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FLOOR plans are so necessary to the full understanding of designs that we shall hereafter, as far as possible, publish with each photogravure plate, the principal floor plan. This we have done with two of the photogravure plates in this number.

WHEN a distinguished sentimentalist declared that America was not fit to live in because it had no ruins, we only laughed at him. We were busy with achievement; for us was the future with its manifest destiny that our orators foretold; we were to hasten the fulfillment of that destiny by all manner of worthy activity. We were right in this. We had not the ruins and dared not lose opportunities of today and of tomorrow, while we lamented the brevity of our past. But the sentimentalist, too, was right in much. The nation, on its birthday anniversary, takes account of something more than stocks and acres and factories; for it is neither an agricultural community nor an industrial society, but a solidarity of souls; its inventory is of men and women, and its largest attainment is in the fullness of the manhood of its men and the womanliness of its women. And the manhood and womanhood of today is inseparably bound up with the past. To the individual an established reputation for unblemished character and an honorable pride in the achievement of his past are a safeguard from pitfalls and an inspiration to sustained endeavor. So in the nation the consciousness of its historic national life, the honorable pride in its past character and achievement, the heritage of the lives of its great and typical citizens, and of their doing and daring for the nation's sake; these are to a nation a guaranty of the future, and this appreciation of its past becomes in the minds of its citizens a ground of union and a bond of sympathy that ward off civil strife and keep alive in sluggish times the spirit of the people. And, so in its ruins, a nation may have in its midst a perpetual reminder of its past greatness. It is a great step forward in the attainment and consolidation of national unity and spirit when a people first begins to set a high value on its past. And thus every crisis in the national life, successfully surmounted, becomes a guaranty of the future, and its influence on patriotism atones in a measure for the cost of victory in blood and treasure. With this self-conscious national life, this national self-respect, comes the nearer likelihood of the happy, spontaneous growth of national letters and art. For this reason we welcome the evidences that are given of the existence of an American national spirit in the efforts, on all sides seen, to erect monuments commemorative of the nation's past on spots that shall be, nay, are historic in our national life; monuments that shall live in the thought and vitalize the imaginations of generations to come.

IT is a pity that business shrewdness does not guarantee good taste; that a lofty sentiment does not dictate its fit and lofty expression; that patriotism and the desire to commemorate the past so often take on petty and pusillanimous and ludicrous forms. Here, for instance, is a great state, famous for its copper, its iron, its lumber, its salt, famous indeed for the high average intelligence of its citizens and the wide dissemination of educational advantages. The legislature of this state falls in line with a patriotic movement, and decides to erect on the field of a memorable battle of the civil war monuments in honor of the victory of the nation over rebellion, in honor of its regiments that participated in the battle, and of its dead who died for the unity and integrity of

the nation. Here is a worthy cause. The legislature appropriates a sum of money which is then divided as follows: \$5,400 for a cavalry monument, \$1,350 each for seven infantry monuments and \$1,000 for a battery monument. Then an invitation is sent out to designers to send in designs for nine monuments to be erected in granite and bronze. We pardon the ineffective effort when necessity has dictated the uses and dimensions of a structure and limited funds compel to an inadequate and inartistic treatment; utility must be served, and when we cannot make utility beautiful we can content ourselves with honest plainness. But a structure or a monument that has its origin wholly in sentiment, which is neither necessary nor useful except as it subserves sentiment, what excuse is there for its existence in petty or crude or contemptible or fantastic guise? It is the offspring of an emotion, and by virtue of that relationship should conform to its origin and should be massive, or airy, or dignified, or graceful; but it should neither be commonplace nor ignoble.

ART has no room for ignoble or commonplace emotions, and the world has no room for their embodied offspring, Wordsworth to the contrary notwithstanding. The poetry of the commonplace had best be left unsung. We need not fall into the error of mistaking size for art, but there is size for this purpose and a size for that. And a monument in an open field, on a rocky hillside or the skirt of a woodland is not to be treated with the minuteness of detail and delicacy of conception that are called for in interior work, and that in suitable climates might be called for in the public square of a city. A battlefield monument, we take it, should have bold, strong, clean-cut detail, on a scale adapted to its position, and the monument should itself be massive, and the whole of perfect workmanship. In this competition a sum scarcely adequate for a single creditable monument is so divided up that the result will be likely to be a collection of something worse than blocks. For committees are prone to want the soldier with his rifle and the cavalryman on his horse for a sum that will barely suffice for a pedestal. And no doubt blocks are to be preferred to the kind of thing that such a demand produces. Of course, the purpose of the division of the appropriation is to place a monument where each regiment engaged in battle. But we cannot but think that it is a great mistake, and one which will hardly redound to the good judgment of the committee or to the credit of the state.

BUILDING accidents are alarmingly frequent, and seem to keep even pace with the increase in building throughout the country. Resulting usually from gross carelessness, ignorance, stupidity or other preventible causes, and avoidable by simple and well-known precautions, they recur year after year with disgraceful regularity; and as no remedy has yet been proposed, but a multiplication of building laws and building inspectors, we cannot hope for any speedy improvement. For if there be one thing plainer than another in this country of ring political misrule it is this, that inspection does not protect. Were it possible to frame an approximately complete and perfect building ordinance, which would not prove by its multitudinous precautions, requirements and probabilities more of a bane than a blessing, and to preserve it from being amended and inverted at each successive meeting of the municipal assembly; and then, possible to select about a tenth of the population for building inspectors and keep several of them at each new building all the time till it was done and occupied, there would still be some contractors and some workmen who would contrive to scamp their jobs occasionally, though if the inspectors were all honest and capable there might not be many accidents.

BUILDING laws, if expressed in general terms, are open to evasion by the unprincipled; if minutely detailed they are apt to return in boomerang fashion upon their authors. For their enforcement inspectors are appointed, and while building accidents are constantly recurring under the very noses, as it were, of the inspectors, the American people seem firm in the belief that the way to prevent such disasters is ever to make a new law and appoint more inspectors. Could any plan be devised to secure honest and capable inspectors without fail, and to sustain and reward them in the inflexible performance of their duties,—but what intelligent American citizen does not know perfectly that such a thing is out of the question, except in occasional and isolated cases and for a very uncertain tenure of office? At the time of the celebrated Buddensiek accident in New York, two years ago, *Harper's Weekly* remarked: "The building law of New York City is worth no more than Buddensiek's mortar—it holds nothing, and the city would be better without its pretended security." One of the inspectors testified in court that he knew little about masonry and nothing about mortar, and could not tell the difference between genuine mortar and Buddensiek's mud. Another inspector had long been known to be incompetent and his chief had tried to dismiss him, but he was retained through political influence.

IN another metropolitan city there were twelve sanitary inspectors, whose special duty it was to ferret out bad plumbing and drainage. Only one of the twelve was a plumber. In the city of Brooklyn, very recently, the following paragraph appeared in a daily paper: "A clean sweep is being made in Brooklyn under the new political rule. Acting under orders * * Commissioner Murtha visited all the stations along the line of waterworks. He carried with him a blank form of resignation which every employé signed, * * * How much politics guarantees a little knowledge of hydraulic engineering, is a conundrum the citizens of Brooklyn appear to have no present ability to secure an answer to." In New York City a commissioner was appointed to direct and control the placing of telegraph, telephone and electric light wires underground. Eminently scientific and practical names were recommended for this purpose, but politics prevailed here, as everywhere, and the parties selected for this difficult and important charge were Jacob Hess, butcher; Theodore Moss, theatrical manager, and C. E. Loew, steamboat agent. Such being the style of our political appointments all over this broad land, what can be more unreasonable than to rely for safe building on city ordinances and salaried city inspectors?

THE suggestion has recently been made in several quarters, that all labor organizations should be compelled to obtain a charter under a general law, framed for that purpose; that none should be permitted to exist without a charter; and that a violation of the conditions set forth in the law should operate to revoke the charter. Such a law, if practicable, would go far toward doing away with a standing objection urged by employers against all schemes for the profit-sharing, coöperation and sliding-scale wages, namely, that the employés are irresponsible and cannot be held to a contract. If, with this, it were possible to couple a law requiring all corporations existing by public franchise, and performing an indispensable public service, to submit to arbitration before a legally authorized tribunal all disputes with their employés, we might hope to see established that voluntary permanence of the relations between such corporations and their employés which is necessary to the public welfare, and the successful conduct of industrial enterprises.

Photography in Architecture.*

PART IV.—BY FRED D. FOSS.

IT is supposed that the camera, lens, tripod and plate-holders have been purchased, and that the purchaser has become familiar with them to a certain extent; that he has carefully inspected the camera, plate-holders and lens mount, and made sure that no annoying rays of white light can enter at any point; that he has placed the sensitive dry plate in the plate-holders, secured the plate-holder slide in position, and is now ready to make the initial exposure. A few words in reference to placing the camera in position to photograph an object may be instructive. Having selected a subject which, for convenience, we will assume is architectural, select the point of view desired, and proceed to place the camera in position. This is done by first unscrewing the tripod legs and extending them to their full length. It is assumed that a tripod of the Scovill or extension pattern has been selected, as they are the most convenient. Now place the camera on the tripod head and screw it securely in place by means of the long screw, which is found in the center of the tripod head; next place the camera in a horizontal position (a small pocket spirit level will be found very useful for this purpose), and regulate the tripod legs until the ground glass of the camera is at a height suitable for the subject, or, in other words, to bring the object in a proper position on the ground glass, bearing in mind that as the picture shows on the ground glass so it will show on the negative; now focus, which is done by means of the rack and pinion on the front of the camera bed, until the object is sharply defined on the ground glass; now take particular notice of the picture, and see if it is in proper position, and if the position on the ground glass is satisfactory, cover the lens with the lens-cap and insert the plate-holder in its proper position, being very careful not to move or jar the camera in any manner, draw the slide and you are now ready to make the exposure. By exposure is meant the interval of time between the uncapping and recapping of the lens, and during which the sensitive surface of the plate in the plate-holder has been exposed to the action of the light. This action is attended with more uncertainty, and requires more judgment and experience than any other in the course of taking a negative. An exposure made at, say 2 P.M., may require an exposure of half a second, while an exposure made half an hour later may require an exposure of eight seconds. Such is the variation in the power or strength of the light. The exposure is regulated or controlled by two different causes, namely, the strength of the light and the area of aperture in the diaphragm used. These diaphragms are small plates of iron or brass, all of the same external size, but having central circular openings of different sizes. They are usually contained in a leather case, and fit in a slit in the brass mounting of the lens, and the quantity of light that passes through the opening in the diaphragm in a given time is necessarily dependent upon the area of this opening. As the effect upon the sensitive plate depends on the quantity of light falling upon it in a given time, the exposure must, therefore, be much shorter when that light is allowed to pass through a large opening than when it comes through a very small one. Consequently, to obtain upon the plate with a small opening the same effect as is produced in a given time by the larger one, the exposure with the former opening must be proportionally prolonged. After having ascertained by experience about the time of exposure required by any one opening with a given lens, the time required for any other opening is a matter of calculation, and will be shown hereafter. As most of the pictures, it is assumed, will be of architectural subjects, a well-lighted subject, taken with a diaphragm having an opening of one quarter of an inch in diameter will require an exposure of two to three seconds. Plates that have been exposed in the camera, but not yet subjected to the subsequent operations of developing the latent image nor the final one of fixing (afterward to be described), must be carefully protected against the action of ordinary sunlight, gaslight or candlelight, as those that have not. By a well-lighted architectural subject is meant a sunlit scene, and the time of exposure, say two seconds, is sufficient for a one-quarter inch diaphragm. Now, if we desire to work more quickly and use a one-half inch diaphragm, the necessary exposure would be in the inverse proportion of their squares. As the area of the one-half inch opening is four times that of the one-quarter inch, the exposure with the one-half inch opening will be one-fourth that of the latter, or, in other words, one-half a second, and *vice versa*. As a defect in the time of exposure may be remedied in the development, extreme accuracy in these calculations is not absolutely necessary; but it is the better plan to always calculate the exposure as accurately as possible; for every plate exposed there is but one exposure correct; all the others are wrong, and while a miscalculation in an exposure may be remedied to a certain extent, perfect exposure and perfect development give perfect negatives. As the exposure depends upon the strength of the light primarily, it is proper to mention in this connection that the strength of sunlight varies very much according to the season of the year,

being the greatest in midsummer and the least in midwinter; and these lights are occasionally modified in summer by being very much *reduced* by a yellow tinge in the atmosphere, and *increased* by a covering of light, fleecy clouds, and in winter it is augmented by the presence of snow on the ground. The best pictures are not produced by exposing, as many suppose, during the middle of the day; but in the morning or afternoon, when the sun's rays are more removed from the perpendicular, the most pleasing effects are secured.

(To be continued.)

Broad Art Criticism.*

BY JOHN W. ROOT, ARCHITECT.

I DESIRE to except the art of music from the following remarks: At no period of the world has art been so prolific as now. At no time has interest in matters of art been so general. And yet we lament the undoubted decadence of our day from certain great epochs when art possessed a grandeur, nobility, simplicity, and inspiration beside which our own creations seem weak and meaningless. The causes of this state of things are not far to seek. Whenever a people are inspired and dominated by a few great ideas, their art necessarily becomes great. The works of the Renaissance are greatest of all modern creations, not because of any ethical quality *per se* within them, but because all the varied and vital forces of the time, numerous as they were, flowed most strongly through a few great channels. Thus the artist, who is but the lens which receives and focalizes influences about him, was strongly moved and powerfully worked. In our own time the universality of civilization, the wide interest of our thought, the questioning attitude of our minds, all conspire together to produce an atmosphere hitherto most hostile to the production of great works of art. Except so far as demonstration is mathematical, men no longer believe profoundly; the subtler ether of pure imagination is displaced by the heavier air of demonstrated fact. I remember to have heard a gentleman with some pretense to culture, and with some fondness for art, condemn Holman Hunt's "Flight into Egypt," because, as he said, "Nobody in these days believes in such nonsense as angels."

What the outcome will be of the conditions now about us, no one man may say. There are reasons for believing that from out this ferment may come a new, richer and stronger imagination, and consequently a new and stronger art. But whether this be true or not, it must be confessed that ideas are now so rapidly shifting that few of them rest long enough to crystallize into images which the painter can transfix.

The one quality in all art which the genius of this age insists upon is accuracy. All other forms of merit must stand aside for this; any other crime may be pardoned but that of untruth. Not untruth in the large and comprehensive sense, but in the small and microscopic sense, which by undue insistence upon each small detail produces in the aggregate of all these details a result widely removed from the truth, which, in short, produces, either as to ideas or technique, a false perspective. Glance for a moment at the present status of art in several of its different branches, and everywhere you meet one all-present and chiefly insisted upon attribute—technique. A painter prepares for himself a moving platform that he may in drawing a horse follow his action with greater accuracy. He frequents the morgue that he may better paint the hue of death. The architect searches all ancient and modern times that his design may be undeniably in the style of this or that period.

France, the long time art leader of the world, has become the chief home of magnificent technique. Here what the man does is of much less consequence than how he does it. His creation may lack aim, it must not lack method. In every art true sentiment and inspiration have fled, and in their places we have thousands of works, cheap in idea, clever in execution. Nudes, which, instead of lifting the human form into diviner dignity, debase it to the level of the pavement—pictures of all sorts of peasants, in costumes devised to show good "handling"—all sorts of juggleries with nature in landscapes painted to show what you may see with your eyes half shut, or if you were astigmatic, or if you had eyes a foot wide.

The average American painter follows these traditions as a matter of course. Living in a country which he feels to be without tradition, without romance, without art, he naturally turns to those countries where a certain inspiration may be cheaply had, and where he may be assured of well-defined and invigorating emulation. In other words, he finds himself so out of sympathy with his environment that his creative powers lie dormant until by remote influences they are quickened into action, a form of life which, we must grant, is far from normal.

Architecture similarly devotes itself to this sensation making. Renaissance follows Renaissance so fast that the new birth never gets past its teething age, and dies before we know the color of its eyes or what its form and complexion would have been. In England and America this race after new sensations has been peculiarly mad. Within the memory of the youngest of us, architectural creations have twice over embodied the whole history of architectural development from Hiram to Norman Shaw. The dinner has been one long succession of dishes—soufflés and salads—ices and sweetmeats, most fascinating to the eye and to the palate, but each so unsubstantial and each so quickly removed that the appetite is both jaded and unsatisfied. In America, a new dish has been prepared for the palate thus exhausted. It may be called *râti à l'Hollenois*. Its ingredients are chosen from among those things which all previous architectural cooks have considered inedible; and sauce, it has none. In preparing the house according to this new recipe of our *cordon bleu*, you begin by making believe that you live in an age before the discovery of

* Continued from Vol. X, No. 9, page 95.

* Paper read before the Chicago Architectural Sketch Club, January 16, 1888. Revised by the author for the INLAND ARCHITECT.

stonecutter's tools; you then roll into a mélange a heap of boulders, cook very rare and serve cold.

France, escaping these forms of development, has been afflicted with one scarcely less unfortunate, for here certain types have become so inevitable that they have ceased to be vital and exist only by grace of expert medicine and dietetics.

In what I believe to be this general decadence of art, America has been the chief sufferer. If no Anglo-Saxon inheritance of "common sense" had been ours, the imperative necessities of a people forced to bread winning and to forest clearing—the high pressure upon each individual of a mass so rapidly multiplying in numbers and in wealth—would have made it inevitable that among all civilized countries ours would have been the most uncongenial home of art. As yet we have no art distinctly American. Occasionally it has so far developed among us as to reach its voting age, and frequently it has come to us from abroad seeking naturalization. But when we seek for the art which in form, color and movement shall be recognized as of the soil we seek in vain. Yet not wholly in vain. The observant student will discern in the apparent hopelessness of his search, tendencies which indicate the coming of an art in all respects our own.

To all foreign nations our lack of æsthetic instincts has hitherto been a byword and reproach; and yet, let us see if in this respect we are not fortunate because of our previous history. The intensely practical life hitherto forced upon the nation has of necessity created an atmosphere in which art could but be one of two things, boastful and meretricious, or servile and imitative. On the one hand, the artist, hampered by neither knowledge within himself nor within the community, aspires to the loftiest heights of Parnassus. He paints great historical scenes which tell anew the triumphs of his countrymen and the craven spirit of their foes; he carves statues of Columbus supporting the world; he creates new and national styles of architecture. Meanwhile, indifferent to such trivial questions as the relative lengths of human arms and legs, the laws of perspective, the essence of true style, poets sing his fame, essayists and critics point out the beauties of his work, and all his admiring fellow-countrymen speak of the great Smith, and the superiority of American art as exemplified in him.

On the other hand, the man who sought his ideas abroad was equally unfortunate. His opportunities of study were limited by the poverty of the country and by its strongly marked political prejudices. Influences received in foreign schools were not wholesomely received, because the student could not occupy a position entirely healthful and normal. His place was analogous to that of the charity scholar who is forced to the wall by the prestige of his fellows; or the commonplace student in the atelier, whose creative forces are absorbed and destroyed by the strong personality of his master. Moreover, the crudeness and inadequacy of our own history compelled too great deference to the histories and traditions of older countries, coupled at the same time with enforced ignorance of the vital meaning of those histories and traditions.

These influences affected all classes—artists and laymen. The day is just past, certainly in some parts of the country, when honestly accepted Da Vincis, Raphaels and Titians, were as common as are now the works of such miraculously prolific men as Daubigny, Corot, Rousseau.

This false condition is now changed, and American students have at least this advantage, that while they have no great national art history they certainly have no ignoble history; for all that has been done up to the present counts for nothing. They are therefore free; free in a deep and significant sense. Artists in other countries may have the advantage of a greater art momentum, but we, approaching their traditions from without, and reinforced by what is now conceded to be a great national spirit, have the advantage of clearer vision and judgment.

This leads us to call attention to several traits of the American mind—in so far as we yet recognize it as typical—which are promising for the future of art in America. The national mind is peculiarly open; it is freer from prepossessions than any other; it is fair and level, not set in certain grooves and fixed with unchangeable tendencies. To this are added quickness of receptivity almost unparalleled; readiness to receive impressions and acute sensitiveness to environment; humor broad and fanciful, vailing at times beneath its play the depth and seriousness of mind which is also typically American. The combination seems to promise that we will have much of the elemental stability and seriousness of mind of the Mother Country, modified by the lightness of fancy and imaginative vivacity of the French.

This should certainly be a national type well endowed for large successes in the domain of art. Unfortunately, any search for the typical American mind must be like the scientist's search for the typical American physiognomy; it can go no further than tendencies and temperaments. Yet, whatever be true of the American type, we must fully recognize that a great and vital and national American art is rendered possible by certain conditions alone; and these conditions can be realized only in the full recognition by each American of the thing to be accomplished and the methods of accomplishment. What then must become our attitude to art, to hasten the consummation so much to be desired?

First, let us remember that never in the history of the world was art so important to men as now. To extend and make more accessible to all men the avenues of pleasure hereby afforded, to make it not only possible but profitable that there should be added to the task of each laborer the quality which means to him and to us pleasure in his work—this means to both laborer and capitalist content and happiness. Surely never was the relation between these two classes so strained as now, and never could either class less afford to treat lightly whatever remedy seems likely to alleviate the diseased condition.

The measure of personal responsibility forced upon us by the inherent greatness of all art questions is here added to with such vastly increased force that no individual should dare shrink from his own full share in it. Until each person assume this personal responsibility he has no part in the movement toward higher art, contributing nothing toward it; nor can he call himself a true lover of art until he finds his love personal. There is too much platonic love of art. Too many men worship by proxy at the altar of Pallas.

It is certainly well in determining our own relation to the art of our time and country carefully to weigh the general sense of popular taste, estimating its drift and quality, and to lean to some extent upon the taste and judgment of expert critics; just as it is well for a man to ascertain what other people think of his sweetheart. But far beyond this is the absolute necessity that each man should cultivate and exercise tendencies and sympathies of his own. This does not mean the lowering of our art standards; to follow unthinkingly the lead of self constituted critics is to do this. When a man is to stand so absolutely upon his own feet as to ask no one to lend him support, he must beforehand know something of his own strength.

When once we become free from the unwholesome dread of critics, and at the same time recognize the largeness of the questions we assume to decide, we take care before deciding that we have sufficiently studied the question to be sure of correct judgment. By this independence of opinion is at once brought into existence an art atmosphere full of potency. While each man, thoughtful and studious though he be, may not lift against the all-powerful critic one feeble protest, fashion has full sway; and fashion is the false friend of art, killing it while promising life and support. When, on the contrary, each member of a community not only equips himself to think but does think for himself, in art as in business, the critic becomes either impotent or competent, and in either case art is vastly the gainer. Fashion, determined by the senseless dicta of self-constituted leaders, and obeyed by servile followers, destroys in art all continuity and therefore all development. Individual freedom of action, on the contrary, leads to that wholesome growth which is strong and self-sufficient, and which rapidly assumes truly national and permanent homogeneity. Fashion creates the anomaly of each man's being compelled to wear for himself a ready made art averaged to the community, in doing which no allowance is made for his various individual tendencies, which should find full expression, and in natural accommodation to which art becomes not only more diversified but more vital.

In thus exercising individual influence, and assuming individual responsibility, personal acquaintance with artists is of great value. To the artist himself no spur can be greater than to know of the actual and expressed sympathy and approval of laymen. To him it is an inspiration, and in this direct intercourse he finds himself continually brought to self-analysis and self-correction. He finds himself less likely to get into ruts; his ideas are expanded and multiplied. To the layman it becomes a source of cultivation, bringing to him phases of art which he would not otherwise recognize, and leading him to become day by day a more enthusiastic art lover and patron.

A point here which may not be of immediate or practical value to us personally, but the importance of which in itself cannot be exaggerated, is the necessity of learning to draw. It is generally confessed that a man is inevitably removed from closest contact and sympathy with an art or science who has not wrought in it with his own hands. To have held the pencil or brush sufficiently to know what it is, to have labored to produce objects about us upon paper or canvas long enough to know its difficulties, is to any man a help which the man without such experience can never know. Were he in after life never to touch pencil or brush again, the mere fact that something has been taught him of how to see *picturesquely* gives him a clearness and definiteness of vision which makes him vastly the superior in this respect of his half blind friend. It is, I believe, true that no branch of learning should be more universally taught than drawing from nature.

Assuming that in the layman there exists a predisposition to friendly criticism, and at the same time a genuine love of art, two questions present themselves. The first touches the broad definition of art itself, and the second the recognition of its presence to greater or less degree in individual works.

As to the first question the essential point is not "What is a work of art?" for upon this, as an abstract question, men are well agreed; it is rather what constitutes the measure of beauty in a work of art. All sorts of answers are given to this question. The answer most nearly true seems to be that given by Mr. Leopold Eidlitz. "The perceived magnitude of creative force contributes what is known as the beauty of any art work. Hence to the person observing a work of fine art, his appreciation of the magnitude of this creative force is his judgment of the degree of its beauty. The ultimate end of criticism is to ascertain the quantity and quality of the force thus manifested; and also what part of this force is due exclusively to its author, and what is due to the general state of progress at the time of its production." In other words, a work of art is beautiful only when it embodies in stone or pigment or in some other visible or audible medium some distinct and recognizable idea, and since in general it is true that greater force is involved in the creation of a great idea than a small one, that art work which best expresses a great idea is greater than one which expresses a small idea.

The strength of the creative force must, however, be measured by several means. As Mr. Eidlitz has said, "To illustrate correctly the physical force exercised by a man in carrying a burden, we have to consider not only its weight but also its bulk and the bulk of the man himself, for both constitute elements of load and displacement of atmospheric air; not only the distance for which the burden is to be carried, but also the inclination upon which the man travels, whether he goes up hill or down; also what are his means and methods; whether he carries his load in one load on his shoulder or on his head."

So in analyzing any work of art, in the effort to arrive at the true value of its creative force, all the circumstances attending its creation must be carefully weighed. When this has been done, then and then only are we prepared to recognize how much of himself the artist has put into his work, and how much of real beauty the work has. Any possible process different from this, which we adopt in the hope truly to estimate the inherent value of such work, is misleading, and tends to foster false ideas and bad art.

The great trouble with the various schools of art of today is just this, that nowhere do we find groups of men, scarcely even individuals, engaged in the serious endeavor to realize in outward form great ideas. On the

contrary, as has been before noted, we are daily called upon to lament the vast power recklessly wasted upon insignificant ideas; the industry of the brush and the pencil, the paralysis of the brain.

If what has been said as to the true nature of art work and its criticism be true, it follows that in all truly great work the idea expressed should be distinctly greater than the method of its expression.

I am aware that in the case of a few great men the end and the means have risen so nearly to the same level as to produce results of unrivaled splendor. But these periods in art have been few and their continuance short. Preceding them were always men striving to attain by imperfect means the realization of great ideas, and following them men content perfectly to express small ideas. Why should a painter, master of a technique which is baffled by no obstacles, content himself with the representation of things so cheap in thought as to be worthy of children and imbeciles alone. Why should architects, capable of accomplishing work worthy to live in constantly renewing beauty and grandeur, commit themselves to crudities and trivialities which they know will be contemptible to even themselves five years hence. Why? Because we uphold them in it. Because the man who assumes the great responsibility—for great responsibility it is—of spending \$5,000 for a picture, or \$50,000 for a building does not recognize the fact he is purchasing for himself and for the community either just so much of added delight and mental and moral elevation, or a contrary sum total of enervation and debasement. It is a crime for anyone to spend on an art work money which through other and lower channels would purchase happiness for many persons, without making sure that he is purchasing equivalent possibilities through higher channels.

Great technique is not to be despised. But while great ideas demand great technique, it is monstrous that great technique should be debased to small and ignoble ends.

Every work of fine art is the expression of one dominating idea. It may and generally does express others also, but each dependent idea is colored and governed by that which is supreme. Each true work of art becomes therefore homogeneous in itself—consistent throughout. Any detail which creates a discord, and thus tends to diminish the force of the central idea, makes the work to that extent less than a work of art. It is this dominance of one leading quality over others which is an absolute test of the merit of any art work, as it is the law which creates what we call "style."

In architecture it lies back of every one of the great historical types, and it is at once their cause and justification. The style thus imparted must not be understood to be, in painting, sculpture, or architecture, a thing of exterior form alone. It lies far deeper. It is the life and existence of the work.

As far as material conditions permit it to be possible, a building designed for a particular purpose should express that purpose in every part. The purpose may not be revealed by conventional means, but it must be so plainly revealed that it can be escaped by no appreciative student.

Ascertain first what are the conditions essential to the function which a house is to perform, and the force with which that function is expressed measures its value as a work of art. The architect may choose different methods for this expression, suiting his method to the general result he has in mind, but the result must be both homogeneous and typical. It thus becomes necessary in estimating the merit of a house or a picture to know not only its general intention, but also the point of view of the artist and the methods by which he has sought to express the general intention. Much of the stability, hospitality, comfort and refinement of the household may be expressed by a design of the most obvious character, whose sole reason for recognition as thus expressive lies in its common association with comfortable households. But the great art work is that which expresses the same intention by less obvious but more inherently significant means—means vital in themselves—the sweep of roof-lines—the general repose of mass—the delicacy and grace of ornament—the generosity and openness of aspect.

What has just been said indicated another essential characteristic of all true art work—moderation. All strength associated with long endurance has this quality. The force which exerts itself intemperately is always short-lived. So the art work which, by excessive display or by wasteful use of means, captivates at first glance, has within itself the seeds of its own destruction. Given a problem to be solved—many methods may possibly serve, only one can be best. When that one is chosen and resolutely followed, the work so produced communicates pleasure of the highest kind. The self-denial of the artist—the self-mastery—the strength—the concentration, breathe in the work, and give to it vitality and beauty of the highest order.

Works so produced are always simple, as they are courageous and fervid.

The creative force operating with this self imposed moderation tends to expression by simple means, for the thought repressed till fully ripe for utterance becomes a jewel too valuable for prodigality; and the mind thus withholding itself from light utterance speaks with boldness begotten of conviction, and with fervor kindled by fulness of thought.

No tropical luxuriance of fancy can for a moment be worth the art work which has been created in this intense workshop of the brain, where high ideals have been applied with singleness of purpose; where self-denying scrutiny has permitted the use of none but the fittest thoughts; where with simplicity and courage and fervor all has been welded into one consistent and inspired whole.

About an art work so created, critics may at first disagree. But they, and all men, finally bow in reverence before it, and it becomes to all men a refuge from care and sordidness, a source of moral and intellectual delight and elevation.

This condition of mind in the artist can be engendered only by full absorption by him of all those influences which lie most closely about him, with which he is most familiar because of daily association. Remote and unfamiliar aspects of nature, or types of men, or conditions of life cannot be felt with earnestness sufficiently deep to fully permeate the art work

produced under their influence. In all the history of the world it has been true, and it must always remain true, that the art work of one nation which has gained its inspiration solely from another has been worthless. So true is this that you will note in even the historical paintings of every great master previous to the nineteenth century the reproduction of human types with which he was familiar, and an absolute indifference to the historical accuracy of the types represented. An exactly parallel condition existed in every form of art work—painting, sculpture, decoration and architecture—the artist was far more concerned in representing essential ideas in his problem than in spending time and labor upon what he conceived to be non-essentials. At present this state of things does not exist. Perhaps it can never again exist even if it should be found in every sense desirable. This, however, is axiomatic, that any art of any time in becoming great becomes national; and that laymen, contemporaneous with this great art, love best the ideas which are familiarized to them by long custom.

Our present attitude is false in this respect as much as in any other, that we do not value rightly that which normally should be of most personal significance to us.

The skies we see each day, the grass we tread upon, the trees beneath whose shade we rest; the men we meet and understand; the histories which thrill our hearts with national pride; these are subjects which may profoundly speak to us from the canvas. So with our own peculiar climates and manner of living; the scorching heat of summer, the winter's bitter cold; our freedom and hospitality; these are *motifs* which when recognized in our architecture should give us keen delight. I do not wish to advise the patronage of American art because it is American, but I do say that if we really love art we can get more pleasure from art work which deals with conditions we know and rightly value, than from such, even if somewhat better in themselves, as are by virtue of their *locale* comparatively strange to us.

Ours should be the task to help every artist who will summon before our delighted eyes in significant beauty all those conditions of nature, in landscape, in men, in the household, in society, whose beauty we know truly belongs to us. When this comes about, art schools—artists and sympathetic patrons—American art, in short, will be here.

The President of the Western Association of Architects.

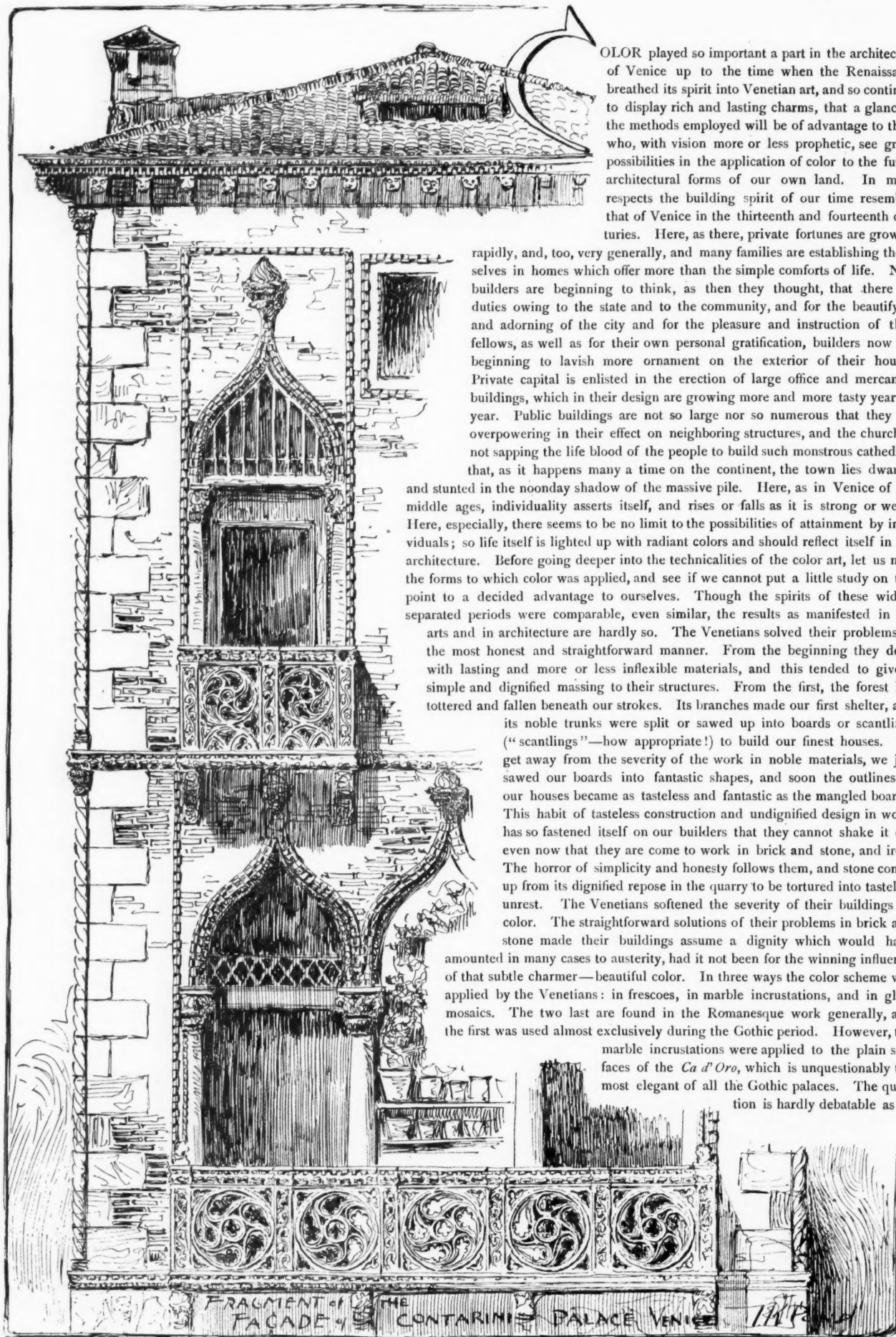
SINCE the election of Architect Sidney Smith, of Omaha, Neb., to the presidency of the Western Association, many biographical sketches have been published which have not presented that gentleman's career as adequately as might be wished by the association, whose unanimous choice he was.

Sidney Smith was born in the cathedral town of Norwich, in England, and educated in the King Edward grammar school of that city. Was then articled to the firm of I. I. Brown & Sons, who at that time were the architects to the dean and chapter of the Norwich Cathedral, and were employed in the restoration of that fine example of Gothic architecture and the just pride of the city. During this time Mr. Smith was a student and regular attendant at the art school and manual training college, studying hard and leaving no stone unturned in his ambition to attain the one great object, that of becoming thoroughly proficient in his chosen profession. After completing his term of service with Messrs. Brown & Sons, he was employed as assistant to several firms in London, and after applying for and passing a very successful examination, was admitted associate member of the Royal Institute. Mr. Smith, however, being possessed of a restless disposition and boundless ambition, applied for and passed another very successful examination, and was appointed clerk of works under the Royal Engineer department, and in 1861 left England for service in Australia and New Zealand. A varied experience met him in that country, for during his stay the Maori war broke out, which lasted five years, and for a considerable time the island was entirely under the military rule. The necessary buildings and public works carried on during that time, from a soldier's hut to the solid and substantial barracks, the construction of roads and bridges to the building of the great Waxwaikia bridge, then the longest in the country, over 1,800 feet, were carried out under his personal supervision. At the close of 1866 Mr. Smith was ordered to India, and during the next three years was engaged in China, Malta, Corfu, and finally to Ireland, where, in 1872, he completed the largest gymnasium in the country, also a riding school at Fermoy. It was at this time an epidemic broke out in the English parliament; the late Mr. Disraeli was attacked with civil service reform. This was carried on to an alarming extent, and one hundred and thirty-eight second and third class clerks of works were discharged to make room for a like number of old pensioners, who were considered able to do a little work yet for their pension. This reform, however, ended like many others, very disastrously for the people who have to foot the bills, to the tune of many thousands of pounds. Becoming very disgusted with his position, Mr. Smith sailed for this country, landing in Milwaukee, Wis., in 1874, following his profession with varied success; finally removed to Omaha in 1881, where he has since been located, and where he is so well and favorably known as a very enterprising, energetic, public-spirited, business man. At the time the INLAND ARCHITECT first suggested the idea of forming a Western Association of Architects, Mr. Smith was the first man to respond in favor of such an institution, and from that time to the present has been a staunch supporter and firm believer in the success of an association which now bids fair, when combined with its older sister, in being recognized as the National Institute. Mr. Smith is well known to many members of both institutes, having served two years on the board of directors of the Western Association before being elected to the presidency.

ST. PAUL'S CATHEDRAL, in London, is to be washed. Firemen are to be set at work with hose and brush to see if the blackened walls cannot be brightened.

Venice — A Color Study.

BY IRVING K. FOND, C. E., ARCHITECT.



COLOR played so important a part in the architecture of Venice up to the time when the Renaissance breathed its spirit into Venetian art, and so continues to display rich and lasting charms, that a glance at the methods employed will be of advantage to those who, with vision more or less prophetic, see grand possibilities in the application of color to the future architectural forms of our own land. In many respects the building spirit of our time resembles that of Venice in the thirteenth and fourteenth centuries. Here, as there, private fortunes are growing

rapidly, and, too, very generally, and many families are establishing themselves in homes which offer more than the simple comforts of life. Now builders are beginning to think, as then they thought, that there are duties owing to the state and to the community, and for the beautifying and adorning of the city and for the pleasure and instruction of their fellows, as well as for their own personal gratification, builders now are beginning to lavish more ornament on the exterior of their houses. Private capital is enlisted in the erection of large office and mercantile buildings, which in their design are growing more and more tasty year by year. Public buildings are not so large nor so numerous that they are overpowering in their effect on neighboring structures, and the church is not sapping the life blood of the people to build such monstrous cathedrals that, as it happens many a time on the continent, the town lies dwarfed

and stunted in the noonday shadow of the massive pile. Here, as in Venice of the middle ages, individuality asserts itself, and rises or falls as it is strong or weak. Here, especially, there seems to be no limit to the possibilities of attainment by individuals; so life itself is lighted up with radiant colors and should reflect itself in our architecture. Before going deeper into the technicalities of the color art, let us note the forms to which color was applied, and see if we cannot put a little study on this point to a decided advantage to ourselves. Though the spirits of these widely separated periods were comparable, even similar, the results as manifested in the arts and in architecture are hardly so. The Venetians solved their problems in the most honest and straightforward manner. From the beginning they dealt with lasting and more or less inflexible materials, and this tended to give a simple and dignified massing to their structures. From the first, the forest has tottered and fallen beneath our strokes. Its branches made our first shelter, and

its noble trunks were split or sawed up into boards or scantlings ("scantlings"—how appropriate!) to build our finest houses. To get away from the severity of the work in noble materials, we jigsawed our boards into fantastic shapes, and soon the outlines of our houses became as tasteless and fantastic as the mangled boards. This habit of tasteless construction and undignified design in wood has so fastened itself on our builders that they cannot shake it off, even now that they are come to work in brick and stone, and iron. The horror of simplicity and honesty follows them, and stone comes up from its dignified repose in the quarry to be tortured into tasteless unrest. The Venetians softened the severity of their buildings by color. The straightforward solutions of their problems in brick and stone made their buildings assume a dignity which would have amounted in many cases to austerity, had it not been for the winning influence of that subtle charmer—beautiful color. In three ways the color scheme was applied by the Venetians: in frescoes, in marble incrustations, and in glass mosaics. The two last are found in the Romanesque work generally, and the first was used almost exclusively during the Gothic period. However, the marble incrustations were applied to the plain surfaces of the *Ca d'Oro*, which is unquestionably the most elegant of all the Gothic palaces. The question is hardly debatable as to

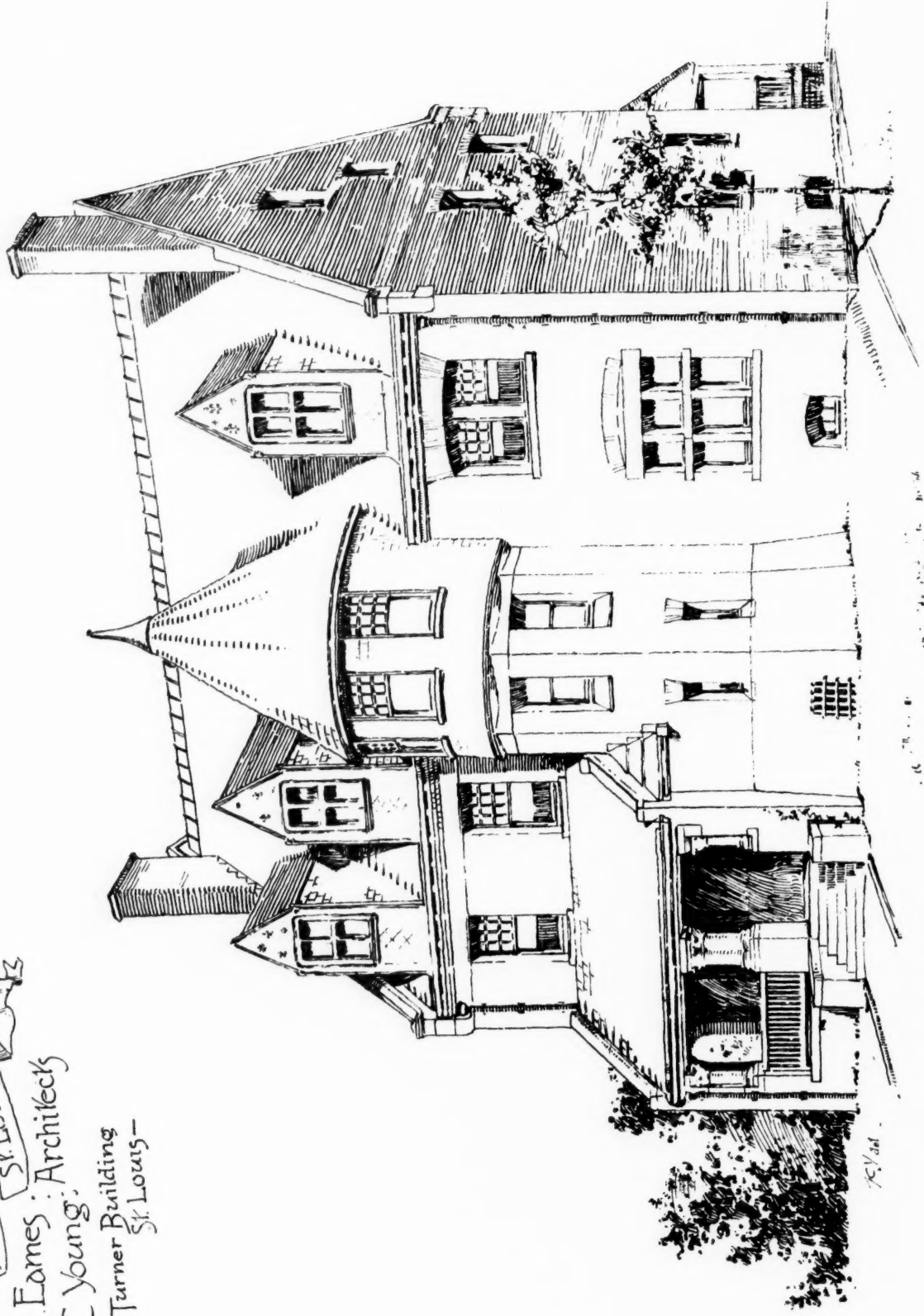
FRAGMENT OF THE FACADE OF THE CONTARINI PALACE, VENICE

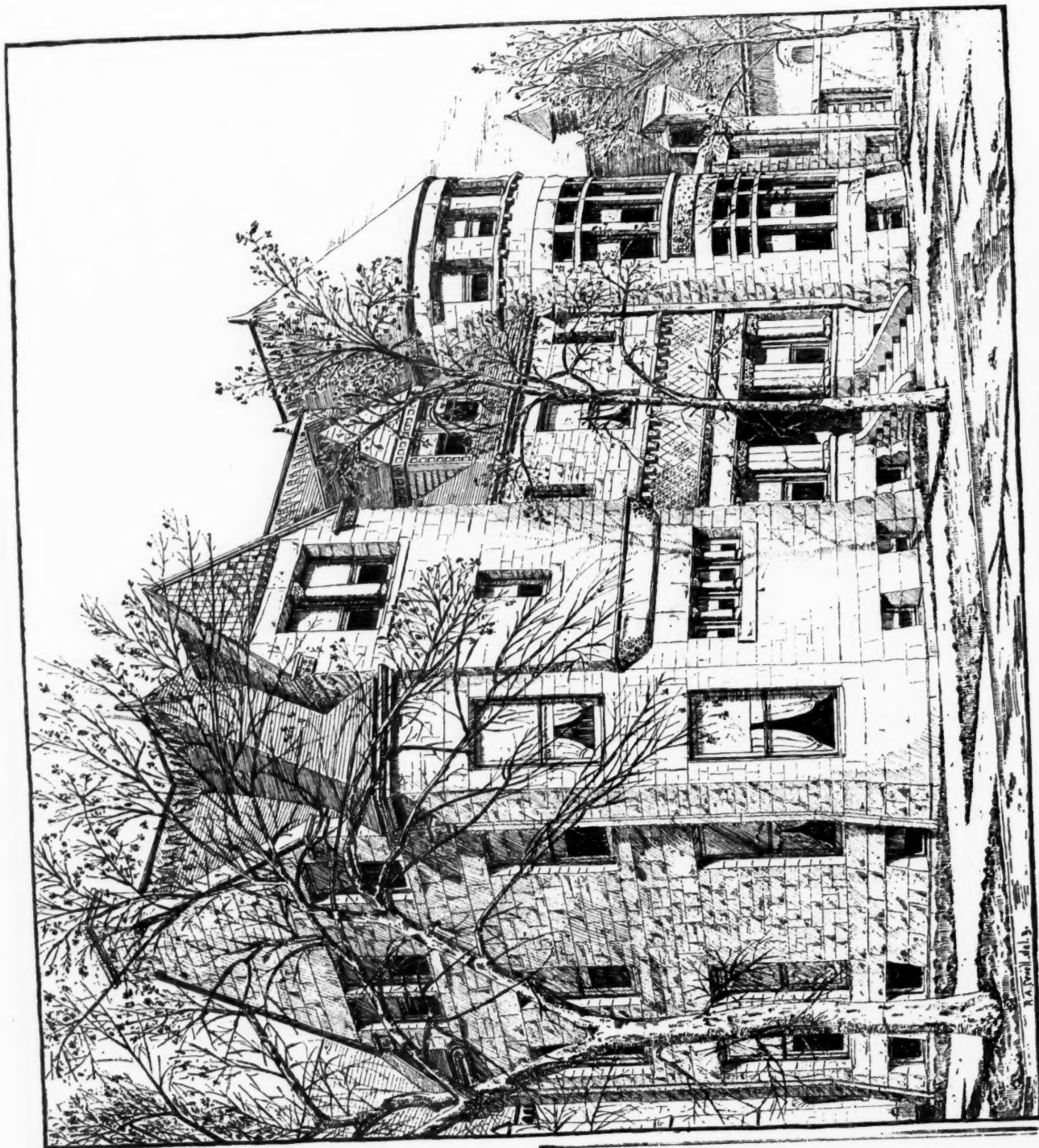


THE CHRONICLE BUILDING, SAN FRANCISCO, CAL.

BURNHAM & ROOT, ARCHITECTS, CHICAGO.

House for
Mr Chas T Clark
St. Louis Mo
Wm S Eames Architects
Th. C Young
76 Turner Building
St. Louis—

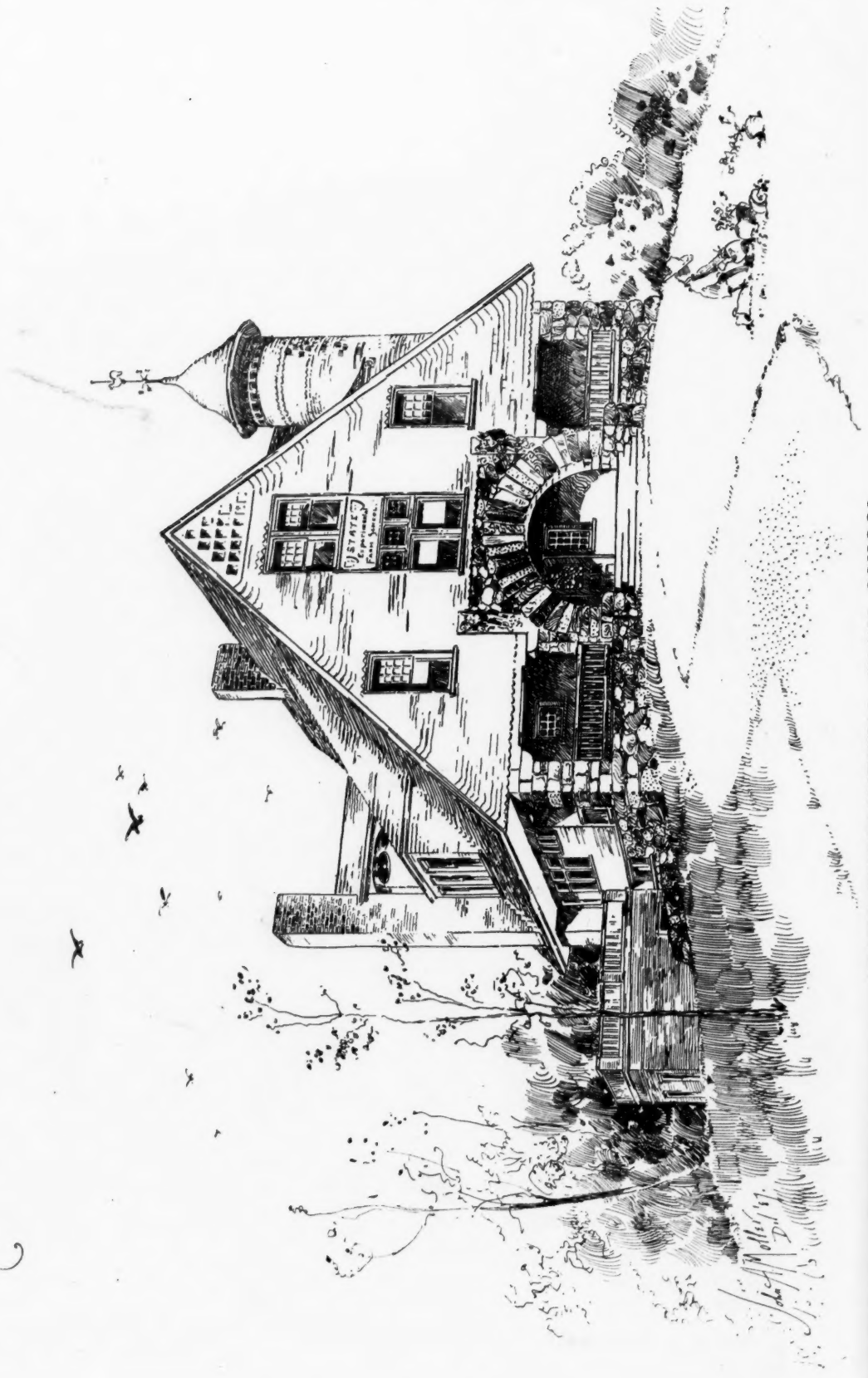




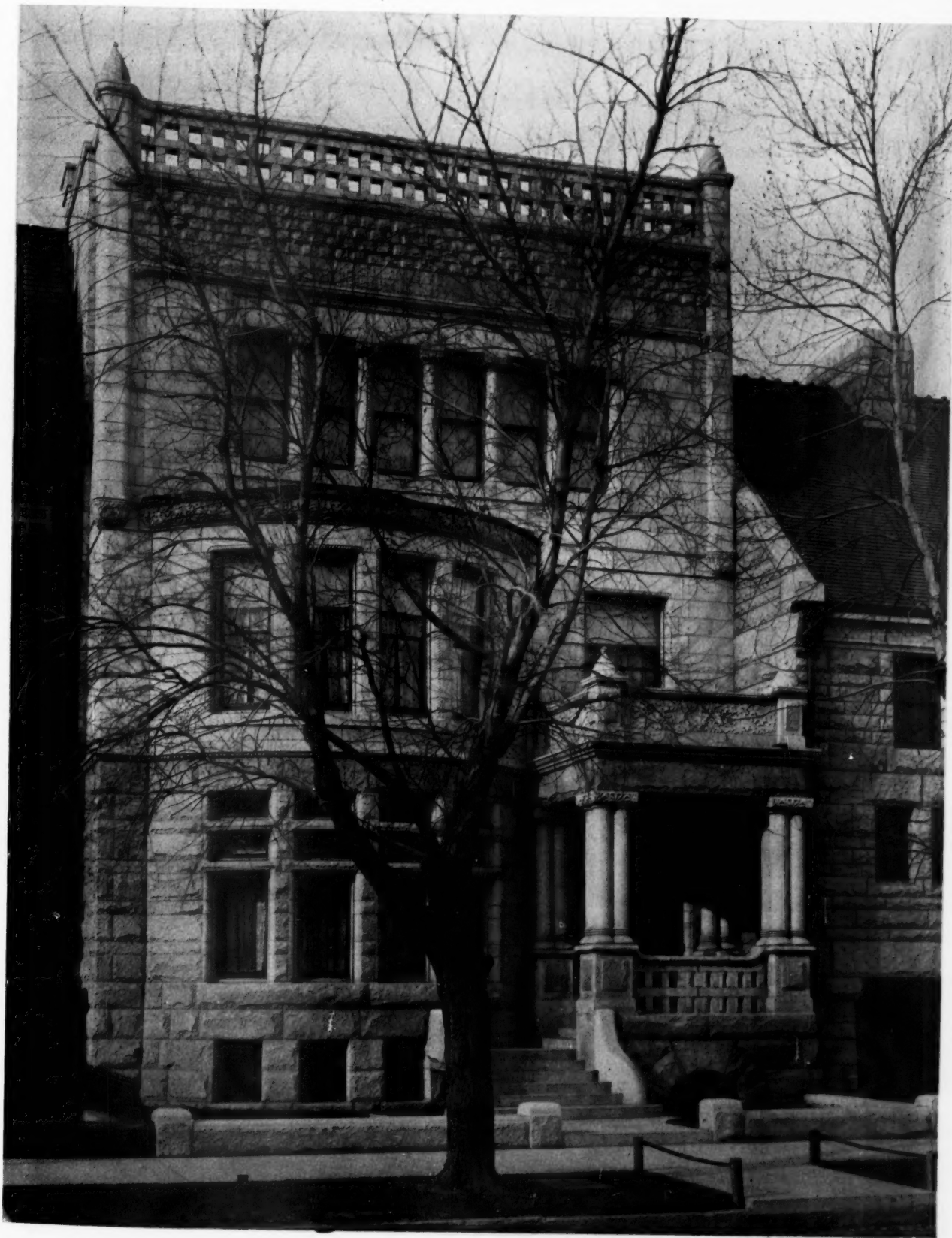
RESIDENCE FOR MRS. V. C. THOMPSON, CHICAGO.

CORB & FROST, ARCHITECTS.

S. L. Buffington Architect Minneapolis Minn. 1887.



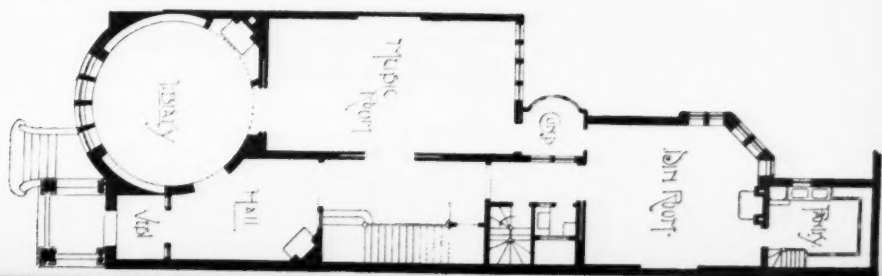
STATE EXPERIMENTAL FARM SCHOOL.



INLAND ARCHITECT PRESS.

RESIDENCE FOR O. R. KEITH, CHICAGO.

COBB & FROST, ARCHITECTS.





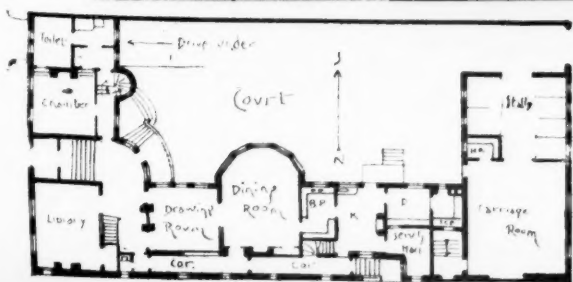
RESIDENCES, CINCINNATI, OHIO.
Jas. W. McLaughlin, Architect.

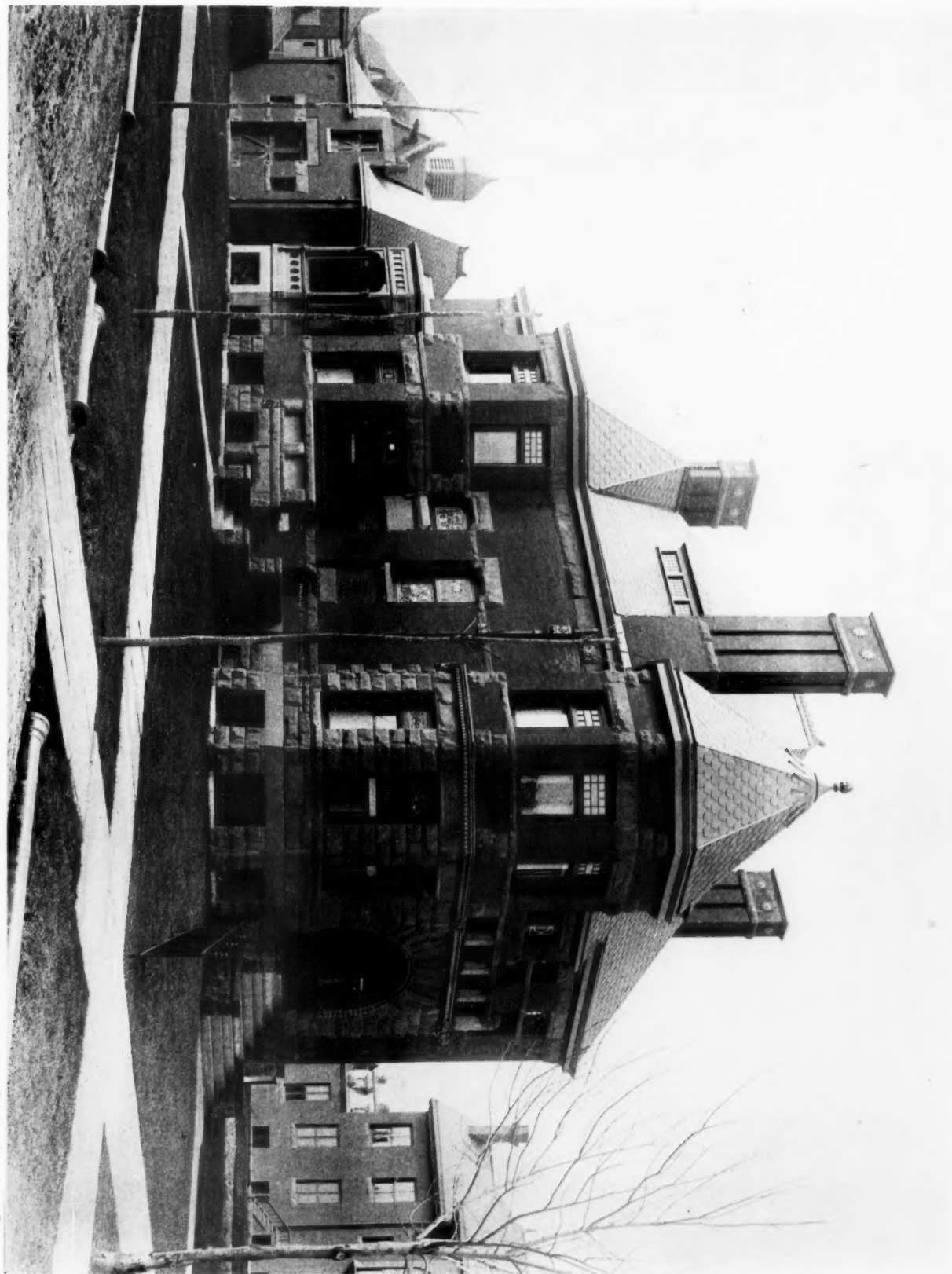


RESIDENCE OF J. J. GLESSNER, CHICAGO.

H. H. HARRISON, ARCHITECT.

INLAND ARCHITECT PRESS

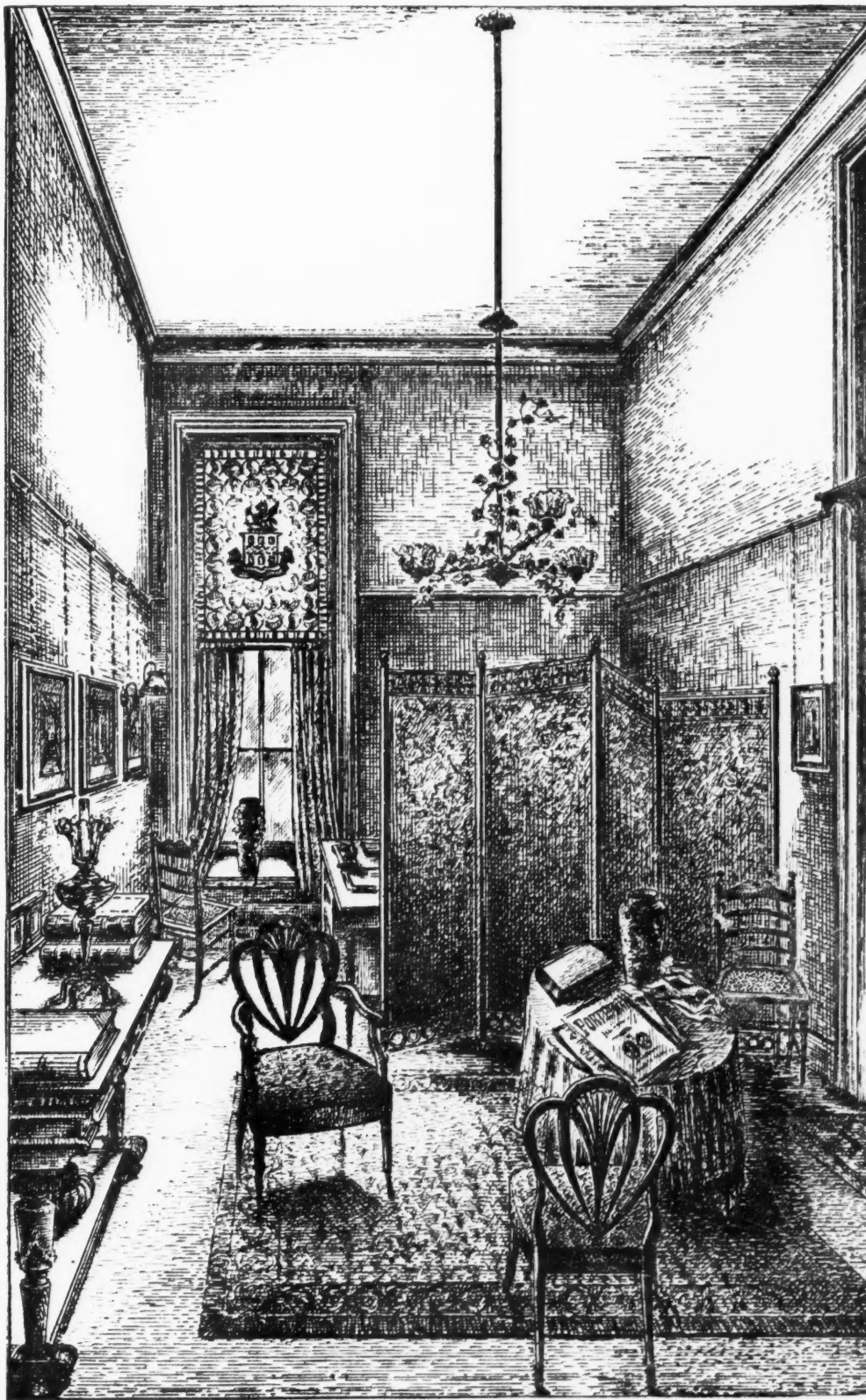




RESIDENCE OF S. B. DIXON, DETROIT, MICH.
MASON & RICE, ARCHITECTS.

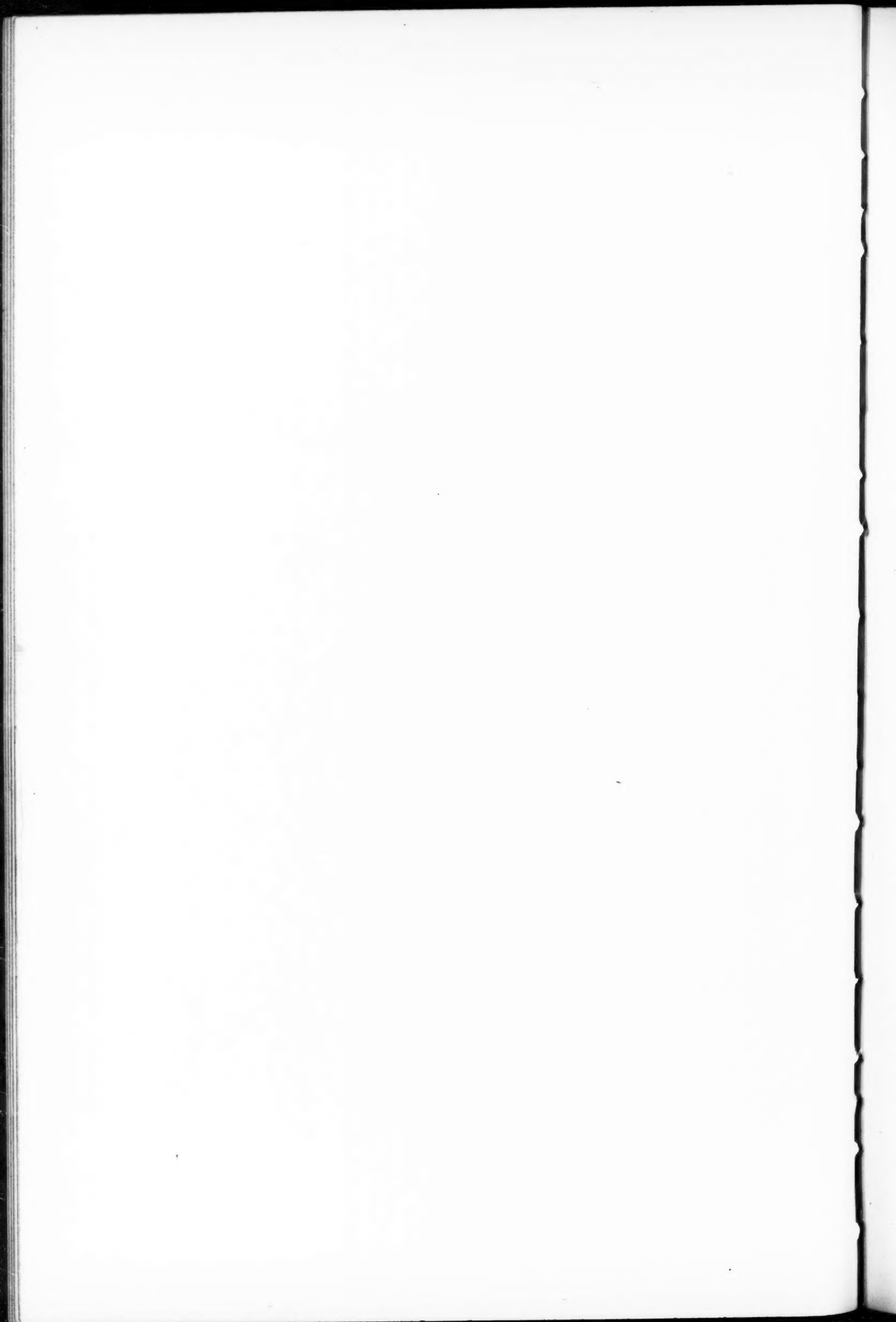


RESIDENCE FOR E. W. BANGS, CHICAGO.
COBB & FROST, ARCHITECTS.

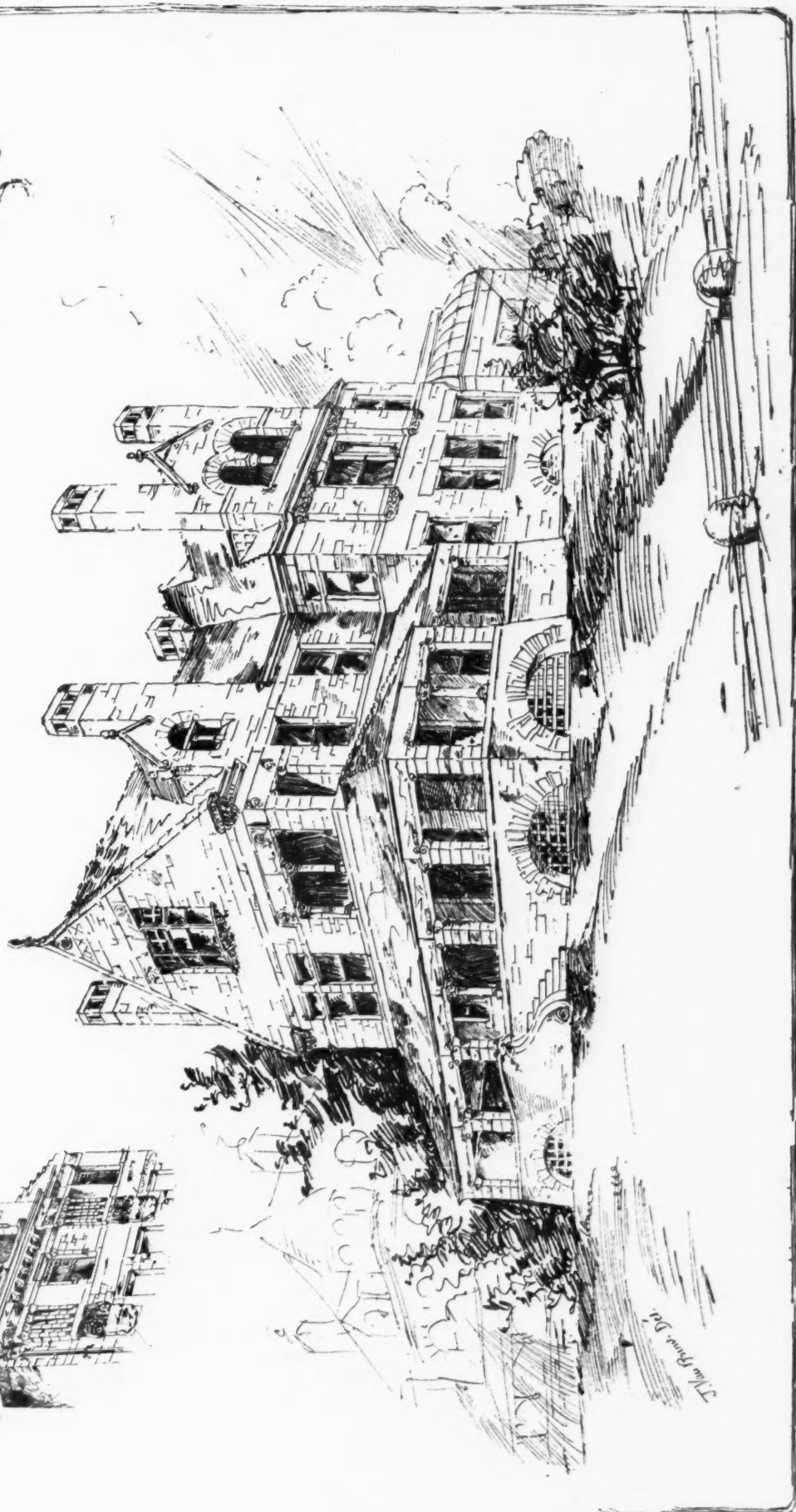
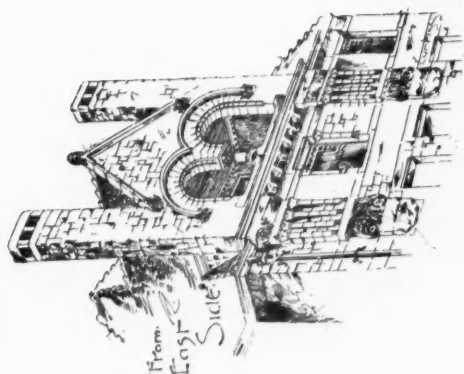


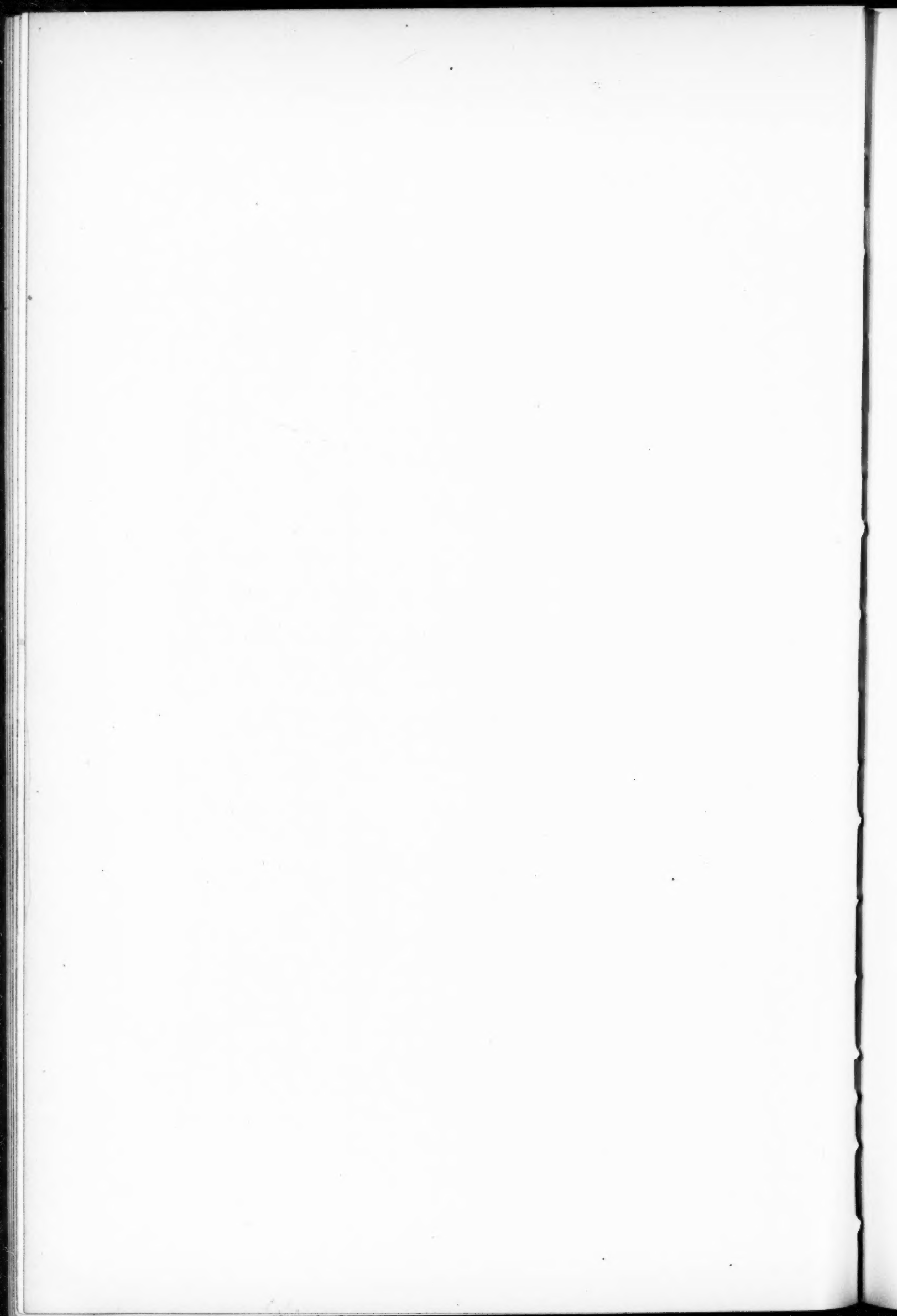
Industrial Series.

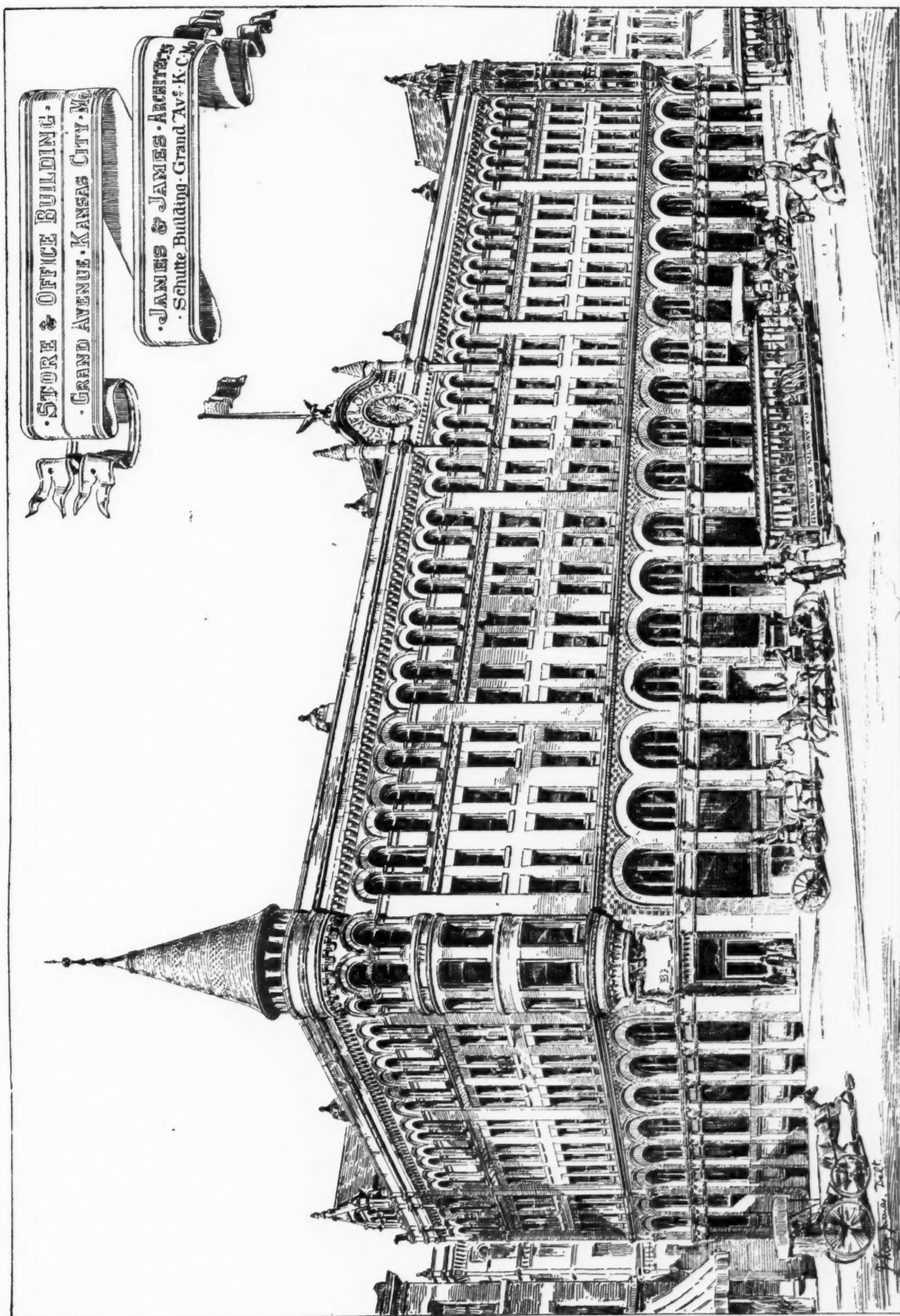
MR. JOSEPH TWYMAN'S RECEPTION ROOM, McVICKER'S THEATRE BUILDING.

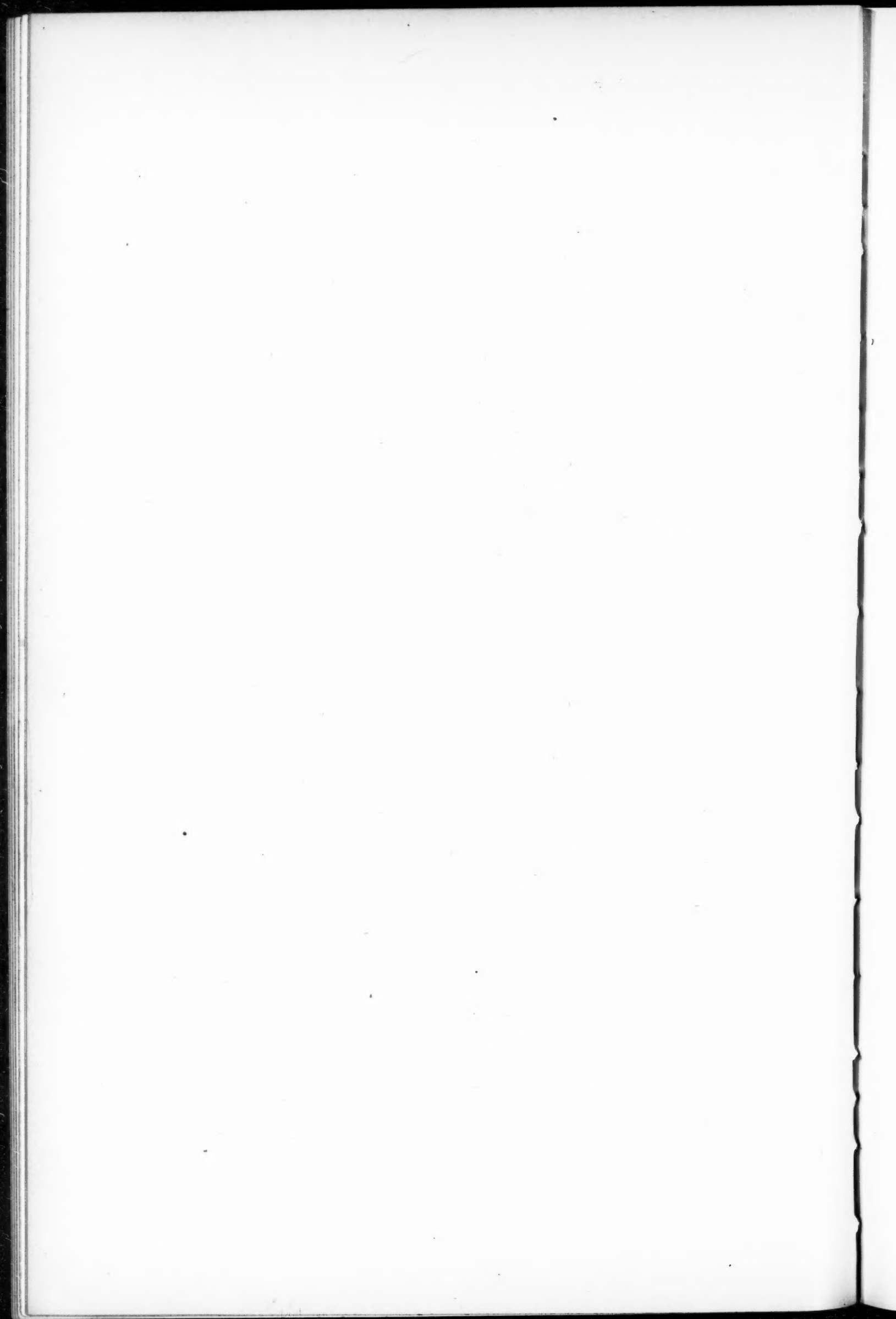


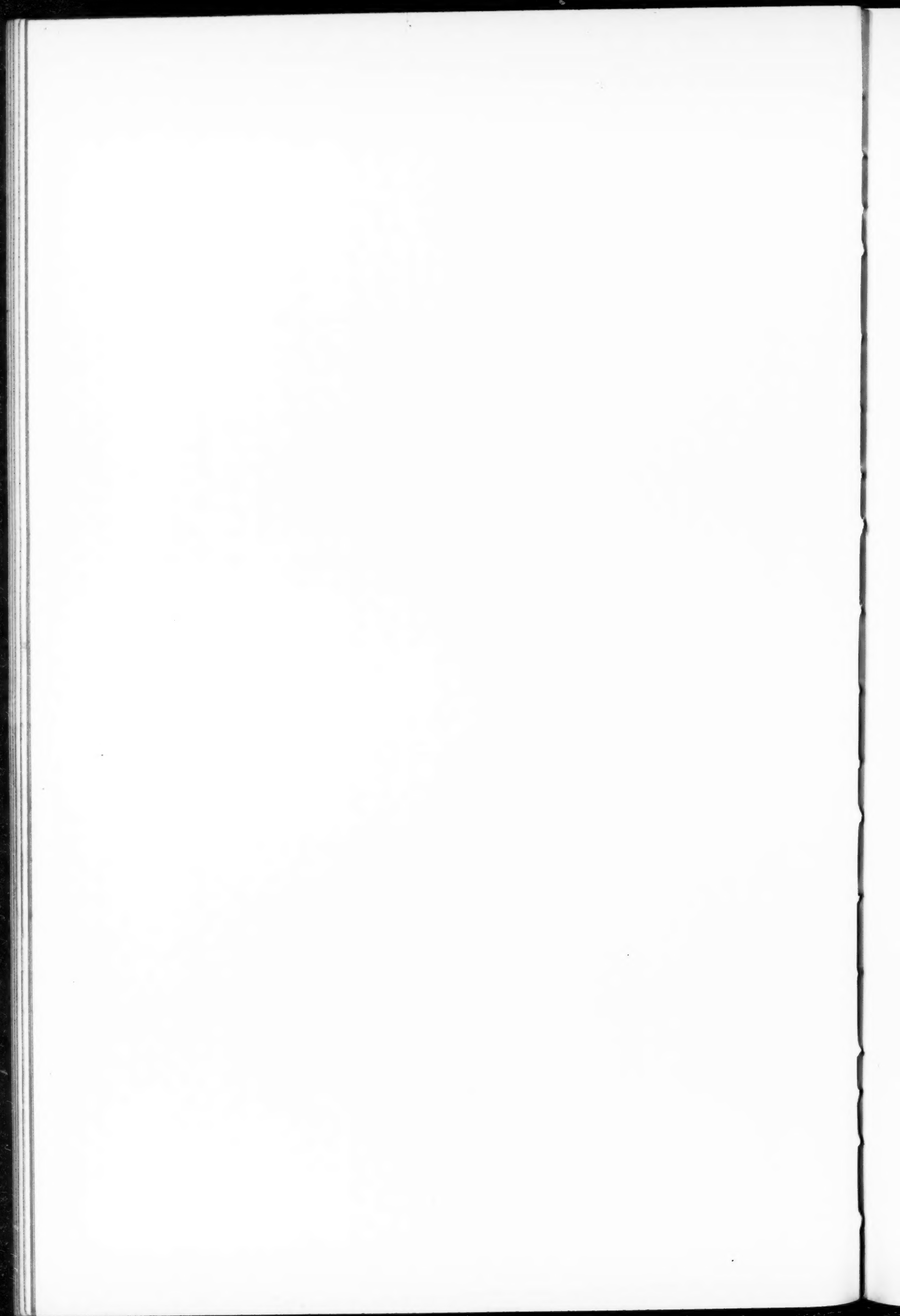
Perspective Sketch
 Residence for
 Robert Gulham Esq
 A. Van Brunt Architect

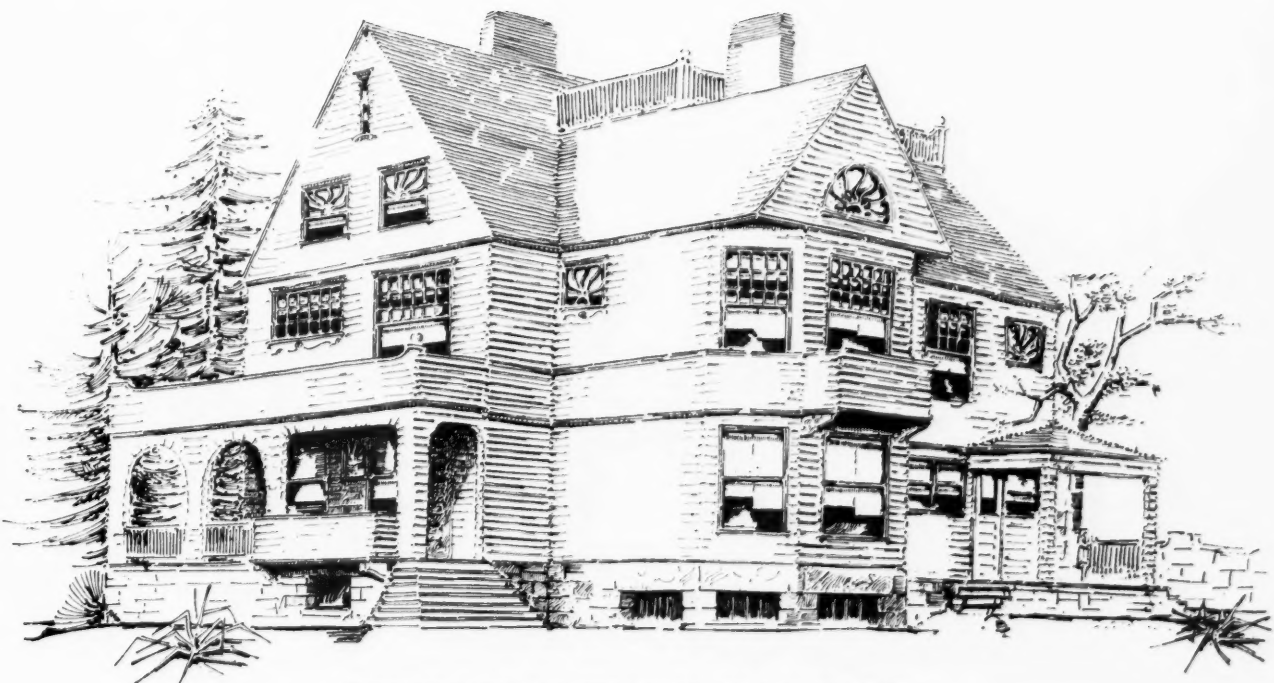






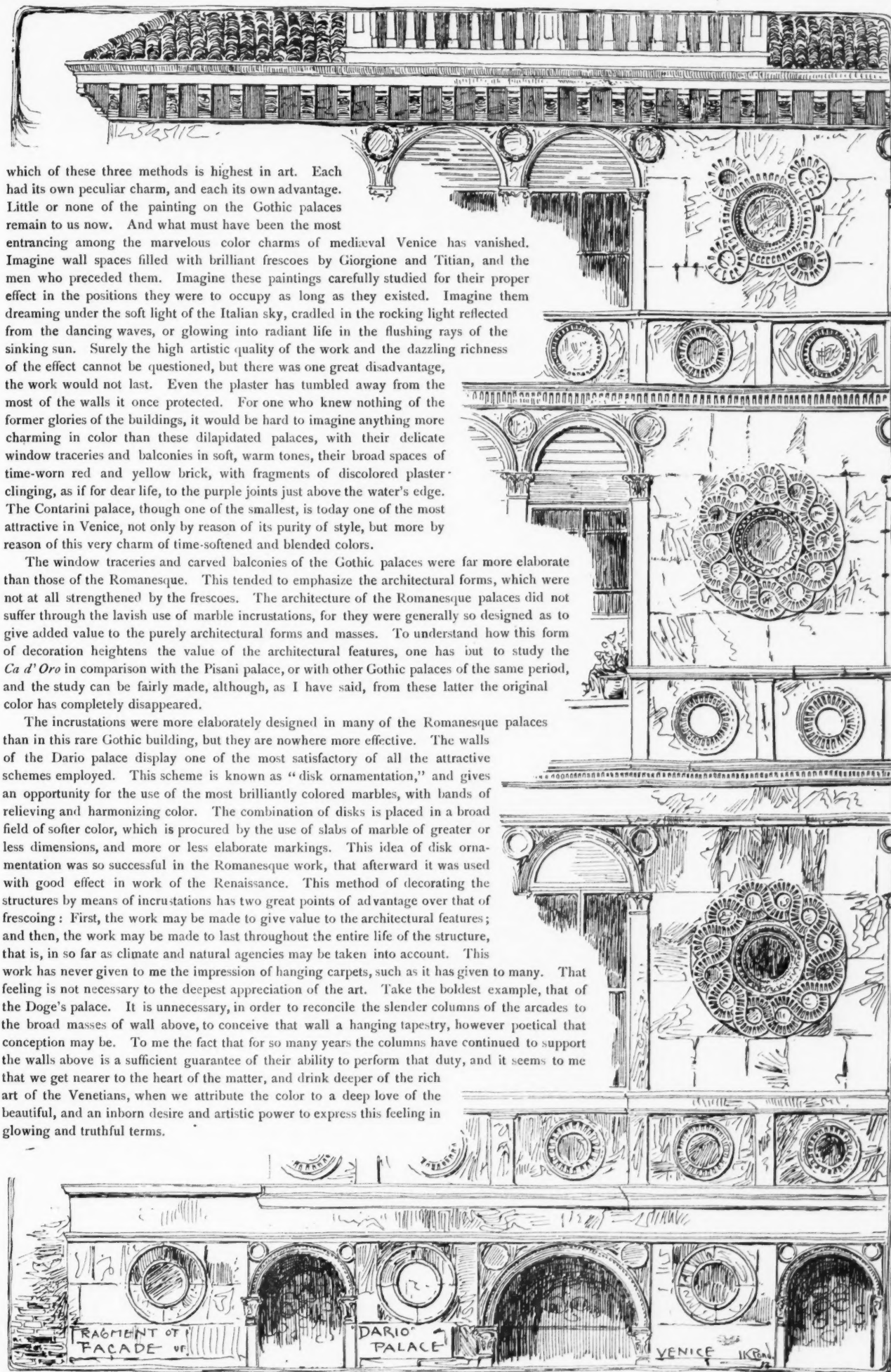






RESIDENCE AT HELENA VALLEY, WIS.

FRANK L. WRIGHT, ARCHITECT, CHICAGO.



which of these three methods is highest in art. Each had its own peculiar charm, and each its own advantage. Little or none of the painting on the Gothic palaces remain to us now. And what must have been the most entrancing among the marvelous color charms of mediæval Venice has vanished. Imagine wall spaces filled with brilliant frescoes by Giorgione and Titian, and the men who preceded them. Imagine these paintings carefully studied for their proper effect in the positions they were to occupy as long as they existed. Imagine them dreaming under the soft light of the Italian sky, cradled in the rocking light reflected from the dancing waves, or glowing into radiant life in the flushing rays of the sinking sun. Surely the high artistic quality of the work and the dazzling richness of the effect cannot be questioned, but there was one great disadvantage, the work would not last. Even the plaster has tumbled away from the most of the walls it once protected. For one who knew nothing of the former glories of the buildings, it would be hard to imagine anything more charming in color than these dilapidated palaces, with their delicate window traceries and balconies in soft, warm tones, their broad spaces of time-worn red and yellow brick, with fragments of discolored plaster clinging, as if for dear life, to the purple joints just above the water's edge. The Contarini palace, though one of the smallest, is today one of the most attractive in Venice, not only by reason of its purity of style, but more by reason of this very charm of time-softened and blended colors.

The window traceries and carved balconies of the Gothic palaces were far more elaborate than those of the Romanesque. This tended to emphasize the architectural forms, which were not at all strengthened by the frescoes. The architecture of the Romanesque palaces did not suffer through the lavish use of marble incrustations, for they were generally so designed as to give added value to the purely architectural forms and masses. To understand how this form of decoration heightens the value of the architectural features, one has but to study the *Ca d'Oro* in comparison with the Pisani palace, or with other Gothic palaces of the same period, and the study can be fairly made, although, as I have said, from these latter the original color has completely disappeared.

The incrustations were more elaborately designed in many of the Romanesque palaces than in this rare Gothic building, but they are nowhere more effective. The walls of the Dario palace display one of the most satisfactory of all the attractive schemes employed. This scheme is known as "disk ornamentation," and gives an opportunity for the use of the most brilliantly colored marbles, with bands of relieving and harmonizing color. The combination of disks is placed in a broad field of softer color, which is procured by the use of slabs of marble of greater or less dimensions, and more or less elaborate markings. This idea of disk ornamentation was so successful in the Romanesque work, that afterward it was used with good effect in work of the Renaissance. This method of decorating the structures by means of incrustations has two great points of advantage over that of frescoing: First, the work may be made to give value to the architectural features; and then, the work may be made to last throughout the entire life of the structure, that is, in so far as climate and natural agencies may be taken into account. This work has never given to me the impression of hanging carpets, such as it has given to many. That feeling is not necessary to the deepest appreciation of the art. Take the boldest example, that of the Doge's palace. It is unnecessary, in order to reconcile the slender columns of the arcades to the broad masses of wall above, to conceive that wall a hanging tapestry, however poetical that conception may be. To me the fact that for so many years the columns have continued to support the walls above is a sufficient guarantee of their ability to perform that duty, and it seems to me that we get nearer to the heart of the matter, and drink deeper of the rich art of the Venetians, when we attribute the color to a deep love of the beautiful, and an inborn desire and artistic power to express this feeling in glowing and truthful terms.

Then we come to the method of decorating by Venetian mosaics of colored glass, and marble protected by glass. This method combines all the excellencies of the other two, with but one drawback; the pictorial work must be a reproduction or a translation, and not a work direct from the artist's hand. This is the work which gives the extreme beauty to the façade of St. Mark's—the work which heightens the rare charm of the interior.

I will not give further description here, for enough has been said to give abundant suggestion; but let us once more look at our own country and age. Is the time not ripe for a more general and a decidedly more artistic employment of color in our buildings, of whatever sort? We have possibilities of which the Venetians never dreamed. Chemistry and mechanics have opened up to us avenues, seemingly so broad, and leading so directly toward the goal, that it is a wonder more are not walking therein. Our architectural lines are advancing, are growing in grace, but we shall never complete our charm until we have woven about it the subtle influences of color.

On House Drainage.*

BY WILLIAM S. MACHARG, C. E.

YOUR committee has asked me to write upon a subject which has been so thoroughly discussed during the last few years that it seems as though nothing new could be said upon it. They have asked, however, more particularly for the practical conclusions which I have drawn from my own experience and consideration of the subject of house drainage, and these I give you, hoping that even if not approved by you, they may, by discussion, aid in the general advance of the character of buildings.

There is probably no country in the world in which the removal of excreta and waste from habitations, by water carriage, is so general as in our own; and from local causes, perhaps no city in this country in which it is so general as in Chicago. In consequence of conduits being required in all classes of dwellings, we have all grades of work, by far the larger part of which is imperfect.

The agitation of a dozen years ago, in regard to sewer gas as a poison and as a vehicle for disease germs, resulted in a material improvement in both design and construction of house drainage systems.

The same agitation, however, bringing forward a few persons well qualified to speak upon the subject, produced as well, in obedience to the law of supply and demand, a large number of self-styled "sanitary engineers," with "sewerage ventilation a specialty," and a great deal of queer work followed until the title became a "stink in the nostrils of the people." The return swing of the pendulum came, and, although a material gain has been made, it has become rather the thing to question the effect of sewer gas, or the possibility of the transmission of disease through sewers. A microscopist recently announced that in the examination of air from a certain sewer he found fewer micro-organisms than in the adjacent exterior air, and draws the conclusion that the air in the sewer may be the purer. This conclusion, which, under some conditions, may possibly be true, is so reported as to make it appear too general, as under some circumstances the air in a sewer may be pure poison, fatal to all animal life.

Two accidents in this city, fatal to the men employed in cleaning sewers, and unexplained, further than that instant death followed entrance into the sewers, apparently from breathing particularly poisonous gas, indicate that the gas from sewers is injurious, and it is a fair conclusion that an atmosphere contaminated with this gas, if constantly breathed, will have an effect similar to that induced by breathing air contaminated in other ways. The tone of the system is lowered, and if no disease is directly communicated, the subject becomes peculiarly liable to contract disease upon direct exposure. Consequently, it is the plain duty of those having such matters in charge, to be certain that no opportunity exists for such contamination of the air in the dwellings of the people.

Let us consider first the materials with which we are to deal, as this will enable us more intelligently to decide upon the means necessary to prevent the danger. Sewer gas is ordinarily a mechanical mixture of the various simple and compound gases, disengaged by the decomposition of the different elements of waste which are taken by water carriage from our houses. Nothing more need be said of this than that it possesses any or all the qualities of its various components, and is not a proper atmosphere.

Sewage, from which these gases arise, is the waste water from all buildings, carrying in suspension or solution all manner of waste. It may properly be divided into two classes, the waste from factories and that from houses. The first requires special treatment, and is not that which we are at present particularly considering.

The conditions in regard to house sewage are as follows: Water, as delivered to the fixtures in a house, is, or should be, pure; when used it is contaminated, and becomes at once a source of danger. Good authorities have concluded, however, that no change takes place in sewage for the space of about twenty-four hours. Decomposition does not set in at once, and hence from the flowing sewage no gases are disengaged.

In this city from the point of contamination to the outlets of the mains, the sewage which is discharged is innocuous. Where then is the danger? It is in the sewage which is held in catch-basins, in the deposit on the sides of the conduits, and in the leakage through defective joints, through which and through the floors the gases return to the houses. Exception must be made to this, of course, in the case of excreta from persons suffering from certain diseases. With this exception, if we could construct conduits which, with perfect joints, would discharge all the waste beyond the main trap on the house drainage system, we should have no contamination of the air to deal with.

* Paper read before the Illinois State Association of Architects, February 4, 1888.

This is a degree of perfection which is not to be attained at present, but modern fixtures have given us the use of water under far better conditions than obtained fifteen years ago. The effect of the water is more concentrated, and if the dilution of the other waste matter is but little higher the conduits are more thoroughly washed. These fixtures may be somewhat improved, but I think we are in a position to feel assured that a house drainage system may now be constructed which shall absolutely preclude the dangerous flow of gas into dwellings. Even with these fixtures engineers have thrown up their hands in despair and thought it advisable to return to primitive forms, because perfect cleanliness is not attained without care and attention.

My first conclusion then is this: That we shall never be able to build a drainage system in a house which will last forever, and acting automatically, run continuously without care and attention.

It is a matter of surprise to me, however, when I see how generally some such result is expected. People feel that they have not got just what they should when this machinery, in constant use, does not operate with as little trouble as the arch over their front door.

It is, however, possible to build a system of house drainage which shall perform its functions in an almost perfect manner, and to so ventilate it that the gases, forming continuously in small quantity, shall be conveyed away as formed without danger to the inmates of the house.

This construction, however, involves a radical change in the ordinary manner of grouping the work, but I do not believe that perfectly satisfactory results will be obtained until the work in a building is divided as formulated in this second conclusion, namely:

For the security of the inmates and for efficiency the whole system of waste and ventilating pipes in any building, commencing at or near the traps of the fixtures, and continuing to a point outside the walls, should be built by one person.

I know that the persons ordinarily employed in one portion of the drainage work of a house are not competent to do the class of work required in this system, and that those now doing the other portion will complain that it cuts into their trade, but the latter I do not consider necessarily true, and even if a new trade is required, the end of absolutely fixing responsibility will have been attained.

Work properly designed and constructed on this principle will furnish the person who sets the fixtures, openings behind each, outside the plaster line, for waste and ventilation, and the junction of different materials, is then at all times easy of access and examination.

Building upon this system, using material homogeneous or like, and testing before the work is concealed, the assurance may stand that the work so constructed will remain in the same condition so long as the material lasts.

This opens the final question: Of what material should such a system be built? My opinion is firm in regard to this. I have formed it from experience and general knowledge regarding water supply and sewerage; formed it professionally, and not in advocacy of any particular system, and it is intended to stand the test of time. The conclusion is this:

That the most perfect and durable system of house drainage can be most practically and economically built, using for the portion covered with earth, cast-iron pipe, and for the portion above the ground, wrought iron pipe.

I am aware that in formulating my opinion in so broad a manner I am throwing down a gage which many will hasten to take up, and will attack the opinion; some because they honestly think it wrong; some because they think it will interfere with their business, and some because the only system in which this combination of cast and wrought iron has been extensively used is patented, and they object to the apparent monopoly.

To the last I will say that I do not think their objection good; if for no other reason than that the monopoly of a product that is held at too high a price is not profitable. To the second class argument is unavailing. To the first, those who honestly doubt, I give reason for each point in the conclusion.

The materials over which this difference of opinion arises are, of course, standard cast-iron gas pipe with lead joints or earthenware pipe with cement joints for the ground work, and wrought-iron pipe with threaded joints or cast-iron soil pipe with lead joints for the upright work.

I do not consider it impossible to do good work with earthenware or poor work with cast-iron pipe, but think more perfect work can be more easily obtained with the latter. In speaking of cast-iron pipe, I refer always to standard gas pipe.

This pipe is cast on end in lengths of twelve feet with the bell four inches deep, and thick enough to stand heavy calking; consequently there is, in straight runs, but one joint to nearly six in earthenware pipe. The joint is lead, one and a half inches deep, calked tight, not disturbed by slight movement of the pipe; the diameters of the pipes are exact, and their length insures easy lining and grading, so that we have for the sewer a perfect tube, the inner surface of which is smoother, straighter, and more evenly graded than can be obtained with the shorter lengths of earthenware pipe, and in which the joints will not be disturbed by settlement or by work which may be done near them, and hence will not open for leakage.

The risers from this drain I would make of wrought-iron pipe. This pipe, made in lengths up to eighteen or twenty feet, gives an opportunity for straight work and few joints, and these joints, the same you would use for steam or gas, are tight and cannot open; not as with cast-iron soil pipe coming where proper calking is impossible. The foregoing are the reasons why I consider this class of work the most perfect.

Persons who hold to the use of clay pipe for house drains, as an instance of its durability, are fond of referring to the many examples of pottery found in excavations of ancient cities, and even to those fragments found deep in the alluvial deposits of the Nile. Still most of the remains of ancient pottery are fragmentary, and prove only that hard burned clay resists corrosion as well or better than almost any other material. No one disputes the durability of a good quality of clay pipe, but what we require

is that the structure of which this pipe is a part should be durable, and I hold that a structure in which the materials in combination fill their places equally for a reasonable length of time, maintaining perfectly the integrity of the structure, is durable in a truer sense than one in which one or more components may fail to fill the part assigned them, from any ordinary cause, and without warning, though the remaining parts stood forever.

The durability of cast-iron pipe when used for the conveyance of sewage is very indefinite, not because of failure, but because of lack of recorded instances of failure. Both cast and wrought iron are used by engineers for the various parts of sewerage works, without hesitation, and have been so used for years. In conduits, flushing gates, pumps, we do not find it necessary to use other metal. We hear it often asserted that the gases arising from sewage will rapidly corrode iron, but the reason that iron in its various uses is not constantly giving out as it should if this were true, is probably that, as we have before seen, fresh sewage of ordinary dilution exerts no more chemical action than the water which is delivered to the house. Those who make this statement regarding cast-iron pipe systematically use cast-iron soil pipe for risers in buildings.

The use of cast-iron pipe in water supply affords us, however, data upon which we can form a sound opinion of the life of a pipe under practically the same conditions. I have seen pipe taken up in this city after twenty-seven years' use, which showed no appreciable diminution from standard thickness. This, too, was pipe laid before Angus Smith's process of coating was applied here. It is a matter of record in England that pipe which had been in use for one hundred years, upon cleaning out was found fit to continue in service. These, of course, were not coated pipe, and although Dr. Smith's process of coating pipe while hot with coal tar was not originally devised for this object, it has, doubtless, had the effect of indefinitely prolonging the life of the pipe. The resistance of this pipe to fracture is, of course, much greater than that of earthenware pipe.

As to the risers of wrought-iron pipe used in this system, coated with tar in the same manner as the cast-iron pipe, they have been applied to this purpose for about ten years, and, so far as I know, none have ever failed, nor is there any indication that they are even beginning to be injuriously affected. Their joints, as do those in the cast-iron ground work, remain perfect. I do not know of any reason for limiting the perfect action of this system to fifty years or even to one hundred years, and I think that either of these periods is sufficient to establish durability as against an earthenware sewer with cast-iron soil pipe risers. In these latter the weakest point is the joint. The bond between cement, mortar, and the hard burned or glazed surface of the pipe is very slight, and for some months there is liable to be no great strength to the mortar. The joint is, therefore, easily broken, and from the instant it is made it runs the gauntlet of men moving in the trench, of filling in the dirt, of future digging near it, and of the settlement of foundations. Any person desiring to connect another pipe makes an opening with a brick-hammer or worse tool, and if he has cement at hand, may make a fair closure of the opening; if not convenient, it is not done. I have examined so many earthenware drains, and so uniformly found them leaking or injured that I have no belief in their structural durability.

As to practicability of good construction in the proposed system there can be no question. If joints come in inconvenient places the pipe, either in the drain or risers, can generally be made up in sections and the connecting joint brought where it can be reached. Hand holes can be conveniently inserted where needed, and be perfectly closed with a cover or plug, easily removed. Under a high pressure water test, joints which may leak can be made tight under pressure, and in the wrought-iron work a joint which shows under test a very slight drop of water, if tested again after the lapse of a day or two will be found tight.

To the easy maintenance of true line and grade reference has been made.

As to economy, I do not know of any case of repairs in well-constructed work of this class. The first cost of a cast-iron drain, compared to that of an earthenware drain, bedded in concrete, if the concrete were made carefully so as to be approximately water tight, would be about equal, or perhaps slightly less. The size of the cast-iron pipe can be much smaller in the branches, as from smoothness and freedom from joints obstructions can be readily removed. The risers, being a higher grade of work than cast-iron soil pipe, would probably cost somewhat more.

To my mind the reasons given substantiate the conclusion formulated. With the minor details of such a system I will not occupy your time, except to say that I consider the feature of giving openings for the connection of fixtures at the floor or plaster line particularly good. By this means no pipe which can be punctured by nails, cut by rats, or injured by contact with mortar is concealed; the connections to the fixture can be readily detached if necessary, and the concealed pipes can be cleaned by rodding or by pressure without danger of injury. I think the general adoption of this class of work in the better class of buildings would have an excellent effect upon the general house drainage work of the city, and would assist the Board of Health in their endeavors to bring the city to a point where the ordinary sanitary condition would be such that epidemics of the diseases resulting from or aggravated by filth, could be avoided or reduced to a minimum. The danger now is greater than people generally realize, and the trouble is deep seated, and not to be reached by the spring "cleaning up," nor even by inspection, limited as it is by the expense. As a matter of fact, under most of the houses in the city exists a latent power for evil, which is liable, when its hour arrives, to exert itself to the full of its terrible might. I do not wish to be considered an alarmist, but my experience has shown me that these things are not corrected. The cure is difficult, involving much greater expense also than prevention, and the rebuilding of the same material is only postponing the evil day.

The common system of earthenware sewer, iron soil pipe, brass connections, and silver and gold plated fixtures, seems a modern realization of the image of Nebuchadnezzar's dream and the fatal weakness in both is at the bottom, for as Daniel told the king, "they shall not cleave unto one another, even as iron will not mix with miry clay." You see, therefore, we have "Scripture warrant" for our conclusion.

Illinois State Association of Architects.

THE monthly meeting of the Illinois State Association was held February 4, President Samuel A. Treat in the chair.

After the usual lunch the meeting was called to order.

There were present: Samuel A. Treat, Robert C. Berlin, J. R. Schaub, George Beaumont, C. M. Palmer, Dankmar Adler, S. M. Randolph, H. L. Gay, O. J. Pierce, Frederick Baumann, W. W. Clay, Normand S. Patton, Clarence L. Stiles, Clinton J. Warren.

On motion, the reading of the minutes was dispensed with, and the president introduced W. S. MacHarg, who, at the invitation of the Executive Committee, had prepared a paper entitled, "On House Drainage." (Mr. MacHarg's paper is printed elsewhere in this issue.)

A general discussion upon the effect of bacillus upon pipe, the qualities of lead joints, the superior quality of coal tar as a covering, etc., ensued, after which Mr. Adler moved that the thanks of the association be presented to Mr. MacHarg, and his interesting paper be published with the official proceedings of the meeting in the INLAND ARCHITECT.

The president announced that he was in receipt of the resignations of two members of the Executive Committee, Louis H. Sullivan, chairman, and John W. Root, and asked what the association wished to do in the matter.

Mr. Adler presented the following resolution:

Resolved, That this association is desirous of retaining the valuable services as members of the Executive Committee of Messrs. Sullivan and Root, and that it believes that their retirement from that committee will be detrimental to the best interests of the association, and that, therefore, the secretary be requested to transmit to these gentlemen a copy of this resolution, with a request that they reconsider the subject of this communication.

Mr. Patton: I second the resolution, as these resignations were caused by a resolution I presented at the last regular meeting, not intending to cast any reflection on those members of the Executive Committee.

The resolution was passed.

Mr. Adler stated that since the annexation of the town of Hyde Park, and other towns, to the city of Chicago, many complications in the erection of buildings had arisen, in regard to the inadequate building ordinance of the city. While the extension of the fire limits might work a hardship to the new districts, still it was unjust to those living in the city to be compelled to erect brick structures, while miles of frame buildings were being erected, forming a cordon around the city proper and a constant menace to it; and for this reason a new or revised building ordinance should be passed at once. While the Illinois State Association could not make the law, it should emanate from that body, and it would be well to secure a consultation with the different officials interested. Mr. Adler believed that certain limitations and restrictions should be made. For instance, while the extension of the fire limits to cover what is now miles of prairie might retard building, it might provide that frame buildings could be erected until one half of a street or a section had been built up, and then the territory could come under the fire ordinance.

Mr. Baumann stated that he was chairman of a committee appointed to assist Commissioner Edbrooke in formulating a new building ordinance. The following resolution was presented by Mr. Adler:

Resolved, That the subject of the revision of the building ordinance, of this city, be made the special order of business of a special meeting of this association, to be held February 18, at 1 o'clock, and that the secretary be instructed to inform the commissioner of buildings, the fire marshal, the board of underwriters and the real estate board, and invite them to participate in its deliberations.

Resolved, Also, that a lunch be served at said meeting.

The discussion which ensued showed that the members were largely in favor of active work in the direction of a correct building ordinance.

The meeting then adjourned to February 18, at 1 o'clock.

Chicago Real Estate Board.

THE fifth annual banquet of the Chicago Real Estate Board was given at the Grand Pacific Hotel, February 2.

The banquets of the board have become not only locally celebrated, but their fame in the way of elaborate menus and able speeches has gone abroad, so that this banquet was attended by many honored guests from other cities.

The menu was one of the best ever spread upon the tables of the Grand Pacific from its exceptionally fine cuisine. The entire arrangements were in charge of William J. Pierce, of the firm of Pierce & Ware, and were pronounced not only perfect in arrangement, but full of pleasing surprises.

Many visitors from other cities were present, among them being: Alexander D. Porter, of Boston, and Colonel John J. Priest and Edward S. Rouse, of St. Louis. In the afternoon these gentlemen were given a lunch at the Union League Club, and were otherwise entertained. The guests' table, at which were also seated the president of the Board, Henry L. Turner, Edward A. G. Goodrich, James P. Root, ex-United States Senator James R. Doolittle, Mayor Roche, Judge Gresham, ex-Governor J. M. Hamilton, Rev. M. Wolsey Striker, Lumley Iglehart, F. G. Gunther, W. D. Kerfoot, Martin J. Russell and Lyman Baird.

The table before these guests was decorated with cottages, with banks of flowers surrounding them, among the petals of which projected tiny electric lights, fed from a storage battery beneath the table, the effect being most unique and brilliant.

After discussing the excellent menu, President Turner arose and said: Since during my absence you conferred upon me the presidency, it is, perhaps, only fitting that I should say a few words of personal thanks, but had I been present that day I should have advised another choice.

President Turner then in his inimitable way made an address of welcome, in which he said:

As there is no pleasure more perfect, more undefined than that where friends gather about a bounteous board, so there is no sweeter grace than that of hospitality—a benediction to the guest, a blessing to the giver. It becomes my pleasant duty to welcome to our midst a number of sister cities. We are glad, friends, glad to meet you. All that we have is yours. We are a modest city. We have not much of which to boast in

presence of those who are so much richer in the good things a city loves than we. We have no ancient Boston Common, but we have a paleozoic common boss town government. We have no musical infant prodigy, but we have that prodigious infant, Frank Collier, who sang his love-songs to the queen. We have no Astors, Goulds, and Vanderbilts, but we have a common council with very wealthy tastes. We have no Anthony Comstock, but we have acres of nudity. We have no Coaching Club, but we have a gorgeous Black Maria. We have no "Dear Bunnie," but any of us can handle the kiss-me-quicks.

We have no *Philadelphia Ledger* with its sweet mortuary poetry, but we have a Robert Givins who can sing a lot buyer blind in half a second.

Said a burglar to his pal:

"Hello, Jim; how you gittin' on!"

"Tip-top."

"What'd yer crack last?"

"A real estate agent's."

"Git any swag?"

"You bet."

"What'd yer git?"

"Got away 'thout buyin' a house an' lot."

If that burglar had chanced to strike Bob Givins he'd a bought a whole auction and been converted before he got away.

We have no Fairmount Park or Wissahickon, but we've a Yerkes, and he's a slick 'un.

"I move," said an Irish alderman, on his return from Venice, "that yer honorable body import twelve gondolas fur the park."

"I move to amend," said his economical colleague, "that we buy wan male and wan faymale and trust to nature for the rist." Lord, gentlemen, if we could only import a female Yerkes what a stunning city we should have.

We have no monuments like Baltimore, but we have some elegant sites and 800,000 people to look at them. We have no base ball club as Detroit has, but we have a beautiful uniform. No bridge as has St. Louis, but we have a Bridgeport, whose mighty stench could bear an army o'er the Hellespont. We have, too, our board, the great Chicago Real Estate Trust—a trust that's never been bet-ayed, never been broken or dishonored, for there's more money in the keeping of it than is ever in its breaches (breaches).

We are, you see, a strange, a wondrous city. Fire cannot destroy, nor riots terrify us. And even should Lake Michigan arise in anger and strive to drown us with a tidal wave, we'd take the advice of the Irish water clerk to the Irish woman who complained that the water-pipes had "boost and drowned all her chickens":

"Dahm it! why don't you kape dooks, thin?"

But such as we are you're welcome in our midst. Welcome, welcome one and all! We're glad to have you here, and glad that you should see how glad we are.

The speeches of the evening were as follows:

Ex-Senator Doolittle responded to the toast, "Homestead Exemption from Taxation, and a Double Vote for the Occupant of a Homestead."

James P. Root talked about "Early Reminiscences" and told some funny stories. He said his talk might better have been on "Early Land-marks." Mr. Root said, among other things:

One would naturally suppose that the Committee of Arrangements believed me to be an early reminiscence, or, in other words, that I am one of the oldest citizens. I am. The committee was right, for I saw Chicago before half of you present were born. In the spring of 1837 I rode all the way from central New York to this city in a wagon. I remember seeing some cattle grazing in the sloughs about where the Grand Pacific Hotel now is, and I asked my mother if they were buffalo. Chicago was then a nondescript. It had no pavements, no parks, no boulevards, no theaters, no board of trade, and no real estate board, though everyone who had a lot to sell boarded every new comer, if he could find a board to float on. There was no harbor, and steamers anchored out in the lake.

Robert C. Givins is the humorist of the board. There was nothing humorous in his subject—"Ownership of Land as an Antidote for Communism"—but he made a speech that was full of hard sense, mingled with much that was humorous.

Martin J. Russell, editor of the *Herald*, responded to a toast, "The Press."

To the toast, "The State of Illinois," ex-Governor John M. Hamilton responded.

President Turner, in introducing Mr. Alexander S. Porter, of Boston, humorously alluded to "Hub" culture, and added that Mr. Porter would probably speak in Hebrew, but a Chicago real-estate man could easily understand it if there was any business in it.

The Weber Quartet sang two songs, which were well received, and Mr. Edward S. Rouse was introduced, a modest gentleman from the modest town of St. Louis. Mr. Rouse brought many facts to show that the progress of his city toward first place among the cities of the West was but beginning. The Weber Quartet sang a song full of local hits, entitled "Nineteen Hundred and Nine." Few local dealers escaped being punctured, and encore followed encore for many minutes.

Decidedly the feature of the evening was the unique menu, which was the creation of the genial chairman of the banquet committee, Mr. Pierce. This was a copy of the regular warranty deed, red ribbon, seal and all, and gave to the guests the menu and the toasts "to have and to hold." It was handsomely printed on parchment, and will be treasured by the guests as a memento of the board's fifth annual banquet.

Chicago Art Institute Exhibition.

THE Chicago Art Institute announces that works for the first annual exhibition of American art, opening May 26, will be received at the Art Institute, corner Michigan avenue and Van Buren street, until May 22. The list of works for exhibition should be written with all the required particulars on the annexed blank, and be sent to the secretary at the Art Institute by or before May 12. The Institute will bear all expense of transportation, and will pay the insurance premiums, asking that contributors name a moderate sum that will reimburse them in case of loss by fire. The secretary will have charge of the sales, upon which no commission will be charged. The public exhibition will begin Saturday, May 25, and close Saturday, June 30. Mr. J. W. Ellsworth has provided for an annual prize of \$300, to be awarded at the annual exhibitions to the best oil painting by any living American citizen, and not previously exhibited in Chicago or vicinity—no competitor to take the prize the second time. The Art Institute has provided for a second prize of \$250, to be awarded the next best oil painting by any living American citizen, not previously exhibited in Chicago or vicinity. The awards will be made by a committee of three, composed of Mr. Thomas B. Clarke, of New York; Professor Halsey C. Ives, of St. Louis, and Mr. C. L. Hutchinson, of Chicago, during the third week of the exhibition.

The value of the Art Institute as an art educator is constantly increasing, and the promoters are reaping a rich harvest for their laudable labors.

Association Notes.

AMERICAN INSTITUTE OF ARCHITECTS.—A. J. Bloor, 18 Broadway, New York, secretary.

WESTERN ASSOCIATION OF ARCHITECTS.—Fifth annual convention will be held November 16, 1888, at Chicago. Normand S. Patton, Chicago, secretary; W. L. B. Jenney, Chicago, secretary of foreign correspondence.

NATIONAL ASSOCIATION OF BUILDERS OF THE UNITED STATES OF AMERICA.—Second annual convention will be held the first Tuesday in February, 1888, at Cincinnati. Wm. H. Sayward, Boston, secretary.

ILLINOIS STATE ASSOCIATION OF ARCHITECTS meets the first Saturday of every month, at 15 East Washington street, Chicago. Annual meeting first Thursday in October, 1888. R. C. Berlin, Chicago, secretary.

WESTERN NEW YORK STATE ASSOCIATION OF ARCHITECTS meets second Tuesdays of October, February and June of each year. Annual meeting in October. Next annual meeting at Buffalo. W. W. Carlin, Buffalo, secretary.

WESTERN PENNSYLVANIA STATE ASSOCIATION OF ARCHITECTS.—E. O. Danse, Pittsburgh, secretary.

MISSOURI STATE ASSOCIATION OF ARCHITECTS meets at St. Louis, on the second Tuesday in January, 1889. E. F. Fassett, Kansas City, secretary.

THE ARCHITECTURAL ASSOCIATION OF IOWA, annual meeting, second Wednesday of February, 1889. Next meeting, August 14. F. D. Hyde, Dubuque, secretary.

THE ARCHITECTURAL ASSOCIATION OF MINNESOTA meets every other Tuesday at Minneapolis and St. Paul alternately. Annual meeting January 8, 1889. F. G. Corser, Minneapolis, secretary.

KANSAS STATE ASSOCIATION OF ARCHITECTS meets at Wichita on the third Tuesday of January, 1888. J. C. Holland, Topeka, secretary.

ASSOCIATION OF ALABAMA ARCHITECTS.—Annual meeting second Thursday in October. John Sutcliffe, Birmingham, secretary.

ASSOCIATION OF OHIO ARCHITECTS meets annually. Next meeting third Thursday in August, 1888, at Cleveland. F. A. Coburn, Cleveland, secretary.

ASSOCIATION OF TENNESSEE ARCHITECTS meets bi-monthly. Annual meeting third Thursday in February, 1888, at Memphis. T. L. Dismukes, Nashville, secretary.

ASSOCIATION OF TEXAS ARCHITECTS meets at Houston on the third Tuesday of January, 1888. S. A. J. Preston, Austin, secretary.

KENTUCKY STATE ASSOCIATION OF ARCHITECTS meets at Louisville first Thursday in each month. O. C. Wehle, Louisville, secretary.

LOUISIANA STATE ASSOCIATION OF ARCHITECTS meets first Wednesdays in May, August, November and February. Annual meeting in February. W. C. Williams, New Orleans, secretary.

KANSAS CITY SOCIETY OF ARCHITECTS meets Monday afternoon of each week, at 4 o'clock. Annual meeting second Saturday in April, 1888. F. B. Hamilton, secretary.

NEBRASKA STATE ASSOCIATION OF ARCHITECTS meets first Wednesdays in January, April, July and October each year. F. M. Ellis, Omaha, secretary.

WISCONSIN STATE ASSOCIATION OF ARCHITECTS meets first Monday of each month. Annual meeting first Monday after first Sunday in January. Howard Russell, Milwaukee, secretary.

BUFFALO SOCIETY OF ARCHITECTS meets first and third Tuesdays each month. W. W. Carlin, secretary.

THE CHICAGO ARCHITECTURAL SKETCH CLUB meets every alternate Monday at the club's headquarters, Art Institute. W. G. Williamson, secretary. Annual meeting, November 5, 1888.

CHICAGO CARPENTERS' AND BUILDERS' ASSOCIATION.

The annual meeting of the Carpenters' and Builders' Association, of Chicago, was held at the Builders' and Traders' Exchange, January 26, the meeting being adjourned from January 12 on account of the inclement weather preventing a full attendance at that time.

The meeting was called to order by Vice-President William Hearson, James John, secretary of the Exchange, acting as secretary.

The secretary reported a new membership of seventy-five, and the association finds, from annual dues, etc., in hand, \$600.

After considerable discussion regarding the proper interpretation of the by-laws relating to the suspension of members for non-payment of dues, the matter was settled by the passage of a resolution calling for the suspension of all members \$10 or more in arrears.

Four firms were reported suspended under the rule: Scheler & Stafford, F. D. Reynolds, Kohl & Kievlan, and Dixon & Peterson. C. G. Dixon, of this firm, is a Knight of Labor, and represented the "labor" party in the last state legislature.

A communication was received from Wm. Grace, who has been president of the association for the past year, but absent from the city almost the entire time. It was received and placed on file.

The election of officers resulted in the following for the ensuing year: President, William Hearson; vice-president, J. W. Woodard; secretary, James John; treasurer, Peter Kauff; directors, for two years, William Mavor, W. E. Frost and Samuel H. Dempsey; for one year, William Goldie.

In the election the desire of the association was to elect James John, secretary of the Exchange, secretary of the association. As he was not a member, a unanimous vote was passed making him an honorary member as long as he filled the office of secretary, after which he was elected.

In the reelection of the treasurer, Peter Kauff, the unanimous vote testified the association's confidence in that gentleman, who has filled that office of trust each year successively since the association's organization.

In voting for directors, the vote for the one year term tied between Francisco Blair and William Goldie, and Mr. Blair moved that Mr. Goldie's election be made unanimous, which was done.

The following addition to section 8 of the by-laws was presented, to be voted upon at the next regular meeting:

A committee of three members of the board of directors shall be appointed by the president to serve during the year, and audit the accounts of the secretary and treasurer at each annual meeting, and, if found correct, to sign their names to their annual report.

Several letters were received from different bodies of carpenters, asking for a committee of conference in regard to the work of the coming season. These were referred to the next regular meeting, February 9.

NEW YORK CHAPTER AMERICAN INSTITUTE OF ARCHITECTS.

At the annual meeting of the chapter, January 1, reports were received from Napoleon Le Brun, chairman of Committee on Examinations in connection with the city fire department, the Library Committee and the Executive Committee.

The following officers were elected for the ensuing year: President, E. H. Kendall; first vice-president, Geo. B. Post; second vice-president, C. W. Clinton; secretary and treasurer, A. J. Bloor; executive committee, N. Le Brun, F. A. Wright and *ex-officio* the president and secretary. Committee on Library and Publications: James E. Ware, Theo de Lemos and H. O. Avery. Committee on Examinations: N. Le Brun, R. M. Upjohn and R. M. Hunt.

EDINBURGH ARCHITECTURAL ASSOCIATION.

The usual fortnightly meeting of this association was held, January 11, in the Architectural Hall, 42 George street, the president, Mr. Hippolyte G. Blanc, in the chair.

After the usual preliminary business, a lecture on certain Scottish castles not described in the recent work on the castled and domestic architecture of Scotland, was delivered by Mr. Ross, architect. The lecture was illustrated by upward of two hundred drawings, including castles in all parts of the country, particularly in the west and southwest, such as Skipness, Loch Ranza, Portincross, Kilburn, Mugdock, Dunheath, Bardowie, and other castles on the Clyde and in the neighborhood of Glasgow. Skipness was described as being one of the most splendid specimens of military architecture in Scotland, and in a most perfect state of preservation, although dating from the thirteenth century. Certain minor castles on the Clyde, such as Little Cumbræ, Fairlie, Skelmorlie Law, had, it was pointed out, a great resemblance to each other both in size and appearance, some of their dimensions being identical, but their most marked similarity consisted in their internal arrangements of hall and kitchen, which characterized them as a group of buildings peculiar to the district. The more important castles in Ayrshire and Galloway, such as Loch Doon, Irvine, Penkill, Dalquhanan, Closeburn, Mochum, Dunskey, Rusco, Loch Naw, Kennure and Hills were illustrated. Special attention was directed to Loch Doon castle, which stands on a small island at the southern end of the loch. The castle is nearly circular in plan, consisting of eleven sides, the south side being about twice the length of any of the others. The whole is in a most appalling state of ruin, it having lately been attempted to bring down the south wall by removing the lower courses of masonry. The castle is of great age, probably dating from the thirteenth century, and merely as a picturesque feature in a wild and bleak district, and altogether apart from its historical associations, it is worthy of better treatment. Mochum, which has lately been restored by the Marquis of Bute, was referred to as a remarkable building, consisting of two distinct castles, separated from each other by about twenty feet, connected by a high wall. Along the eastern borders Cessford, one of the most massive piles in Scotland, was fully described, as well as Little Dean, Hutton, Innerwick, Lethington and Merchiston, the two latter being most interesting in themselves, having several architectural points of resemblance, and both having been the homes of celebrated men. Queen Mary's house in Gedburgh, Kirkhope and Oakwood towers, with various castles along the Firth, such as Blackness, Langapaus, Budge Castle and Bonhard were included among examples, while in Fife and Forfarshire, and as far north as Ackergill in Caithness, many examples were illustrated. As regards Queen Mary's house, the lecturer was of opinion, notwithstanding the doubts which have been expressed to the contrary by various writers, that it was within the bounds of possibility that the house was as old as the time of the unfortunate queen.

At the close a hearty vote of thanks was accorded to Mr. Ross for his paper.

WESTERN PENNSYLVANIA STATE ASSOCIATION OF ARCHITECTS.

The annual meeting of the Western Pennsylvania State Association was held at Pittsburgh, January 17.

The following officers were elected: President, Andrew Peebles; vice-president, George S. Orth; secretary, L. O. Dance; treasurer, Joseph Anglin; board of directors, Thos. M. Boyd, Joseph Stillburg and T. D. Evans.

The Western Pennsylvania State Association was started as a local organization at Pittsburgh, in February, 1886, and includes among its members most of the practicing architects of that city. The association has adopted the schedule of charges of the national associations, but have taken no steps toward affiliation, deeming it proper to regulate local affairs before seeking representation in the national body.

CHICAGO BRICKLAYERS' UNION.

At a meeting of the Bricklayers' Union, held in Greenebaum's Hall, January 20, the following Committee on Arbitration was elected for the ensuing year: Albert Vorkeller, president, Albert Buttan, Charles Householder, E. Goodwin and Thomas McNichols. Architect Donnellan, who prepared the plans for the proposed new quarters of the union at the corner of Peoria and Monroe streets, presented his bill for \$1,000, which he claims has been due for a year. A committee was appointed to consider the figures and report at the next meeting.

Our Illustrations.

Residence; Frank L. Wright, architect, Chicago.

Residence for Robert Gillham; A. Van Brunt, architect, Kansas City.

Tenement block for James Lovett, Omaha, Neb.; Sidney Smith, architect.

The Chronicle Building, San Francisco, Cal., Publication office of the Chronicle.

Store and office building, Kansas City, Mo.; James & James, architects, Kansas City.

State Experimental Farm School; L. S. Buffington, architect, Minneapolis, Minn.

Residence for Mrs. V. C. Thompson, Dearborn avenue and Delaware place, Chicago; Cobb & Frost, architects.

House for Chas. T. Clark, St. Louis, Mo.; Wm. S. Eames, and Th. C. Young, architects. Built of brick and Lake Superior sandstone, roof, red slate; cost about \$14,000.

PHOTOGRAVURE PLATES.

(Issued only to subscribers for the Photogravure edition.)

Residence of S. B. Dixon, Detroit, Mich.; Mason & Rice, architects.

Residence for E. W. Bangs, 469 N. State street, Chicago; Cobb & Frost, architects.

Residences, Reading road, near Oak street, Cincinnati, Ohio; Jas. W. McLaughlin, architect.

Residence for O. R. Keith, Prairie avenue, near Eighteenth street, Chicago; Cobb & Frost, architects.

Residence of J. J. Glessner, corner Prairie avenue and Eighteenth street, Chicago; H. H. Richardson, architect.

In our photogravure edition for August, 1887, we issued a plate of the residence of Judge Brown, Detroit, Mich., without giving the architect's name. We have since learned that Mr. William H. Miller, of Ithaca, New York, was the architect.

New Publications.

ELEMENTARY GRAPHIC STATICS AND THE CONSTRUCTION OF ROOF TRUSSES. By N. CLIFFORD RICKER. New York: Wm. T. Comstock.

This work has been before the public for a year or more; time enough has elapsed to enable one to pass on its merits. This we propose to do.

In judging properly of a work it is necessary to know for whom it is intended, whether for students or for practical men, that is, for those engaged in business. Students at schools or colleges usually take up a book and go regularly through it, studying it day by day, so that they have the connection of things in their head, and recollect the meaning of the symbols, etc. The practicing architect may use a book once and then not look, or need to look, at it for a year. When he does look at it he is, perhaps, in a hurry to find some particular thing or rule, divested of all extraneous matter and clearly applicable to the question in hand. The meaning of the symbols should be readily found and clearly and definitely defined, so that he who runs may read, and clearly understand, without shadow of doubt.

Though this book is intended for students, it will also be found useful to the practicing architect, much more so than might first be supposed.

The first portion of the work is taken up with the elements of graphical statics, which are given without any particular novelty, though expressed in a clear manner. The moment of inertia is treated of, and made as clear, if not clearer, than is usual. It is difficult for most people to grasp the idea as to what the moment of inertia is. However, it is not necessary to fully comprehend its import in order to use it for the solution of problems. The area of the inertia figure is recommended to be found by a planimeter, or by abscissas. A planimeter is scarcely ever to be found in an architect's office. A good way is to reduce the figure to an equivalent triangle, as mentioned in Trautwine's Pocket Book, but better described in Gillespie's Surveying.

The slopes of roofs are given by angles only. Protractors are not often used by architects. The slopes of roofs are always, or nearly always, given by their run and rise. It would have been well to have done so here, and better to have given both ways.

The method of moments is made very plain. It might be better, perhaps, if the figure of the trusses were given whole, on a larger scale, instead of separate drawings being made of the joints, but this is not important.

It would have been better to have used + to denote compression, and — to denote tension, as done by Stoney & Dubois, instead of the reverse. Because in practice compression members are often made of cruciform shape, and tension members of a rod (or tie). Similarity of shape helps the memory. Indeed, to a practical man it seems incongruous to use the shape of one section to denote where a different (or what might be called the reverse) shaped section is required.

Bow's notation, modified, is stated to be the best and most simple. To this we must most emphatically dissent. Bow's notation pure and simple is much the best. There is not a single figure in the whole book where it could not have been used, and where its use would not have been an improvement. It makes but little difference to an expert what notation is used, but to a student or one who uses a book or rule occasionally, it makes a great difference whether the notation can be readily understood and used or not. For most uses, we have never seen any notation equal to Bow's; it is both readily understood and used. Indeed, the difficulty with it would be to go astray. It can be applied to the most simple, as well as the most complex figure.

Problems are given with irregular loads on only the upper chord of trusses. Uniform vertical loads only are given for lower chord. The loads

on lower chord, as well as those on upper chord, may be irregular, both in amounts and in directions, no two of them being the same in any respect. A novice might, perhaps, presume otherwise.

In treating of what is termed the Fink truss, a truss where three unknown strains come together at one joint, a solution of the problem is given only for equal vertical loads at all the joints, the same as in all books we have ever seen on the subject. Yet it is not at all necessary that the loads should be similar either in amounts or directions in order that the problem may be solved graphically. We may, perhaps, treat of this further hereafter.

A chapter on the length of truss members gives trigonometrical rules by which the lengths of the members of many various forms of trusses can be calculated. This is a novel feature and may be a useful one. The actual lengths are generally found from the rise and run given on the drawings, by laying out the work in the workshop on a large scale, the full size if possible. This way will no doubt be followed when practicable, nevertheless it is well to have such rules as are given so that they can be used when needed.

A number of formulae are given, without demonstration or examples, which was to be expected from the title of the book. Although there is nothing peculiarly original about the formulae themselves, yet we know of no such compact and useful collection of formulae elsewhere. They are not the least merit of the work.

There is a table of average coefficients of materials given. The authorities therefor are not given. They do not agree in many cases with authors like Hatfield. However, we know that authorities differ, and we do not suppose that they lack justification.

A chapter is given on the determination of dimensions of truss members. The arrangement of the formulae is well adapted to the use of logarithms, and this we personally prefer, though we do not feel sure that most architects would do so. However, logarithms need not necessarily be used.

The chapter on detail of truss joints is also instructive although there are some things given about which we do not agree. In this chapter a statement is made that good brick masonry will safely resist a pressure of eight tons per square foot. What is meant is that brick masonry immediately under the truss will do so, and this is true. Whether a brick pier would carry that amount or not would depend on the height of the pier.

Wooden tenons are shown in some of the joint drawings. It would be better as well as cheaper to omit them. If anything of the kind is needed a spike or two will answer. A better fit can be made without the tenon than with it, and the wood around the mortise is not so likely to crush by pressure. The foot of the truss is bolted. It should be strapped. No reliance can be placed on what is called the resistance of indent to shearing. We have often seen the piece between indent and end of tie, split off before the truss members were put together. A bolster should be put at the foot of all large trusses.

The index is very lean. It might and should have been much fuller. There are also some typographical errors that should have been corrected.

We have taken a rapid glance through the work and noted our ideas thereon. We have tried to be candid, free and impartial in our criticisms, the more so as we believe that we appreciate its great merits. It is the only work that we know of that sets out the subject of graphical statics and truss work in a clear, lucid, and, so to speak, workable, manner to a noteworthy degree. Although it is primarily intended for students, all architects who take an intelligent interest in their profession should read it.

CATALOGUE No. 8, issued by William Willer, of Fourth and Cedar streets, Milwaukee, Wis., has been received. The edition is for 1888, and entitled the "Architects' and Builders' Edition." It illustrates and exemplifies the rapidly getting to be very popular Willer inside blind and screen, in a thorough and intelligible manner. To most architects and builders this unique style of window blind is familiar, and requires no description to make them acquainted with its merits. To those who have neither used or seen them it would be advisable to acquaint themselves with the claims of this blind and screen, and they may become satisfied they have found a good thing for their clients. A request to Mr. Willer will result in the receipt of this latest and revised catalogue and price list. We learn a large number of the architectural profession have given the Willer blind their indorsement by utilizing it in their work.

THE illustrated catalogue for 1888, of Messrs. Samuel H. French & Co., of Philadelphia, Pa., manufacturers and importers of builders' supplies, is received. It is a handsomely printed octavo book of over two hundred pages, containing more than four hundred artistically designed engravings, showing samples of their specialties in center pieces, brackets, column caps, corbels, keystones, cornices, frieze work, corner pieces, enrichments, mantels, grates, etc. Architects and builders will find the firm's catalogue for this year a great improvement over those of previous years, and, no doubt, may find many suggestions in its pages, as well as material adapted to much of their work. In a word, it is a good thing to have in an architect's and builder's office.

THE receipt is acknowledged of a fine catalogue just issued by E. C. Stearns & Co., Syracuse, N. Y. The book is handsomely bound, containing an unusually large and attractive list of door hangers, screen frames, clamps, vises, augers, and other hardware specialties manufactured by them.

AN important tablet of polished brass has been executed by Messrs. J. & R. Lamb, of New York, from design furnished by Mr. James G. Cutler, architect, of Rochester, for the Dean Richmond Memorial Library at Batavia, N. Y. It is oblong in shape and fits into the woodwork over the fireplace. The upper part is engraved with a rich band of ornamentation, in the central part of which is introduced the monogram of young Mr. Richmond, and below this the inscription, reading as follows: "This building erected A.D. 1887, as a memorial of Dean Richmond, Jr., by his mother, Mary E. Richmond." The lettering and ornament are deeply engraved and filled with colored enamels, and the work in position is very effective.

Mosaics.

THE Exposition building at Oshkosh, Wisconsin, a huge frame structure, was crushed in by the weight of snow.

THE Byrket-Hall Sheathing Lath Company, of Indianapolis, has opened a Chicago office at 28 Maller's building where samples of that material may be examined.

UNDER the style of George C. Mason & Son, architects, George C. Mason, Jr., of Newport, for three years secretary of the American Institute, has opened a branch office in Philadelphia. Mr. Mason senior commenced the practice of architecture at Newport in 1858.

THE Grant Monument Association, of New York, has issued a circular, addressed to artists, architects and sculptors, inviting competitive designs for a monument to be erected over General Grant's grave, to cost \$500,000. Prizes of \$1,500, \$1,000, \$500, \$300 and \$200 are offered. Information as to the rules governing the competition can be had by application to Richard T. Greener, secretary, 146 Broadway, New York.

MESSRS. PIERCE, BUTLER & PIERCE, of Syracuse, New York, manufacturers of the Florida steam and hot water heaters, have recently purchased a large foundry and machine shops at Geneva, New York, and have doubled the former capacity of their works. Their trade through the popularity of their heaters has spread from throughout the United States to Canada and England, and the increased capacity of their works was demanded by the rapid increase in sales during the past year.

IT is a well-known fact that our architects many times pay too little attention to the beautiful effects so easily obtained by the use of beveled glass and mirrors. In the way of decoration one can hardly imagine a more pleasing display of talent in this line than that in the vestibule and foyer of the new Haymarket theater (Flanders & Zimmerman, architects) executed by Mr. J. D. Roberts, 39 South Canal street, Chicago. All work from this factory is done under the personal supervision of Mr. Roberts, which fact accounts for the superior workmanship exhibited. Too much care cannot be taken in the selection of fine glass, and our architects would be well remunerated for a little time spent in looking at some of the excellent work of the above-named firm.

THE reception room of Mr. Joseph Twyman, illustrated in this number, is one of the five he now occupies as office, studio and workshops, in the McVicker Theater building. Mr. Twyman is well known as the color decorator of McVicker's Theater, acknowledged to be unexcelled by any playhouse in this country. The Fourth Presbyterian Church, corner of Rush and Superior streets, is a recent example of his work, into which he has introduced beautiful and novel treatments, conspicuously the two large stained glass windows in the transept. He is also the decorator of the Hotel Richelieu, which contains some of the handsomest interiors of any hotel outside of New York. Mr. Twyman has been prominent in his profession for many years as a leading spirit, not only in Chicago but in the entire Northwest, and has opened studios to do frescoing, papering, painting, stained glass, and a general decorating business. His success is already assured.

Obituary.

ARCHITECT WILLIAM M. BEATTIE died at Waco, Texas, February 5. He was formerly a resident of St. Louis, where his father, J. Beattie, is a prominent architect.

Railroad Notes.

"THE Burlington's No. One" is the quickest train from Chicago to Omaha and Denver. It has not missed being on time yet. For tickets apply at Palmer House, Grand Pacific Hotel, Union Depot, or at the Chicago, Burlington & Quincy city ticket office, No. 211 Clark street.

THE Chicago & Grand Trunk railway is very highly complimented by those who have tried the new cars. In fact, it is said that the new Pullman sleeping cars, specially constructed for the line, exceed in elegance and appointment any ever turned out of Pullman. Travelers seeking the most comfort for their money are sure to be satisfied.

THE great Rock Island offers choice of routes, either via Union Pacific, D. & R. G., A. T. & S. F., or Missouri Pacific, from the Missouri river. Rates as low as the lowest. Round-trip tickets on sale at frequent intervals. For tickets, sleeping-car berths, and full particulars call at ticket office, 104 Clark street, Grand Pacific Hotel, Palmer House, or depots on Van Buren and Clark and Twenty-second streets.

IT may not be generally known that while the price of the celebrated California excursions has been advanced \$20 by other lines, the Missouri Pacific is still selling round-trip tickets from Kansas City to Los Angeles, San Diego and San Francisco at the old rates of \$60 from Kansas City, \$72 from St. Louis, and corresponding prices from other points. These tickets are good for six months, with liberal provisions for stop-overs, for returning by different routes, and for extensions and side trips. The line runs through the charming Indian Territory and the state of Texas to El Paso, thence by the Southern Pacific, and is wholly free from storms and snow blockades. It is, therefore, a favorite with invalids. The next excursion train leaves Kansas City on the morning of February 17, 1888, or St. Louis by the Iron Mountain route, February 16, 1888. The Missouri Pacific and the Iron Mountain Railways are also selling excursions to all points in Texas at one fare for the round trip. Tickets good sixty days, with stop-over privileges both going and returning. For further information address H. C. Townsend, general passenger agent, 102 North Fourth street, St. Louis.

UTICA, Ill., on the "Great Rock Island Route," is the center of a very rich farming country, making it a good grain market. The same prices are paid as in the largest cities for all kinds of grain. A half million bushels of grain are shipped from the two large elevators here every year. The principal manufactories are the Sewer Pipe & Terra-Cotta Works, the

Fire Brick Works and the Cement Works. The pottery which is now building is an important step in the business interests of the town. Clay particularly adapted for making jugs, jars and all kinds of stoneware is abundant. The public schools are up to the standard in efficiency. A fine brick school building was built two years ago at a cost of \$5,000. It is two stories high, has basement, and contains six rooms with a capacity of seating 300 pupils. The scenery around Utica is magnificent. The town is situated in the valley of the Illinois river and to the north and south the thickly wooded cliffs tower up to a height of 150 feet. The famous pleasure resorts, Starved Rock and Deer Park, are near, Starved Rock being just across the river and a few rods east, and Deer Park about three miles south. Thousands of people from all parts of the country visit these places every month.

THE latest addition by the Chicago & North-Western railway to its already admirable train service is its new train between Chicago and Council Bluffs, which, on account of its quickened movement and the very advantageous connections which it forms for the Pacific coast, has been christened the "Overland Express." The make-up and movement of this train have been arranged with studious care to afford the greatest convenience and best service to the patrons of the North-Western. It is completely equipped with palace cars, in which are found all the most recent and approved devices for comfortable and even luxurious travel—supplemented by the perfect service for which the Chicago & North-Western dining-cars have established a national reputation. Commencing Sunday, December 18, it leaves Chicago daily at 7:30 P.M., and arrives at the Missouri river before the following noon, connecting with the fastest trains of the Union and Central Pacific railways for Denver and the coast (upon which new through sleepers are carried from the Missouri river to San Francisco and Los Angeles) greatly reducing the time of transit from Chicago to Denver and all Colorado and Pacific coast points. For information, time tables, and sleeping-car reservations apply at the ticket offices of the Chicago & North-Western railway, No. 62 Clark street, Palmer House, Grand Pacific Hotel, and passenger station, corner Wells and Kinzie streets.

Synopsis of Building News.

Aberdeen, Dak.—Architect O. C. Jewett reports: For J. S. Hazelton, hotel building, to cost \$22,000.

Augusta, Ark.—Architect B. J. Bartlett, of Little Rock, reports: For S. L. Ingalls, two-story frame residence, 50 by 62 feet; cost \$2,500.

Bloomington, Ill.—Architect W. H. Milner reports: Outlook fair. Two pretty nice church buildings are projected for this summer, and competitive drawings are now in hands of the judges. One is for the Baptist and one for the Methodist society. For Jas. Larkin, frame residence, 34 by 48 feet; cost \$3,000; projected. For J. K. Mason, addition to residence, 20 by 24 feet; cost 2,000; projected. For Grace M. E. Church, church building, 75 by 110 feet; cost \$20,000; projected. For O. F. Reeves, remodeling residence; cost \$3,000. For Dr. Crothers, remodeling residence; cost \$2,500; projected.

Breda, Iowa.—Architect M. Schnell, of La Salle, Ill., reports: For Rev. C. L. Schulte, brick and stone church, 56 by 140 feet; cost \$24,000.

Brookings, Dak.—Architects Lee & Roth, of Fort Smith, Ark., report: For L. Foster, frame dwelling, 30 by 45 feet; cost \$3,500; projected.

Canon City, Col.—Outlook good. There is considerable work in the way of small houses, repairing, etc., being done. The A. T. & S. F. R. R. is now running trains into this city.

Architect G. W. Roe reports: For the School Board, three-story stone addition, 77 by 48 feet, to the public school building. It is of modern design with an elaborate tower; cost \$16,000; projected; plans completed. For Canon City Coal Co., ten houses, 26 by 32 feet; cost \$900 each. Also coal breaker, elevator house, weigh-house, etc.; cost \$5,000. Boiler and engine house, 49 by 65 feet; cost \$1,600. Carpenter and blacksmith shop, 30 by 60 feet; cost \$1,200. All under way; Roe & McGrath, builders.

Centralia, Ill.—Architect W. H. Milner, of Bloomington, reports: Old National Bank, bank building, 27 by 60 feet; cost \$10,000; under way; W. B. White, builder.

Chicago, Ill.—Architect W. Ohlhaber reports: For Wm. Miller, three-story flats, 22 by 68 feet; cost \$6,000.

Architect A. F. Boos reports: For Geo. Schmoll, three-story stores and flats, 20 by 70 feet; cost \$10,000. For Jacob Becker, three-story flats, 41 by 49 feet; cost \$7,000. For John Schirra, three-story stores and flats, 25 by 78 feet; cost \$12,000. For A. F. Boos, three-story flats, 40 by 60 feet; cost \$8,000.

Architect J. L. Merriam reports: For D. H. Small, six two-story dwellings, 22 by 50 feet; cost \$24,000. For George Wilson, two-story residence, 25 by 42 feet; cost \$4,000. Architect Thos. Wing reports: For J. F. Whiting, three-story residence, 22 by 65 feet; cost \$9,000.

Architect C. E. Lohman reports: For Chas. Oberg, four-story flat building, 22 by 65 feet; cost \$6,000.

Architect C. H. Gottig reports: For Chas. Gottschalk, five-story malt house on West Division street. For the Brand Brewing Company, an ice house to cost \$25,000. For John Swenson, three-story store and flat building; cost \$15,000.

Architects Ostling Bros. report: For C. F. Blomstrom, three-story flat building, 50 by 80 feet; cost \$16,000.

Architect Fred W. Wolf reports: For F. J. Dewes, additions and alterations to brew houses; cost \$25,000.

Architects M. F. McCarthy & Co. report: For Charles Fry, seven-story apartment building, 56 by 161 feet, pressed brick, Wisconsin granite trimmings; cost \$160,000; to be commenced at once.

Architect August Bessler reports: For H. Ahlgrim, three-story store, flats and hall, 25 by 85 feet; cost \$10,000. For Wm. Beck, three-story flat building, 50 by 100 feet; cost \$22,000. For John Perlick, three-story store and flats, 25 by 75 feet; cost \$10,000. For Wm. Heinrich, three-story store and flats, 25 by 75 feet; cost \$10,000.

Architect P. W. Reuhl reports: For James Walsh, three-story store and flats, 30 by 66 feet; cost \$10,000. For E. Schoeppe, two-story flats, 22 by 54 feet; cost \$5,000.

Architects Lutken & Thislow report: For John Stack, two-story residence, 46 by 50 feet; cost \$10,000.

Cincinnati, Ohio.—Reported by Mr. Lawrence Mendenhall:

The building situation since my last report has not changed materially, the same hopeful feeling still prevailing. From what can be gleaned, contractors do not, I believe, apprehend any serious strikes, and the year promises exceedingly well. The architects are tolerably busy, but not ready to make full reports until the work is well in hand. The exposition buildings are progressing rapidly, and will be finished by the time specified.

Architects Hannaford & Sons are extremely busy in preparing working drawings for our new City Hall, and they are models for clearness and exactness. The bids are to be in by February 12. This building, when erected, will be a great addition to our city.

Architects Anderson, Drach, Rapp and Elzner have several plans under way, and will be heard from later on.

The Presbyterian Church, on Price Hill, is a beautiful piece of architecture, and reflects great credit upon Architect A. C. Nash.

The National Association of Builders will meet here this month, and matters of great importance will be transacted. The trade here will give delegates a grand welcome and a banquet.

Architect Wm. Stanton Robinson reports the following houses under way: For M. J. Kay, Esq., a frame house of eight rooms, pine finish and slate roof; cost \$3,000. For M. Z. Kerwick, a frame house of seven rooms, pine finish and shingle roof; cost

\$2,200. For R. J. Cresap, Esq., a block of four frame buildings, for stores and flats; cost not yet known. Prospects good.

Architects Buddemeyer, Plympton & Trowbridge report: H. Powell, double dwelling, first story brick, plastered, second story shingled, slate roof, at Westwood, Ohio. Ed. Johnston, dwelling, half timber, second story shingles, slate roof, at Bellevue, Ky. Mrs. Anna J. Lynch, dwelling, half timber, tile roof. Walnut Hills. J. Martin, dwelling, stone first story, half timber second story, slate roof, at Mt. Auburn, Jno. Weyand, dwelling, brick and shingles, at Loveland, Ohio. F. M. Coppock, double dwelling, first story half timber, second story half timber, plastered, slate roof, at Walnut Hills. R. Case, double dwelling, first story brick, second story half timber, plastered, at Walnut Hills. T. E. Williams, double house, shingles first and second story, gables plastered, at Walnut Hills. T. E. Williams, double house, first story half timber, second story shingles, gables plastered, slate roof. Walnut Hills.

Architect Theo. A. Richter, Jr., reports: For C. Rice, a double press brick front store and flat, 50 by 75 feet; three stories high, tin roof, with bathrooms and all modern improvements; also a brick stable, 15 by 50 feet, two stories high; total cost \$9,000. For J. H. Frey, a brick dwelling, 38 by 67 feet, of twelve rooms, slate roof and hardwood finish; also a brick stable, 24 by 33 feet, with asphalt floor, etc.; cost \$10,000. For F. Pagels, a five-story stone front store and flat building, 50 by 105 feet, with soft pine finish, tin roof, etc.; cost \$10,000. Prospects good, and has several sketches made already for parties contemplating building this year.

Architect Emil G. Rueckert reports: For Louis Hoffmann, an addition to his building, to be of brick, three stories high, with ten rooms, including large wine room, serving and pantry rooms; cost \$5,000. For Julius Stephany, a remodeling job of a four-story brick, new roof, cellar, entire new plumbing, etc.; cost \$5,000. For Henry Jostworth, Norwood, Ohio, a two-and-a-half story brick dwelling, tin roof, etc.; cost \$2,500. The Ahrens' Manufacturing Co. will build a five-story brick factory building, 43 by 69 feet, with tin roof, to cost \$15,000.

Cleveland, Ohio.—Architect A. Druiding, of Chicago, reports: For Rev. Joseph Koudelka, St. Michael's Catholic Church building, 160 by 80 feet; cost \$65,000.

Danvers, Ill.—Architect W. H. Milner, of Bloomington, reports: For Dr. Parkhurst, frame residence, 40 by 60 feet; cost \$3,500; projected.

Danville, Ill.—Architect W. H. Milner, of Bloomington, reports: For F. B. Shoaff, frame residence, 27 by 50 feet; cost \$3,000; under way.

Delavan, Ill.—Architect W. H. Milner, of Bloomington, reports: For L. W. Lawton, frame residence, 31 by 50 feet; cost \$2,500; projected.

Des Moines, Iowa.—Outlook is not very bright for building this season, especially during the early months.

Architects Hackney & Merrill report: For J. K. Macomber, frame dwelling, 30 by 50 feet; cost \$3,000; projected. For Hoyt Sherman, mausoleum, 14 by 20 feet, limestone; cost \$2,500; projected.

Duluth, Minn.—P. D. Armour & Co., of Chicago, have engaged J. C. Pierce to erect a cold storage warehouse, 80 by 175 feet, eight stories high.

Major H. Bell is having plans prepared for a ten-story office building. The Equitable Life Insurance Company will erect a \$300,000 office building.

Elkhart, Ind.—Outlook good, and with the accession of the Grand Trunk Railroad, which is now assured, several large factories and hundreds of residences will be erected this season.

Architects N. Weaver & Son report: For Richard Blackburn, two three-story brick and stone store buildings, 41 by 80 feet; cost \$8,000; plans under way. For Levi Chamberlain, two three-story brick stores, 40 by 120 feet; cost \$10,000; plans under way. For H. E. Bucklin, remodeling the Clifton House at a cost of \$25,000. For A. M. Tucker, three-story brick store building, 20 by 120 feet; cost \$5,000; under way. For Crowl Bros., three-story brick store building, 20 by 120 feet; cost \$5,000; under way.

For Maria Buddington, two-story brick store building, 40 by 95 feet; cost \$10,000; projected. For O. N. Lambert, brick residence; cost \$5,000; projected. For O. Z. Hubbell, brick residence; cost \$4,000; projected. For C. A. Strongreest, brick residence; cost \$3,000; projected. For Excelsior Starch Co., brick factory building, 80 by 250 feet; cost \$30,000; under way. For P. S. Steiner, livery stable, 20 by 165 and 20 by 65 feet; cost \$6,000; projected. For C. B. Hibberd, frame dwelling; cost \$2,000; projected.

El Paso, Tex.—Outlook good for this early in the season.

Architects Stewart & Carpenter report: For Wells, Fargo Co., three-story pressed brick, terra-cotta and stone bank building, 40 by 65 feet; cost \$25,000; under way.

Fort Smith, Ark.—Architects Lee & Roth report: Outlook for 1888 is good. No large work; perhaps the limit of cost will not exceed \$50,000 for any one building, unless unforeseen developments occur. For S. P. Day, two-story and basement stone front building, 50 by 100 feet; cost \$7,000. For Israelite congregation, frame, Moorish design, church building, 40 by 100 feet; cost \$6,000. For B. Wolf, frame residence, 42 by 60 feet; cost \$5,000; taking figures. For Jacob Brinoldi, frame residence, 30 by 40 feet; cost \$2,500; projected. Also superintending the construction of the Anheuser-Busch Brewing Co.'s buildings, after plans by E. Jungenfeld & Co., of St. Louis, Mo., pressed brick and stone, 35 by 150 feet; cost \$25,000.

Fort Worth, Tex.—Architect J. J. Kane reports: For R. E. Madlox, brick business block, 75 by 200 feet; cost \$20,000; under way; Heck & Baker, contractors. For D. Norton, brick business block, 25 by 90 feet; cost \$5,000; Heck & Baker, contractors. For Geo. L. Gause, brick business block, 80 by 100 feet; cost \$12,000; under way; Townsend & Lusher, contractors. For M. L. Holt, brick residence, 48 by 72 feet; cost \$5,500. Stone church, 70 by 136 feet; cost \$75,000; projected. Stone church, to cost \$10,000; projected. Also a number of small dwellings, etc., ranging in cost from \$1,000 to \$3,000.

Gaines Station, Mich.—Architect Claire Allen, of Ionia, reports: For School Board, two-story brick and stone school house, 58 by 66 feet; cost \$4,000; Price & Knisley, of Detroit, contractors; work not yet commenced.

Grand Ledge, Mich.—Architect Claire Allen, of Ionia, reports: For Peterson & Babcock, block of three stores, stone, plate glass, galvanized iron, etc., 75 by 80 feet; cost \$11,000; contract not let. For W. R. Clark, two-story stone residence; cost \$3,000; not let.

Hawatha, Kan.—Architects Schrage & Nichol, of Kansas City, have prepared plans for a \$50,000 court house to be erected.

Joliet, Ill.—Architect H. Boehme reports: For A. C. Clement, three-story and basement building; cost \$10,000; contract not let. For E. C. Hager, remodeling residence; cost \$2,000; not let. For J. E. Henderson, remodeling residence; to cost \$2,000; not let. For A. K. Clark, dwelling; cost \$2,500; not let. For Joseph Stevens, double two-story building; cost \$5,000; not let. For W. G. Wilcox, dwelling; cost \$3,000; not let. For Judge Garney, dwelling; cost \$2,000; not let.

Kansas City, Mo.—Architect C. B. Lakin reports: Prospects for the coming season are very good. For W. W. Perkins, three-story brick flat building, 75 by 60 feet; cost \$10,000; projected. For J. J. Green, two-story brick tenement block, 43 by 128 feet; cost \$18,000; projected. For J. Clark, two-story brick residence, 40 by 42 feet, slate roof; cost \$8,000. For W. C. Hunt, two-story frame residence, 30 by 50 feet; cost \$5,000.

Lake Odessa, Mich.—Architect Claire Allen, of Ionia, reports: For E. E. Wager, two-story frame dwelling; cost \$3,500; not let.

Lemont, Ill.—Architect H. Boehme, of Joliet, reports: For Mathew Warner, residence; cost \$5,000.

Little Rock, Ark.—Architect B. J. Bartlett. For C. B. Clark, two-story brick residence, 64 by 55 feet; cost \$7,000.

Log Bridge, Ill.—Architect H. Boehme, of Joliet, reports: For Rev. Father Bollmann, remodeling church; cost \$4,000.

Manhattan, Kan.—Architects Schrage & Nichol, of Kansas City, have prepared plans for a \$75,000 female seminary to be erected here.

Minneapolis, Minn.—Architects Orff Bros. For A. McCloud, double three-story house, to cost \$1,000.

Architect W. H. Hayes. For Andrews Presbyterian Society, church building, to cost \$30,000.

The following permits have been issued recently: John Estagen, double two-story store and dwelling; cost \$10,000. R. L. Berghund, three-story stone store and flats; cost \$20,000. J. A. Ridgway, two-story frame dwelling; cost \$8,500. De Soto Lumber Co., frame planing mill; cost \$14,000. J. F. Cullum, six one-story brick stores; cost \$9,000. A. Bergman, two-story brick veneer dwelling; cost \$9,000. N. A. Fræburg, four two-story frame dwellings; cost \$12,700. H. G. Darrow, two-story frame dwelling; cost \$5,000. Webster & Hoyt, two two-story frame dwellings; cost \$16,000. Frank E. Little, four-story brick and stone warehouse; cost \$50,000. Wm. Donaldson, five-story brick and stone building; cost \$200,000.

Morris, Ill.—Architect H. Boehme, of Joliet, reports: For L. Gebhart, two-story and basement double store building; cost \$10,000.

Nashville, Tenn.—Architect Geo. W. Thompson. For Wm. Duncan, four-story hotel building, 105 by 128 feet; cost \$50,000.

North Branch, Mich.—Architect Claire Allen, of Ionia, reports: For the School Board, two-story brick and stone school house, 58 by 66 feet; cost \$7,000; to be commenced in spring; contract not let.

Omaha, Neb.—Architect Sidney Smith reports: Present condition and outlook very good. A large number of new buildings are talked of. For Chas. F. Manderson, four-story brick and stone store and flat building, 66 by 60 feet; contract ready to let. For Mardis Bros., three-story brick and stone store and flat building, 60 by 88 feet; cost \$35,000; contract ready to let. For James I. Lovett, three-story brick and stone tenement block, slate roof; cost \$20,000; contract ready to let.

Savannah, Ga.—Architect J. J. Nevitt reports: For Episcopal Society, Orphans' Home building, Stony Point natural cement brick, with artificial stone trimmings; cost \$16,000; John R. Easton, mason; R. N. Stunt, carpenter. Remodeling First Regiment Armory, frame building; cost \$6,000. For J. P. Germain, remodeling residence; cost \$2,500. Episcopal church building, frame; cost \$2,000; at Chetrom, Fla.

Sioux City, Iowa.—Architect E. W. Loft reports: For School Board, a \$20,000 school building.

St. Louis, Mo.—Architect A. Beinke reports: For Chris. Von der Ahe, two-story store and flat building and two story dwellings, 97 by 150 feet; cost about \$30,000. For Haupter & Eckhoff, three-story factory building, 50 by 112 feet; cost \$12,000. For W. H. Neidringhaus, two-story residence, 36 by 40 feet; cost \$5,000.

Architect Chas. F. May reports: For Aug. Bruegemann, block of five two-story dwellings, 90 by 63 feet; cost \$15,000.

Architects P. F. Meagher & Son report: For C. Crevling, two-story carriage repository, 50 by 150 feet; cost \$5,000. For J. L. Isaacs, two-story residence; cost \$5,000.

Architect J. B. Legg has prepared plans for A. A. Eddy, for a three-story flat building; cost \$10,000.

Topeka, Kan.—Architect Seymour Davis reports: For Wm. C. Knox, four-story and basement office building, 50 by 130 feet; cost \$40,000; not let. For Central National Bank, four-story and basement office building, 25 by 150 feet; cost \$60,000; contract not let. For J. E. Frost, frame residence, 46 by 50 feet; cost \$10,000; contract not let. For ex-Governor S. J. Crawford, four-story and basement business block, 50 by 100 feet; cost \$35,000; under way; Henry Bennett, builder. For C. H. Kendall, three-story business block, 25 by 150 feet; cost \$10,000; contract not let. For T. B. Mayo, frame residence, 40 by 48 feet; cost \$800; under way. For Sisters of Bethany, addition to college building, 200 by 40 feet; cost \$50,000; contract not let. For W. T. Clark, stone and frame residence; cost \$5,000; contract not let. For P. L. Soper, frame residence; cost \$3,000; T. H. Stevenson, frame residence; cost \$3,000; contract not let. For a Boston syndicate, stone and frame hotel building, to cost \$75,000; contract not let.

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PROPOSALS.

NOTICE TO ARCHITECTS.

Architects will submit plans and specifications to build a court house in the city of Lincoln, the county seat of Lancaster county, Neb. Said plans and specifications will be filed with the county clerk on or before noon, February 21, 1888.

Said plans and specifications are to call for a building, including plumbing, gas fitting and steam heating, not to cost more than \$170,000.

The county commissioners of said county reserve the right to reject any and all plans and specifications that may be submitted.

No compensation will be allowed for plans rejected.

Architects will carefully prepare estimates of cost on the entire work in detail, so it may be fully understood.

For further information address County Clerk.

By order of the Board of County Commissioners.

O. C. BELL, County Clerk.
Lincoln, Neb., January 20, 1888.

COURT HOUSE.

[At Liberty, Ky.]

Up to 12 o'clock noon, 5th day of March, 1888, proposals will be received for the erection of a new Court House at Liberty, Casey County, Ky.

Plans, specifications, etc., are on file at the office of the county clerk, at Liberty, Casey County, Ky., also at the office of the undersigned at Louisville, Ky.

The right is reserved to reject any or all proposals.

McDONALD BROS., Architects.
Bull Block, Fifth and Market streets, Louisville, Ky.

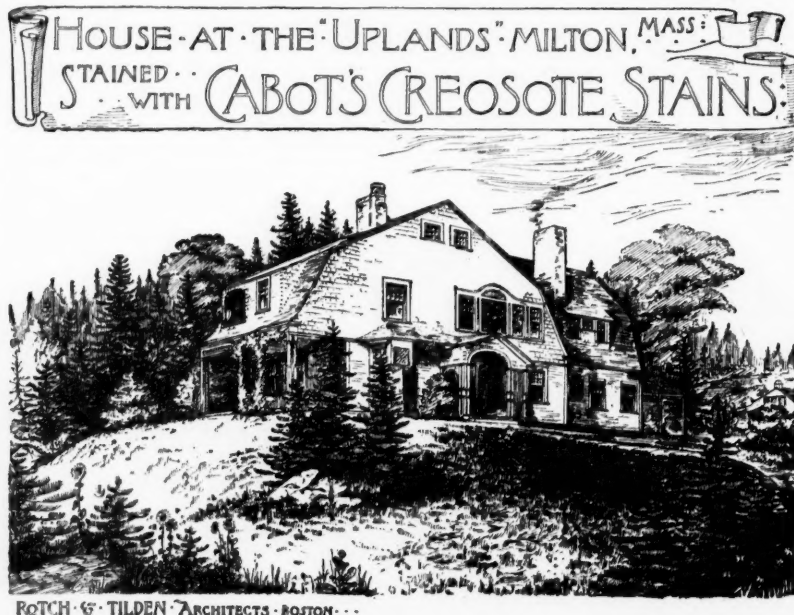
TOWN HALL.

[At North Kingston, R. I.]

Sealed proposals will be received at the office of William Gregory until 12 o'clock, M., of the 27th day of February, 1888, for the carpenter and mason work required in the construction of a brick town hall for the town of North Kingston, R. I., to be erected in the village of Wickford.

Plans of the building may be seen and any information concerning the same may be obtained on or after Tuesday, January 31, by applying at the office of William Gregory, Chairman of the Building Committee, Wickford, or at the office of Edgar B. Peck, architect, No. 5 Custom House street, Providence, R. I.

The right to reject any or all bids will be reserved.
WILLIAM GREGORY,
GEORGE A. SPINK,
WALTER RODMAN,
Building Committee.

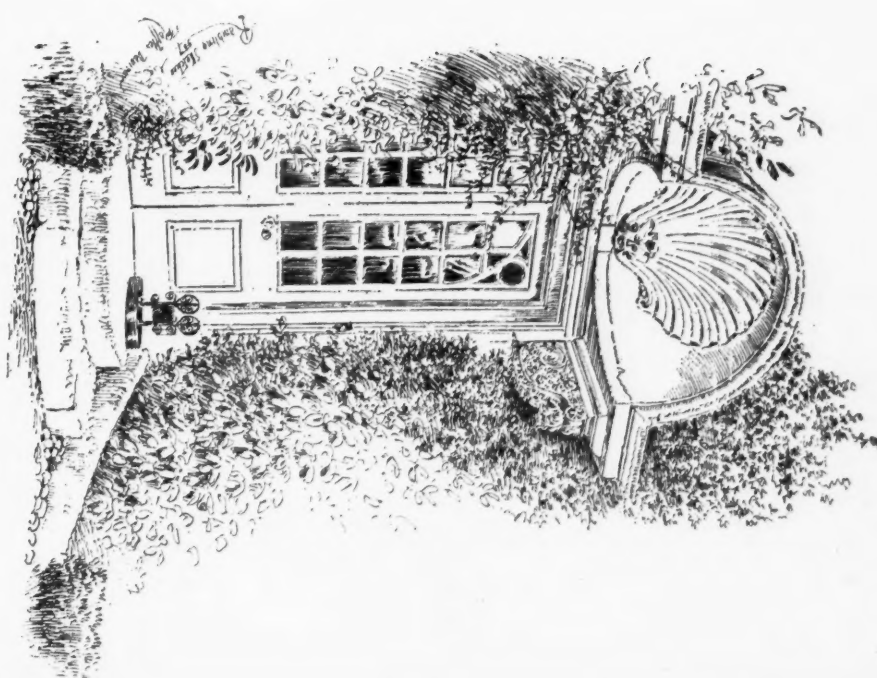
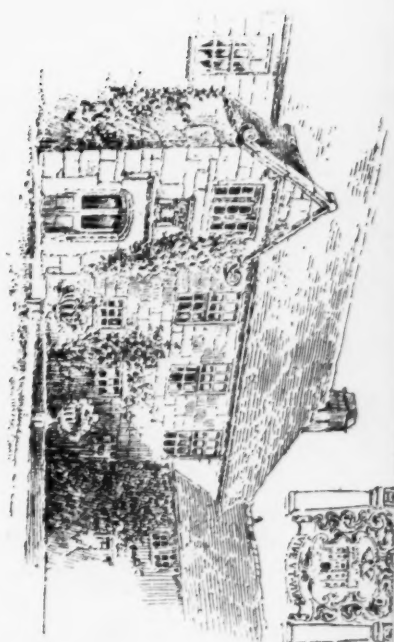
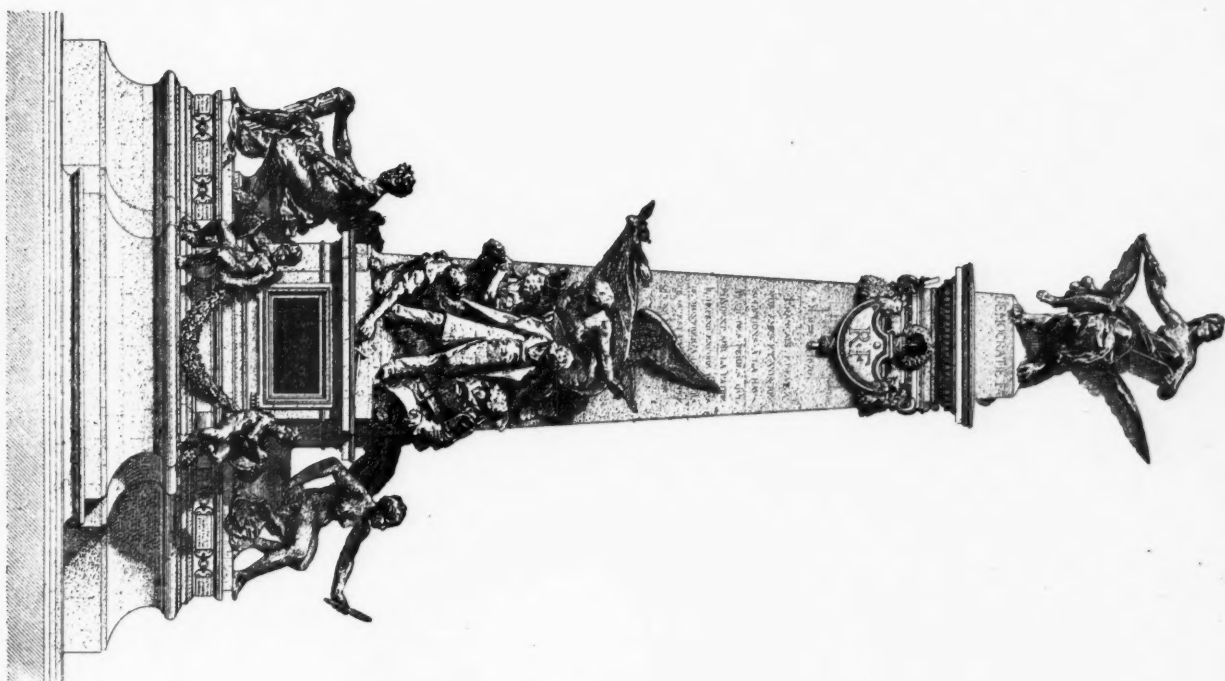
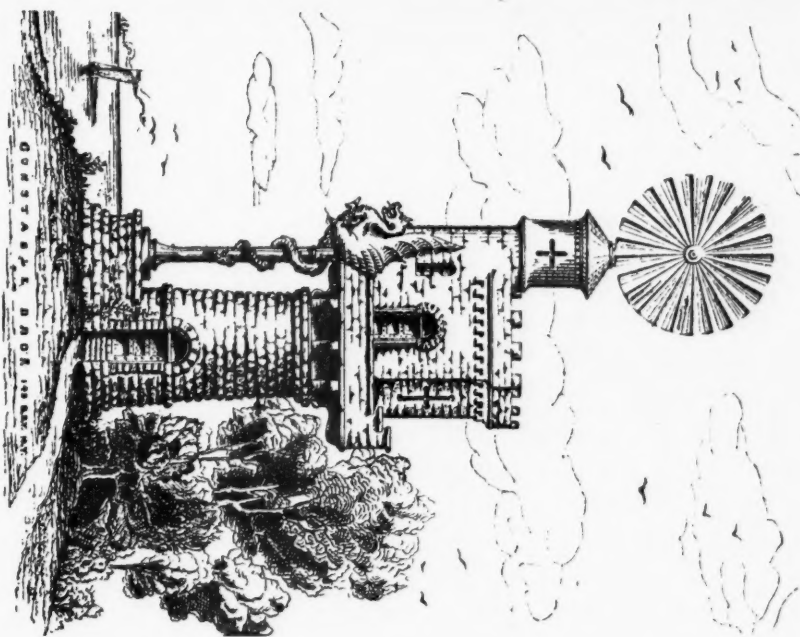
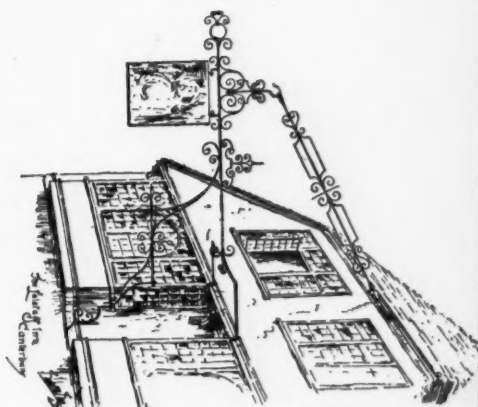


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