interesting chapters of the first volume.

*Translated by W. A. Otis for THE INLAND ARCHITECT.

withal a very useful assistant, but somehow or other one gets tired of hearing "Annie Rooney" whistled and sung, sung and whistled, in key and out of key, in short snatches, hour after hour, week in and week out, only varied by an occasional yell of "dry up over there" and allusions to little brown nuts or to long-tailed little animals.

Then there are the draftsmen collectively. A jolly set of mighty good fellows they are, who well know how to give a banquet and to entertain their guests and each other right royally. Long life to them. Will the guests join me? Here is to their health, everyone of them.

Many other speeches were made, songs were sung, music of piano and of violin made the perfumed air vibrate with sweet sounds, and at four o'clock the lights were turned out, and the fifth annual banquet of the C. A. S. C. closed a complete success.

Mistakes of Employes.*

BY CYRUS KEHR, OF CHICAGO.

WHAT I shall say will be in reference only to the mistakes of employes in this country; and the mistakes which I shall mention are not made by all the employes of this country. By way of introduction, it may be noted that employes are persons who work for others and receive pay therefor. It is to be borne in mind that our people are not all either employes or employers. Many are neither. The festive tramp, the burglar, and the swindler live without hiring or being hired. So do many small manufacturers and many tillers of the soil. So do many business people. It is also to be observed that the employes of this country are not all poor and the employers are not all rich.

In common with the rest of mankind, employes imagine that they have less advantage and more burdens than other people have. Sharing in this weakness, the employe is by nature led to feel that the man for whom he works has privileges and pleasures and freedom from vexations to a greater degree than he may ever hope to attain, while the fact may be that the employe has little responsibility and worry or hardship in comparison with what the employer must face.

Unconsciously taking this view, the employe is prepared to give ear and attention to anything in the nature of a murmuring regarding his own lot or any arraignment of the methods of his employer.

Some employes make the mistake of asking their brother man to divide his worldly goods with them while they are not willing to divide with him. Who ever knew of an advocate of equal division of property who had any property and was willing to divide it with others?

Another mistake made by employes is their inclination to cling to large cities. Thousands stay in large cities where they receive small salaries, live in poor quarters, and breathe the poisoned atmosphere. The large city has a peculiar fascination for these people, and many can not be induced to leave although they live in sections of the city in which poverty and discomfort prevail.

There are manufacturers who would like to move their establishments from Chicago to country towns, but can not do so because they could not there secure the necessary employes. Manufacturers have told me that if they should move their plants to a country town and offer to take their employes along and pay them increased wages and at the same time give them an opportunity to live more comfortably and more cheaply, they could get but a few to go. They will not leave the hum of the multitude.

Many employes make the mistake of not exerting themselves to attain better qualifications in the line of their occupation. There is a great surplus of unskilled men. Let a vacancy in almost any occupation be announced, and there will be numerous applications by men who are totally unfit for the position. Frequently employers must try a large number of men for a position requiring only moderate skill before a satisfactory person is found. I have often known of employers who were looking for days and weeks for a suitable employe, while numerous men were seeking the place but could not be taken because they lacked the necessary skill. The employe should strive to acquire such skill as will make him indispensable to his employer. A man who is thoroughly skilled in any trade or calling, need seldom be idle. Instead of making this effort to thoroughly master their occupations, many stop when they have learned barely enough to place themselves on a pay-roll, and all they do thereafter in relation to the acquiring of skill in their line of occupation is to formulate and try to enforce rules calculated to bar others from learning and entering their calling. Only the other day there came to my notice the case of a young man who has barely learned the rudiments of an occupation which affords opportunity for almost unlimited expansion in skill, and he is content with the little he has learned and has joined a union whose chief rule requires all members to hinder others from learning and entering their occupation. They lack the ambition to ascend to a higher plane and have arranged themselves in picket line for the purpose of preventing others from doing so.

Allied to the foregoing is the mistake which some employes make in not giving their support to the public schools. The schools are supported by property taxes and he who has the most property contributes most to the school funds. The poor man pays least, but it is the public school that places his son on an equal footing with the son of the rich man. The moneyless youth who is properly educated and disciplined is better equipped for life than is the deficiently-trained wealthy youth. In this case, "The fool and his money are soon parted," but the poor youth has his education and also knows the

value of what he earns and knows how to save it. The poor man makes a grievous mistake when he says or does aught against the public schools.

The employe often makes the mistake of not conceding to the employer a margin for the risks necessarily assumed by the latter in his business. The employe who receives two dollars a day knows exactly the amount of his income, but few employers have a constant income. The manufacturer, for example, may during the course of a year realize a considerable net sum, or the year's business may result in a loss. To meet the latter, he must have a capital, and to compensate for losses he must reckon for a margin of profit larger than would be required were the losses at the minimum from year to year. Many manufacturers are wrecked because they do not make proper allowance for stagnation in sales and extra losses and expenses. I know a carpenter who might be a contractor and employer of a large number of men, but he prefers to work for the definite and constant wages which his skill commands and invest the surplus of earnings and let others assume the business risks.

A mistake is also made in assuming that the people of this country are permanently divided into two classes, the exalted or rich, and the humble or poor, separated by an impassable barrier. This country is not the home of caste. The poverty stricken are comparatively few. The restless are few, but seem many because of their constant and loud talking. The many thousands who work soberly and steadily and gradually acquire comforts, if not a competency, are out of notice because they make so little tumult. Instead of being confined by caste, the poorest may become the richest; those of humble station may rise to the places of greatest honor; the rail-splitter, the tanner or the canal boy may here become the greatest among us and greater than a king.

A most serious and criminal mistake made by employes is in undertaking to control the actions of their fellows. This is a direct and dangerous attack upon the liberty which our government seeks to secure to all. The people of the thirteen colonies announced and enforced recognition of the right of self-government. They shattered one of the strongest bonds of tyranny. But, while they freed themselves from monarchy, they left human slavery undisturbed. While they established the principle that a man need not do the bidding of a king, they did not deal with the holding of one man by another as a chattel and a beast of toil and burden.

During many years the country was concerned in the effort to solve this feature of the problem of liberty. After trying a large number of the expedients and attempting to establish all manner of unsatisfactory and untenable doctrines relating to this subject, this country, by an effort that shook the world, announced, that *one man must not be allowed to compel another to work for him.*

But full liberty is to be attained step by step. After the lapse of a quarter of a century, we find that the employes of this country, they who should be foremost in their zeal to promote liberty, have made the mistake of developing a violation of liberty which, in magnitude and seriousness, rivals the slavery of our former years. Indeed, this later violation of liberty is the counterpart of human slavery. Slavery disappeared from our land when we established that, "*One man must not be allowed to compel another to work for him.*" The counterpart of this is, "*A man must be allowed to work, if he have a task.*" Could anything be more simple and self-evident? And yet this principle is frequently violated.

If your neighbor undertakes to paint or mend his house or build him a stable with his own hands, who has a right to club or stone him? Yet this has been done in the proudest of our forty-four states.

If you bargain with your neighbor to lay a wall, or build, or repair a house, who has a right to way-lay or terrorize him? The principle is the same whether your are building one or a hundred houses.

If you have bargained with a man to cut for him four cords of wood at a price that is satisfactory to you and to him, and you are engaged at the work in order to earn bread for your wife and children, who has a right to force you from your work? The principle is the same if there are four hundred cords of wood.

If you bargain with the owner to operate a machine on certain terms, who has a right to stand at the door of the shop and murder you? Is the principle any different if there are a hundred machines and a hundred men?

What right have a band of men who are dissatisfied with their employments to drive a stranger from a porch he is building to his own house, and then tear the porch down?

What right have a group of men who have left their own work to murder a peaceable old man building his own house?

Nine years ago I met upon a street in Chicago a man who was covered with blood from head to foot. He was dazed and hardly able to walk. He said he had been working on a dock and suddenly a number of men came and stoned and clubbed him; that he did not know he was doing anything wrong; that he had the chance to work and wanted to earn the money.

No sect or class of people worked more earnestly for the abolition of human slavery than did the Quakers. There are now living three Quaker sons who have suffered outrages as painful, as protracted, and as serious as any portrayed in Uncle Tom's Cabin. They were born in Ohio, are well educated, and are skillful printers. They have been at Columbus, Indianapolis, Cincinnati and elsewhere, filling responsible positions, but everywhere persecuted and threatened by the union, whom they, from principle, refuse to join. At various times they have been assaulted, seriously injured and each has now physical defects and ailments resulting from such assaults. Nor is this wrong limited to the sons. The gentle mother is in constant fear that these persecutions may end in murder.

"But," some one may say, "all this is done in effort to improve the condition of the laboring man." May one employe be allowed to

*Paper read before a semi-social gathering November 28, 1890, printed in these pages because it is the most clear, concise and practical exposition of the labor problem that has come under our observation, giving the status of the employe its true value, and as universal in its application as the golden rule.

improve his condition by clubbing and murdering another, and denying him a right as sacred as any this government undertakes to secure to him? "But," says the dissatisfied employé, "I am oppressed." That may be, but you must not take the wrong way to relieve yourself. You must not attempt to improve your own condition by wronging some other person. As you would not be made to work against your will, so do not prevent another from working if he chooses to work.

Death of Two Veteran Decorators.

WHEN white enamel paint, with a touch of gold upon the trim and white plaster walls, marked the highest idea of decorative art in residences, there were two painters in Chicago who excelled in the class of decoration then in vogue. As the use of color, both on the exterior and interior, became general, the firms of P. M. Almini and J. B. Sullivan & Bro. became known as leaders in this class of work. We are called upon to record the death of P. M. Almini and of M. J. Sullivan, the junior member of the firm of J. B. Sullivan & Bro.

PETER M. ALMINI.

Peter M. Almini died at the Virginia Hotel, Chicago, October 16 aged sixty-five years. He was born in the province of Smoland, Sweden, March 21, 1825. According to facts compiled by J. G. McCarthy, of Chicago, his boyhood was spent upon his father's farm, and his education only such as fell to the majority of farmers' sons in his immediate neighborhood. His native intelligence, coupled with the care and attention of his good mother—to whose care his younger years were assigned, his father dying while he was a mere youth—more than made up for the lack of educational opportunities afforded in his native land at that time, and made him ambitious to fit himself for the commanding position he was destined to occupy in the decorative world. Leaving home at the age of fourteen, he became apprenticed to a painter in the town of Ekesjö, with whom he spent the succeeding five years; at the close of his apprenticeship removing to Norrköping, and subsequently to Stockholm, where for six years he labored and perfected himself in his chosen calling, during this time spending two years upon the decoration of the palace of the king. From Sweden he went to Russia, but finding the conditions there ill suited to his ardent love for liberty and enlightenment, he departed for this country, landing in New York in the year 1852. Within a year Mr. Almini came to Chicago, and for two years was engaged with several firms then carrying on a painting and decorating business, and in 1855 formed a partnership with Mr. Otto Jevne. His history from that time is well known to the older architects and builders of Chicago; two disastrous fires and a consequent loss of property being borne as cheerfully as were the physical ailments of his later years, a quality that made him many steadfast friends. Not alone in his line of business, but throughout the country, he was known and respected by those who had come in contact with him, and were charmed by his genial and kindly disposition. No man stood higher in this community in his calling, or as a citizen, with all that term implies, and the history of decorative art in the West cannot be written without his name occupying a commanding position in its annals. He occupied the office of treasurer of the National Association of Painters, which of itself shows how his reputation for strict business methods and sterling integrity was broad as the country of his adoption. He was buried with Masonic honors from the preceptory of the Scottish Rite at Graceland cemetery.

MICHAEL J. SULLIVAN.

Among the most active members not alone of the Chicago Master Painters' Association, but the Builders' and Traders' Exchange, Michael J. Sullivan was numbered. Belonging to a firm that for thirty years had been noted for fidelity to contract and enterprising in business methods, his sudden death was a shock such as seldom comes to the business world. His business life had never made him selfish, his friends were as many as his acquaintances and these were numberless in every city in the country. At the last convention of the National Association of Builders, to which he was a delegate, one of the most important measures, when championed by him, met with approval and its provisions will have a significant effect upon the building interests of the future. In reviewing his life, which was so particularly an active business one, his skill and taste as a decorator of a high order must not be forgotten, for his judgment and taste have beautified the churches and public buildings as well as the palaces of the people from the Atlantic to the Pacific. It might also be here recorded that it was the business foresight of his firm that saw in the blue-glass craze of twenty years ago a road to wealth that resulted in their securing a "corner" in that then supposed valuable medicinal agent. The esteem in which Mr. Sullivan was held was manifest by the action of the Builders' and Traders' Exchange. A special meeting having been called, the following resolution presented by Mr. Prussing was adopted as the sentiment of the exchange:

With sorrow and regret we have heard of the sudden death of our friend, Michael J. Sullivan. We feel that a good man, an upright citizen, a true friend and a worthy member of the Builders' and Traders' Exchange has left us. He was kind and generous, alive to every advancement and progress, of sterling character and unquestioned integrity, and his reputation extended broadly over the land. He was liked by all he met, and made friends of all who were privileged to know him well. We feel his loss deeply and mourn with the bereaved.

The secretary was instructed to place the resolution on record, give it to the press for publication, and deliver to the family of the deceased a copy thereof suitably engrossed under seal of the exchange and countersigned by its officers, and the following were appointed as pallbearers: George Tapper, D. V. Purington, H. J. Milligan, George

C. Prussing, E. V. Johnson, E. F. Gobel, B. W. May, P. Lichtenstadt, F. C. Schoenthaler, J. G. McCarthy, W. A. Wells, A. E. Wells, M. Benner, C. W. Gindele, F. S. Wright, William Grace, E. A. Thomas, James John, A. J. Weckler, W. P. Ketcham, J. R. Wilson, E. Koch, C. L. Willoughby, Adolph Henrotin. The funeral which followed was one of the most imposing ever given to a private citizen in Chicago. Almost the entire membership of the Builders' Exchange and of the Master Painters' Association attended in a body, and solemn high mass was celebrated. The departure from the church was imposing. The honorary pallbearers from the exchange, forming a guard of honor, lined the passage to the hearse, then the priests in their robes of office issued, and the casket loaded with flowers was carried reverently between the lines. The Master Painters' Association had sent a floral piece which occupied an open barouche. It was an urn five feet in height, composed of ivy leaves, around which was twined a climbing rose vine. This rested upon a base of white immortelles, and upon which also rested a painter's pallet with the colors and brushes in different flowers. Above the flowers with which the urn overflowed rested a dove, the entire conception being one of the most artistic and appropriate displays of the painter's and florist's art imaginable. Yet, with the immense crowd of mourners, the solemn requiem of the choir, the mass solemnized by the priests, the flowers and the attending delegations, there was nothing in the least ostentatious, for to the observer it only said, *here is a man who has done something for his kind, being laid to rest, and in these things his neighbors seek to find some expression for their great grief.* The sable drapings that have for a month darkened the windows of the Painters' Exchange may be removed, but the name of Michael J. Sullivan will live in the hearts of the many who called him friend.

The Competition Code of Austrian Architects.

ACCORDING to the competition code recently adopted by the Austrian Association of Architects and Engineers, all architectural competitions are to be by public invitation and to embrace the following conditions:

1. *The owner, his rights and obligations.*—The public invitation to compete should give the name of the owner or promoter of the competition, to whom is conceded the right to a free choice of the design which may please him best. He may acquire the right to use the premiated design and of any others which he may be able to purchase from their authors, on condition that the preparation of the working drawings and the supervision of the building shall be directed by the author of the design adopted, or by some other party with the consent of the said author previously obtained. His compensation for drawings and supervision shall be regulated by the schedule of commissions adopted by this association (of Austrian architects and engineers). The owner is to defray all the expenses of the competition, and to pay all premiums offered within thirty days after the close of the competition. This agreement by the owner should be explicitly set forth in the first announcement of the competition.

2. *Judges.*—In the first announcement should also appear the names of the experts selected by the owner to direct the competition and to act as judges.

3. *Jury, how composed and how paid.*—The number of jurors should be odd, not even, never less than three, and at least two-thirds of the jurors must be experts in architecture and construction (i. e. either architects or engineers), while all the rest must be *connoisseurs*, by which term is indicated those who while neither professional architects nor engineers are yet qualified by education, experience and culture to make a just selection from the designs to be submitted to them. International competitions require the presence of foreign experts on the jury. The remuneration of judges and jury to be as set forth by the official schedule of this association.

4. *Duties and rights of the jury.*—The jury will have the absolute right to award premiums, and the sole right to open the sealed envelopes containing the addresses of the successful competitors. They must formulate the programme of the competition, must honorably refrain from all participation in the competition, direct or indirect, and must act impartially and without favor or prejudice in any respect. They should also prepare

(a) Full minutes of their proceedings as a jury, including an account of all important differences of opinion expressed at their sessions.

(b) An itemized analysis of the various designs, which, by conforming with the conditions of the competition, are entitled to consideration on their merits, setting forth the advantages and disadvantages of each.

(c) A report upon the various plans, comparing their relative merits and demerits, and announcing the awards made by the jury. They should further state whether they recommend the execution of any of the designs without modification, and, if not, whether they favor the selection of any design for remodeling or advise a new competition. The minutes, the analysis, and the report are each to be signed by all the judges.

The following duties will also devolve upon the judges:

(d) To transmit to the successful competitors proper certificates to enable them to receive the premiums awarded.

(e) To publish in the technical press their itemized analysis and their final report, in full or in part, and to announce the result of the competition through the daily journals of the widest circulation.

(f) To arrange for a public exhibition of all the designs received, including also the programme of the competition, the minutes of the jury, and their itemized analysis and final report, to all which equal publicity shall be given.

5. *Programme.*—The programme must give the requirements and preferences of the owner and such local data as the judges may select. The utmost care must be taken to distinguish between requirements to be considered as *desirable* only and those which are *indispensable*.

6. *Drawings.*—In general only the simplest outline drawings should be called for (sketches), to be as few as may answer clearly to indicate the solution proposed for the problem. The announcement of the competition should prescribe the number and character of drawings wanted and to what scale (usually 1-200 for single buildings; 1-400 for groups).

7. *Estimate of cost.*—Where the cost is not a ruling consideration no estimate should be required in a competition. If otherwise, an approximate estimate should be called for and full directions given as to its mode and extent. In such cases the cost will be one of the considerations to be regarded by the jury. If, further, the limit of cost is obligatory, this question will have precedence over all others with the jury, and the programme must require each design to be accompanied with an itemized estimate of quantities and prices capable of ready verification.

8. *Specification.*—The announcement of the competition must require with each design a descriptive specification justifying the solution of the problem shown, giving any scientific demonstration necessary, and designating the materials and methods of execution intended.

9. *Motto.*—Each design to bear a motto or other means of identification, which shall also appear on the face of a sealed envelope containing the name and address of the author. The face of the envelope to give also an address for the return of non-premiated designs without opening the envelope.

10. *Limit of time.*—The announcement should designate the place and time for the delivery of the competing designs, and the mode of acknowledging their receipt. Designs arriving subsequently will not be considered unless it is shown that the delay was from no fault on the part of the sender.

Association Notes.

ILLINOIS CHAPTER AMERICAN INSTITUTE OF ARCHITECTS.

The annual meeting of the Illinois Chapter of the American Institute of Architects was held at the association rooms November 12, President John Addison in the chair. About twenty members were present.

The resolution passed some months ago, suggesting the appointment of a committee to call upon the Columbian Exposition directory regarding a competition scheme for the world's fair buildings, was brought up and discussed.

Mr. Adler in abstract said that as the directors had not asked the opinion of the Chapter regarding the proper method for securing designs, it would be in extremely bad taste for the Chapter to solicit recognition. The matter upon this was dropped.

The reports of the year were presented, that of the treasurer showing a large surplus in that official's hands.

The following officers were elected for the ensuing year: President, S. V. Shipman; first vice-president, H. B. Hill; second vice-president, W. A. Otis; secretary, George Beaumont; treasurer, D. Adler.

The report of the manager of the exhibit of building materials showed a profit up to date.

CHICAGO ARCHITECTURAL SKETCH CLUB.

There have been several business meetings of the club since the annual meeting, at the last (on December 15) the partial completion of the syllabus for the year being announced. Although the dates have not been definitely fixed the exercises are arranged at present as follows:

SYLLABUS.

December 22.—W. A. Morse, a lantern exhibit.
January 12.—Club entertainment.
January 26.—William Kleinpell, paper on Dormers.
February 9.—W. Schlessinger, lantern exhibit of views of and about the castles of King Louis of Bavaria.
February 23.—W. H. Perkins, a paper on System.
March 9.—E. H. Hoeffner, paper on Fireproofing.
March 9.—Club entertainment.
March 23.—W. B. Mundie, Exterior and Interior Design.
April 6.—George Beaumont, Architectural Aspirations.
April 20.—Fritz Wagner, The Practical and Artistic Draftsman.
May 4.—Arthur Dawson, Sketches.
May 18.—R. C. McLean, What I Know About Draftsmen.
June 15.—Ernest Albert, Scenic Art.
June 29.—J. E. Youngberg, Architects up to Date.
August 10.—Club excursion and picnic.
September 7.—Club entertainment and social.
September 21.—C. A. Kessell, Character Studies.
October 5.—W. A. Morse, lantern exhibit.
October 19.—A. B. Pond, "One on Browning."
November 2.—Annual meeting.
November 16.—Annual banquet.

COMPETITIONS.

January 26.—Design for upright piano.
March 9.—Water color from photograph.
April 20.—Bridge and tollgate.
June 1.—Design to a given outline.
September 7.—Design and artistic rendering from the following quotation (to be selected).
November 2.—Menu card.

Through the year it is proposed to entertain the members with frequent informal meetings and socials, and in general the year promises to be a notable one with the club.

ST. LOUIS ARCHITECTURAL LEAGUE.

The annual meeting of the St. Louis Architectural League was held November 8 at the St. Louis Museum of Fine Arts. The following officers were elected for the ensuing year:

President, J. P. Annan; vice-president, G. M. Siemens; secretary, W. A. Hirsch; treasurer, J. L. Wees; executive committee, P. Bardell, C. R. Greene.

The club held an exhibit and social meeting on November 22 when they had the pleasure of entertaining among their guests, Hon. James McGrath, Professor Ives, Professor Brinkhurst, Dr. Green, Architects Furber and Ramsey, Mr. Holmes Smith and Mr. Stoddard, who inspected the excellent exhibit of drawings, among which were conspicuous the works of the well-known draftsmen, Harvey Ellis, Oscar Enders, Oliver C. Smith, Gustave Lendholdt, and some valuable contributions from several architects in this city and Eckel & Mann, of St. Joseph, Missouri. After inspecting the exhibit, in response to the calls of Vice President Siemens, who occupied the chair, the remainder of the evening was spent in listening to clever, instructive and witty speeches. Draftsman G. G. Will responded in behalf of the club, and after pleading the draftsman's cause in an able, though somewhat pathetic manner, to the edification and amusement of the company, introduced what appeared to be the most highly appreciated feature of the evening, namely, the refreshments provided for the occasion, of which all partook in a hearty manner, enjoying themselves thoroughly and going home happy.

CHICAGO CARPENTERS' AND BUILDERS' ASSOCIATION.

The regular meeting of the association, held December 11, was well attended, the special attraction being the opening of new quarters—and incidentally a tool chest and a keg of nails. This was done successfully, and the president was toasted by the members as heartily as he was "roasted" by some partisan newspapers during the strike.

The membership of the association has steadily increased, and through the capable management of the president and Secretary Berry the association was never in so flourishing a condition as at present and the members so much a unit in all questions of policy.

The principal business was a short discussion of a request received from the carpenters' union for the appointment of a committee to meet its Committee on Arbitration. A resolution was discussed and

passed ordering the appointment of a committee of five, with instructions to meet the committee with power to decide upon hours and wages, and further, to present the association's platform, which is identical with that of the National Association of Builders, with the statement that an indorsement of this document is necessary in any negotiations, and none be entered into or discussed that in any way conflicted with it.

The president appointed as such committee, W. F. Behel, J. L. Deitz, S. H. Dempsey, W. Irving Clark, Francois Blair. It was then voted as the sense of the association that eight hours should constitute a day's work, and 35 cents per hour be paid for first-class carpenters.

Our Illustrations.

The Ricardi Apartment House, Chicago. H. B. Wheelock, architect.

Exchange Building, Boston, Massachusetts. Peabody & Stearns, architects.

Gate Lodge, Fairmount Cemetery, Denver, Colorado. H. T. E. Wendell, architect.

Mortuary Chapel, Fairmount Cemetery, Denver, Colorado. H. T. E. Wendell, architect.

Mothers' Jewels' Home, York, Nebraska. Crapsey & Brown, architects, Cincinnati, Ohio.

Residence of William B. Knight, Esq., Kansas City, Missouri. Adrience Van Brunt, architect.

Residence of W. A. Ingraham, Esq., Bristol, Connecticut. C. H. Stilson, architect, New Haven, Connecticut.

PHOTOGRAPHURE PLATES.

(Issued only to subscribers for the Photographure edition.)

Residence of Mr. J. F. Cox, Camden, New Jersey. Hazelhurst & Huckel, architects, Philadelphia.

New Power House and Office Building, for the People's Railway Company, St. Louis, Missouri. J. H. McNamara, architect.

Summer Residence of Mr. James Van Inwagen, Lake Geneva, Wisconsin. E. Hill Turnock, architect, Chicago. Two floor plans are shown.

Residence of Mr. A. W. Chamberlin, Denver, Colorado. Kidder & Humphreys, architects. Four full-page plates are given showing the following views: Exterior with floor plan, reception room, dining room, billiard room. All interior woodwork and finish included in architect's drawings. Cost of house \$35,000.

Synopsis of Building News.

Chicago, Ill.—Architect W. D. Cowles: For E. D. Murray, a two-story flat building, 42 by 60 feet, to cost \$12,000, on St. Lawrence avenue near Seventy-first street; to be of Peerless pressed brick and stone front.

Architect Clinton J. Warren: For N. K. Fairbank, a ten-story hotel; size 73 by 171 feet; to cost about \$500,000; to be erected on the northwest corner of Twenty-first street and Michigan avenue. The first two stories will be of stone and above of buff terra cotta pressed brick with terra cotta cornice. The interior will be finished in hard woods and have marble wainscoting, tiled and mosaic floors, steam heat, electric light, three elevators and the best of modern improvements. It will be of steel construction and thoroughly fireproof.

Architect O. W. Marble: For J. W. Casket, making plans for three three-story and basement residences, to be erected on Lake avenue near Oakland boulevard. They will have stone fronts, hardwood interior finish, stained, plate and beveled glass, furnaces, etc., and to cost \$35,000. For C. H. Brown he is making plans for a two-story basement and attic frame residence; to have stone basement, hardwood finish, stained, plate and beveled glass, furnace, and cost \$16,000; to be erected at Decatur, Illinois.

Architect Robert Rae: For Harry Babcock, at Hinsdale, making plans for a two-story frame residence; to have furnace and all the improvements, and cost \$5,000. He is making plans for an Episcopal church to be erected at Englewood; it will have a stone front and part stone sides, hardwood finish, steam heat, electric light, handsome stained glass windows, slate roof, square tower with belfry and clock, pews to accommodate a congregation of five hundred; it will be 50 by 125 feet in size and cost \$50,000. He is also drawing plans for a seven-story apartment building 110 feet front by 50 feet deep, to be built of stone for basement and first story and the balance of pressed brick and terra cotta, with large bays of ornamental terra cotta and copper. He will put in steam heat, electric light, dumbwaiters, speaking tubes, two elevators, marble and tile work, hardwood finish, all the sanitary and modern improvements. It will be erected on Stony Island boulevard near Sixtieth street, for a syndicate. The cost will be upward of \$150,000.

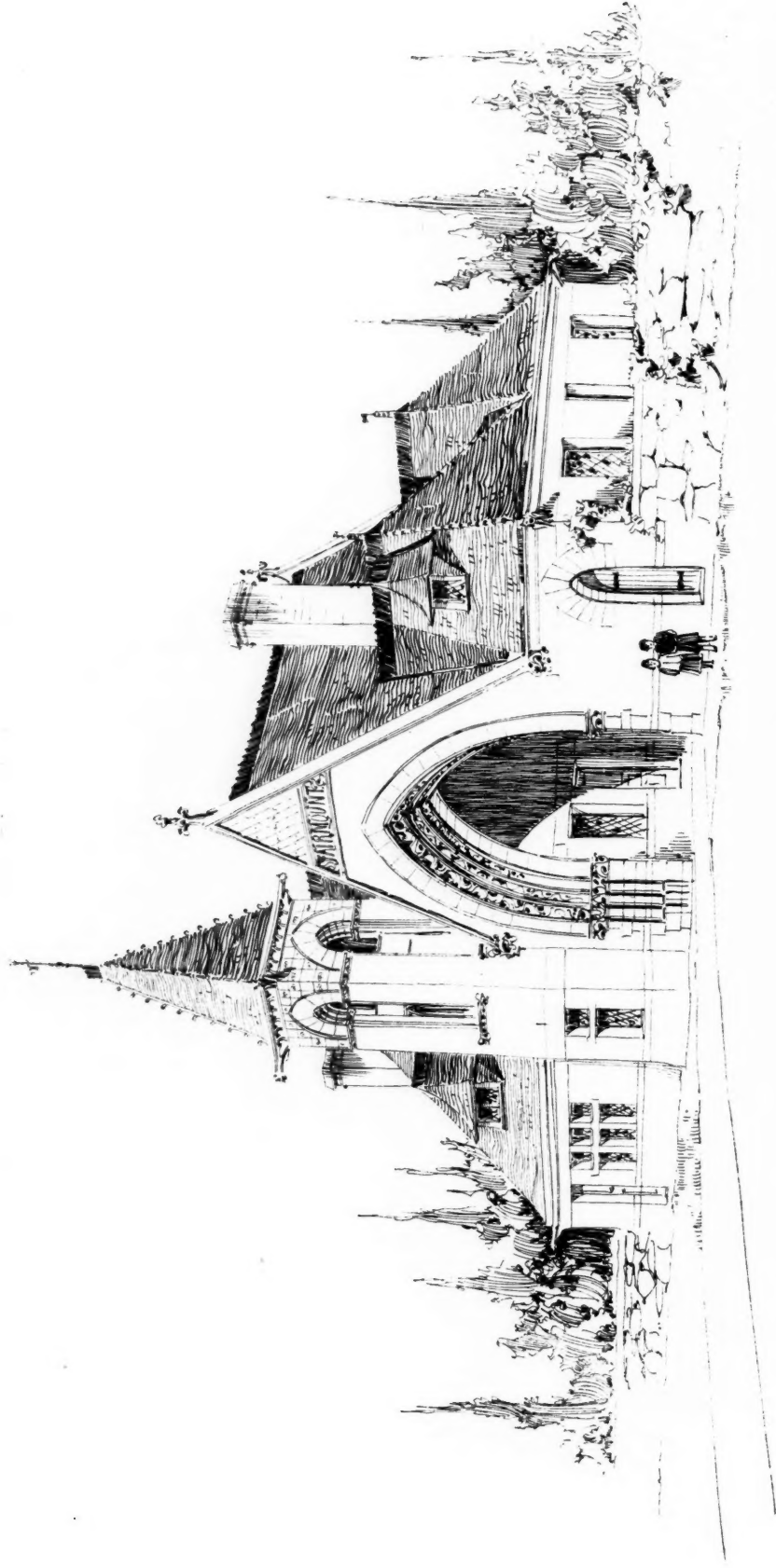
Architect D. A. Lapointe: For E. J. Lewis, making plans for a four-story apartment building, 120 by 75 feet; to cost \$50,000; to be built on Warren avenue near Homan; it will have a rockfaced stone front and entrance, with granite pillars and marble steps, and wainscoting; he will put in hardwood interior, stained, plate and beveled glass, the sanitary and modern improvements. He is also making plans for a two-story flat building for Joseph C. Fetter, to be erected corner of Monroe street and Spaulding avenue; it will have a front of Peerless pressed brick and stone; will put in furnaces and all the improvements; the cost will be about \$20,000. For James Arnold he is planning a three-story flat building of 100 feet front; to be built on the northeast corner of Artesian avenue and Lake street; to have pressed brick and stone front, and cost \$16,000. For John W. Garvey, on Polk street, near Centre avenue, a three-story building; to cost \$12,000. For M. W. Schmidt, at 1545 Monroe street, a three-story flat building; to cost \$7,000.

Architect Julius Speyer: For Mrs. Mary E. Willey, five two-story dwellings; to be of pressed brick and brown stone and cost \$25,000; to be built on Boulevard Place, near Vincennes avenue. For A. B. Lewis, at Montrose, a two-story store and hall building; to cost \$10,000.

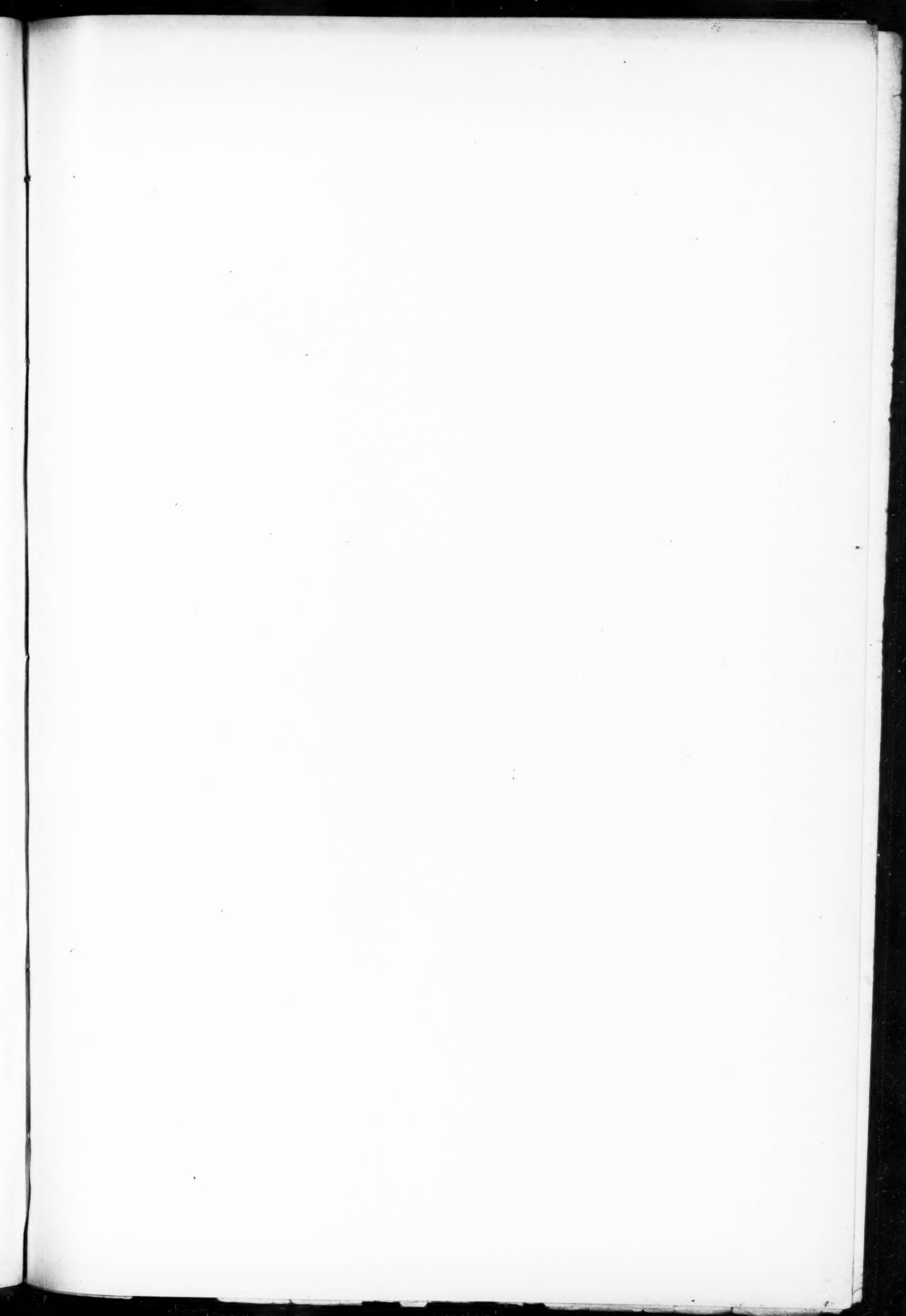
Architects Adler & Sullivan: For J. E. Dooley, at Salt Lake City, Utah, a six-story office building, 95 by 165 feet, of steel construction, to cost about \$300,000. For M. Wainwright, at St. Louis, Mo., a nine-story office building, 114 by 127, of fireproof construction; to cost about \$300,000. For a stock company at Salt Lake City, the "Ontario Hotel," the contract for the foundations has just been let. They are also making plans for an opera house to be erected at Seattle, for a stock company.

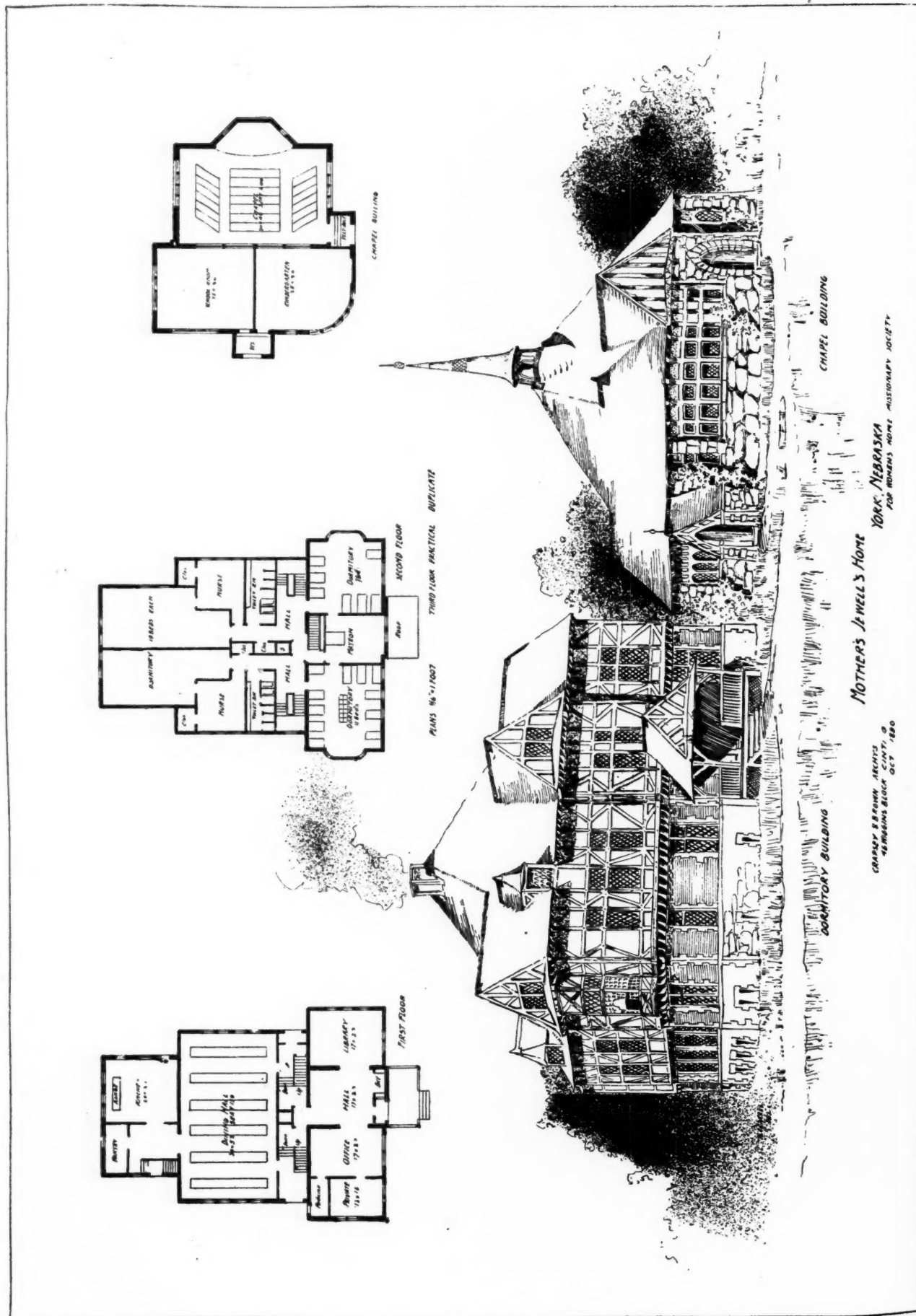
Architects Frederick Baumann and J. K. Cady: For Richard Peck, on the northeast corner of Goethe street and Dearborn avenue, a four-story apartment building, 50 by 130 feet; to cost \$75,000. It will have a front of Roman pressed brick and brown stone, steam heat, electric light, and all the improvements.

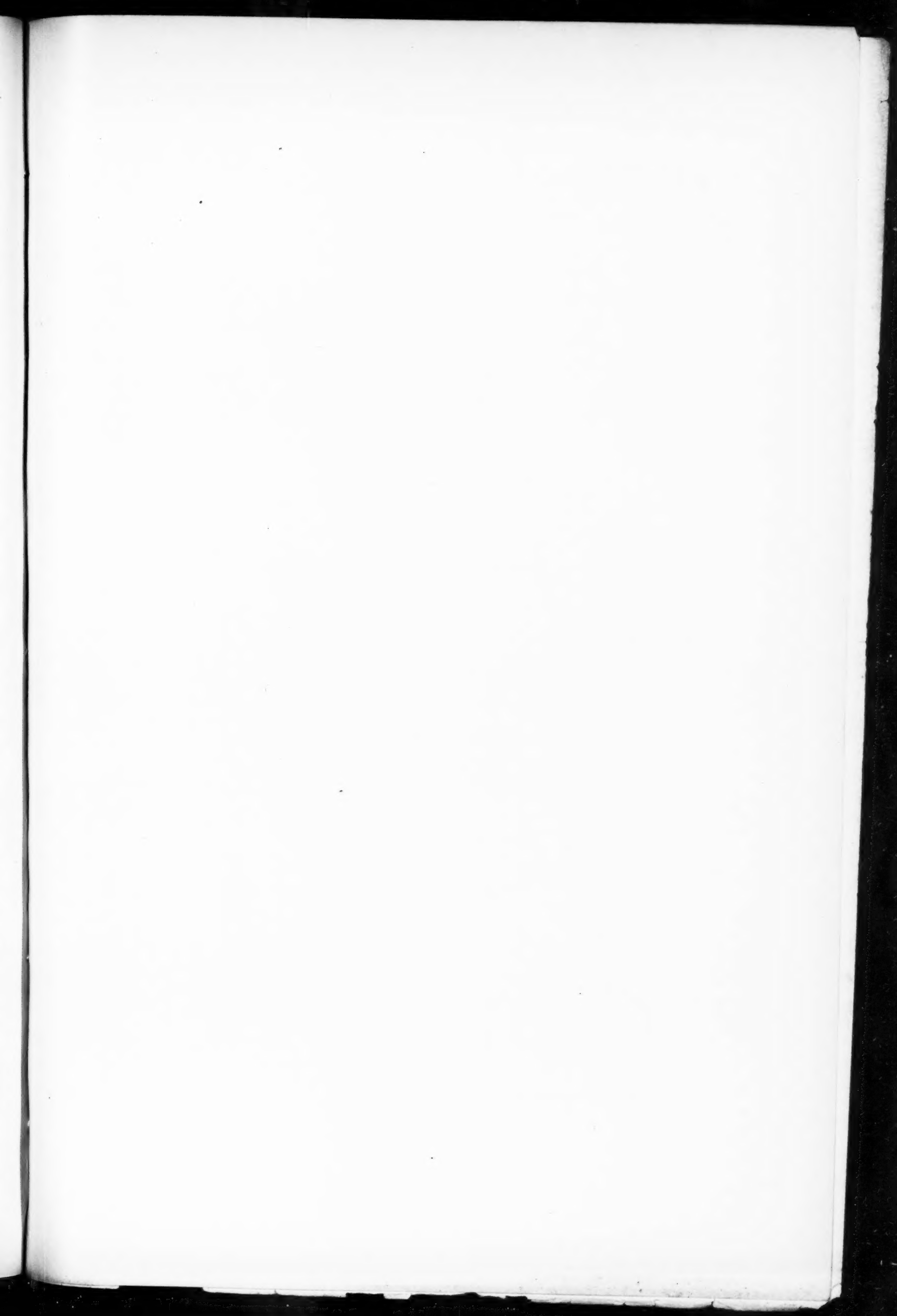
Architects Flanders & Zimmermann: For A. McLeish, at Glencoe, a handsome two-story residence, size 50 by 100 feet, first story of stone and above of frame; to have hardwood finish, steam heat, gas engine, and all the sanitary improvements; the cost will be \$25,000. For B. Newhall, at Glencoe, a two-story frame residence, 40 by 70, to have stone basement, steam heat, the sanitary and

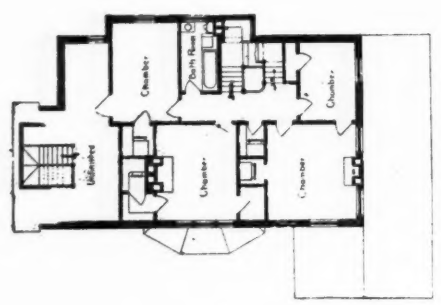


GATE LODGE: FAIRMOUNT CEMETERY: H. T. WENDELL ARCHT.
DENVER: COLO.

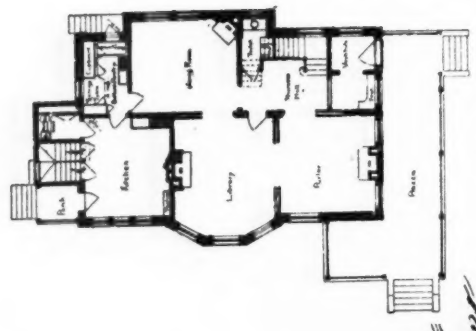




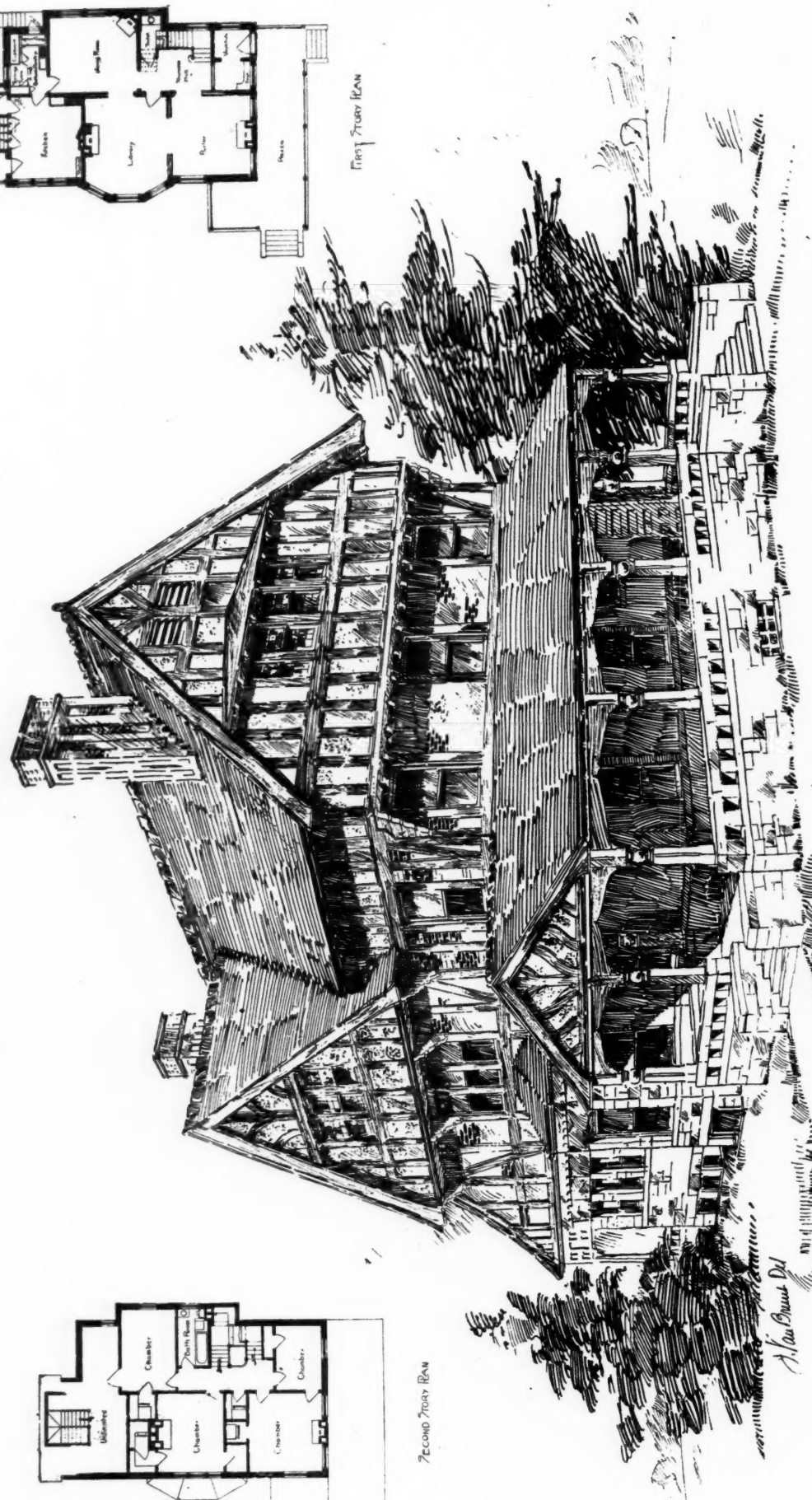




SECOND STORY PLAN



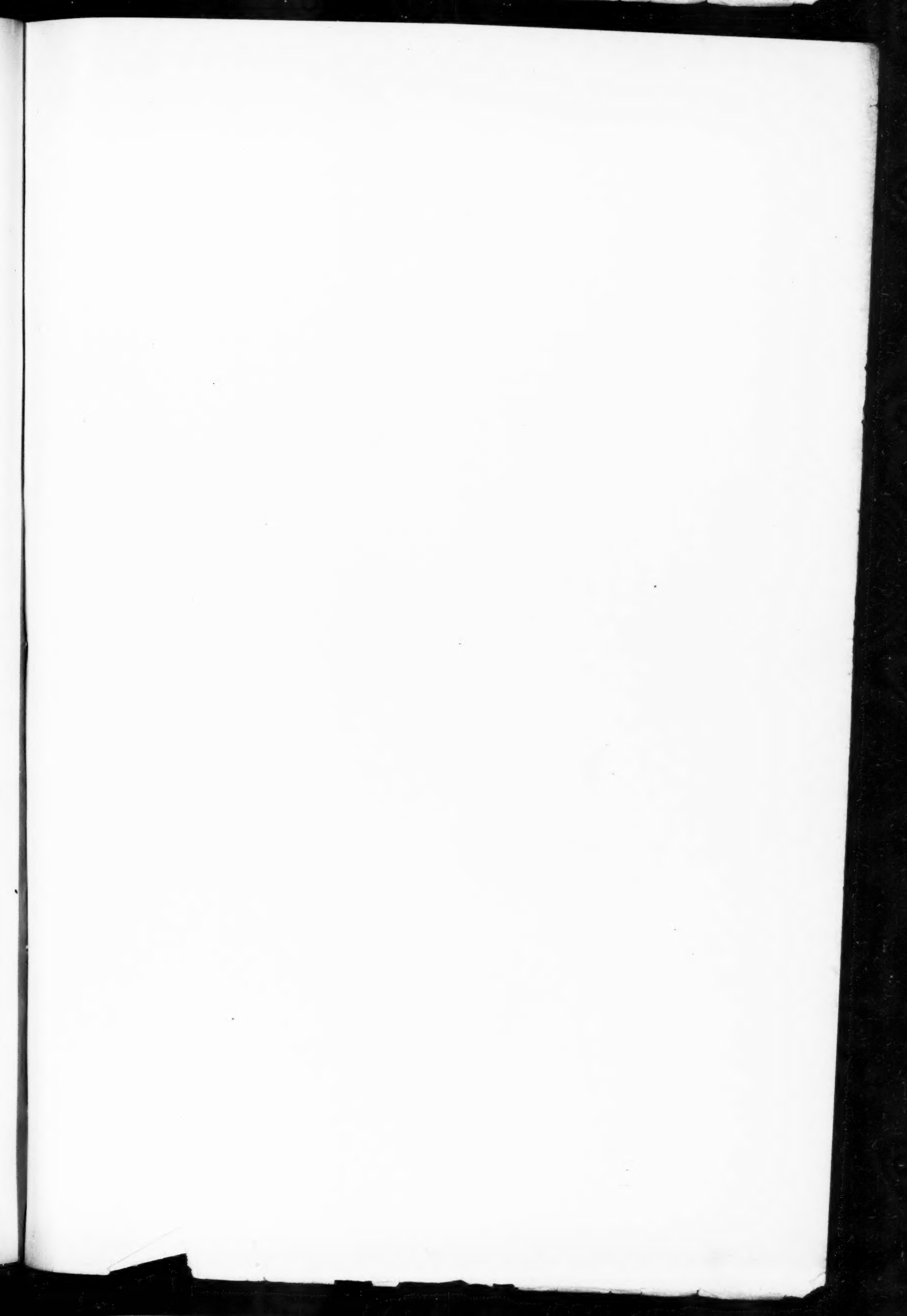
FIRST STORY PLAN



A. Van Brunt Del.

Perspective Sketch

Residence for
Wm. D. Knight Esq.
Kansas City Mo.
A. Van Brunt Archt.







INLAND ARCHITECT PRESS.

STATUE TO SURMOUNT THE INDIANA SOLDIERS' AND SAILORS' MONUMENT.

MODELED BY GEORGE P. BREWSTER, CLEVELAND, OHIO.

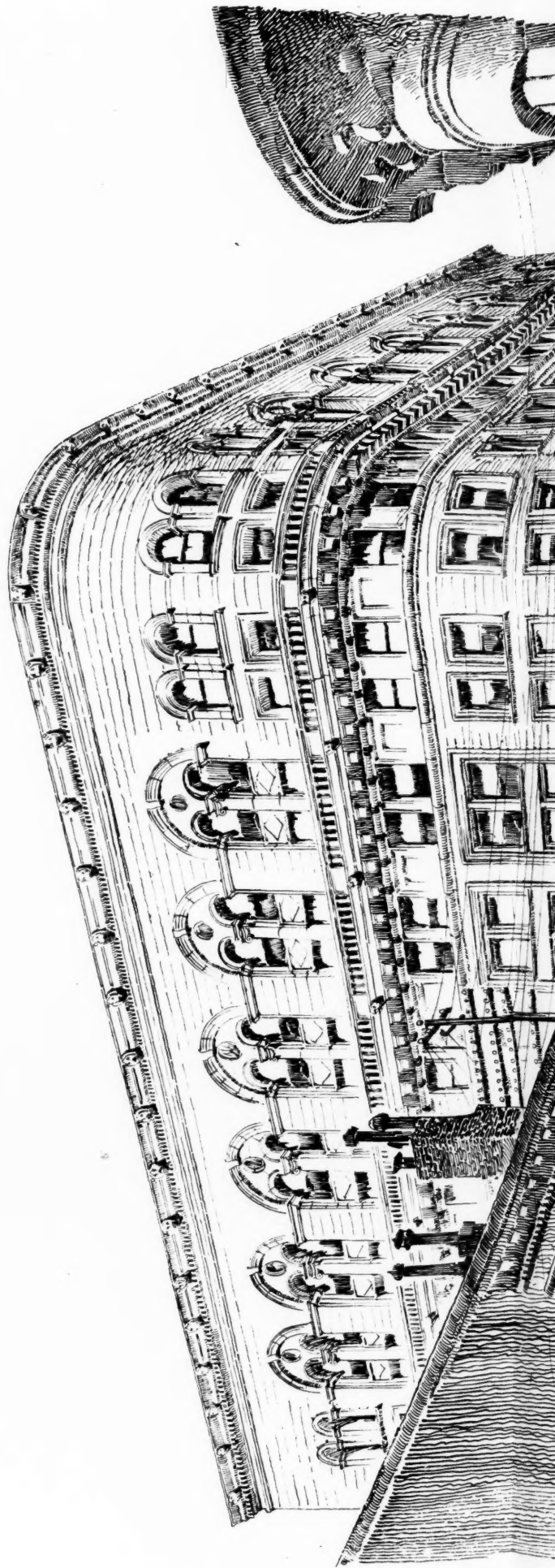
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EDMUND 1890

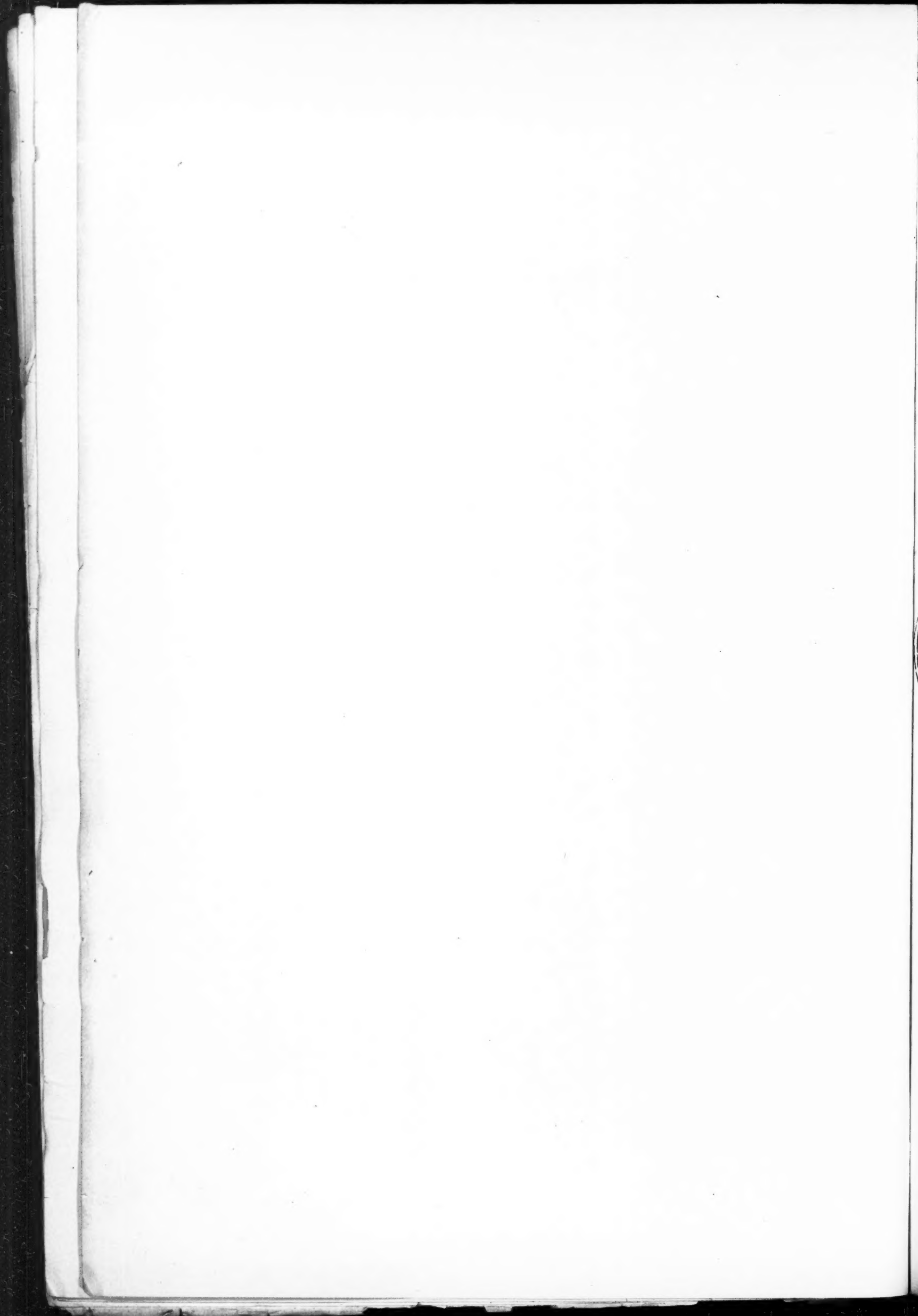
There are seven pillars of gothic mold,
In (Hillon's) dungeon, deep and old;

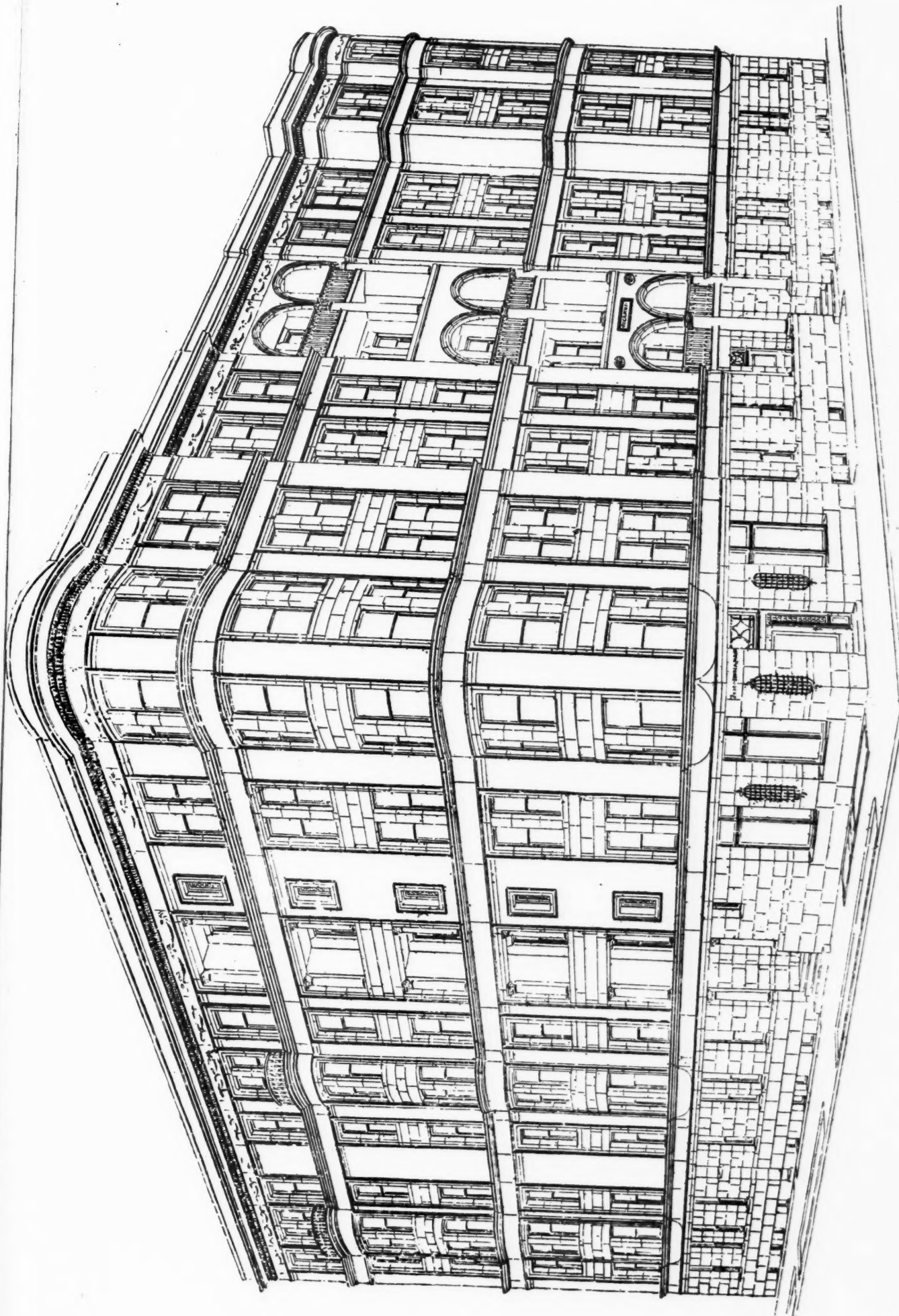
· EXCHANGE · BUILDING ·
· BOSTON · MASS ·
· PEA BODY AND · STEARNS · ARCHTS ·





J. A. S. M. W. E. I. N. F. O. R. T. H. I. N. D. E. L. F. O. R. I. N. L. A. N. D. A. R. C. H. I. T.





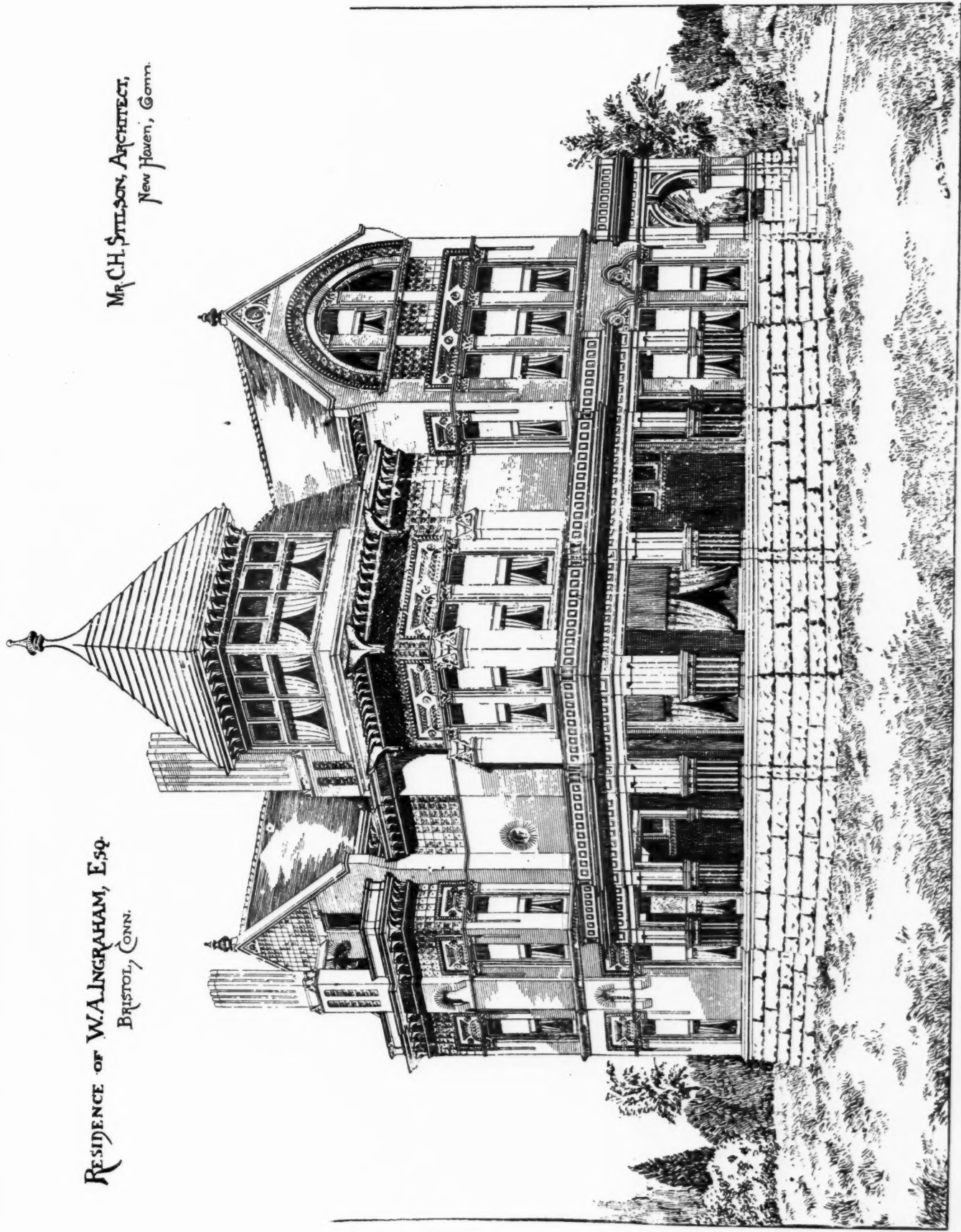
THE RICARDI APARTMENT HOUSE, CHICAGO.

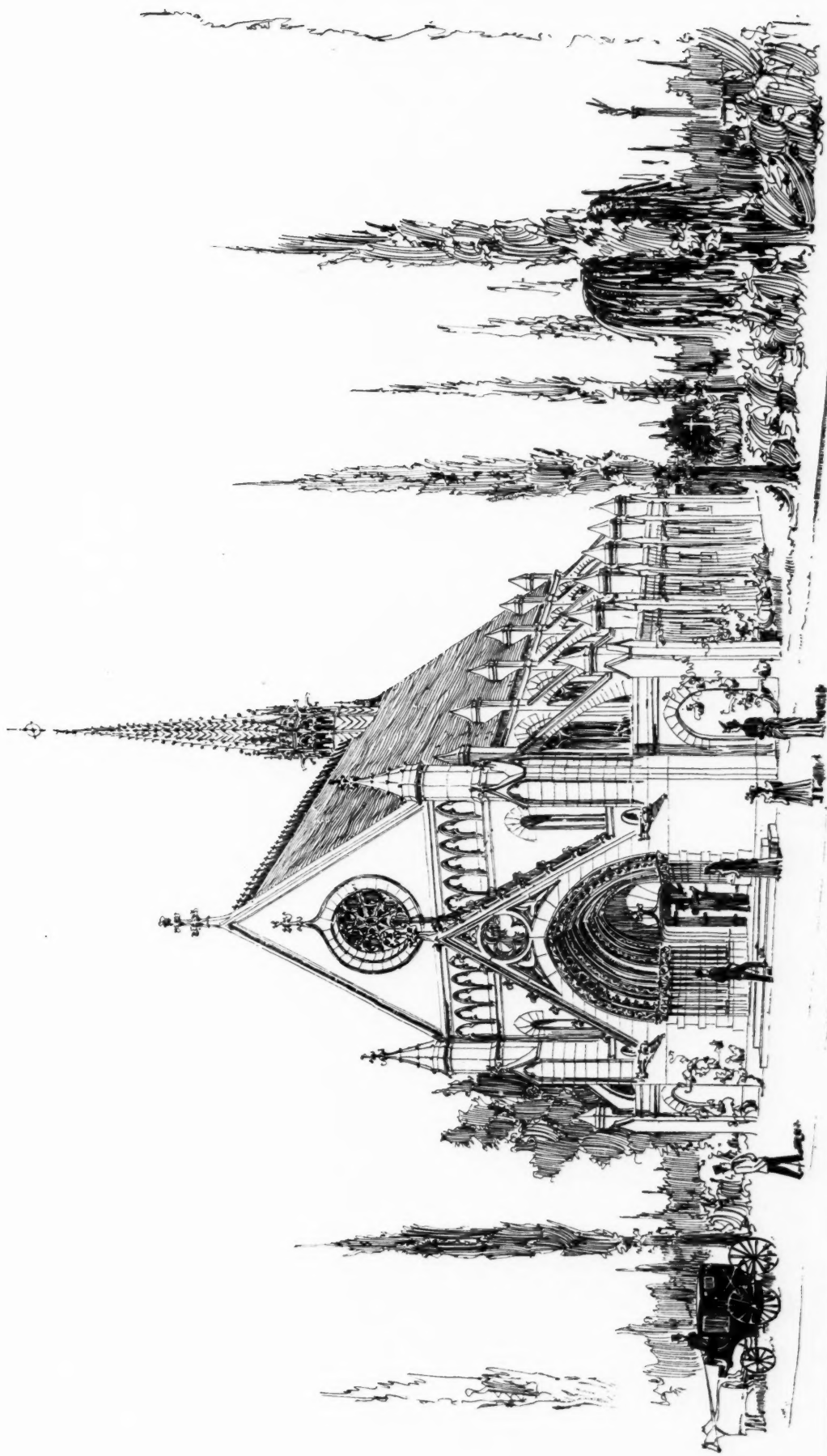
H. B. WHELOCK, ARCHITECT.

Elliott Lynch, Dec., '90

RESIDENCE OF W. ALINGRAHAM, ESQ.
BRISTOL, CONN.

MR CH. STILSON, ARCHITECT,
NEW HAVEN, CONN.





MORTUARY CHAPEL FAIRMOUNT CEMETERY. H. F. WENDELL ARCHT.