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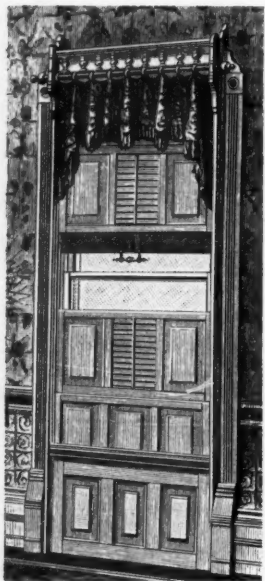
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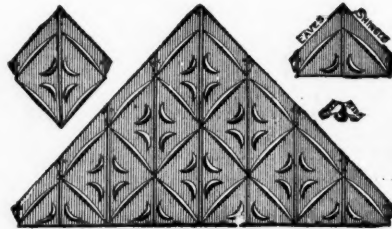
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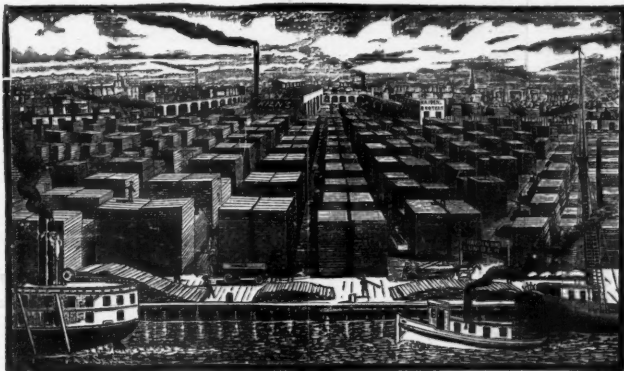
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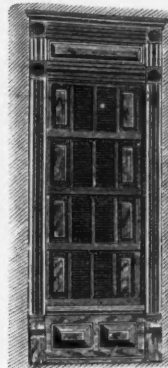
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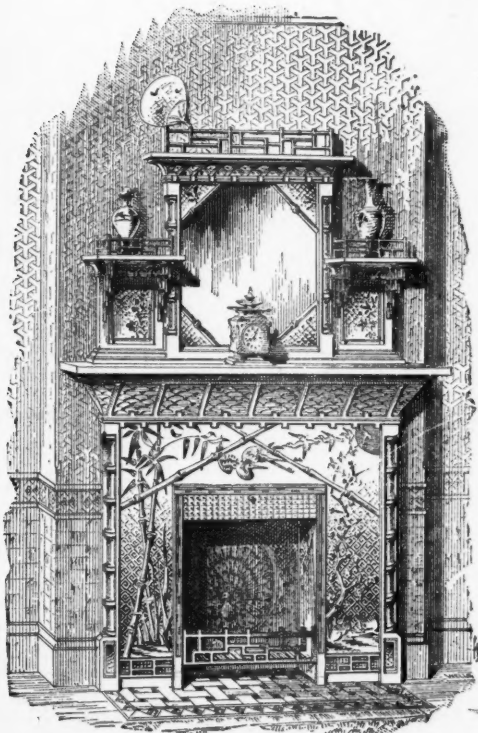
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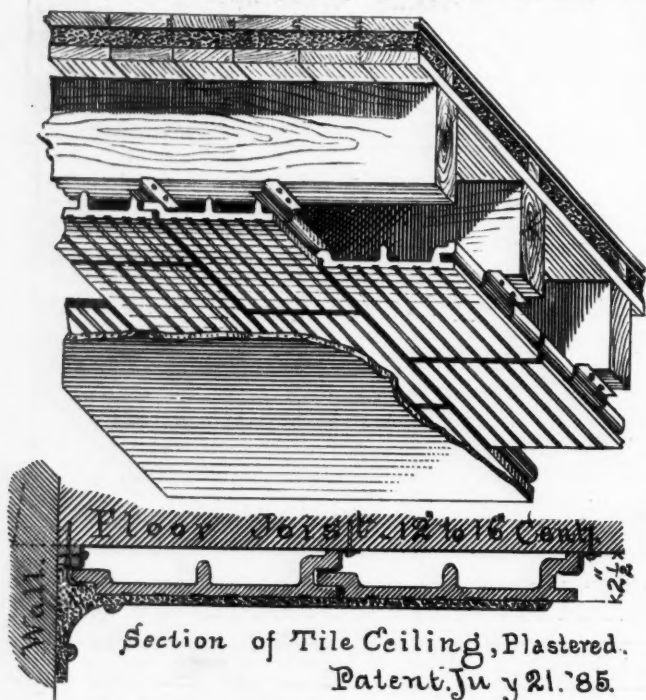
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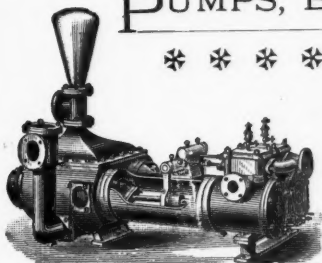
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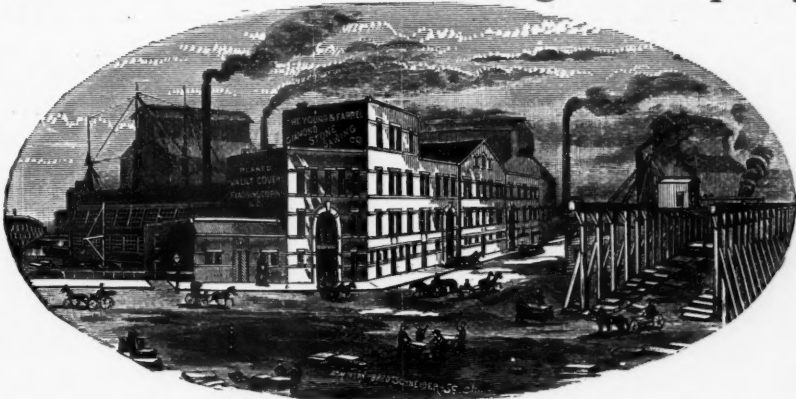
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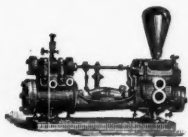


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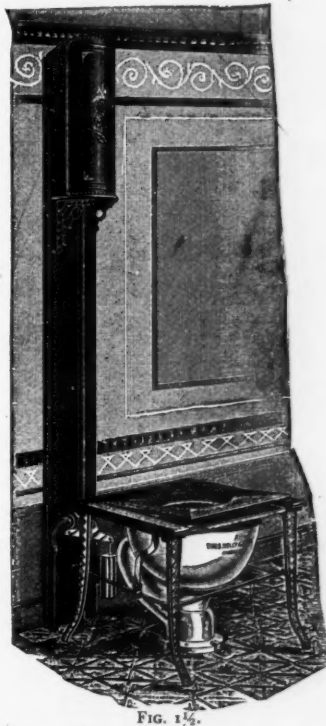


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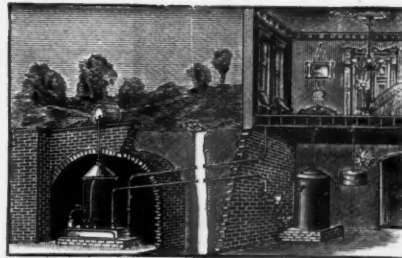
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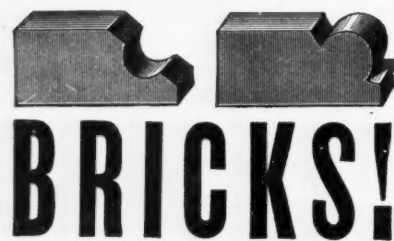
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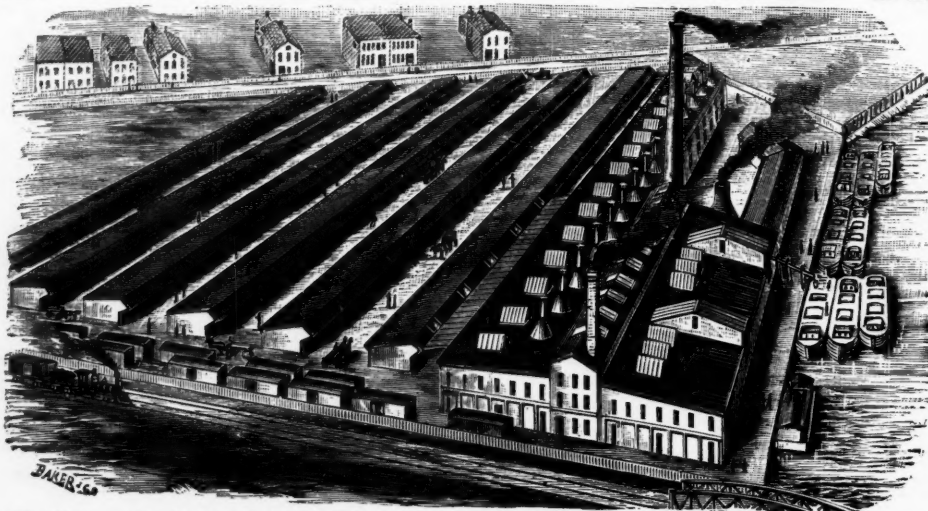
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THE INLAND ARCHITECT AND BUILDER.

Vol. VII.

No. 1

FEBRUARY, 1886.

THE INLAND ARCHITECT AND BUILDER

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INDEX for 1885 will accompany the *Intermediate News Number* of this month, which will also give directions for binding THE INLAND ARCHITECT AND BUILDER.

WITH this number the subscription price of THE INLAND ARCHITECT AND BUILDER becomes \$3, which includes the *Intermediate News Number* as announced two months ago.

THE architectural exhibit of the Salmagundi Club, at New York, has, of course, been an object of very considerable interest to architects throughout the country. There has probably been no such general exhibit held in this country before; general in the sense of the widely diverse elements which were represented. It was, therefore, possible for the visitor to form a moderately accurate estimate through the drawings exhibited of the characteristic tendencies of the work now being done in various American and several foreign cities. Speaking broadly, the widest difference between eastern and western work is what we would expect it to be in the quality of finish. Not only did the drawings themselves betray higher culture in both the draughtsman and the designer, but the designs themselves have been considered with greater care and in a more critical spirit. This has, of course, begotten a much more homogeneous grammatical expression and a vastly superior delicacy of rendering, the last quality being noticeable in the drawings as well as in the designs. In these respects the drawings exhibited by eastern architects are very closely allied to their British compeers. The work of western architects, as has been intimated, certainly exhibits haste and crudity, both in design and in the drawings; the designs are generally more or less incoherent; the qualities of refinement and finish are sadly lacking, and the mere grammar of design is often treated with contumely.

YET, in spite of these obvious defects, to a dispassionate critic in much of the western work there is strongly manifested an element of vitality greater upon the average than in the designs exhibited by eastern architects. This, it will readily be seen, is a thing to be expected. The very

crudities are manifestations of a stress of conditions so vigorously operating about the designers that the architect's solution of them is frequently full of a certain vitality and power which in those of the more critical and fastidious eastern architect is frequently somewhat sacrificed. In other words, the solution seems to be very closely connected with the problem, or, if one might so express it, the confluent about it being free as it is from those artificial interventions resulting from greater leisure, less strenuous environment, and possibly less of the cultivation of the schools. Probably something of this essential difference will disappear as the conditions of different parts of the country become more similar. This, again, is to be expected, and yet to those who live in the West it seems probable that similar differences will continue to exist. Architecture, after all, is so widely and immediately influenced as our other departments of creative art, by the conditions and practices of given localities rather than the formulation of schools that it will not be a source of surprise if it is in the West that the American architecture will continue to take upon itself newer and more vital forms, and continue to widen the distance between itself and the traditions of presently accepted architectural practice.

IN its issue of the 30th ult., the *American Architect* publishes an inquiry from architects whose bill for services is disputed, and advises them in reply, to go to their client and show him "the actual amount of time and money expended on the work," etc. While concurring in general with the advice given, we must emphatically demur to the part we have quoted. We think our contemporary has inadvertently nodded, just as Homer is said to do occasionally, by assuming that the value of professional service has any necessary or customary relation with "the actual amount of time and money expended on the work," or by advising an architect to employ such methods of convincing a client. This assumption is false, mischievous and wholly unwarranted; but it is plausible and is a favorite plea with clients and their lawyers when an architect's commission is to be disputed. Unfortunately not a few architects themselves are unable to detect its fallacy and give it a reluctant assent, while inwardly conscious of its unfairness. Therefore we desire always to emphasize in the most unmistakable way the broad truth that in professional service the amount of time spent is no measure of value, but on the contrary the two very generally stand in inverse ratio, i. e., the more quickly the duty is performed the more it is worth.

IF a dentist draws a tooth in a second, or a surgeon deftly performs an operation in a few brief minutes, the patient is not apt to complain of the little time it took. Likewise with artists, sculptors, lawyers and all other professional men; the time spent is apt to be in inverse ratio with the skill of the practitioner, and is something with which the client has no concern whatever. An architect may at one time sketch and erase, sketch and erase for hours over a bit of detail before it will suit him, while at another time a happy thought will occur at the outset and it will be drawn in a few minutes. Very likely the latter design will be more brilliant, less labored than the former which took so much longer. Shall the owner pay less for it because it took so little time to make it? Where superintendence is included in the service there might appear at first to be less objection to estimating the

amount of time given, but even here it is difficult to value an architect's time by the hour. All of this may be avoided by adhering to the schedule of the American Institute and the Western Association. Beside, very few if any architects keep accurate memoranda of the time spent on various jobs, and it would be difficult and troublesome in many ways to do this. Moreover, if it were done and such records were brought into court they would only serve the purposes of a client's attorneys in their scheme of valuing an architect's service by the day and hour just as they would that of a journeyman mechanic or a day laborer.

SOME months ago THE INLAND ARCHITECT created quite a stir among certain of its contemporaries by editorial remarks upon the sometimes questionable advice of enthusiastic sanitarians and sanitary enthusiasts, who, in their haste to add pipe to pipe, and fixture to fixture, appear unmindful of the fact that every new complication not only increases the first cost of plumbing apparatus, but makes it the more difficult to keep in order. In the vast majority of buildings a reasonable cheapness and the utmost simplicity of plumbing are indispensable to its insertion at all. There is a most inviting field now open for sanitary engineers who will apply their talent in this direction. The world needs and must have an arrangement which, with ordinary care, will answer the most essential requirements of hygiene, while combining the merits of the utmost automatic simplicity, and a cheapness which will lead to its general adoption and to its construction of good materials, without scamping, to reduce excessive cost. In harmony with our remarks, we note in Secretary Treherne's annual report to the Architectural Association of Minnesota (see January number of INLAND ARCHITECT), that a special committee appointed to consider the subject of trap ventilation and fresh air inlets to drains, reported adversely to the former, declaring it to be of "only temporary value," and that "systems of plumbing can be so arranged and proportioned as to do away with such special ventilation by comparatively simple precautions," etc. The arguments for and against trap ventilation need not here be considered. It must suffice to remark, in general, that the conditions which obtain in experimental plumbing apparatus with clean water, clean pipes and new fixtures, may differ in important regards from those apt to exist in actual experience, and, in particular, that trap ventilation has never obtained more than a limited employment among practical constructors, partly because of its cost, no doubt, partly from a mistrust of its real utility, and partly because there was no convenient method of testing its operation after it was put in.

A PRINTED circular has been received from the Boss Stone Masons' Association, of St. Louis, stating that that body has "unanimously resolved that in future no lump bids shall be given, but all work should be accepted only per perch. This resolution shall be in force from and after February 1, 1886." The syntax, as well as the sentiment, is original with the boss stone masons. In St. Louis the custom largely obtains of giving the whole contract for a house to one party, generally a carpenter, who engages to build it, "according to plans and specifications" for a stated sum. This is called a lump bid. The building contractor in turn seeks from the masons, brick layers, plasterers and other tradesmen lump bids for their respective portions. With the more competent "bosses" this arrangement works well enough, but not all who aspire to do business as masonry contractors are able to take off the quantities correctly from a set of plans. Such parties are, therefore, exposed to risks which they would avoid if the responsibility of estimating

were assumed by someone else and they were only required to name a price per perch. This class of contractors would seem, from the above resolution, to control the St. Louis Stone Masons' Association.

WERE mechanics more disposed soberly to consider in advance the probable results of a line of policy, their votes and "unanimous resolves" would carry more weight than they do. If an attempt is made to carry out this resolution of the St. Louis boss masons it is likely to prove an afflicting apple of discord in their association. Prohibited from making lump bids the only chance for a discrimination among bidders will be in the price per perch, and the consequence will be reckless undercutting, in spite of all the efforts of the association to sustain uniform rates. Farther, could the rates and the resolution be equally maintained, there would be no occasion for bidding at all since every man's figure would be the same. In that case the leading masons would get nearly all the work, there being so much less risk in dealing with them and no pecuniary inducement to employ inferior men. For these and other reasons, therefore, this resolution seems likely to encounter the fate of similar attempts in the past, unanimously adopted only to be as unanimously forgotten when actual competition for work opens in the spring.

A PRINTED circular has been received from A. & B., stone carvers, who desire, properly enough, to inform "friends and patrons" that they have formed a partnership for the transaction of business, and will take special care, etc., with work intrusted to them. But, most unfortunately for their purpose, to secure the good will of architects, they add an offer to "allow—per cent to architects for all work direct from their offices under competitive bids." As these are evidently novices in dealing with architects and have, no doubt, sinned unwittingly, we refrain from holding them up to public opprobrium by printing their names, as we should be very apt to do under other circumstances. But the occasion is a good one for admonishing these parties, and all others, that the taking of commissions by an architect from a contractor, material man or from any other person interested in a building beside its owner, is an act of a gross professional misconduct substantially on a par with embezzlement.

THE making of such offers as this to an architect is, therefore, in effect as insulting as would be a proposition that he should rob his client outright. An architect is not a solicitor who may be engaged to introduce this or that specialty to favor this or that contractor on any ground except intrinsic merit. On the contrary, his position is that of an expert, confidential adviser, who devotes his professional knowledge and skill exclusively to the benefit of his client. In every case his recommendation of this or that apparatus, or of this or that workman, will depend solely upon the question which is best for the owner in each particular instance. An honest architect selects in every case what he considers best for the owner on its merits alone. He wants no commission from makers or dealers to influence his decision, and anyone who comes with such an offer simply exposes himself to being metaphorically if not actually kicked out.

THE city of East Saginaw, Michigan, wants a new city hall, to cost one hundred thousand dollars, and being plainly mistrustful of the ability of any single architect to plan a building of such unusual size and importance, it must have the benefit of a combination of talent and calls for a competition. Five architects will be invited to wrestle with

this problem, one of whom is to be awarded the work at the usual commission, which looks fair enough, and the four others are to sell, grant and convey their plans in toto to the committee for just one hundred dollars each, an arrangement which is expected to stimulate each architect to the utmost pitch of exertion lest he should be one of the four. The natural elation of the successful architect, however, will be somewhat chilled by a requirement for him to give bond that the plans, specifications, etc., shall be faultless and that he shall pay the cost of any extra work himself. Unfortunately, there is no reason to doubt that the city of East Saginaw or any other city, town or village in Michigan, or anywhere else, can easily find architects enough to accept terms as ignominious as these or worse. The demoralization which the practice of competition has wrought and daily perpetuates in this profession has been equally destructive to enlightened self-interest and self-respect.

BUT after all the most interested party is not the architects, who are concerned only to the extent of a five per cent commission, but the city of East Saginaw, which is to put up the one hundred thousand dollars. The first question, therefore, should be whether it is likely to get as much for its money through competition as if it were to select a responsible architect at the start and place the whole thing in his charge, just as people do with lawyers or doctors. This is the regular way of dealing with professional men; no sane man would think of any other in law or medicine, and a little inquiry will show that it has been as generally satisfactory in architecture, while competitions rarely fail to disappoint their promoters. How do the East Saginaw commissioners expect to decide which is the best plan? Are they experts in architecture and able to discriminate in technical matters of construction, strength of materials, architectural proportion, appropriateness of design, etc.? Can they judge from the plans how adequately or inadequately the various parts of a building will be lighted, heated and ventilated? Can they correctly conceive from the geometrical drawings just how the building will look when erected, the varying projections and recesses, or will they depend wholly upon the caprice of the artist who furnishes the perspective?

THEN how will they judge of the relative cost of the different designs? In short, what grounds have they for any assurance that, after poring over the five sets of plans, elevations, sections, perspectives and specifications till their eyes are dim, they will not finally adopt the very one which, could they correctly foresee the effect of the building when erected, they would unanimously reject as the most ill arranged, extravagant and unsightly of all. Possibly they may be discreet enough to call in an expert, but if his advice is to be depended on he must be of sufficient ability to design a suitable city hall himself, and must be adequately paid for his services. To his fee will be added the four hundred dollars which are to compensate the luckless "other four" for their designs and the five per cent commission to the fifth architect, who by agreement is to be chosen on the merits of his plan alone, although, individually, he may be the very one of the five who has least experience in such work and would be the last choice of every one of the committee. When now we consider that all of these risks might have been saved, together with the four hundred dollars, and the fee to the expert for his indispensable advice, by engaging a responsible architect at the start, and getting the benefit of his counsel at every step, the question irresistibly arises whether, in resorting to a competition, the East Saginaw commissioners have not chosen the most hazardous and the most expensive method of select-

ing an architect for their new city hall. It would be cheaper and probably quite as satisfactory in the end to put the five names in a box, shake them up and then choose the one which drops out first.

Style in Architecture.*

BY W. A. HAWLEY, ARCHITECT, OF MARSHALLTOWN, IOWA.

WE often hear foreigners, or those with foreign sympathies, complain of American architecture as devoid of any purity of style; consisting of a strange conglomeration of details and features from various styles, so cemented together as to form a composition utterly unworthy to endure.

Another complaint is that the various styles of architecture are so used by different designers that there is no telling from the style, or even in some cases, from exterior form and arrangement, what use was intended for buildings; nor yet any style which can be called distinctively American.

However the implicit conclusions in these criticisms may be viewed, we must admit the correctness of the premises; that is the variety of styles in designs for similar uses, and the existence of heterogeneous designs, which, borrowing from several, can still be classed under none of the existing styles of architecture.

Even further than this, we must admit that, here, as elsewhere, there have been many buildings erected which have proved far from satisfactory to owners and public, and not a few which have also been sadly disappointing to their designers.

Still the question is, in view of all this, are we prepared to select one of the existing styles as our principal or exclusive style, or, failing in that, shall we set ourselves conscientiously to work to develop a new American style? In short, are we prepared to expend our chief efforts upon elaborating the form of expression rather than the idea sought to be expressed?

Would it not be equally wise for us, discarding that accumulation, from various sources, of idea vehicles, known as the English language, to attempt the immediate construction or evolution of an American language?

To my apprehension the styles of architecture, like the languages which are used to describe them, have come into existence, not like Minerva, full grown and ready armed, but by degrees, as the repeated impression of one and another recognized need upon the creative intellects of a people have at last caused the invention and improvement of a means to meet each such need, so perfect that no material improvement could be thought of.

Each of these succeeding forms, gaining popular approval, came to be a part of the common means of meeting needs or expressing ideas. But it was only when some one came to study these forms from the outside, to analyze, compare and collate them, that they were recognized as parts of a style or language.

Not only so, but this recognition as part of a style has, not infrequently, proved a sort of fossilizing influence; preserving the form with marvelous fidelity, it may be, but forever destroying the life which produced it and of which it was a manifestation.

As with language, so with architecture, forms of expression have been borrowed with greater, less, or with even no change when they seemed fitted in some degree to meet the requirements of another people than their originators.

Thus the Greeks borrowed from Egypt, the Romans from Greece, and so on, till today we have all these accumulations from which to select that best suited to our needs, if we cannot or do not choose to present new solutions of the problems set before us.

So in examining any or all of the known styles of architecture, which are really but the crystallized rules for meeting their necessities, constructive, utilitarian and decorative, which were used by a given people within certain limits of time, we find that each one started with material borrowed from an earlier style, and grew, both by original invention and by additions from other styles, modified as the variations of need dictated.

In the "Habitations of Man In All Ages," Viollet-Leduc traces, in a brief way, the story of domestic architectural development, as Fergusson deals with the more monumental parts of the same in his "History of Architecture."

By a careful study of either one, we may see that, so long as careful adaptation of buildings to their uses was the chief aim, the style used continued to improve, but, whenever the form became of such importance that fixed rules for its proportions and arrangements came to be generally observed the style entered upon its period of decay, even though there were still many erections showing daring and skill in designing and, often, a remarkable degree of manual skill on the part of the artisans.

May we not, then, safely conclude that the great reason why no style has come to meet our needs, so as to possess the field, is that we have been too closely bound by the rules of previous examples, instead of seeking with judgment and care to modify where needs have changed and to create where needs are quite new?

But, if too close and servile, a following of precedent is a flight upon the growth of architecture, a conscious struggle for novelty merely as novelty is equally to be avoided.

There are so many variations in the conditions which are imposed, even where at first the problems would seem almost identical that a careful study of the requirements, including not only the uses of the building, but available materials, cost, etc., as well, will give ample opportunity for variety without making that the chief object sought, regardless of, or at least, at the expense of good construction, use, durability and economy.

In short, it matters not what we suffer to assume first place in our designs, if we relegate fitness for use, site and amount of expenditure to a second place we cannot hope to build for the coming American style, or even to our own or our clients' enduring satisfaction.

* Paper read before the Third Semi-Annual Convention of the State Architectural Association of Iowa, January 13, 1886.

Owners' Influence on Architects.*

BY T. R. TINSLEY, ARCHITECT, KANSAS CITY, MISSOURI.

AT Delphi, in ancient Greece, about 2,500 years ago, two Greek brothers, Agamédes and Trophonius, formed a firm of practicing architects. They were the sons of a king; but, prouder boast than that conferred by the accident of royal blood, and the honors incident thereto, these architects commanded fame and exalted distinction by reason of being the authors of those magnificent examples of the mother art, the Temples of Apollo, at Delphi, and Neptune, at Mantinea.

The simple fact that their minds were the womb wherein was conceived and from whence sprung the design of the Temple of Apollo made them celebrated men and architects; this glory was sufficient; but to it was added the fame they were destined to eternally gather by their names drifting down the current of history as the architects of a temple the adytum of which stood in the midst of the earth, and the navel of the world was shown on the shrine thereof. Pause and consider what a God-given opportunity for the vaulting ambition of a pagan architect it was to design a building that stood as a monument over the umbilicus of the universe. Christianized architects of today may sneer at this conceit, and in it but recognize the juggling of pagan priestcraft; but who can doubt the sincerity and honesty of awe which these Grecians, existing six hundred years before the advent of Christianity, held the utterings of these oracles? Were they not as sacred to them as the New Testament is to the Christians of today? and if not, why not?

Let us now endeavor to analyze the peculiarities of a human mind that had been trained superfine enough to be the alembic through which was distilled the genius that conceived these splendid structures, the Temples of Apollo and Neptune, and that it was a human possibility to pass through the self-same alembic, and to be offspring of the self-same genius, the degrading and corrupt scheme of robbery, grand larceny and self-prostitution that these two master architects were guilty of toward Hiero, who employed them to construct a building suitable for the safe keeping of his immense treasures, at the same time confiding in them the extent and nature of his wealth; and that these two eminent architects deliberately, premeditatedly, and with design aforethought, most cunningly had adjusted certain stones in the wall of this treasury in such a manner that they could be easily withdrawn and reinserted, thus giving them secret entry into the treasury to purloin therefrom; and it appears that they daily took advantage of this, as Hiero with dismay discovered, notwithstanding the great care and cost he had been to in employing exalted talent, in the designing and construction of his treasury, that yet there was a mysterious leak, which baffled detection; so at length he set a trap, much, I imagine, like a farmer's scheme to catch a chicken thief; and the trap, in this case, did its duty, for it is related that the two thieves, having entered the vaults, Agamédes thrust his hand into a money chest, and was instantly fixed by Hiero's snare.

Trophonius, after effort, despairing of releasing him, and to save himself from disgrace, cut off Agamédes' head, stripped him of his clothing, so as to destroy all attempt at detection, and while endeavoring to escape, was himself destroyed, and thus perished two competent and capable architects.

Now, fellow architects, there is a moral in this tale, and I have related it for that moral, and not for an idle or passing fancy. In my official capacity as head of the department of buildings for Kansas City, I find that some of our architects are robbing their clients of the capital they have invested in their building, and are robbing the innocent parties who may have rented or leased the building, and are robbing themselves of their architectural existence, and their profession of its rightful dignity and standing. And how are they doing this? Not by cunningly adjusting certain stones in the walls in such a manner that they could be easily withdrawn; but by assenting to foundation walls to be constructed in such a manner and of such character, and upon such earth foundation, as in their judgment is inadequate and insufficient. This evil is done by giving ear to the owners' cry of "too much money being sunk in the foundations," or by permitting the owner to influence him by hinting "that if these foundations are going to cost so much, I will either not build at all, or must look about for a more economical architect;" or by submitting to the owner consulting some civil engineer or builder, and upon their irresponsible opinion, directing the architect "that it is not necessary to incur the expense of his plans about the foundation, as Smith and Brown say it is all right, and he is willing to risk it."

I contend that any architect that thus permits his judgment to be set aside, and gives free or sullen consent to the going in of a wall that has been dictated against his opinion, is not less guilty of robbery than these pagan Greeks were. There are buildings that my official attention has been called to as settling, cracking and becoming dangerous, and when I quietly approached the architect of the building about its condition, he has peevishly informed me that it was not his fault, as the owner had ordered the excavators to cease and the stonemasons to commence, directly against the protests of the architect.

Now, permit me to add a pertinent remark right here. In every case where an owner has thus interfered he has openly boasted of his action, and taken pains to call attention to the fact of his superior common sense over professional knowledge, and pointed out the amount of money he saved, and this boasting continues as long as the building remains in *status quo*. But when it once commences to show the inevitable, to lean, to bulge, to fracture, and its condition becomes street scandal, then it is that the owner forgets his interference, and his boasting is transferred to indignant denouncing the architect "for not having gone to solid earth, cost what it may, as a fool would know that it was economy in the end; and what did he employ an architect for and trust everything to him, as, of course, he (the owner) was not expected to know anything about building." And then this owner, who imagines that he has been injured, and his friends follow up and use all their influence to break down the architect's practice.

Now, I have no sympathy for either, and contempt for both; my expe-

* Paper read before the second annual convention of the Missouri State Association of Architects, at Kansas City, January 12, 1886.

rience as an official has convinced me that in the majority of cases of official notices being served by the building department upon owners whose buildings have developed defects, which, if neglected or ignored, will surely result in rendering the building dangerous to life or limb, consequently subject to municipal condemnation, that the owners, in response to the official notice gives freer expression to his feelings to the department than he does to his architect, and yet I have to find a single case where the owner has failed to lay the blame on the architect, his interference to the contrary notwithstanding.

I believe that I am correct when I assert that any architect who will knowingly permit his judgment to be overruled or set aside as to the proper firmness of earth bottom, or as to the character or manner of the introduction and use of artificial substitutes for base resistances, such as piles, rafts, greeleyings, etc., or as to the thicknesses, depths and quality of masonry of walls, compositions and applications of mortars, cements or concretes, I assert that such an architect is both dishonest and cowardly, first, to himself; second, to his profession; third to his client, and fourth, to the community. And it were better for him that he build honest and strong, and leave certain stones whereby he may steal in and rob only filthy lucre, than that he run the risk of not only robbing the client, the occupant, himself, and the community, but that also he may take that which no man can replace, human life.

There exists no excuse for this manner of doing business. The architect can and should utterly refuse to be a party to such suicidal proceedings, and if the owners persist, he should report the matter to the proper authorities.

Course of Study for Junior Members.*

BY MYRON S. CHURCH, OF CHICAGO.

BY referring to sections 1 and 2 of article VI. of the constitution, it is seen that any person having served one year in an architect's office or in kindred arts, is eligible for junior membership, and any person having served three years in an architect's office or in kindred arts, is eligible for senior membership; thus limiting the junior members to those serving their second and third year in an office, but thinking that the purposes for which this club was formed, and for which these papers are read, would be more nearly subserved by widening this field, I take upon myself the liberty of including the younger senior members within the pale of these remarks, hoping thereby that if there be within our ranks any person serving his fifth or sixth year at pure tracing, to point out to him the road that would lead to a commutation of sentence, and possibly save him from a life term at solitary tracing, while to those who have not had the time to be guilty of the crime of indolence, it may serve as an additional finger-post pointing out the road to success, if not to a realization of all their wakening dreams.

This guide board would read, "Observation and Study," and by these alone can any degree of proficiency be attained, or success expected. Observation first, for knowledge acquired thus is knowledge gained direct, and the observer takes more delight in this self-acquirement, and will retain the matter longer in his memory, than by its acquirement indirectly through the medium of books, by reflection.

Books are to culture what drawings are to a building, mere tools, means to an end, not the end itself, and their virtue is apt to be overrated even in those branches of study where their use seems to be most needed.

All observation must be accurate and classified; he that looks at everything sees nothing; know not only that things are thus and so, but know the reason for their being so, for instance, you may be shown the plan of a large building, possibly the basement plan, now you may be interested about this time in some one subject that this plan will answer your inquiries, it may be about boilers, examine their arrangement, their size and style, their location in the building, their relation to each other, and see the reason for their being placed so, see how the smoke is carried from them to the chimney, note how the latter is constructed to best serve its purpose, have a note book continually with you, and if a question presents itself to you that cannot be answered, at once make a note of it, and in your leisure moments call in those useful helps to knowledge, books; ask questions, don't be afraid to say you don't know if you don't; you will be obliged to say it only once, I hope, about the same subject. Don't fail, when the opportunity presents itself, to visit a building where you can see the practical workings of the items under inquiry, and this course pursued for the period of one year will lead to a fund of useful information that will surprise the least zealous worker, and which once acquired in this manner, will hardly be forgotten, and opportunities will be found for their practical application, bearing in mind that no important work will be entrusted to you the second time if not neatly and intelligently done the first.

As to a course of systematic study, the nearer one comes to that pursued in the different industrial universities, the greater will be the benefits derived, and those who, from force of circumstances, cannot avail themselves of this golden opportunity to acquire a combined theoretical and practical education, made possible only within the last fifteen years, must follow the example set by them, arrange your own course and so divide up your time that in the following year you will know just what you are going to study, and for what purpose and at what time.

The requirements for admission to the different universities are about the same, take that for the Massachusetts Institute of Technology. The applicant must have attained the age of sixteen years, and must pass a satisfactory examination in arithmetic, algebra, plane geometry, French, English grammar and composition, history and literature and geography.

Cornell leaves out history and literature and substitutes physiology as presented in the smaller text books, while the Industrial University at Champaign omits French and adds physiology, botany and natural philosophy.

A university is a collection of colleges, and the colleges are again divided into schools; thus at Champaign we have the college of engineering, which embraces the school of architecture, the school of mechanical engineering and the school of civil and mining engineering.

* Paper read before the Chicago Architectural Sketch Club January 18, 1886.

It is designed to teach only the higher branches of education at the universities, and not for the study of the common branches, such as arithmetic, geography, English grammar, reading and spelling; you are expected to be proficient in these before entering, so the first or preliminary year is really only laying the foundation for the three succeeding years, and the course of study during that year is the same for all the colleges, whether one takes the engineering or architectural course.

The course after entering includes the following studies: Mathematics, including analytical geometry and a taste of the calculus.

A thorough course of drawing, linear and freehand, sketching, and the use of water-colors.

In physics, experimental mechanics, heat, light, electricity, magnetism, acoustics and optics.

In mechanics, the strength of materials, graphical and analytical analysis, trusses, arches, piers, etc.

The history and distinguishing features and characteristics of different styles of architecture, Egyptian, Greek, Roman, Byzantine, Romanesque, Gothic, Renaissance and Modern.

In chemistry, lectures and laboratory practice, building materials and construction, continuous study in the theory and practice of design.

The student also takes up French or German, and in the senior year, contracts, agreements and specifications are discussed. This course leads to the degree of Bachelor of Architecture.

For students who cannot take the whole course of four years, a special course of two years is arranged, but leads to no degree, and is as follows:

MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

SCHEDULE OF PARTIAL COURSE IN ARCHITECTURE.

FIRST YEAR.

First Term.
The Five Orders.
Sketching and Water-Color.
Mechanical and Freehand Drawing.
Materials.
Ancient Architectural History.
Elementary Mechanics.

Second Term.
Original Design.
Sketching and Water-Color.
Common Constructions.
Projections.
Shades, Shadows and Perspective.
Medieval and Modern Architectural History.
Graphical Statics.

SECOND YEAR.

First Term.
Original Design.
Sketching and Water-Color.
Specifications.
Ornament and Decoration.
Problems in Construction.
Ventilation and Heating.
Working Drawings and Framing.

Second Term.
Original Design.
Specifications and Contracts.
Planning.
Iron Construction.
Schools, Theaters, Churches.
Acoustics.
Surveying.
Problems in Construction.

From this I should select, as being that which you would not be apt to learn in an office, and which would be of the most benefit to you, the following studies, which you can all learn yourselves, and be able to apply them in practice: materials, elementary mechanics, graphical statics, iron construction, problems in construction, history, which would include the Five Orders.

Examples might be cited of different successful architects who never studied chemistry and physics, who never saw the inside of a college. In fact, I knew an architect who could not do long division, yet succeeded in making a good living, so far as money was concerned, notwithstanding his inability to master higher mathematics. On the same plane with him is the architect who confidentially told his friend, on hearing of an event that transpired the day before in London, not to believe in such a thing as the Atlantic cable, as it was nothing but a grand American humbug, and thus it is a great many go on making mistakes, may be not so palpable as these, just through the want of "observation and study."

Chicago Builders and Traders' Exchange.

THE members of the Builders and Traders' Exchange of Chicago banquetted at the Grand Pacific Hotel on the 4th instant. The occasion, besides being exceedingly enjoyable, was graced by many guests, principally from among the leading architects, and the admirable choice of speakers brought forth much that was extremely practical as well as amusing. A brief extract of the speeches is all that can be made in this issue, except that of Mr. Geo. C. Prussing, president of the exchange, which is of such general interest as to partake of the nature of a report, as it certainly outlines the programme of the exchange for the coming year. Mr. Prussing made a very acceptable toastmaster, and opened the season of speeches by introducing that Nestor of the architectural and building profession, Chicago's first architect, Mr. J. M. Van Osdel.

Mr. Van Osdel spoke briefly on "Chicago before the war." The speaker spoke of early life, he had witnessed the battle of Fort Henry, and for fifty years had followed his calling. He stated that his early Chicago experiences were fully set forth in a series of articles contributed to THE INLAND ARCHITECT of 1883.

Mr. Van Osdel's remarks were listened to with the greatest deference by those assembled, the chairman then introducing Architect W. W. Boyington as an architect of long and honored practice.

Mr. Boyington said the architect and contractor were equally responsible to the owner, but that he must be architect and superintendent of work in his charge. That he must see that material be of good quality and pass upon the perfect completion of the work. It was also necessary that he be fully informed upon all the arts and sciences connected with building.

The chairman then announced: Lumber, gentlemen, I suppose you all know what lumber is, but none so well as Mr. J. H. Swan, the president of the Lumberman's Exchange, who will unload.

Mr. Swan said the matter of lumber has a history identical with that of the city, and gave figures which showed that the receipts of lumber in 1858, beyond which he had no data, were 311,000 feet, but that in 1852 the shipments were 70,740 feet. The shipments in 1872 were 417,827 feet. The maximum of the lumber trade to date was reached in 1882, when the shipments were 2,116,000,000 feet. The receipts in 1885 were

1,740,000,000 feet, and the shipments 1,970,000,000 feet. Mr. Swan gave further interesting data and account of the early days and the progress of the lumber trade.

The chair announced Architect W. L. B. Jenney, foreign secretary of the American Institute and Western Association of Architects.

Mr. Jenney, commencing with an apt quotation from Miles O'Riley, after which pleasantness, he sketched the history of the trade guilds during the middle ages. Today we see a revival of the guild, the unworthy weeded out and a high standard introduced. The speech was full of information and bright wit.

Mr. D. V. Purrington being introduced spoke of "Clay," the vast length, breadth and depth of the subject, but having its qualities in the composition of brick, spoke facetiously of its use in mud pies and clay pipes for blowing soap bubbles, and its fascination for youth in the shape of marbles, and its ancient province in the Hub district as a receptacle for beans.

Masonry was the subject of an interesting speech by George K. Fox, followed by Carpentry by Wm. Grace, in which each being recognized experts, the proper methods, the abuses and the privileges of their respective crafts were cleverly and entertainingly told.

Architect D. H. Burnham, in response to the toast "The Successful Builder," spoke of the need for creditable builders, and said it was a common remark that if architects would invariably employ the best builders and would rigidly exact from them perfect work there would be no poor contractors. He spoke in favor of owners giving the architect entire authority and allowing him to engage a workman because he was the best and not the cheapest. The successful builder was a man of truth in his character as well as in his life; a man of knowledge, and preëminently a man of energy. The architect never has to read over his bill of expenditures; they are allowed and paid.

The chair announced the abused plumber, and he appeared in the person of Alex. W. Murray, who spoke feelingly in rhyme upon his woes, but before his speech ended there was strong evidence that the plumber was a valuable craftsman and reasonably well paid.

Robert Clark was to have spoken as an "Ironmonger," but was absent.

The chairman announced "The Press, a substantial structure erected upon a firm foundation by master builders, and the response came in a gracefully worded and delivered speech by Mr. James C. Beeks, of the Chicago Times.

As some reference had been made in other speeches to the "official organ," the chairman announced that THE INLAND ARCHITECT AND BUILDER was the official journal of the Builders' and Traders' Exchange, and as its managing editor was present would call for a response to the toast.

In reply, Mr. McLean said that any editor spoke best through type; called attention to the need for schools for mechanical training, and of the marked advance in this particular from the kindergarten upward to the manual training schools of the country. The present generation should do something to produce good mechanics or the next would suffer.

The chairman, Mr. Geo. C. Prussing, made the final speech as follows, which was listened to by the entire assembly with marked attention:

And now, Gentlemen, before closing, it may not be out of place to say a word or two about the Builders & Traders' Exchange. You know its objects. The management desire it understood that, while satisfied with the progress made in the past, it will not rest or be content until it has succeeded in making the Exchange the headquarters of all builders, meaning thereby all who furnish any article or branch of labor required in the construction of buildings, and of all associations of builders. This it has not yet become. Various branches of trade have not as yet recognized the common advantages of mutual association and coöperation. While during the first stages of organization it was impossible to do more than to provide Exchange Rooms proper for the more speedy transaction of business with fellow mechanics or dealers in materials, other departments were added as their need became apparent and our abilities permitted. The Credit and Collection Department is of benefit to all. Disputes among members and among members and others can be, and are, referred to the Arbitration Committee for adjustment, thereby saving the laws delays and expense.

The foundation for a library of books of reference has been laid. We have now on our shelves 400 volumes, all on trade subjects, architecture, and applied science generally. At the last annual, \$1,000 more were appropriated for its enlargement—a library cannot be found ready made. It is of necessity of slow growth, but with the liberal annual appropriations from the Association's surplus funds, and the kind donation of books from members, we may safely count upon possessing the most complete library of its kind in the West at an early day. Every year the Exchange publishes its "Hand Book" filled with useful information for all. Its next issue will be enriched by a catalogue of the library. Its volumes may be consulted at the Exchange Rooms at any time, and all, with the exception of a few rare works, may be taken home for study.

The perplexing provisions of our lien law have lately been considered. Action for its radical amendment or repeal seems imperative. All engaged in building are mutually interested herein. A series of public evening meetings will be held at the Exchange to agitate the question and take steps necessary to formulate our own position clearly—to enlist coöperation throughout the state, and make the law what it was designed to be, a protection to the honest mechanic and manufacturer of building materials.

For years it has been clear to the directors of the Exchange that the establishment of a public exhibit of building materials and appliances under its auspices and management will be needed to afford its members an opportunity to display their goods to customers and architects. For various reasons its establishment has been postponed until this spring. At the last meeting of the Board of Directors a committee was appointed to report ways and means for the early opening of such exhibit under the same roof and management with the Builders' Exchange. And right here let me say that while no one can have a more thorough appreciation of the future greatness of our city, still I am of opinion that even if we should live to see it teeming with millions of busy inhabitants, it will not be large enough for two "Builders' Headquarters." There can be but one, and we believe the present organization will be that one. Whenever our present quarters, meaning thereby, the building in which the Exchange is now located, containing six floors of 80 by 120 feet each, lighted on both sides and from the center (for there is no reason why we should not occupy the entire building in time, subdivided in any manner found suitable for our purposes), whenever, I say, we shall have outgrown our present quarters, or for any other reason they shall have become unsuitable, the Exchange will, we trust, have become strong enough and the necessary business talent will be found, to erect a building, bearing above its portals, in capital letters, carved deeply into lasting rock, "The Builders & Traders' Exchange of Chicago."

Subsequent conversation with the officers of the exchange indicated a strong movement toward carrying out the plans outlined in Mr. Prussing's speech, and the large attendance of leading architects was spoken of as an indication of the increased interest of the more prominent members of the profession in the upbuilding of the grand building center, toward which the best efforts of Mr. Prussing and his associates are directed. The tables were handsomely appointed, and the viands arranged in Mr. Drake's best style all voting this, the first banquet of the Chicago Builders' Exchange, a decided success.

The Kansas State Architectural Convention.

PURSUANT to a call the architects of Kansas met at the parlors of the Windsor hotel January 25, 1886. The meeting was called to order at 4 P.M., by Mr. J. G. Haskell, who was appointed November 20, 1885 by the Western Association of Architects as committee for Kansas, to call the architects of Kansas together with a view of forming a state association. Mr. J. G. Haskell, of Topeka, was chosen president and Mr. F. J. Grodavent, of Leavenworth, was chosen secretary pro tem.

A committee of five, E. T. Carr, Alfred Meier, C. W. Squires, S. A. Cook and C. B. Hopkins, were appointed a committee to draft constitution and by-laws.

A call of the roll showed the following gentlemen present:

J. G. Haskell, of Topeka.	Otto A. Weile, of Winfield.
L. M. Wood, of Topeka.	S. A. Cook, of Winfield.
Geo. Ropes, of Topeka.	A. B. Howatt, of Hutchinson.
W. R. Parsons, of Topeka.	Alfred Meier, of Atchison.
C. H. Parsons, of Topeka.	C. W. Squires, of Emporia.
C. B. Hopkins, of Topeka.	E. T. Carr, of Leavenworth.
J. C. Holland, of Topeka.	F. J. Grodavent, of Leavenworth.
H. M. Hadley, of Topeka.	C. J. Jobson, of Leavenworth.
W. A. Richie, of Winfield.	B. F. Erwin, of Parsons.

The following names were submitted for membership:

E. Dumont, of Wichita.	W. T. Proudfoot, of Topeka.
C. W. Terry, of Wichita.	F. W. Cooper, of Topeka.
C. W. Kellogg, of Wichita.	John Barton, of Independence.
G. W. Bird, of Wichita.	Geo. P. Washburn, of Ottawa.

The meeting was adjourned to 7:30 P.M.

EVENING SESSION.

The convention convened at 7:30 P.M., pursuant to adjournment, Mr. J. G. Haskell in the chair.

The report of the committee on constitution and by-laws was received. The constitution which was then taken up, considered by sections, and adopted, reads as follows:

CONSTITUTION.

SECTION 1.—Name.—The name of this association shall be the "Kansas State Association of Architects."

Sec. 2.—Objects.—The objects of this association shall be to unite all, directly or indirectly, interested in architecture, in efforts, to promote the artistic, scientific and practical efficiency of the profession to encourage the study of kindred arts, and to correct unprofessional practices.

Sec. 3.—Members.—This association shall consist of fellows, juniors and honorary members. Any architect in the state, who may have engaged in the honorable and exclusive practice of his profession for one year, shall be eligible to election as follows. Any student or draughtsman, who has spent at least two years in the service of a regular architect, or in an approved architectural school, may be eligible to election as junior.

Juniors shall have all privileges except those of voting and holding office. Artists and engineers, who manifest an interest in the objects of this association, shall be eligible to election as honorary members, and enjoy the same privileges as junior member.

Sec. 4.—Officers.—The officers of this association shall be a president, a vice-president, a secretary, a treasurer and three trustees, who, with the above officers shall constitute an executive committee. The president shall be ex-officio chairman of the executive committee.

Sec. 5.—Duties of Officers.—The president, or in his absence, the vice-president, shall preside at all meetings of the association, and in the absence of both of these, a presiding officer shall be chosen by those present. The secretary shall take the minutes of all proceedings of the association, and conduct the correspondence.

The treasurer shall collect all funds of the association and disburse the same on the order of the secretary, countersigned by the president; but they shall not involve the association in debt. Both the secretary and treasurer shall make a written report of all matter in their charge, at each regular meeting.

The executive committee shall control the property and general interest of the association; shall receive and act upon nominations for membership; receive complaints; give written admonition to any member whose conduct may appear to them to be injurious to the interests of the association, or contrary to its by-laws, and if in their opinion the nature of the offense requires it, may request him to resign; expel members of the association for cause; call all extra meetings; act as a committee of arbitration on all questions submitted to it by members of the association, and generally shall control its welfare and interests; they shall keep a record of all their proceedings, and report the same at each regular meeting.

Five members of this committee shall constitute a quorum, but a smaller number may adjourn from time to time.

Sec. 6.—Appeals.—All appeals from the action of the executive committee shall be: First. To the state association in regular assembly. Second, appeal may be had to the Board of Directors of the Western Association of Architects, whose decision shall be final.

Sec. 7.—Amendments.—This constitution may be amended by a two-thirds vote of the fellows present at any meeting of the association, provided that a notice of such proposed change shall have been mailed to each fellow by the secretary thirty days before date of such meeting.

Mr. Washburn: I make a motion that the chairman appoint a committee of five to nominate permanent officers.

Mr. Wood: And carried.

The chairman appointed the following as a committee to nominate permanent officers: C. H. Parsons, George Ropes, H. M. Hadley, A. B. Howatt and W. H. Ritchie. A recess of twenty minutes was then taken.

After recess C. H. Parsons, chairman of the Committee on Permanent Officers, reported as follows:

For president, J. G. Haskell, of Topeka.
For vice-president, George Ropes, of Topeka.
For secretary, H. M. Hadley, of Topeka.
For treasurer, E. T. Carr, of Leavenworth.

Trustees, Alfred Meier, of Atchison, C. B. Hopkins, of Topeka, S. A. Cook, of Winfield.

Mr. Carr: I move that we elect the permanent officers by ballot.

Mr. Hopkins seconded the motion.

The motion was carried.

The convention then proceeded to elect the officers by ballot.

All the officers nominated by the committee, were unanimously elected.

The by-laws, schedule of fees, charges, etc., were then taken up and considered by sections and adopted.

BY-LAWS.

ARTICLE I.—Meeting.—There shall be a regular meeting of the association on the third Tuesday of January in each year, and at every such meeting the place of the next regular meeting shall be decided upon before adjournment. One third of the members in good standing shall constitute a quorum, but a smaller number may adjourn from time to time. No member shall be considered in good standing if more than thirty days in arrears for his dues.

ART. II.—Rules of order.—The meeting of this association shall be conducted according to "Roberts' Rules of Order."

ART. III.—Application for membership.—Any candidate for membership in this association, shall send his application in writing to the executive committee, indorsed by two fellows of the association in good standing, and who are personally acquainted with the candidate.

ART. IV.—Election of members.—When receiving an application for membership, the executive committee shall investigate the standing of the candidate, and shall by ballot admit or refuse him. All discussions of applicants shall be strictly confidential. Any person so selected, who shall not within three months after notice of election left or sent to his address, signify his acceptance and pay his proper fees and dues, shall be considered as having declined to become a member.

ART. V.—Dues.—All fellows of the association shall pay an initiation fee of \$5 and annual dues of \$2. All juniors shall pay an initiation fee of \$3 and annual dues of \$1. The first dues to the full amount shall be paid at the time of admission. Charter members shall be exempt from the payment of the initiation fee. All dues shall be payable at the regular meeting, and if not paid within thirty days thereafter, in default of which, any member shall be liable to suspension or expulsion by the executive committee.

ART. VI.—Election of officers.—All officers shall be elected at the annual meeting of the association, by majority ballot vote of the fellows present. An officer shall be eligible to the same office not to exceed two consecutive years, but all officers shall hold over until their successors shall be duly elected.

ART. VII.—Papers and Records.—All papers and other records shall be at all times open to the inspection of the fellows of the association.

ART. VIII.—Committees.—Juniors may serve on committees as follows: On a committee composed of three, two must be fellows and one may be junior. On a committee composed of five or more members, two may be juniors, but not more than two juniors may be appointed to serve on any committee.

ART. IX.—Amendments and By-Laws.—The by-laws of this association may be amended by a two-thirds vote of the fellows present at any annual meeting.

SCHEDULE OF FEES AND CHARGES FOR PROFESSIONAL SERVICE.
Recognizing the desirability of uniformity throughout the country in the matter of fees and having implicit confidence in the action of the American Institute of Architects in this respect, it is

Resolved, That this association adopt the schedule of fees recently adopted by the American Institute of Architects, by the Western Association of Architects and by the Iowa and Missouri associations, and that the secretary of the association mail to each member a printed copy of this schedule as soon as practicable.

The following resolutions, passed by the Western Association of Architects, was unanimously adopted by the Kansas Association of Architects:

PRACTICE.

Resolved, That in his relations to his clients and contractors, the architect should be an impartial arbitrator, and that under no circumstances should he act as a special pleader for either party.

Resolved, That the relations between architects and clients should be confidential, and that no architect is worthy of employment who is unworthy of trust.

Resolved, That it is the sense of this association that the architect should in all cases superintend the work designed by him.

Resolved, That in the case where, for special reasons, the architect does not superintend the work designed by him, his responsibility ceases with the delivery and acceptance of the plans, unless by expert testimony it can be proven that the plans were defective.

The association then adjourned till Tuesday January 26, at 10 A. M.

SECOND DAY'S PROCEEDINGS.

The convention reassembled pursuant to adjournment at 10 o'clock A. M., Mr. Haskell in the chair.

The question of a code by which to conduct competitions was first taken up, and after considerable discussion it was decided to refer it to the executive committee with instructions to report at the next regular meeting.

Mr. Wood: I move that a committee of five be appointed by the president to have charge of the matter of legislation and report at the next meeting.

Mr. Parsons: I second that motion.

The motion was unanimously carried.

The president appointed the following as a committee on legislative matters: L. M. Wood, C. H. Parsons, J. C. Holland, F. J. Grodavent, and A. B. Howatt.

Mr. Wood: I move that the following resolution, in regard to the Stockslager bill now before congress, be adopted;

Resolved, That this association urge the Kansas delegation in congress to support what is known as the "Stockslager bill," establishing a commissioner of architecture and otherwise providing for the planning and supervision of government buildings; and that a copy of this resolution be forwarded to each member of congress from this state.

The resolution was adopted.

The secretary is instructed to forward a copy of the above resolution to each member of congress from this state.

Mr. Wood: I move that the secretary be instructed to have 100 copies of the constitution and by-laws printed, and made into pamphlet form.

This motion is carried.

Mr. Ropes: I move that all architects present and all whose names were represented for membership, be considered charter members, on payment of their dues.

The motion carried.

Mr. Carr: I move that THE INLAND ARCHITECT AND BUILDER be made the official organ of this association, and that the secretary be instructed to send an official report to that journal.

Mr. Wood: I second that motion.

The motion was unanimously carried.

Mr. Hopkins: I move a vote of thanks to Messrs. Hill & Co. for the courtesy they have shown this convention, and for the use of the hotel parlors.

The motion was unanimously carried.

Mr. Carr moved that the matter of a seal for this association be referred to the executive committee, who are to report at the next regular meeting. The motion was carried.

Mr. Wood suggested that each fellow of this association in good and regular standing have the initials F. K. S. A. A. on their letter heads.

Mr. Hopkins: If all our business is done I will move that we adjourn to meet on the third Tuesday of January next at Topeka.

Mr. Grodavent seconded the motion, which was carried.

The convention adjourned to meet at Topeka, the third Tuesday in January, 1887.

ARCHITECT LOUIS H. SULLIVAN, secretary of the Illinois State Association of Architects, was complimented by the publication of his able paper upon the Characteristics and Tendencies of American Architecture read before the last meeting of the Western Association in the *Builder's Weekly Reporter*, of London, England. This paper has also been published by a number of prominent American journals.

Association Notes.

KANSAS CITY SOCIETY OF ARCHITECTS.

This Society was organized in April, 1885, with a membership of twenty-one local architects. Since that time four new members have joined, and two of its original members have been stricken from the roll, leaving twenty-three members at present.

The society meets weekly, on Mondays at 4. P. M., and there has been an average attendance of twelve members at each meeting since its organization.

As yet the society has done but little of general interest to the profession, but we anticipate greater results for the future. The meetings thus far have been more of a social nature than are usual with similar organizations, and to the genial feeling which exists among its members is attributed the cause of there having been so little accomplished of interest to the outsiders.

About two months ago the society provided itself with comfortable quarters which have been tastefully furnished and decorated, and recently added an adjoining and communicating room, which it is having prepared for the exhibition of building materials and appliances by manufacturers and others who desire, on the payment to the society of a nominal sum per square foot per annum for this privilege.

The society thinks that this feature will be beneficial to all concerned, as it saves the trouble and expense of sending to each architect samples of such goods by parties having them for sale, and relieves the architects of having the limited space in their respective offices crowded with the wares which are from time to time sent them.

Only the smaller articles of such appliances will be admitted, as there is only 250 square feet of space available, and, necessarily, the amount of space allowed each exhibitor will also be limited.

Parties desiring further information on this subject will please address the undersigned.

The society contemplates soon to subscribe for a list of architectural and scientific periodicals not usually patronized by individual members, the same to be kept on file at the society's rooms, and a committee has been appointed to prepare such list.

In view of the difficulties and disputes which have been caused by the system of measurement of brick and stone work which has been in vogue in this city, in cases where contracts are not let for a round sum, the society has a committee at work preparing what is hoped will be a more perfect and generally satisfactory system. Architect F. B. Hamilton is the secretary.

CHICAGO ARCHITECTURAL SKETCH CLUB.

The meeting, February 1st, was called by President Lawrie in the chair. After the minutes of the previous meeting were read and approved, some time was given to the discussion of the proper treatment of delinquent members, which was finally left to the Executive Committee for action on the next meeting.

The president then announced that the subject for the evenings sketching was a dormer window, and about fifteen of the members at the close of the session presented very creditable designs. The subject for the evening of the 15th instant will be a paper on stonework by J. F. Heatherington.

CIVIL ENGINEERS' EXECUTIVE BOARD.

Wm. T. Blunt, Secretary of the Executive Board of the temporary Civil Engineers' Committee on National Public Works, issues the following bulletin, dated Cleveland, Ohio, January 11, 1886.

To Civil Engineers' Societies and the Technical Press:

The societies so far heard from on the subject of the Cleveland convention are the following:

- December 15. Cleveland ratified and appointed committee. (John Eisenmann.)
- " 16. Boston appointed committee. (Clemens Herschel, L. F. Rice and Thomas Doane.)
- " 19. Philadelphia ratified and requested Board Directors to appoint.
- " 30. St. Louis appointed committee. (Robt. E. McMath.)
- January 4. St. Paul ratified and appointed committee. (Chas. F. Loweth.)
- " 5. Chicago appointed committee. (L. E. Cooley.)
- " 5. Southern ratified and appointed committee. (L. J. Barbot.)
- " 8. San Francisco, meeting.
- " 9. Technischer Verein, New York, meeting.
- " 11. Pittsburgh, meeting.
- " 12. Connecticut and Ohio, meeting.
- " 15. Indiana, meeting.
- " 18. Nebraska, meeting.
- " 26. Michigan, meeting.

Respectfully.

Wm. T. BLUNT,
Secretary Executive Board.

MISSOURI STATE ASSOCIATION.

The following errata is furnished by Secretary Annan as corrections upon the report of the annual meeting published last month. *The report was as follows:*

Mr. Fassett: I have a couple of resolutions which were read before dinner, but not presented:

Resolved, That a special committee of five be appointed to present and urge its passage by the Missouri State Legislature at its next session, the architects' license bill, as adopted by the Western Association of Architects, with such amendments as may become necessary.

Seconded by J. M. D. Knox. Also:

Resolved, That the same committee be authorized to formulate and present to the same body a new form of lien law.

Seconded by Mr. Knox.

The correction is as follows:

"These resolutions were adopted and the chair stated that the names of members of such committees would be announced prior to adjournment."

The chair then suggested that it might be proper to take some action on the code as adopted by the western association.

This correction follows the above resolutions printed in the latter part of the upper half of the first column, on page 124, *Intermediate news supplement*.

A second correction is found in the election of officers and after the

first ballot for the third member of the Board of Trustees and should read as follows:

"Messrs. Tinsley, Hellmers and Bannon strenuously objected to the use of their names."

This latter correction explains the seemingly incongruous action of these gentlemen, particularly Mr. Hellmers whose election would have been contrary to his expressed opinion and was changed at his request.

Obituary.

At a regular meeting of the Rhode Island Chapter, held the 25th ult., the following minute was presented:

Henry A. Nisbet died at St. Luke's Hospital, Denver, Colorado, Dec. 18, 1885, after an illness of four weeks.

Mr. Nisbet was a junior member of this Chapter from March, 1876, until the summer of 1884 when failing health compelled him to leave Providence and seek a home elsewhere. He was born and educated in Scotland. He passed many years in this country in various offices as an assistant, and also in full practice of his profession. He died away from relatives and friends, but there are many who will mourn his loss. He was esteemed by all who knew him as a well-trained architect of modest worth, of quaint humor and of a sensitive and artistic temperament, and his death removes a personal friend of each member of this Chapter.

EDWARD I. NICKERSON, Secretary.

The remains of John McPherson, one of the brightest young men that ever went out from Rockford, Illinois, to win his way in the world, were brought home last week and interred in the Burrett cemetery of that city. Mr. McPherson was engaged as surveyor and draughtsman for a large mining company in Tennessee, and was a very fine expert, doing some of the best work ever done in that state. He was just in the prime of manhood, and gave promise of a splendid advancement in his profession.

Mr. H. E. Coe, the architect who obtained the premium of £800 for the best design for the new Foreign Office, London, which Sir G. G. Scott built according to Lord Palmerston's notion of art, is dead. He had shares in several large works at Islington.

Col. G. A. C. Smith, architect, for thirty-three years in the government's employ, died at his home, No. 239 Warren avenue, after having been confined to his house about three weeks. For thirty-three years Mr. Smith was in government employ, nearly fifteen years of which were spent as a Superintendent of Repairs, serving at Lincoln, Nebraska; Dubuque, Iowa, and Chicago, his service here lasting for three years, and closing June 1 of last year, when he was removed for cause, the reason given by the supervising architect, as we stated at that time, being because "his place was wanted for another man." He then formed a partnership with Architect A. K. Ackerman. Mr. Smith was born in Franklin, New Hampshire, in 1836. The funeral will not be held until his daughters, one of whom is in Dakota and the other at Baton Rouge, can get here. Col. Smith leaves a wife at the family home. He was a member of the Knights of Pythias and of the Association of Architects.

New Publications.

AMATEUR ART: Oil and Water Color Painting Without a Teacher; also How to Paint on Wood, Silk, Velvet, and Glass, with Directions for the Transferring of Photographs to Glass for Painting and Other Purposes, Cameo Oil Painting and for Coloring Mounted Photographs, Maps, Prints, etc. By HENRI CLARICE. Amateur Art Company, publishers, Chicago. Price \$1.00.

While the object of this handy little volume seems to be to afford beginners full instructions in regard to not only the best methods, but the best materials for each class of work, it is of value to any amateur who wishes not only to become proficient as an artist, but to afford those who have not the means to take a long and expensive course of tuition to develop any artistic taste they may possess. This "Amateur Art" gives, and it is surprising the amount of instructive matter contained in its seventy-five well written and printed pages. A page is devoted to a carefully prepared table of directions for mixing colors, which is an exceedingly valuable feature. A department has been added to the first edition upon modeling in clay and ware painting, which of itself is worth more than the price of the work.

WATER WASTE PREVENTION: Its importance and the evils due to its neglect, with an account of the methods adapted in various cities in Great Britain and the United States. By HENRY C. MEYER, Editor of the *Sanitary Engineer*.

This work is an octavo volume of seventy pages. It is addressed primarily to municipal authorities and civil engineers who are directly concerned with the management of waterworks. Architects usually give little attention to preventing the waste of water, feeling quite satisfied if they succeed in getting an abundant supply in every part of a house and in removing it properly after use. But they have to aid in the selection of plumbing faucets and other fittings, to whose defects a considerable part of the waste is due. Moreover, the water supply on the upper floors of city houses is often greatly reduced, and sometimes fails entirely, through the reckless waste of water elsewhere. Architects, therefore, as professional men, and as tax payers, are interested in a book which treats of the cause and extent of water waste in American cities, and the measures proposed for its remedy, and they will find these pages full of interesting and valuable information.

Very few people who have not given special attention to the matter have any correct idea of the enormous extent of the evil to which this book relates. Twenty to twenty-five gallons a day per capita, are considered an abundant allowance of water for all domestic purposes, with no special care to prevent waste. Where water for family use must be drawn from a well or cistern the average daily consumption probably falls considerably within this amount, but where the crystal fluid is conveyed through pipes to every part of a house, and can be had in abundance by simply turning a faucet, and where it makes no difference in the expense to the user whether he draws a cupful, whenever he wants a drink, or enough to fill a cistern, eighteen to twenty gallons a head do not begin to supply family necessities. In Boston, the daily consumption ranges from sixty gallons per capita in April to ninety-two gallons in January. In New York City a careful inspection appears to show that some nine thousand of the more prodigal water takers contrive to get rid of *three thousand gallons a day*

apiece, or twenty-seven million gallons in all. The clear loss in Boston alone, from the wanton waste of city water, with no advantage to anyone, probably exceeds \$500,000 a year, and in New York it must be proportionately greater. All this not only increases the cost of water to careful users, but frequently interrupts the supply entirely in the higher parts of the city, causing much personal discomfort beside increasing risks from fire.

Similar recklessness has been experienced in many cities in England, and has led to remedial measures, of which, and their gratifying success, this book gives a most interesting account. In Norwich, for example, the daily consumption was quickly reduced from forty gallons per head to fifteen, in Liverpool from thirty-nine gallons to about twenty, and in Glasgow the night consumption as quickly fell from forty-five gallons to ten. There is no question but that equivalent remedies must be employed in American cities, and architects should inform themselves of their nature, and lend their influence to forward so very necessary a reform.

A GUIDE TO SANITARY HOUSE INSPECTION; or Hints and Helps regarding the choice of a Healthful Home in City or Country. By WILLIAM PAUL GERHARD, C. E., Consulting Sanitary Engineer. Published by John Wiley & Sons, New York. Price \$4.25.

This is a modest duodecimo volume of 145 neat, clearly printed pages, which gives a concise and quite complete summary of the probable and possible defects in the location, construction and fittings of city and country houses which are injurious to health. After a circumspect glance at soil and surroundings, including the backyard, the author begins at the cellar, and goes through the house in minute detail, inspecting and testing the drains, the plumbing apparatus, the furnace or other heaters, the lighting, ventilation, disposal of refuse, and like practical matters. This is done separately for both city and country houses, and there is a short chapter each for apartment houses, tenements and summer resorts.

The book is admirably written, the style being simple and clear, and the subject being presented in an interesting manner throughout. It is thoroughly in accord with the most advanced principles which are generally accepted among sanitary authorities, without advocating extreme notions. To architects, builders and plumbers it can be recommended as the best known compendium of sanitary principles, as applied to buildings, useful for instruction and for reference. To householders its utility will unavoidably be lessened in a measure by the fact that the inspections suggested can often be made only by an expert. But it will be serviceable in the many directions where owners can inspect for themselves, and by informing them when and where they must resort to expert help. The list of unsanitary defects in modern houses, their plumbing, drainage, heating, ventilation, their soil and surroundings, which these pages contain is somewhat appalling, however, and may naturally produce a feeling akin to dismay in timid owners. For their comfort, it might be added, perhaps, that while all the requirements here mentioned are desirable, it is still possible, with ordinary care to live and be fairly healthy in many a home that is faulty in some of these respects. Indeed, we would hesitate to assume that our author, if requested, would be able to name a single house which could be called sanitariously perfect by the standard given in this admirable little book.

THE SUBURBAN COTTAGE: Its Design and Construction. By W. B. TUTHILL, A.M., Architect, New York: W. T. Comstock, publisher, 1885. Price \$1.50, post paid.

This practical and concise treatise on that class of building which more often falls to the lot of the builder but comes within the domain of the architect, the low cost house, occupies one hundred pages and contains a large number of diagrams, illustrative of the subject matter. This is classified under the different heads of: The Plan; Its Design and Requirements; Elevations; Masonry and Brick Work; Framing; The Roof; General Details; Plastering and Plumbing. The purpose of this volume is evidently to lay before the student or the practitioner the better method of systematic design, involved in the preparation and construction of houses ranging in cost from one thousand dollars upward. The writer in the first chapter takes for example a house costing seven or eight thousand dollars. He proceeds to construct his house in simple terms and gives a vast amount of valuable information. It is noticeable that while the exterior design receives due consideration, that it is upon the planning of the interior that the writer devotes his most careful and studied efforts. In fact, throughout the entire construction, the practical hints are given with a marked clearness, making the book one that a builder should have within reach at all times for ready reference. The volume was first published in a series of articles in *Building*, and now in book form they are made more accessible and none the less valuable.

The London *Times* in speaking of "Salammbô," the masterpiece of Flaubert, the founder of the naturalistic school of literature, followed and debased by Zola and others, which has at length been translated into English by M. French Sheldon, and is now in the press, says "This fascinating story of love and war, rich in heroic Carthaginian lore, set in glowing barbaric splendour, surrounded with an atmosphere of dreamy tropical warmth and local colour, and with its weird serpent scene and mysterious cults, has long been regarded as an untranslatable work. It is said that this delicate task has been accomplished in such a subtle manner as to preserve all the vigor, natural realism, and idyllic style of the original. Flaubert's works have inspired more pictures in the French *salon* during the past few years than any book except the Bible. The appearance of "Salammbô" in English is looked forward to with great interest in the literary and art circles of the Continent. The introduction has been written by Edward King, the American poet, and the volume is dedicated to Henry M. Stanley, the famous explorer. The work will be published by Saxon and Co., London and New York."

GEN. BEAUREGARD gave a history of the Shiloh Campaign in the January number of the *North American Review*. He claims that Gen. Algernon Sydney Johnson acted only as a corps commander at Shiloh. Gen. Beauregard emphatically asserts (contrary to the common belief) that he was the sole commander on both days, and, without naming them, controverts the reports of Grant and Sherman as to the nation's forces

being taken by surprise. Canon Farrar had an article on the Church in America, and the Marquis of Lorne, Col. Ingersoll, Millionaires Astor and Carnegie, an Irish Member of Parliament elect, John Boyle O'Reilly, Cassius M. Clay, Sir John MacDonald, and Frank B. Sanborn also had articles in the January number.

Our Illustrations.

Group of residences at La Grange, Illinois: for A. H. Lanphere, G. W. Blakeledge, Henry Werno and Wm. Haskins; by Clarence L. Stiles, architect, Chicago. They are frame construction of an average cost of \$4,000.

Residence of Geo. Kirk, Esq., at Waukegan, Illinois; by W. W. Boyington, architect, Chicago; veneered with brick on first story, frame above. Inside finished, red and white oak, cherry and pine, natural finish; cost about \$15,000.

Union passenger station, at Birmingham, Alabama, for the Louisville & Nashville Railroad; by H. Walters, architect, Louisville, Kentucky.

Residence for A. J. Wolford, Chicago; by W. L. B. Jenney, architect, Chicago. The perspective is by W. B. Mundie, the excellence of whose drawings we have had occasion to notice before. The front is entirely of Colorado redstone, all rock faced; three stories and basement; interior handsomely finished in natural hard woods; plate glass; beveled glass in door; all sheet metal work of copper; cost about \$9,000.

Accepted design for a memorial to General U. S. Grant, for Lincoln Park, Chicago, Illinois; by Francis M. Whitehouse, of the firm of Burling & Whitehouse, architects, Chicago. The selection of the design was made by a committee composed of General W. E. Strong, chairman, Norman Williams, Potter Palmer, J. McGregor Adams and Samuel K. Nickerson. The first designs were requested from architects, and several very creditable designs were submitted. The general form of the design accepted presents a footway connecting the walk which surrounds the pleasure lake in the park with the promenade which extends north and south parallel to the lake drive. This footway passes underneath the raised road, and is formed of solid blocks of granite, thus allowing pedestrians to pass under the road-bed. The east end of this granite arch is faced with a terrace 150 feet long of solid granite work, and having two flights of massive steps extending to the level of the roadway above, at which point it is to be erected a solid granite elevated structure, 50 feet long by 20 feet wide, through which will pass a foot way and at the side a raised roadway, which structure will be in keeping with the facade of the terrace, all of massive granite, Norman-Gothic in treatment, with rounded buttresses and corners of hammered granite, the two sides being perforated by five massively constructed arches, through which a beautiful view of Lake Michigan and the Park will be had. Above the structure and surmounting the hill will be a massive granite base 8 feet high and 15 feet long, constructed of large blocks of granite in a solid and substantial manner, upon which will stand a bronze statue of General Grant. The monument complete will cost \$50,000.

New Architectural Firms.

THE firm of Smith & Fulkerson, architects, Cedar Rapids, Iowa, was dissolved January 1, Mr. Smith retiring. Mr. W. A. Fulkerson will continue the business in the old quarters, in the Post-office block.

JOS. E. MILLS, late head assistant with Architect E. E. Myers, of Detroit, Mich., has opened an office at No. 6 Cleland building, also that Architect E. E. Myers has taken his son, Geo. W. Myers, into partnership under the firm name, E. E. Myers & Son.

McCaffee & Lively is the title of a new firm to the profession in Chicago. Both gentlemen are well known as leading draughtsmen, and have entered practice with the desirable amount of talent and experience as well as a considerable quantity of immediate work.

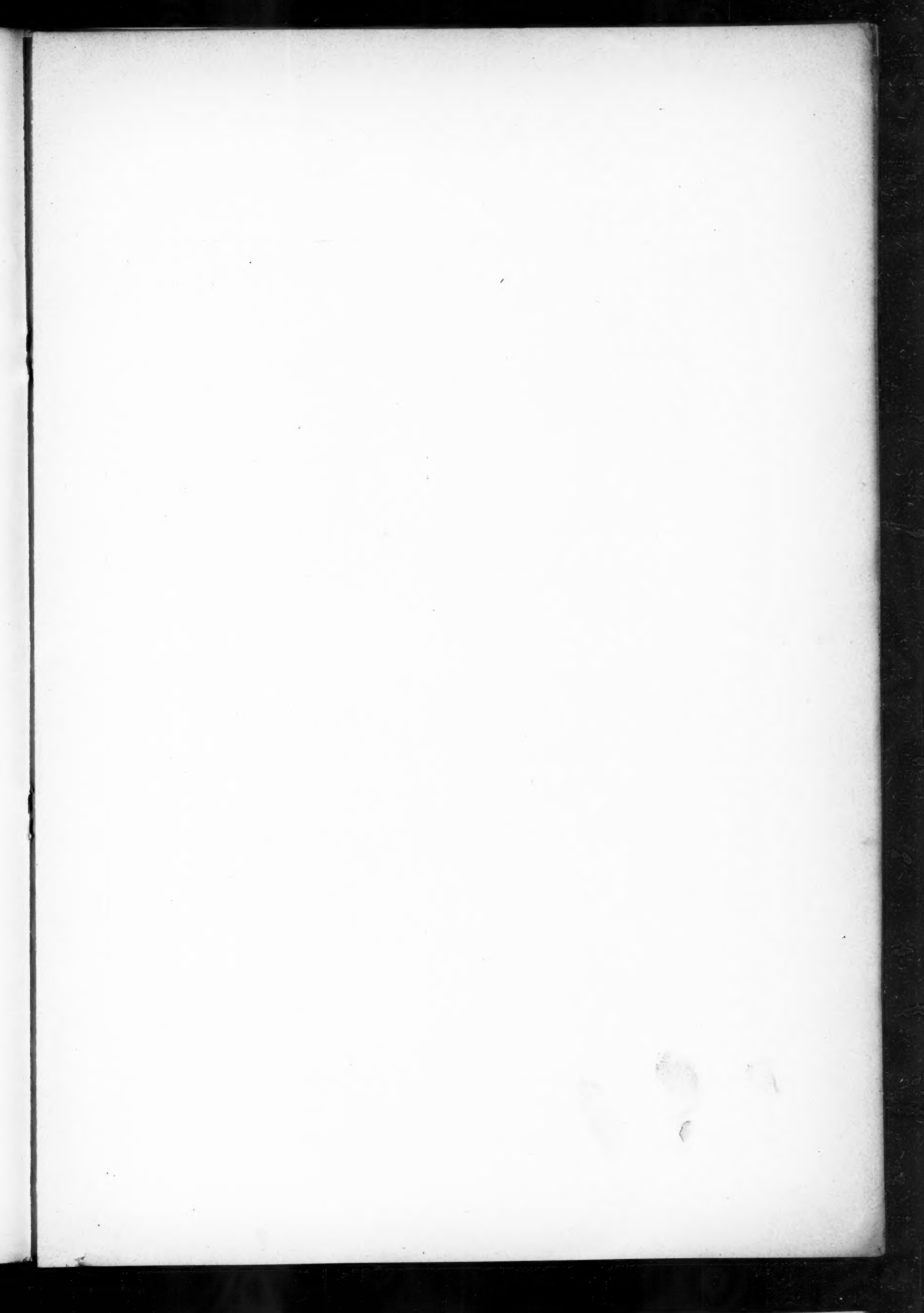
O. L. Wheelock, who has been known as a prominent Chicago architect for considerably more than a quarter of a century and is the designer of a large number of the best buildings, upon the recent dissolution of the firm of Wheelock & Clay formed a copartnership with Robert Rae, Jr. Mr. Rae has practiced in Chicago for 16 years.

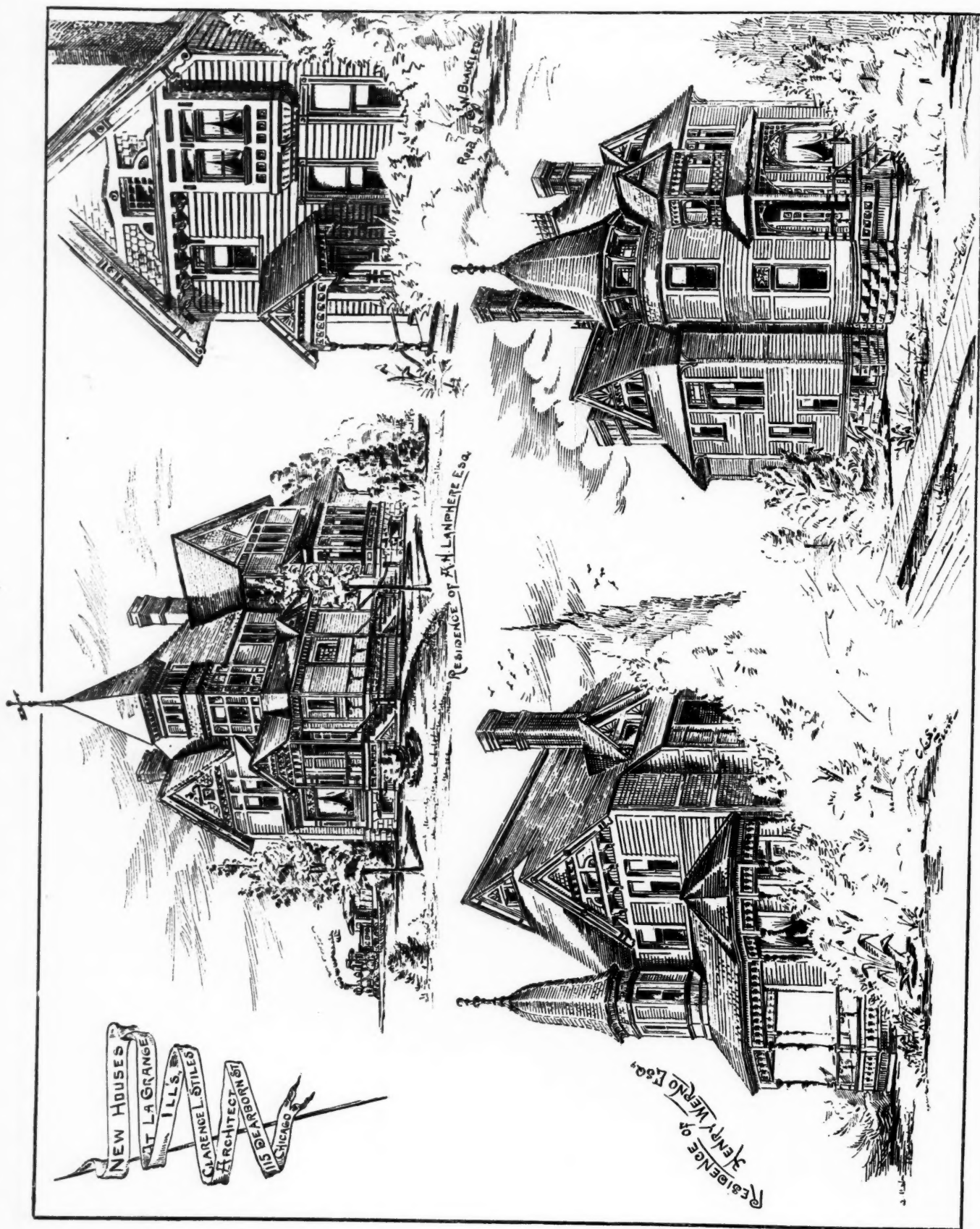
Allen & Coxhead is the legend upon the office sign formerly monopolized by the well known name of F. S. Allen, at Streator, Ill. Mr. Allen has enjoyed an extensive business in the interior of the state. Mr. John H. Coxhead is a young man of considerable designing talent, recently from Chicago, but originally from New York. His sketches equal the best work of Mr. Edward Denison, under whom he studied. The combination makes a strong architectural firm.

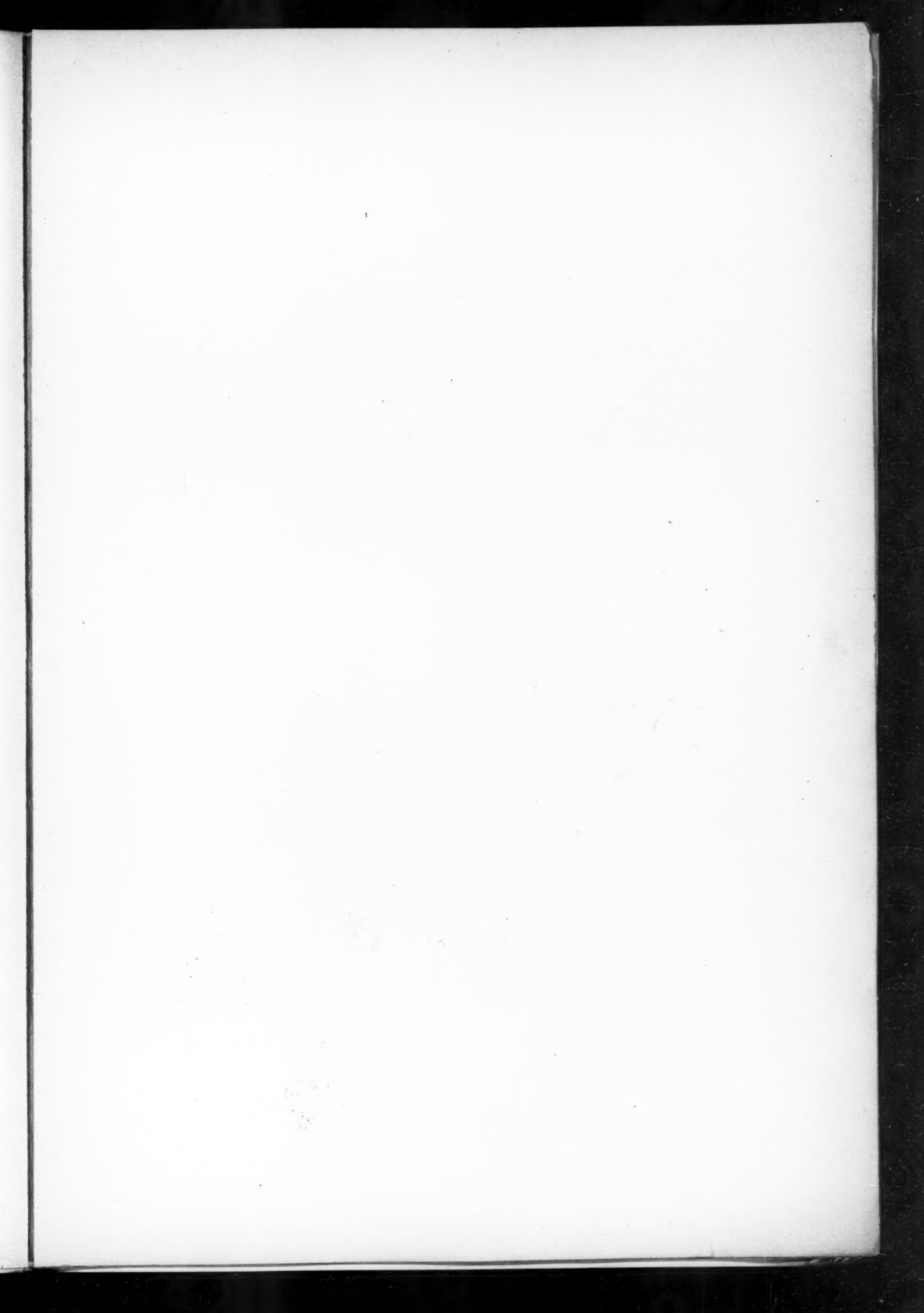
George Beaumont has opened an office in the Illinois Bank Building, 115 Dearborn street. Mr. Beaumont was for several years superintendent for the late firm of Wheelock & Clay. He studied architecture in Leeds, England, and obtained the medal of the Leeds and Yorkshire Architectural Society in 1879, and in the following year was elected a member of the Royal Institute of British Architects in London. He traveled extensively on the continent of Europe in further search of architectural knowledge, and with his varied experience in this city, we have no doubt that he will be successful in his profession.

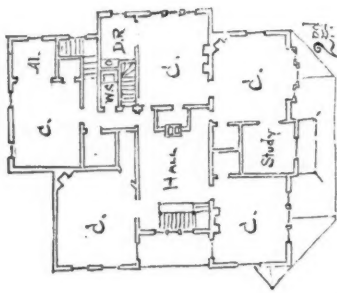
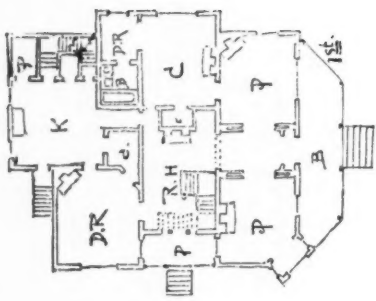
It is understood that Architect O. C. Wehle, of Louisville, will soon enter into partnership with W. J. Dodd, of Chicago. Mr. Dodd studied architecture in the office of Architect W. L. B. Jenney, of Chicago; was engaged by Architect S. S. Beman during the building of the town of Pullman, and being recommended by that architect to the Northern Pacific Railway, was employed as architect of that road, with headquarters at Portland, Oregon. Soon after the stoppage of work on that road Mr. Dodd came east and reentered the office of Mr. Beman, where he remained until engaged some months since by Mr. Wehle. Mr. Dodd will be a valuable addition to the architects of Louisville.

Architect W. W. Clay, the former partner of the veteran architect, O. L. Wheelock, has engaged Mr. Harry Lawrie as head draughtsman of his designing department. Mr. Clay's well known ability, together with

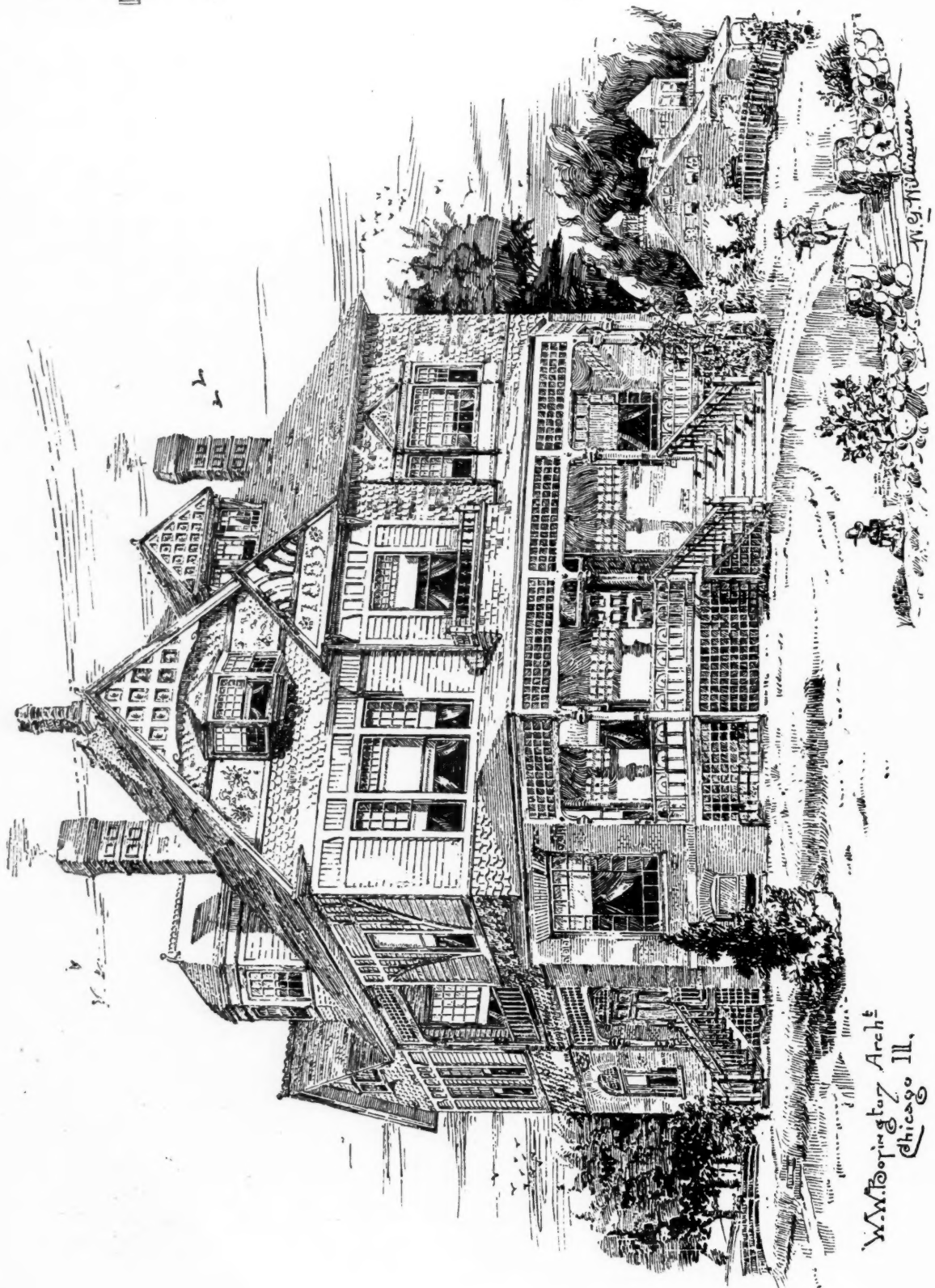




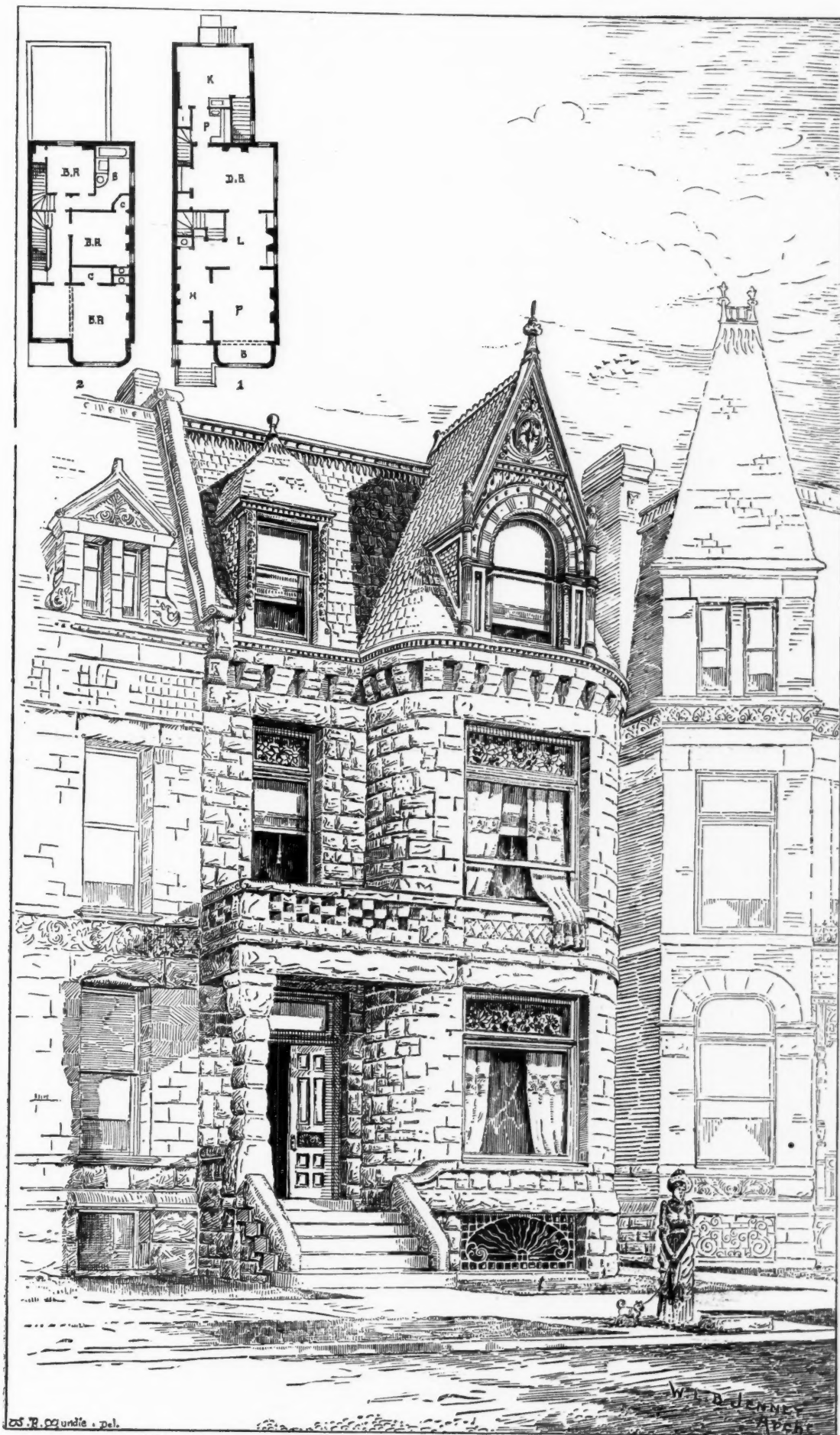




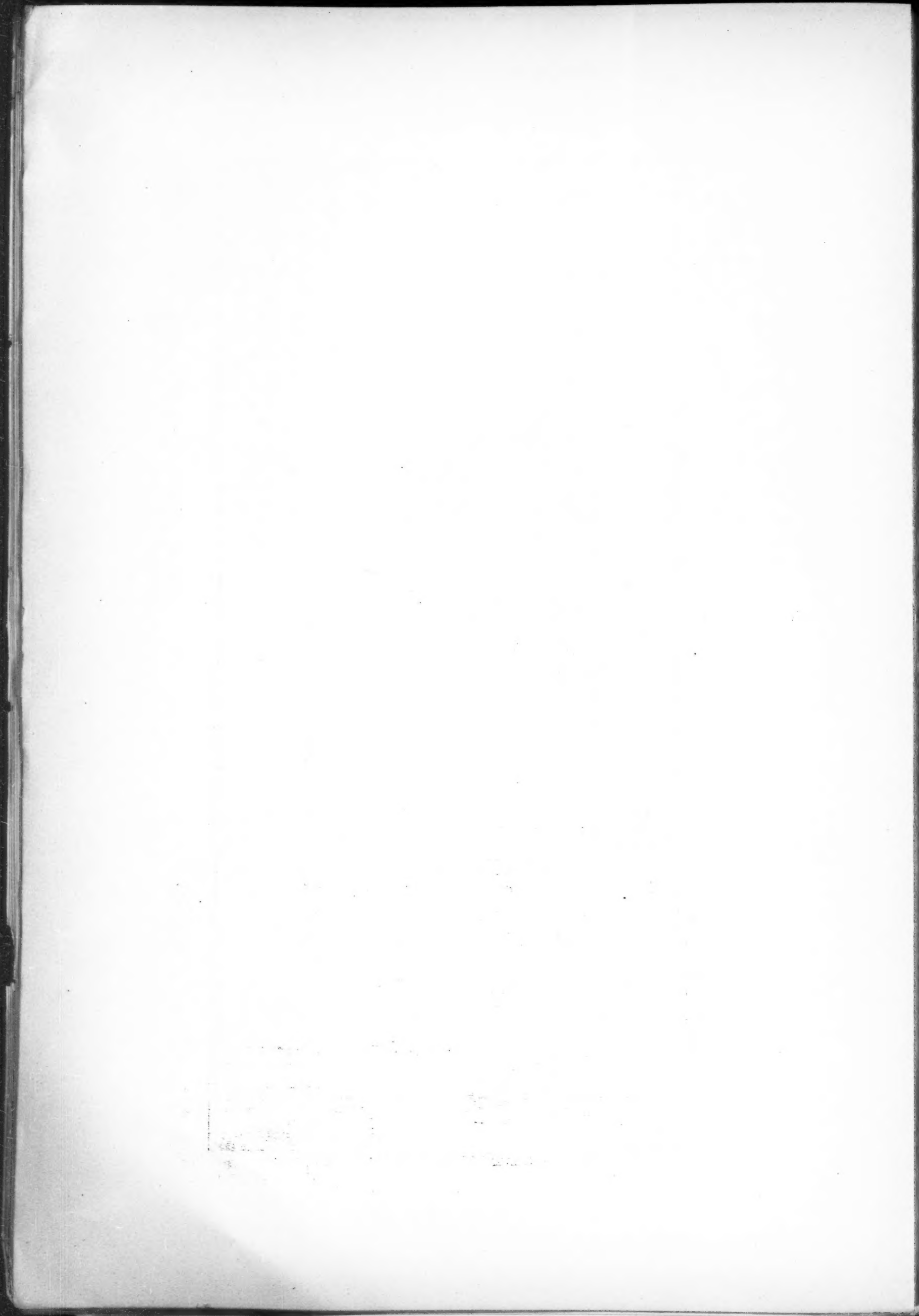
Residence
for
Mr. Geo. Kirk, Esq.
at
Waukegan
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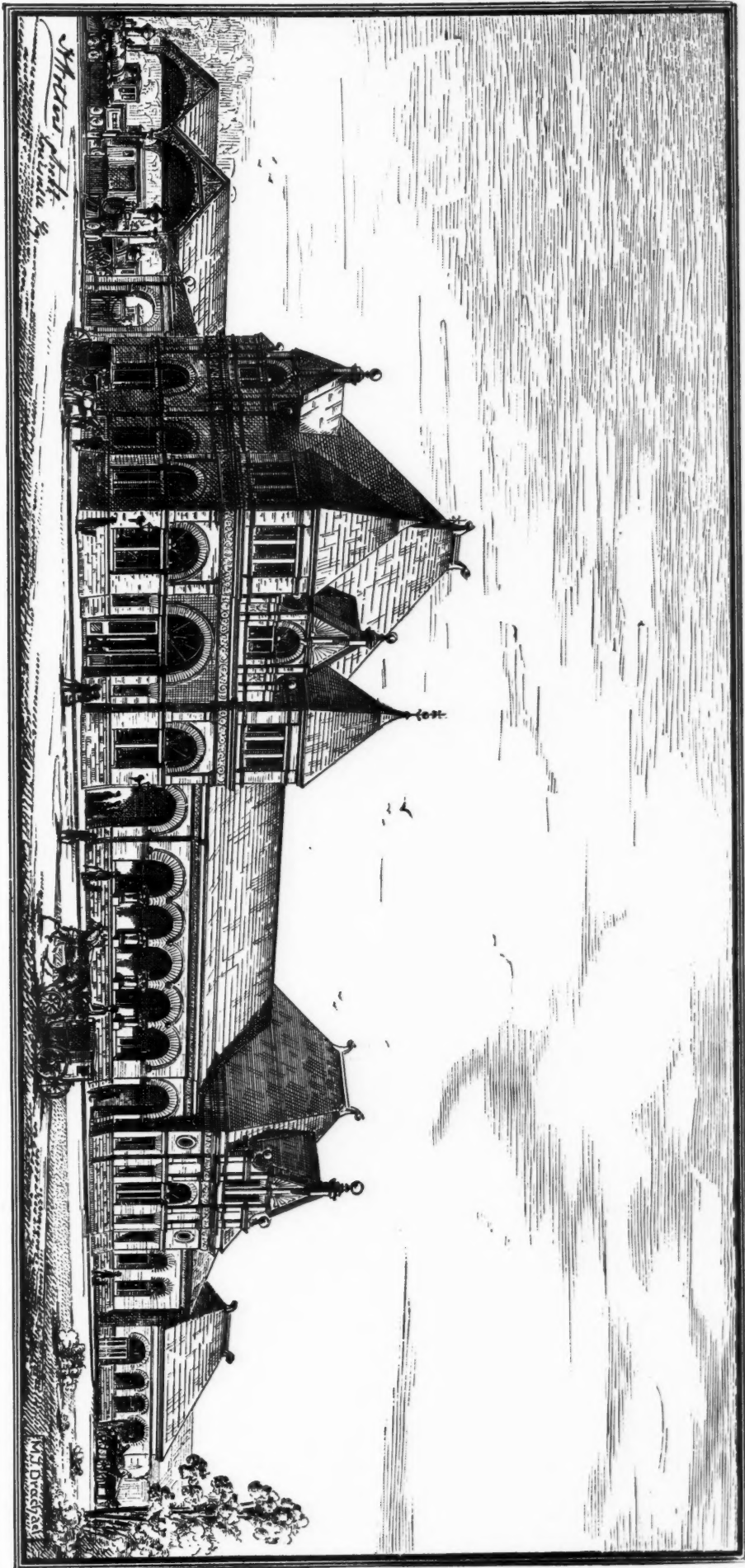


W. W. Booring, Archt.
Chicago, Ill.



:RESIDENCE FOR J.A. WOLFORD ESQ: CHICAGO:





UNION PASSENGER STATION, BIRMINGHAM, ALA.—By H. WOLTERS, Architect, Louisville, Ky.

Mr. Lawrie's valuable services, will make this one of the strongest architectural firms of Chicago. Mr. Lawrie was born in Dumfurline, Scotland, studied his profession in Glasgow, where his talents became so recognized that he was made president of the Draughtsmen's Association of that city. Coming to Chicago several years ago Mr. Lawrie entered the office of Burnham & Root, where his services have been valuable and recognized. Mr. Lawrie is president of the Chicago Architectural Sketch Club. The new arrangement will go into effect on the 15th instant.

Correspondence.

ST. LOUIS, MO., February 5, 1886.

Editors of Inland Architect and Builder:

Will you please advise me through the columns of your valuable paper as to the advisability of using yellow pine for doors and finish, etc.? Is it used much in Chicago? What per cent more does it cost finished in its natural state than white pine (grained)?

Respectfully yours, JOHN A. FOLSOM.

[In regard to the advisability of using yellow pine for doors, finish, etc. we would say, that we have heard no complaints where this has been used for interior finish, though, with the exception of public buildings, the bulk of Chicago trade for yellow pine interior finish has gone into interior work for floors in residences, such as servants' rooms and for halls and, to some extent, basements. As to its staying qualities, we believe it is just as good as white pine, and as to the difference in cost in natural finish of yellow pine, of white pine grained, it would depend altogether upon the quality of white pine used. Yellow pine can be bought from \$28 to \$32 for finishing stock, and the same grade of white pine would cost from \$40 to \$45. The expense of graining we should estimate to be greater than the natural finish of yellow pine. While we have great faith in the growth of the yellow pine trade, yet for interior finish there is nothing like oak, birch, ash and maple, all of which can be placed at a much less figure than clear white pine. Of course the expense of finishing is an item which adds materially to the cost of hardwood over soft, yet the satisfaction one derives from the staying qualities of hardwood one can readily see to be a great desideratum.—EDITORS INLAND ARCHITECT AND BUILDER.

CHICAGO, Ill., Jan. 9, 1886.

Editors Inland Architect and Builder:

We believe the inclosed slip clipped from the *Chicago Times*, possesses enough merit to warrant a notice in your columns, as a matter of interest to architects and the public.

Yours respectfully, J. M. L.

To the Editor:

CHICAGO, December 15, 1885.

The recurrence at intervals of terrible loss to life and property from burning of public buildings, theaters, halls, hotels and other places where numbers gather together should teach the authorities as well as the people at large the folly of such construction. Private capital has found it advisable and profitable, solely on business principles, to build large structures on a practically fireproof plan. Public officials would doubtless find it equally advisable and profitable to build in this way, and, in fact, have done so in most of the structures erected within ten years past. The wisdom of this was lately demonstrated in the county building, where, through carelessness, the gas was allowed to escape and fill the office of the county superintendent of schools with flame, which burned all night, doing no damage further than to blacken the fire-proof walls, floors and ceilings of this single compartment. The incident arouses the dreadful reflection that if by any cause a fire should break out in any one of our city schools there would be no fireproof walls and ceilings to confine it, but, on the contrary the wooden pile which constitutes the entire interior would burn like tinder. Over fifty thousand children attend these schools, most of them incapable under the slightest excitement of any forethought or judgment. A false economy or the fear of evoking criticism has thus far prevented the authorities from introducing anything but wood in the construction of schoolhouses. They have acknowledged the existence of imminent danger to life by other precautions. That on which most reliance is placed is a "fire test" calculated in case of fire to get all the children out of the building in time to avoid being incinerated in their mammoth crematories. Sometimes the "test" has worked satisfactorily. It was tried in a West-side school house a year or two ago. The bell struck at an unusual hour. The children were started in good order. They had learned that the test was to be made. Notwithstanding this, the very thought of fire caused them to break in wild confusion in the wide halls, resulting in serious injury to a teacher, who was thrown to the bottom of the staircase in the precipitate flight of the school. The children knew there was no fire, but even with this knowledge could not control their groundless fears. If a real fire should break out, would they be better able to maintain good order? If flames should start at the most probable point, the basement, the wide halls and draughts from the street would send the flames in a very few moments from the bottom to the top of any one of these pine-built school houses. The first thing to burn would be the staircases. The children could not live a moment in the stifling smoke in the halls. *They could not escape.* The life of every scholar is in danger every hour it is housed in our city schools.

Chicago is not alone in this criminal neglect to provide for the safety of school children. There are very few school buildings in the country where even the reasonable precaution has been taken of introducing hollow tile in the ceilings and walls and iron girders instead of pine joists. The expense would be but little more than the cost of wood construction. It would be something more, however, and until the parents of the school children demand that their children shall have some protection, and bring the matter prominently before city councils and school boards, it is probable that the school children will continue to be crowded into buildings

which are a constant menace to life and limb. Why should the adult population, which is, presumably, in a measure able to look out for itself, be given a security which is denied to the children, who certainly need it more than they?

COMO.

Mosaics.

LOCKWOOD & KIMBELL have enjoyed a copartnership for a year, and with it a fair amount of the pressed brick trade of Chicago. As the representatives of the St. Louis Hydraulic Pressed Brick Company, they have kept this product in unlimited stock at their yards at Fifth avenue and Folk street. Though they still keep a full supply at these yards they have moved their office up town so as to be near the offices of the architects, and are now occupying a handsomely appointed and spacious suit of three rooms at 162 Washington street, just west of La Salle, where architects and patrons will not only find a welcome but enjoyable surroundings when they call. These gentlemen have arranged a sample box of convenient size and attractive appearance for displaying the different shades and styles of brick for distribution in architects' offices, so that their patrons may have them for instant display or examination.

It is understood that an agency will soon be established in Chicago for the introduction in the west of a most durable syenite granite for building purposes, and also a beautiful verd-antique for interior finish. The following is the opinion of Mr. J. P. Leslie, State Geologist of Pennsylvania, in regard to this granite: "You have an unlimited quantity of the rock, and it can be gotten out in very large pieces. It is practically all of the same quality; is more durable than the ordinary granite, and in fact will last forever, not being subject to the action of the atmosphere, to an appreciable extent. Thousands of years of exposure has merely given a brown skin to the loose rock. A wall built of such specimens as you have sent from your quarry for my inspection would stand unchanged for centuries." The Smithsonian Institute specimen of this rock is marked Hornblende Syenite. The syenite granite is from Chester county, Pennsylvania, and the quarry is owned by J. H. Brinton, owner of the celebrated greenstone.

E. T. BARNUM, manufacturer of wire and iron work, of Detroit, Michigan, issues the following circular to the trade. It is a manly explanation and deserves notice.

About twenty years ago, in 1866, the undersigned started, in a small way, the manufacture of wire and iron work, giving employment to less than ten men. At that time the wire business was in its infancy, and the practical uses of wire work were very imperfectly developed. In 1879, the business had increased so that buildings four stories high and one hundred feet square were secured, giving employment to over four hundred men. In 1882, a joint stock company was organized (of which I was president and general manager), and, in order to meet the wants of the trade, buildings were erected and occupied in 1883, giving employment to over seven hundred men. The panic in the spring of 1884, found the company with a large stock of manufactured goods ready for the spring trade, and being somewhat extended for the times, together with internal dissension among a few of the stockholders, finally resulted in the E. T. Barnum wire and iron works going into the hands of a receiver, showing assets of \$115,000 over liabilities. Recently, December 3d, 1885, a fire occurred, burning the works, which were the most extensive and complete in all its appointments in the world. This fire has destroyed the work of years, and at a time when re-organization was being perfected.

I would respectfully announce that, notwithstanding these misfortunes, I have made arrangements to promptly fill orders for wire and iron work that may be sent to me, and that I propose, as soon as possible, to get the business in running order again.

Thanking my old friends and customers for their many expressions of kindly feeling, and asking their future orders, which will have my prompt and careful attention.

Very respectfully,

E. T. BARNUM.

P. S.—Letters intended for me, but addressed E. T. Barnum Wire and Iron Works, frequently get into other hands. For the present please leave off the wire and iron works, and address your letters, E. T. BARNUM, DETROIT, MICH.

A PROCESS that is in successful use by the Hecla Architectural Bronze and Iron Works, Poulson & Eger of New York, many examples of which are sent from their works and are in general use in Chicago, and for which that firm have lately appointed a resident agent here, Richard Robins 161 La Salle street, is described in a recent number of *Engineering*. The article says: "The Bower-Baff process for protecting iron from rust, by covering it with a skin of magnetic oxide of iron, appears to be steadily gaining in favor in Germany. It is not infrequently mentioned in German technical journals, and always with approval. Recently at a meeting of a branch of the German Engineers' Society, at Hanover, a paper was read by one of the members, in which he very strongly recommended the process to engineers and architects. Speaking of the fine blue-gray color of the coating formed, he said that this was always the more beautiful the cleaner the surface of the articles operated upon. The coating adheres very strongly to the metal, but still not so strongly as to allow of working iron so coated beyond a very limited extent. Thus wire cannot be bent without cracking off the oxide formed on it. Therefore all articles to be protected should be finished before the oxidation takes place. As regards the strength of iron treated by the process, the results of experiments go to prove that wrought-iron does not in any way suffer by the oxidation, and that cast-iron gains in strength, inasmuch as the outer surface is to a considerable extent changed, and made like a malleable cast-iron, gaining in toughness. There is a gain in weight of about one-half of one per cent, owing to the oxidation, and a scarcely perceptible increase of volume. The protection is very perfect, as has been proved by burying test-pieces for one year in the ground in very damp and unfavorable places. The coating is liable to have its appearance injured by handling, and for objects where this is a matter of importance, it is better to brush the surface over with grease or wax, which is absorbed into the oxide and remains in it, permanently protecting it. Another property of objects coated with the oxide is specially pointed out as of great value for some purposes, especially for objects of art. The oxide coat easily takes enameling, silvering, gilding or platinizing. The enamel, or the solution, can be put on direct upon the oxide, and then, after firing, adheres perfectly and has not the tendency to crack off, as in the case of its application to the bare iron. Then a coating of bronze or other metal can be given to objects in the simplest manner by brushing them over with a brush made of the metal in question. So much of the metal penetrates the oxide coating that the result is perfectly permanent."

The Year 1885.

Ann Arbor, Mich.—Business buildings, cost \$34,560; residences, cost \$69,900; repairs, etc., \$52,350. Total, cost \$156,810. Expended on public works \$247,700. Total \$404,510. Total 1884, \$444,875.

Anoka, Minn.—The amount expended in building improvements in this city during 1885 is estimated at \$500,000. Total 1884, \$349,000.

Aurora, Ill.—Brick dwellings, 3; cost \$12,000. Frame dwellings, 75; cost \$112,500. Brick business buildings, 17; cost \$96,000. Miscellaneous buildings, etc., cost \$17,800. Total cost, \$238,300.

Baltimore, Md.—3,237 permits were issued; cost \$4,340,125.

Battle Creek, Mich.—Brick residences, 2; cost \$3,000. Frame dwellings, 157; cost \$125,000. Brick business buildings, 9; cost \$18,000. Miscellaneous buildings, 4; cost \$12,500. Total 172 buildings, cost \$58,500.

Benton Harbor, Miss.—Brick dwellings, 2; cost \$2,800. Frame dwellings, 42; cost \$34,300. Brick business buildings, 4; cost \$8,070. Miscellaneous buildings, cost \$36,100. Total cost \$81,270.

Boone, Iowa.—Building improvements during 1885 cost \$89,500.

Burlington, Iowa.—Building improvements during 1885 cost about \$500,000.

Cedar Rapids, Iowa.—Brick residences, 1; cost \$6,000. Brick and stone residences, 4; cost \$84,000. Frame dwellings, 144; cost \$204,650. Brick business buildings, 3; cost \$14,500. Brick and stone business buildings, 5; cost \$175,500. Miscellaneous buildings, 16; cost \$85,900. Total, 173 buildings; cost \$570,550. Total 1884, \$927,580.

Charleston, S. C.—Brick residences, 4; cost \$6,900. Brick and stone residence, 1; cost \$75,000. Frame dwellings, 212; cost \$156,300. Brick store buildings, 5; cost \$12,800. Miscellaneous buildings improved, 158; cost \$121,175. Total 380 buildings, cost \$372,175. The report for the same period in 1884 was 465 permits and the reported cost \$320,100, showing an increase for the year 1885 as compared with the year 1884, of \$52,075.

This statement does not include the cost of repairs made necessary by the cyclone in August last. Col. Wm. Aiken Kelly, the city assessor, says that at least \$500,000 has been expended for the repair of damages. Allowing this estimate, \$872,000 will be the total. Total 1884, \$584,555.

Chicago, Ill.—South Division—Number of buildings, 1,122; feet frontage, 25,941; cost \$6,748,900. Basements and additions, 104. West Division—2,772 buildings; 63,073 feet frontage; cost \$8,531,900. Basements and additions, 322. North Division—744 buildings; 19,836 feet frontage; cost \$4,183,700. Basements and additions, 99. Total, 4,638 buildings, 525 basements, 1,604 sheds, 108,952 feet frontage; cost of buildings \$19,467,700; cost of sheds \$160,000. Grand total cost, \$19,624,100. Elevator certificates issued in 1885, 321, at two per cent. per certificate, \$642. The number and amount of fines for violation of building ordinances: Number, 155; amount for 1885, \$3,425. Receipts, January 1, 1885, to December, 1885: Building permits, \$20,566.30. Expenditure about \$19,500. Total 1882, 3,113 buildings; 73,161 feet frontage; cost \$15,842,800. Total 1883, 4,086 buildings; 85,588 feet frontage; cost \$17,500,000. Total 1884, 4,169 buildings; 98,782 feet frontage; cost \$20,689,600.

Cincinnati, O.—664 building permits were issued. Total cost of new buildings, according to valuations given the comptroller, \$2,072,058.10.

Clinton, Iowa.—Total expenditure in building during 1885, \$553,080; 1884, \$368,800; 1883, \$365,000; 1882, \$414,000; 1881, \$318,000; 1880, \$160,000.

Council Bluffs, Iowa.—The only possible way we have found to obtain anything like an accurate report of the amount of building done during 1885 is by taking the individual reports of the contractors, which are as follows: Messrs. Wickham Bros. report total, \$71,400; Mr. Battan reports total, \$23,500; F. Grass reports total, \$22,642; P. H. Wind reports total, \$34,500; J. F. Cody reports total, \$13,400; Messrs. Herman & Brown report total, \$15,900; Martin Hughes reports total, \$31,500; W. A. McMillen reports total, \$11,000; James Bodertha & Co. report \$5,100; C. Bosen reports \$11,000; C. Straub reports \$28,000; Mr. Covalt reports \$20,000; Mr. Lawson reports \$22,000; J. P. Weaver, \$9,500. Miscellaneous, \$55,600. Total reported, \$343,542. Total 1884, \$363,000.

Denver, Colo.—Brick and brick and stone residences, 152; frame dwellings, 14; cost \$12,150. Business buildings, 49; cost \$256,400. Churches, 3; cost \$19,500. School buildings, 2; cost \$11,000. Additions and repairs, 150; cost \$126,980. Total, 409 permits; cost \$790,980. Total 1884, \$1,909,426.

Des Moines, Iowa.—Brick residences, 27; cost \$94,500. Brick and stone residences, 15; cost \$58,750. Frame dwellings, 936; cost \$1,084,001. Frame business blocks, 11; cost \$39,050. Brick and stone business and factory buildings, 37; cost \$680,915. Total 1,026 buildings, cost \$1,957,216. Total 1884, \$2,830,674.

Detroit, Mich.—Permits were issued for 1,891 new buildings; cost \$3,103,873; 458 additions and alterations, cost \$341,203. Total cost, \$3,445,076. Building fees \$628.60. Besides the buildings above referred to, permits were issued for a number of fuel and other small sheds valued at \$8,313. There is also to be added an item of \$24,930, being for changes in plans after the permits were issued. This makes a total for the year of \$3,478,319. Of the buildings the most costly is the new Cass Hotel, \$70,000. Of buildings valued at from \$20,000 to \$50,000 there were erected 17; from \$10,000 to \$20,000, 26; from \$5,000 to \$10,000, 90; from \$1,000 to \$5,000, 521. The character of the buildings erected is shown in the following classification: Dwellings, 1,394; stores, 210; barns, 183; store houses, 15; manufactories, 12; carpenter shops, 7; offices, 7; blacksmith shops, 6; churches, 5; school houses, 5; foundries, 5; blocks for offices, 3; hotels, 3; miscellaneous buildings, 37. Of these buildings 563 were constructed of brick, and 1,328 of wood. Of the additions and alterations 101 were of brick and 356 of wood. Total 1884, \$3,676,227.

Detroit, Minn.—The amount expended in building improvements in this city during 1885 is estimated at \$120,000.

Dubuque, Iowa.—Brick residences, 76; cost \$123,700. Brick business buildings, 17; cost \$59,400. Frame dwellings, 69; cost \$53,050. Miscellaneous buildings, 9; cost \$51,150. Total, 171 buildings; cost \$287,300. The above is a correct report of the building permits issued. Total 1884, \$276,543.

Duluth, Minn.—Total amount expended in improvements during 1885, \$1,525,110. Total 1884, \$1,142,900.

Emporia, Kan.—Brick residence, 1; cost \$40,000. Frame dwellings, 125; cost \$125,000. Brick business buildings, 3; cost \$25,000. College building, 1; cost \$65,000. Total, 130; cost \$255,000; Total 1884, \$120,000.

Faribault, Minn.—Brick residence, 1; cost \$2,000. Brick business buildings, 2; cost \$20,000. Frame dwellings, 36; cost \$35,000. Addition to Deaf and Dumb Institute, cost \$12,000. Total, 40 buildings, cost \$69,000. Additions, barns, etc., cost \$43,000. Grand total, \$112,000.

Fond du Lac, Wis.—Brick residences, 6; cost \$25,000. Brick business buildings, 4; cost \$52,000. Frame dwellings, 22; cost \$44,500. Miscellaneous buildings, 4; cost \$48,000. Total, 36; buildings cost \$169,500; waterworks cost \$150,000. Grand total \$319,500.

Galena, Ill.—Brick residences, 2; cost \$3,000. Frame dwellings, 21; cost \$26,900. Miscellaneous buildings, 14; cost \$5,350. Total, 37; buildings cost \$35,250. Total 1884, \$31,000.

Galesburg, Ill.—Brick residence, 1; cost \$2,000. Frame dwellings, 70; cost \$85,000. Brick business buildings, 4; cost \$22,000. Miscellaneous buildings, 4; cost \$8,500. Total, 79 buildings; cost \$117,500.

Hay Springs, Wis.—Building improvements during 1885 cost \$85,550.

Helena, Mont.—A careful estimate of the buildings erected during 1885 in Helena shows over \$700,000. This includes the Masonic temple and Union block, two of the largest structures in the city. The plans for a number of new buildings of vast importance have been drawn, and the work will be commenced as soon as the weather permits.

Indianapolis, Ind.—Cottage houses, 409; cost \$325,850. Frame residences (two-story), 26; cost \$149,900. Brick residences (two-story), 9; cost \$42,200. Business buildings, 82; cost \$310,250. Additions and repairs, 355; cost 96,900. Total 931 permits issued; cost \$925,100. Total for 1884, 499 permits issued; cost \$967,835.

Iowa City, Iowa.—Building improvements during 1885 cost about \$55,000.

Jackson, Mich.—Brick residences, 9; cost \$31,620. Brick and stone residence, 1; cost \$75,000. Frame dwellings, 109; cost \$199,835. Brick business buildings, 11; cost \$140,800. Miscellaneous buildings, 18; cost \$198,925. Total 148 buildings; cost \$646,180.

Janesville, Wis.—Building improvements during 1885 cost \$197,000. For 1883, \$438,000. For 1884, \$200,000.

Joliet, Ill.—Brick residences, 3; cost \$12,000. Frame dwellings, 250; cost \$280,000. Brick business buildings, 3; cost \$30,000. Brick and stone court house, 1; cost \$150,000. Miscellaneous buildings, 45; cost \$60,000. Total 302 buildings; cost \$532,000. About \$25,000 has been expended in suburban buildings not included in above estimate. Total 1884, \$225,000.

Kalamazoo, Mich.—Total 185; buildings cost \$526,950. Total 1884, \$366,750.

Kansas City, Mo.—Brick and stone residences, 392; cost \$1,865,895. Frame dwellings, 851; cost \$870,578. Brick business buildings, 310; cost \$2,535,525. Frame business buildings, 291; cost \$303,335. Miscellaneous buildings, 1,070; cost \$183,296. Total 2,904; cost \$5,758,629. All the above were erected on an area of 4.57 square miles, being the old city limits. The estimate of commercial Kansas City new city limits is \$7,758,629. Total expenditure for building 1884, \$6,680,602.

Keokuk, Iowa.—Brick residences, 3; cost \$8,250. Frame dwellings, 28; cost \$36,650. Business buildings, 4; cost \$9,000. Stone church, 1; cost \$20,000. Miscellaneous buildings, repairs, etc.; \$21,750. Total cost \$95,650. Total, 1884, \$110,400.

Knoxville, Tenn.—Business buildings, 40; cost \$98,000. Manufactories and miscellaneous buildings, 18; cost \$271,000. Public buildings and works, 14; cost \$307,000. Private dwellings, 260; cost \$210,000. Total 332 buildings; cost \$886,000. Total for 1884, \$991,800.

La Crosse, Wis.—Public buildings cost, \$258,025. New dwellings, cost, \$378,335. Additions and improvements cost, \$55,755. Total \$692,375. Additions to water works, sewer, etc., cost, \$86,800. Total improvements, \$779,315. Total 1881, \$504,450. Total 1882, \$478,175. Total 1883, \$640,640. Total 1884, \$654,465.

La Salle, Ill.—Frame dwellings 46; cost \$36,800. Brick and stone business building, 1; cost \$3,000. Miscellaneous buildings, 3; cost \$2,800. Total, 50 buildings; cost \$42,600. Total 1884, \$67,000.

Little Rock, Ark.—Brick residences, 2; cost \$8,000. Brick business buildings, 12; cost \$38,000. Miscellaneous buildings cost \$226,990. No record of frame buildings is kept. "Miscellaneous" includes the following buildings in course of erection by the state; school for the blind, insane asylum, addition to the penitentiary, remodeling of state capitol, also Hyde's Opera House and the Pulaski county jail. Total expenditure for 1885 was \$272,990.

Los Angeles, Cal.—The architects report the following as gross amount of their work in Los Angeles during 1885: Architects Boring & Haas, total \$200,000. Architect R. B. Young, total \$180,000. Architect John Hall, total \$160,000. Architect A. M. Edelman, total \$51,300. Architect C. H. Brown, total \$98,600. Architects Kysor & Morgan, total \$265,350. Architect B. J. Reeve, total \$160,300. Total buildings under \$2,000, 36; buildings between \$2,000 and \$4,000, 64; buildings between

\$4,000 and \$6,000, 28; buildings over \$6,000, 47; grand total of buildings, 175; grand total of valuation, \$1,115,550. This does not include Architect C. W. Davis' list, which was not obtainable. Total for 1884, \$1,219,650.

Louisville, Ky.—Brick residences, 166; cost \$508,850. Frame dwellings, 453; cost \$343,952. Brick and stone residences, 2; cost \$31,250. Brick business buildings, 55; cost \$395,987.50. Brick and stone business buildings, 7; cost \$80,625. Brick churches, 4; cost \$27,250. Brick club house, 1; cost \$7,500. Miscellaneous buildings, 205; cost \$48,193.75. Total, 893 buildings; cost \$1,443,605.75. Not included in the above is \$19,456.70, amount expended during the year ending September 30, 1885, according to report of supervising architect, for building the court house, postoffice, etc. The building is to cost \$1,000,000. Total expenditure to date, including site, \$160,937.55. This makes the total amount of building improvements for 1885, \$1,604,536.30. In the last ten years 75 per cent of the buildings of Louisville have been constructed of brick, iron and stone, and it is estimated that during this period at least \$10,000,000 have been expended in permanent buildings. Total 1884, \$1,537,993.

Madison, Ind.—Brick residences, 40; cost \$40,000. Brick and stone residences, 5; cost \$100,000. Frame dwellings, 50; cost \$40,000. Brick business buildings, 10; cost \$100,000. Brick and stone business buildings, 2; cost \$20,000. Cotton mill, 1; cost \$200,000. Woolen mill, 1; cost \$50,000. Opera House, 1; cost \$20,000. Stone foundry, 1; cost \$15,000. Baptist church, 1; cost \$8,000. Livery stable, 1; cost \$5,000. Total, 113 buildings; cost \$598,000.

Madison, Wis.—Building improvements during 1885 cost about \$500,000.

Mankato, Minn.—Total amount expended in building and improvements during 1885, \$240,350.

Milwaukee, Wis.—Brick and stone residences, 76; cost \$351,500. Brick business buildings, 52; cost \$568,500. Frame business buildings, 10; cost \$25,000. Frame dwellings, 190; cost \$347,500. Factory buildings, 14; cost \$182,000. North Western Mutual Life and Fire Insurance Company's stone building, \$300,000; C. M. & St. P. R. R. depot, stone, \$225,000; County jail, brick \$100,000; three public schools, brick, \$80,000; two fire engine houses, brick, \$10,000; art gallery, stone, \$75,000; two brick churches, \$48,000; Light Horse Squadron armory, stone, \$35,000; gas house, brick, \$20,000; panorama building, frame, \$16,000; roller rink, frame, \$13,000; private school house, brick, \$10,000; grain elevator and malt house, wood, \$40,000. Total cost, \$981,000. Grand total, 358 buildings; cost \$2,455,500. Total 1884; \$3,063,531.

Minneapolis, Minn.—Brick and stone business buildings, 81; cost \$1,274,050. Brick veneer business buildings, 12; cost \$62,910. Frame business buildings, 57; cost \$58,785. Frame dwellings, 1,362; cost \$2,956,300. Miscellaneous buildings, 1,554; cost \$1,776,223. Total 3,066 buildings; cost \$6,128,298. This report dates from March 1st to December 1st. Total 1884, \$7,621,950.

Mobile, Ala.—Brick residences, 8; cost \$37,000. Brick business buildings, 8; cost \$80,000. Frame dwellings, 48; cost \$97,000. Miscellaneous buildings, 10; cost \$22,000. Total 74 buildings; cost \$236,000.

New Haven, Conn.—Brick buildings, 89; frame buildings, 324. Total 413; cost about \$1,500,000.

New York, N. Y.—Estimated cost of all buildings for which plans were filed during 1885; \$44,214,563. 1884; \$41,461,208. 1883; \$48,845,000. 1882; \$49,000,000. 1881; \$47,543,000. Work was begun on 2,400 buildings in 1884 and on 2,704 in 1885. Last year 2,473 buildings were completed. Over 2,550 have been erected this year, and 2,113 are in various stages of construction. Of this number 673 are below Twenty-third street. Among the most expensive buildings for which plans were filed this year were a French flat house at Thirty-fifth street and Fifth avenue, to cost \$600,000; the Emigrant Industrial Savings Bank in Chambers street, to cost \$500,000; an office building at Nos. 8, 10 and 12 Wall street, sixty-six feet front, to cost \$500,000; and many others costing from \$100,000 to \$250,000 each. The Equitable Life Assurance Society has made application for the erection of a building to occupy the space between Nos. 116 and 124 Broadway, Nos. 62 and 82 Cedar street, and to extend to Pine street. The plans for this building are not completed. It will cost, it is estimated, \$2,000,000. During the eleven months of 1885, ending November 30, the estimated cost of dwelling houses in this city for which plans were filed and which were to cost less than \$20,000 each, is \$8,693,000. The estimated cost of dwellings worth between \$20,000 and \$50,000 is \$3,875,100. The estimated cost of flats costing over \$15,000 this year is \$14,858,000. In 1884 the cost of this class of building was less than \$8,000,000. The estimated cost of tenement-houses to cost less than \$15,000 for which plans were filed in 1884, was \$14,992,100. The cost of such buildings in 1885, was \$7,455,100.

Omaha, Neb.—Residence buildings, cost \$1,609,630. Store and warehouse buildings, cost \$701,000. Hotel buildings, cost \$120,000. Manufacturing buildings, cost \$342,750. School and church buildings, cost \$92,600. Total cost, \$2,865,980. Public improvements, \$922,707. Grand total \$3,788,687. Total 1884, \$3,687,400.

Oshkosh, Wis.—Brick and stone residences, 2; cost \$14,000. Frame dwellings, 155; cost \$180,000. Brick and stone business buildings, 7; cost \$29,000. Frame business buildings, 32; cost \$48,600. Mills and factory buildings, 7; cost \$84,359. Miscellaneous buildings, cost \$79,270. Electric light plant, cost \$3,600. Total cost, \$458,829. Total 1884, \$737,000.

Ottawa, Ill.—Brick residence, 1; cost \$8,000. Frame dwellings, 31; cost \$48,000. Brick and stone business building, 1; cost \$5,000. Miscellaneous buildings and repairs, cost \$6,000. Total 33 buildings, cost \$67,000.

Peoria, Ill.—Residences, 75; cost \$235,850. Business and miscellaneous buildings, etc., 27; cost \$244,800. Total cost, \$480,650. The

above report is incomplete, nor does it include the amount expended upon the government building now in course of construction. Total 1884, \$659,500.

Philadelphia, Pa.—Brick residences, \$5,406. Brick stores and dwellings, 264. Brick store buildings, 88; additions and alterations, 568. Total number of permits issued, 7,964. No account of cost has been kept by the building inspector.

Pittsburgh, Pa.—Brick buildings, 626. Frame buildings, 646. School buildings, 3. Total cost \$3,030,429. Total cost 1882, \$2,294,750; 1883, \$2,825,042; 1884, \$3,361,990.

Portland, Ore.—Brick business buildings, 13; cost \$446,500. Frame dwellings, 83; cost \$389,500. Miscellaneous buildings, 9; cost \$128,000. Total \$964,000. Total 1884, \$1,683,600. East Portland, \$341,700. Grand total 1884, \$2,025,300.

Providence, R. I.—Brick residence, 1; cost \$10,000. Frame dwellings, 380; cost \$1,196,750. Brick business buildings, 5; cost \$109,000. 1 brick police station, cost \$25,000; 1 brick church, cost \$30,000. 1 brick and stone club house, cost \$75,000. 1 brick theater, cost \$30,000. 1 brick mill, cost \$75,000. Additions and alterations cost \$209,005. Miscellaneous buildings, cost \$178,495. Total cost \$1,938,450.

Richmond, Ind.—Brick residences, 47; cost \$88,550. Frame dwellings, 68; cost \$51,750. Total 115 buildings, cost \$140,300.

Rockford, Ill.—A table prepared by the *Register* places the amount expended in building during 1885 at \$485,715.

Rushville, Ill.—Building improvements during 1885 cost \$50,000, against \$100,000 during each for the past three years.

San Francisco, Cal.—Frame buildings, 1,182; cost \$4,562,914. Brick buildings, 39; cost \$1,972,600. Alterations, 237; cost \$608,485. Total cost, \$7,143,999. Total 1884, \$6,202,807.

Sioux City, Iowa.—Brick residences, 11; cost \$46,000. Frame dwellings, 373; cost \$321,143. Brick business buildings, 60; cost \$138,600. Brick and stone business buildings, 2; cost \$14,000. Brick business buildings improved, 27; cost \$72,000. Miscellaneous buildings new, 26; improved, 7; cost \$208,000. Additions and improvements in brick residences; cost \$44,000. Total cost \$843,743. Not including city or railroad work. Total 1884, \$980,000.

Sioux Falls, Dak.—Building improvements during 1885 cost \$352,400.

South Bend, Ind.—Brick residences, 9; cost \$46,000. Brick and stone residence, 1; cost \$7,000. Frame dwellings, 50; cost \$50,000. Brick business buildings, 10; cost \$50,000. Brick and stone business building, 1; cost \$100,000. Miscellaneous buildings; cost \$25,000. Total 70 buildings; cost \$278,000. Total 1884 \$298,2200.

St. Joseph, Mich.—Building improvements during 1885 cost \$124,259.

St. Joseph, Mo.—Brick residences, 30; cost \$310,800. Brick and stone residences, 4; cost \$110,000. Frame dwellings, 200; cost \$150,000. Brick and stone business buildings, 10; cost \$146,000. Miscellaneous buildings, 28; cost \$272,000. Total 272 buildings; cost \$988,800. Sewers laid by the city during the year; cost \$15,000.

St. Louis, Mo.—Brick residences, 1,349; cost \$4,059,631. Brick and stone residences, 21; cost \$132,325. Frame dwellings, 337; cost \$307,557. Brick business buildings, 31; cost \$140,556. Miscellaneous buildings, 706; cost \$1,226,751. Total 2,484 buildings; cost \$5,866,810. Total 1884, \$6,764,791.

St. Paul, Minn.—Residences, 2,514; cost \$4,363,000. Frame business buildings, 188; cost \$309,100. Brick and stone business buildings, 193; cost \$1,550,300. Miscellaneous buildings, 612; cost \$2,881,300. Total 3,507 buildings; cost \$9,103,700. Total for 1884, 2,383 buildings; cost \$7,266,477. The amount expended on new bridges during 1885 was \$421,900. New sewer built in 1885, 19-7 miles. In 1884, 4½ miles. Total amount expended on public works, \$1,500,000 in 1885; \$1,200,000 in 1884. Total amount expended in water-works department in 1885, \$522,971; in 1884, \$900,902.

Streator, Ill.—Brick residence, 1; cost \$1,500. City Hall; cost \$12,000. Frame dwellings, 300; cost \$82,500. Brick business buildings, 5; cost \$47,000. Stone church; cost \$6,500. Miscellaneous building, 1; cost \$1,500. Total 309 buildings; cost \$151,000. Total 1884, \$179,000.

Syracuse, N. Y.—Dwellings, 326; cost \$884,850. Business buildings, 19; cost \$57,250. Expended on superstructure of Government building, \$111,550. Miscellaneous buildings, additions, alterations, etc.; cost \$260,140. Total \$1,313,790. Total for 1884 cost \$1,706,890. Not included in above is \$351,330, expended in suburban building.

Terre Haute, Ind.—Brick residences, 10; cost \$17,825. Frame business buildings, 9; cost \$7,600. Frame dwellings, 76; cost \$50,635. Brick business buildings, 16; cost \$19,800. Miscellaneous buildings (including two churches), 35; cost \$23,655. Total, 146 buildings; cost \$119,515. Above is from building permits issued. Permits were only taken out for about two-thirds of the buildings erected. Total 1884, \$303,206.

Toledo, Ohio.—Brick buildings, 163; cost \$450,619. Frame buildings, 580; cost \$434,580. Miscellaneous buildings, including amount expended on the new postoffice and custom house, the soldiers' memorial building, and the manual training school, built by the city, cost \$140,000. Total cost \$1,025,199. Total 1884, \$2,083,531.

Tower, Dak.—Residences, cost \$8,200. Business buildings and miscellaneous improvements, cost \$23,400. Buildings of public nature, cost \$7,100. Total cost \$42,280.

West Point, Dak.—Building improvements during 1885 cost \$134,159.

Synopsis of Building News.

Albert Lea, Minn.—Architects C. G. Maybury & Son, of Winona, Minn., report: For Gulbrandsen Bros., two-story brick store building, 45 by 100 feet; cost \$7,000; under way. For G. Gulbrandsen two-story frame dwelling, 42 by 52 feet; cost \$4,000; projected.

Architects Hodgson & Stem, of St. Paul, Minn., report: Brick and stone court house; cost \$45,000.

Atchison, Kan.—Architect W. Angelo Powell, of St. Joseph, Mo., reports: For John McIntire, four-story and basement brick business block, 72 by 100 feet, stone front, tin roof; cost \$16,800; under way.

Atlanta, Ga.—Architects Bruce & Morgan report: For Christian Church congregation, new brick front to present church building; cost \$6,000; under way; D. D. Snyder, contractor. For Mrs. E. C. Durant, two-story dwelling; cost \$2,500; taking bids.

Attica, Ind.—Architect Geo. S. Spohr, of Chicago, Ill., reports: For Mrs. P. Collins, stone and wood residence, 40 by 60 feet; cost \$15,000.

Bloomington, Ind.—Architect J. L. Nichols reports: For N. B. Rogers, two-story frame livery stable, 60 by 130 feet; cost \$3,000; just contracted; also two smaller jobs; outlook not flattering.

Buffalo, N. Y.—Architects Swan & Falkner report: For H. Wells, two-story half brick and frame residence on Niagara street; cost \$9,000; Joseph Metz, builder. For Irving Kester, two-story half brick and frame residence on North street; cost \$8,000; Schneider & Kraft, builders. For J. W. Crafts, two-story frame residence on Linwood avenue; cost \$8,500; Joseph Metz, builder. For E. H. Webster, brick and frame residence on Prospect avenue; cost \$7,000; Schneider & Kraft, builders. For W. E. Morgan, frame residence on Dodge avenue; cost \$4,000; Joseph Metz, builder. For James Stewart, frame residence on Seventh street; cost \$5,000; William Henrich, builder. For S. Koopmans, frame residence on Niagara street; cost \$5,500; Joseph Metz, builder. For Henry Brown, frame residence on Niagara street; cost \$5,500; F. Scott, builder. For L. W. Simpson, frame residence on Richmond avenue; cost \$4,000; Dean & Spring, builders. For H. Loomis, frame residence on Richmond avenue; cost \$3,500; Joseph Metz, builder.

Architect F. W. Calkins reports: For James H. Smith, two-story frame residence on Ferry street; cost \$11,000; Joseph Metz, builder.

Architects M. E. Beebe & Son report: That contracts have been awarded, but work will not be begun before the first of May next, for the John C. Jewett Manufacturing Company's new building. The contract for the mason, iron and cutstone work was awarded to Charles Berrick; and for carpenter work, plumbing, painting and glazing to John Feist. It will be 93 feet front by 144 feet deep, and five stories high. It is estimated to cost \$50,000.

Cadillac, Mich.—Architect Sidney J. Osgood, of Grand Rapids, Mich., reports: For Austin Mitchell, dwelling; cost \$3,000; contract not yet let.

Canon City, Col.—Mr. J. P. DeWoody and Mr. Stubbins, of New York, will move the St. Cloud Hotel from Silver Cliff to this place. The building is of brick and stone and handsomely finished. It was erected at Silver Cliff three years ago, at a cost of \$28,000. The estimated cost of moving and rebuilding is from \$12,000 to \$16,000. The County Court House, which was erected in Canon City in 1881-82, at a cost of \$30,000, has been condemned, and has to be taken down and rebuilt. The cause is not the construction, but that the foundation was laid on loose, spongy ground, which keeps giving. Prospect for next season, good.

Architect Geo. W. Roe reports: County Poor House, main building and wings, main building 36 by 36 feet, two stories; east and west wings 55 feet with "L" 40 feet; one-story high; size over all, 146 feet front, 4 feet depth; to be built of brick; tin roof; cost, about \$10,000. Plans on file at Court House. For Andros Johnson, brick dwelling, 32 by 32 feet, tin roof; cost \$2,000; under way; S. Bond, builder. For James Adams, eleven-room brick and stone residence, 40 by 40 feet; cost, about \$4,000; projected. The Hot Springs Hotel, previously reported, 120 by 62 feet, cost \$10,000, is nearly inclosed. County bridge across the Arkansas river, to be built after the Pratt system, 20 by 80 feet, cost \$1,200, is projected.

Carroll City, Iowa.—Very little building going on, but outlook is good. Architect S. P. Hart reports: Two-story and basement brick and stone building, 30 by 100 feet, for J. E. Griffith; cost \$8,000.

Chicago.—The prospect for a year of unprecedented activity in building is now almost a certainty. The building material market is steady with a slight upward tendency. Most of the city building is in the "projected" stage, but active preparations are being made for early spring work.

Architect Geo. S. Spohr reports: For S. Wallace, three-story and basement brick, 25 by 80 feet, corner of State and Forty-second street; cost \$10,000. For A. C. Weaver Estate, additional story, 25 by 70 feet, to brick building, 48 Eldridge court; cost \$2,500. For Henry Koon, three-story and cellar, brick, 24 by 60 feet, Forty-second street and Wabash avenue; cost \$7,000. For Mrs. A. Miller, three-story and cellar, brick, 25 by 72 feet, 582 Sedgwick street; cost \$8,000. For Mrs. H. Frese, three-story and cellar, brick, 25 by 58 feet; 441 Dayton street, cost \$6,000. For Mrs. M. Schuler, three-story and cellar, brick, 25 by 58 feet, on Sedgwick street, near North avenue; cost \$4,800. For John Sullivan, three-story store and flats, 24 by 70 feet, corner of Wells and Whiting streets; cost \$8,000.

Architect J. W. Ackerman reports: For John Gaynor, three-story, attic and cellar, residence, 30 by 98 feet, brick and Hummelstone (Pa.) brownstone front; interior finished in hardwood and heated by steam; cost, including barn, \$28,000; not let. For the same owner, two residences on Sangamon street, two stories and cellar, 40 by 57 feet, Anderson pressed brick, limestone trimmings; cost \$6,000. For the same owner, two residences on Congress, near Sangamon, three stories and cellar, 42 by 65 feet, pressed brick, limestone trimmings; cost \$7,500. For Z. Davidson, on 59 Wilson street, three-story store building, 25 by 80 feet, flats above, Anderson pressed brick front, limestone trimmings; cost \$8,000; Napoleon Provost, contractor.

Architect Alfred Smith reports: For A. E. Kent, three-story and basement barn, Anderson pressed brick front, 75 by 100 feet; cost \$25,000.

Architect C. C. Miller reports: For P. F. Flood, on corner of Monroe and Sangamon streets, flat building, three stories, 24 by 62 feet, pressed brick, stone trimmings; cost \$8,500. For P. H. Dyrenforth, residence at Lake View, frame, French chateau style, 34 by 60 feet, two stories; cost \$6,000.

Crawfordsville, Ind.—Architect E. H. Ketcham of Indianapolis reports: One-story brick church building, 74 by 102 feet, pressed brick with stone trimmings; cost \$20,000; under way.

Cincinnati, O.—There is no change since last report. The winter continues more or less open, and is quickly taken advantage of by all the contractors. There are several new and imposing buildings soon to be erected which will add greatly to the beauty of our city. Cincinnati is making encouraging strides forward architecturally, more attention being paid to ornamental details, which add but little to the cost, but much, when judiciously and artistically arranged, to the "tout ensemble" of the structure. Among the prominent new edifices to be erected, and reflecting credit upon the architect, are the "Citizens' Bank and Paxton Warrington building," built jointly, and the Second Nat. Bank building, both designed by the same architect. In my next I will mention his name, combined with a full description of the buildings. The contracts for both will be closed in about two weeks, which explains my silence.

Architect Samuel Hannaford has enlarged and refitted his office and it is now one of the cosiest and best arranged in our city. He reports the following: For Alms and Doeppke, a six-story brick warehouse, 50 by 150 feet, with tin roof; contracts not let. College Hill Town Hall, College Hill, Ohio, a brick building of irregular shape and size; cost \$15,000. For John E. Bell, a six-story brick store building, with freestone trimmings, size 45 by 130 feet; cost \$2,500. For Jos. Jones, Esq., a residence of brick with 9 rooms, pine finish, slate roof and costing \$8,000. Remodeling building for stores and flats for Jno. W. Ellis, Esq., of New York City; drawings in preparation; time well occupied.

Architect H. E. Siter, "Lincoln's Inn Court," has his time well occupied.

Architect G. W. Drach reports as follows: Residence for Chas. Weber, Esq., built of frame, 2½ stories, and containing 10 rooms, hardwood finish, etc., and slate roof; cost \$10,000; also a brick stable costing \$2,000. For Mrs. Mary Flannery, a frame house of 9 rooms, pine finish, slate roof; cost \$3,500. For Miss Adile Andres, a frame residence of 8 rooms, pine finish and slate roof; cost \$4,000. For Henry Brinkmeyer, a residence built as follows: First story weatherboarded, second story cypress shingles, with cement gables and slate roof; cost \$5,000.

Architect G. W. Rapp reports the following: Remodeling and rebuilding University

building, which was destroyed by fire; cost \$8,500. Hospital building for "The Poor of St. Francis" at Lick Run, city; irregular in shape with a center building, 40 by 150 feet, connected with two wings, each 40 by 108 feet. The Chapel is in the center of the main building, which has iron stairs throughout. It is a brick building, 3 stories high, with freestone trimmings, and has a capacity of 200 patients. There is also a boiler-house and stable connected in the group; total cost \$125,000.

Architect Sidney J. Osgood, of Grand Rapids, Mich., reports: For Farren Schuberth, six dwellings; cost \$18,000.

Cleveland, Ohio.—Outlook for building is good.

Architect A. M. Smith reports: For P. McArthur, four tenement houses, 26 by 56 feet each; cost \$10,000; under way. For G. J. Jones, M.D., two tenement houses, 27 by 54 feet; cost \$6,000; plan ready; Simmons & Waldon, masons; Kelly & Richards, carpenters. Also considerable repair work under way.

Columbus, Ohio.—The outlook for 1886 is good. There will be but slight advance in prices of material, about 10 per cent in early work.

Architects Terrell & Morris report: For C. D. Firestone, two-story pressed brick building, 50 by 84 feet, brownstone trimmings, tile roof, cost \$30,000; under way. For F. E. Powell, two-story buff and brownstone building 40 by 60 feet, tile roof; cost \$15,000. Plans on the boards for D. T. Nichergten, pressed brick and brownstone building, 40 by 48 feet, slate roof; cost \$9,000; under way. For S. Butler, two-story brick and frame, 28 by 40 feet, slate roof; cost \$5,500; under way. For T. H. Ricketts, two-story brick, slate roof, 30 by 44 feet; cost \$5,000; under way. For D. K. Watson, two-story brick, 28 by 26 feet, slate roof; under way. For A. A. Gibson, two-story pressed brick, 36 by 40 feet, slate roof; cost \$7,000; under way. For J. W. King estate, six-story and basement bank building, 25 by 100 feet, American method of fireproof construction, brownstone front; cost \$40,000; receiving bids.

Davenport, Ia.—Very little new work projected as yet. Two office buildings are talked of, the erection of which is uncertain.

Architect E. S. Hammatt reports: Griswold College gymnasium, one-story, pressed brick veneer building, 71 by 31 feet; cost \$5,000; plans nearly finished.

Des Moines, Ia.—But little can be said of what may be done here this year. There seems to be a general feeling that there will be a good deal of building.

Architects Josselyn & Taylor report: For Geo. Booth, one-and-one-half story frame cottage, 28 by 38 feet; under way; L. A. Stonerod, builder.

Architect W. L. Plack reports: For M. Lawritsen, three-story brick business block, 40 by 110 feet, pressed brick and cutstone front, steam heating; cost \$17,000; projected. For Percival & Hutton, two-story brick and stone business block, 22 by 75 feet; cost \$4,000; projected. For Frank Thornton, two-story frame residence, 28 by 42 feet; cost \$3,000; projected. For Chas. Kohler, remodeling business block, 22 feet front; cost \$22,000; projected. For S. J. Stover, story and a half frame cottage, 26 by 46 feet; cost \$2,500.

Detroit, Mich.—The outlook for building is quite flattering, though it is de vel oping only moderately at present.

Permits were issued during January for new buildings to cost \$163,425; for alterations, etc., \$5,800. Total, \$169,225.

Architect H. H. Richardson, of Brookline, Massachusetts: For the Bagley estate will erect a handsome building on Congress between Randolph and Bates streets, for the Light Infantry armory, which will be extremely convenient; size, 120 by 75 feet and 68 feet high. The front is designed with three large arched openings 18 feet wide and 44 feet high, with a gable over each above, in which will be carved stone panels of tasty design, the center gable containing the words "Light Infantry Armory." Voussoirs of arches will be 4 feet and the sockets 16 inches deep.

The front will be of brick and portage entry sandstone, surmounted with stone molded coping. The first-story front is composed of plate glass show windows between iron columns. Above these windows will be broad lintels of stone. In the second-story, stone columns with handsomely carved caps. In the front of third-story are large semi-circular windows fitted with wooden mullions and transoms. There will be three stores, two 22 by 120 feet and one 25½ by 120 feet, each with nice light basement same size. The second floor will be reached by a flight of stairs at the west end of building, where, from a long hall, open off ladies' parlor, 16 by 32 feet, off from which is a toilet room, 14 by 9½ feet. Right back of this are two parlors, 22 by 32 feet, one will probably be gentlemen's parlor, the other billiard room. There will also be off this corridor two headquarters' rooms, 46 by 35 feet, capable of being thrown together, and next to these, reached by double doors from the corridor, will be the dining-room, 44 by 33 feet, and adjacent thereto, the kitchen and porter's room, 23 by 25 feet. From corridor, stairs lead to the third floor, which is the side room, 75 by 120 feet in size. The roof is semi-circular, making room in center, 32 feet high. It is well lighted, having skylights in addition to large windows in front and rear walls. At one end of room will be a band stand, 10 by 20 feet. The basement is 10 feet high, the first story 14 feet, and second story, 11 feet. The floors are to be "mill floors of show burning construction." The whole building will be heated by steam. The contractor's are: for the masonry and iron work, Alex. Chapoton, Jr.; carpentry, Underwood, Armstrong & Son; plumbing, Lane Bros.

Architect A. C. Varney reports: For Fred Simmons, two-story brick dwelling, 35 by 62 feet, stone trimmings, gravel roof; cost \$3,500; Thos. Golden, builder. For A. W. Clark, two-story brick dwelling, 32 by 65 feet, stone trimmings, slate roof; cost \$8,000; Vivier & Son, masons; Lloyd & Fluening, carpenters.

Architects Mason & Rice report: For T. H. Roberts, three-story brick dwelling, 26 by 90 feet, gravel roof; cost \$7,500.

Architect Mortimer L. Smith reports: For Mr. Hall, three-story brick dwelling, 25 by 66 feet, slate roof; cost \$6,000; under way; Vinton & Turk, builders.

Architects J. V. Smith & Son report: For James Clancy, two-story brick dwelling, 22 by 60 feet; cost \$3,000.

Architect Peter Dederichs, Jr. reports: For N. Christa, block of two, two-story brick stores, 54 by 55 feet, stone trimmings; cost \$7,000; projected. For A. Krug, one-story store building, 27 by 60 feet, brick and stone trimmings; cost \$4,000.

Architects J. V. Smith & Son report: For Chas. Leahy, two-story brick dwelling, 26 by 64 feet, stone trimmings, gravel roof; cost \$3,000; Allen Williamson, builder. For V. P. Bayley, two-story dwelling, 32 by 90 feet, brick, stone trimmings, slate and tin roof; also barn, 25 by 40 feet; cost \$8,000; projected. For James Atkinson, three-story brick office building, 44 by 49 feet; with dancing hall, stone trimmings, gravel roof; cost \$5,000; projected. For Hugh Currie, three-story brick store building, 41 by 100 feet, stone trimmings, tin roof; cost not estimated; projected.

Mr. John Guton is building several one-story frame cottages, each 20 by 42 feet; cost \$5,600.

Elkhart, Ind.—Present condition and outlook for building is fair.

Architects N. Weaver & Son report: For L. Chamberlain, two-story brick store building, 38 feet 6 inches by 70 feet, iron and stone front, tin roof, metal cornices; cost \$4,000; projected; Wm. Barger, builder. For Old Peoples' Mutual Insurance Co., one story brick office building, 85 by 85 feet, metal cornices; cost \$6,000; projected. For Dr. F. C. Eckleman, two-story office and rooms, 25 by 60 feet; cost \$4,000; under way. For R. K. Mann, two-story frame cottage; cost \$3,000; projected. For Henry C. Dodge, brick residence; cost \$15,000; under way. For Elkhart County, brick asylum for the poor; steam heating; cost \$20,000; projected.

Emporia, Kan.—Present condition and outlook fair.

Architect C. W. Squires, reports: For G. W. Newman & Co., remodeling and new front to brick store building, 50 by 130 feet; cost \$7,000; under way; E. F. Sprenger, builder. For J. A. Stevens, brick and stone store and opera house block, 50 by 116 feet; cost \$20,000; under way. For J. P. Wiser, Rancho House, stone building, 54 by 67 feet; cost \$6,000; projected. For H. F. Kallcock, stone residence, 48 by 64 feet; cost \$18,000; under way. For E. A. Hildebrand, brick and stone store building, 50 by 100 feet; cost \$10,000; under way. For E. A. Buckley, frame dwelling, 28 by 48 feet; cost \$2,000; under way.

Emporium, Pa.—Architect I. C. Wykoff, of Keokuk, Ia., reports: Warner Hotel, three-story brick veneered building, 90 by 35 feet; seventy-five rooms.

Fargo, Dak.—Architect F. G. Corser, of Minneapolis, Minn., reports: For the Daily Argus, brick block to cost \$28,000.

Fort Wayne, Ind.—Architect Peter Dederichs, Jr., of Detroit, Mich., reports: For Roman Catholic Society, Roman style brick and stone church building, 80 by 120 feet; two towers, each 140 feet high; three naves; middle one 48 feet and side ones 32 feet high; seating capacity 700; work will be commenced about March 1; cost of building, \$25,000.

Frankfort, Ind.—Outlook for season is good.

Architect J. W. Hammond reports: For Hon. James V. Kent, two-story frame dwelling, 35 by 50 feet; cost \$3,500; plans completed. For Will Klein, two-story frame dwelling; cost \$2,500; plans completed. For James Collins, one and one-half story cottage, 28 by 35 feet; plans on the boards.

Frehold, N. J.—Architect D. S. Hopkins, of Grand Rapids, Mich., reports: For J. Clarence Conner, frame dwelling, 32 by 51 feet; cost \$3,500; projected. Add Fort Wayne, Ind.

Architect D. S. Hopkins, of Grand Rapids, Mich., reports: For R. T. McDonald, frame dwelling, 36 by 58 feet; cost \$6,000; projected.

Grand Rapids, Mich.—Architect Sidney J. Osgood reports: For Wm. Widcomb, pressed brick and stone building; cost \$150,000; contract for foundation let. The Union Benevolent Home will soon be completed; cost \$40,000. Work completed on Westminster Presbyterian Church; cost \$35,000. The following work has come into hand since November 1: For Mr. Holt, frame dwelling; cost \$2,500; Wm. Alger, builder. For Mr. Sullivan, dwelling; cost \$2,500; Wm. Alger, builder. For Mr. Agnew, dwelling; cost \$3,000; Howe & Driscoll, builders. For Mr. Yerex, dwelling; cost \$3,000; Howe & Driscoll, builders. For S. P. Bennett, dwelling; cost \$5,500; contract just let. For Mr. Nelson, dwelling; cost \$2,000. For Rev. Bocher, residence; cost \$10,000. Besides numerous jobs outside of Grand Rapids.

The contract for the erection of the Michigan Soldiers' Home has been awarded to Charles Tiedke, of Saginaw, Mich.

Green Bay, Wis.—Outlook for Spring season is favorable.

D. M. Harteau reports: For T. Van Henreck, two-story brick store building, 26 by 90 feet; cost \$3,500; projected. Also several less important jobs.

Hermose, Ill.—Architect Geo. S. Spohr, of Chicago, reports: forty cottages, to cost \$40,000; and four stores to cost \$15,000, for Thomas Roth.

Hamilton, Ohio.—Architect Max Reutti reports: For Charles Heiser, block of four frame dwellings, 100 by 60 feet, with store at corner; cost about \$6,800; projected. For Christ. Benninghofen, three-story stores and flats; stores 36 by 75 feet; flats 36 by 45 feet; first story of iron construction; second and third stories pressed brick with stone and terra-cotta trimmings; steam heating throughout; cost about \$12,000; projected.

Hot Springs, Neb.—Architect G. G. Baldwin, of Sioux City, Ia., reports: For the Hot Springs Hotel Co., three-story frame hotel building, 48 by 152 feet; steam heat; cost \$12,000; under way; E. C. Wakefield, builder.

Howard, Wis.—Architect D. M. Harteau, of Green Bay, Wis., reports: For T. Finnegan, two-story brick dwelling, 42 by 57 feet; cost \$2,500; projected. Also remodeling residence of Capt. Cusic at Fort Howard.

Ishpeming, Mich.—Architect Sidney J. Osgood, of Grand Rapids, Mich., reports: For S. W. Hayden, dwelling; cost \$3,000; contract not yet let.

Jamestown, Dak.—Architect H. W. Jones, of Minneapolis, Minn., reports: For W. M. Floyd, brick and stone double store building, 80 by 80 feet; cost \$10,000.

Kansas City, Mo.—Architect Kimball, of Minneapolis, Minn., reports: For H. D. Ashley, two and one-half story frame dwelling, 45 by 60 feet; cost \$7,000.

Keokuk, Ia.—Architect I. C. Wykoff reports: For Keokuk Stone Works, warehouse 43 by 140 feet; cost \$6,000; projected. A four-story hotel building is also projected but no particulars yet given.

Kalamazoo, Mich.—Architect D. S. Hopkins, of Grand Rapids, Mich., reports: For F. E. McGurrian, frame dwelling, 28 by 46 feet; cost \$2,000; projected.

Kankakee, Ill.—Architect D. S. Hopkins, of Grand Rapids, Mich., reports: For Arthur Swannell, frame dwelling; 32 by 47 feet; cost \$2,000; under way. Add Kansas City, Mo.

Architect Geo. Carman reports: For S. S. Dickinson, two-story, brick, stone and terra-cotta, slate roof, 38 by 55 feet; cost \$10,000; under way. For N. P. Simonck, two-story brick and stone, 42 by 50 feet; cost \$7,000; nearly completed; W. B. McLain, builder. For John Gray, two-story brick and stone, slate roof, 40 by 60 feet; cost \$15,000; under way. Swedish parsonage, two-story and basement, brick, slate roof, 20 by 55 feet; cost \$4,000; foundation in. For W. W. Perkins, two-story brick and stone, slate roof, 35 by 52 feet; cost \$7,500; under way.

Lake View, Ill.—Architect Joseph L. Silsbee, of Chicago, reports: For R. A. Walker, two-story and basement dwelling, 30 by 50 feet; first story of brick, second story frame.

Architect Geo. S. Spohr, Chicago, reports: For Henry Strassheim, addition and alterations to residence on Roscoe street; cost \$3,000.

La Crosse, Wis.—Architects C. G. Maybury & Son, of Winona, Minn., report: For M. E. Church Society, brick church building, 60 by 120 feet; cost \$14,000; under way.

Little Rock, Ark.—No new buildings in project and present condition is very quiet. The State Blind and Mute Asylums are nearing completion.

Architects Harding & Bailey report: For State of Arkansas, remodeling two-story building, 192 by 162 feet; cost \$30,000. State Lunatic Asylum, four-story brick additions; cost \$58,000. Clark & Co., contractors, Lonoke Court House, two-story brick building, 40 by 84 feet; cost \$14,000. Sterrett & Co., contractors. For J. B. Spears, two-story brick building, 50 by 90 feet; cost \$8,000. For W. E. Woodruff, two-story frame, 44 by 54 feet; cost \$3,500. All the above work is nearly completed.

Logansport, Ind.—At present building matters are at a stand still; but outlook is good for spring season.

Architects Crain & Krusch report: For city of Logansport, brick and stone City Cemetery vault, 16 by 32 feet; cost \$1,200; contract not yet let. For H. Brookmeyer, Sr., brick and stone residence, 18 by 56 feet, slate roof; cost \$3,000. W. J. Lewis, builder. Also two smaller jobs projected.

Louisville, Ky.—Architect C. A. Curtin reports: Residence for Judge Jackson; cost \$8,000. Residence for J. D. McCanby; cost \$12,000.

Architect D. X. Murphy reports: Opera House building with stores, offices, etc.; cost \$50,000.

Architect C. J. Clarke reports: Store building for W. H. McKnight & Co.; cost \$30,000. Residence for Mr. Owens; cost \$25,000.

Architect Mason Maury reports: For Henning & Son, office building; cost \$60,000. For Judge Huston, residence; cost \$15,000. For H. M. Smith, residence; cost \$16,000.

Architect O. C. Wehle reports: For G. E. Curie & Co., warehouse; cost \$15,000. For M. Selliger, residence; cost \$14,000. For Captain P. Varble, residence; cost \$7,000. For W. C. Garland, two cottages; cost \$4,000.

Marshalltown, Ia.—Building at present is very dull; outlook rather better than last year.

Architect J. G. Weatherly reports: For Chas. Eckles, two-story frame, 46 by 54 feet, slate roof; cost \$4,000; plans about completed.

Marietta, Ga.—Architects Bruce & Morgan, of Atlanta, Ga., report: Four two-story cottages; cost \$8,000; receiving bids.

Minneapolis, Minn.—Architect Kimball reports: For T. D. Skiles, block of six three-story brick stores, 132 by 50 feet, on corner Western avenue and Thirteenth avenue South; cost \$25,000. For Lewis Laramie, three-story frame dwelling house, 40 by 60 feet, on Highland avenue; cost \$8,000. Just completed the Central Park Terrace, 140 feet on Spruce and Willow streets and 180 on Grant street, 65 feet deep, three stories high above basement, for Gates Bros. Building is veneered with Dresbach blue and buff sandstone, and interior finished in Georgia pine; cost \$150,000.

Architects Haley & Allen report: For John Travis, six-story brick block, 77 by 92½ feet, on Fourth street, between Hennepin and First avenues North, with all modern improvements; cost \$35,000.

Architect W. A. Hunt reports: For F. J. Collom, at North Minneapolis, two-story brick building, 45 by 90 feet, comprising three stores and thirteen tenement suites of seven rooms each; cost \$8,000.

Architect A. L. Dorr reports: For S. H. Baker, two-and-one-half-story, pressed brick and stone veneered dwelling, 40 by 67 feet, with hardwood finish and steam heating, on corner of Seventeenth avenue and Spruce place; cost \$16,000. Also barn; cost \$2,000.

Architect W. H. Dennis reports: For S. P. Channell, brick and stone residence on the bluff, back of the Lowry residence; cost \$45,000. For J. B. Bushnell, brick veneered residence, on corner Hennepin and Franklin avenues; cost \$5,000. For H. L. Gordon, five-story brick block, with cutstone front, on Fifth street, between Nicollet and Hennepin avenues; cost \$30,000.

Architect W. C. Whitney reports: For G. A. Morse, frame dwelling on corner of Twenty-fourth street and Chicago avenue; cost \$5,000.

Moline, Ill.—Architect E. S. Hammatt, of Davenport, Iowa, reports: For E. H. Sleight, two-story frame residence; cost \$7,000; roof on; J. M. Craig, builder.

Montgomery, Ala.—Architect H. Wolters, of Louisville, Ky., reports: Depot for L. & N. R. R., to cost \$50,000.

Mount Airy, Ga.—Architects Bruce & Morgan, of Atlanta, Ga., report: For Judge J. L. Hopkins, summer residence; cost \$2,000; contract not yet let.

Manistee, Mich.—Architect Sidney J. Osgood, of Grand Rapids, Mich., reports: For the Unitarian Society a church building to cost \$10,000; projected; contract not yet let.

Medina, Ohio.—Architect D. S. Hopkins, of Grand Rapids, Mich., reports: For W. B. Croft, M.D., frame dwelling 38 by 50 feet; cost \$4,000; under way.

Muskegon, Mich.—Architect D. S. Hopkins, of Grand Rapids, Mich., reports: For J. W. Moore, summer cottage at Bay View, 30 by 42 feet; cost \$2,500; projected.

Nashua, N. H.—Architect D. S. Hopkins, of Grand Rapids, Mich., reports: For C. W. Greenwood, frame dwelling, 37 by 68 feet; cost \$3,500; projected.

Nashville, Tenn.—While the present condition and outlook is not good, it is better than at this time last year.

Architect Geo. W. Thompson reports: For Isaac T. Rhea, two-story brick, 46 by 66 feet, stone and terra-cotta trimmings, steam heating; cost \$7,500; under way; J. F. Bowers & Bro., builders. For G. Lieberman, two-story brick, 38 by 72 feet, slate roof, steam heating; cost \$9,500; under way; roof on; Simmons & Phillips, builders. For Mrs. M. Hart, two-story brick, 48 by 60 feet, slate roof, steam heating; cost \$7,200; under contract; not yet commenced; F. Waterson, builder. For J. S. Reeves, two-story brick, 38 by 76 feet, tin roof, steam heating; cost \$6,500; under contract; not yet commenced; Robertson & Bro., builders. For Judge T. F. Cooper, two-story brick, 42 by 60 feet, tin roof, steam heating; cost \$6,000; taking bids. For W. E. Norville, two-story brick, 44 by 66 feet, tin roof; cost about \$5,000; plans on the boards. For Mrs. W. Perry, two-story brick, 54 by 74 feet, slate roof, steam heating; cost about \$8,000; plans on the boards.

Normal Park, Ill.—Architect Geo. S. Spohr, of Chicago, reports: For H. Reimers, frame dwelling, 30 by 40 feet; cost \$5,000.

Onancock, Va.—Architect D. S. Hopkins, of Grand Rapids, Mich., reports: For C. I. Hamanson, M.D., frame dwelling, 40 by 50 feet; cost \$3,000; projected.

Oconto, Wis.—Architect D. M. Harteau, of Green Bay, Wis., reports: Catholic school building and sisters' residence, two-story brick veneer building, 57 by 57 feet; cost \$4,000; projected.

Ogallala, Neb.—Architect N. A. Sherman, of York, Neb., reports: For L. A. Brandhoeffer, two-story brick-veneer dwelling, 34 by 46 feet; cost \$3,500; projected.

Ottumwa, Iowa.—Architect Edward Clark: For A. C. Leighton, remodeling business block, 40 by 44 feet, for postoffice; cost \$3,800; projected. Also less important work, aggregating \$4,000.

Pen Argyle, Pa.—Architects Allen & Coxhead, of Streator, Ill., report plans under way for the State Normal School building. It will be three stories and basement and attic, 150 by 187 feet, built of native granite, with slate roof. The assembly room will have a seating capacity of 1,000. The building is designed to accommodate 300 students, 13 professors, steward's family, servants, etc. It will be heated by steam, have hydraulic elevator, also stained glass; cost \$50,000.

Ponca, Neb.—Architect G. G. Baldwin, of Sioux City, Iowa, reports: For J. B. Saulpaugh, three-story brick hotel, building 42 by 82 feet, tin roof; cost \$8,000; projected.

Quincy, Ill.—Architect S. M. Randolph, of Chicago, has been appointed architect of the Illinois Soldiers' and Sailors' Home. Legislature last winter appropriated \$200,000, \$10,000 of which was to be invested in land. Have secured 140 acres of land near Quincy, adjoining town site.

Architect J. L. Silsbee, of Chicago, reports: For Wm. B. Bull, two-story residence, 30 by 60 feet; first story brick, second story stone. For W. S. Warfield, two-story and attic residence, 50 by 75 feet; to be built of Kasota stone.

Ravenwood, Ill.—Architect Geo. S. Spohr, of Chicago, reports: For A. Smith, frame dwelling, 38 by 40 feet; cost \$4,000.

Richmond, Ind.—Architect Sidney J. Osgood, of Grand Rapids, Mich., reports: First Presbyterian church building to cost \$35,000; contract let to Roberts & Co., January 20.

River Point, R. I.—Architect D. S. Hopkins, of Grand Rapids, Mich., reports: Frame dwelling, 30 by 46 feet; cost \$3,000; under way.

Richfield, Minn.—Architect W. H. Dennis, of Minneapolis, Minn., reports: A brick-veneer residence; cost \$5,000.

Rock Island, Ill.—Mr. E. S. Hammatt, of Davenport, Iowa, is architect, and Mr. L. G. Halberg, of Chicago, consulting architect, for the Augustine College. The building is to be three stories and basement in height, 178 by 74 feet, built of Le Claire stone. Contract for iron and tin work on roof just let to E. M. Spencer, of Rock Island.

Savannah, Ga.—Architects Bruce & Morgan, of Atlanta, Ga., report: For Solomon Cohen, three-story brick tenement block, six houses; cost \$20,000; receiving bids.

Architects McDonald Bros., of Louisville, report: Jail building; cost \$60,000.

Sioux City, Iowa.—The outlook is very favorable, but most of the work projected is in dwellings.

Architect G. G. Baldwin reports: For John Dinnell, two-story frame dwelling, 36 by 62 feet; cost \$4,500; under way; C. K. Poor, builder. For O. J. Taylor, seven three-story brick tenements, 21 by 4 feet, each fitted with gas, water and steam; cost \$18,000; projected.

Architect James W. Martin reports: For C. C. Wales, two-story brick stores and flats, 40 by 82 feet, stone trimmings, plate glass store fronts; cost \$8,000; projected; John Beck, builder. For W. L. Wilkins, two-story and basement and attic frame residence, 47 by 47 feet, plate glass, hardwood interior finish; cost \$10,000; projected.

Springfield, Ill.—The building season is not yet opened up. Prospects for season, fair.

Architects Bullard & Bullard report plans on the boards for frame dwelling, 32 by 58 feet, for Wm. S. Fulinwider; cost, about \$3,200.

Architect Geo. H. Helmle reports: St. John's Hospital, three-story brick and stone additions, 60 by 100 feet, including chapel; cost \$20,000; projected. Springfield Woolen Mills, two-story brick addition, 40 by 120 feet; cost \$70,000; projected. For Board of Education, two-story addition, 25 by 40 feet, to Palmer School building; cost \$5,000; projected. For Fred. D. Buck, remodeling store front; cost \$1,000; Buck & McKee, contractors. For C. Breckenridge, two-story, eight room frame dwelling; cost \$3,000; projected.

Springfield, Ohio.—Outlook somewhat more favorable as the spring season draws near. Present condition is improving.

Architect F. H. Penfield reports: For Rev. Wm. H. Warren, ten-room frame cottage; cost \$3,500; Springfield Planing Mill and Lumber Co., builders.

St. Paul, Minn.—Architects Brinkerhoff & Phillips report: For the Citizens' Union of Dayton Bluff, on Dayton's Bluff, an ice tower, 54 feet high and 23 feet square at base; also, toboggan slides, half a mile long; cost \$2,000.

Architect J. C. McCarthy reports: For Patrick Kelley, two-and-one-half story brick veneered dwelling, 40 by 60 feet on Commercial street; cost \$10,000.

Architect E. W. Ulric reports: For Hanover Brothers, remodeling store on corner of Jackson and 7th streets; cost \$3,500. For Richard Rolf, two-story frame residence of 10 rooms, on Park place; cost \$4,000. For Dr. Ohage, two-story brick dwelling of 12 rooms, on Bradley street; cost \$8,500.

Architect John M. Doherty reports: For C. A. Smith, two-story frame residence of 9 rooms, on corner of Dale and Marshall avenues; cost \$4,000. For Jacob Mathes, two-story frame residence of 10 rooms, 24 by 32 feet, on Burr street near Beaumont street; cost \$1,500. For Dowling and Ruse, row of three, three-story frame houses, 60 by 30 feet, on Bluff street; cost \$7,500. For Wm. Thompson, three-story brick store, 50 by 100 feet, on corner of Dakota avenue and Isabel street; cost \$18,000. For John Hurley, two-story frame residence, 23 by 33 feet, in West St. Paul; cost \$3,000. For Mr. Stoddart, row of five three-story brick residences, 120 by 45 feet, on corner of Exchange and Chestnut streets; cost \$20,000. For Henry Survue, two-story brick dwelling, 80 by 80 feet, on corner of Collins street and LaFayette avenue; cost \$10,000.

Architects Hodgson & Stem report: For C. A. Zimmerman, at Rice Park, brick residence; cost \$5,000.

Architect C. A. Wallingford has in charge three triumphal arches for the Carnival association, situated respectively at the corner of 4th and Sibley streets, 7th and Minnesota streets and 3d and Cedar streets; cost \$6,000.

Architect H. Sackville Treherne reports: Young Girl's Home, on St. Paul street, three-story frame building, 45 by 60 feet; cost \$8,000.

Architect Kimball, of Minneapolis, Minn., reports: For J. J. Watson, block of brick stores; cost \$35,000.

Streator, Ill.—Prospects good for 1886, and a large amount of work will be commenced soon as the weather permits.

St. Louis, Mo.—Present condition of building is dull, on account of the weather; prospects of a fair legitimate business for Spring.

Architect T. B. Annan reports: For L. A. Moffett, two-story and finished attic dwelling, wood and brick, 40 by 40 feet; cost \$7,000; Pritchett & Moore, builders. For C. Carriere, two-story wood and brick dwelling, 36 by 40 feet; cost \$3,000; Focke & Wilkinson, builders. For Mrs. A. P. Lockwood, one and one-half story wood and brick dwelling, 32 by 40 feet; cost \$3,500; contract not let. For the Hall Estate, apartment houses, 80 by 70 feet; cost \$12,000; contract not yet let. All the above will be commenced as soon as the weather will permit; also have plans on the boards for chapel for M. E. Church, 40 by 70 feet; cost \$8,000.

Architect Thos. W. Brady reports: For H. O. Sullivan, three-story brick building, 24 by 65 feet; pressed brick front with stone trimmings; cost \$5,500; work will be commenced soon as weather permits; Joseph Flannery & Bro., builders.

Architects Ramsey & Swazey report: For Emile Koch, nine-room Queen Anne frame cottage, 36 by 40 feet; under way; sub let. For Anna Koch, nine room Eastlake frame cottage, 40 by 43 feet; cost \$5,000; plans on the boards. For Alfred Bevis, alterations and addition, 38 by 40 feet; pressed brick and brown stone; cost \$6,000; under way; sub let. For Jacob Straus Saddlery Co., store building; five stories; two stories iron, above that pressed brick with stone and terra-cotta trimmings, 60 by 135 feet; cost \$40,000; projected. For Edward Mallenckrodt, brick stable, 30 by 38 feet; cost about \$5,000; projected.

Architect John Beattie reports: For F. W. McManus, five-story brick store building, 26 by 105 feet, composition roof; cost \$16,000; nearly finished; E. C. Hoffman, builder. For J. K. Cook, two-story brick stable, 24 by 61 feet; slate roof; cost \$4,000; roof on; Rent & Allen, builders. For I. R. Triplet, two-story and attic brick dwelling, 42 by 64 feet; slate roof; cost about \$8,000; making plans; contract not let.

The more important building permits issued since December 1, are as follows: G. Biston, two story brick dwelling; cost \$4,800; B. J. Goesse, architect; Goesse & Remmer, builders. L. M. Rumsey Manufacturing Co., two-story brick gas-pipe factory; cost \$3,000; Thomas Lowerly, builder. Coillier Estate, alterations to five-story brick store building; cost \$5,000; J. W. Gains, architect and contractor. Thos. Bray, two two-story brick tenements; cost \$3,500; Thos. Bray, architect and builder. A. Kuhr, three two-story brick stores and flats; cost \$6,000; P. Samonsien, builder. Felix Raeman, two-story brick dwelling; cost \$3,850; A. M. Barker, architect; Felix Raeman, builder. St. Louis Bank of Commerce, alterations in seven-story bank and office building; cost \$100,000; H. G. Isaacs, architect; Samuel M. Ross, builder.

Architect D. S. Hopkins of Grand Rapids, Mich., reports: For John Ringen, frame dwelling, 46 by 64 feet; cost \$6,000; projected.

Architect Geo. S. Spohr of Chicago, Ill., reports: Plans on the boards for two dwellings to be erected in St. Louis.

Stevens Point, Wis.—Architect D. S. Hopkins of Grand Rapids, Mich., reports: For W. W. Hazeltine, brick dwelling, 46 by 61 feet; cost \$5,000; projected.

St. Joseph, Mo.—Architect W. Angelo Powell reports: For T. H. Beekman, three-story brick residence, 49 by 51 feet; cost \$13,000; under way. For Geo. W. Mar-

low, two-story and basement brick residence, 48 by 49 feet, slate roof; cost \$12,000; under way. For Col. J. F. Tyler, two-story and basement brick residence, slate roof; cost \$6,500; under way. For J. Lysaght, two-story brick dwelling, 31 by 56 feet; cost \$3,000; projected. For Brittain & Co., five-story and basement, brick and stone business block, 63 by 136 feet; cost \$26,500; projected. For Mr. Washburn, two-story brick, 23 by 61 feet; cost \$3,000; projected. For Mr. Warfield, two-story brick, 38 by 63 feet; cost \$3,500; projected. For J. Lysaght, two-story and basement brick, 62 by 60 feet; cost \$6,000; projected. For P. Connor, two-story and basement brick, 39 by 61 feet; cost \$5,000; under way; J. Griffith, builder. For G. Hansen, two-story and basement frame, 28 by 56 feet; cost \$3,500; under way; J. Griffith, builder. For Mr. Schumacher, three-story brick store building, 21 by 70 feet; cost \$2,800; under way; J. Zimmer, builder. Two-story brick schoolhouse, 36 by 71 feet, slate roof; cost \$5,500; under way; J. Griffith, builder. Church building, brick, 43 by 55 feet; cost \$5,000; projected. For J. Hansen, two-story and basement brick residence, 29 by 60 feet; cost \$3,000; projected; J. Griffith, builder.

Sturgis, Mich.—Architect J. M. Bauaure reports: 'Work on Baptist Church, to cost \$6,000, is nearing completion. It is rumored that the M. E. Society of La Grange, Ind., 12 miles from Sturgis, will expend \$15,000, in a new building this year.

Waukesha, Wis.—Architect D. S. Hopkins of Grand Rapids, Mich., reports: For J. C. McCutchen, frame dwelling, 30 by 48 feet; cost \$3,500; projected.

West Bay City, Mich.—Present condition dull; outlook fair.

Architect D. P. Clark reports: small work, \$500 and upward; aggregating \$5,250.

West Point, Ga.—Architects Bruce & Morgan, of Atlanta, Ga., report: For Lafayette Lainer, two-story frame residence; cost \$5,000, under way; also, two one-story cottages; cost \$3,300, under way; work done by the day.

Wilmar, Minn.—Architects Haley & Allen, of Minneapolis, Minn., report: For School district, ten-room brick school house, 56 by 82-6 feet; cost \$15,000.

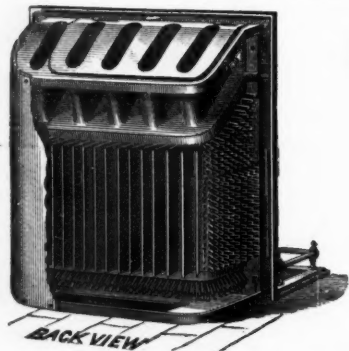
Winona, Minn.—Outlook for coming season is good, and it now looks as though more building would be done this year than there was last. Many fine residences are being finished, giving employment to first class workmen until season is open.

Architects C. G. Maybury & Son report: For German Lutheran Society, brick and stone church building, 57 by 132 feet; cost \$17,000; Munck & Lohse, contractors. For German Catholic society, brick convent building, 34 by 36 feet; cost \$3,000; Fred Kratz, contractor. For Jacob Story, three-story frame dwelling, 48 by 48 feet; cost \$4,500; under way; Henry Behrens, contractor. For R. E. Tease, two-story frame dwelling, 36 by 52 feet; cost \$3,200; under way; Grant & Noonan, builders. For A. Q. Slade, three-story brick store building, 25 by 110 feet; cost \$10,000; projected; contract not yet let. For Frank Rackow, two-story brick store building, 20 by 80 feet; cost \$4,000; projected. Also two-story brick store building, 40 by 40 feet; cost \$2,500; projected. For John Pauzer, two story brick store building, 20 by 80 feet; cost \$3,000; under way; John Pauzer, builder. For Henry Bahrens, two-story frame dwelling, 30 by 50 feet; cost \$2,500; projected.

Worthington, Minn.—Architects C. G. Maybury & Son, of Winona, Minn., report: For Bank of Worthington, two story brick bank building, 30 by 60 feet; cost \$6,000; under way.

York, Neb.—Outlook for Spring is fair.

Architect N. A. Sherman reports: For E. P. Warner, two-story brick veneer dwelling, 38 by 41 feet. High pitched roof with chambers, tower over small front; cost \$3,500; projected.



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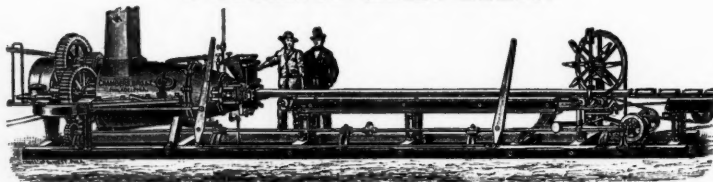
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PROPOSALS.

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[At Fort Niagara, N. Y.
OFFICE OF CHIEF QUARTERMASTER,
DEPARTMENT OF THE EAST,
GOVERNOR'S ISLAND, N. Y., January 15, 1886.]

Sealed proposals, in triplicate, subject to the usual conditions, will be received at this office and the office of the quartermaster at Fort Niagara, N. Y., until 12 o'clock M., (Eastern time), February 15, 1886, at which time and place they will be opened in the presence of bidders, for the construction of one set of barracks, of brick, and one or two frame buildings for officers quarters, at Fort Niagara, N. Y. in accordance with plans and specifications which can be seen at this office and at the offices of post quartermaster, Fort Niagara, N. Y., and depot quartermaster, at Fort Buffalo, N. Y.

Blanks for proposals and information as to the manner of building, etc., can be obtained at the offices mentioned above. Envelopes containing proposals should be marked "proposals for Construction of Buildings at Fort Niagara, N. Y."

The Government reserves the right to reject any or all bids.

ALEX. J. PERRY,
Assist. Quartermaster General, U. S. Army.

NOTICE TO CONTRACTORS.

Sealed proposals for furnishing the following items for the Illinois State House will be received by the State House Commissioners at their office in the Capitol Building at Springfield, until March 16, at 12 o'clock noon.

For an electric plant to light Capitol Building.
For State Library metallic book-cases.
For statuary sculpture to produce eight life-like models.
For samples and prices of gas fixtures.
For chairs and office desks.
For body Brussels carpets, sample patterns and prices desired.

Full particulars as to the requirements of the beforementioned items can be obtained at the office of the architect, W. W. Boyington, 157 La Salle street, room 107, Chicago, where the plans and specifications can be consulted until the time for receiving proposals. The Commissioners will also be in session at the State House to give further information to parties desiring to meet them on the second day of March, 1886.

The Commissioners reserve the right to reject any and all bids.

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[At Cape Charles, Va.
OFFICE OF THE LIGHT HOUSE ENGINEER,
FIFTH DISTRICT, BALTIMORE, MD., Jan. 15, 1886.]

Sealed proposals will be received at this office until 12 o'clock, M., of Saturday, the 13th day of February, 1886, for furnishing the material and labor of all kinds necessary for building a pile and concrete protection, removing dwellings and building foundations therefor at Cape Charles, (Va.), Light Station.

Specifications, forms of proposal and other information may be obtained on application to this office.

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Drawings must be received at the office of the *American Architect* on or before Saturday, February 27, 1886.

For the three designs adjudged of highest merit by a jury of three architects, we will pay \$50 each, the prize-drawings, as in previous competitions, remaining our property.

We add an important and unusual condition, however. Each design must be accompanied by a bill of quantities, prepared on a "Handy Estimate Blank," procurable from David Williams, 83 Reade street, New York, at an expense of twenty-five cents, in the use of which the same publisher's "Practical Estimator" would be found a useful instructor.

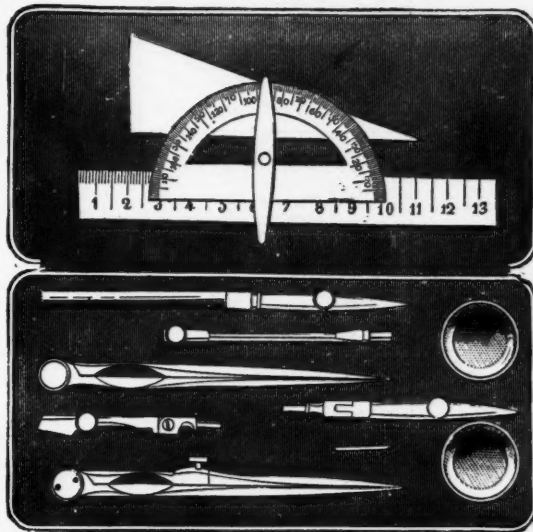
Our reason for making this requirement is, that we propose to have a competent Boston builder prepare an estimate upon each design, so that the series will have a distinct comparative value. The jury will, however, be allowed to take into consideration, in awarding the prizes, the prices obtaining in the market most familiar to the designer, and he would do well to obtain an estimate from a local builder before sending his drawing to us.

To prevent any future misapprehension, we will say that it seems not impossible that a series of designs thus reduced to a common measure, might be found worthy of re-publication in book-form, and should such prove to be the case, we should hope to find it possible to treat with the authors of the most desirable designs.—*Editors American Architect.*

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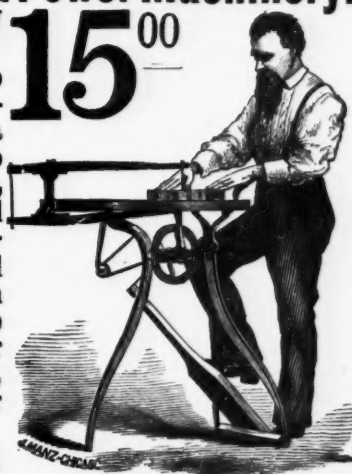
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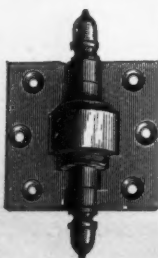
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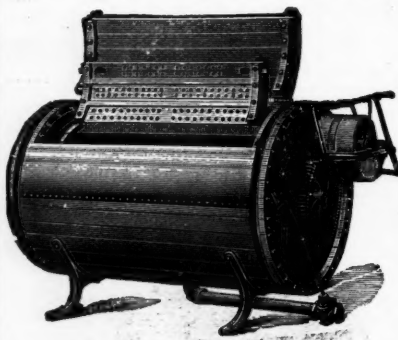
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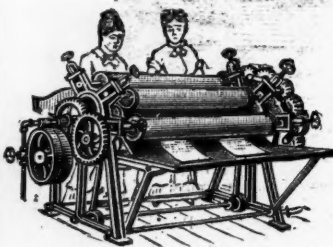
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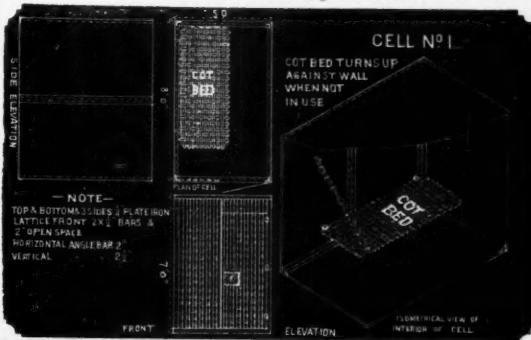
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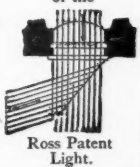
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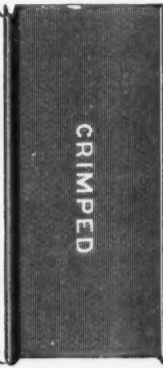
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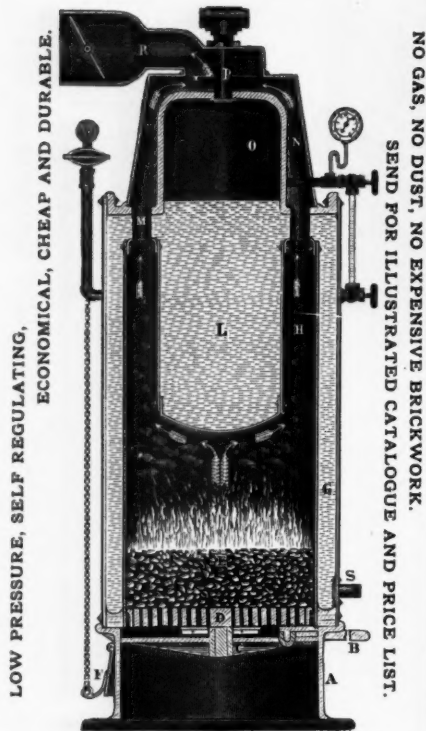
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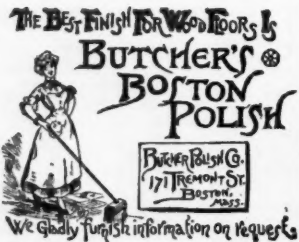
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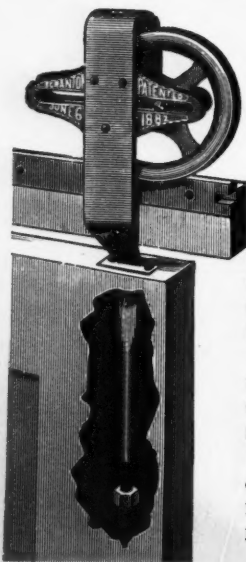
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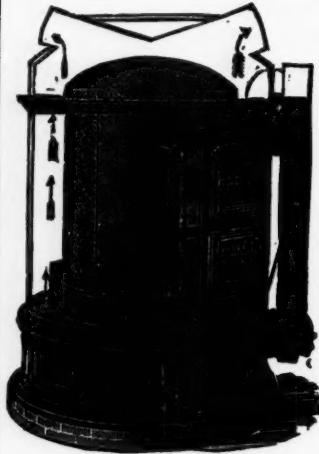
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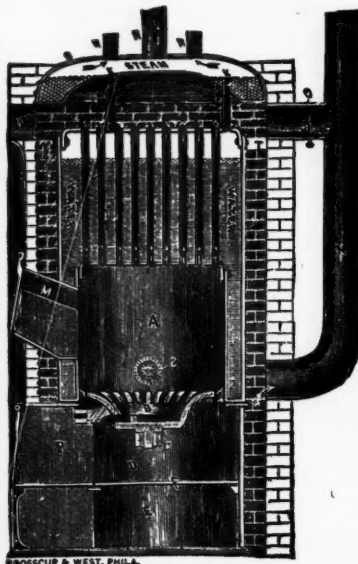
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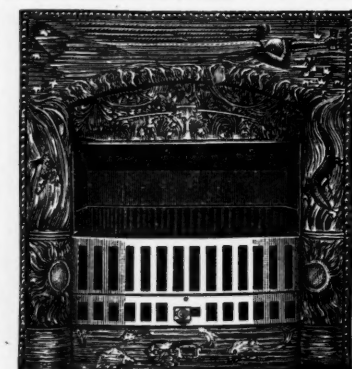
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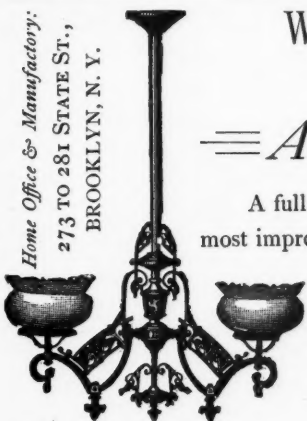
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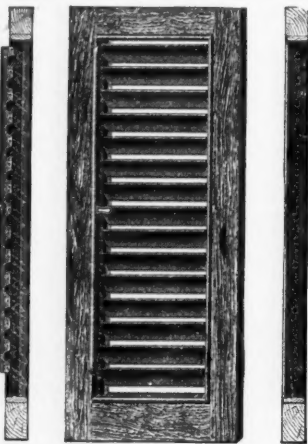
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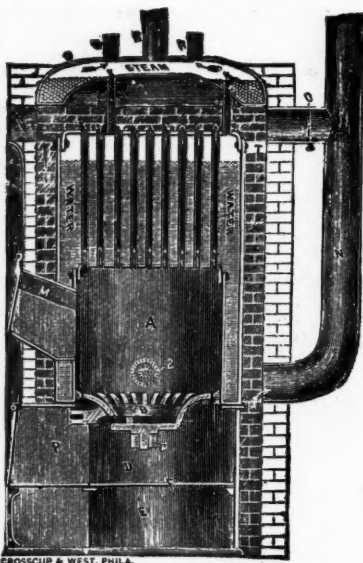
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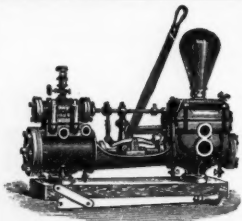
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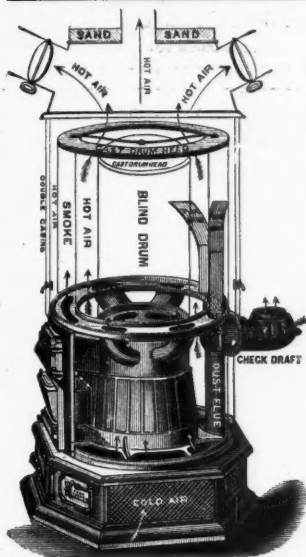
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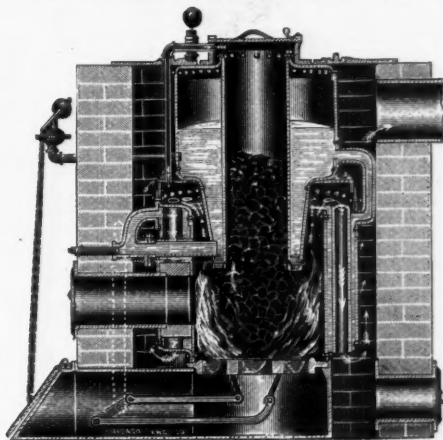
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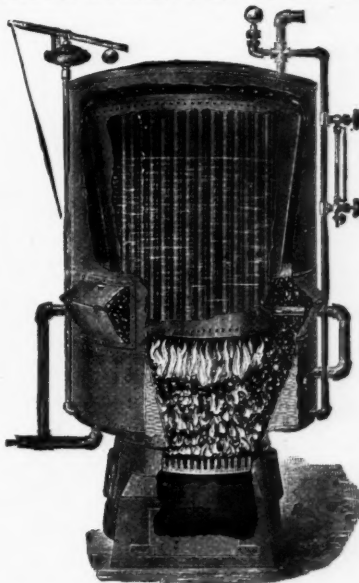
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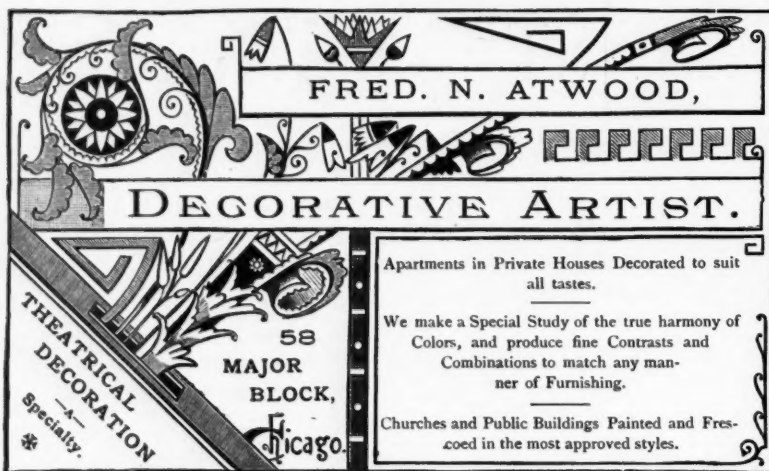
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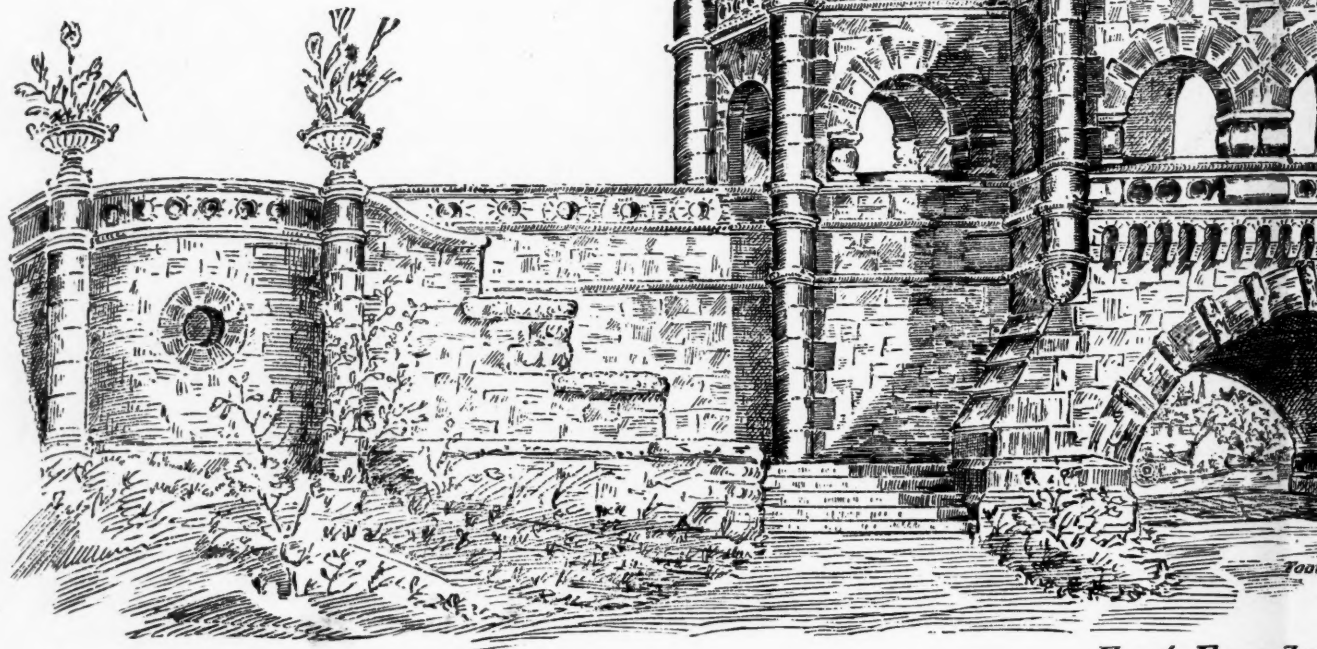
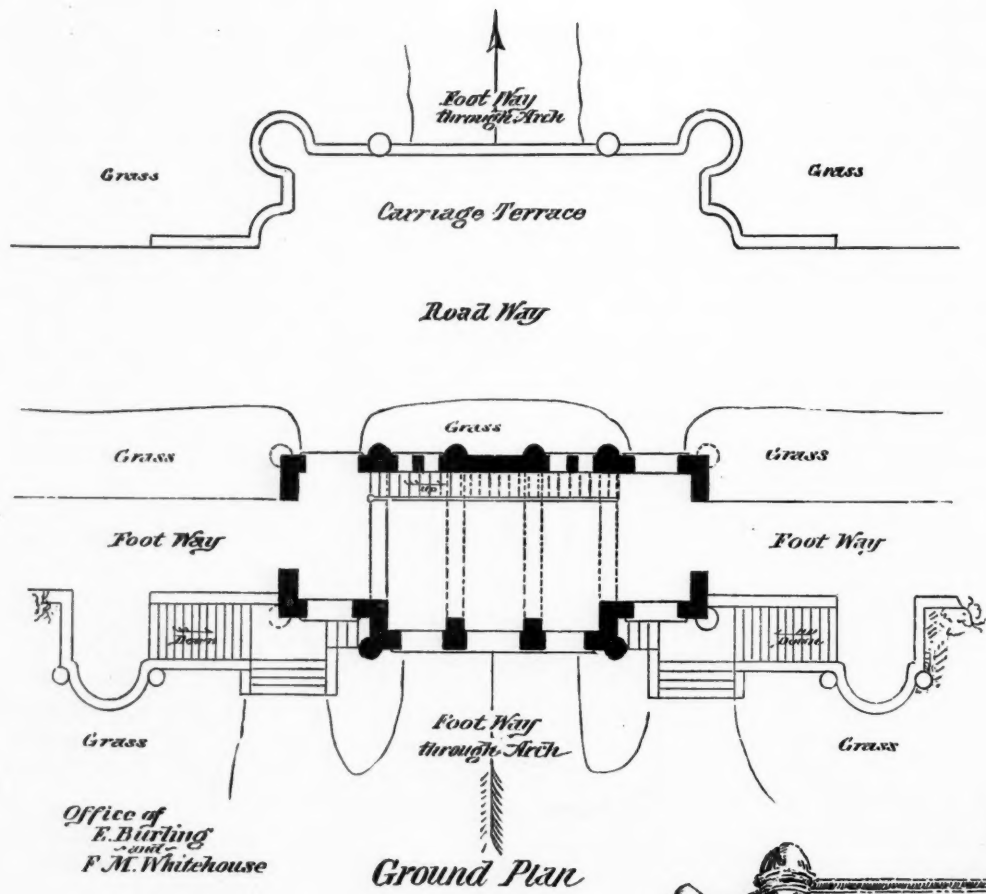
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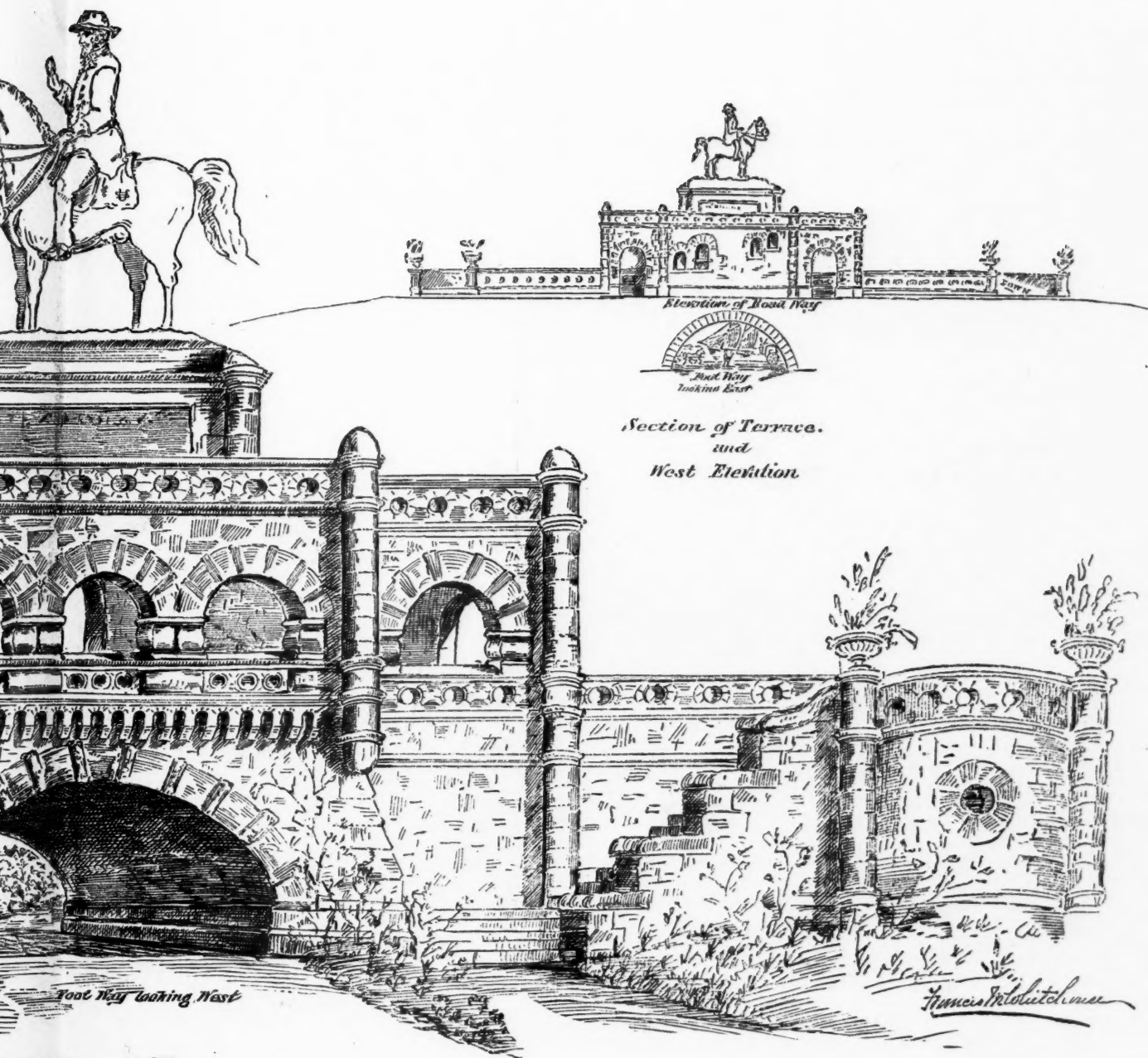
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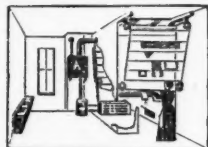
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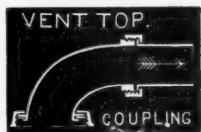
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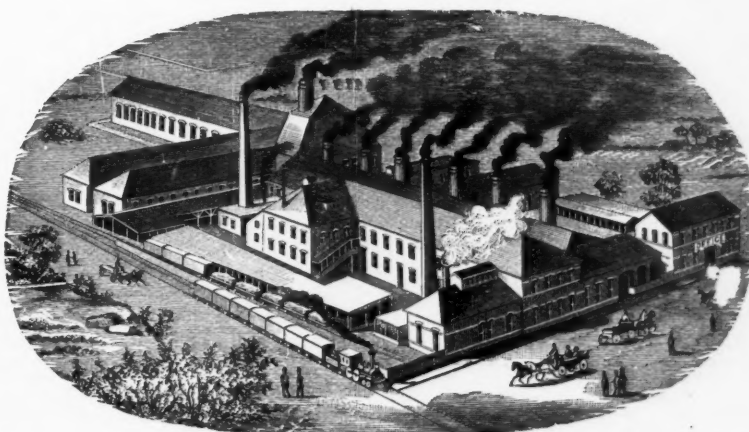
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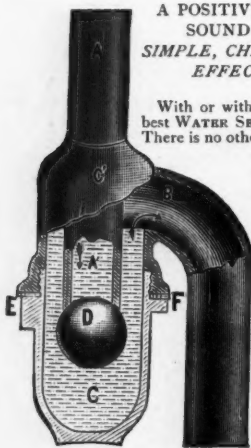
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