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VOL. IX.

CHICAGO, JUNE, 1887.

No. 8

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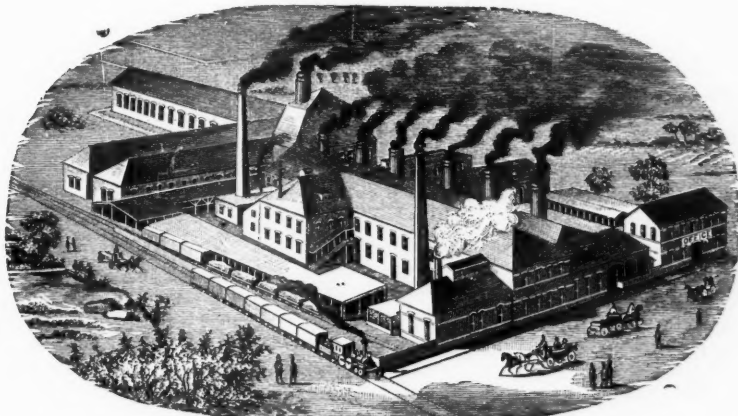
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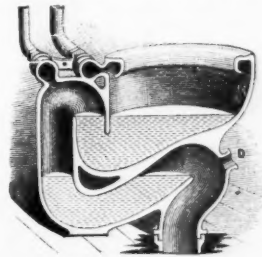
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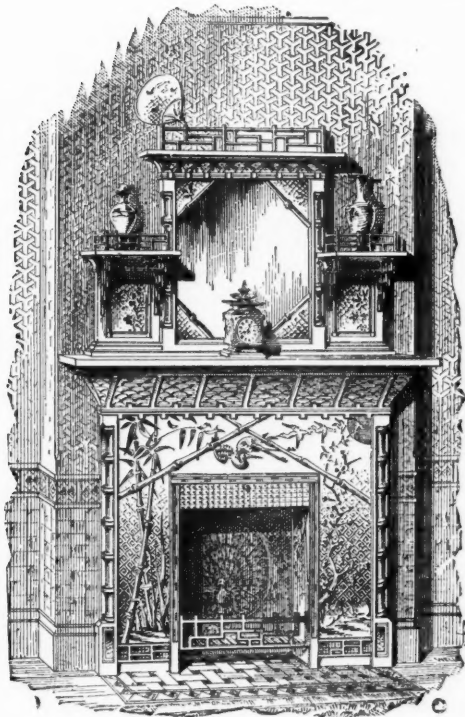
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Painter.....	2 00	2 25@2 50	2 50	2 25@3 00	1 50	2 50	3 00	2 50	2 50	2 50@3 00	3 00	3 25@3 50	2 00	2 75	2 50	2 50	
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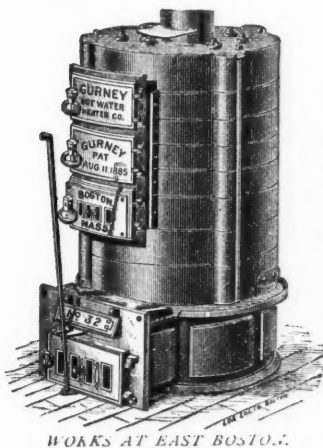


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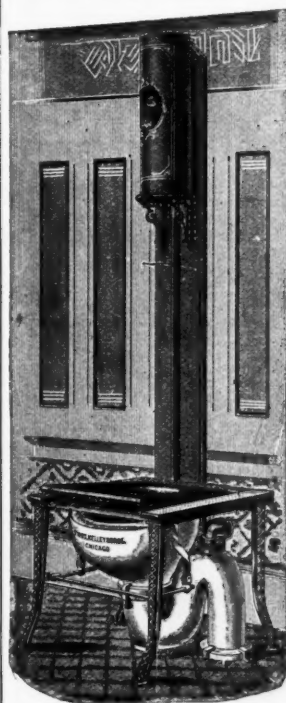
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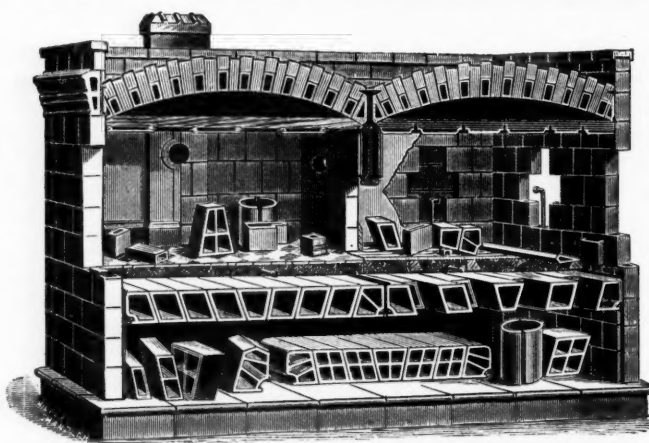
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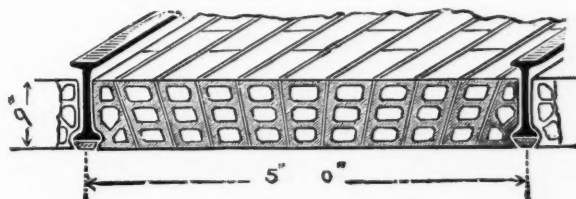
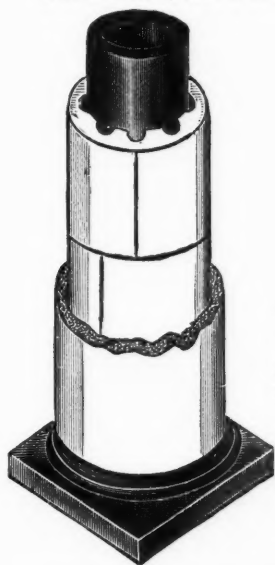
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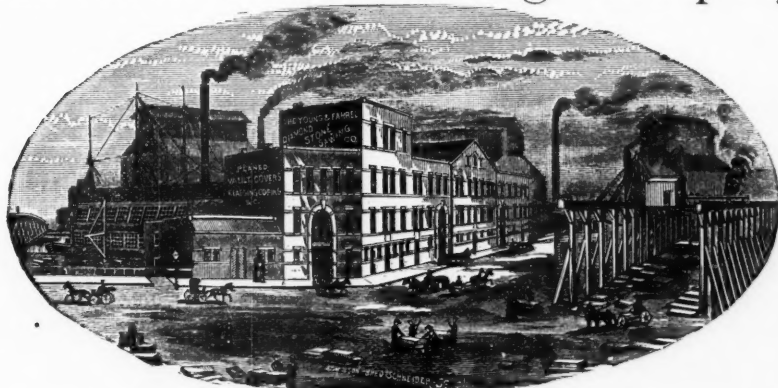
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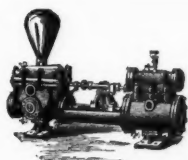
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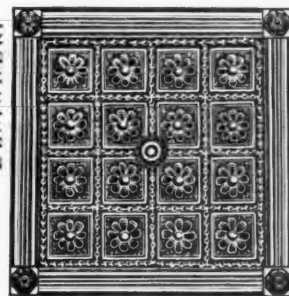
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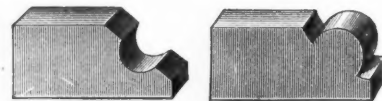
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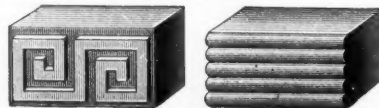
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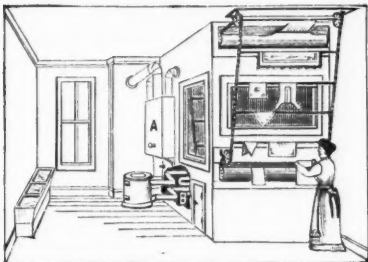
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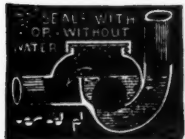
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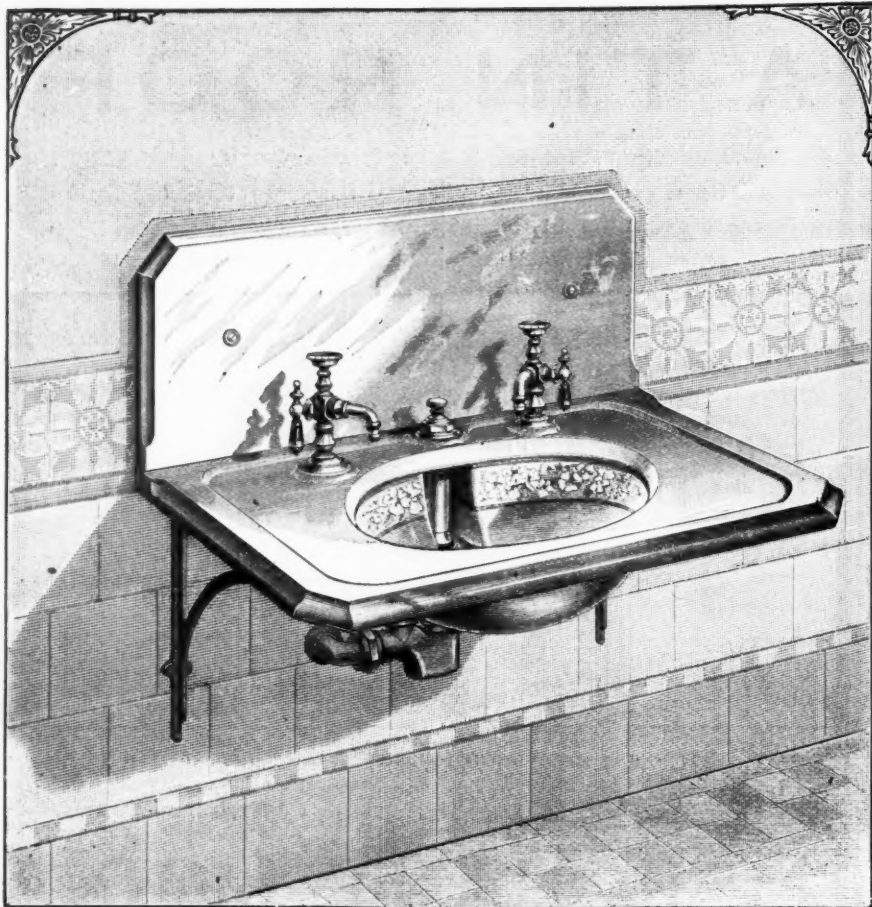


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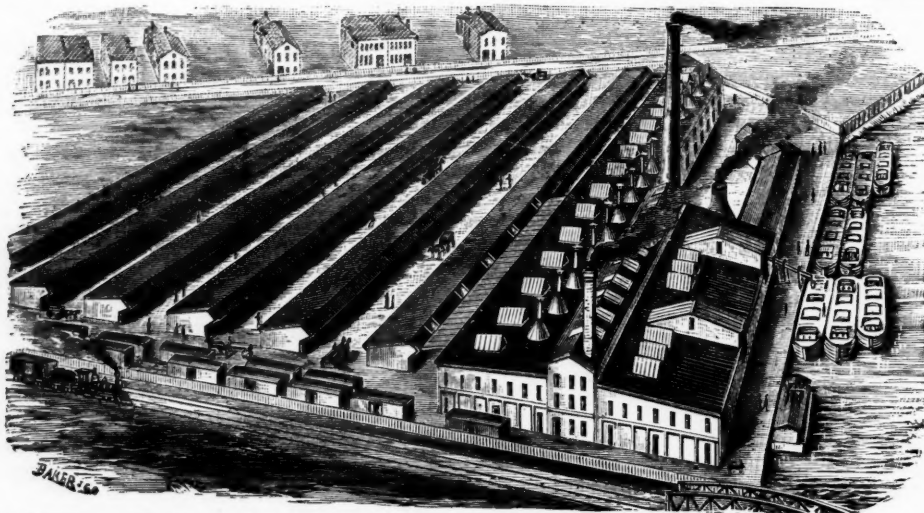
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IN explanation to those of our readers who may wonder why so much space is given to the discussion of different phases of unions versus contractors (they do not live in Chicago certainly), we will call attention to the record of the important moves made by those actively interested, since our last issue, and especially to the report of the Executive Committee of the National Association of Builders, and their recommendations, published elsewhere. The causes which led up to this complete stoppage of all building in Chicago are easily enumerated. For several years contractors have been saying there is no money in the business, and those who invested money in building that, not knowing when a strike would upset all calculations, building was becoming more unsafe as an investment year by year. A strike of carpenters almost precipitated the present condition of things in April, but as it occurred at the close of the winter work, and before the mass of spring building had commenced, this, through these circumstances and the firm stand taken by the Carpenters and Builders' Association, was averted. Later, it only required a demand for a Saturday pay day by the bricklayers and stone-masons' union, and, upon its refusal by master masons, a strike, to cause all interested, from the owner and his adviser, the architect, to the smallest contractor and material dealer, to say "we will stop right here until we can manage our own business," and thus know upon what basis to calculate, and arrive with some accuracy at a reasonable percentage of profit.

WHEN the individual workman said, "I will not work except under certain conditions," he exercised his lawful right. When he formed in association and said, "We will all act in concert in the same way," he was still within the law; but when he went farther, and said, in effect, that all work belonged to his association or union, and that none who were not members thereof should labor within the district which that union assumed to control, then the rights of man, as established by the constitution of a free country for a free people, was violated. But they could not even stop here. The union assumed the right to appoint itself judge, jury and executioner, and delegated this authority to one member, the "walking delegate." True, they assumed a sort of "rebate" court procedure, what the Scotch called "Jedwood justice," when they hanged a man and tried him afterward; they reserved the right to pass upon, to recall or indorse, the acts of the walking delegate at the next meeting of the union. Such arbitrary action is not excusable, even if the reasons given by the unions were correct, "that the law is beyond the reach of a poor man, and he cannot afford to waste days in attendance upon court to collect wages from a contractor who does not pay his debts." It is only in the most barbarous districts of any country that "lynch law" is ever even assumed to be right.

A CAREFUL investigation of the condition, the causes and the results of the present disturbance, made by constant personal attendance upon the meetings of contractors, and conversations with workmen, both members of unions and others, leads to but one conclusion. The labor unions are controlled by two elements. Largely in the majority are the professional labor agitators, from the professional "Knight of Labor" with political aspirations, to the socialistic crank who preaches that it would materially better the condition of all if the "railroads were divided among the

people and each given a tie." In the minority yet still existing among the leaders are those who believe that capital, as they hold the contractor to represent, and labor are of necessity eternally at war, and that to yield is to become slaves to despotic tyrants. The followers of both these classes of leaders are, strange to say, comparatively small. The mass of the conservative and competent workmen, feeling that it is easier to work peaceably, and pay a tribute to a union for such privilege, joins, and pays his initiation fee and dues, and works. In the evening he goes home to his family, and, when called off the work by a walking delegate, he submits, rebelling in his heart, but feeling that the union is too strong for him to oppose. These statements are not overdrawn, but go to show that for the honest workman, as well as every American citizen who holds the institutions of his country dear, there is but one way to work in this great movement of emancipation.

THE differences between the master masons of Chicago and the bricklayers' union, while involving questions of principle not assented to by the union, as a body, seem to be held by the large majority as being just and right. Were there no other obstacle in the way it seems possible that the masons' part of the present difficulty might be adjusted. But the real separation seems to be the utter distrust each body has of the other. Master masons speak of former contracts made by arbitration committees having been broken when reported to the union, and the union make charges of bad faith in former dealings with the masons, both as an association and as individuals. It is evident that in the past, individual master masons have taken advantage of the unorganized condition of the workman, and treated him unjustly, and the workman has retaliated when he found he had the power, by instituting the walking delegate. Both sides have suffered by this strife thus engendered, and now it is almost impossible to eradicate from the minds of either contractor or workman the idea that each is in opposition to the other. It is hoped, and we think that both are fast learning, that the present strike, or lockout (one of the peculiarities is that the contractors claim it to be the former and the workmen the latter) is teaching that while this condition continues there can never be a permanent settlement.

IN all other trades the situation is much the same; the workmen feel that their unions are necessary to their existence, and the contractors that they must "down the union." The unions do not see that it is the objectionable and arbitrary features of their unions that must be eradicated and not the abolition of the union itself. The contractors, as the supposed more intelligent body, should have all the patience and wisdom possible under the circumstances. They should labor as individuals to get the workmen to see not only where they are wrong, but to assure them that they can be trusted to treat them fairly. If these clauses which cause the disturbance and continual disposition to strike or to lockout should be eliminated, then the two bodies could meet and talk over the situation, looking from the same standpoint with equal interest and equal fairness. The conclusions reached would certainly be for mutual benefit, and the entire effect would be what must be before any permanent settlement can be reached, as the voice of one association. While the interests of each are equal there is no reason why there should be two associations acting independently. Because there are many matters that come before contractors or workmen that are of no interest to the other, there may be two associations, still, in everything effecting a mutual interest, such as hours of work, wages, etc.; nothing

should be done until the entire matter had been reviewed and decided upon by a joint committee.

ONE of the more important subjects discussed during the present labor troubles is the apprentice question. The unions say that, in absence of a law, they have been compelled to establish a rule governing apprentices. The contractors claim, as a part of a universal principle, that the boy's right to learn a trade is on a plane with his right to a school education. The state law on the subject of apprentices, revised and in force since July 1, 1874, places the age under which apprentices may be bound at sixteen years, by the natural guardians of the minor, with or without his consent, through indentures subscribed to by both parties. When the indentures are drawn by guardians other than parents, a copy shall be filed in the county court. In all indentures the master shall cause the apprentice to be taught to read, write, and the ground rules of arithmetic. All money to be paid the apprentice as compensation for services shall be inserted in the indenture and secured to the sole use and benefit of the minor, and at the expiration of the term of service, when the term of indenture is over one year, he shall be given a new bible, two suits of clothes, and \$20 in money. To remove an apprentice from the state, a bond of \$1,000 shall be filed in the county court. Another clause, which may have an important bearing where outside parties interfere with apprentices at work, is that any person who shall counsel, persuade or entice an apprentice to absent himself from the service of his master, shall forfeit and pay not less than \$20 or more than \$500, to be sued for with costs in any court of competent jurisdiction. These are the principal points in the apprenticeship law for the state of Illinois, which seems wholly inadequate to cover present requirements, and leaves the question, in the majority of trades, wholly in the hands of the contractor, and those who wish to learn trades to settle between themselves. The journeyman has nothing whatever to do with the question in any case, and the assumption of authority in the matter by trades unions is as entirely unwarranted as their interference with the employment of non-union workmen.

CARPENTERS throughout this country, as a body, are the most intelligent of the building trades, and it is strange that a professional agitator, such as recently spoke in Chicago, can even obtain a hearing upon matters in which they alone are interested. At this meeting the speaker, a man named P. J. McGuire, is reported by the press as saying that "he came to Chicago to throw down the gauntlet to the master builders." "Milton Seward [a strange mixture of the names of J. Milton Blair, president, and W. H. Sayward, secretary of the National Association of Builders], George C. Prussing, and other leaders in the Carpenters and Builders' Association, were attempting to stamp out the carpenters' organization." "That work in Chicago has to be done, it cannot be shipped away for completion, and carpenters here will see that no one else comes here to do it," and much more in the same strain, but enough is quoted to comment upon. These will show how unreliable the average statements of such men are, how unsafe it is to follow their leading, and how so large a majority of the labor troubles, and consequent loss of work, is chargeable to just such agitators. He "throws down the gauntlet," and leaves the carpenter with a wife and children to support to fight it out, showing how unsafe an adviser he is to follow. The gentlemen named have nothing directly to do with the Carpenters and Builders' Association of Chicago, all three being mason builders, and have directed

no movement, or even spoken against carpenters' unions especially, showing the unreliability of his statements. His latter statement belongs to the creed of the anarchist, and is contrary to every principle of justice and freedom.

A NEW method for supporting walls has been inaugurated by Architect Frederick Baumann, of Chicago. It became necessary to take out the first story of a dividing wall in a double store building, supporting the wall with iron beams, the ends resting upon iron columns. Instead of using screws and needles, as is usual in such cases, the architect conceived the idea of removing the wall from the line of the ceiling to a little below the floor line, for a distance of one hundred and twenty-six feet, in nine equal spans, and inserting the columns without any temporary support. This was done by first cutting through the wall where the column was to be set; then a firm foundation was secured through placing a curved castiron bearing plate in the wall below. Upon this were placed two footing plates, with steel wedges between. The column was then placed on the footing plates, and a stone cap placed upon the column and the space between this and the wall above filled with brick, set in Portland cement. After allowing this to stand for a day, the steel wedges were driven up until the column formed a substantial support. After all the columns were set in this way, the iron I-beams upon which the wall was to rest were introduced. This was done by cutting half through the wall on one side, placing the beams, and then placing those on the opposite side in the same manner. The work was perfectly successful, and no settlement of any kind occurred, though each column supports a weight of over one hundred and ten tons. It was observed, however, that the utmost care and the constant watchfulness of the architect were necessary, as the entire operation was a delicate one from an engineering standpoint, the slightest neglect or mistake, especially in keying, being liable to lead to serious results. Mr. Baumann's method will doubtless be followed generally where the same work is to be accomplished, namely, the substitution of columns for the lower part of a dividing or outside wall. From this demonstration it would seem that the plan may be adopted for buildings of almost any height, at a great saving in time and cost.

THE National Association of Plumbers will hold its fourth annual convention in Chicago, June 21, 22 and 23. The assembly will convene at the Grand Pacific Hotel. About 160 delegates from all the states and territories will be in attendance. The convention will not only be the most important yet held by the plumbers, but will discuss questions of general interest to all building trades. Papers will be read upon payment by the hour, the apprenticeship question, state legislation, manual training and trade schools and other questions of general interest, while such topics as main drains, foot vents, etc., will be technically discoursed upon. A new system will be inaugurated in their discussion, it being arranged to debate each paper after it is read before continuing. An entertainment committee of twenty-five has been appointed, whose duty it will be to look after the comfort and amusement of the delegates out of convention hours.

ARCHITECT Willoughby J. Edbrooke, of Chicago, has been appointed Superintendent of Buildings, vice Alexander Kirkland. Mr. Edbrooke is a member of the Western Association, and also the Illinois State Association, and it is complimentary to the profession, as well as greatly to the advantage of Chicago, to have an architect of his ability at the head of the building department.

The Education of the Architect.

BY PROF. N. CLIFFORD RICKER, OF THE UNIVERSITY OF ILLINOIS.

A SESSION of the English Conference of Architects, on May 7 last, was devoted to the "Education of the Architect," with results possessing great interest to American architects, since the papers read may be taken as expressing English views on that topic.

The discussion was preceded by some remarks of the chairman, Mr. Arthur Cates, who said that very little had yet been done in England toward establishing a course of instruction as a basis for the professional education of the architect, the examinations now required for admission to the R. I. B. A. merely indicating the proper course of study, and showing the prevailing deficiency of accurate scientific knowledge now found in candidates. Each pupil was therefore likely to neglect the preliminary studies, devoting himself to one or more kinds of advanced work. Much more had been accomplished in this respect by the American architectural schools.

The first paper was read by Prof. Babcock, of Cornell University, who believed that a technical education was essential to architects, and should comprise those principles of building and mechanics required in designing structures, as well as the general sciences, the history of architecture, with drawing and designing. Manual training in the use of the tools and processes of the building trades is useless to the architect, not being necessary to the proper designing or supervision of such work, and would be solely valuable as a physical exercise. The necessary knowledge of constructive details should be acquired from suitable lectures and text-books, supplemented by visits to work in process of construction. The architect is not required to become a skilled mechanic in any branch.

The mechanics of architecture may be made quite simple, dealing only with statics, omitting all other branches, which are only required by the engineer. The formula of resistance of materials may be simply expressed, requiring only a knowledge of arithmetic and algebra, and are of very easy application. All higher mathematics may be omitted if the student be willing to accept the results of the work of other men, not caring to examine the methods by which they were obtained. "It is best, of course, that a student should understand the theories of things, but it is not necessary." The graphical method of finding strains in beams and trusses, and lines of pressure in piers and arches, has practically superseded the analytical, being simple and easily applied.

Physics, chemistry, botany, geology and mineralogy are the general sciences to be studied.

No suitable history of architecture yet exists, Fergusson's containing valuable examples, but being badly arranged, unsatisfactory, and full of his theories and criticisms. The structural details and constructive methods of the styles should be studied, especially of the Romanesque period from 400 to 1200 A. D., which is unfortunately neglected in all histories, though it is the period of the greatest architectural invention. This study is best taught by carefully arranged lectures, omitting everything irrelevant, illustrated by photographs, drawings, lantern slides, and models of details. These models cannot be purchased, must be specially constructed, but are far more valuable than drawings.

Accuracy and clearness in drawing are essential, a thorough knowledge of descriptive geometry being a pre-requisite for this. Painting in water colors should be taught, but not required, few students becoming experts in this. The best draftsmen do not make the best designers.

Designing is often considered to be a special gift, but the average student can be taught its elements, so as to develop his latent powers, though some may become designers without training in a school, while others will fail under any circumstances.

Time can only be spared for a year each of French or German, or two years of either, but Greek and Latin would be better, because supplying the terminology of architecture. French is preferable to German, so that a student may be able to read the best architectural work ever written, Viollet-Leduc's "Dictionnaire raisonné," not yet translated into English.

Graduates from the full courses of the American architectural schools obtain ready employment and rapid promotion, learn quickly in an office, and after two or three years of office work are well prepared to commence practice.

The second paper was read by Mr. E. C. Robins, who said that the examinations in architecture had shown the necessity for a better general and technical education, especially to prevent the architect from being supplanted by specialists, such as sanitary engineers, etc., and to accord with the extraordinary progress now made everywhere in the teaching of applied science. The general knowledge possessed by the average pupil in an architect's office is insufficient. An architect must be an artist as well as a scientific man; but if the artistic be too exclusively cultivated in early life, he acquires a distaste for the scientific, which should therefore be first studied as a basis for the former. The number of architects should not be

increased, but their quality ought to be improved by better systems of apprenticeship and instruction. At present, a course in science for a year at a technical college, succeeded by an apprenticeship of from three to five years, is all that can be done. The programme of studies for this year would practically be similar to that of the first year in the American schools of architecture, comprising mathematics, except calculus, art and drawing, physics and chemistry, with laboratory practice, and French or German. During his apprenticeship the student should supplement and complete this course of study by attending evening lectures, art classes, etc., so as to practically complete the course of study prescribed in America, which would well prepare the student for the examinations.

Mr. Arthur Hill read a paper on the "College Training of Architects," comparing the differences in the present modes of educating architects and physicians in England, showing the necessity for the provision of suitable collegiate training, not yet existing in England, the required studies now being pursued in different places. This course in architecture might easily be added in colleges now having a course in civil engineering, just as is the case with American architectural schools, and with the great advantage that ancient monuments are much more readily accessible in England for purposes of study. This training would soon materially elevate the standard of the examinations and of the profession, and would also impress the public with a sense of the value of proper training. Raw pupils would soon be required to pursue this course before admission to an office, to the advantage of the architect.

A general board of professional education was then suggested, to represent the institute, and take charge of the movement, arranging with several existing colleges for the establishment of proper courses in architecture.

A valuable paper by Professor Aitchison followed. He says that it is now most essential to make the public appreciate and demand good architecture, to see that architects are adequately remunerated, and to aid the progress of architecture, this comprising the education of the future architect. Every architect must construct soundly, or is otherwise no architect at all. It is a great advantage to be able to use the higher mathematics, otherwise he must take theory on trust, or employ some one else to solve difficult problems. Descriptive geometry is essential in construction, and geometry was the foundation of most good architecture. He must be able to solve the statical problems occurring in building, as well as possess a thorough knowledge of materials used. Also drawing, planning, lighting, heating and ventilation, with some knowledge of architectural law.

"It is a thousand to one against any student having any architectural invention, and as far as I know, invention cannot be taught," so we must provide instruction valuable to all. Designing should be taught by first studying the Greek, Byzantine, Saracenic and Gothic styles, then taking a purely structural building and trying to make it beautiful. "Eccentric ugliness is better than second-hand beauty, if it be the right step forward." Systematic instruction saves time, is more thorough and complete than self-instruction, but must be imparted by live men, not pedants. There is wanted in the architecture of this century "more original and daring construction, more invention, more perfect subordination of parts, and greater finish."

Professor T. R. Smith read a paper on an "Architectural Studio," suggesting that an office should be opened by one or more architects, provided with a good library and collection of casts, receiving students daily under proper supervision and instruction, and especially devoted to the following subjects: Drawing, architectural forms and details, especially Greek, design and composition, perspective and shadows, water colors, sketching existing buildings, descriptive geometry and graphical statics, and also building construction. The last would be improved if supplemented by practice in woodwork and masonry in a workshop. The greatest difficulty would be to find just the man to take charge of such a studio.

A note on the Architectural School of the Royal Academy was read by Mr. R. P. Spiers, who stated that the time of the students was too limited, and that they were disposed to work in almost all styles, so that a proper direction of their work was all that could be attempted. Since 1876, architects of distinction have lectured before the students with excellent results. It is found best to first arrange the plan to best suit the requirements, to base the elevations on the plan, using sound construction, leaving the question of style to the student, trusting to a gradual development of his artistic sense of design. This produces better working drawings than the best competition drawings made at the Ecole des Beaux Arts. Though the training at that school is very valuable, English architecture is better without a national school of architecture, being more progressive, as the result of the Gothic revival, architects studying principles instead of precedents. English architects exhibit greater skill than continental architects in properly treating special materials, such as wood, brick, terra-cotta, etc. This is especially manifested in some of Nesfield's designs. Burges left

models for draftsmen in his architectural drawings, not pretty but carefully analyzing the principles of ancient work. Elaborately finished drawings restrict architectural design.

A paper on "Education and the Institute" was presented by Mr. L. Booth, who said that the recently increased powers of the institute should be employed in facilitating the education of architects. If the architectural profession were made a close one by law, admission will not depend on artistic or linguistic acquirements, but on a thorough knowledge of sanitary science and construction, which are considered to be of the greatest importance by the public. Every student should be early affiliated to the institute after a suitable examination, followed by two others, the last entitling him to become an associate. The institute should suggest the course of study and conduct the examinations, held simultaneously in various parts of England. Adopting the education and training of students as one of the principal aims of the institute, all the best men would soon be brought into it, communicating the results of their experience to others.

Mr. J. A. Cotch (memorable for an unsuccessful attempt to reform masculine costume by throwing aside the "plug" hat and the "claw-hammer" coat of modern society) read a paper on "Learning to be an Architect." It is commonly considered to only be necessary to apprentice a student to some architect, letting him pick up his knowledge as he can, for which few opportunities are open in provincial cities outside London. No definite programme of study is possible, or any due appreciation of methods. The institute ought to take such pupils in hand, give them a good start, and make them feel that it has a living interest in their work. It is now only possible for the institute to direct and examine students, not to supervise their daily work. The best method for this would be by a general examination of the student, previous to his apprenticeship; afterward an intermediate examination on construction, history and materials, with a third and final one for admission as an associate.

Existing schools would soon arrange to prepare students for the first examination; the institute could direct students to proper places for obtaining instruction in the studies required for the second, though this would make a patchwork of an education, composed of parts taken from various sources.

From the preceding, it seems that English architects agree that the present provision for the education of future architects in England is about as bad as possible, but they do not accord so well in suggesting the proper remedy therefor, and no one seems quite willing to give up the idea of an apprenticeship. Possibly the usual premium of about \$1,000, seemingly paid for the privilege of picking up the chunks of wisdom found lying around in an office, and of getting in the way of the real draftsmen, may have some bearing on this point, as it certainly did in the case of the immortal Mr. Pecksniff. It would seem that these premiums might become quite important in the income of a provincial architect without extensive connections.

England is probably the only highly civilized country where the state has made no provision for the proper study of architecture. Indeed, it has been a continual surprise to the writer, that so much good work could be produced, with such a lack of professional training. It probably is the result of the influence of Ruskin, acting upon the young architects of a quarter century since, directing them to the study of the best works of Italy and France, which taught them design and construction, thereby originating good traditions in some offices. Besides, the difficulties in the way of the architectural student must discourage and divert all but the most energetic men, so that the work is done by comparatively few men selected from a multitude of aspirants. It would appear that to open a course of study at some technical college, perhaps based on those of American schools, and profiting by their experience, would not be assuming a very great risk. But the movement is likely to terminate in mere talk, that being so much easier, and not disturbing the pet hobby or interest of anyone.

In order to be professionally successful, the architect must satisfy the requirements for any given building, must employ good construction throughout, must expend the money of his client to the best advantage, and must make the structure as tasteful and pleasing as possible, within the limits of expenditure and arrangement permitted. Any successful course of study in architecture must be based entirely on these requirements, if the architect is ever to become nearly so indispensable to his clients as the lawyer or physician.

The public now looks on the architect as a necessary evil, indispensable sometimes, whose principal function is to increase the cost of a building by plastering on extraneous ornamentation. If once convinced that his true work is to expend the means of his client most judiciously, economically and safely, producing the most effective and pleasing results, the practice of the profession would be increased tenfold.

This very desirable result will never be attained by the expression of artistic longings or yearnings, or the production of æsthetical lucubrations,

but only by convincing the dear public that the client of an architect obtains a better, handsomer, and more substantial building for his money than the man who is his own architect or trusts entirely to his builder. Good construction first, then good decoration to ornament, not disguise this construction.

Grecian and Medieval architects knew nothing of many sciences now essential to the architect, but we have no evidence that they did not master everything attainable, that they were content to remain ignorant of any branch of practical knowledge. Nor is there any more reason for ignorance in these days. A properly qualified architect ought to be able to make detail drawings of every part of a building, yet very few can make the working drawings of stairs required by stair-builders. It is not sufficient to take formula from handbooks, without fully understanding the manner in which they are deduced, knowing their limitations, and how to change them to suit other conditions; otherwise, one may be entirely unable to answer a question as to the use of a new material or a new form of section. A student cannot properly understand mechanics and resistance of materials without some knowledge of the higher mathematics, especially since all American schools of architecture are affiliated with schools of engineering, and must take these studies as taught to engineers, or on a much lower plane.

Manual training is certainly essential to the student of architecture, if to anyone, for it gives him a better knowledge of the tools and modes of working materials than could ever be obtained from simple inspection. But he has not time to become a skilled mechanic in all the trades. This must be followed by taking notes of all new details of construction. It is said that Viollet-Leduc could instruct workmen on any trade in the proper methods of performing any very difficult work, taking the tools in his own hands, and that workmen always preferred employment on buildings in his charge for this very reason.

Owing to the prevalence of prosperous times and the general "boom" throughout the West, there is a great demand for draftsmen, almost anyone being able to obtain a position. Hence there is a considerable pressure on the schools to reduce their requirements for admission, and to curtail their courses of study to the lowest limits, in order to extend their influence as widely and to retain their students as long as possible. But this ought to be withstood, for half-educated men will be likely to remain bad draftsmen or worse architects forever; certainly it is not the way in which Richardson's are ever trained. This lack of proper preparation is one of the reasons that the province of the architect is now being invaded on all sides by the expert, by the sanitary engineer and the professional decorator; possibly we may see the architectural engineer looming up in the future, ready to appropriate the remainder of our professional domain.

Paper on Ironwork.*

BY C. W. TROWBRIDGE.

THIS being a continuation of the paper delivered last year† and as I have spoken almost entirely of constructional ironwork in the previous paper, this will be devoted more particularly to ornamental work, the only constructional work which I have not already mentioned being trusses and riveted plate and angle work. This is yearly becoming a more important part of the business, the superior adaptability of riveted work to building construction renders its use much more economical in many cases. It can be said that I-beams cannot be used with economy in spans of over thirty feet, and even for these spans riveted work is cheaper, particularly where the depth of beams are two feet or more. Regarding the calculation for strength of riveted work, the text books, giving quite simple formulas or tables, and the valuable hand book of the Dearborn Foundry Company give perhaps the most complete data on the subject, this book should be in the hands of all draftsmen.

In cases where lateral strength is necessary, it is good policy to use double web or box girders, this form giving much more stiffness to the weights than single web or plate girders. For the support of walls and for the support of long span floors, this work is particularly economical. In case you wish the beam to project as little as possible below the ceiling, the floor beams can be coped on, or angles can be riveted on the sides, and wooden floor joists supported at any height on each side of the web. For forming balconies in theaters and a thousand and one places where you wish curved or bent iron supports, plate or angle work will be much cheaper than bent I-beams. In places where light construction is wanted, bent angles latticed are very desirable, and by a little consideration the design can be made quite ornamental. The addition of rosettes or ornamental features at the crossings of the lattice often have a very pleasing effect; by making the end panels solid and cutting out some simple geometrical form, or by cutting out a series of geometrical forms the whole length of the web, often produces a pleasing effect. Examples of this can be seen in the drawings which we have of many English railway station roofs, where this sort of work is very much used. In France and America, it is much more common to use latticed work for these places, making the design much lighter. One point sometimes neglected by designers who use riveted girders is that the loads for the transfer to the walls on which

they rest are often enormous, and they neglect to provide sufficient bearing surface on the walls; it can be generally said that walls should not receive more than ten or fifteen tons to the square foot from bearing plates, and as rivetted girders usually carry enormous loads, bearing plates have to be proportioned accordingly. As an instance, in the designs of the Pickwick Club, New Orleans, there is a girder there thirty feet span, carrying several stories of wall, and in the design, the bearing plate provided was twenty-four by thirty-six and a half inches thick.

Upon investigation of the weights, it was found necessary to make the bearing two feet by eight feet; two feet, in that case, being the thickness of the wall for that purpose. We used castiron ribbed bearing-plates sixteen inches high in the center.

Regarding frame trusses, the question always arises as to whether we should rivet or use pin connections. The question hinges in a great measure on the facilities of erection. Riveted trusses are not objectionable where their length and size does not prevent their being erected in one piece; that is to say, where they can be riveted together on the ground and hoisted to place as one piece. It can generally be said that unless they weigh more than four tons, and are more than seventy feet long, they can be made in one piece very nicely. Above that size or length, it is usually desirable to use pin connections. This pin-connection work being so easily connected, pieces can be hoisted and set in the positions which they are to occupy, supported on light scaffolding pins slipped into place, and the scaffolding taken away, leaving the complete truss. For large-span, heavy-weight trusses, the pin connection also has this advantage; these connections are upon the pins themselves; whereas, in riveted work, large plates, connection or joint, are necessary, and in case of any distortion of the trusses, from deflection or other causes, no one can tell the exact course pursued by strains through a large plate of this description, and there is a consequent uncertainty regarding strains, which has to be provided for by an extra number of rivets, involving additional material and cost.

With regard to the calculation of strains in trusses, there are so many valuable treatises on the subject that I need say nothing. Such works as those of Wood, Shreve, Boller, Trautwine and many others, give all necessary data in very simple and complete shape. I would recommend Trautwine's hand book, as having more valuable information for the money than any other book in the market. It may generally be said that errors in designs of trusses are not made in the preparation of strain sheets, but rather occur in carelessness in proportion joints, and it often occurs that where large trusses are needed, it is better to employ an engineer who has had experience with bridge construction or similar work, to design a truss, as he is always up to the latest date, and can design a truss with the least possible waste of material, and consequent economy. This practice is growing with architects every year, and unless designers have more time than is usually the case, they will find it to their advantage to call in outside help on large, long trusses.

Regarding proportioning of members, I would only call attention to the fact that compression members should be of as large section as possible; that is to say, that the radius of gyration should be as large as practicable, these members acting as columns and being subject to the same conditions and rules as columns bearing vertical loads. Tension members are usually the ordinary eye-bars for small sizes, generally made with loop ends; care should be taken to have excess of material wherever welds occur. The treatment which iron receives in welding reduces its strength. In some experiments conducted by Mr. Moxham, now of the Cambria Ironworks, Johnstown, Pa., he took a piece of refined iron, such as is ordinarily used in eye-bars, and, cutting it into three pieces, tested one as it originally came from the roll; another was cut into two and welded in the ordinary manner, making the customary lap and drawing the piece to original size during the process of welding; still another was heated to welding heat, and upset under a steam hammer; when these pieces were tested, it was found that the pieces which had been welded were about five per cent weaker in tensile strength, and the elongation was about fifteen per cent less than the original bar, while the piece which had been simply upset lost fifteen per cent in tensile strength and twenty-five per cent in elongation, showing that the iron, as we might say, was totally demoralized by the process of up-setting. These things should be remembered when designing die forged eye-bars.

Differences in shop practice among ironworks produce great differences in the design of work executed by the different works building trusses for the same loads, and while they all obtain the same result by different methods, their work is practically of the same value when completed, and architects will often do well to allow contractors to adopt their own methods, as it does not result in poorer work at the completion, and will often result in saving of price to the owners. Where trusses are exposed to view, and expected to form part of the architecture of the building, there is a broad field for the exercise of taste in design; any one contemplating designing ornamental truss work, will do well to look over the published designs of French, English and German engineers. Very handsome designs for bridges and iron roofs are quite common in England and on the continent, particularly in France, where they seem to have the faculty of combining good construction with graceful outlines—they perhaps excel any other in the world in this particular. Some years ago designs for a bridge over the Duro at Oporto, Spain, were published in the French journal, *La Genie Civil*. They are well worth anyone's consideration. The French three hundred meter iron tower and many other pleasing designs might be mentioned, but you probably already know of them. One of the probable changes in the ordinary construction that will occur in the near future, is the more common use of wrought-iron gaspipe for columns of small diameters, say up to six inches in diameter, particularly where long columns are desired; not much data is as yet published upon the strength of gaspipe as columns, but we have a little in the book published by the Pencoid Ironworks, of Philadelphia, they having conducted quite a series of tests of this material, quite sufficient for data necessary for ordinary work. Joints at the ends of gaspipe columns will of course be a most interesting, difficult point to decide. The strength of screw-thread joints

* Paper read before the Chicago Architectural Sketch Club May 23, 1887, revised by the author for THE INLAND ARCHITECT.

† "Architectural Ironwork," commenced in INLAND ARCHITECT Vol. VIII, No. 3.

as ordinarily made by the standard couplings now used by steam and gas-fitters, will be found of ample strength for columns of more than twelve or fifteen diameters in height, such columns fail by bending rather than crushing, and joints made with the standard thread will be plenty strong in such cases. In instances of long columns like those in the boxes at Hooley's Theater, or in cases of light construction several stories high, these columns are particularly adaptable; also in cases of verandah and stairway columns, or columns for the support of ornamental wrought-iron, they have many advantages; as an instance, I might mention the Fort Wayne railroad depot on Canal street. Along the front edge of the sidewalk, there are perhaps thirty-five or forty castiron columns supporting an awning. Of these columns perhaps seventy-five per cent are already broken by baggage wagons backing up and striking the columns, most of these have now gaspipe columns placed inside the castiron to secure strength, the castiron being left outside for ornament. If these columns had originally been made of gaspipe, with shell caps and ornaments, these breakages would not have occurred. In most cases the columns would not have been bent, but where they were bent, they could have been bent back to a straight line without damage. In using this class of columns smaller factors of safety can be adopted than with castiron, as no such elements of uncertainty enter into their composition, as with castiron columns. Gaspipe is made by rolling out iron in sheets and bending it round in a die, welding the edges together in the process; the material in consequence is of uniform thickness and of the best character, there being no flaws and no shifting of cores, or other accidents to which castiron is liable. In the construction of roofs for open structures, or where smoke is not liable to come in contact with the under side, corrugated iron has many advantages. Corrugated iron receives its transverse strength from the fact that the upper and lower parts of the corrugation act as compression and tensile members in an eye-beam or girder; the intermediate parts act as webs. This iron is made in many patterns; you can secure almost any kind of corrugation desired, and sheets up to ten feet long are in the market constantly. For roofs of sheds and for many kinds of shops and similar buildings, it has, as I said before, many advantages; however, where the temperature on the outside of the building varies from that on the inside, great trouble will be found with condensation, and in such cases, it is hardly a desirable material. Of ordinary tile and slate roofs, on iron purlines, you have so many examples before you constantly that no remarks are necessary.

Generally speaking in the designing of trusses and girders and all sorts of wrought-iron frame constructions, the use of I-beams and channels is not desirable on account of the difference in cost. Beams and channels this year sell in Chicago at \$3.40 per hundred plain, while on plates and angles the price is \$2.65 to \$2.90 according to quality. This makes quite a difference in the cost, and should be remembered in preparing the design.

Of the shop process in the construction of this class of work, very little need be said as these are matters which the designer cannot hope to control. Generally speaking, he might insist on correct matching of holes for bolts and rivets and in cases where the factors of safety are exceedingly small, drilling of holes after the pieces have been placed together might be insisted upon with good results, although this process is quite expensive; still where great lightness is necessary, such treatment is desirable. With regard to bent construction, members are often bent cold with good results. Any material which is suitable for these constructions will bend cold without flaws; closed surfaces should be painted before the work is put together. Pieces which have not been properly straightened, and ragged trimming of cut edges are the most common defects. These can be prevented by rigid inspection of the work as delivered. In the use of bolts, an excessive number should always be employed, as the probability is that not much more than fifty per cent of the bolts used will have actual bearing in their holes.

With regard to painting, it is generally best to have the work painted as soon as completed at the shop, as at that time very little rust has appeared. Where rust has already set in, paint is not apt to adhere, being very liable to scale off and the rust to continue. While having work delivered unpainted may facilitate inspection, it is hardly good policy unless inspection is attended to at once, and painting is done immediately. It would be worth any designer's time to give considerable study to designs for wrought-iron construction, as this class of work will probably be used more and more in the future, and so many pleasing effects are obtainable by the use of these materials that their importance cannot be overestimated. Very pleasing designs are often made in the work composed of wood and iron used together like trusses, with wood compression members and iron tension members. By chamfering the edges of wooden members, and other similar ornament, and some attention to painting the finished structures, very desirable effects have been obtained.

In ornamental work, such as railings, gates, spandrels, elevator fronts, and such work, we have many very pleasing designs in Chicago that are well worth consideration. The work in the Phoenix building, the Home Insurance and the Rookery are good examples of this class, as these designs are generally clearly artistic, with only enough construction in them to make them answer their purpose. I shall say very little on the subject of the designs; most of you are far better designers than I am, and anything which I could say would be of little value; description of the process would be probably long and tedious, and comparatively uninteresting. What we might class as clearly forged work is so very expensive that not much of it will be used. I refer, in this case particularly, to ornamental work executed hot with the hammer. Mechanics capable of doing this work are few and far between; whereas scroll work, such as can be bent cold, and similar constructions of that sort, with very little forging in them, are equally effective with the present generation of owners, and much cheaper. Among the more recent features of scroll work construction is making of scrolls in comparatively wide material, such as inch by quarter, or one and a half inch by quarter, and, where one piece crosses another, cutting out half the material from each piece and notching them together, forming a brace or fastenings for the scroll at that point, and allowing the edges to cross each other in the same plane. This has a good

effect, but of course should be avoided in places where there are evident strains to be transmitted. In such cases the iron should show its full strength and section. The combination of castiron ornament with wrought is quite common, and practicable for many places. This is a matter deserving considerable attention on the part of the designer, and one which will be able to produce many fine things. For purely castiron ornament, there is an almost limitless field. Castiron ornamental anchor-ends, cast-iron panels in stone or marble stairways or balustrades, and in many other places, can be used with good effect. Castiron balustrades are quite common in our best stairways, and many good designs have already been erected in Chicago.

In relation to design of castiron work, perhaps a little more might be said relating to the shop processes as a guide to what is possible in castiron. Models in plaster of paris are a necessity for really artistic work, and it would be good practice for architects to have all ornaments modeled in their offices. The artistic merit of the design lies entirely with the model, as artistic work can be executed as it is possible to model. The treasury department at Washington has done this for many years, the result being that considerable good iron ornament has come from that office. I speak more particularly of the execution of the designs than the designs themselves, although many creditable designs have originated in Washington. In speaking of the process, say that we start with the plaster model. This would show the under-cutting and projections desirable. It will be necessary, where pieces overlap each other, in castiron, that they be cast separate and screwed together. In some cases, however, where there is sufficient material to allow what we call burning together, that is, casting some of the projecting parts first and placing them in the sand in the position which they are to occupy, and pouring the additional cast afterward, part of the pieces first cast melting away, and the result being that, when finished, they are all one piece. But to return to our model. The necessary draft in order to allow patterns to be drawn out of the sand, will be put on this model by the pattern maker. Then a plaster reverse will be taken, which will be like the negative of a photograph, the reverse of all the features of the pattern. In this we will place a layer of clay of the thickness desired in the finished work; and in case both sides are to be ornamented, the ornament will be modeled on the back of this clay; then another plaster reverse will be taken. If there are few pieces to be cast, this clay will be used as a pattern, one side of the mold being rammed up directly on the plaster and clay surface, the opposite side of the mold being rammed up on another plaster block, which is a fac simile of the mold, with the addition of surface necessary to form the parting of the flask. In case of pieces that will not draw, it is often customary to make wax patterns, drawing them in parts. As an instance of this sort, I will describe the molding of a mask of a face, as occurred in our shops a few years ago. We received a plaster model from Washington of a face of Gambinus for the Cincinnati postoffice. In this, the mustache and eyebrows were undercut. The first thing which we did was to cut out the eyes, as they had so many fine deep lines surrounding them that they must be made separately and set in sockets in the face. Then we made a plaster reverse of the face in many pieces so that they could be drawn from the face without breaking the original model. These pieces were jointed together carefully, and were about four inches thick. Over the back of these pieces we made a layer of plaster of about six inches thick, all in one piece. This gave a bed in which the pieces could be placed in their proper position, after having been drawn from the model, leaving an exact reverse of the face, into which we could put our clay for forming the thickness of the casting, by making some parts of this clay a little thicker than at others, we were able to make a back block which would draw in one piece. After making this back block, the clay was taken out, the back replaced and the space which, of course, represented the future thickness of the iron was run full of wax; when this was cool, we removed the back block and cut the wax into many pieces; the joints coinciding approximately with the joints originally made in the plaster reverse of the face. We were thus enabled to remove our pattern in pieces and place them on the back block in their proper position, so that we had a very good pattern from which to make our sand molds. We rammed the drag or bottom part of our flask directly over this wax face, then rolling our flask over, we withdrew the back piece, leaving the wax pattern in the sand; on this we rammed up the cope or top part of the mold, the cast being made face down in order that any loose sand would rise to the top or back part of the cast, and not mar the surface of the face; after lifting off our cope we withdrew the wax pattern in pieces; of course, then, this flask would be closed, and poured in the ordinary manner with iron, and the pattern of wax lasting in this case for the entire order, about fifteen masks. When there are a large number of pieces, iron patterns are made. This general principle of procedure is in common use for all classes of ornaments, and, as you will see, the general principles embodied in this case will enable the production of pretty nearly anything in castiron. A very good description of the process of modeling castiron statues, animals, and such things as we see in the parks, is published in Overman's treatise on founding and casting, which would be quite instructive and interesting reading for any one designing castiron ornament. The shrinkage strains in ornamental work will be provided for by the foundrymen. There are two ways of providing for these shrinkages. One is by proportioning the metal so that the pieces will come out of the mold straight; another is to cast your ornament so thin that it will spring straight when fastened in place. Foundrymen differ as to the best process, and would probably insist on using the one with which they were most familiar.

In this matter, it is good policy to give plenty of latitude to the foundrymen in the matter of thickness, letting him do about as he pleases, insisting only upon the correct production of the artistic results desired. One of the most striking incidents of casting pieces thin enough so that they can be sprung straight, was in the production of the castiron window and door frames for the Cincinnati custom house. There are iron frames and architrave moldings there of twenty-four to thirty inches girth, cast in pieces twenty feet long, thickness of metal only about three-sixteenths of

an inch. This was thin enough so that the erectors were able to spring them straight, fastening them to the walls perfectly straight, even if the castings were somewhat crooked when they came out of the sand. As few foundrymen are capable of producing this sort of work, it is more common, and, generally speaking, a cheaper way is to cast the edges a little thicker than the other parts, so that heat radiating in all directions from the casting will be supplied to the edges by this extra thickness in sufficient quantities that the casting may cool uniformly throughout. In making large panels of castiron ornament, it is desirable that as little plain surface as possible should be allowed. Large, plain surfaces of castiron are hard to produce, and often quite unsatisfactory, as I said in my previous paper. The cope or upper part of the mold is provided with cross-bars, spaced from four to six inches apart, to form supports for the sand in ramming the mold. It is extremely liable to occur that the sand under these cope bars will not be as solid as that between them, and when the mold is poured the iron will force under these bars, forming little ridges possibly one-sixteenth of an inch high, but when the sun strikes across the face of the cast these little marks will appear, and are decidedly undesirable; whereas if ornament is used pretty freely, these little ridges do not show as plainly, and little imperfections of that sort cannot be noticed.

As a rule, you cannot get castiron too rich in ornament, as far, at least, as the execution of the work is concerned, and it is good policy to put on all the ornaments that the design will stand. On castiron surfaces, where there is considerable repetition, this would cost little or nothing more than plain surface, and are sure to be far more satisfactory. In such cases as we spoke of, and for wainscoting running up the stairway, around halls, castiron is often a very desirable material, being usually cheaper than marble, especially where ornament is desired, and not liable, like marble, to be injured by carelessness of people carrying things up and down the stairs.

With regard to iron store fronts, there is every probability that this material will be a favorite one in years to come. The possibility of having large openings, plenty of glass and lots of light, makes this material particularly desirable, and the ease with which light and graceful ornament can be executed, and the great varieties of style which can be adopted in the design, recommend iron for these purposes. Already we have many buildings where light gaspipe columns are used with intermediate panels and horizontal lines of ornamental cast or wrought-iron, which form very desirable buildings, and keep the cost of the front within reasonable limit. Where all castiron is used for a front, it is good policy to joint each piece together with lap-joints, as in this case shop work in fitting of butting joints is avoided. This is not very important, however, as in many shops machinery for making nice butt joints and for fitting of miters and joints of this description is in use. We have in our shop machinery for making miters and butt joints on cast or wrought-iron, that will make joints that are positively water-tight, metal to metal, more cheaply than we could previously produce them by the ordinary method, with chipped joints and putty.

Finally, with regard to the coating or finish applied to iron, there are three methods now in quite common use, namely, painting, electroplating and Bower-Barff. Painting, as you all know, is by far the most common, and what I said before regarding the painting work, as soon as possible after completion, is about all there is to be said on the subject. With regard to electroplating for interior work, this, probably, has no equal as a fine finish. The use of emery wheels and emery belts enables a sufficient surface polish to be given in a piece of castiron to enable electroplating to be used effectively. This process is not expensive; of course, it costs more than painting, but as a process is not expensive, and will be cheaper and cheaper as we have more work of that description.

In Bower-Barff it is different. This process is covered by patents, and at present is only in use by three or four firms in the United States.

The coating which they produce is magnetic oxide of iron. It is quite similar to what we see on iron when it comes fresh from the rolling mills, with this exception that the coating is made thicker by the Bower-Barff process, so as to be rust proof. For wrought-iron there is one objection to Bower-Barff work—which is quite serious. This coating is hard and brittle like glass or porcelain, and if the iron is bent, will crack, leaving places which will rust and look bad. If the iron is not expected to be within reach of the hand, and consequently not liable to be bent or distorted, this forms an excellent finish, or if the pieces are sufficiently stiff and strong to resist attempts to bend them, the same may be said; for the castiron, the brittleness of the metal is such that the casting will generally break before the coating is destroyed; in the production of this coating the iron is brought to a red heat, and remains so for a considerable time. This results in more or less permanent expansion of the iron, and other conditions which render the fitting a matter of considerable care, and, consequently, considerable expense. The price of this work will always be higher than electroplating, and some people think that, like blue glass, it will eventually go out of style. I have already taken up considerable time, and I fear I have not made as interesting a paper as my previous one. Perhaps that is not saying much for the previous paper, either. However, this matter had slipped my mind until I received the secretary's postal card, announcing the meeting, and paper by Mr. Trowbridge, and then I neglected it for other pressing business. I hope you will excuse shortcomings in the matter of study and care which should have been put on this paper.

A COPY of the *Advertisers' Manual* is received. It is a neat, compact volume, designed for the use of general advertisers, and published by Remington Brothers, newspaper advertising agents, Pittsburgh, Pa. This book, the first work of the kind published in Pittsburgh, contains in very convenient form a carefully revised list of the leading papers of the United States and Canada. The book contains a large amount of information invaluable to the business man who contemplates the use of "printers' ink," and its concise and compact arrangement make this information readily available, a point which busy men will appreciate.

The National Association of Builders.*

THE Executive Committee of the National Association of Builders convened in Chicago during May 23, 24 and 25, investigating the labor question which has disrupted the building trades. Previous to adjournment the committee issued the following address to the Builders and Traders' Exchange of Chicago, and all filial bodies of the National Association of Builders and the general public.

In view of the serious disturbance to building interests in the city of Chicago, and the widespread influence likely to flow from it to other localities, affecting not only the building trades but all branches of industry in the United States, it has been thought wise to call the Executive Board of the National Association of Builders to this city to carefully examine the situation, investigate the causes which have produced the existing conditions, and report thereon to all filial bodies for their information, together with such suggestions for their future action as may seem wise and best. All interested parties (and every business has interests more or less directly involved in this question) should thoroughly understand that the National Association of Builders assumes no powers of a dictatorial character; it simply meets as an advisory body, and communicates its conclusions only in the form of recommendations, which its affiliated associations may or may not adopt or follow, as the circumstances by which they are surrounded demand. But it should also be borne in mind that the National Association endeavors to confine its expressions of advice and recommendation to the general principles which underlie and effect conditions in all localities, and in this especial issue and crisis which has arisen in one of the most important business centers of the country the executive board intends to be particularly careful, while considering the facts which exist in this city, to avoid as much as possible in its advice or recommendations all local or superficial issues, and deal largely with the problem that is rapidly demanding solution in every city and town in the land. It is one of the purposes of the National Association of Builders to keep a watchful guard over the interests of builders everywhere throughout the country, giving its advice and assistance to all its members when difficulties arise, using its influence with them to secure and maintain just relations, either in their contact with each other or in their relations to owners, architects, or workmen, and prevent the incroachment of other interests upon ground that belongs to them. The exact circumstances that have brought about the present blockade of business in Chicago may not be absolutely identical with the issues that have caused similar disturbances in other cities, and they may not be exactly reproduced in the future in any other locality, but the root from which they spring has been planted everywhere, and while the plant may be good and worthy, it is a matter of the greatest concern to all that the growth from it be carefully watched and held in check, lest it assume such rank and oppressive proportions that other interests equally valuable and necessary be overgrown and choked. It is sometimes necessary to prune a vine of rank and unhealthy growth in order that it may bear good fruit. We apprehend that the experience of the builders of Chicago in this crisis will be of great importance to builders in other cities, and we hope to utilize their experience in such a way that general business interests will be better protected and preserved in the future, and the proper purposes, opportunities, and interests of the organizations of workmen maintained and encouraged, and that the individual workman himself, whether he be connected with organizations or independent of them, may be placed in a position where he may exercise unquestioned his rights as an American citizen.

In this endeavor we ask the coöperation of all business men, particularly those whose affairs bring them into direct contact with the difficult and perplexing questions incident to the employment of labor, and the community generally, for the public, as a whole, has an immense stake in this question of individual liberty. We have endeavored to make our inquiries in a disinterested spirit, and in pursuance of this purpose have given hearings to the employing builders, the bricklayers' union, non-union workmen, manufacturers, merchants, bankers, architects and business men generally, believing that we could only consider the question fairly by listening to all sides and opinions. The result of our investigation leads us to report as follows:

The demand for pay day on Saturday by the bricklayers' union, which precipitated the present blockade of business in the building trades in Chicago, was, in itself inconsequent and trivial, and a concession or denial of it, on its merits, would have been immaterial, but it was presented in such a manner (at a time when the hodcarriers' strike in progress had been supported by the Amalgamated Building trades), and had been preceded by such concessions on the part of the employers, that they felt this to be the "last straw," and that their duty to themselves and others compelled them to make a stand and demand a surrender of the rights which had been previously abrogated.

In this course, and in the manner in which the builders have presented their convictions and method of future action, we believe that nothing has been done beyond what the situation imperatively demanded, and the safe and proper conduct of business required. We are only astonished that the crisis has not been sooner reached.

It seems to us that this strike or lockout was not caused by a demand that it was impossible to grant, but was the direct result of the assumption by organizations of workmen, for a number of years, of rights not properly within their jurisdiction, and the demand, coming as it did under such aggravating circumstances, occasion was properly taken, in our opinion, for a complete cessation of business, in order that it might finally be decided and settled whether the employer should for the future be free from further incroachments, and that he might recover those rights and prerogatives which properly belong to him. It is worthy of note that this issue or demand was not made in the dull season, when it might have been more easily arranged, or at least considered, but after the busy season was commenced, and in addition to and in support of the existing strike.

* Revised for the INLAND ARCHITECT, by W. H. Sayward, Secretary N. A. B.

The union making it did not seek to consult the employers in regard to its feasibility, although after it was promulgated (the employers requesting a reconsideration) a slight alteration was made in one of the details.

It appears, according to the testimony of the bricklayers' union, that there has been no general strike in their trade for the last four years, but they admit that during that period they have been successful in enforcing certain rules and regulations in regard to control of journeymen and apprentices (which are set forth in their printed Constitution and By-laws), and that the enforcement of these rules has caused strikes or stoppages of work in many cases, upon certain jobs.

It is in the rules and regulations referred to that conditions are imposed which the builders claim are an encroachment on their peculiar rights, as well as the rights of independent workmen, and that in submitting to them they have made concessions which they can no longer endure. In this opinion we entirely and heartily concur.

We will cite a few of these rules, calling attention to the fact that although the employers have at least an equal interest in the matters treated, they have never been even consulted in their formulations, but have been expected to comply with them as presented, and have so complied, for the reason, as they claim, that they could not help themselves.

The first rule, or regulation, or custom which demands notice is that which prevents the workman not a member of the union from obtaining work. This is excused by the declaration of the union that they do not claim that the non-union man shall not work, they simply will not work with him; but this explanation is purely a clever evasion of the point at issue, for the workman is, by force of circumstances, deprived of opportunity to labor, and the position taken by the union is manifestly a conspiracy against the rights of the individual. It may truly be considered the first step toward setting up an oligarchy in the midst of a free people. This assumed right is most tenaciously held, and is one of the most dangerous expedients ever adopted by a voluntary association. We believe it to be a direct attack upon individual liberty, and an evil that will react upon those who attempt to establish it. We also believe it to be entirely unnecessary for the welfare of unions, that all the ends they wish to gain can be secured by legitimate measures, and that not until they cut out this cancer will harmony be restored and reforms established.

This custom should be constantly and absolutely denied. The next rule which we wish to consider is that establishing a "walking delegate." Some of the functions of this officer (if he may be so designated) as explained by members of the union, are perfectly harmless, and possibly quite a convenience, but if proper relations were permitted to exist between employer and workman, these functions could be equally well maintained by the foreman on the job. There are other powers, however, with which he is invested, which are so arbitrary in their character, which deprive the employer so completely of that control of workmen necessary to the conduct of his work, that it is simply ridiculous to submit to it. For instance: "He shall be empowered to use his personal judgment on all points of disagreement between employer and employé between regular meetings." Art 5, Sec. 4.

The simplest mind can readily see how little control the employer has left him, when a man not in his employ is permitted to come upon his work and "use his personal judgment" in questions of disagreement, the workman being obliged to then obey his orders. The employer seems to be a mere cypher under this arrangement, and can only fold his hands and wait until the "regular meeting" (at which he has no opportunity to be heard) settles whether the "personal judgment" exercised be just and fair. The result can be imagined. In the hands of an exceptionally honest and discreet person, such power would be dangerous enough, but in the control of a man who may not possess these qualities, or possess one of them without the other, the chances of stoppage of work under his orders, the constant annoyances to which employers and owners may be subjected, makes this infliction too grievous to be borne.

The thousands of unnecessary strikes, stoppages and obstructions to work for every conceivable cause, or no cause, which have occurred in all parts of the country, in the name of justice and the "walking delegate," are evidence enough that to owner, architect, employer and workman, he is an abomination not to be tolerated.

As an adjunct to the "walking delegate" comes "the steward," who, like him, has some functions perfectly unobjectionable, but who in other ways is empowered to assume certain directions and control which surely is not consistent with the duties of a workman—that is, if the workman is considered to have any duty to his employer. It is noticeable that in the description of the duties of these two gentlemen, it is the "interests of the union" only that they are directed to observe. It is true that the "walking delegate" is not an employé, but he is to have free access to the work, can interfere and obstruct as he pleases, but the interest of the employer seems to have been omitted in the recital of his duties.

When it is considered how much is taken off the hands of the employer by these two persons, it is somewhat a matter of surprise that owner and architect burden themselves with the useless middleman, the nominal employer, when they can have the whole matter handled by the union and its agents.

The rules in relation to apprentices are peculiarly restrictive, and leave nothing whatever that is worth possessing in the hands of the employer. We can not imagine why any contractor would care to have apprentices at all, if their direction and control is to be so completely out of his hands. These rules declare that "no contractor shall be allowed to have more than two apprentices at a time"—"he will not be allowed any more until their term is completed,"—"he may then replace them."

The contractor must sign such indentures as are prepared by the union without consultation with him. "No contractor will be allowed to have an apprentice over eighteen years of age, unless he be the son of a journeyman who is a member of the union." Apprentices must also be members. The contractor is thus debarred from putting his own son at apprenticeship if he happens to be eighteen years of age. This appears to be most emphatic special legislation. In fact, the whole management and control of apprentices is virtually in the hands of the union, and we submit again that such

action as this is most indefensible and pernicious. It has already caused a tremendous reduction in the number of young men learning the trade, and if practiced in other branches of business would create a state of revolt among the people, and would be denounced throughout the length and breadth of the land as a violation of the rights heretofore supposed to be secured when this country became a republic.

Foremen upon the work must be members of the union. Inspectors upon public buildings must be practical bricklayers in the opinion of the union and members of it—in fact, there are so many points that demonstrate the development of this one-side power of the union, and showing abuse of their place and mission, that we cannot take time or space to enlarge upon them.

To our mind the constitution of this union and many others is framed upon the assumption that all employers are dishonest, bad men; so all are to be made to suffer.

The union seems to have come to the conclusion that the laws of the land are not sufficient, and they propose to be not only a law unto themselves but a law unto all others who come in contact with them. This assumption, if permitted to stand and grow, will tend to disintegrate the whole social and political fabric upon which citizens of this country depend for protection, and we believe it to be our duty to call upon all good citizens to deny it in unequivocal terms.

We submit that these "rules" which we have quoted and other questions which have naturally grown from such development of power, that are neither written nor admitted by the union but which actually exist, are distinctly an encroachment upon the province of the employer; that, under them, he is robbed of that control and authority absolutely essential to the proper conduct of his business. Submission to such dictation as this simply opens the door wider for further interference, and the employer is not secure from day to day from new and harassing demands, so that eventually he will have practically nothing left to him but the "privilege" of paying the bills. The crisis here in Chicago is of tremendous importance and significance to every builder and every business man, not alone in this great and rapidly growing city, but in every city of the country, for here is seen a demonstration of the tyranny which becomes possible when improper methods are submitted to—a tyranny which holds the workman in its grasp quite as surely as the employer, and this experience and demonstration should be a timely warning to all.

Labor unions have gone too far. They have mistaken their functions and overstepped their boundaries.

The time has come to "call a halt," and to demand a surrender of that which had been improperly obtained. To do this will require some patience and some sacrifice, but the end to be gained is but just and right, and worth all that it may cost.

Better that not another brick be laid or another nail be driven in Chicago for a year than this opportunity be lost to regain the rights and prerogatives which make it possible for employer and workman to be independent and successful.

Let nothing be done to injure the unions in the prosecution of their rightful purposes; they have a most important mission and a great field for usefulness. Aid and assist them in these things by every means in your power; but for their own good, as well as your own safety, stand constantly and steadfastly opposed to any and every attempt to take away that which makes you an employer, or from the workman himself the right to work.

Trade-unionism in theory, and as it may be consistently and intelligently carried out, can be a most useful aid to all concerned, but as at present managed, clinging fast as it does to the cardinal principle of the rights to prevent any and every man from working who does not happen to belong to the order, it is a bane to society and a curse to its members. We approve of the position taken by the builders of Chicago in this emergency, and we congratulate them that other branches of business whose interests are closely interwoven with theirs, have had the courage and willingness to make common cause with them, recognizing, as they evidently do, that if this sort of dictation is permitted to grow, that their own position will become undermined, and their security vanish. We congratulate them, also, that general business interests are giving them such hearty coöperation and support, and we feel assured this will continue until the victory is won.

We recommend all filial associations of this body to assume the same attitude in the event of an issue being forced upon them by further encroachments, and we suggest to them, as well as the Builders and Traders' Exchange of Chicago, that they encourage all workmen who wish to have an opportunity to freely work, untrammelled by the improper requirements and rules of voluntary associations (which, as far as most workmen are concerned, have become involuntary), and that they be protected in their work, it will be wise to create and establish at once a bureau of record in connection with their associations, where any and all workmen may put themselves on record as assenting to the principles of individual liberty announced here in Chicago, and by and through which the workmen so assenting will be kept at work and protected, in preference to those who deny these principles. Let steps be taken, after a certain time given to develop the honest purpose, good character, skill and ability of the workmen, to make them members of your own association, and so institute, for the first time, a union wherein employer and employé shall be joined, and their interests considered in common, as they properly should be. We believe this would be a step in the right direction, and the dawn of the day when the two branches of workmen will not be arrayed against each other, but will consider and act in concert for their mutual benefit. Closing now our report to filial associations, we wish to address a few words to the public at large, whose servants we are:

We believe that the builders of this country stand today in a position which commands the attention of all kinds and classes and business men everywhere. We wish to do only that which is right and in accordance with the principles upon which this republic was founded.

Individual liberty is the dearest possession of the American people. We intend to stand by it and protect it in every emergency, and to our

mind there has never been before presented an occasion more significant and decisive than the present, and in doing now all we can to maintain it we feel that we are fighting not for selfish ends alone, but for the welfare and protection of every individual in the land.

Individual liberty is not incompatible with associations, and associations are not incompatible with individual liberty. On the contrary, they should go hand in hand. We call upon all to sustain us in maintaining all that is good, and in defeating all that is bad in this difficult problem of labor.

Liberty is our watchword, and this struggle is but a continuation of that endeavor which began a hundred years ago, when a little band of patriots at Concord bridge fired that shot heard round the world, which was the first blow in establishing American independence.

J. M. BLAIR,
EDWARD E. SCRIBNER,
WILLIAM H. SAYWARD,
JOHN H. TUCKER.

Executive Board of the National Association of Builders.

Chicago Builders and Traders' Exchange.*

THE committee consisting of George C. Prussing (master mason), H. L. Turner (real estate), William Hearson (carpenter), J. B. Sullivan (painter), and Edward Kirk, Jr. (galvanized iron), appointed at the meeting of the Conference Committee, May 18, to formulate a plan of action, submitted a report, which was published in the Intermediate News number. On May 23 the committee revised the report, the main change being the substitution of "assent" for "signature," and adopted as follows:

To the representatives of building interests in conference assembled:

GENTLEMEN,—In order to carry into effect the platform adopted by us, your committee recommend:

First. That from this time forth the assent to the following code of principles by the employé be made a universal condition of employment by all building interests of Chicago, viz:

I recognize the right of every man to decide for himself, when he shall work or cease to work, where he shall work, for whom he shall work, how many hours he shall work, and for what wages he shall work.

I recognize the right of the employer to decide for himself, whom he shall employ or cease to employ, and to regulate and manage his business with perfect independence, provided only that he deal lawfully, justly and honorably with all men.

I recognize the right of every father to have his son taught, and of every son to learn any lawful trade, to be the same as his right to a knowledge of reading, writing, or any other branch of learning, which should be subject to regulation only by the laws of the land.

By accepting employment I agree in all my relations and intercourse with my employers and fellow workmen to maintain and live up to these principles.

Your committee recommend:

Second. That this conference recommend to our respective organizations to request each of its members to employ such workmen only who recognize the inalienable rights as above set forth.

Your committee recommend:

Third. That public announcement be made at once that business will be resumed on or before June 1, 1887, with this card of principles as a basis.

Your committee recommend:

Fourth. That a standing committee of one member from each of the building trades, the Chicago Real Estate Board and the Illinois State Association of Architects, to be known as the Central Council of the Building Interests of Chicago be appointed, whose duty it shall be to see to the carrying out of these principles; that it shall have a sub-committee of safety, whose province it shall be to see that ample protection to all is afforded; with sub-committees on grievances, strikes, arbitrations, and such as may be found necessary, but that it work always and solely for the maintenance and protection of the principles herein laid down.

Your committee recommend:

Fifth. That an address to the workmen of the building trades and to the general public, be prepared, setting forth your action and your reasons therefor; that 50,000 copies be printed and immediately distributed.

Your committee recommend:

Sixth. That a fund be created to defray expenses of this Central Council, and that we request each association here represented to transmit to the order of Geo. Tapper, chairman, the sum of twenty-five cents for each of their members, and that individual contributions of people interested in this work be accepted.

METAL WORKERS.

The annual meeting of the Association of Metal Workers of Chicago was held at the Grand Pacific Hotel, May 28.

Officers were elected for the ensuing year, the election resulting in all the old officers being reelected, with the exception of an alternate on the executive committee.

*Continued from May Intermediate News Number (page 69, Vol. IX, No. 7), as a complete record to date of the important measures taken by the building interest of Chicago in the direction of a permanent settlement of labor disturbance and the eradication of disturbing elements.

R. T. Crane, president; J. McGregor Adams, first vice-president; John T. Raffin, second vice-president; W. J. Chalmers, third vice president; Robert Vierling, secretary and treasurer; R. T. Crane, J. McGregor Adams, W. J. Chalmers, Frank I. Pearce, M. C. Bullock, Louis Wolff, George Mason, John T. Raffin, A. Plamondon, executive committee.

The executive committee presented a set of resolutions, which were discussed, and after a few immaterial changes, were adopted as follows:

WHEREAS, We know there are organizations existing which deny the rights of the individual as guaranteed by the constitution of the United States; and

WHEREAS, We believe it our duty as citizens to range ourselves with others in the assertion and defense of the rights of man, be he employer or workman; now, therefore,

We affirm that absolute personal independence of the individual to work or not to work, to employ or not to employ, is a fundamental principle which should never be questioned or assailed; that upon it depends the security of our whole social fabric and business prosperity, and that employers and workmen should be equally interested in its defense and preservation.

We recognize that there are many opportunities for good in associations of workmen, and we will aid and assist them in all just and honorable purposes; that while upon fundamental principles it would be useless to confer or arbitrate, there are still many points upon which conferences and arbitrations are perfectly right and proper, and that upon such points it is a manifest duty to avail ourselves of the opportunities afforded by associations to confer together to the end that strikes, lockouts and other disturbances may be prevented.

We recognize that permanent harmony between employer and workman can only exist when both agree on the justice and right of the principles set forth. Now, therefore, be it

Resolved, That all members of the Association of Manufacturers in Metals be, and they are hereby requested to display, in office and workshop, the above declaration and the following code of principles:

"I recognize the right of every man to decide for himself, with employers, without dictation or interference, when he shall work or cease to work, where he shall work, how many hours he shall work, and for what wages he shall work."

"I recognize the right of the employer to decide for himself whom he shall employ or cease to employ, and regulate and manage his business with perfect independence, provided only that he deal lawfully, justly and honorably with all men."

"I recognize the right of every father to have his son taught, and of every son to learn any lawful trade, to be the same as his right to a knowledge of reading and writing, or any other branch of learning which should be subject to regulation only by the laws of the land."

"By accepting employment I agree in all my relations and intercourse with my employers and fellow-workmen to maintain and live up to these principles."

Resolved, That full powers be and they are hereby granted to the executive committee to take all steps by them deemed necessary to carry into effect the principles heretofore set forth, and to express the concurrence of this association with the position taken by the Master Masons' and Builders' Associations.

This action, it was stated during the discussion of the resolutions, was not the outgrowth of sympathy only, but caused by the fact that metal men are suffering just as much as anybody under the present trouble in the building trades in Chicago. There are not cast seventy-five tons of building ironwork a day in the city at present, when there ought to be three hundred tons at least. It was also stated that the depression of trade is so marked already that two foundries will shut down next week, throwing two hundred and fifty men out of work, and all the establishments are glad to have a pretext for closing Monday, although they have not been in the habit of stopping work on Decoration Day during the busy season.

MASTER MASONS AND BUILDERS' ASSOCIATION.

The Executive Committee of the Master Masons' Association, June 1, issued the following address:

To the Bricklayers and Stonemasons of Chicago:

GENTLEMEN,—To those of you who have families to support; who, by frugal saving, have laid by a store for rainy days; who, perhaps, have invested surplus earnings in a house and lot, or made partial payments on a piece of land for a future homestead, and thereby have acquired an interest in Chicago—to you we speak.

To those of you who have joined the now existing union under compulsion, and are today afraid of personal injury, should you in any way assert your independence; to those of you who feel the abuses practiced, who are not in accord with the ruling clique, who have informed us time and again that you are not granted a hearing when your opinion is not in harmony with that of "the gang," and that you consequently do not attend the meetings of said "union,"—to you we appeal.

To those of you who believe in arbitration as a better mode of redressing grievances or adjusting differences than the strike or lockout; to those of you who are old enough to remember that the members of our organization have all been journeymen bricklayers and stonemasons, that there are none among us who may not be compelled to take up tools again, nor any among you who may not at any time become employers, and that, consequently, there are no questions concerning one branch which are not of interest to the other,—to you we address ourselves.

This association, together with other associations of builders, has issued a platform affirming our adherence to the fundamental principle of individual liberty. Read it, discuss it, digest it. It is right. It is guaranteed by the constitution of the United States, and he who denies the rights of man is not an American citizen, and by his denial affirms that he does not intend to become such, although he may have gone through the form of acquiring citizenship.

We are not opposed to all unions.

In the second paragraph of our platform we recognize the right of organization among workmen for all just and honorable purposes. But we are opposed to the methods employed by the present union. Brute force is used in all directions to compel fellow-workmen to join and keep them in line in support of any action taken, no matter how unreasonable; to enforce the assumed control of the business of employers; to arbitrarily keep boys from learning the trade; to deny the right of mechanics to support their families by working at their trade in this city, etc. In all directions brute force is the foundation of the present union. This is wrong. Brute force can only be opposed by brute force, the strike on the one hand opposed by the lockout on the other, resulting in loss and suffering to both, and without any permanent results, for no matter which side is successful, the only thing proven is that it had the strongest organization, not that its position is right. Strikes and lockouts, with all the train of resulting evils, can only be prevented by organizations among both workmen and employers, both recognizing the same fundamental principles and agreeing to refer any question of temporary policy, such as the amount of wages to be paid, number of hours to be worked, pay day, and others, or any grievances or differences arising in the future, to a joint committee of arbitration—work to continue without interruption, and questions at issue to be decided definitely by the committee.

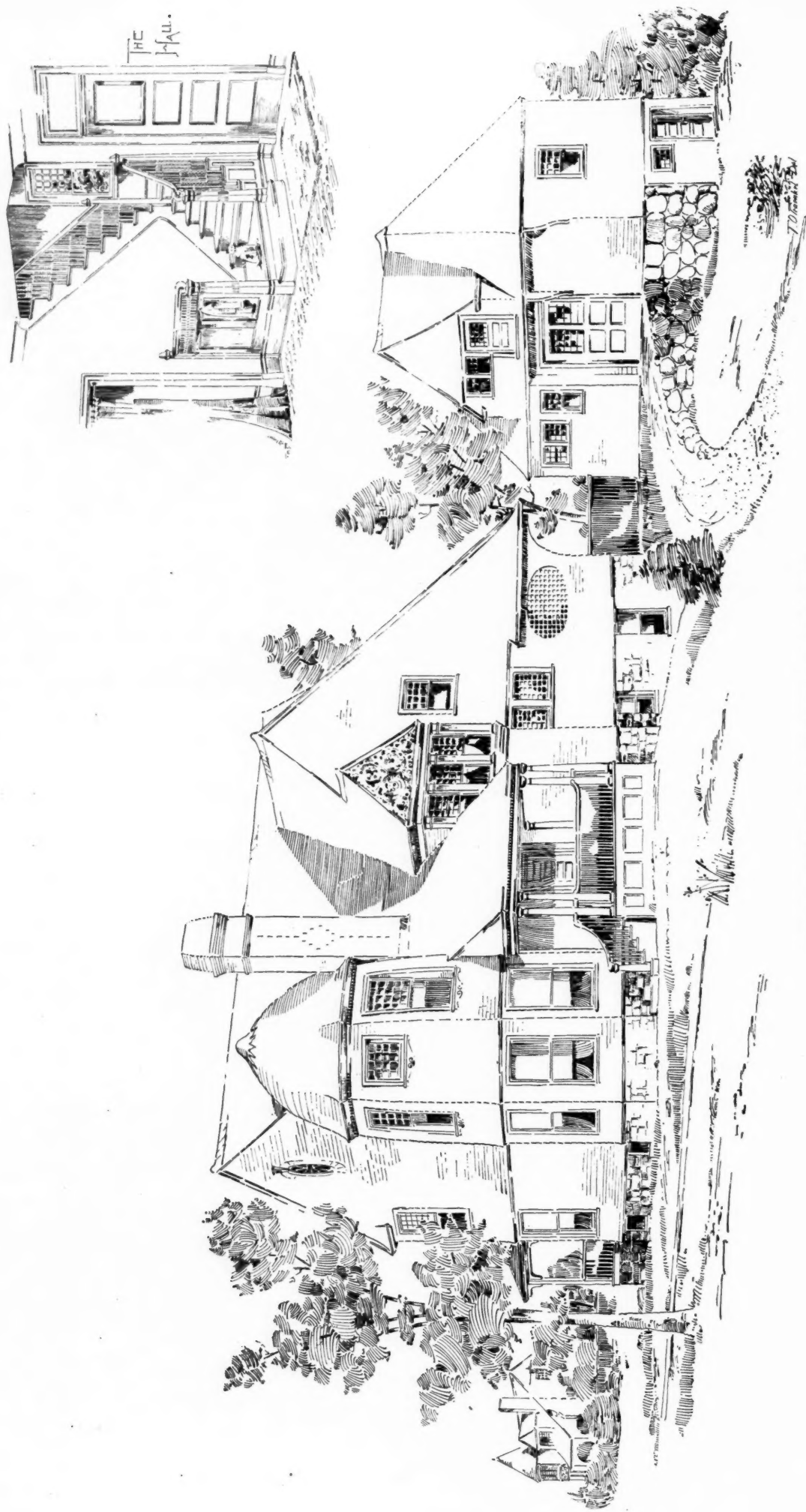
The "walking delegate" has proved himself an unmitigated nuisance. To give into the hands of one man power so absolute will always be dangerous and sure to be abused. Nor will the necessity exist for a "walking delegate." His place will be filled by the arbitration committee. That the laws of the state shall prevail in regard to apprentices, as well as to other subjects by them covered, needs no argument.

All must recognize that foremen are hired to be the agents and representatives of the employer for the faithful and economic performance of the work, and, as such, should be under his exclusive control.

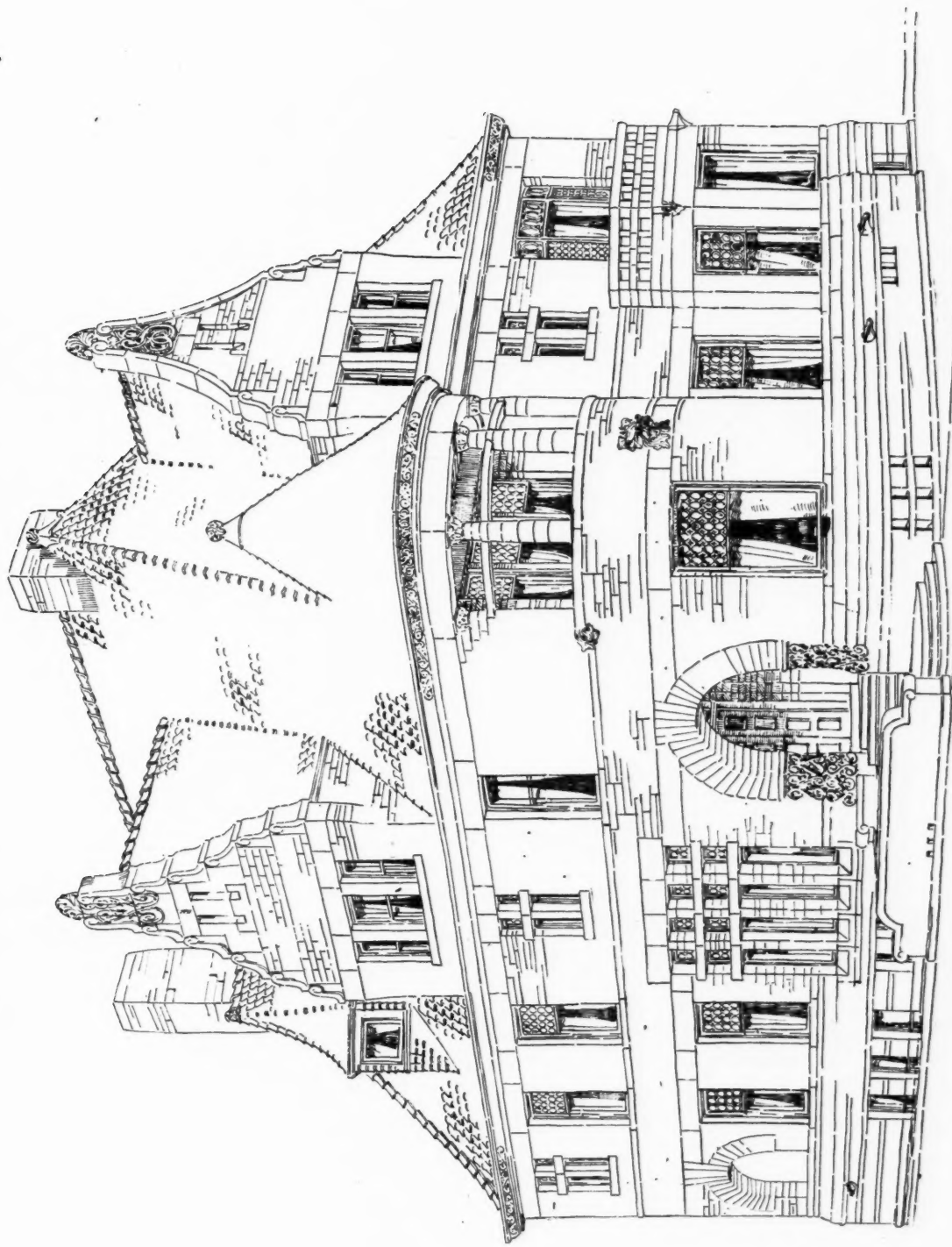
Of "stewards," we need not treat here. Acting for an organization which acknowledges as right and just the principles contained in our platform, their duties cannot interfere with the proper prosecution of the work.

To sum up, form a union on the same platform we uphold and men will join it because of the benefits to be derived—brute force will not be necessary in any direction—and whenever one hundred, yes, fifty, members shall have enrolled themselves, we will gladly recognize it and appoint members to serve on a joint committee of arbitration, to have charge of all matters of mutual interests.

We mean what we say.

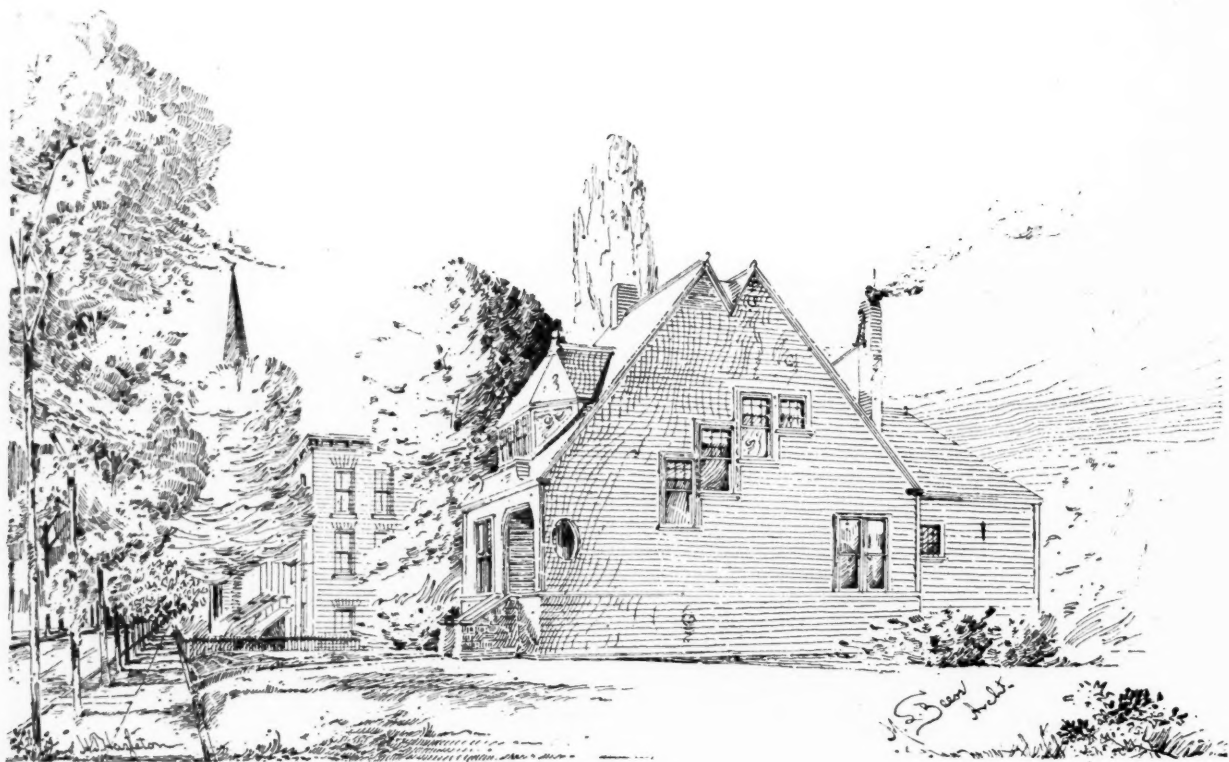


RESIDENCE AT LEWISTON, MAINE.
HENRY IVES COBB AND CHAS. S. FROST, ARCHITECTS, CHICAGO.



Residence for
Mr V C Turner.
Burnham & Root
Architects

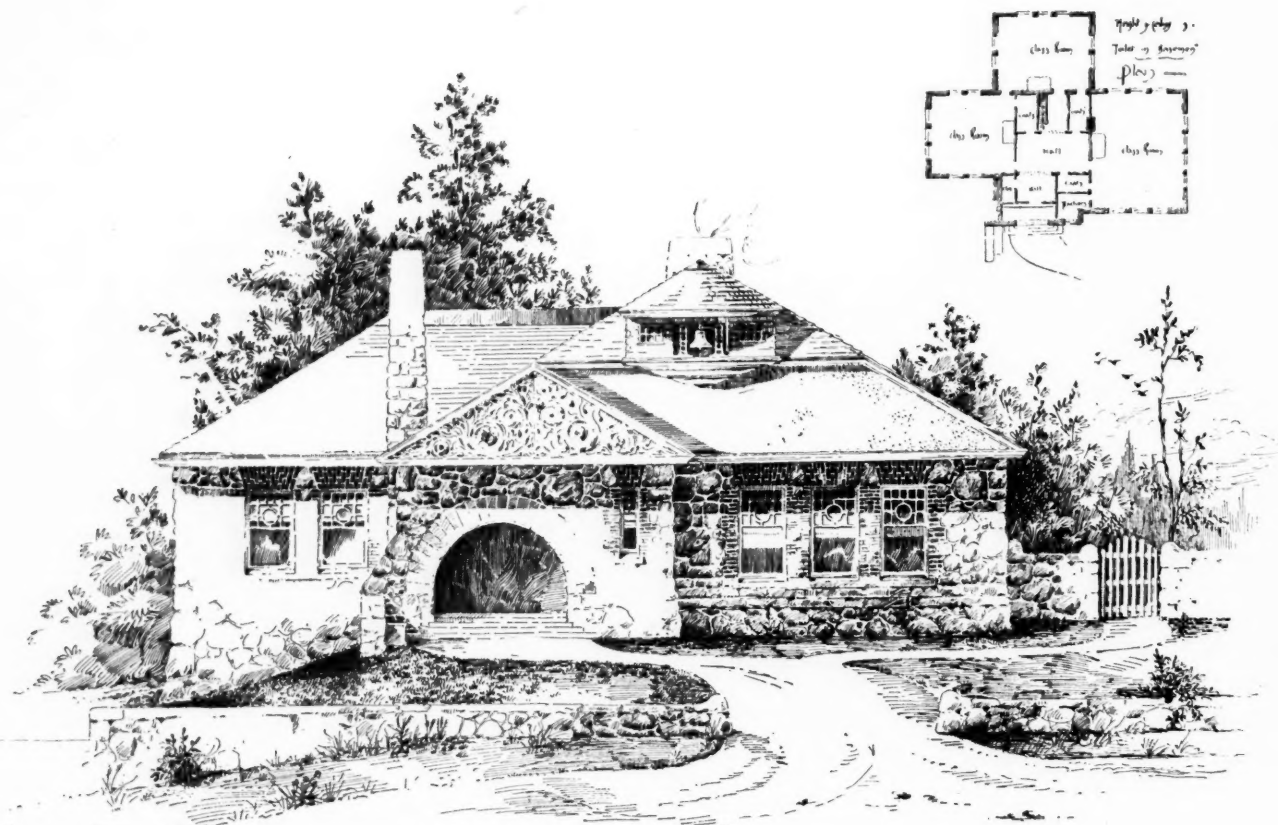
Oliver C. Smith Del.



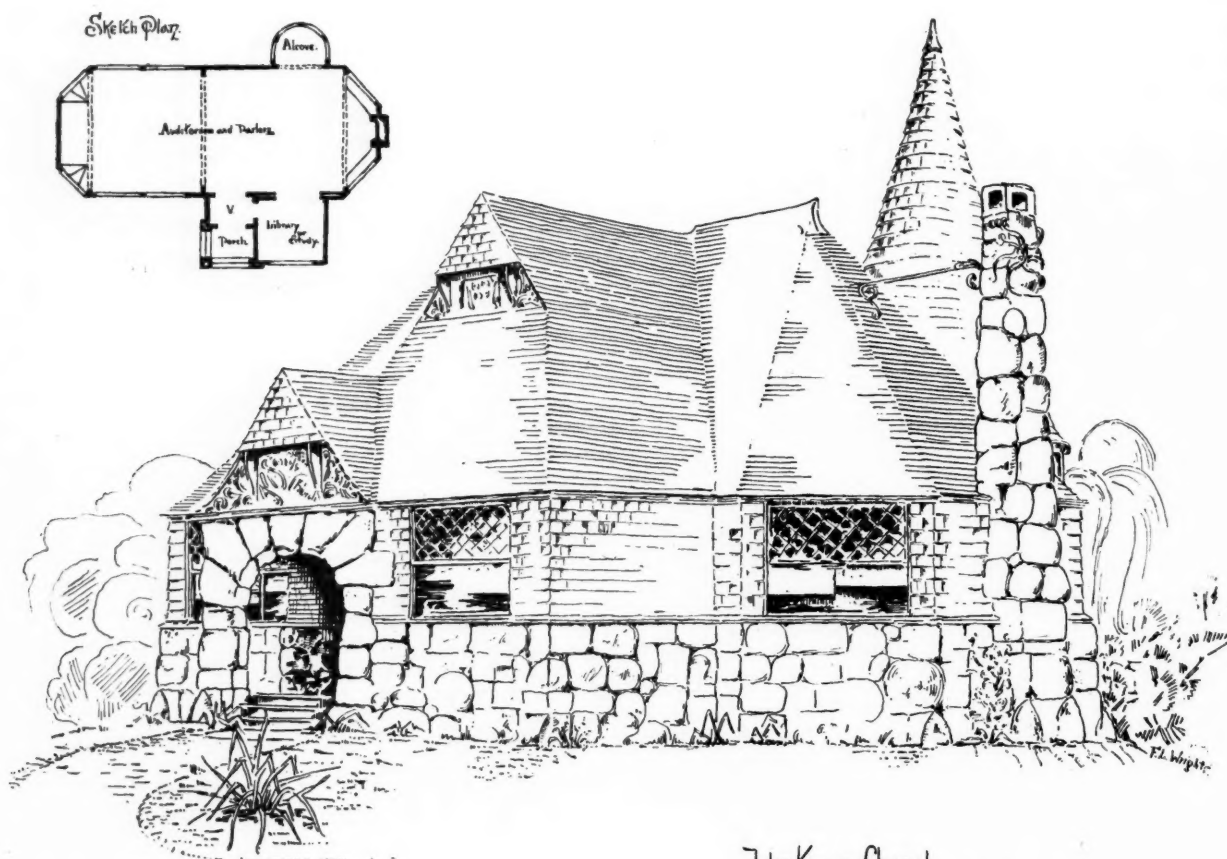


RESIDENCE FOR D. H. CONKLIN, DECATUR, ILL.

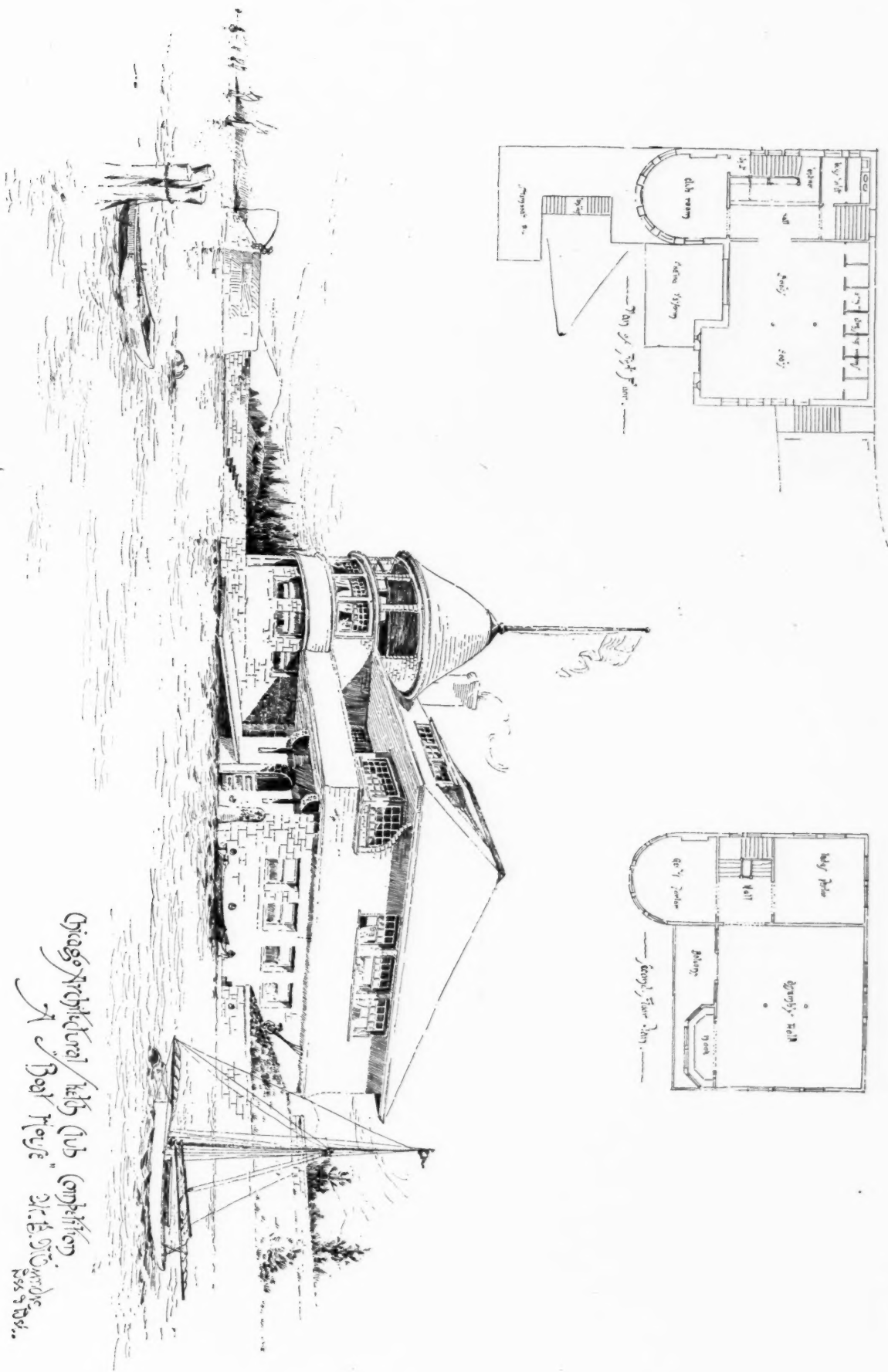
H. R. WILSON, ARCHITECT, CHICAGO.



C.A.S.C. A Three Room Village School
"Truant" W.B. Wendie
Res. & Des.



Unitarian Chapel
for Sioux City, Iowa
Frank L. Wright Archt.
Chicago Ill.



Fault has been found with the "working rules" adopted. These will be subject to joint discussion and adjustment when a joint committee of arbitration shall be in existence. Until then we have agreed to nine hours as a working day, because that is the rule adopted by other large cities, and Chicago should not be at a disadvantage as a point for investment in comparison with them. We believe the Saturday half-holiday has come to stay with us as one of the recognized institutions of the country, and we have adopted it freely and voluntarily. By agreeing to forty-five cents per hour as a minimum rate of wages we trust to have proved that we do not desire to lower rates. A regular fortnightly pay day has been guaranteed.

These are our conditions. Discuss them as to their fairness, and if you find them just come to work, and we shall be glad to employ you as far as still in our power, for it is true that each day of continued strike does lessen the chance for a busy season.

The situation in brief is as follows: The general public recognizes the present necessity of coming to a fair understanding between employer and workman—and thereby laying the foundation for future harmonious action—by refusing to build under present circumstances. Some work must be done, no matter what the conditions. But there is not one-fourth of the work on hand now there was last year at this time.

For its future growth and prosperity Chicago needs manufacturing enterprises. In the selection of a site for such, people with money to invest look for security from violent and arbitrary interruption to their business. Abolish the "walking delegates;" show that you have profited by the lessons of the past, and establish arbitration; lay the foundation for peace and harmony between employer and workmen, and Chicago will be the place selected; business, now dull and dragging, will revive, and steady employment will reward both you and us for sense and moderation shown.

Fraternalty yours,
THE CHICAGO MASTER MASONS' ASSOCIATION,
By Executive Committee.

CONFERENCE COMMITTEE.

The last meeting of the Committee of Conference was held June 1. Reports from each association were called for and all responded, each making reports, in substance being that their associations had indorsed and adopted the report of the Conference Committee, and would work in accordance with the platform of principles therein. Some of the associations had not set a day when this should go into effect, however. The most important report was that of the cut-stone contractors, who, through Mr. T. C. Diener, made the following report, premising it by saying that the members of the association were in accord with the principles which had been enunciated by the Conference Committee:

To the Conference of the Building Trades: The Cut-Stone Contractors' Association has carefully considered the code of principles adopted by your committee, and, although approving of the principles laid down, we could not adopt them as a whole, and therefore deem it not advisable to ask the assent of our employees as a condition of further employment after June 1, for reasons hereafter mentioned:

Fully indorsing the right of any employee to work for whom he chooses, we do not concede that individually he can regulate the number of hours he desires to work, but in that respect must comply with the established rule of number of hours per day.

In our trade eight hours per day for stonecutters has been the system for the last twenty years. It has been a success in every respect, for today, with improved machinery, cutstone is fully 50 to 100 per cent cheaper than during the ten hour time.

Conceding the right to each man for what wages he will work—we maintain that it is to the interest of the building trade generally that a rate of wages be adopted at the opening of the season, thus making it a standard basis for contractors to estimate by.

In the matter of apprenticeship we also maintain that it is to the interest of the boy and the employer of the same. For by employing too many boys in our trade a foreman would not have the opportunity to train the boy, and he would turn out a poor mechanic.

It is a rule and regulation similar to educational institutions. To make these rules has been the motive which has prompted employees and employers to organize. In the cut-stone trade we have an association of stonecutters and an association of contractors. These two bodies recognize each other, and at the beginning of the season, as has been done heretofore for years, they have agreed on a rate of wages, number of hours per day, and number of apprentices to a yard (which is about one to six men), and, therefore, we are in duty bound to abide by the same.

We have, furthermore, a written agreement between our two organizations, of which Article I is as follows:

"All disputes or misunderstandings of any kind that may arise shall be submitted to committees, who shall report to their respective associations before final action shall be taken."

And Article VI is as follows:

"These rules not to be changed or altered except by the consent of each association, and in that case a thirty days' notice to be given by the party desiring to terminate said agreement."

In our discussions and conclusions we have also been guided to a certain extent by the press, to avoid, if possible, a general lockout, and by that part of the platform of the National Association of Builders, "that good may be derived from proper organizations," and it is our aim that our associations shall not only be a benefit to themselves, but to the general public. Respectfully submitted, T. C. DIENER, Secretary.

Mr. H. L. Turner, of the Real Estate Board, said there had been no meeting, but he was satisfied that the principles would be approved by his organization. (A meeting of his association, held the same day, indorsed the principles, and appointed Mr. Turner to the Central Council.)

Mr. P. B. Wight stated his company had secured nearly all the men needed to complete the fireproofing upon the Rock Island depot, and by the close of the week would have all it could use, and it was working without interference from the members of the union. It was working under the rules adopted.

Mr. Prussing said for the information of those present that some of the bricklayers in the city were going to work, and others would do so but for fear of bodily harm from union bricklayers. As soon as the men could feel assured that they would not be interfered with many of them would go to work. At present there were nearly three hundred bricklayers at work in the city who hold no allegiance to the bricklayers' union in Chicago.

The Committee of Conference then adjourned *sine die*.

THE CENTRAL COUNCIL.

In accordance with the request of the conference of the building trades, the delegates to the Central Council of Building Trades, of Chicago, met June 1. The various trades were represented as follows:

Metal workers, Robert Vierling; steamfitters, H. G. Savage; cut-stone contractors, T. C. Diener; master plasterers, John Sutton; gravel roofers, M. W. Powell; master masons, George Tapper; master painters, J. B. Sullivan; galvanized iron cornice, Edward Kirk, Jr.; carpenters and builders, William Hearson; North Side brick manufacturers, A. J. Weckler; fireproofers, P. B. Wight; non-union stonecutters, C. B. Kimbell; Builders' and Traders' Exchange, F. C. Schoenthaler.

Delegates from the Master Plumbers and the Illinois State Association of Architects, were not present, because none had yet been appointed.

On motion of William Hearson, George Tapper was elected chairman and F. C. Schoenthaler secretary.

At the suggestion of Mr. Vierling, a committee of three was appointed to prepare a plan of organization, with instructions to report at the next

meeting. The committee is as follows: H. G. Savage, Edward Kirk, Jr., and William Hearson.

The council then adjourned until June 3 at 2 o'clock.

The Central Council again convened June 3, and the Committee on Rules appointed at the last meeting submitted the following report, which was discussed and adopted as the rules governing that body:

I. This body shall be known as "The Central Council of the Building Interests of Chicago."

II. The object of this council is to promote the building interests of Chicago, harmonize the different branches, and adopt such measures as from time to time may be found beneficial, carrying out the following platform of principles, which has been adopted by the various associations herein represented.

PLATFORM.

We affirm that absolute personal independence of the individual to work or not to work, to employ or not to employ, is a fundamental principle which should never be questioned or assailed; that upon it depends the security of our whole social fabric and business prosperity, and that employers and workmen should be equally interested in its defense and preservation.

We recognize that there are many opportunities for good in associations of workmen, and while condemning and opposing improper action upon their part, we will aid and assist them in all just and honorable purposes; that while upon fundamental principles it would be useless to confer or arbitrate, there are still many points upon which conferences and arbitrations are perfectly right and proper, and that upon such points it is a manifest duty to take advantage of the opportunities afforded by associations to confer together to the end that strikes, lockouts, and other disturbances may be prevented.

III. All associations of building trade employers, the Real Estate Board, the Illinois State Association of Architects, and the Builders' and Traders' Exchange, shall be entitled to one representative each.

IV. The officers shall be elected at the annual meeting, and shall consist of a president, vice-president, and financial secretary, to hold office for one year, or until their successors are duly qualified.

V. Regular meetings shall be held the first Friday of each month at 2 P.M.

The first regular meeting in June shall be the annual meeting.

Special meetings may be called by the president, or any three members of the Council.

VI. The following standing committees, consisting of three members each, shall be appointed by the president, at the annual meeting, to hold office for one year, or until their successors are appointed.

Credentials—To whom shall be referred all applications for membership.

Safety—Whose duty it shall be to see that ample protection to all is afforded against unlawful interference.

Strikes and Grievances—Whose duty shall be to investigate all strikes and grievances, and report to the Council fully in regard to the same, with such recommendations as they deem necessary.

Arbitration—To whom shall be referred all questions of differences between employers or employees.

Annual Dues—Shall be 25 cents for each member of the various associations belonging to the Council; and assessments may be made upon the same basis of representation.

A committee of three, consisting of H. L. Turner, M. W. Powell and Ed. Kirk, Jr., was appointed to nominate officers, and reported: president, George Tapper; vice-president, H. G. Savage; financial-secretary, F. C. Schoenthaler.

The secretary was instructed to cast a ballot for the ticket as reported, and the officers were declared duly elected.

The chair appointed the following standing committees:

Credentials—J. B. Sullivan, T. C. Diener, A. J. Weckler.

Safety—H. L. Turner, C. B. Kimball, Robt. Vierling.

Strikes and Grievances—P. B. Wight, H. G. Savage, M. W. Powell.

Arbitration—Ed. Kirk, Jr., Wm. Hearson, J. Sutton.

The committee adjourned, and the sub-committee on Strikes and Grievances, upon motion of Mr. Diener, instructed to investigate the present differences between the master masons and the bricklayers and report to the next meeting.

The committee adjourned, to meet June 6.

THE COMMITTEE OF SAFETY.

The Committee of Safety of the Central Council of Building Interests met June 4 and issued the following document:

The Central Council of the Building Interests of Chicago having appointed, among other committees, a committee of safety, whose duty it is to "see that ample protection to all is afforded against unlawful interference," the committee desires to announce to all concerned in the building interests of the city that they are prepared to follow up and prosecute all offenders unlawfully interfering with or intimidating any workman or employer in the legitimate performance of his business.

This announcement was hastened by the publication in the morning papers of an unlawful and unprovoked attack upon peaceable workmen at a job at the corner of Harrison street and Western avenue on Friday, June 3. The committee will promptly investigate any such case when reported to Secretary Schoenthaler at the Builders' and Traders' Exchange, where the committee will be in daily session at two o'clock P.M.

THE ILLINOIS STATE ASSOCIATION OF ARCHITECTS.

The association held its regular monthly meeting June 4, and took up the subject of the labor difficulties in Chicago, before proceeding with regular business. Among those present were Messrs. D. Adler, D. H. Burnham, W. W. Boyington, L. D. Cleveland, S. M. Randolph, Rev. Warren Randolph, of Newport, R. I., W. W. Clay, Alfred Smith, Gregory Vigeant, Normand S. Patton, R. C. Berlin, L. J. Schaub, O. J. Pierce, C. M. Palmer, C. L. Stiles, Samuel A. Treat, John W. Root, Harold M. Hansen, Adolph Druiding, A. M. F. Colton.

President Adler called the meeting to order, and read a letter from the Executive Committee of the Builders' and Traders' Exchange, thanking the association for the stand it had taken upon the present labor troubles. He said that those present knew the demoralized condition into which the building trades have been drifting, because of the leveling process which prevails in trades unions. It was becoming almost impossible to replace good men, because the trades unions arbitrarily prevented the education of a sufficient number of apprentices to replace the good and competent mechanics, who appeared to be rapidly dying out. The difficulty was staring them in the face that soon they would not be able to secure competent mechanical skill at all. It was the architects' duty to assert the right of every American citizen to work at any trade he pleased, without interference from the walking delegate. It was the architects' duty to assist

every young man who desired to learn a trade. There was more at stake in this contest than their own immediate interest as architects—more than the mere stoppage of work or the more or less that might be made during this season. The architects should strengthen the hands of those who were battling for the freedom of American citizens.

Mr. Root offered the following resolution, which was adopted:

Resolved, That the Illinois State Association of Architects heartily indorse the general principles set forth in the recently published "platform and code of principles" adopted by the builders' associations and Real Estate Board of Chicago, and that we will use our utmost endeavors to see that these principles prevail in all building operations in Chicago.

The platform and code of principles adopted by the Conference Committee, the different builders' associations, the Chicago Real Estate Board and the Central Council of the Building Interests was read and indorsed.

Association Notes.

WESTERN ASSOCIATION OF ARCHITECTS.—Convention will be held November 16, 1887, at Cincinnati. J. F. Alexander, La Fayette, Ind., secretary; W. L. B. Jenney, Chicago, secretary of foreign correspondence.

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

ILLINOIS STATE ASSOCIATION OF ARCHITECTS meets the first Saturday of every month, at 15 East Washington street, Chicago. Annual meeting first Thursday in October, 1887. Clarence L. Stiles, Chicago, secretary.

INDIANA STATE ASSOCIATION OF ARCHITECTS meets on the fourth Wednesdays of January, April, July and October of each year. Annual meeting fourth Wednesday in October. E. H. Ketcham, Indianapolis, secretary.

MISSOURI STATE ASSOCIATION OF ARCHITECTS meets at Kansas City on the second Tuesday in January, 1888. Charles E. Illsley, St. Louis, secretary.

THE ARCHITECTURAL ASSOCIATION OF IOWA, annual meeting, second Wednesday of August, 1887, at Spirit Lake. F. D. Hyde, Dubuque, secretary.

THE ARCHITECTURAL ASSOCIATION OF MINNESOTA meets every other Tuesday at Minneapolis and St. Paul alternately. Annual meeting January 3, 1888. F. G. Corser, Minneapolis, secretary.

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

ASSOCIATION OF ALABAMA ARCHITECTS.—John Sutcliffe, Birmingham, secretary.

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

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

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

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

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

THE CHICAGO MASTER PLUMBERS' ASSOCIATION meets second and fourth Tuesdays of each month, at 15 East Washington street. J. R. Alcock, secretary. Annual convention of National Association, at Chicago, June 21, 1887.

ASSOCIATION OF OHIO ARCHITECTS.

At a meeting of the Cincinnati Chapter, June 6, an advertisement for competitive plans, issued by the Board of Armory Trustees, was discussed and a resolution passed as follows:

WHEREAS, The Board of Armory Trustees of Hamilton County, Ohio, have advertised for architects to submit plans, drawings and specifications for an armory in the city of Cincinnati, and as the said Armory Trustees have offered no compensation for such services rendered, nor any premium for meritorious designs, nor appointed an expert jury to pass upon the merits of the same, and have, moreover, limited the time for the preparation of such drawings to the short period of twenty-eight days, and whereas the Cincinnati Chapter of Architects has adopted a code governing competitions,

Resolved, That a committee of five be appointed to present said code for consideration of the Board of Armory Trustees, and to request them to modify their conditions in conformity with the said code, and to give a reasonable amount of time for the preparation of such designs.

And be it further resolved, That a copy of these resolutions be forwarded to the press for publication.

On motion, Architects Jas. W. McLaughlin, Chas. Crapsey, H. E. Siter, Gustave Drach and Lucian F. Plympton were appointed a committee to present the above resolutions to the Board of Armory Trustees.

LOUISIANA STATE ASSOCIATION OF ARCHITECTS.

The efforts of Mr. Thos. Sully, as a member of the committee of the Western Association, for organizing state associations, have resulted in complete success, a Louisiana State Association of Architects having been recently formed. The meeting was held at New Orleans May 4. The officers elected for the year are: Thos. Sully, president; Wm. Fitzner, vice-president; W. C. Williams, secretary and treasurer; S. M. Patton, A. Toledano, B. M. Harrod, J. A. Braun and C. A. Leffingwell, charter members.

The constitution and by-laws are similar to the rules governing other state associations of architects. The membership consists of fellows and honorary members, and the Western Association definition of an architect is accepted by this association. The regular meetings of this association will be held upon the first Wednesdays in May, August, November and

February. The annual meeting will occur in February. The initiation fee of members (fellows) is five dollars; the annual dues five dollars. The schedule of charges as indorsed by the American Institute and the Western Association is adopted as the charges for professional services by this association.

Mr. Sully is deserving of praise for his efforts in forming this state association, which will materially advance the practice of the profession in Louisiana.

WESTERN ASSOCIATION OF ARCHITECTS.

Architect J. F. Alexander, secretary of the Western Association is notifying members that there will be a meeting of the board of directors of the Western Association of Architects, on Saturday, June 18, 1887, at Cincinnati, Ohio. Any members having petitions for the admission of new members or business of any kind to submit to the board of directors for action, will send the same to the secretary's office on or before June 15, 1887. If the work of the association does not progress it will be the fault of the members failing to respond to the circulars, and other active means employed by Mr. Alexander to bring the fast accumulating business of the association to their attention.

CHICAGO ARCHITECTURAL SKETCH CLUB.

The directors of the Chicago Press Club received through Architect John W. Root, from the committee on adjudication for the sketch club, the drawings placed in competition by members for a suitable monument for the press club, premiating one of the designs. The members of the press club are voting on the two best drawings, and the vote will be announced June 12.

Tall Chimneys.

THE following is an extract from a paper read before the Civil and Mechanical Engineers' Society, by Messrs. R. M. and F. J. Bancroft, reported by the *Builders' Weekly Reporter and Engineering Times*, of London, the subject being a chimney built at Lancaster for Messrs. Storey Brothers & Co's White-Cross Street Mills. The engineer was Mr. Edward Storey; architects, Messrs. Paley & Austin; contractor, Mr. C. Baynes; built 1876-7-8, about eighteen months being occupied in its construction. The chimney is octagon brick, with stone cap.

DIMENSIONS.		Feet.	Inches.
Total height, including foundations.....	270	0	
Height from ground line to top.....	252	0	
Outside measurement at foundation.....	28	0	
Inside measurement at foundation.....	17	0	
Outside measurement at ground surface.....	25	0	
Inside measurement at ground surface.....	17	0	
Outside measurement at top.....	10	8	
Inside measurement at top.....	9	2	

Materials.—Seven hundred and fifty thousand bricks, 650 cubic feet of stone, and 145 cubic yards concrete.

Foundation.—The shaft stands upon a base of concrete, 28 feet square by 5 feet thick.

Bricks.—"Shale" bricks, supplied by the Caton Brick and Tube Company, were used, and were chosen because they are said to absorb less moisture than ordinary bricks.

Internal Shaft.—This is octagonal in form, 264 feet high and 8 feet internal diameter, built 18 inches thick at base and 9 inches at top. It is built parallel to within 12 feet of the top, then sets back 7 inches at each side as shown in diagram 21. The inner shaft carries off the smoke from the steam boilers; it is surrounded by a space or cavity 2 feet 6 inches wide, inclosed by the outer shaft, and the vapors from the stoves, etc., are passed off through this 2 feet 6 inch space. This space between the inner and outer shells is divided into three distinct flues by vertical diaphragms of brickwork, which latter serve to tie the whole structure together.

Outer Shaft.—The brickwork of outer shaft is 4 feet 6 inches thick where it rests on the base, and 14 inches thick at top, about 20 feet from top of chimney; the outside wall curves inward and joins the inside wall, as shown on drawing.

Annular Flue or Cavity.—It will be seen at the junction of the inner and outer shafts two outlets are constructed in each of the eight sides, so as to allow the heated air, vapors, etc., to escape from the annular flue, the principal of which is more fully described under the head of Print Works Chimney, Falls River, U. S. A.

Weight.—Total, 3,300 tons.

Cost.—£2,800 complete.

Deflection and Straightening.—During the erection of this chimney, when it had attained a considerable elevation, it cauled out of the perpendicular toward the south 3 feet 10½ inches at top. This was accounted for partly because during the two years occupied in its erection very frequent rains kept the mortar soft on the weather side, the result being that the joints on that side were squeezed rather closer than those on the other, and the stalk heaved or bent over. The principal reason, however, must have been that the foundation was a little weak on the south side, and thus yielded to the pressure, the weight on that side being increased by the deflection of the chimney.

The work of bringing it back plumb was successfully executed by Mr. J. W. Cronshaw, of Blackburn. The operation consisted in cutting out courses of bricks in five different places near the base, on the north side of the chimney, and rather more than half way across. These courses were replaced by ones diminishing very slightly in thickness from south to north, so that the five courses shortened the north side of the chimney sufficiently to bring the axis in a true vertical position. The process of cutting was as follows:

A width of about 18 inches was first cut right through the 4 feet 6 inch brickwork of the outer shell on the extreme north side, a course of bricks being then withdrawn, and the top and bottom joints being thoroughly cleared off. Into this space, 18 inches wide, good hard bricks were then closely packed, these bricks being thinner, as already explained, than those

they replaced. At the outer end good oak wedges were inserted; then similar cuts were made right and left of the first, and similarly treated with bricks and wedges, the work proceeding regularly on each side, east and west, from the north toward the south. As this was done the wedges were gradually withdrawn and the chimney quietly settled over toward the north, until when all the five cuts were completed it had come back to the perpendicular.

The lowest cut was close to the ground, and the highest about 30 feet above. Two of the cuts were continued into the internal shaft.

Our Illustrations.

Suburban residence; M. L. Beers, architect, Chicago.
Residence for V. C. Turner, Chicago; Burnham & Root, architects.
Residence for D. H. Conklin, Decatur, Ill.; H. R. Wilson, architect, Chicago.
Unitarian Chapel, Sioux City, Iowa; Frank L. Wright, architect, Chicago.
Residence at Lewiston, Maine; Henry Ives Cobb and Chas. S. Frost, architects, Chicago.
Greenhouses and Gardener's Lodge for C. C. Collins, Chicago; W. W. Boyington, architect.
Chicago Architectural Sketch Club Competitions—Three-Room Village School, first prize design; A Boat House, first prize design. W. B. Mundie, designer and delineator of both.

PHOTOGRAPHURE PLATES.

(Issued only to subscribers for the Photographure edition.)

Residence on St. Paul St., Baltimore, Md. J. & W. T. Wilson, architects.
Residence of Frank G. Tullidge, Clifton, O.; Jas. W. McLaughlin, architect, Cincinnati.
Residence of Henry Adams, H. street, Washington, D. C.; H. H. Richardson, architect.
Statue to James A. Garfield, Washington, D. C.; unveiled May 12, 1887; J. Q. A. Ward, sculptor.
Residence of Geo. B. Remick, Woodward avenue, Detroit, Mich.; C. F. & J. A. Schweinfurth, architects, Cleveland, O.

Mosaics.

ARCHITECT JOHN J. KOUHN, a former practitioner in Chicago, but more recently located at Lincoln, Neb., has returned to the city and opened an office in the Insurance Exchange building. Mr. Kohn is a member of the Western Association of Architects.

A LARGE order has just been received by B. D. Washburn, Boston, Mass., for his improved harness and wardrobe hooks. The order has the significant expression: "We shall use these goods altogether, as they are made stronger and neater than the cast hooks."

"It is an ill wind that blows nobody good" is an adage applicable to the general "dullness" that is a feature of architect's offices in Chicago just now. Good use of any spare time could be made by getting perspectives drawn and sending them to us for publication.

THE Harris & Winslow Company, manufacturers of architectural iron and brass-work, has lately been dissolved, the Winslow Bros. purchasing Mr. Harris' interest. The firm will occupy the same premises 99 to 109 West Monroe street and will be known as the Winslow Bros. Co.

IN addition to the many and varied manufactures of sanitary and other goods, already well-known to architects, the J. L. Mott Iron Works have completed largely increased facilities for turning out wrought-iron, brass and bronze railings, gates and art metal-work of all kinds. They are also prepared to give estimates from drawings and specifications, or to furnish special designs. This information comes in the shape of a unique and tastefully printed circular.

A PHILADELPHIA firm, Manly, Cooper & Company, have secured the contract, at Cleveland, for the iron railing for the central viaduct, a big bridge to the south side of the city. The contract involves the use of 600,000 pounds of iron. There were five bids entered, which varied from \$25,500, Manly & Cooper's figures, to \$36,600, and upon motion of the mayor, the lowest bid accepted. The firm are in every way qualified to carry out this or similar contracts, their works being among the largest in the country.

THE Otto gas engine has been before the public for years as a motor power for all manner of small businesses, and has proved a universal success. Why it has not superseded the cumbersome, expensive and dangerous steam engine with builders, it is easier to ask than to answer. There is no danger incurred from explosions or fire with the Otto engine. It occupies little space, having no boiler or smokestack to provide for; can be shifted to any place, and as it runs itself, requires no engineer or attendant, and without, is more economical than any fuel engine, as it automatically regulates its expense, according to the work it has to do.

THE use of granite in the construction of modern buildings is of comparatively recent date. A decade ago its use was hardly noticeable in Chicago. Today one can scarcely find a substantial building that has been built within the past few years that has not more or less in it to give it either strength or ornamentation, or both. To get a comprehensive idea of the rapid growth of this popular stone in the favor of architects and builders one should visit the new establishment of the Minnesota Granite Company near Polk street bridge. There the gigantic character of the granite trade begins to dawn on the beholder. Huge blocks of the stone, ponderous and versatile machinery, among which is to be seen the first

granite-polishing machine erected in the West. The officers of the company are S. P. Ely, president; E. C. Ellis, secretary-treasurer; N. C. Hinsdale, vice-president and general manager, and W. R. Hinsdale, superintendent of construction. The Minnesota Granite Company have made a good beginning for a large trade by securing the granite contract for the new Auditorium.

Synopsis of Building News.

Albion, Ill.—Architects McDonald Bros., of Louisville, Ky., report: Remodeling court house; cost \$15,000.

Ann Arbor, Mich.—Nothing definite has yet been done in regard to the new high school. N. D. Hainman, president of the school board.

Athens, Ill.—Architect George H. Helmle, of Springfield, reports: For Methodist Church Society, frame church, 32 by 50 feet; cost \$2,000, exclusive of stained glass, heating and furniture; Henry Hall, builder.

Augusta, Ga.—Architects Macmurphy & Story report: For Dr. W. H. Tutt, suburban frame residence, 76 by 50 feet; cost \$25,000; taking bids. For Jno. I. Cohen, Augusta Opera House, 71 by 144 feet; cost \$30,000; plans in preparation. For Wm. K. Miller, frame dwelling; cost \$5,000; Jesse Thompson & Co., builders. For Judge H. C. Roney, frame dwelling; cost \$4,000; T. J. Daly, builder. For J. W. Alexander, frame building; cost \$4,000; taking bids. For D'Auynao estate, three three-story stores, 25 by 150 feet each; cost \$20,000; taking bids. Richmond county public school, brick and stone school building, 60 by 128 feet; cost \$20,000; ready for bids.

Aurora, Ind.—Architects McDonald Bros., of Louisville, Ky., report: Plans for Odd Fellows' Hall ready for bids; three-story brick, stone and iron building; cost \$15,000.

Birmingham, Ala.—Architects Maury & Haupt, of Louisville, Ky., report: For the Jefferson Building Improvement Co., four two-story residences, 45 by 60 feet, stone, brick and frame, slate and tin roof, closets and baths, stained glass, hardwood finish and tiling, electric bells, speaking tubes, wood or slate mantels; cost \$3,000 to \$5,000 each; under way; F. C. Thompson, contractor. For the Elyson Land Co., the stone and brick buildings for the new water works, 170 by 64 feet; cost \$20,000.

Architect H. Wolters, of Louisville, Ky., reports: Court house, to cost \$125,000. Architects Maury & Haupt, of Louisville, Ky., report: For W. T. Underwood, residence, to cost \$10,000.

Bloomington, Ill.—Architect Warren H. Milner: For J. R. Mason, four-story and basement building, 30 by 89 feet, steam heat, passenger elevator. For a stock company, an opera house, 75 by 135 feet; cost about \$30,000. For the Y. M. C. A., building, 45 by 60 feet; cost about \$10,000. For First Baptist Society, church building, 66 by 115 feet; cost \$25,000. For C. & A. R. R., freight house; to cost about \$15,000. For Grace M. E. Society, church building, 75 by 112 feet; cost \$20,000.

The Congregational people have a goodly sum of money ahead, and have purchased the lot on the northeast corner of Mulberry and East streets, the Murray place, and will erect a \$15,000 edifice.

The Consolidated Tank Line Company will spend about \$10,000 in the erection of a building especially fitted for their work in the oil business. The building will be located near the packing house on land bought from Dr. Schroder.

Mr. Philip Ryan has commenced a business building. It will have a pressed brick front, will be three stories high and cost \$5,000. Mr. Thomas Erwin will erect a three-story brick building, at a cost of about \$6,000. The new city library building, under the superintendence of Mr. George H. Miller, is in process of erection at the corner of Washington and East streets. It will be 60 by 90 feet, three stories high, built of brick and pressed brick, and cost about \$20,000. The German Catholic church, commenced last fall, is being finished up, and will be dedicated soon. The cost of it will be about \$25,000. Messrs. Willard Parritt and J. T. Lillard contemplate building three-story buildings. Mr. A. B. Funk contemplates building a three-story structure on Main street. Mr. John Kuhns will build a double three-story business building. A new school house, of no mean dimensions, will be erected this summer in the Stevensonville addition to the city. Mr. W. F. Crane is rebuilding his grocery and dwelling on West Market street. Mr. John Mulherran is building a store building on the corner of Catherine and Locust streets. Mr. Zelleck is building a store building on North Main street. Mr. George Cox is to build an elegant \$10,000 residence on East Grove street. The first story will be of pressed brick and the second story frame. Mr. James Smith builds, on East Jefferson street, an elegant modern dwelling of pressed brick and frame, at a cost of about \$6,000.

Cincinnati, O.—Reported by Mr. Lawrence Mendenhall: The labor difficulties reported last month have come and gone, and an arrangement perfected that will keep business in its proper channel, at least for the season, the only exception to the above being the troubles with the tanners, who demand an increase of twenty per cent to the journeyman's wages. This demand is strenuously opposed by the Master Cornicemakers' Association, which will submit to no dictation whatever.

The following agreement shows what was done in the strike of the stonecutters, having been drawn up and signed by both committees, binding until May 1, 1888:

CINCINNATI, May 17, 1887.

The Journeymen Stonecutters' Society and the Master Stonecutters' Association of Cincinnati, O., and vicinity, this day enter into contract, the conditions to-wit:

First—The journeymen cutters agree to work the first five days nine hours and eight hours on Saturday, at forty-five cents per hour.

Second—All men now employed in the several shops shall not be interfered with by the journeymen stonecutters.

Third—The hours for starting will be 7 A.M. daily.

Fourth—This agreement shall hold good until May 1, 1888.

JAS. S. ROBINSON, JOHN BOYLE,
C. SIMINGER, DAVID HUMMEL,
JOHN RYNN, JOSEPH FOSTER,
WM. ITTIG, E. J. DOBBELING.

Com. Journeymen Cutters. Com. Master S. C. A.

Notwithstanding the resolution adopted by the builders' exchange concerning nine hours as a day's work, some carpenter bosses are making their men work ten, a sign of weakness and a severe injury to the trade, besides being unfair to their companions.

The competitive designs for our centennial exposition buildings were placed on exhibition in our chamber of commerce, and some of them are extremely original. Without going into a description of them, the estimated cost of each may prove interesting: Jas. McLaughlin's plan, \$200,000; H. E. Siter, \$243,000; Chas. Crapsey, two plans, \$163,000 and \$148,000; Saml. Hannaford & Sons, \$230,000; Gustave W. Drach, \$200,000. The prevailing type was cruciform, with open interior courts, with a central dome, the only exception to the rule being that the plan of Mr. Crapsey, which was a quadrangle with an open court.

While it was a disappointment to have an outsider secure the contract for our chamber of commerce, yet Norcross Bros. deserve the thanks of the community for the careful and compact way in which they are building. The firm is using what is known as a "boom derrick," and the writer is not alone when he says that it was his first view of this particular way of building derricks. The granite is being set now, and rapid progress made in all branches of the work.

As a result of the strike, architectural notes are meager, but next month will probably see an improvement.

Architect E. Anderson has completed designs for a picturesque parsonage at Pleasant Ridge, Ohio. He is also engaged on a series of four additional buildings for the city infirmary, consisting of male and female insane wards, colored wards, and a ward for the toilers or working inmates. The buildings average in size 50 by 110 feet, and will be two stories high, of brick. Mr. Anderson is perfectly at home in this kind of work, and these plans only strengthen his reputation.

Wm. A. Lay, fresco artist, has his hands full, being engaged on a church in Springfield, O., and also one in Knoxville, Tenn.

Architects Saml. Hannaford & Sons report the following, the strikes not seeming to affect business in their office: The Newport Car Company will build a stable of brick and stone, two stories, tin roof, and all modern improvements; size 60 by 110 feet. M. M. White, a store building of brick, six stories high; size 26 by 100 feet. Henry Hanna, same class of building and adjoining the same; size 46 by 100 feet. For Chaffield & Woods, a brick storehouse, six stories high; size 80 by 90 feet. For A. C. Horten, a frame dwelling of twelve rooms, hardwood finish, with all conveniences, and slate roof. A frame church at Wyoming, O., with a capacity for 450 people.

Architects Buddemeyer, Plympton & Trowbridge report: For Cohen & Co., warehouse, seven stories, 28 by 82 feet, brick, stone and iron front and rear, tin roof;

cost \$20,000; contract for foundation let. For John Gates, two and a half story half timber, brick, shingle and plaster residence, Oak street, Walnut Hills, 13 rooms including bath and laundry, shingle roof, stained glass, pine finish for varnishing and staining, unique in design; cost about \$11,000; not let. For C. Whiteley, Twenty-fifth ward, Chase avenue, residence, 9 rooms, bath, etc., brick, with plastered gables, slate roof, pine finish, ornate stair window; cost about \$4,500; not let. For Mr. C. H. Downhoff, Twenty-fifth ward, stable, half timber, 20 by 28 feet 6 inches, three stalls, carriage room, man's room, hay loft, etc., shingle or slate roof; cost about \$1,000; not let. Store building for Mr. S. W. Smith, West Sixth street, five stories, brick, with iron front and rear, asphalt roof, 20 by 90 feet; cost about \$10,000; not let. For C. H. Low, Clifton, O., two-room addition to residence, new porches, etc., brick mantel in St. Louis hydraulic pressed brick, hardwood finish, etc., stained glass; cost \$1,650; contractor, Chas. Rosenstiel.

Clarksville, Tenn.—Architects Reid Bros., of Evansville, Ind., report: For Arlington Hotel Co., three-story and basement brick building, 80 by 100 feet, metal roof; cost \$35,000; contract not yet let.

Coldwater, Mich.—Architect M. H. Parker reports: Prospects good, no strikes, all laborers contented and busy. For city of Coldwater, one story brick lock-up 20 by 24 feet; cost \$1,200; Cash M. Brown, builder. State public school laundry, 48 by 54 feet; cost \$3,000; James Carleton and Wm. Drawborough, builders. For Alfred Milner, brick and stone store and hall building, 40 by 80 feet; cost \$5,500; under way; Albert Sherman, builder; also smaller work; under way.

Columbus, Ohio.—Architects Elah Terrell & Co. report: For the Board of Trade, seven-story building, 75 by 187 feet, stone front, galvanized iron cornices, felt roof, iron channels, beams, etc., fireproof, skylights, stained glass, closets, etc., steam heat and power, elevators, hardwood finish and tiling, mantels; cost \$100,000; excavating, contracts not let; the question of electric lighting is not yet settled. For John Joyce, two-story brick and stone residence, 50 by 80 feet; cost \$11,000; under way; M. Fahey, builder. For A. Heffner, two-story brick and stone residence, 40 by 70 feet; cost \$8,000; under way; F. Parker, builder. For H. C. Stanwood, two-story frame dwelling, 40 by 60 feet; cost \$7,000; under way; D. Spencer, builder. For Lee Chamberlin, two-story brick and stone dwelling, 40 by 50 feet; cost \$4,000; under way; J. Hennessy, builder. For H. A. Lanman, two-story brick and stone dwelling, 50 by 70 feet; cost \$10,000; under way; separate contracts. For Walter Zin, two-story brick and stone dwelling, 40 by 70 feet; cost \$6,000; under way; Henderson & Hought, builders. For D. K. Wilson, two-story brick and stone dwelling, 35 by 70 feet; cost \$6,000; projected. For Mrs. Dennison, three-story brick and stone residence, 50 by 80 feet; cost \$20,000; projected. For F. P. Hills, stone residence, 40 by 70 feet; cost \$3,000; projected. For Kenneth Wood, brick and stone dwelling, 35 by 60 feet; cost \$5,000; under way; Robert Wood, builder. For T. Ewing Miller, five-story brick and stone business block, 32 by 125 feet; cost \$17,000; under way; separate contracts; also four-story brick and stone building, 75 by 100 feet; cost \$16,000; under way; separate contracts. For F. Hubbard, brick and frame dwelling, 40 by 70 feet; cost \$5,000; projected. For Presbyterian Society, church building, 61 by 70 feet; cost \$12,000; under way; separate contracts.

Darion, Ga.—Architects McDonald Bros., of Louisville, Ky., report: Stone, iron and steel jail building; cost \$10,000.

Delaware, Ohio.—Architects Elah, Terrell & Co., of Columbus, report: For Methodist Congregation, brick and stone church building, 96 by 120 feet; cost \$30,000; under way; F. Myers, contractor.

Detroit, Mich.—Present condition and outlook very good.

Architect A. C. Varney reports: For Mr. Kennedy, two two-story stores and dwellings, 38 by 60 feet, brick and stone, gravel roof; cost \$5,000; Bunting and Sigman, builders. For Mr. Rickey, two-story double frame dwelling, 44 by 58 feet; cost \$5,000; J. Brand, builder. For Mr. Hauxhurst, two-story dwelling, 37 by 65 feet, brick and stone, slate roof; cost \$6,800; Wm. Holland & Son, builders.

Architect Gordon W. Lloyd reports: For J. E. Bolles & Co., three-story brick factory building, 60 by 132 feet; cost \$10,000; M. Scholl, mason, J. L. Gearing, carpenter.

C. D. Widman & Co. are erecting a two-story brick factory building, 60 by 230 feet; cost \$9,000.

The Board of Education are erecting a two-story school building, 100 by 40 feet, brick and stone, slate roof; cost \$17,000; Jeaynes & Son, contractors; also two-story brick school building, 64 by 48 feet, brick and stone, slate roof; cost \$11,000; Robert Wallace, superintendent.

F. W. Claxon & Co. are building a two-story double dwelling, 39 by 56 feet, brick and stone; cost \$4,500.

Gideon Vivier & Son are erecting two two-story dwellings, 26 by 54 feet, brick and stone, slate roof; cost \$7,000.

Architect H. Englebert reports: For German Lutheran Society, brick and stone church, 52 by 90 feet; cost \$8,000; W. H. Pocock, builder.

Architects Donaldson & Meier report: For E. J. Smith, two-story dwelling, 34 by 52 feet, brick and stone, slate roof; cost \$7,000; Gideon Vivier & Son, builders. For Geo. L. Fox, two-story dwelling, 37 by 48 feet, brick and stone, slate roof; cost \$4,500; M. Blay & Son, builders.

Architects Spier & Rohns report: For Ramers Park, two-story double dwelling, 32 by 50 feet; brick and stone, gravel roof; cost \$4,500; M. Keller, carpenter; Geo. Nutt, mason.

The Michigan Car Works are erecting a one-story brick car shed, 40 by 400 feet; cost \$3,000.

Architect A. B. Cram reports: For John H. Bissell, three two-story stores and dwellings, 60 by 50 feet, brick and stone; cost \$9,800; Henry Carew, builder.

Architect W. G. Malcolmson reports: For E. E. Mann, two-story double dwelling, 47 by 73 feet, brick and stone, slate roof; cost \$7,000; W. H. Holland, builder.

Wm. Houghton is building two two-story stores and dwellings, 40 by 50 feet; cost \$4,000.

Architects Hess & Raseman report: For August Goebel, six two-story dwellings, each 20 by 61 feet, brick and stone; cost \$16,000; Spitzley Bros., builders.

R. J. Wilson is building two one and one half-story frame dwellings, 22 by 48 feet; cost \$2,300.

Architect J. E. Mills reports: For M. A. Adams, two-story dwelling, 30 by 57 feet, brick and stone, slate roof, also barn; cost \$10,000; Tennyson & Co., masons. For Mr. Bassett, two-story dwelling, 30 by 56 feet, brick, stone and tin shingles; cost \$3,500; Morse & Co., carpenters; Dierich Bros., masons.

Jno. R. Gentile is building for B. J. Fayfeta, a two-story store and hall, 40 by 100 feet, brick and stone; cost \$10,000.

Henry George & Son are building a two-story frame dwelling, 26 by 49 feet; cost \$4,000.

Architect Peter Dederichs reports: For Westphalian Brewing Co., two-story brick brewery, 50 by 27 feet; cost \$3,000.

Architects Van Leyen & Preston report: For J. H. Robinson, two-story frame dwelling, 30 by 54 feet; cost \$3,000; J. E. Boomer, mason; Geo. Keeble, carpenter.

For Brownell & Co., two-story frame dwelling, 24 by 42 feet; cost \$2,300; Peter Henderson, builder.

For C. H. Brownell, two-story frame dwelling, 28 by 42 feet; cost \$3,000.

For Wm. F. Knox, one and one half-story frame cottage, 26 by 48 feet; cost \$1,500; Wm. Clifford, builder.

For Wm. F. Broadner, two-story frame dwelling, 26 by 44 feet; cost \$2,500.

For Cornelius Rafferty, one and one half-story cottage, 26 by 30 feet; cost \$1,400; D. McDonnell & Co., builders.

Architects Scott & Co., report: For Detroit Fire Department, two-story supply house, 28 by 72 feet, brick, slate roof; cost \$6,240; Topping & Fisher, contractors.

For Wm. A. Jackson, two-story dwelling, 48 by 80 feet, brick and stone, slate roof; cost \$10,500; Henry Carew, builder.

Jno. R. Gentile is building for Mrs. Minna Duke, three-story dwelling, 27 by 60 feet, brick and stone; cost \$4,000.

Dean Bros. are building for J. H. Cuddy, a two-story double dwelling, 40 by 52 feet, brick and stone; cost \$3,875.

Wm. Glaser is building two two-story frame dwellings, 22 by 58 feet each; cost \$3,000.

Permits were issued during the month of May for new buildings, to cost \$355,790; alterations, etc., to cost \$30,710; total \$386,500.

Duluth, Minn.—Messrs. Swain & Todd are putting in the foundation for a \$15,000 residence for Captain Lewis. Thomas Saxton has commenced work on four dwellings to cost \$7,000. H. B. Moore has commenced work on a residence to cost \$7,000. W. F. Rohback is about to build a residence to cost about \$5,000. M. J. Mullen is about to commence work on a \$5,000 residence. The following are under way: The Spalding House, \$400,000; Elevator H, \$275,000; Elevator I, \$500,000; St. Louis addition, \$100,000; Masonic Temple, \$125,000; Odd Fellows' building,

\$25,000; Congregational church, \$40,000; Duluth National Bank, \$125,000; Steam Forge Works, \$15,000; H. H. Bell's residence on Second street and Sixth avenue east, \$35,000; G. G. Hartley's brick and brownstone, Thirteenth avenue east and Bench street, \$30,000; L. J. Barnes, Fourth street, between Third and Fourth avenues west, \$6,000; J. Lumberg, Tenth avenue east and second street, \$5,000; H. E. Long, four-story brick, Second street, between Second and Third avenues west, \$15,000; George M. Smith, brick dwelling, Fourteenth avenue east and Bench street, \$8,000; E. L. Bradley, Seventh avenue west and Second street, \$5,000; J. G. Williams, Fourth street and Tenth avenue east, \$5,000; H. Nolte, Second street and Twelfth avenue east, \$4,000.

Elkhart Ind.—Architect D. N. Weaver reports: Prospects for a lively boom this season. The Citizens Railway Company are laying two and one-half miles additional track, reaching Highland Park. Among the most important building improvements are the following: James Cornish, three-story brick store room; cost \$6,000; projected. David S. Simontong, three-story brick store; cost \$5,000; projected. A. S. Jones, two-story frame dwelling; cost \$4,500; under way. Otis L. Thompson, two-story frame dwelling; cost \$4,000; under way; S. Danb, builder. H. B. Sykes, two-story frame dwelling; cost \$3,500; projected. Chas. Gilmeyer, two-story frame dwelling; cost \$3,000; under way. Chas. A. Strouquest, two-story brick veneer dwelling, 32 by 56 feet, slate roof; cost \$3,500; under way; N. Weaver, builder. Lon S. Kenyon, frame cottage, 20 by 30 feet; cost \$2,500; projected. Frank E. Thompson, two-story frame dwelling; cost \$2,500. Elkhart Real Estate Association, Park Pavilion, 50 by 120 feet; cost \$2,500; under way; N. Weaver, builder. There are upward of two hundred smaller dwellings, under way and projected. Also a great deal of repair work, additions, etc.

Evansville, Ind.—Architects Reid Bros. report: Contracts on James L. Orr's store building let as follows: Stonework, F. R. Caden; brickwork, Geo. Gorge; carpentry and millwork, John S. McColliss; cast-iron, Geo. L. Meaker & Co.; glass, E. C. Johnson. Contracts on J. W. James' office building, let to Henry J. Weiss. (The owner's name was, by mistake, given as James in our May regular edition). Contract let for a ten-room frame residence for G. M. Daussman, to cost \$5,000, to J. T. Rechten.

Architects Reid Bros. report: For G. M. Daussman, two-story frame dwelling, slate roof; cost \$5,500; under way; J. T. Rechten, builder. For H. G. Menks, one-story brick dwelling; cost \$2,500; under way; Ohio Planing Mill Company, builders.

Fort Scott, Kan.—Architect F. A. Grant has prepared plans for the Board of Education for three two-story brick school houses, 52 by 58 feet; cost \$18,500; contracts not let.

Fort Smith, Ark.—Architect Wm. H. Byram reports: The outlook is quite good, and many large buildings are contemplated this season. There is a scarcity of good mechanics.

The following are under way at present: The Fort Smith Opera House, three-stories, 67 by 140 feet, stores in front, brick, tin roof, steam heat, etc. Building alone will cost \$45,000; with site \$80,000; foundation in; J. B. McElpatrick & Son, of St. Louis, architects; Wm. H. Byram, superintendent; N. L. Wickwire, of St. Louis, Mo., contractor; building to be completed by October 1. For Herman Baer, two-story frame dwelling 34 by 50 feet, stone foundation, tin roof; cost \$4,000; under way; Nier, Hogg & Byram, Kansas City, Mo., and Fort Scott, architects; J. K. Stephens, builder. For Geo. H. Lyman, two-story frame dwelling, 32 by 60 feet, stone foundation, tin roof; cost \$4,200; Mr. Ward, contractor; Nier, Hogg & Byram, architects. For Fort Smith and Sebastian county, two-story and basement court house and city hall, 102 by 82 feet, pressed brick, cutstone and terra-cotta trimmings, slate roof, galvanized iron cornice, Rutan system of heating; cost \$52,000; M. J. Brennan, of St. Louis, Mo., contractor. We have recently finished the public school building at a cost of \$30,000. Have projected a brick office and residence building, 20 by 80 feet, for Dr. W. W. Bailey; cost \$5,000.

Fort Wayne, Ind.—Architect H. W. Matson reports: Three-story store building, 51 by 105 feet, Philadelphia pressed brick, cutstone and terra-cotta trimmings, plate and stained glass, elevators; cost \$12,000; plans prepared.

Architects Wing & Mahurin report: For Mace Long and George W. Pixley, five-story stone front business block, 85 by 140 feet; cost \$40,000; one-half now under way.

Frankfort, Ky.—Architects McDonald Bros., of Louisville, report: Brick and stone building for Kentucky Normal School for colored people; cost \$10,000; plans ready for bids.

Architect C. L. Clark, of Louisville, reports: Masonic Hall building to cost \$18,000.

Greenville, Pa.—Architects Kanengeiser & Kling, of Youngstown, Ohio, report: Peter Saul, two-story frame dwelling, 30 by 48 feet; cost \$2,500; projected. For Dr. Martin, two-story frame dwelling, 34 by 48 feet; cost \$4,500; projected. For N. E. Tillotson, two-story frame dwelling, 33 by 50 feet; cost \$5,000; projected.

Huntington, W. Va.—Architect James King reports: Present condition of the building trades good, and outlook favorable for a good season's business. For city of Huntington, two-story and basement pressed brick school building, 118 by 83 feet, stone basement and trimmings, slate roof; cost \$19,000; under way; James F. Hoback, builder. For Mrs. S. Ziegler, two-story stone and brick building, 34 by 63 feet, slate roof; cost \$5,000; under way; Robt. Shore, builder. For Messrs. Fox & Brown, two two-story frame and redwood shingle dwellings, 28 by 50 feet; cost \$1,700 each; under way; Robt. Shore, builder. For Titus & Emmons, block of eight brick and stone, two-story dwellings; cost \$9,000; under way; Robt. Shore, builder. For T. J. Prichard, M. D., two-story frame dwelling; cost \$2,000. For First Baptist Congregation, frame church building, shingle trimming, stained glass, etc.; cost \$3,000; projected. Robt. Shore has the contract for a \$3,000 building for the Huntington fire department.

Hutchinson, Kan.—Architect A. B. Howatt reports: Outlook fair. For G. W. Carpenter, two-story brick livery stable, 50 by 150 feet; cost \$6,000; contract not let. For Young Bros., two-story stone store building, 25 by 100 feet; cost \$7,000; contract not let. For J. R. Price, one and one-half-story frame dwelling, 30 by 48 feet; cost \$2,700; not let. For J. G. Malcolm, M. D., one-story frame cottage, 37 by 57 feet; cost \$2,200; under way; Thompson & Hanna, builders.

Architects Van Brunt & Howe, of Kansas City, Mo., prepared plans for Messrs. Ott & Tewksbury, of Topeka, for a three-story hotel building, 97 by 130 feet, brick, stone trimmings; cost \$50,000; Bowers & Bryan, of Topeka, Kan., contractors, A. B. Howatt, superintendent of construction; building under way; to be completed September 15, 1887.

Kansas City, Mo.—Architect W. F. Hackney reports: For the School Board, two school buildings, to cost about \$40,000 each; also additions to two other buildings, to cost about \$10,000 and \$15,000, respectively. For E. L. Martin, stone residence, to cost \$15,000 to \$20,000. For James Thornton, stone dwelling; cost \$20,000 to \$25,000. For Robert Fullerton, stone residence, to cost \$60,000 to \$75,000. For S. Curkner, brick residence; cost \$8,000. For J. C. Hooper, frame dwelling; cost \$5,000. For John Duvall, frame dwelling; cost \$5,000.

Larned, Kan.—Architects Terry & Thompson, of Wichita, report: For J. V. Moffit and M. W. Levy, hotel, 75 by 110 feet; cost \$30,000; J. V. Majors, contractor.

Little Rock, Ark.—An immense cotton seed oil mill is about to be erected, by southern oil men, in the south end of town, at a cost of \$150,000. Noah Hamlet has the contract for the brickwork, and the Smith-Vaile machinery will be put in.

The "Benjamin" Block is to be repaired and remodeled, and a three-story addition is to be built in the rear; cost \$20,000; H. G. Allis, St. Louis, Mo., owner; Thos. Harding, architect; individual contracts. Mr. Harding has also prepared plans for alterations Lutheran Church, to cost \$15,000.

Louisville, Ky.—Architect D. X. Murphy reports: For H. Bishop, office building, to cost \$24,000.

Architect Henry Wolters reports: Plans in preparation for a depot at Memphis, Tenn., and a court house at Birmingham, Ala.

Architects McDonald Bros. report: Addition to Calvary Church, 60 by 40 feet, stone; cost \$60,000. For Chestnut street Christian Church, 50 by 90 feet, brick, stone trimmings; cost \$15,000. For Third English Lutheran Church, frame Sunday school-room; cost \$8,000. For Kentucky University, medical school lecture rooms, etc.; cost \$12,000.

Architects Maury & Haupt report: For Jas. Leech, block of dwellings, 75 by 120 feet; cost \$20,000. For C. Johnson, residence; cost \$6,500. For C. K. Crawford, residence; cost \$7,500. For W. C. Hutchins, residence; cost \$14,000.

Architect Chas. D. Meyer reports: For J. Verhoeff, Jr., brick and stone dwelling; cost \$8,000; Kimbell Bros., contractors.

Architect C. A. Curtin reports: Making plans for remodeling Jefferson County Jail building, at Louisville; cost \$7,500.

Architects Maury & Haupt report: McFarren Memorial Church building, 80 by 170 feet, stone, Gothic style, hardwood finish, steam heat, etc.; cost \$100,000. For T. L.

Jefferson, block of dwellings, 200 by 72 feet, stone, pressed brick and terra-cotta, hardwood finish; cost \$40,000. For Chas. Strater, stone and pressed brick residence, 41 by 54 feet, steam heat, hardwood finish; cost \$10,000.

Architects McDonald Bros. report: For Third English Lutheran Church, frame lecture room, 30 by 75 feet; cost \$4,800.

Lyons, Kan.—Architect I. M. Wood, of Topeka, reports: Block of brick stores, 300 by 80 feet; cost \$100,000; plans in preparation; not let. For Butler, Shumway & Co., block of brick stores, 50 by 80 feet; cost \$30,000; plans in preparation; not let. For W. T. Nicholas, office building, 25 by 100 feet; cost \$12,000; plans in preparation; not let.

Macomb, Ill.—Architects Furber & Churchill have prepared plans for the School Board for a school house, to cost \$20,000; building under way, and to be completed November 1.

Mobile, Ala.—Building business is at present at a standstill.

Architect Jas. H. Hutchison reports: For Fred Johnson, two one-story frame cottages, 32 by 60 feet; cost \$4,200; under way. Ferdinand Meyer, one-story frame cottage, 31 by 68 feet; cost \$2,700; taking bids. For Theo. Guesnard, two-story frame double tenement, slate roof; cost \$5,700; under way. J. P. Einrich & Son, builders. For E. G. Draper, two-story frame dwelling; cost \$4,700; Wm. O. Pond & Son, builders. For John W. Black, repairs, etc.; cost \$3,500; Wm. S. Foster, contractor. For Adam Glass, warehouse; cost \$2,200; under way. For P. J. Collins, two-story dwelling; cost \$3,600; taking bids. For F. Meyer, repairs, etc.; cost \$2,500; under way.

Morganville, Ky.—Architects Reid Bros., of Evansville, Ind., report: For National Bank of Union county, brick and terra-cotta bank building, 32 by 65 feet, cost \$6,500; under way; John McCorky, builder.

New Corporations.—The Chicago Edison Company; capital stock, \$500,000; to furnish electric heat, light and power; John M. Clark, John B. Drake and Robert T. Lincoln, incorporators. The New York Corrugating Company, of New York City; capital stock, \$22,000; Henry M. Warren, Lewis Moss and Jas. Gowdy, New York City, and Harlan P. Lloyd, 56 Johnston Building, and L. Lew Sagendorf, Cincinnati, O., incorporators. The Central Electric Company, of Chicago, Ill.; capital stock, \$10,000; M. T. Greene, Geo. A. McKinlock, 38 La Salle street, and Wm. H. McKinlock, incorporators. The Solid Rock Asphalt Company, of Camden, N. J.; capital stock, \$500,000; Thos. T. Tasker, Sr., 921 Arch street; Malcolm Macleod and Edwin N. Yelland, all of Philadelphia, Pa., incorporators. The Victor Safe and Lock Company, of Cincinnati, O.; capital stock, \$100,000; Geo. C. McDermott, Thos. S. Spivey, 130 West Ninth street; J. Wm. Johnson, W. W. Dyer, and W. H. Jones, incorporators. The Safety-Latch Door Company, at St. Louis, Mo.; capital stock, \$1,000,000; for the manufacture of automatic elevated doors; incorporators, Henry T. Mudd, Richard D. Thaxton and Henry J. Voe. The Milwaukee Avenue Electrical Company, of Chicago, Ill.; capital stock, \$30,000; Alfred L. Baker, 79 Clark street; Chas. R. Webster and Wm. W. Case, incorporators. The Liberty Brick Manufacturing Company, of Chicago, Ill.; capital stock, \$50,000; Henry M. Brady, Patrick J. Conway and Jacob Semmelhaack, incorporators. Attorney, Edw. Maher, 122 La Salle street. The Shields and Brown Company, of New York City; capital stock, \$25,000; Henry W. Johns, 87 Maiden lane, Fredk. E. Brown, New York City, and Jas. H. Shields, Chicago, Ill., incorporators. The Standard Gas Machine Company, of Chattanooga, Tenn., has been organized with a capital stock of \$100,000; President, John G. Anderson. The Dark Hollow Limestone Company, of Hallowell, Me.; capital stock, \$60,000; President, Jos. R. Bodwell, Hallowell; Treasurer, George Doyle, New York City. Chicago Wire and Iron Company, at Chicago, Ill.; capital stock, \$50,000; incorporators, Eben B. Smith, Frank P. Smith and Willis B. Smith. The American Scotch Granite Company, of Saratoga (P. O. Saratoga Springs, N. Y.); capital stock, \$50,000; Scott Barton, Rufus G. Fuller, Horace H. Nye, Stanley H. Bevins and George V. B. Frost, incorporators. The Alsip Brick Company, of Chicago, Ill., has been incorporated; capital stock, \$255,000; Frank Alsip, Wm. H. Alsip, 482 Marshfield ave., and Frank B. Alsip, incorporators. The New York Anderson Pressed-Brick Company, at Chicago, Ill.; capital stock, \$200,000; incorporators, J. C. Anderson, Elisha Gray, S. R. Bingham, F. D. Everett and J. C. Cushman. The Reliance Wire Works Company, Limited, of Milwaukee, Wis., has been incorporated; capital stock, \$20,000; Frank A. Hall, W. N. Fitzgerald and O. E. Lindman, 269 Broadway, incorporators. The Michigan Cement Company, of Milwaukee, Wis., has been incorporated; capital stock, \$200,000; John Johnston, Wm. H. Harding, Wm. E. Sawyer, 310 Prospect avenue, Benj. J. Miller and J. R. Birthele, incorporators. The Wichita Terra-Cotta Lumber Company, of Wichita, Kan., has been incorporated; capital stock, \$30,000; Amos L. Ranch, Clement T. Meyer, Robert M. Jack, Wm. M. Ranch and others, incorporators. The Converse Heating Company, at Chicago; capital stock, \$10,000; for the manufacture of stoves, furnaces, and heating appliances and apparatus; incorporators, Lyman P. Converse, Peter Fish and E. L. Barber. The Silexin Manufacturing Company, at East St. Louis; capital stock, \$25,000; for the manufacture of silica; incorporators, Arthur M. Read, Charles B. Mason, Henry V. Kent and Nelson C. Robbins. The Brown & James Heating Company, at Chicago; capital stock, \$25,000; for the manufacture of water heaters and furnaces; incorporators, Royal F. Brown, Charles B. James and James B. L. Gascoigne. The Woodland Brownstone Company, of Montclair, N. J., has been incorporated. Capital stock, \$15,000. A. Howard Pelaubet, Newark; Lewis Dawkins and Joseph A. Pelaubet, Bloomfield, incorporators. The Illinois Automatic Door-Bell Company, at Chicago; capital stock, \$10,000; for manufacturing; incorporators, Richard A. Allen, Charles F. Sinclair and A. J. Scarborough. The Chicago Wood Ornamenting Company, at Chicago; capital stock, \$15,000; incorporators, Spencer L. Davis, Edward W. Alleigh and Campbell Allison.

Newton, Kan.—Architect W. L. Ross reports: I will not attempt to describe any buildings at this time as I am not doing much myself at present but expect to put up some good buildings soon. There is quite a building boom here, two fine hotels going up, some six or eight business houses and a number of residences which I am not prepared to describe. This is one of the best towns of its size in Kansas, and bids fair to make a city of considerable importance. I think they claim about nine thousand inhabitants, three weekly newspapers and two dailies, and are arranging for another daily to start soon, three railroads with indications of three more being built to this place this season. Prices of labor fair and each branch is well represented.

Orbisonia, Pa.—Architects Kanengeiser & Kling, of Youngstown, Ohio, report: For J. J. Crowther, two blocks of double frame houses, 28 by 45 feet; cost \$4,000; projected.

Owensboro, Ky.—Architects Reid Bros., of Evansville, Ind., report: Baptist church, Sunday school and class rooms, 39 by 88 feet, two stories, slate roof; cost \$7,500; contracts not let.

Petersburg, Ill.—Architect George H. Helmle, of Springfield, reports: For Miller Aiken, seven-room frame dwelling, 40 by 36 feet; cost \$3,000; projected.

Salt Lake City, Utah.—Architect R. Kletting reports: Outlook promising. For Matt Cullen, five-story and basement hotel building, 153 by 51½ feet, with rear building, 90 by 26 feet, two-stories high, brick, stone front, gravel roof; cost \$100,000; plastering commenced. For L. C. Karrick, three-story and basement store and office building, 28 by 100 feet, brick, pressed brick and stone front; cost \$15,000; foundation in. For School District, one-story brick school building, 41 by 64 feet; cost \$3,200; walls up. For L. Post, remodeling two-story residence; cost \$2,000; plans under way.

Sheffield, Ala.—Architects Maury & Haupt, of Louisville, Ky., report: For W. L. Chambers, three-story bank building, 25 by 120 feet, stone, brick and terra-cotta, iron channels, beams, etc., closets and bath, felt roof, hardwood finish and tiling, hot air heat, electric lighting; cost \$15,000; commenced May 15.

St. Louis, Mo.—Building permits issued during the month of May valued at \$5,000, and upwards were as follows: P. Oehler, two-story brick store and dwelling, 36 by 71 feet; cost \$6,000; C. Weiner, builder. A. Cooper, six two-story brick dwellings, 105 by 48 feet; cost \$15,000; A. Cooper, builder. J. Gugerty, two-story dwelling, 22 by 68 feet; cost \$6,000; J. Gugerty, builder. Mrs. M. A. Field, two-story brick dwelling, 22 by 40 feet; cost \$5,000; J. W. Wilson, builder. Miss L. Homer, two-story brick dwelling, 30 by 60 feet; cost \$15,000; Gerhard & Son, builders. D. Houser, two-story brick dwelling, 30 by 60 feet; cost \$15,000; Gerhard & Son, builders. J. D. McLure, two-story brick store and dwelling, 63 by 65 feet; cost \$20,000; F. S. Green, builder. Mrs. E. Gresser, two-story brick flats, 44 by 54 feet; cost \$7,500; sublet. Wm. Renshaw, two-story brick store and dwelling, 75 by 58 feet; cost \$8,000; sublet. Anheuser, Bush Brewing Company, two-story brick warehouse, 97 by 150 feet; cost \$10,000; sublet. Mrs. L. A. McFarland, two-story brick dwelling, 30 by 58 feet; cost \$6,500; sublet. H. Feuerbach, three one-story brick dwellings, 17 by 44 feet; cost \$6,000; H. Feuerbach, builder. Wm. M. Hutton, two-story frame dwelling, 40 by 54 feet; cost \$5,800; C. Johnson, builder. R. S. Brookings, two-story brick dwelling, 44 by 46 feet; cost \$10,000; F. S. Green, builder. F. W. Paramore, two-story brick dwelling, 39 by 44 feet; cost \$5,500; sublet. American Central Insurance Company, alterations to six-story brick building, 46 by 100 feet; cost \$100,000; H. Melburn, builder. Wm. S. Schotten, 50 by 133 feet; cost \$8,000; H. Wuechen, builder. F. W. Paramore, two-story frame dwelling 21 by 42 feet; cost \$9,000; sublet. J. O. Connel, three two-story brick dwellings, 50 by 60 feet; cost \$6,000; M. Conley, builder. R. Stecher, two-story brick cooper shop, 118 by 121 feet; cost \$10,000; B. Webber, builder. F. Yealman, two-story brick dwelling, 24 by 37 feet; cost \$5,000; Chelsman & Kristie, builders. Alton Box Company, two-story brick factory building, 58 by 33 feet; cost \$8,000; sublet. W. F. Stugueson, two-story brick dwelling, 40 by 28 feet; cost \$5,000; J. B. Lindsley & Son, builders. Dr. W. J. Harris, two-story brick dwelling, 30 by 42 feet; cost \$6,000; J. B. Lindsley & Son, builders. H. Campbell, three-story brick warehouse, 28 by 100 feet; cost \$9,000; J. B. Lindsley & Son, builders. J. Martin, two-story brick dwelling, 24 by 61 feet; cost \$8,000; Anderson & Bro., builders. J. E. Kanne, two-story brick dwelling, 44 by 45 feet; cost \$5,000. J. B. Lindsley & Son, six two-story brick dwellings, 96 by 44 feet; cost \$10,000; J. B. Lindsley & Son, builders. D. K. Ferguson, two-story brick dwelling, 28 by 65 feet; cost \$6,500; R. P. McClure, builder. C. E. Nixdorf, two-story brick dwelling, 28 by 24 feet; cost \$6,500; Francisco & Sangumett, builders. J. E. Koch, two-story brick store and dwelling, 37 by 78 feet; cost \$8,000; Klute & Hildebrand, builders. Mrs. S. B. Scudder, four two-story brick tenements, 56 by 44 feet; cost \$5,000; H. E. Fryday, builder. E. V. P. Ritter, two-story brick dwelling, 38 by 45 feet; cost \$6,000; Lester & Halley, builders. M. Deckelmann, two-story brick dwelling, 22 by 67 feet; cost \$6,000; A. Dietz, builder. G. O. Hall, two-story brick dwelling, 23 by 55 feet; cost \$6,000; H. E. Roach, builder. Mrs. F. E. Fisher, two-story brick dwelling, 42 by 50 feet; cost \$6,500; H. Kohlmeier & Son, builders. R. W. Shapleigh, two-story brick dwelling, 39 by 40 feet; cost \$9,000; F. Hallemeier, builder. Ursuline Academy, three-story school building, 78 by 57 feet; cost \$14,000; W. C. Papp, builder. Mrs. M. C. Johnson, three-story brick dwelling, 21 by 55 feet; cost \$5,000; A. E. Cook, builder. B. Brontio & Co., two-story brick dwelling, 36 by 60 feet; cost \$7,400; L. Horman, builder. Commercial Building Company, eight-story office building, 127 by 116 feet; cost \$400,000; sublet. Mound City R'y Co., one-story brick shop, 113 by 145 feet; cost \$5,000; J. O. Malley, builder. E. Riecker, two-story brick flats, 25 by 84 feet; cost \$8,000; H. R. Becker, builder. L. W. Bushmann, block of brick dwellings, 71 by 35 feet; cost \$8,000; F. M. Easterday, builder.

[Continued on page xiv.]

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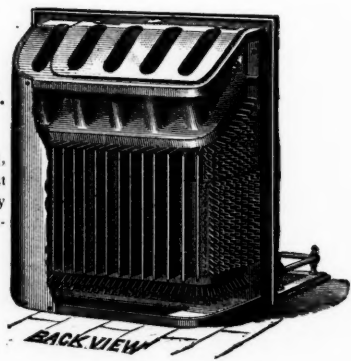
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[Continued from page 86].

South Evanston, Ill.—Architect Otto H. Matz, of Chicago, is preparing plans for E. W. Griffin for a brick and frame residence, to cost \$6,000.

Springfield, Ill.—Architect George H. Helmle reports: Outlook favorable. For George Pasfield, three-story pressed brick and stone store and office building, 47 by 70 feet; cost \$22,000; projected; plans completed. For Leonard Mathies, brick and stone store and flats, 72 by 60 feet; cost \$9,000; under way; Wicks Bros. and Hollings & Son, builders. For Hugo Thoma, three-story pressed brick and stone store building, 25 by 65 feet; cost \$7,000; under way; H. Bettenhaus, builder. For Rosanna Miller, two-story pressed brick and stone store building, 30 by 60 feet; cost \$6,000; J. L. Powell, builder. For Gus. Kuorn, two-story brick and stone store building, 25 by 65 feet; cost \$4,500; projected; drawings completed. For Geo. L. Blood, three-story brick and stone store building, 33 by 60 feet; cost \$4,800; projected; drawings completed. For Thayer & Cappel, two-story addition to woolen mills, 40 by 75 feet; cost \$4,000; E. F. Gehman, builder. For T. C. Kimber, two-story dwelling, 40 by 40 feet; cost \$6,500; J. L. Powell, builder; heating and wood mantels not yet contracted for. For G. A. Kimber, two-story dwelling, 30 by 32 feet; cost \$2,500; J. C. Whipple, builder. For J. N. Gatton, two-story dwelling, 40 by 40 feet; cost \$3,200; under way; Bush & McKee, builders. For W. C. Sommers, two-story dwelling, 32 by 50 feet; cost \$3,500; J. L. Powell, builder. For Peter Halfen, two-story dwelling, 30 by 48 feet; cost \$2,500; projected; drawings completed. For Board of Education, four-room brick and stone school building; cost \$10,000; projected; drawings completed. Also improvements on old school building; cost \$3,600; day work.

St. Cloud, Minn.—Architect A. E. Hussey reports: For Hon. J. P. Wilson, two and one-half story and basement brick-veneered residence, 32 by 70 feet; native pressed brick, shingle roof, hardwood finish; cost \$10,000; under way; H. Husback, superintendent; day work. For First Baptist Church, frame building, with gallery and stone basement, 52 by 76 feet; cost \$8,000; under way; Kopp & Delaney, builders. For school board, First Ward school building, 84 by 69 feet; native brick, granite trimmings, two stories and basement; Rutman system of heating, ventilating and cold closets; cost \$16,000; under way; Kropp Bros., contractors. For N. Lahr, block of two stores; pressed brick fronts, granite trimmings, two stories high, 42 by 80 feet; cost \$5,000; under way; A. Larson, contractor. For J. E. West, addition, 44 by 120 feet, to four-story hotel, brick-veneered; cost \$20,000; carpenter work by the day; A. Larson, brick contractor. For F. R. Bushkirk, two-story frame dwelling; cost \$3,000; under way; John J. Wall, contractor.

St. Paul, Minn.—Architect A. F. Gauger reports: For Mr. Fogelberg, two-story brick veneer building, 28 by 48 feet, Kasota stone; cost \$7,000. For Joseph Harrison, two-story and basement frame dwelling, 32 by 48 feet; cost \$5,000.

Architect J. W. Stevens gives as work being done and to be done by him this season the Model Steam Laundry building, on Sixth and John streets, to cost \$15,000; a residence for Mrs. B. W. Davidson, on Summit avenue near Mackubin, to cost \$20,000; blocks for N. R. Frost, on Western avenue, at \$7,500, and on Fourth street, at \$8,000; residences for S. B. Gault, on Holly avenue, \$10,000; for F. W. Anderson, on Lincoln avenue, \$5,000; for F. D. Hager, on Virginia avenue, \$15,000, with a barn at \$5,000; for Nathan Ford, on Dayton avenue, \$10,000; and one for the architect himself, on Holly avenue, at \$5,000. In addition to this he has under way plans for the new six-story business block of Mr. Mayall, on Jackson street, to cost \$40,000; a like building for DeCoster & Clark, in the same locality, to cost \$40,000; an office for Stone & Morton, on Robert street, \$5,000. The addition to the First Baptist church on Waukuta street, in the form of a chapel, has also been built by Mr. Stevens, at a cost of \$18,000; completed this spring. In the new town or division known as North St. Paul, about which so much has lately been written, Mr. Stevens is planning work to amount to fully \$125,000; this includes a hotel, stores and offices, and dwellings.

Architects Wilcox & Johnston, the central building of Macalester College, corner Summit and Snelling avenues, to cost \$35,000; the city and county hospital, two pavilions fronting Jefferson boulevard, brick and stone; cost \$50,000. Additions to Van Buren school, Dayton's Bluff, brick, stone trimmings, eight school rooms; cost \$29,500. Residence A. H. Wilder, Tiffany brick and brownstone; cost \$50,000. Residence T. L. Schurmeier, Crocus Hill, Chicago pressed brick and brownstone. Residence R. R. Dorr, Crocus Hill, stone and brick; cost \$20,000. Residence J. T. McMillan, Wabasha Hill, brick and brownstone; cost \$15,000. Residence George C. Stone, Central park, brick and brownstone; cost \$27,000. Residence Messrs. Bement and Cary, Central park, brick and brownstone; cost \$18,000. Residence R. B. Wheeler, corner Avon and Summit avenue. Residence Mrs. Campbell, corner Prospect and Vine streets, frame; cost \$8,000. Residence G. O. Nettleton, Pleasant avenue frame; cost \$5,500. Block of residences for William C. Riley, brick and brownstone, corner Nina and Laurel avenues; cost \$60,000. Block of residences for Dr. Wharton, Tenth street near Jackson, brick and stone; cost \$20,000. At the corner of Dayton and Virginia avenues "The Aberdeen" is to be erected, seven-stories high and basement, fireproof, red sandstone and brick. The apartments will be fitted up with every modern convenience, strict attention to ventilation will be paid, heated throughout by steam and lighted by both gas and electricity. There will be many balconies projecting from the stories above the first and upon the roof, which will be tiled.

Architect H. S. Treherne is busy at work upon the plans for combined club house, apartment building, natatorium and cavalry headquarters. It will be about 300 by 150

feet in size, a part of it three and a part five stories in height; the total cost of the building alone will be about \$250,000. It will not commence before fall.

Architect E. S. Radcliff has under way a residence for F. J. Schultz on Grant street, near the residence of William R. Merriam, to cost \$16,000; one for Adam Worley, in West St. Paul, to cost \$6,000; another for J. P. Hawley, on Portland avenue, to cost \$7,000; one for Thomas Riley, on Laurel avenue, to cost \$12,000; and one for W. B. Banks to cost about \$10,000. He is also preparing plans for a block of ten tenements for Mr. Banks to cost \$30,000, and for a block of stores at Merriam Park to cost \$12,000, to be owned by Chamberlain & Brainerd.

Architect D. W. Millard: A block for H. H. Herbst on Chestnut and West Seventh, to cost \$6,500; a residence on Holly avenue for M. G. Brown, to cost \$8,000; another on Grand avenue, for L. T. Lawton, \$8,000.

Architects Hodgson & Stem: An apartment building at the corner of Tenth and St. Peter, built by J. R. McMurrin; it will be five stories high, of stone and brick, the first floor to be devoted to stores, the remainder to apartments; each apartment will contain from eight to ten rooms. There will be a regular steam heating and electric service throughout; the cost will be \$125,000. For E. Felderhauser, fifteen houses, built of brick, stone and terra-cotta, with tile roofs; the court formed by the houses will be fitted up as a park; a central plant will furnish steam heating and electric lighting; the total cost will be \$135,000. Three houses are to be built for the same party on Nelson avenue at \$15,000. For J. R. McMurrin, residence at St. Anthony Park, \$25,000. Tenement houses for J. P. Gribben and J. J. Watson, \$20,000; residences for themselves at Holly and Kent, \$14,000. A block for J. R. McMurrin at \$25,000. The Como Hotel and Club House, \$20,000. Four houses for McClung & McMurrin, on Langford and Breda avenues, \$20,000. Residences for J. J. McCarty at Dayton and Kent, \$8,000; for H. P. Rugg, on Summit, between Selby and Nina, \$30,000; for A. B. Wilgus, West St. Paul, \$8,000; for F. S. Kirkpatrick, on Holly avenue, \$7,000.

Architects Wirth & Haas: Central Park Methodist church will be a notable one. It is being built at the corner of Minnesota and Twelfth streets, of Dresbach stone, with a foundation of Bayfield sandstone. The cost of the building alone will be \$45,000, the total cost of the completed structure, with all the furnishings, \$80,000. The firm has also been building the Esby block on Fourth street, a fine building of Kettle river sandstone, with Bayfield trimmings and attractive carving. The cost is about \$20,000. Among the other buildings by this firm are: A residence for Fred S. Bryant on Portland avenue, \$6,000; one for Samuel Magoffin on Summit avenue, to cost \$15,000; a residence for Mr. Bishop on Summit avenue, to cost \$12,000; a residence at Hamline for George H. Hazzard, to cost \$10,000, and other buildings of less value in different parts of the city.

Architects Hamilton, Zschocke & Turner: Block of stores and flats, Concord street, for W. Berlandt, \$20,000; German Catholic church, Robie and Hall, \$16,500; block of three houses on Exchange street for W. Barteau, \$15,000; residence for Jacob Hammer on Franklin street, two stories and basement, \$7,000; five school houses for the city of South St. Paul, \$4,000 each; warehouse for Griggs Bros. on Fillmore avenue, \$12,000; double store building for Whitwell Bros. on Duca street, \$12,000; three-story double stores and flats for Mr. Highhouse on Dakota avenue, \$13,500; residence on St. Anthony Hill, cost \$15,000; ten houses for Paul Martin, West St. Paul, cost \$1,500 each.

Topeka, Kan.—Contracts for stone, iron and brickwork on the central building of the Kansas State Capitol will be let June. McDonald Bros., architects, Louisville, Ky., or Secretary of State, Topeka, may be addressed.

Warren, Ohio.—Architects Kanengeiser & Kling, of Youngstown, report: For J. M. Thurman, two-story brick store building, 20 by 70 feet; projected; cost not estimated.

Watertown, Minn.—Architect H. G. Carter, of St. Paul, reports: Brick and stone opera house building; cost \$20,000; work to commence at once.

Wichita, Kan.—Architects Terry & Thompson, report: For J. C. Mossman, two two-story frame dwellings; cost \$5,000; G. W. Loser and J. S. Moad, builders. For Joseph Mossbacher, two-story frame dwelling; cost \$7,000; H. W. Finch, builder. For M. L. Garver, two-story brick dwelling; cost \$9,000; Jackson & Plank, builders. For A. W. Bittling, two-story brick dwelling; cost \$15,000; sublet. For M. P. Barnes & Son, three-story business block, brick and cutstone, 100 by 110 feet; cost \$30,000; sublet. For J. A. Jones, two-story frame dwelling; cost \$6,000. For G. M. Boyd, two-story frame dwelling; cost \$6,000; day work. For Mrs. C. A. Fitzgerald, two-story frame dwelling; cost \$5,500; J. A. Nixon, builder. For Finlay Rasmussen, two-story brick dwelling; cost \$9,000; J. S. Moad, builder. For Dr. Wm. A. Jordan, two-story frame dwelling; cost \$5,000; sublet. For Wm. Fletcher, two-story brick dwelling; cost \$11,000. For Wm. Fletcher, four-story office building, 50 by 140 feet; brick and cutstone; cost \$60,000; sublet. For Baughman & Fruman, two-story hack barn, 75 by 120 feet; brick and cutstone; cost \$15,000; sublet. For Schweiter & Mossbacher, three-story brick business block, 75 by 110 feet; cost \$25,000. For J. R. Snively, two-story frame dwelling; cost \$7,000. For Arthur Lefevre, two-story frame dwelling; cost \$4,000; J. A. Nixon, builder. For Midland R. R. Co., two frame dwellings; cost \$3,000; Whitcomb & White, builders. For O. D. Kirk, two-story frame dwelling; cost \$6,000. For Fred Smith, two-story frame dwelling; cost \$2,500. For Mr. Bruggemann, two-story frame dwelling; cost \$2,500. For J. C. Bentley, two-story frame dwelling; cost \$7,000.

Wyandotte, Mich.—Architects Van Leyen & Preston, of Detroit, report: For Wm. Smith, two-story frame dwelling, 29 by 52 feet; cost \$5,000.



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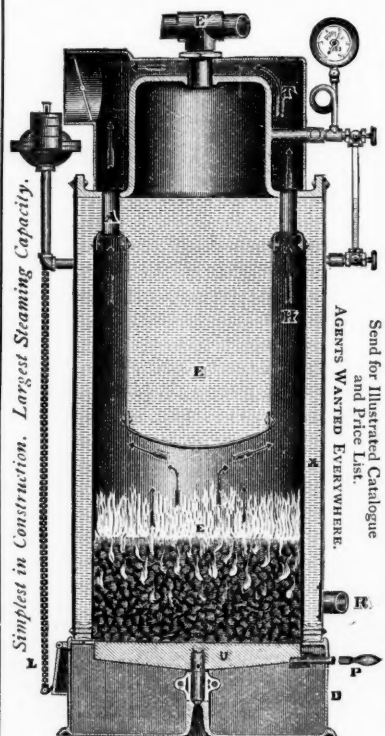
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NOTICE TO ARCHITECTS.

PLANS FOR COURT HOUSE.

The Board of Commissioners of Vanderburg county, Indiana, will receive competitive plans for a new court house for said county, at Evansville, Indiana. Architects competing will deposit their plans with the Auditor of said county, on or before the 15th day of June, 1887, at 4 o'clock, P.M.

The cost of the building completed must not exceed four hundred thousand dollars (\$400,000) and must be constructed strictly fireproof throughout the entire structure. Said court house is to be located upon a lot of ground 300 by 300 feet square, and to have four fronts, with grand entrance fronting the streets bounding said lot or court house square. Said plans must be of a uniform method of presentation, drawn to a uniform scale of one-eighth ($\frac{1}{8}$) of an inch to the foot, put up in portfolio form. Said drawings must be free from all coloring, and done only in black lines and pen shading. Each design shall consist of plans of foundations, each floor, roof, plan, transverse and longitudinal sections through the building. Elevations of the four fronts of said building with such details as will be necessary to clearly develop the principal parts of construction. Each design shall bear only the motto of the author. No plans will be considered which do not conform to these requirements.

The Board of Commissioners will pay to the architects of the three best plans the following sums, to wit: For No. 1, the sum of \$500; for No. 2, the sum of \$300; and for No. 3, the sum of \$200; the said premiated plans to become the property of the county upon the payment of said premiums, with the right to use the whole, or any part, or any modification thereof, without further claim from the authors for compensation or employment.

Carefully prepared detailed estimates of the cost of erecting and finishing the building will be required to accompany each plan submitted.

The Board of Commissioners reserve the right to reject any and all plans submitted.

By order of the Board of Commissioners.
JAS. D. PARVIN,
Auditor Vanderburg County.

TO ARCHITECTS.

The Board of City Hall Trustees of Cincinnati invite competition in designs for a new city hall; all designs to be submitted on or before July 15, 1887.

A plat of the ground to be occupied, and all other necessary information, will be furnished to architects desiring to compete upon application to the board.

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will be received at the office of the Sheffield Hotel Co., Sheffield, Alabama, until June 20, 2 P.M. Plans and specifications can be seen at company's office at Sheffield, and at the office of H. Wolters, architect, Louisville, Ky. All proposals must be accompanied by a certified check of \$1,000 payable to A. J. Moses. The right to reject any or all bids is reserved.

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FOR THE CONSTRUCTION OF THE

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WASHINGTON, D. C., May 26, 1887.

Notice is hereby given to all owners of building-stone quarries who choose to submit samples for the various stone works of the Congressional Library Building, at Washington, D. C., to forward the same to this office, prepaid and carefully packed. They should consist of four (4) one (1) inch cubes, smoothly rubbed on all sides (not polished); two (2) eight (8) inch cubes, with one side quarry-faced, one side chiseled, one side hammer dressed, one side ten (10) cut work, one side bush-hammered, if granite, and one side polished.

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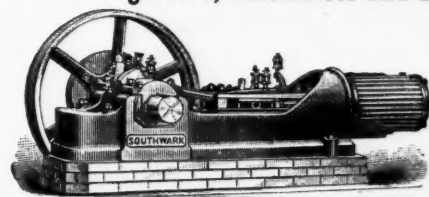
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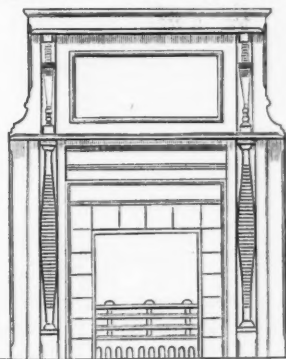
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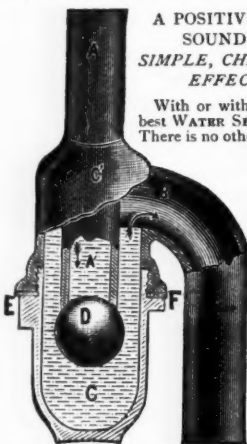
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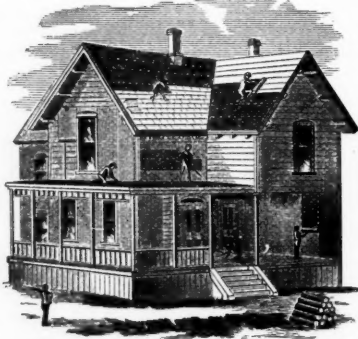
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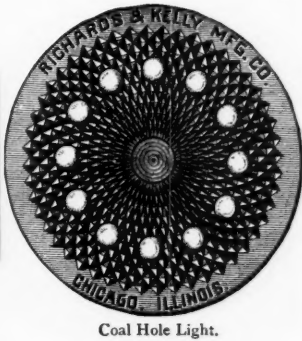
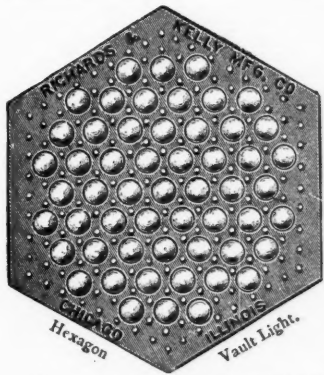
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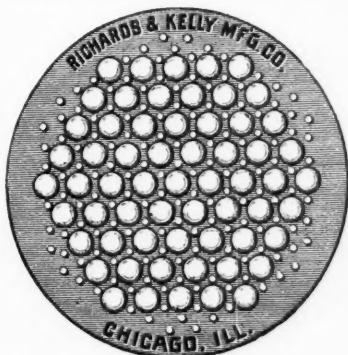
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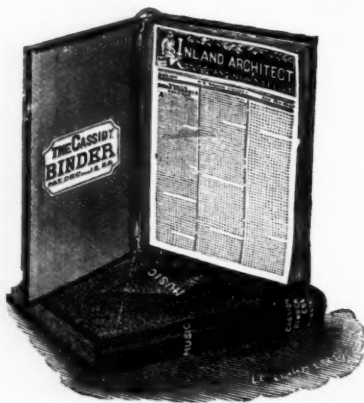
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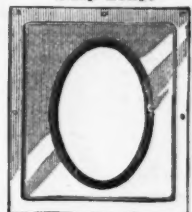
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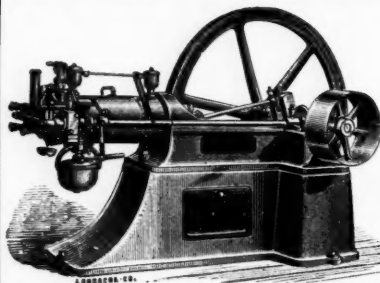
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2½, 3 & 4 in. 32 00 @ 38 00

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Butternut, 1st & 2d, 1 in. 40 00 @ 45 00

1½ & up 45 00 @ 50 00

Sycamore, 1st & 2d, 1 in. 20 00 @ 25 00

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Boards, D 1 s. 33 00 @ 35 00

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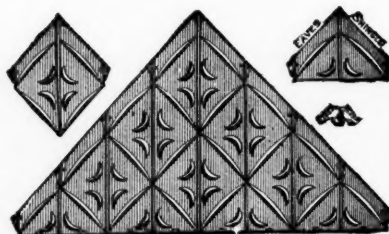
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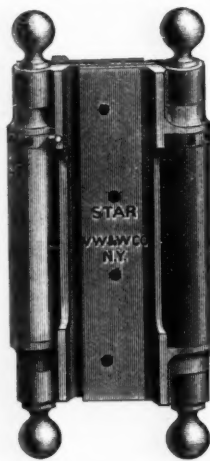
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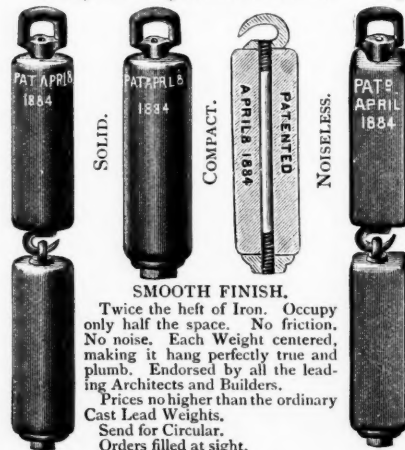
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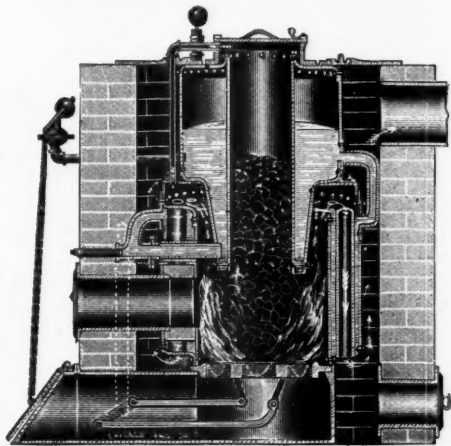
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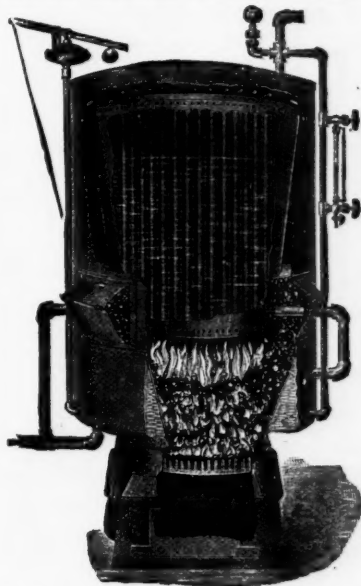
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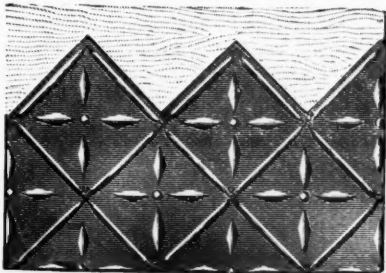
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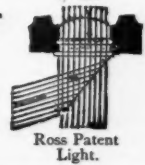
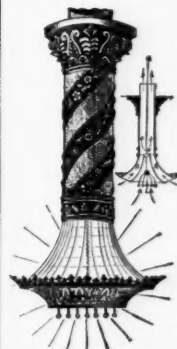
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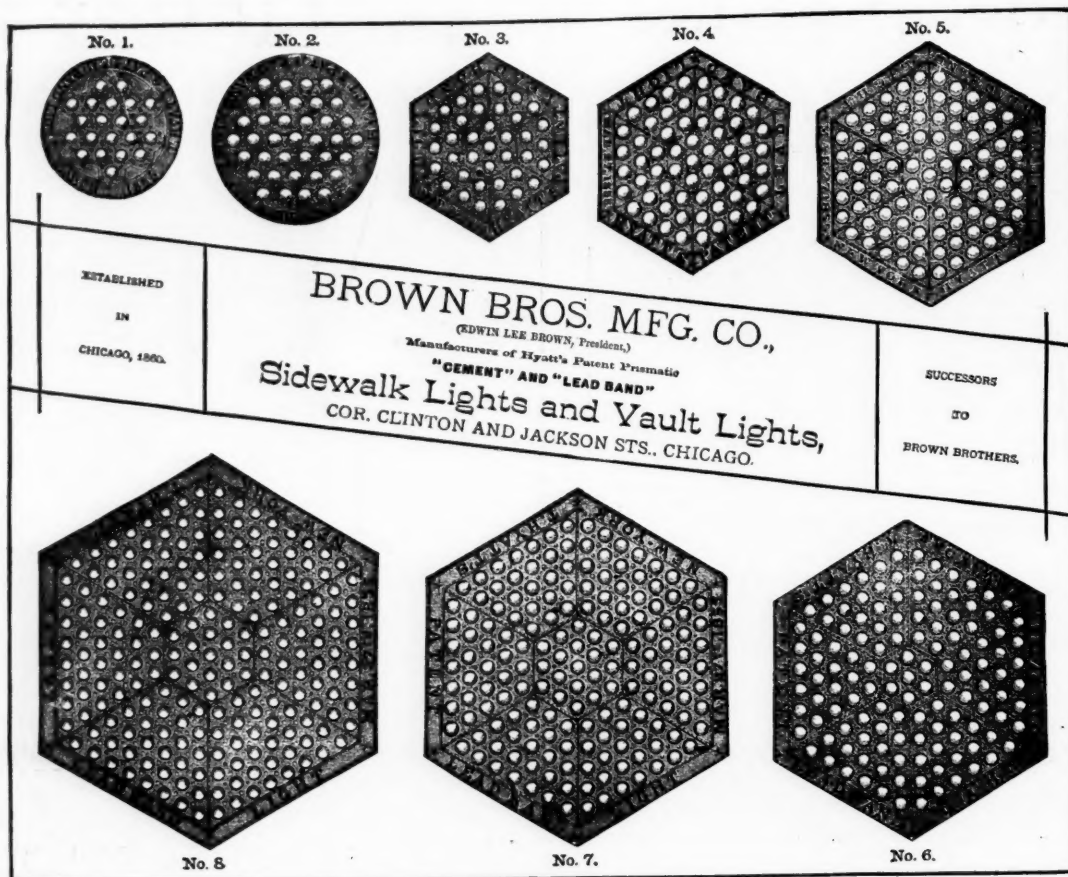
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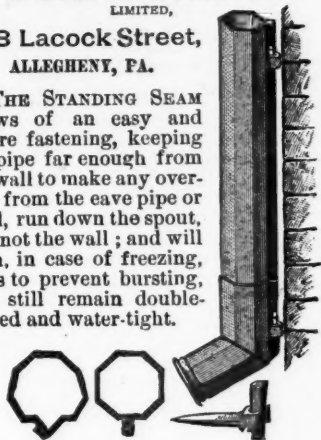


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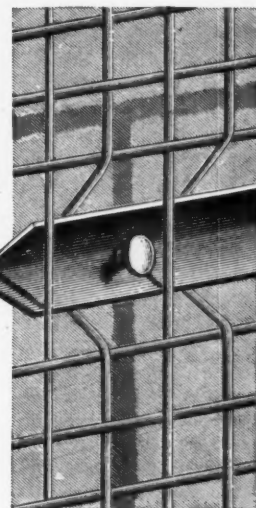
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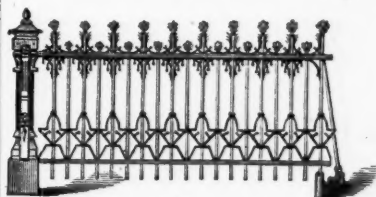
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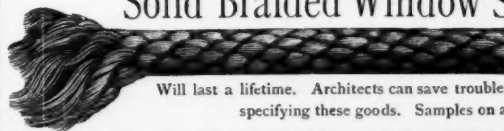
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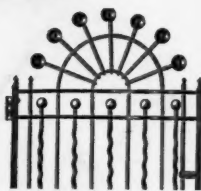
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