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WITH this number, subscribers to the photogravure edition will receive the first set of plates, which are confined to reproductions of a high class of Chicago residences. In future numbers, besides residences, we shall give views of office buildings, schools, churches, store-fronts, interiors, etc., aiming in our selections to give the best examples of each, without regard to locality.

STATE associations were formed in Kentucky and Tennessee, in February, and complete the formation of all the western states except Michigan, and the southern, excepting those bordering on the gulf. Of these, Texas formed a year ago, and now word comes from Alabama, Georgia, and Louisiana, that movements looking toward formation are about to be inaugurated. The architects of western New York will shortly meet at Buffalo, in response to a call to be issued by the Buffalo Society, and even in California the best architects are contemplating the advantages of association, and a state meeting will probably be called before another issue of this journal. So rapid a consummation of a movement that three years ago was little more than a dream in the mind of, perhaps, a single individual, is one of the strongest of evidences that the Western Association of Architects, and the complete association by states was needed, and has been found most valuable by the profession, and next to that evidence of requirement is illustrated the earnestness and wisdom of those architects who have, and are now giving their best thought and energies to the work.

WE have from time to time brought before our readers the steps being taken to form a Canadian society of civil engineers, and we now take pleasure in announcing it as an accomplished fact. On the 24th of last month, a largely attended meeting was held in Montreal, on the anniversary of the first meeting held in Toronto, called by Alan Macdougall, to promote the society. The meeting was enthusiastic. The ballot resulted in placing Messrs. Thos. C. Keefer, C.M.G., Ottawa, as president; Walter Shanly, M.P., Montreal, Col. Gzowski, Toronto, John Kennedy, Montreal, vice-presidents; Prof. H. T. Bovey, Montreal, secretary-treasurer; Alan Macdougall, H. D. Lumsden, Toronto; H. F. Perley, H. N. Gisborne, Ottawa; W. L. Poole, Hellarton, N. B.; Hurd Peters, St. John, N. B.; S. Keefer, Rockville; W. T. Jennings, London; H. N. Ruttan, Winnipeg; P. W. St. George, E. P. Hannaford, H. Wallis, Prof. Sovey, L. Lesage, P. A. Peterson, Montreal, council. Montreal was chosen for headquarters, by a majority of three to one over Ottawa and Toronto. A pleasant *conversazione* was given by the resident members, in the Redpath Hall of McGill University, which was attended by a large and fashionable assemblage. Sir William Dawson, the venerable president of the university; Mr. Curran, M.P. for Montreal, and Mr. Kennedy, vice-president, delivered addresses of welcome. The roll of members starts with two hundred and eighty names, with numbers of applicants coming in daily. We learn that application is shortly to be made to parliament for an act of incorporation for the whole dominion. We extend to the young society our hearty good wishes for its prosperity. Its birth has taken place under the brightest auspices, and we hope it will live to a golden old age, and be a medium of benefit to one of the most learned and practical of all professions.

A CIRCULAR letter, which has been issued to architects of the cities of western New York, by the Buffalo Society of Architects, may need some explanation. The Buffalo society has already recognized the great value of organization locally, but there are many necessities arising in architectural practice which call for united action by the profession in the state, and this consultation is called for the consideration of these necessities, and the forming of a state association, not only to meet them, but for the general advancement of the profession. The circular reads as follows:

BUFFALO SOCIETY OF ARCHITECTS,
SECRETARY'S OFFICE, 57 CHAPIN BLOCK,
BUFFALO, N. Y., March 2, 1887.

The undersigned committee has been appointed to correspond with the architects of New York, regarding a convention to form a state architectural association. Although our society has been organized less than one year, we think every member has been benefited by the more intimate acquaintance, and interchange of ideas; but we feel the need of a more extended organization, to enable us to deal with those questions of legislation which must sooner or later be brought before the profession.

We would respectfully solicit your opinion of the subject, both with regard to the time and place of meeting, should one be called, and the general character and scope of the organization.

Awaiting your early reply, we subscribe,

LOUISE BETHUNE,
CHARLES R. PERCIVAL, } Committee.
W. W. CARLIN.

The entire subject outlined in this circular should receive the careful consideration of the members of the profession it addresses, and any doubts regarding the benefits of a state association should be weighed against the fact that the separation of the profession, as a whole, and the lack of acquaintance, not to speak of united feeling and action, has been the cause of much mistrust between architects, and a lack of professional *esprit*.

NOTHING new has transpired in regard to the National Convention of Master Builders, to be held in Chicago on March 29, 30 and 31, except that the formation of exchanges, and the appointment of proper delegates, is occupying the attention of the craft east and west. Active preparations are being pushed forward in Chicago to give these delegates a royal reception, and the different sub-committees in charge of entertainment, hotels and railroads, etc., will have full arrangements completed before the day arrives. The delegates will register, as far as possible, at the Grand Pacific Hotel. The convention will be held at that hotel, and also the banquet will be given there on the evening of March 31. In cities where the formation of an exchange is not completed the work should be terminated at once, so that the master builders of each city will have full representation in this, to them, most important convention.

IT is probable that in many building contracts made this season a "strike clause" will be incorporated, by which the contractor is relieved from responsibility for delay caused by a strike of his workmen. The experience of several seasons has shown that, where there is no such provision, the workmen have it in their power to force the employer to an issue, in which the result is determined, not by the justice of their complaints, but by the predicament in which the employer is placed by a strike, which so delays fulfillment of his contract as to render him subject to the penalty for a violation of the time clause. To obviate this, owners and contractors have mutually agreed upon a saving clause, in case of delay caused by strikes, which will render futile any attempt to take advantage of the contractor in such a way and at such a time. This is a much needed concession from owners; but it should be pointed out that such a clause, unless carefully guarded, will prove a very convenient shield for an unscrupulous contractor who, seeing that it will be to his advantage for any reason to postpone the fulfillment of his contract, may so handle his workmen as to make a strike practically inevitable. Such a use of the

"strike clause" by a contractor may be prevented by placing with the architect the power to decide on the merits of the issue between the contractor and his men; and, in case he finds that the strike is the fault of the contractor, and kept in operation through his fault, to cause the contract to be canceled, or new men to be put on the work, as for any other unwarrantable delay.

ARCHITECT THOMAS WALSH, of St. Louis, has placed the architects of this country under a lasting obligation to himself, for contesting, single handed and alone, with a wealthy corporation, the principle that promises made by the promoters of a competition constitute a valid contract which the courts can and will enforce. This litigation has covered a period of three years, and was carried up to the supreme court of the state, which has rendered a decision sustaining the plaintiff in every particular. The facts are briefly these: In April, 1883, Mr. Walsh received a letter from the St. Louis Exposition and Music Hall Association, inviting him to submit plans for a building to cost \$400,000, in competition with other architects, on certain specified conditions. One of these conditions was that certain designs selected as superior to the rest should be premiated in the sum of \$500 each, but that "the architect who is successful shall not receive \$500, but he shall be engaged as architect and superintendent, and shall be paid for performing such duties, the usual commissions as adopted by the American Institute and the St. Louis Institute of Architects."

MR. WALSH notified the committee in writing of his acceptance of their invitation, and at the proper time and place he presented his drawings according to the instructions given. His design was pronounced the best of all submitted, but after considerable delay and negotiation with various parties, the directors decided not to engage Mr. Walsh as their architect and superintendent, but to employ one architect to make plans according to their instructions, to engage another architect to make the elevations and to intrust the superintendence to a building contractor who had secured their confidence. Mr. Walsh testified that he offered to perform the duties of architect and superintendent and declined other business in the expectation that the exposition work would engross all his attention. The association having refused so to employ him, he sued for five per cent on \$400,000, amounting to \$20,000, and was completely successful, the court of appeals and the supreme court both sustaining his plea.

THE defense set up by the St. Louis Exposition Association was, that their proposal had no binding force on them at all, being general and not addressed to any particular individual, and being "without consideration," also that their invitation to competitors was "so indefinite, uncertain and ambiguous that it can furnish no intelligible and certain basis for a contract." But the courts ruled that general proposals become particular as soon as their conditions are complied with by anyone, that the amount of time and skill applied by plaintiff in preparing his plans was as truly a "consideration" as anything else, and was amply sufficient to establish a contract, also that there was no questioning the interpretation which the exposition directors intended that competing architects should place on their artfully worded invitation, and such meaning would be sustained by the courts in the interest of public morals. Quoting Lord Mansfield on interpretation of contracts, it was ruled that "the basis of all dealings ought to be good faith."

DETROIT has been for some time agitated over the improvements of Belle Isle for park purposes, and the matter has attracted considerable attention in the country at large because Fred Law Olmstead, the well-known landscape architect, was first engaged as architect. We have taken considerable pains to ascertain as fully as possible the present status of the case, and the nature and amount of the proposed improvements. The island, which covers about 700 acres, is a most beautiful spot naturally, and is capable of being made one of the most attractive parks in the country. While we cannot learn officially that any specific appropriation was made for the entire carrying out of Mr. Olmstead's plans, as he only made preliminary studies, it is probable that only preliminary appropriations were made. In 1882, \$20,000 was appropriated; in 1883, \$25,000; in 1884, \$32,500; in 1885, none; in 1886, \$28,500. This total of \$106,000 has been used in carrying out a small part of Mr. Olmstead's plans on the lower end of the park. The sum Mr. Olmstead has received for services is \$6,000, with \$1,000 still unpaid.

MR. OLMSTEAD'S plans have now been abandoned, and future operations have been placed in the hands of Donaldson and Meiers, of Detroit, a firm of regular architects in good standing. They have already completed a very appropriately designed casino for the lower end of the park. There will be no appropriation asked for this year, as the park commissioners will have the proceeds of \$100,000 of city bonds, and with this money the architects expect to thoroughly drain the island from the lower to the upper end and get their general plan outlined. The improvements contemplate emphasizing the natural formation of the island, the drainage, cutting canals and small lakes, and laying out roadways in as natural a manner as possible and at a large saving in expense. One fine feature will be a boulevard around the entire circumference of the island. The abandonment of Mr. Olmstead's plans cannot detract from that architect's reputation, as that is too well established, and can only result in a loss of finish and elegance to the park; though it is satisfactory to know that since the work has been transferred it is placed in the hands of architects with some reputation for capability.

MR. GEORGE W. COPE, who has for a number of years been connected with, and, latterly, been the secretary of the American Iron and Steel Association at Philadelphia, has resigned that position and assumed the management of the Chicago office of the *Metal Worker* as resident associate editor. That journal modestly says:

Mr. Geo. W. Cope resigned the secretaryship of the American Iron and Steel Association at the beginning of the year, and has gone to Chicago as Resident Associate Editor of the *Metal Worker* in that city. The desirability of supplementing the efficient services of the manager of our Chicago branch office, Mr. J. K. Hanes, by such an addition to our staff, has been contemplated for some time, and we have waited Mr. Cope's convenience in resigning the important office he has so creditably and successfully filled. It was mutually desired that the change should inconvenience as little as possible the management of the American Iron and Steel Association, and for this reason Mr. Cope has postponed until now entering upon his new field of work. Mr. Cope's duties will be wholly editorial, and will involve no change in our established branch offices or their management. He is a brilliant journalist, with a wide personal acquaintance, and an intimate knowledge of the trades represented by the *Metal Worker*. We consider his acceptance of the important post to which he is assigned a cause for congratulation. We invite for him the confidence with which the editorial management of this journal has always been regarded, and trust that from personal contact with men and happenings in the West, he will be able to reflect western views and western interests more fully and ably than has ever been done in the columns of a trade newspaper.

In congratulating the *Metal Worker* upon this acquisition, which places it first in the list of journals devoted to the manufacture of and trade in metals in this country, we cannot but regret the loss sustained by the American Iron and Steel Association, the chief conservator, as well as the barometer, of the iron interest in the United States, the influence of which is felt in every country with which we sustain commercial relations. We bespeak for Mr. Cope a hearty welcome, not only because of the journal he represents, but because of his sterling qualities as a gentleman and a journalist.

The Disposal of Sewerage of Isolated Country Houses.*

BY WILLIAM PAUL GERHARD, C. E., CONSULTING ENGINEER FOR SANITARY WORKS.

(Continued from Vol. IX, No. 1.)

ANOTHER example of a constant round in Nature is afforded by the circulation going on between animal and vegetable life. Plants are nourished, and grow upon decomposed animal matter, effecting a change of those substances which might become dangerous to animal life, into harmless food substances for the roots of plants. The same plants, perhaps, form the nourishment for man and animals, and are again discarded to feed vegetation.

The whole process of water circulation has never been better described than in the words of Mr. F. O. Ward, at the General Congress of Hygiene, at Brussels, in 1856. These words, quoted by Mr. Edwin Chadwick, the Nestor of sanitary science in England, in an address on "Circulation or Stagnation," are as follows:

"The water which falls on the hills in a state of purity undergoes a natural process of filtration through sand, enters the rural collecting pipes, and passing through the aqueduct to the metropolitan distribution pipes, finds its way to every story of every house in the town; whence again, after having supplied the wants of the inhabitants, it runs off, enriched with fertilizing matter, which it carries away before allowing it time to ferment. This manure, driven along irrigation pipes, is deposited in the soil leaving the water to pass into drainage pipes, and flow on to the rivers. The rivers conduct it to the ocean, where it rises as vapor under the heat of the sun, to redescend as rain on the hills, enter again the collection pipes, and recommence its vast and useful course of circulation."

But let us return to the consideration of the application of sewage from isolated country houses to land. The conditions of successful application are a sufficiently large area of suitable, absorbent, well aerated, properly prepared and thoroughly underdrained soil. I should, perhaps, add to these a few other conditions, namely, the proper and judicious management, careful and equal distribution, and, before all, the *intermittent* application of sewage to the soil, which latter is so needed to insure its aeration.

The land selected for the purification of the sewage should not be located too near to a dwelling. In particular, if wells are used, it should be kept at a safe distance from them, the exact distance depending not so much on the configuration or slope of the surface as upon the inclination of the underground geological formation and strata.

We may distinguish several systems, namely, broad sewage irrigation, intermittent downward filtration and sub-surface irrigation. The Report of the Royal Commission on Metropolitan Sewage Discharge, published in 1884, defines broad irrigation as "the distribution of sewage over a large surface of ordinary agricultural ground, having in view a maximum growth of vegetation, consistent with due purification, for the amount of sewage supplied." The same report speaks of intermittent downward filtration as "the concentration of sewage at short intervals on an area of specially chosen porous ground, as small as will absorb and retain it, not excluding vegetation but making the produce of secondary importance." In the first system, the sewage flows principally *over* the land, in the latter system it passes *through* the land. Sub-surface irrigation is a modification of the filtration system, in which the sewage is distributed in a network of tile pipes, close under the surface of the ground, whereby all offense to sight or smell is at once overcome. It is obvious that this is an important consideration wherever sewage irrigation is to be practiced close to a dwelling house.

Broad irrigation requires very large areas of land. The land must not be continuously flooded, so that in order to manage an irrigation farm successfully, it is, at least, advisable to have pieces of fallow land, and to distribute the sewage on different portions on alternating days. By passing sewage through a properly prepared filtration area, we are enabled to effect the purification of a much larger volume, provided we maintain an intermittent discharge, so as to secure thorough aeration.

In all methods of application of sewage to land, it is advisable to intercept, at least, the coarser suspended organic matters contained in sewage, which should be dealt with separately. The irrigation field must in all cases be properly and thoroughly underdrained. The preparation of the surface of the land should be simple and inexpensive, and must depend somewhat on the general topography of the field, as well as upon the kind of vegetation which it is intended to raise from sewage. It is important that the sewage be distributed evenly and in as fresh condition as possible. Much the best plan to secure an intermittent discharge and to avoid an irregular and trickling flow, is to collect the sewage from the house in a self-acting flush-tank. Wherever possible the sewage should be conveyed to the latter by gravitation, and the location of the irrigation field should

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be selected accordingly. Occasionally, however, pumping becomes a necessity, and this may be accomplished either by a steam pump, a gas or hot air engine, or a windmill.

I shall, hereafter, dwell more at length upon the sub-surface irrigation system, and shall explain some of its details, because I regard it as the best available system for the disposal of liquid and semi-liquid wastes of isolated country houses. Before doing so, it may be well to sum up what I have said about the methods available for disposing of sewage of isolated country houses.

Such houses as are not in reach of sewers can dispose of their liquid sewage in some cases by a direct discharge into a stream (taking this word in its widest significance) or into the sea. As a rule, however, it is absolutely necessary, and vastly better to adopt some system of purification on the premises. Of systems of sewage purification, application to the soil is preferable to mechanical filtration, or to chemical precipitation. The latter methods should only be resorted to where no land suitable for disposal is obtainable. Of the methods of applying sewage to land broad irrigation is least favorable, as it requires a large area of land, and in cases where the field is located close to the house, it becomes objectionable. Inter-mittent downward filtration, while requiring a much smaller surface, is yet open to the second objection made to surface irrigation. Far preferable, for single houses and isolated institutions, is the sub-surface irrigation system. Leaching cesspools are absolutely inadmissible, and the same is true of tight cesspools with overflows into a ditch or water course. In a few cases it may be necessary to adopt a perfectly tight cesspool without overflow, and to pump the liquid out at frequent intervals, distributing it on the land. This alternative should be resorted to only where all other methods prove objectionable or impracticable.

Architectural Ironwork.

BY C. W. TROWBRIDGE.

STRUCTURAL CAST-IRON WORK—CONCLUDED.

(Continued from Vol. VIII, No. 10)

One more point with regard to columns and I will be done with them. On turning off the ends it is necessary to measure from the brackets if any are cast on the ends and trim to figure length. As columns often shrink differently the thickness of the bottom flanges, which are usually some distance from the brackets, is liable to vary. It is nothing uncommon to find $\frac{1}{4}$ inch difference in the thickness of bottom flanges of columns from the same pattern after turning off in the lathe; and in cases where it was necessary to change the mixture of iron I have seen columns from different days casting vary 1 inch in 16 feet. Of course the pattern was changed after the first day to fit the new shrinkage.

After castings leave the foundry they are often crooked. You can safely say if a column is crooked that the side which is longest will be thinner, usually from shifting of the core, sometimes from carelessness in setting the core. Castings are straightened in several ways. One of the most common is to heat them, and spring them a little the other way; secure them in that position and let them cool; when released, they will be straight. This weakens them considerably, but as this is not applicable to very heavy pieces it does not often occur in pieces subject to strains in the building. Another way is to pound the short side with the pene of a hammer till it is as long as necessary to bring the piece straight. I have seen columns that were pene, but am glad to say not many of them.

In casting lintels, considerable thickness of metal is quite an advantage, by allowing heat to pass from one part of the cast to others to balance unequal radiation of heat into the mold—data regarding the strength of castings under transverse strain is not very plentiful, and the result of a few isolated tests generally quite unsatisfactory. Owing to the great variation of strength of castings from the same pattern and same day's cast quite often these differences are fifty per cent. Generally this can be traced to some cold shut blow hole or some defect in the weaker casting. As stated before, I think that adoption of rough testing machinery by foundries would result in reduction of weight of cast-iron lintels $\frac{1}{2}$ inch; it would also result in breaking many castings which now go into the building and do their duty all right owing to the enormous factor of safety used in their design.

The use of cast-iron for girders and lintels has been greatly retarded by there being no easy rule for calculating the strength of the many forms of sections which are wanted by architects in places exposed to transverse strain, and the impossibility of confining the use of cast-iron to a few well defined types of sections, as is the case with wrought iron work, where "I" beams, channels and box girders are used almost exclusively, and their strength is readily obtained from printed tables based on experiments by rolling mill owners. The simplest solution I can offer of the cast-iron girder problem is to give a general rule applicable to all sections, basing their strength on the moment of inertia, obtaining the moment of inertia by graphic analysis (a very simple process, quickly learned) which will be easily applicable to the most intricate and ornate forms of lintels. The universal application of the rule $W = \frac{881}{L^3}$ (or eight times the extreme fiber strain per square inch in pounds, multiplied by the moment of inertia, divided by the length of the span in inches, multiplied by the distance from the neutral axis to the extreme fiber in inches, will give the uniformly distributed load in pounds) will enable you to use any unusual or curious form of cast-iron lintel with as much safety as one of the old and familiar forms. Now, don't be alarmed, boys, it is an interesting looking formula, I will admit,—looks dangerous, like a bulldog on a strange piece of road. I like to "shy off" and go round some other way when I meet a dangerous looking formula, too,—but this is not a bad one,—if you will write all the quantities out in figures to fit your case and use cancellation you can usually reduce it to one simple division without any trouble—and it gives "lots more reliable" results than the usual formula of guessing at $\frac{1}{4}$ of the strength and multiplying by 4. Many writers on the strength of material neglect to mention that in using this formula for cast-iron you

must consider the extreme fiber strain in both top and bottom edges of your section. It will not do to say, as in wrought-iron, that this metal is equally strong against both tension and compression. Hodgkinson says that the average cast-iron requires about six and one-half times as much force to crush as to tear it asunder, and has designed a beam, which bears his name, in which the upper fringe is to the lower one as 1 to $6\frac{1}{2}$. He obtained this result by starting with a cast-iron beam having equal top and bottom flanges, then reducing the top and adding to the bottom flanges of each succeeding beam, and observing the result of these changes on the strength of the beams, "finally adopting 1 to $6\frac{1}{2}$ as giving the utmost strength," but, on account of the greater equality of shrinkage strains, I would recommend a proportion of 1 to 4 or 1 to 5, in which case the beams will always fail by tearing the bottom flange apart. For Hodgkinson's beams, proportioned 1 to 6, or any other proportion, that would insure the fracture of the lower flange first, the following is his formula, published in Trautwein's hand-book, for the center-breaking loads in tons of 2,240 pounds: 2,166, the area of the bottom flange in square inches, multiplied by the extreme depth of the beam in inches, divided by the clear span in feet.

(This will give extreme fiber strains varying with the height of the section from 24,000 pounds at bottom and 71,000 pounds at top, for beam 5 inches high, 4 feet 6 inches span, with flanges 6 to 1, to 21,300 pounds at the bottom and 54,100 pounds at the top for beams 17 inches high, 17 feet span, with flanges $6\frac{1}{2}$ to 1.)

I have examined a table, stating the size, span, center breaking loads, and extreme fiber strains for several different sections, copied and calculated from published accounts of breaking tests on cast-iron beams, and observe that the extreme fiber strains in the bottom flanges of beams which fail by "tearing" of the "bottom flange apart" vary only in such proportion as might be expected from different qualities of iron, while the extreme fiber strains in the top have a much wider range of variation, owing to the difference in the design of the beams, some of them failing by crushing of the top flange, others failing by tearing of the bottom flange apart before the top flange had received a high strain. In beams where a single rib runs up far above the surrounding section, the beam will probably fail by crushing out a piece at the top of the rib, with an extreme top fiber strain of seventy to ninety thousand pounds per square inch, while in the ordinary three-rib lintel, the failure will probably occur by tearing the bottom flange apart, with an extreme bottom fiber strain of twenty to twenty-four thousand pounds per square inch. In designing a girder to suit a given load, the formula $S = \frac{W L^3}{8 I}$ will be found very convenient to determine whether the top or bottom of the proposed section will be the weakest, but for merely approximate work, a good idea of the ultimate breaking strength may be obtained by marking off from the highest part of the section a portion equal to one-fifth of the area of the bottom flange, then consider the center of gravity of this portion as the top of the beam, and apply Hodgkinson's formula, using the height from this center of gravity for a total height of section. In a case where a load cannot be made to bear evenly on the lintel, but rests on one side, as in the case of sidewalk lintels, lower strains must be allowed, varying from one-third to two-thirds the load for even bearings, according to the judgment of the designer. Brick walls, however, can usually be set upon the lintels, so they will have an even bearing on each side of the center of gravity, notwithstanding many inequalities in the symmetry of the lintel sections. Where it is possible, it is good policy to have the ribs of a lintel nearly, or quite as thick as the bottom. For the outline of the top of the rib the segmental form so commonly used, approaches very nearly to the theoretical perfect shape, and can hardly be improved upon for economy of metal. There is an unjust prejudice against cast-iron on account of its supposed lack of elasticity. This idea is, in a measure, erroneous, its modulus of elasticity is about 17,500,000, against 26,000,000 or 28,000,000 for wrought-iron or steel. Numerous experiments on cast-iron bars 1 inch square, 4 feet 6 inches span, give a deflection of $1\frac{1}{2}$ to 2 inches before fracture. A large series of experiments on cast Hodgkinson's beams, 5 inches to $5\frac{1}{2}$ inches high, 4 feet 6 inches span, give a deflection of 3 to $\frac{7}{10}$ of an inch. In one case of an extra good casting broken by me, a 1 beam, 6 inches wide, $4\frac{1}{2}$ inches high, 3 feet 6 inches span, deflected $1\frac{1}{2}$ inches before fracture, recovering itself between loadings without noticeable permanent set. Sound castings of ordinary quality can usually be depended upon to give signs of overloading before total failure to a much greater extent than is usually expected. Tredgold gives it as his opinion that the elastic limit of cast-iron is one-third to one-half its breaking load. Hodgkinson says that extremely small, permanent sets are given by one-eighth or one-fourth the breaking load, while some more modern experiments indicate two-thirds or three-quarters of the breaking load as the elastic limit. Most of the modern writers on the strength of cast-iron, agree with Tredgold in setting the elastic limit at one-third to one-half, and loading lintels to one-quarter or one-third the breaking strains in simple cases, where there is no probability of shrinkage strains or bad castings.

Snap molding is for small work only, mostly ornamental, and will be mentioned when I speak of ornamental cast-iron work.

SECTION III.—STRUCTURAL WROUGHT-IRON AND STEEL.

In this branch of the business the bulk of the work is done with "I" beams and channels. We are fortunate in the fact that all American mills are so situated that it don't pay to roll beams of poor material. I think that all the beam mills in the world, except one or two in Belgium, are so situated that their output is generally of good quality. In this country steel beams are rapidly taking the place of iron in the market. It is, I think, generally believed that they are cheaper to produce, and as far as heard from, superior in ultimate strength by about twenty per cent, and equal or superior to iron in every other respect. All the American beam mills publish books, giving the strength and deflection of their beams, stating the extreme fibre strain used in the calculation, which is usually 12,000 pounds to the square inch for iron, and 15,000 pounds for steel. It is of the utmost importance, however, that we ascertain and consider the deflection when we use steel beams, as this quality is the governing

one in determining the load, except in cases of heavy loads on short spans, while with iron usually the safe load does not produce an undesirable amount of deflection. Within the last year we have had several new and very valuable sections put on the market. The New Jersey Steel and Iron Company have brought out 20 inch beams, 91 and 66 $\frac{3}{4}$ pounds per foot, the light weight 20 being the same weight per foot as our medium 15, while the strength is very much greater. For instance, 25 foot span, 15 inches, 66 $\frac{3}{4}$ pound iron beam is considered safe for the load of 28,260 pounds, giving deflection of 0.59 inches, while the 20 inch same weight, span and cost, carries a load of 37,940 pounds with deflection of only 0.45 inches, often enabling us to make a saving of thirty-three per cent in the cost and have increased stiffness. We also have a new 15 inch steel beam, 41 pounds per foot by Carnegie Bros., also made in iron by the Phoenix Iron Co., which should supersede all the heavier 12 inch beams, and a 12 inch 32 pound beam in steel by Carnegie and iron by the Phoenix; this being only 2 pounds per foot heavier than the light 10 inch beam and very much stronger. This should supersede all the heavier weight 10 and 10 $\frac{1}{2}$ inch beams, making a very great saving in the cost of ironwork, and while we have the same strength we get greater stiffness by using the higher sections of beams. This is a point that cannot be kept too constantly in mind by designers. Framing or coping of floor beams to girders is a very popular method and forms a good brace in iron floors, actually making the whole floor one solid construction tying the whole building together from all sides. However, when satisfactory anchoring can be secured without framing the floor beams, a saving of a quarter of a cent per pound can be effected. This on 15 inch 50 pound beams 30 feet long is \$3.75 per beam. If girders can be arranged so joists can rest on them without interfering with other parts of the design certainly quite considerable savings can be effected thereby. The knees, or wings securing framework together are usually riveted on to the end of floor joists and bolted to the girders. As we have to depend on the rivets and bolts anyway, I never could see why using, say 6 by 4 angles instead of 4 by 4, letting the angles project beyond the ends of the joists, cutting the joists off square to clear the girder was not just as safe, more consistent and a somewhat cheaper method of framing than the present system of coping. It would also often save time, which is a most important recommendation, as when mills are full of business, coped work often has to wait a long time for its turn in the fitting shop. No amount of theory and talk will ever enable the webs of beams to rest uniformly on the bottom flanges of the girders and carry part of the load. The rivets and bolts are always proportioned on the supposition that they will carry all the load, and in nine cases out of ten they do so, too; so why not give them the credit and trust to them only? Even if someone took all the bolts out, your beam would not fall down. The projecting knees would still rest on the bottom flange of the girder and carry the load. Most of the rolling-mill books give standard sizes of knees and numbers of rivets and bolts suitable for framing each size of beam. You only have to add two inches to one leg of your angle to let them project, putting in, say, one or two extra rivets, using the standard size and number of bolts shown in the books.

Regarding methods of securing beams and girders to columns, I can suggest no improvement over the present practice of casting brackets on to columns and resting your beams thereon, bolting through projecting lugs cast on columns to come alongside the webs of the beams. In cases where lines of beams or girders are continuous across the building, a most excellent system of bracing and anchoring is to put a good heavy bolt, say 1 inch or 1 $\frac{1}{4}$ through cored holes in the column, bolting knees on the girders each side, and screwing up till the ends of the beams come tight to the column, forming a solid line, metal to metal, clear across your building. When brick or tile-floor arches are used between beams it is customary to put $\frac{3}{4}$ inch rod's space 6 feet to 8 feet centers through the webs of beams to form lateral bracing. Sometimes flat ties, say 1 $\frac{1}{2}$ by $\frac{1}{2}$, or 1 $\frac{3}{4}$ by $\frac{3}{8}$ of an inch are hooked over the flanges of beams at bottom, accomplishing the same result and avoiding cutting of the arches which occurs with ties in the web. Any of these methods are good enough, but the great need in building business is for someone to devise some plan by which masons and fireproofers can be prevented from taking out these ties and throwing them away, hiding them in the hollow spaces in the ties, or disposing of them in some manner that was not intended. Girders made by riveting "I" beams together, one on top of the other, rivets passing through the flanges, are often used in government buildings, but we seldom see them elsewhere. They cost more than riveted plate and angle girders of same strength, and, unless in places where special conditions make their use desirable, they will hardly become common. The only book I know of, giving calculated strength of this kind of girder, is one published by the Union Foundry in the early part of 1885, when I was with them.

(Concluded.)

Personal.

JOSEPH DOWNEY, the well-known mason contractor of Chicago, has just returned from a trip through the West to California. Mr. Downey speaks of the beautiful climate, and the sense of repose one experiences there, but to one of his active temperament the classic shades of the Exchange rooms and the rush and stir of Chicago business life was much more attractive, and when the direct purposes of the trip were accomplished, his wish was to return. A rumor was started while Mr. Downey was away that one object of his visit to the coast was to secure Chinese labor to work on some of the immense railway jobs he now has under contract; but anyone who knows Mr. Downey will recognize its fallacy, for while he may, as a just and practical builder, object to some of the strictures placed upon free labor by the trades unions, he has too broad a view of the rights of the American workman to stultify them by such an importation of unskilled foreigners. Mr. Downey has been one of the largest employers of masons in the West for many years, and is in the prime of life, and at the height of business activity.

Illinois State Association.

THE regular meeting of the Illinois State Association of Architects was held March 5, President Adler in the chair. The meeting was called to order at 3 o'clock P.M., and on motion of the secretary, that the reading of the minutes be dispensed with, the president said as they had been published in THE INLAND ARCHITECT it would be so ordered.

The president called for new business.

Mr. Baumann: There is a question in regard to some amendments to the new building ordinance of Chicago, which were proposed by the underwriters, and passed by the council, without due examination. There is one amendment in regard to elevators. It says: "Hoistways in which elevators shall be used shall be constructed entirely of brick, from its lowest point, extending up through the roof six feet above the same, and all openings in such shall be protected by iron, and no wood shall be used inside of such hoistways." Now I want to ask how it is in regard to passenger elevators. There is not the slightest reference made to them.

The President: I asked Mr. Drew, the proposer of the ordinance you mention, about it. He stated that he had in view only freight elevators, and that he believed the ordinance as enforced would be applied only to freight elevators.

Mr. Baumann moved that the matter be referred to a committee of three, with full power to take such action on behalf of the association as it might deem expedient, with a view to the modification of this ordinance.

The motion was carried, and the president appointed as that committee Messrs. J. W. Root, F. Baumann and L. H. Sullivan.

The President: If there is no other business to be brought before this meeting we will proceed to the regular order of business. Mr. Root will please open the symposia.

Mr. Root: The subject of the symposia today is, "What are the present tendencies of architectural design in America?"

JOHN W. ROOT.

It is notoriously difficult for any man to accurately ascertain the tendencies of his own age. What phenomena of the day are entirely ephemeral, what of longer endurance, what of permanent life, only the trying crucible of time can determine.

Henri Taine has compared this phenomena in another art to the various geological phenomena upon the surface of the earth. First comes the shifting sand, blown lightly hither and thither, and the product of purely local forces operating on local conditions. Next are found those loosely held formations, half stone, half mud, which are scarcely more widespread, and scarcely more enduring than surface sands. These in their turn give way to the sandstones, which vary from manifestations essentially local, to great deposits underlying whole continents. Last, we find those huge elemental formations, which are as wide and as fixed as the earth.

So with architectural styles. Beginning with the earliest times, architectural style has been slowly developing new forms, whose lighter characteristics have passed away with each age, but whose essential elements have crystallized into fundamental strata. Deeper and more fundamental become these elements, more essential as sure foundations for all the various overlying formations of each later age and nation.

During the rapidly shifting phenomena of our day the problem presented to us is to determine which are ephemeral, and which will become fixed in the architectural foundations of our age and country.

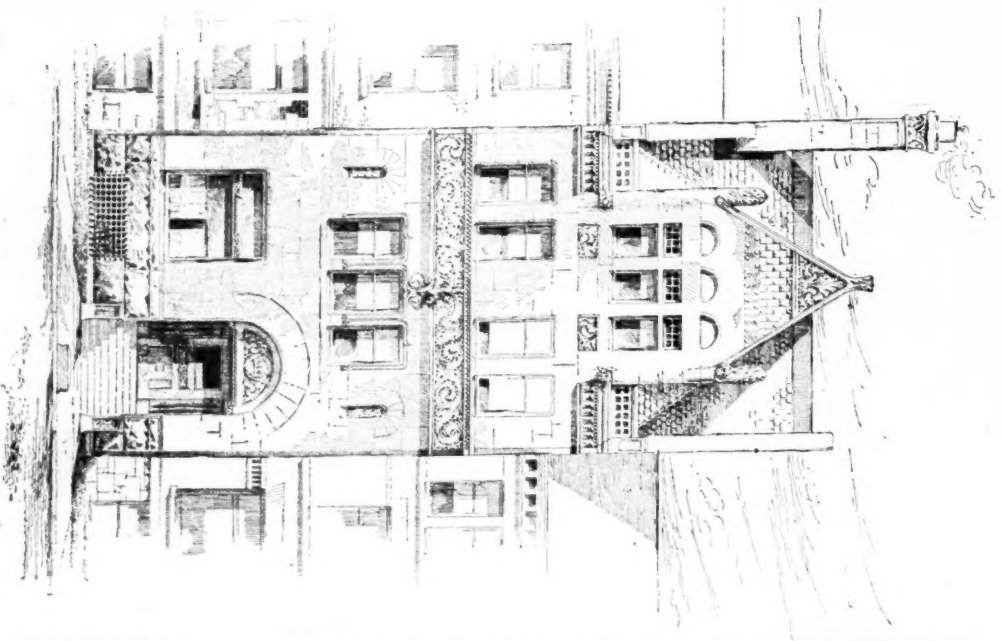
Probably in no age was it so difficult to determine such a question as now. All movements are now so rapid; thought is so lightning-like, so rapidly changing; transmission of ideas and news is so instantaneous that each one of us today realizes, not only the accomplishments of all other men, but is enabled, within limits, to think their very thoughts. The consequence of this is, that we are somewhat like Sancho Panza, in that many of the dishes thus rapidly presented to our lips must be taken away untasted; while much of the pabulum with which we load our stomachs remains unassimilated.

Before every one of us has passed a kaleidoscopic panorama of styles, for whose original development three thousand years were required. To what extent may we call any of these rapidly dissolving architectural impressions our own? To what extent will architects of today leave enduring impressions upon any one of the various styles in which they have rendered their buildings? Note some of the changes of the last twenty years. Nowhere today do we find academic productions in Neo-Grec so common a decade since; nowhere those pseudo Gothic designs, to whose production were consecrated the talents of Burges and Street and Scott. In high stays, and crisp, unyielding ruffs, Queen Anne has taken coach and driven off, and now only the rumble of her distant wheels, and the lingering perfume of her lavender remain; the Neo-Jacobean has lost its royal state; the Dutch have come to London, and, like William of Orange, holds silent sway in Cadogan square; here in America the present vogue is a style called "Romanesque."

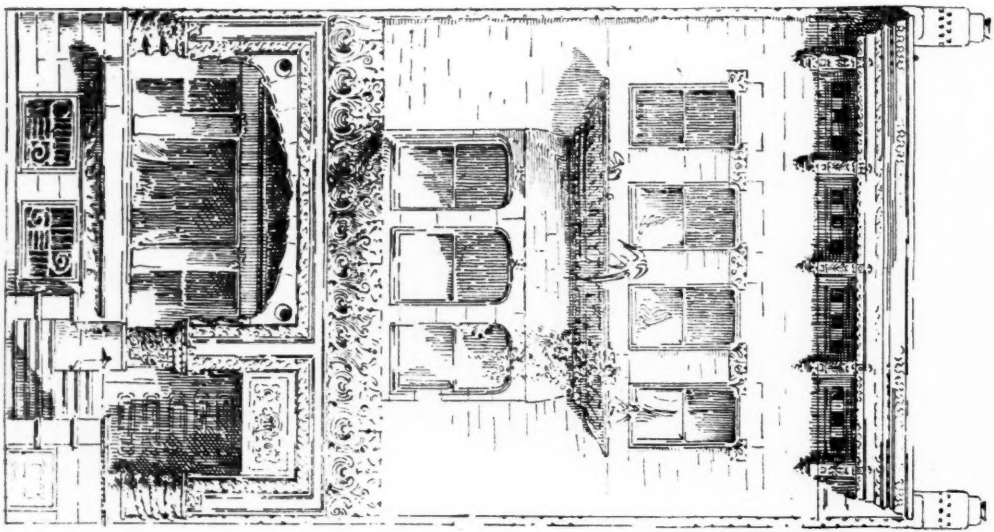
In recalling this series of swift changes we can but ask, "What in heaven's name are the present tendencies of architectural design in the world? What are they in America?"

In striving to reach some answer to this question, we will find it useless to waste time over the great mass of imitations, or the host of mere imitators. In no one of these quickly born and quickly dead art movements has anything been vitally done by the heedless throng who blindly followed the masters of their school. In each case the first apostle has made converts, among whom were a few, not content with the study of his work alone, but who went back to those original sources from which their master gained inspiration. These have added to the permanent value of his work. But how few have been their number. The vast mass of converts have been satisfied to follow where he led, to repeat what he has said, to devote lives to that mere industry of pencil which covered original and strong work with the killing vine of meaningless affectation.

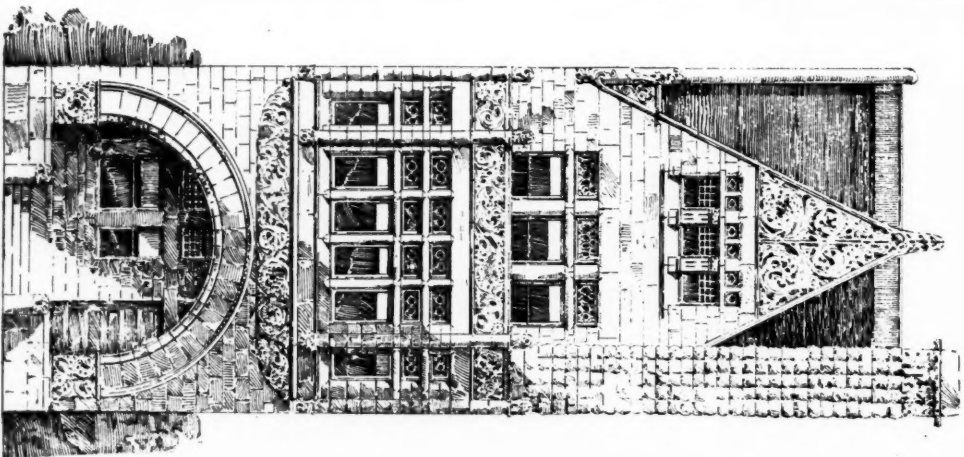
Thus, in the so-called Romanesque work of today, how much comes freshly studied from France, and how much from New England? Which are commoner sources of modern inspiration, Ste. Croix, in Bordeaux, or



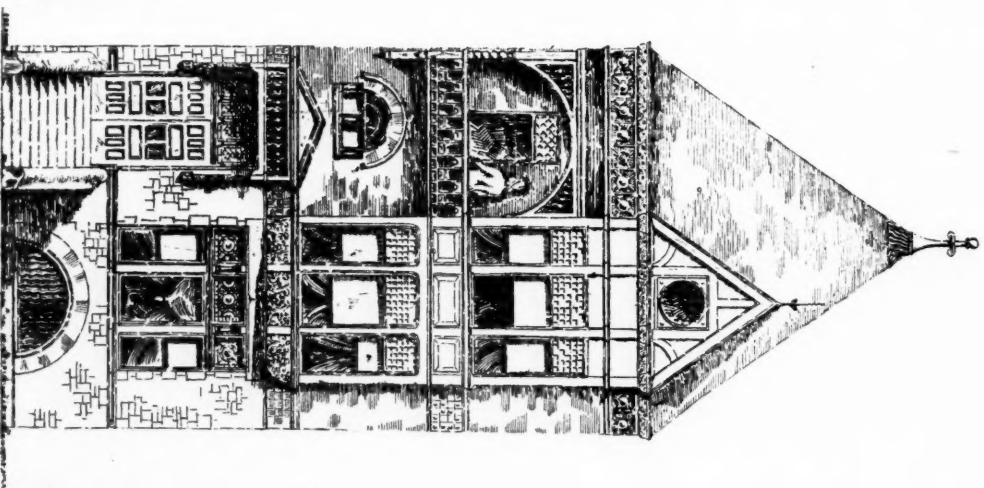
FIRST CHOICE. W. B. MUNDIE.



SECOND CHOICE. W. R. RAY.

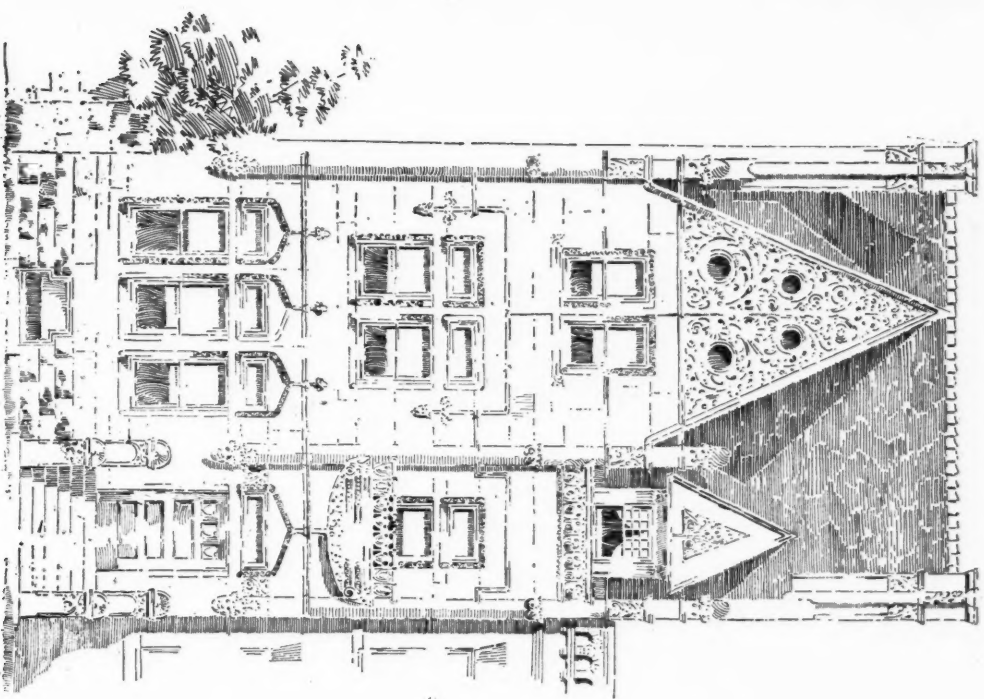


THIRD CHOICE. R. M. TURNER.

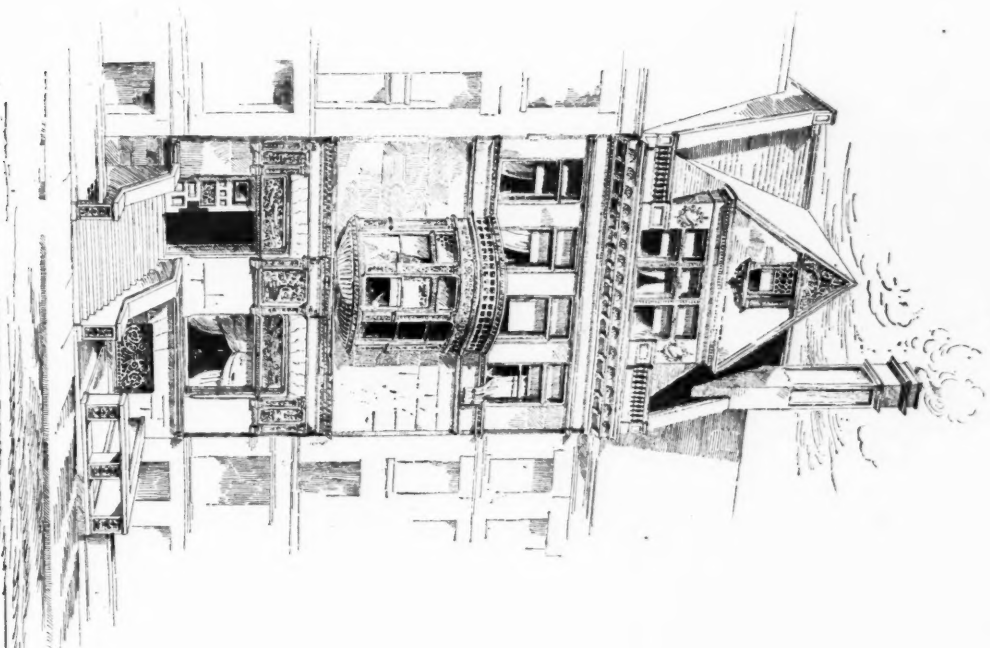


RICHARD WOOD.

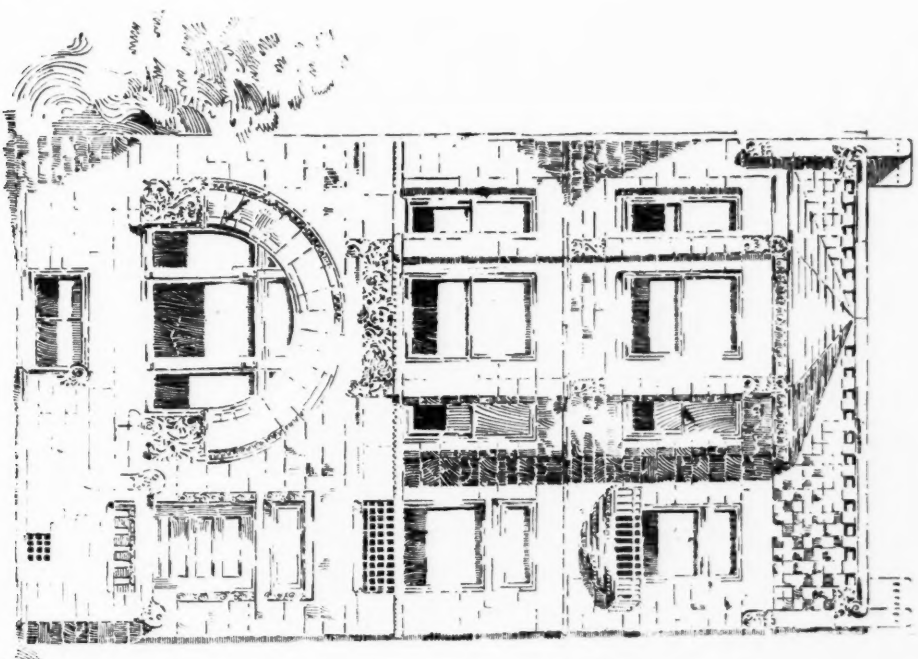
CHICAGO ARCHITECTURAL SKETCH CLUB COMPETITION FOR A 25-FOOT CITY FRONT.



T. O. FRAENKEL.



W. B. MUNDIE.



T. O. FRAENKEL.

Trinity Church, in Boston? St. Pierre, in Angoulême, or Harvard Law School? To the really creative minds of our day, and to those students whom they have inspired to imitate, but not copy them, must we look for the tendencies of our day. In considering these men and their work, we may see reflected in them something of the influences operating upon architecture in America. The creative artist must always be a man in whom are especially focalized these influences, which are different from those which move other men of his time, not in kind, but in degree alone. Thus, in one such man will be manifestations, not only through his work, but through the mere attitude of his mind, which will clearly indicate what forces are in play about him.

But apart from questions of architectural styles, as commonly understood, and quite distinct from the study of examples in these styles, or of the men who revived them, are considerations of national characteristics in non-architectural directions. These will, perhaps, after all, give us the best answer to what American architecture must soon be, and therefore what its present tendencies are. Judged by the character of the American people, in as far as this character has been developed, some qualities which we may assume of American architecture will be:

First. It will be *Catholic*. The American people do not tend toward narrow views of things, nor have they yet developed sufficient conservatism to retain things merely because they exist. They rather tend to the adoption of any new thing, provided it merely seem better than the old, which often leads to a too sudden abandonment of older modes, cutting off slow and yet promising developments, and inflicting the newer fashion with certain harshness and crudity. What conservatism the nation may acquire when it is older is wide of the question. It is the present condition which is creating the architectural tendencies we are striving to discover; and these conditions being what they are, it does not seem that there is immediate prospect of a single national style, or of adherence to single lines of development. On the contrary, it seems more likely that each architectural style will, in its turn, be taken and Americanized,—that is acclimatized and modified by local conditions.

Second. It will be *Grave*. No student of the American people can doubt their essential gravity. Even their humor is often a mere cover for an underlying seriousness, and the sober view of things is frequently disguised beneath what, to the careless observer, seems a trifling jest. Though Americans are really grave, the gravity is not of a somber sort, nor of the quality which marks our English brother. The gravity, essentially American, has a humorous complement, strongly marked, which will give to the architecture of the future a certain *Lightness*. This lightness may, in certain buildings, express itself in grace of detail, or in delicacy of parts, or in occasional touches of fancy or even *whimsicalness*. But underlying this lightness will still remain the essential and national gravity.

Third. Our architecture will probably remain *Practical*. This means not only that structures of purely decorative character will be few in number, but that each important detail of a building must have some immediate, easily recognized and practical use. This is made likely by the strength in American character of the "commercial instinct, which involuntarily shrinks from what it considers a 'waste of money.'" Not that Americans are mean, for they are on the contrary, generous; but it is to be feared that long time must pass before we will as a nation, consider with equanimity large expenditures for buildings whose sole function is æsthetic, and whose sole beauty is to make the public mind more sensitive to beauty. At the same time there will come in America, and that very soon, an architecture of the greatest splendor.

The tremendous and rapidly acquired wealth, not only of individuals, but of the nation as a whole, coupled as it is by no national indifference to display, and by no national parsimony, will inevitably lead to the erection of buildings, both of private, commercial and public character, whose splendor will be phenomenal in the history of the world. We see many indications of this even now, not only in the magnificent palaces erected as dwellings for millionaires, but in the gorgeous trade-palaces which have already become typically American.

Thus, we may assume that architecture tends today in several widely different directions: toward *Catholicity*, toward *Gravity*, with its modifying *Grace*, toward *Utility*, and toward *Splendor*. Other tendencies there are, arising from the tastes and needs of that chief element in all republics, the vast middle class; but this class is with us so unstable, so quickly passing from a middle state to great wealth or great poverty, so influenced by boundless ambition which seems to be cognizant of all possibilities; so imitative in cheap ways of the splendor of great wealth, that these tendencies seem difficult to estimate.

DANKMAR ADLER.

I agree with Mr. Root in all his premises and in his conclusions, excepting two particulars, which I will state:

I think Mr. Root in error in fearing "that much time must pass before Americans will consider as *practical* those things whose sole function is æsthetic, and whose sole result is to make the public mind more sensitive to beauty." I believe that we see all around us throughout the country tentative efforts in every direction toward realizing in the designs of buildings the longing for a proper expression of a feeling for the æsthetic and beautiful. These longings may in many cases be vague, and the ideas crude. The means employed for their realization may also be characterized by vagueness and by uncertainty of touch, and want of resource and artistic skill on the part of the designers; but there are unmistakable evidences that this vagueness is gradually giving way to a more thorough understanding of our æsthetic longings, that our sense of the beautiful is becoming more and more developed, and that the technique of our designers is keeping pace with this higher development of the æsthetic wants of their clients, the American people.

We see expressions of this feeling for the beautiful, and indications of its gradual and healthful development, as we perceive that our designers find themselves encouraged to give artistic treatment to structures erected merely for gain, as well as to the few which owe their origin to the desire for ostentation or luxury of wealthy and cultured citizens.

All around we are made to hear and feel that there exists even among the more sordid of our speculative builders a desire to make concessions to the development of the æsthetic sense of the beautiful among those from whom they derive their gain and income.

It has become necessary to "consider as *practical*" those things whose sole function is æsthetic, and whose sole result is to make the public mind more sensitive to beauty," and the standard of beauty is one that is constantly rising to a higher level and to greater dignity.

I also differ from Mr. Root in my estimate of the influences of what he calls the "vast middle class," for I believe that "that chief element in all republics, the vast middle class" constitutes the American people, and forms all its tendencies, artistic or otherwise. We have as yet no upper class. Mr. Root's own statement indicates that. Our men of wealth, with but few exceptions, "have quickly passed from a middle state to great wealth." They have not yet been wealthy long enough to throw off the feelings and conditions in which they have passed their previous existence, and with wealth there has not come to them that elegant leisure which might distinguish them from the middle class. Our men of wealth as a class, cannot cultivate the æsthetic sides of their natures; on the contrary they have become wealthy, and they retain their wealth because of their restless activity, their boundless ambition, because of a concentration of their thoughts, aims and ends upon the advancement of their business interests. Their contributions to the artistic development of the American architecture are in the direction of that splendor which Mr. Root has mentioned as the objective point of one of the tendencies of American architecture. And as far as this tendency finds expression in the use of choice and superior materials—in the development of a high grade of artistic workmanship, and in the exercise of greater care and circumspection in the selection of architects to whom these expenditures are intrusted—to that extent the influence of those who have passed from the middle state to great wealth will be in the direction of an advancement of our architecture. And to that extent it will influence for good that imitative "in cheap ways, of the splendor of great wealth" on the part of the great middle class—that is of the American people at large—which to me, as to Mr. Root, and probably to all of us, seems so dangerous a tendency in the development of our national style of architecture.

But the general effects of this imitativeness seem to me to possess a rather wholesome tendency. The truly good features of the higher class of buildings cannot be effaced in reproduction, while the meretriciousness and "whimsicalness" that may be found in buildings upon which large sums of money have been expended, and which in such buildings may derive from their association with better work, and execution in the best material, and with the best workmanship, a certain dignity of effect which, when imitated in cheaper buildings, in cheaper materials, in inferior workmanship, become grotesque, and carry with them their own condemnation—a condemnation which will then reflect upon their prototype in better buildings. The danger, therefore, of finding salient features of good buildings travestied and caricatured in inferior structures, will make the projectors and designers of the better buildings all the more careful to exclude from them all features that are not subject to this danger.

I therefore believe that to the tendencies of modern American architecture enumerated by Mr. Root, there should be added another, namely, that of the gradual elimination of all whimsical and trivial features.

CLARENCE L. STILES.

The subject matter presented by Mr. Root for our consideration, in regard to "What are the present tendencies of architectural design in America," admits of so little question that it seems presumptuous in one of the youngest members of the profession to disagree with any of his premises or his conclusions, and especially inasmuch as Mr. Adler has said, "them's my sentiments." But, notwithstanding the fact that Mr. Root has taken the ground that each style of architecture will in its turn be taken and Americanized, inferring thereby that we would eventually have a national style of architecture, consisting of modified preëxisting styles, I must take a little different view of the matter.

Taking into consideration the acknowledged lack of conservatism and the independence of American thought, may not the formation of a distinctively American architecture be among the possibilities of the near future? By this is meant an order or style which shall be the outgrowth of American thought and feeling, and the result of conditions under which that thought and feeling has been developed. Not an American edition of any existing style, not even a combination of them, but a style of architecture which shall be as distinctive as any of the already recognized styles of other countries.

Why should not this be the case? We have creative minds among us. In all other branches of human knowledge invention strides with seven league boots into unexplored and hitherto unimagined possibilities. Are we alone of all the professions to remain slaves to the past, and live on, following the old masters, grand and noble though they be, only combining and rearranging, but never originating.

Would Mr. Root deny to us the mental vigor of other nations, who have impressed upon their architecture their own individuality and characteristics? It must be acknowledged that there are features of our style which are essentially American, and I am therefore inclined to assume that one of the tendencies of design is toward an American style.

I agree with Mr. Adler that there are "unmistakable evidences of a longing for the æsthetic," and to such an extent has this idea taken hold of the American people that the man who builds for profit does not now stop to consider whether it would be practicable to expend his money upon "those things whose sole function is æsthetic," but rather question if it would be practical to build without them. It is rarely that our clients desire plain, substantial structures, regardless of ornamentation; but on the contrary the cry is, make the front as attractive as possible, catch the public eye, throw out a bay here, pull in a bay there, and let the sunflower, the honeysuckle and the daisy be worked in bas relief on all sides. Or as Mark Twain might put it: He wants an excrescence in the shape of a mark on one corner, a swelled eye on the other, and a reminiscence of

a big spree on poor (county) whisky in the middle. These main features to be toned down and brought into harmony by means of a few Chinese parasols pasted to the face of the wall upside down, highly ornamented with bits of stained glass, broken cobble stone and cement rubbed and polished.

From these observations I take it that it is not only "practical," but decidedly profitable to indulge in "those things whose sole function is æsthetic."

We all hope, of course, that the time is not far distant when these trivialities will be thrown aside, and only the truly beautiful be demanded or tolerated.

The thoughtful and conservative members of our profession, who never allow themselves to run after strange gods, are still those whose councils are the most valuable to us, and their influence upon both the profession and the people will undoubtedly have a tendency, as Mr. Adler has already said, to eliminate from our designs "all whimsical and trivial features."

W. W. BOYINGTON.

I agree with Mr. Root in his thesis of the moving, shifting elements that seem to be almost a floating ephemeral substance, seeking a lodgment on some fertile field, to take a permanent root and be cultivated into the æsthetic and beautiful architectural forms which are so rapidly forming the "substrata" of a national style. But as yet we must admit the crudeness of the tendencies of our mixed heterogeneous combinations. We are undergoing a transient state which develops disproportions, poor applications, and a general lack of any fixed standard or guide. The present state of things must, of necessity, be so. Having broken away from the fundamental rules which governed the ancient architects, we have no further use for the rigid scale of minutes which governed the ancients in producing all their proportions of heights and breadths and depths, and the minute details of the orders of architecture. We have no place for the sturdy Grecian, Doric or Tuscan, or the feminine and graceful Ionic, or the masculine but beautiful composite, or for the Queen of the Orders, with its gorgeous crowned capitol, the Corinthian. All these have been consigned to a place in history, as a rule. While we are deviating from the old masters, we have very much to learn before we can ever establish a national style of architecture, except it becomes national from its crudeness. The tendency to diversity in style retards crystallization, and also the fact that our thoughts have to keep pace with the very electric rapidity of the times. Hence there is but little time to crystallize architectural impression. We are carried on the wings of time by the locomotion of the nineteenth century, and our designs have to be executed red hot from our trustle-boards. As Mr. Root says, "The creative artist must always be a man in whom are especially focalized these influences," namely, electricity in thought set forth like the power of a locomotive. I repeat from Mr. Root, "In recalling this series of swift changes we can but ask 'What in heaven's name are the present tendencies of architectural design in the world? What are they in America?'" I must say for one the signs of the times are not flattering for a national style of architecture.

Our would-be aristocracy are aping after nobility. While they may have wealth, they have not the æsthetic taste to secure good results, to dictate the artist or discern the beauties of architecture. So long as the standard of American architecture is taken for granted—that whatever emanates from the hands of reputed celebrated architects must be æsthetic, even though these architects produce designs for palatial dwellings with diminutive loop-hole windows that the stranger observer would take to be a copy of some ancient cloister or a modern cell-house, without a line of beauty or an architectural detail—I say so long as such designs are accepted as true art and of æsthetic taste, just so long will we be stamped as scrubs in architecture and devoid of good taste. Mr. Adler remarks, "our men of wealth as a class cannot cultivate the æsthetic sides of their nature." Then I should say they had better not set themselves up as connoisseurs in the architecture, or ape after such dazzling lights as are likely to reflect a vitiated or morbid taste.

Consequently I must say that while there are many tendencies to elevate the standard of architecture at the present time, and the undoubted advance in æsthetic taste, yet there is about an equal amount of crude and unskilled production which seems to be as well accepted by some of our wealthy citizens, as does the beautiful and really architectural. This in a great measure grows out of the fact that wealth comes so quickly to the lower or middle class of society that, as Mr. Adler says, "they have no time to study the æsthetic side of their nature." I consider we are arriving nearer to something tangible as a national style in the interior finish of our buildings than we are from the exterior; but as the exterior becomes public, the general impress upon the public taste is made manifest therefrom. Consequently, it is supposed as a rule that from the exterior the public can form some idea that the same general impression as is produced from the exterior should prevail in the interior. But my observation is to the contrary. Many of our crude appearing buildings, externally, have really a magnificent interior finish, worthy to be considered as having been studied from an æsthetic standpoint. So that while we may excel in our interiors, and in many of our exteriors, there is a marked inclination to ugliness in design in some of the modern exteriors. And having so many mere copyists in our profession, the crude is as likely to be repeated as is the really meritorious. Hence I conclude that we are far from consummation of a national style of architecture.

Since preparing the above I have received Mr. Stiles' contribution to the Symposium, in which he inclines to the belief that "we have creative mind among us," sufficient to soon formulate "a style of architecture." He says, "Why should not this be the case?" I would say for the very reason which Mr. Stiles reiterates, that the demand of our clients is, "make the front as attractive as possible, by throwing out a bay here, pull in a bay there, work in a sunflower, a honeysuckle, a daisy, a toadstool, a swelled eye, a Chinese parasol," and a general series of such excrescences, which is, to my mind, a good reason why we are too much inclined to flippery to arrive to the dignity of a national style of architecture.

J. W. ROOT.

In summing up the subject under consideration I will allude to the preceding papers in the order in which they appear.

Mr. Adler makes the point that the first writer was wrong in the belief that an ideally "practical" architecture in America was remote. It is not unlikely that he may be right, and that at some future time America, like Italy, may be full of the monuments, the triumphal arches, the memorials in mosaic and fresco, which are the glory of the Renaissance. But at the present time there seem few indications of this. In the typical American mind there seems at present a certain insistence that each important structure shall have an easily recognized value, when viewed from the plane of pure utility. This feeling constitutes no bar to the adornment of such buildings as are erected; on the contrary, it may in some cases demand this adornment. But its tendency is to make more probable the building of public libraries and court houses, stores, dwellings and office buildings, than costly monuments or elaborate memorial structures devoted to purely artistic purposes. One may note with curiosity how oddly blended the æsthetic and practical are in some of our more notable structures. Great corporations often erect vast buildings for their own uses, which to the casual and uninitiated observer seem great monuments to beauty, rather than to trade; the practical American mind, however, notes the value of the advertisement.

This practical quality of mind will, I contend, for a long time prevent America from becoming distinguished by many classes of structure, and of general art productions, as well, whose sole purpose is æsthetic.

The same practical turn of mind will in all likelihood tend to that elimination of adventitious features to which Mr. Adler has referred, and this tendency is only one manifestation of the same quality of mind which I think insists that all buildings shall have some "immediate, easily recognized and essentially practical use." You will note here, then, that Mr. Adler and I are practically as one.

Let me now refer to the "vast middle class."

Among all nations America is peculiar in having no recognized class distinctions. The consequence is, that as a matter of theory, the position of the highest is within reach of the lowest. I say, as a matter of theory. As a matter of fact it is not now, and never was, and never will be true. Still this is the theory of our national system, and as a state doctrine is eminently wise and true. What is the result?

In France, in Germany, in England, the lower classes are complete in themselves, and in the vast majority of each person, the highest ambition is to rise to the top of his particular class. One does not, therefore, see farmers' wives and daughters imitating the town fashions set by lords and ladies, nor "persons in trade" following the latest "fad" of Marlborough House. Here, on the contrary, nothing is too good for any one of us, provided we can get it! and since it is always theoretically possible to get it, we get the next best thing, as a step in the right direction.

The fashion of last year in town is in the country the fashion of this year.

The "newest thing in bonnets" graces the head we see at the palace car window, and the "dowdy" bonnet of last year sits uneasily upon the head of her less fortunate sister in the common coach.

The same democratic spirit is on the increase in other countries, but nowhere has it reached the development it has here.

Even upon the faces of large classes of Americans are indelibly stamped traces of what in so many is this ineffectual rivalry. In architecture, the same thing is true—and with strange results.

To an architect comes a client. Client *loquiter*: "I saw a house on the corner of Seventy-third street and Madison avenue which pleases me very much, and I want something like it. Of course, I don't want to spend so much money, for I really suppose that house must have cost enough to 'bust a bank.' You see, I want to build a comfortable, attractive house—with new ideas, and different from other houses—one that I could sell to advantage if I wanted to. You see, I don't expect to live in this house always. When I get along a little further I may want to build another, and I don't want to put so much into this that I can't get it out. Then the city is growing and changing so much that the location may get undesirable. Business may get alongside of me."

Is this typical or not?

Here is what I mean by the architectural influence of the "great middle class."

Architects being more or less human, and the original prototype being a house which cost several times what the copy may cost, you can readily see the result.

And the client is the more readily reconciled to the cheap collections of makeshifts which go to make his house, because he hopes to sell, and build more substantially before the shams reveal themselves, or else his house may be made valueless as a dwelling by the encroachments of business.

All this means much for the rapid growth and substantial prosperity of the country, but it does not mean so much for the substantial character of the building.

Now, as to the whimsical features alluded to, I do not conceive that this practical spirit, tending as it does to their suppression, will totally eliminate them, although it will certainly make them less frequent.

Not only have Americans a strong sense of poetry overlying this practical quality, but they have, as was noted before, a strong sense of humor. This poetry and humor will, I believe, continue to express themselves in occasional touches of the whimsical even upon our dwellings. These touches will be refined by better taste and higher culture, and will consequently lose much of their offensiveness, but, like slang, they serve a purpose.

Slang may be vile when indiscriminately used, or when used by an ignorant man; but slang may be most valuable and picturesque when used with good taste and discrimination.

Mr. Stiles is sanguine of an American style—a style "distinctly American." In a measure I share this hope with him. But I do not think this style will be freed from the traditions of those which have preceded it.

It will probably grow as grew the varied types of the Renaissance in

Italy and France, rather than as the early Gothic, which suddenly shot up into an entirely new flower.

Styles of architecture grow out of deeper conditions than mere matters of exterior ornament, or even of interior arrangement; and our American styles will probably, for a long time, go no further than the modifications, to a greater or less degree, of what we have.

In a narrow sense we thus acquire American styles, just as we have a French Renaissance of Francis I, of Louis XIV, of Louis XVI, of the second empire, all based upon earlier classical types and closely related to them.

There seems to me no observable tendencies in the American mind to a form of national character, which will be content with one type of architecture in the same sense that the Germans of the thirteenth century used Gothic alone. This singleness of purpose, as Ruskin points out, is necessary, apart from other conditions, for the evolution of an architectural style; and he goes so far as to claim that such singleness of aim is necessary for any thoroughly good architecture. He states that at no period of the world's history have men created a noble type of architecture when at the same time they used any other.

Be this as it may, I think both history and present observation will show us that Americans will continue to exercise the greatest latitude of choice in the selection of architectural types, but each will become so thoroughly impressed by national conditions, and so molded by the national mind, that beneath and beyond all styles of superficial expression will be seen the type American.

Mr. Boyington laments the chaotic condition which surrounds us, and the state of crudity in which we find ourselves. This, although lamentable, is, I think, unavoidable. All new communities are crude, and in our own case there are many reasons for an especial crudeness. Not only are all our conditions new, and therefore tentative, but we live amid conditions so rapidly expanding that no single thing remains fixed after we have tried to fix it. New ideas are pouring in upon us in torrents, and we can no more shelter ourselves beneath the umbrella of old traditions than we could beneath a green cotton umbrella when under Niagara. Nothing is left but to get drenched, or "get in out of the wet." Crudeness is also a general and necessary accompaniment of the tremendous vitality of youth, which scorns the restraints of conventionality. The next thing after perfect refinement is death. It is also to be expected that some of our millionaires should be just a little conceited and self-confident. Millionaires are this everywhere, even when standing amidst old civilizations, and before art traditions hoary with the frost of centuries. With us influences all about them tend to create an especial self-confidence. Their success in what is too often considered the thing to be supremely desired, emboldens them to essay with equal confidence the conquest of other fields. For them the sacred name of art has no terrors. Art is a commodity—purchasable.

To most men whose lives are given to the acquisition of money, it is only late in life that there comes a dawning sense that there are priceless things beyond the get of all bonds and stocks and gold. Thus their children, obtaining money easily by a simple deed of transfer, hold lightly what their fathers held tightly, and art is the gainer.

We are yet in our national first generation, certainly so far as art is concerned. Yesterday—it seems but yesterday—there was no architecture. Today we have—what we have!

Today, as Mr. Boyington truly says, "Wealth comes so quickly to the lower or middle class of society that they have no leisure to cultivate the aesthetic side of their natures." This need cause us no alarm. When government 3½ per cent securities sell for more than par, the time is not remote when money will not be so rapidly acquired, and when people will have larger opportunity to polish up their aesthetic side.

Meanwhile let us, who are contributing something either to hasten or retard the progress of architectural development in America, remember a few things:

As mere copyists we can never do anything for good. To copy what any man has done is moral and artistic degradation. To emulate the spirit in which a great work has been done is moral and artistic elevation. Some other man's good idea may be legitimately "appropriated" by us; but it is certainly adding insult to injury, if, after appropriating, we proceed to vulgarize it. Let us also remember that we can do nothing vital without hard work. In a broad and generous spirit we may each offer to all what he himself has done, simply saying "Here take this as common property; analyze and criticize it,—then finding what there is of good in it (if you must make use of it) use only the good. Don't use my property for the ill of mankind, nor repeat in enduring stone and brick the crimes and follies of my life. Rather help me by your vigor of thought and art-life to cast these follies into deepest oblivion, and let us all unite to lift each new and good thing to the highest peak of immortality." So shall our architecture become, whatever else it be, true and enduring.

DISCUSSION.

The President: Gentlemen, the purpose of the symposium is not merely to give the association the ideas as put forth in these more careful and elaborate efforts, but also to invite a free and general discussion of the subjects presented; and I think we should all be pleased to hear from individuals here present their views upon what has been presented by those officially engaged in this work, and also such additional independent contributions as they may wish to offer.

Mr. Baumann said that he thought *utility* one of the most salient points, and that it had not been as fully emphasized as it ought to be; that in this modern age *utility* was the true base of architectural art. We have spoken of *style*. What do we call style? What is style in architecture? He concluded by quoting from Professor Gottfried Semper, the great German architect, in his work published on the subject: "*Stile ist die Uebereinstimmung eines Bauwerkes mit den Bedingungen seines Entstehens*"—Style is the coincidence of a structure with the conditions of its origin.

Mr. Sullivan: I think we are starting at the wrong end entirely.

We are taking the results of what has already passed, examining on the surface, and from that are searching for the source of impulse. I do not believe the origin of style is outside, but within ourselves, and the man who has not the impulse within him will not have the style. But the more he thinks, the more he reflects, observes and assimilates, the more style he will have. So, therefore, it seems to me that the eventual outcome of our American architecture will be the emanation of what is going on inside of us at present, the character and quality of our thoughts and our observations, and above all, our reflections. If I were to forecast the outcome of American architecture I should search for it by the study of my own generation; not by studying the architecture of the past. We are in a vast ferment at present, and like most of them, the top of the liquor is covered with scum, but the real process is down below; and it is from this gradual clarifying of the fermentation of thought that the style will result, but the impulse must come first. Therefore, I think that to arrive at the style it is a great deal more important that we should be good observers and good reflectors rather than good draughtsmen.

Mr. Patton: Suppose we take at random a large number of architectural designs by average, good and bad architects, of all nationalities, could not any one of us in nine cases out of ten pick out every American design? Can we not tell almost at a glance that it is not French, German or Italian, but American? Is there not a particularly American style today? Then too, each has its own particular style. We see the individuality of the designer, and we see the national characteristics. It seems to me that we are converging more and more readily every year toward a certain amount of uniformity of treatment of whatever style we do adopt. I am sure that foreign architects years ago had more influence with us than they have now. I have been much impressed with how we are studying the work of American architects rather than the English architects today.

Mr. Root: I think we are in danger of getting a little wide of the subject, by the loose way in which we are using the word "style." I think it is our desire, and the intent of the papers here read, to limit the use of the word to its technical sense. If we use the word in its wider sense, then I entirely agree with the gentlemen who have spoken. The intention of modern architecture is not to inspire one to a direct imitation of his work, but rather to inspire one to go after those original sources from which he took *his* inspiration, and work over the same methods that he himself used, and produce parallel results.

Mr. Sullivan: With reference to Mr. Root's point, from such use there will gradually result a clinging to certain forms. It must come to everyone who has closely thought of the subject, that the use of any historic motive, which once had a special significance, now seems rather thin and hollow when used in our designs.

Mr. Pierce said he thought that in the discussion of the present tendency of style in architecture—the American style, that the wide latitude which our architecture must cover was overlooked; that the study of historic styles shows us that the architecture of every country largely depends upon the necessities arising out of local conditions, of climate, etc., and consequently one style of architecture could hardly cover our extensive country. We are made up, he said, of a multitude of people, coming from every part of the globe, who bring their own traditions, and it was unreasonable to expect all these varied ideas to fuse themselves into one local style.

After some further remarks, the president said: Before closing this discussion, I wish to enter a little protest against a matter which Mr. Root, the leader of the discussion, has, perhaps, emphasized more than he intended to, and that is, the insistence upon the existence here of a middle class as a separate and distinct feature.

We are all the middle class in our own estimation; we all realize that any one of us who may now be apparently below, may in a short time rise to an immeasurably high position. We are all familiar with the story of the rail-splitter, the tanner, or the canal-boy. Though we are all young men, there is not one of us but what has seen a bookkeeper, a clerk, or a laborer perhaps, become a merchant prince or a millionaire; so that we are sure to see before us that there are no class barriers, and that the only class distinctions there may be, are the incidental ones produced by wealth, unless, perhaps, the efforts which are now being made by trades unions, etc., may produce, after a while, a separate and distinct class of people, who are self-styled "the laboring class," and who never hope to rise to a higher condition. But the leaders who are seeking to bring about this state of affairs are decidedly un-American, and I believe their ideas are ephemeral, and that we will always be a people without class distinction; and therefore our architecture will never be the expression of the conditions or the wants and desires of any small class, but of the American people as a whole. Our architecture will develop into an easily recognizable style, and perhaps has already done so, simply because it is compelled from the inherent conditions of our American life, to express the wants and the needs of the American people, with the means that are at the disposal of the architect of today. But as these means are constantly growing, as the conditions under which work is being done, and the means placed at our disposal for doing this work are constantly shifting and changing, I doubt whether we shall, for many years, see an absolute crystallization of these into what we would like to call an American style; and it will be for the art critics of future generations to more definitely determine the tendencies of that style, and to define its peculiarities. These critics will be out of the struggle, and will be able to see the actual results, and will not know the immediate history of each individual effort.

Mr. Root explained that he had been misunderstood, and that in this country, where the laborer sometimes rose to the multi-millionaire, the change from one class to another was so rapid that to designate that to which an individual belonged would depend where one caught and branded him. The meeting adjourned.

The symposium for the April meeting is: What is the just subordination in architectural design, of details to mass?

It will be led by Louis H. Sullivan, W. L. B. Jenney, L. D. Cleveland, O. J. Pierce, L. H. Sullivan.

Association Tennessee Architects.

PURSUANT to the call issued by William C. Smith, F. A. I. A., and George W. Thompson, F. W. A. A., of Nashville, the architects of Tennessee met at Nashville on February 24, and formed a state association.

The meeting was called to order by G. W. Thompson, who nominated W. C. Smith as chairman of the convention, who was elected. On taking the chair, Mr. Smith stated that a call had been issued inviting the architects of the state to hold a convention, believing that a meeting for conference and the discussion of matters relative to the practice of architecture would greatly benefit the architects of the state.

The chair stated that R. C. McLean, of the INLAND ARCHITECT was present and in behalf of the architects assembled would present to him a most hearty welcome.

Mr. Smith made opening remarks, in which he sought to outline the work of the convention. One question that should be considered was that of state law regarding the licensing of architects. Another, the present method of awarding contracts. The present practice of awarding contracts separately, was abominable and should be changed. The speaker had already notified the Nashville Builders' Exchange of the desirability of a change; but whether that body had acted in the matter or not, the architects should, and suggestions outlining the proper method should be made. We will also organize a state association, so that we can have a schedule of charges of what we consider right and proper fees for our services as architects. These and other things will come before us which it will be proper to duly consider.

The chair stated that it would be necessary to elect a secretary for the convention, and on motion, R. C. McLean was asked to fill that office. The chair declared the convention open for business.

A resolution was passed to proceed to form a state association and a committee of three on permanent organization was appointed by the chair, consisting of Messrs. G. W. Thompson, J. P. Wilson and John S. Smith.

A committee of three to report on constitution and by-laws was appointed by the chair, consisting of Robert Sharp, T. L. Dismukes and R. C. McLean. On motion, W. C. Smith was added to this committee.

Letters were read by the chair from Architects R. G. Rosenplaenter, C. C. Burke and J. B. Cook, of Memphis, and J. F. Bowman, of Knoxville, stating in substance that they would be unable to be in attendance upon the convention, but were in full sympathy with the purposes of the meeting.

On motion by Mr. Dismukes, the gentlemen named were added to the roll of membership as charter members.

After a recess of thirty minutes, Mr. Sharp, Chairman of Committee on Constitution and By-Laws, read the report, and after discussion, section by section, the following was adopted as a whole:

CONSTITUTION.

NAME.—Section I.—The name of this association shall be The Association of Tennessee Architects.

OBJECTS.—Section II.—The objects of the association are: To unite in fellowship the architects of the State of Tennessee, to combine their efforts so as to promote the artistic, scientific and practical efficiency of the profession, and to cultivate and encourage the study of kindred arts.

MEMBERS.—Section III.—This association shall consist of active, associate and junior members.

QUALIFICATIONS.—Section IV.—Any architect engaged in the legitimate practice of his profession in the State of Tennessee may become a member of this association.

[Section 8 of the constitution of the Western Association of Architects is given in definition of Section 4 of these by-laws.]—The status of an architect is hereby defined as follows, to-wit: An architect is a professional man whose sole ostensible occupation consists in supplying all data preliminary to the material, construction and completion of buildings, in exercising administrative control over the operations of contractors supplying material and labor incidental to the construction and completion of buildings, and in officiating as custodian and arbitrator of contracts, stipulating terms of obligations and fulfillment between proprietor and contractor.

Section V.—Civil engineers, artists, and such persons of culture and taste as may feel an interest in architecture and works of art, may become associate members, and attaches of architect's offices may be admitted as junior members, with all the privileges of the association, except that of voting.

OFFICERS.—Section VI.—The officers of this association shall be a president, a secretary, a treasurer, three vice-presidents, and an executive committee.

DUTIES OF OFFICERS.—Section VII.—It shall be the duty of the president to preside at all meetings of the association; or, in his absence, this duty shall devolve on the vice-president present from the city where the meeting is held, or that nearest the same.

It shall be the duty of the secretary to take minutes of all meetings of the association, and to conduct all its correspondence, subject to the control of the Executive Committee.

It shall be the duty of the treasurer to collect all funds of the association, and disburse the same on the order of the secretary, when countersigned by the chairman of the Executive Committee.

The Executive Committee shall consist of the secretary, treasurer, and three active members, including the president, who shall be chairman *ex-officio*. It shall require three members of this committee to constitute a quorum.

It shall be their duty to exercise control over the property and general interests of the association; to receive nominations for membership and act upon the same; to consider complaints, and expel members of the association for cause; to act as a committee of arbitration on all questions submitted to it by members of the association, and generally to have control of its welfare and interests.

All calls for extra meetings shall be issued by this committee.

This committee shall report to the association at each regular meeting of the association.

All appeals from the action of the Executive Committee shall be to the Board of Directors of the Western Association of Architects.

AMENDMENTS.—Section VIII.—This constitution may be amended by a two-thirds vote of the active members present at any meeting of the association, provided that a notice of such proposed change shall have been mailed to each active member by the secretary, on the order of the Executive Committee, twenty days before the date of said meeting.

BY-LAWS.

MEETINGS.—Article I.—The regular meetings of this association shall be bi-monthly, and shall occur on the third Thursday in February, April June, August, October and December, unless otherwise ordered by the Executive Committee, ten days' notice having been given. The place to be chosen at each preceding meeting.

The annual meeting shall occur on the third Thursday in February.

RULES OF ORDER.—Article II.—The meetings of this association shall be conducted according to Roberts' Rules of order.

APPLICATIONS FOR MEMBERSHIP.—Article III.—Any person desiring to become a member of the association shall send his application in writing to the Executive Committee, this application to be indorsed by two active members of the association who are personally acquainted with the applicant.

ELECTION OF MEMBERS.—Article IV.—Upon receiving an application for membership, the Executive Committee shall investigate the standing of the applicant, and shall, by ballot, admit or refuse him. All discussion of applicants to be considered confidential.

DUES.—Article V.—All active members of the association shall pay an initiation fee of \$5 and annual dues of \$3. Dues to be payable semi-annually, in February and

October, and no person shall be entitled to vote at any meeting, whose dues may be in arrears for twelve months.

QUORUM.—Article VI.—Five active members shall constitute a quorum for the transaction of business.

ELECTION OF OFFICERS.—Article VII.—All officers of the association shall be elected at the first regular meeting of each year of the association. They shall be elected by a majority ballot vote of the members present. If any member of the Executive Committee is absent from four of its consecutive meetings, the other members shall have power to declare his place vacant, and proceed to elect his successor for the remainder of his term. A two-thirds vote will elect.

PAPERS AND RECORDS.—Article VIII.—All papers and other records, not considered by the Executive Committee confidential, shall be at all times open to the inspection of the active members of the association.

AMENDMENTS OF BY-LAWS.—Article IX.—The by-laws of this association may be amended by a two-thirds vote of the active members present at any meeting, notice having been given as in the case of proposed amendments to constitution.

The report of the Committee upon Permanent Organization was called for, and G. W. Thompson submitted the following as its choice of officers for the ensuing year:

President, Wm. C. Smith, of Nashville; secretary, T. L. Dismukes, of Nashville; treasurer, George W. Thompson, of Nashville.

Vice-presidents, P. J. Williamson, of Nashville; J. B. Cook, of Memphis, and J. F. Bowman, of Knoxville.

Board of trustees, P. J. Williamson and R. G. Rosenplaenter together with the secretary, treasurer, and the president, who is *ex-officio* chairman.

The report was accepted, and on motion by Mr. Dismukes the rules were suspended, and the secretary instructed to cast the ballot for William C. Smith, as president.

On motion of Mr. Laurent, the secretary was instructed to cast the ballot for the remainder of the report.

On motion of G. W. Thompson, the entire minutes of the proceedings were ordered printed in THE INLAND ARCHITECT, and a marked copy sent to every architect in the state of Tennessee.

Mr. W. C. Smith said: Some if not all of you are familiar with the part I have taken in this state in past years, in regard to fighting the taxing of architects, and that two years ago I succeeded in getting the tax imposed by the legislature removed. Some years ago the architects of Nashville took the matter up and presented a memorial to the legislature. It passed two readings and then stopped. In the next session, the matter was taken up by the Committee on Revenue, and the tax upon architects and engineers was repealed. It was again put on at the last meeting, and though not as heavy as before, it is unjust, as any professional labor, such as that of the architect, should be taxed no more than the artist or lawyer. Proper steps should be taken by the association to have the tax permanently removed.

Mr. McLean presented the Western Association bill for the examination and licensing of architects, briefly explaining its purposes, and read the bill.

After some discussion, on motion of Mr. Laurent, a committee of three, including the president, was appointed by the chair, to make such changes in the draft of the bill as would adapt it to the state of Tennessee, and present it to the legislature. The committee also to be charged to take such steps as is deemed necessary to secure the relief of architects from the present tax. The committee appointed are, William C. Smith, Edward Laurent and George W. Thompson.

On motion, a committee of three, consisting of H. C. Thompson, P. J. Williamson, and Robert Sharp, were appointed, to select a place for the next annual meeting.

G. W. Thompson made the following motion:

Resolved, That a committee of five be appointed to examine laws and customs pertaining to measurement of masonry, and report at our next annual meeting, with recommendations looking to a uniform practice.

The chair appointed W. G. Thompson, J. L. Smith, P. J. Williamson, J. B. Cook and J. F. Baumann.

Robert Sharp offered the following resolution:

Resolved, That the schedule of charges as formulated and adopted by the American Institute of Architects, and the Western Association of Architects, be adopted by the Association of Tennessee Architects as the basis of charges for professional service.

G. W. Thompson suggested the discussion of the contract question, stating that all architects experienced great embarrassment and inconvenience in the present mode of letting contracts.

The chair stated that he had recently sent a communication signed by G. W. Thompson and himself, to the secretary of the Builders' and Traders' Exchange of Nashville. While it did not place the matter in just the shape in which it should come before the meeting, he would read a copy of the letter, which was as follows:

NASHVILLE, Tenn., February 8, 1887.

I. N. Phillips, Secretary Master Builders' Association, Nashville, Tenn.:

DEAR SIR.—Believing that the interests of the contractor and owner alike, as well as all other parties concerned, will be greatly promoted by letting contracts for buildings under two divisions only, the undersigned have adopted the following, relative to the preparation of specifications, and letting contracts for work from their respective offices:

1. Two specifications will be prepared, to wit:

The "Masons' Specifications" and the "Carpenters' Specifications."

2. In the "Masons' Specifications" will be included: The brickwork, cutstone work, terra-cotta, plastering, grate-setting, pavements, and all work requiring the use of mortar, except the foundation work, which may be let as a separate contract.

3. In the "Carpenters' Specifications" will be included, the carpenters' work, galvanized iron work, tinning or other roofing, and the painting and glazing.

We are confident that such a division of the several trades required for the construction of a building will expedite the work when once begun, and insure its completion in a very much shorter time, thus making it more profitable to the builder and owner as well, from the fact that the builder will realize upon his work more rapidly, and the interest account of the owner is very much lessened thereby, if a commercial building, besides enabling the owner to occupy the building very much sooner from the date of its commencement.

Hoping to have your coöperation in this movement, we are, very respectfully, yours,
SMITH & SHARP,
GEO. W. THOMPSON.

A general discussion followed, by Smith, Thompson, Dismukes, Laurent, and others, in which it was developed that the present system of letting contracts devolved too much unnecessary labor upon the architect, and that work should be given to one general contractor, or perhaps two, and that these should let sub-contracts after the approval of the sub-contractors by the architect. It was finally decided to place the matter in the hands

of the Executive Committee, with instructions to formulate a system to be presented at the next meeting of the association.

G. W. Thompson reported Memphis as the unanimous choice of the committee as the place for holding the next annual meeting.

A vote of thanks was passed to the official board of the First Cumberland Presbyterian Church for the use of their lecture room by the convention.

A vote of thanks was also tendered R. C. McLean, "not only for his presence at the meeting, but for his valuable aid and suggestions in carrying out the work of the convention."

The convention adjourned to meet in Nashville the third Thursday in April, the place to be designated by the board of trustees.

Association Notes.

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

THE CHICAGO ARCHITECTURAL SKETCH CLUB meets every alternate Monday, Builders' and Traders' Exchange. W. G. Williamson, secretary.

THE WESTERN SOCIETY OF ENGINEERS meets the first and third Tuesdays of each month at 4 o'clock, p. m., at 15 East Washington street, Chicago.

ARCHITECTURAL ASSOCIATION OF MINNESOTA.

The revised bill for the examination and licensing of architects in the State of Minnesota, presented to the senate by the state association, through Senator Sheffer, met with disaster, its consideration by that body having been indefinitely postponed by a majority opposition vote.

SOCIÉTÉ CENTRALE DES ARCHITECTES.

The officers of the Société Centrale des Architectes, of Paris, France, for the present year are as follows: President, M. Bailly; vice presidents, M. Hermant and M. P. Sédille; secretary, M. Paul Wallon; assistant secretary, M. Mounier; secretary of publications, M. Constant Bernard; librarian, M. Raulin; treasurer, M. Simon Girard. These addresses may be useful to American societies who may wish to communicate with the Société Centrale on some matter of architectural interest.

BUFFALO SOCIETY OF ARCHITECTS.

A circular letter has been sent to the most reputable architects in western New York, by the Buffalo Society, calling for a conference looking toward the formation of a state association, and a respectable number of replies have already been received, all, with out exception, in favor of the proposed organization, so that the committee feel very much encouraged, and will push the matter to a speedy consummation. The Buffalo society is being rapidly extended in membership, including several draughtsmen as junior members, who are already members of the "Buffalo Architectural Sketch Club," a union that will be of benefit to both societies. A new departure has been instituted in the manner of conducting the business of the societies. Four standing committees have been appointed, one on "woods used in building," one on "building stone," one on "brick," and one on "limes and cements." The membership of these committees includes a junior member to each, who, while they have no vote or voice in the conducting of the business of the society, are thus brought actively into the work of accumulating a fund of information and samples on the subject in question. The society has not, as yet, felt strong enough to take up the many legislative matters that

will form one of the purposes of the state association when formed, but its members are disposed to use their best efforts to familiarize themselves with the materials which they constantly handle. With this end in view the committees have been appointed, whose duty it shall be to compile all possible information on the subject, and also to collect samples, properly labeled and classified, of which they hope to have a respectable exhibit. The committee on woods made a partial report at the meeting, March 2, bringing into the society thirty-four classified and labeled samples of local woods, finished on one side, and of uniform size. The informal discussion of these samples by the members present could not fail to be of interest to anyone interested in building, and the value of this class of the society's work can hardly be overestimated.

CHICAGO ARCHITECTURAL SKETCH CLUB.

The meeting on February 28 was well attended, and listened to an excellently delivered and very instructive talk upon ventilation by W. M. Green, of the Exhaust Ventilator Company.

The competitive drawings for a three-room village schoolhouse were handed in.

Mr. McLean submitted a proposition that the club make drawings for the title page of a menu card for the builders' and traders' banquet, which occurs March 31, which was accepted, the drawings to be submitted at the next meeting, March 14. They should be drawn on a sheet about five inches by eight inches or longer. It is deemed a good opportunity for the club to show its appreciation of the many courtesies extended it by the Exchange, and should be improved.

The Chicago Press Club are desirous of receiving designs for a monument for its lot at Rosehill Cemetery, and through Mr. Root asked the club to present a suitable design. A vote was taken, and the club unanimously agreed to submit competitive designs in a special competition, to be closed one month from date. The monument is to cost \$1,500, exclusive of the material (Georgia marble), which has been donated.

KANSAS CITY ARCHITECTURAL CLUB.

The draughtsmen of Kansas City organized an association February 21, with fourteen members, and elected as officers, J. Van Brunt, president; A. H. Ramsden, vice-president; Willis J. Polk, secretary; W. M. Kenyon, treasurer. The executive committee will consist of these officers and L. S. Curtiss. The proceedings of the club will be similar to those of the Chicago club, holding semi-monthly meetings, with monthly competitions, reading of papers, etc. The Kansas City Society of Architects is taking a lively interest in the club, and giving it much encouragement.

CINCINNATI ARCHITECTURAL SKETCH CLUB.

The draughtsmen of Cincinnati have organized a sketch club, with a membership of about twenty-five. The officers are: president, J. W. Adams; vice-president, L. G. Dittoe; secretary, Arthur Steadman. The club will meet every two weeks on Thursdays.

Our Illustrations.

Fireplace of endolithic marble, by Architects Berg & Clark, New York.

Competitive design elevation and plans for the Carnegie free library, at Allegheny, Pa., by James W. McLaughlin, architect, Cincinnati, Ohio.

Designs submitted in the Chicago Architectural Sketch Club competition for a 25-foot city front; by W. B. Mundie, first prize; W. R. Ray, second prize; R. M. Turner, third prize; F. O. Fraenkel and Richard Wood.

Club house for the Park Club, at north entrance to Rosalie court, South Park Station, by S. S. Beman, architect, Chicago. Brick; dimensions, 30 by 60 feet; first and second floors finished in hardwood; cost, complete, \$13,000.

The Pickwick, an eight-story apartment house, Chicago; Burnham & Root, architects. Brick; interior, including trimmings, doors, stairways, etc., finished throughout in butternut, by the C. J. L. Meyer & Sons Company, of Chicago. Apartments for fifteen families.

The Argyle, an eight-story apartment house, Chicago; Burnham & Root, architects. Brick; interior, including trimmings, doors, staircases, etc., finished in oak, by the C. J. L. Meyer & Sons Company, of Chicago. The Argyle and the Pickwick are the largest structures of this class erected west of New York, and are well planned for apartment purposes.

Residence for Mrs. Elizabeth T. Hoagland, northeast corner of Lake avenue and Fifty-first street, Hyde Park, Ill., by M. L. Beers, architect. The finish of main part of first story is of selected butternut with a furniture polish. The balance of the house is in clear pine, finished in the natural wood. One feature of the house is the "den," which is in the front octagon upon the second story stair landing. The house is fitted up with all modern conveniences.

PHOTOGRAPHURE PLATES.

(Only issued to subscribers for the Photographure edition.)

Residence of Wm. J. Watson, Chicago; Treat & Foltz, architects.
Residence of H. O. Warner, Chicago; Burnham & Root, architects.
Residence of Joseph Frank, Chicago; Burnham & Root, architects.
Residence of S. B. Barker, Chicago; Wheelock & Clay, architects.
Residence of F. G. Logan, Chicago; Wheelock & Clay, architects.

A CIRCULAR letter, issued by the Illinois Terra Cotta Lumber Company, of Chicago, states that the agency of E. D. Morris & Co. for the company had expired by limitation; that they are the sole owners for the rights of manufacture and sale of porous terra-cotta in the State of Illinois, and that the output of the company's factory had lately been considerably increased, and it was now able to furnish any quality or description of fireproof roofing material and hollow building tiles.

An Endolithic Fireplace.

THE question is often asked an architect: "What ought we to build the hall fireplace of?" The answer is usually, marble, stone, terracotta, tile, or a combination of the same. The most recent material used for this purpose, however, is endolithic marble. With this material it has become possible to build and to have a most artistic hall fireplace at moderate cost.

It will be seen from the illustration in this number, by Architects Berg and Clark, of New York, that is, as far as black and white will convey the idea, where color plays so large a part, that the designers have taken advantage of the possibilities offered by endoliths, and have produced a hall mantel, strong in design and beautiful in color. Indeed it would have been almost impossible to have obtained sienna and numidian in as large blocks, or as beautifully marked as the endoliths used in this mantel, and if obtainable, the expense would have been beyond all reason, while as it is the mantel costs very little. But then, it may be said, "Endoliths are imitations, and of doubtful durability." This is a misstatement, that can be best answered by a definition and an explanation. The definition is of the word imitation, while the explanation is the history and nature of endoliths. An imitation is a copy in another material, and generally inferior one, of something which we know it is not, as for example, marbleized slate and grained woods; we know they are only counterfeits or likenesses; but on the other hand, if a chemist should produce gold in his laboratory, it would be gold just as much as if he had got it out of a mine, and therefore not an imitation. This is just what has taken place in the discovery of endolithic marble. The chemist reproduces the operation of nature; using white marble as a base, he changes it through and through its entire substance into a colored marble, say sienna, which will yield the same constituents when subjected to chemical analysis, as that quarried; moreover, this being true, the matter of durability is also settled. Furthermore, endoliths have been in use some years without showing any sign of disintegration, but on the contrary, have proved themselves more durable than quarried marble.

Hand in hand with the discovery of endoliths, there were a number of new pigments brought to light—pigments having the wonderful property of entering the marble vertically, at right angles with the surface, so that a picture, or any design painted with them, can be forced below the surface and afterward the marble polished, making in this way an imperishable decoration. What! paint marble? Yes, why not? Because it is bad art. Not if we are to believe the Greeks, who in the best period of their art not only painted the subordinate details of their white marble and stone buildings, but sometimes the entire edifice; not if we are to believe the Gothic architects, who used color freely upon the stonework of their churches, shrines and tombs, as witness the Rochester cathedral, with its stone shafts and arches painted alternately red, green and yellow. The only possible objection to the legitimate use of paint is its lack of permanence, an objection met by endolithic pigments, which have the quality of permanence in the highest degree. If there was ever an excuse for mosaics, whose value depends upon their durability, there is a two-fold reason for using endoliths—first, because they are as durable; secondly, because they are free from the disagreeable cement lines. Architects Berg and Clark have used in their mantel, and it seems with great success, almost all forms of endoliths.

Railroad Notes.

FOR several years the Michigan Central has had in its Atlantic express a most admirable and convenient through car line from Chicago to Boston and other New England points, and its popularity has steadily increased. It has enjoyed a great advantage over its competitors, not only in the directness of its route and the splendid scenery of Niagara Falls, Central New York, the Mohawk, Hudson, Housatonic and Connecticut valleys, and the Berkshire Hills, but in its connections with the great four-track New York Central and double-track Boston and Albany and its splendid equipment, making fast time with sureness and with safety.

In the arrangement of grand excursions the Missouri Pacific Railway takes the lead. Its California excursions, leaving St. Louis and Kansas City about twice a month for Los Angeles and San Francisco, at a round trip fare of \$72 for some eight days' steady travel, are well known and very popular, being particularly attractive to winter tourists, from this being the southern route, free from the dangers of snow blockades. This road now offers a new attraction in a grand excursion to the City of Mexico, to leave Chicago, Detroit, St. Paul, Louisville and other leading cities on March 8, and St. Louis and Kansas City a day later. The entire fare for the round trip is only about \$100. Tickets are good for sixty days, and can be extended on application, and the excursion will be attended all the way by a special superintendent to care for the comfort of the tourists, both in their own land and in Mexico.

Synopsis of Building News.

Abilene, Kan.—Architect Geo. W. Shaffer reports: Outlook very promising. For L. B. Johns, two-story and attic frame dwelling, 36 by 42 feet; stone foundation; steam heat, mantels, etc.; cost \$4,000; under way.

Buffalo, N. Y.—Architects Silsbee & Marting report: Ingersoll Memorial Chapel, corner of Jewett and Summit avenues; cost \$20,000. For C. B. Germain, residence; cost \$15,000.

Architects M. E. Beebe & Son report: For A. G. Hatch, stores; cost \$12,000. For J. S. Grimms, stores; cost \$30,000.

Architects C. K. Porter & Son report: For Bronner Bros., storehouse; cost \$10,000. Architect L. Saenger reports: For Cooperative Brewing Company, storehouse; cost \$30,000. For Clinton Brewing Company, sheds and barns; cost \$5,000.

Architects Green & Wicks report: For Granger & Co., "Granger Block"; cost \$60,000; Schmidt & Bro., builders, For Geo. H. Lewis, "Niagara" Hotel; cost \$100,000; Chas. Berwick, builder. For Dr. Roswell Park, residence; cost \$10,000.

Architect Geo. J. Metzger reports: For Riverside Driving Park, stock barn; cost \$10,000.

Architect W. W. Carlin reports: For Emanuel Levi, stores and flats; cost \$30,000; J. H. Tilden, builder.

Caro, Mich.—City Clerk reports: City Hall, 85 by 70 feet, two stories and basement, brick, with stone and iron trimmings; cost \$6,000; not yet let; to be commenced about April 1; H. S. Hollister, architect.

Chicago, Ill.—The tendency toward dwellings of moderate cost, both for owners' occupancy and rental, stores and flats, rather than large structures, seems to gain as the spring work begins to show in the contractors' hands for execution. There will be a larger number of costly residences built this year than for several years past. The weather favors building, and though excavators have to wedge the top crust, the frost is not deep, and building is exceedingly active throughout the city.

Architects Edbrooke & Burnham report: For Frank H. Ray, three-story building, 64 by 180 feet, 1446-8 Wabash avenue; to be used as a livery stable, store and laundry, with apartments above; pressed brick, with Vert island stone, copper and terra-cotta trimmings, galvanized iron cornice, composition roof, iron channels, beams, etc.; skylights, stained glass, closets and bath, carriage elevator; cost \$25,000; John Angus, mason; Alex. McIntosh, carpenter; building under way. For Frank Gazzolo, four-story store and office building, 40 by 50 feet, 86 and 88 West Madison street; Anherst stone and iron front; galvanized iron cornice, composition roof, iron channels, beams, etc.; skylights, closets, bath, etc.; cost \$25,000; under way; John Angus, mason; E. Moore, carpenter. For W. J. Edbrooke, three two-story residences, 50 by 55 feet, on Forty-first street near Drexel; brick, stone trimmings, galvanized iron cornice, composition roof, skylights, stained glass, closets and baths, wood mantels, hot air heat, electric bells, speaking tubes; cost \$12,000; under way.

Architect W. G. Barfield reports: For J. H. Allen, two-story frame dwelling, 27 by 40 feet, at Woodlawn; stone basement, hardwood finish, stained glass, closets and bath, hot-air heat, wood mantels; cost \$3,000. For A. Berg, brick and stone residence on Wabash avenue near Thirty-fifth street; cost \$10,000. For John O'Malley, three-story stores and flats, 125 by 150 feet; brick, stone trimmings; cost \$22,000.

Architect W. W. Boyington reports: Contracts for addition to L. S. & M. S. and C., R. I. & P. R'y Depot have been let as follows: Masonry, Wm. Munson; carpentry, Thos. Clark & Son; ironwork, Dearborn Foundry Co.; fireproofing, Wight Fireproofing Co.; steam-heating, Hay & Prentice Co.; plumbing, Hugh Watt; painting, J. B. Sullivan & Bro.; terra-cotta, Northwestern Terra-Cotta Co.; roofing, Wm. Powell & Co.; tile roofing and copper work, Wm. B. White; total cost of improvement \$107,000. Contracts for additional story to the National Life Building were let as follows: Carpentry, Gordon & Covil; ironwork, Bouton Foundry Co.; skylights, Wm. B. White.

Architect Alfred Smith is taking figures on buildings of C. H. Jordan, for which plans were made last spring. They include a three-story and basement store and flat building, 25 by 80 feet, on West Madison street, opposite Page, to cost \$10,000, and two two-story residences, 42 by 69 feet, pressed brick and stone; cost \$13,000; work to be commenced at once.

Architect Clarence L. Stiles reports: For Gabriel Frauchere Owen, two-story tenements, 143 by 50 feet, corner of Sibley street and Vernon Park place, brick, composition roof, galvanized iron cornices, closets and bath, slate mantels, electric bells, speaking tubes, etc.; cost \$18,000; J. W. La Croix, mason; Billie & Ducasse, carpenters. For David Graham, two-story frame cottage, in Woodlawn, closets and bath, stained glass, hot air heat, hardwood finish, wood mantels, electric bells, speaking tubes, etc.; cost \$4,000.

Architect W. I. Beman: For E. L. Jayne, two-story frame dwelling; cost \$5,000. For A. W. Hayward, two-story and basement dwelling 44 by 52 feet; cost \$8,000. For R. A. Shaler, two-story and basement dwelling; cost \$9,000. For C. E. Seaton, two-story and basement dwelling; cost \$8,000. For E. F. Gordon, two-story dwelling; cost about \$8,000.

Architect Wm. H. Drake: For Dr. Quinlan, brick warehouse, 40 by 90 feet; cost \$15,000 to \$20,000. For P. Ewan, five-story hotel building, 90 feet front on West Madison street, near Jefferson street.

Architects Treat & Foltz: For H. Van Schaak, ten two-story and basement dwellings, 20 by 40 feet each, on Lawrence avenue; cost \$26,000.

Architects Jenney & Otis: For Dr. Tucker, three-story and basement residence, 22 by 70 feet, on Dearborn avenue; granite front; cost \$13,000.

Cincinnati, Ohio.—Reported by Lawrence Mendenhall. Until the building season fairly opens, the gleaming of notes that will interest the readers of architectural journals, is not an easy task. Of course at this time of year extensive improvements are talked about, and land and improvement syndicates formed, but as all that glitters is not gold, so do these fail to materialize in every instance. But I am safe in asserting that suburban building will partake of the nature of a boom this season, but consist mainly of the medium-priced houses.

The cable and elevated railroads projected and completed, have done much toward opening this "Pandora box" to our architects, who are, by the way, entirely too modest.

The young draughtsmen of the city have organized the Cincinnati Architectural Sketch Club. The officers are good, live young men, and competent, namely: President, J. W. Adams; vice-president, L. G. Dittoe, and secretary, Arthur Stedman. They meet on Thursday twice a month.

Our Builders' Exchange took formal possession of their new quarters on February 24, in Mechanics' Institute building, the cradle in which many of our now prosperous mercantile associations were rocked. They have now no reason to be ashamed of their rooms, and can boast of not only clean, light rooms, but of having a live organization.

The Building Exhibit Co. have elected Wm. H. Stewart, president, and L. H. McCameron, secretary, both live men.

The new Armory is now a settled fact, and the trustees are advertising for a lot upon which to build. The amount appropriated is \$100,000.

On my rounds, the following notes were obtained:

Architect Jas. W. McLaughlin is preparing plans for a new bank building for the First National Bank of this city. The present building is a three-story brick, which does not denote the solid condition of its occupant. The basement or first floor will be granite, and the remaining two of pressed brick, with terra-cotta, gables, and tourelles, and fireproof construction. The size of structure is 55 by 75 feet, and will cost \$80,000.

Architects Forbush & Green report: Alteration for the Merchants' National Bank, and a safety deposit vault, costing \$13,000. A residence for Alvin Patton, Esq., built of brick and frame, with shingle roof, containing nine rooms; cost \$5,000.

Architect Geo. W. Rapp reports: A residence and store for B. Ellermann, Esq., containing eighteen rooms, pine finish, tin roof. For J. E. Lapp, alterations and additions of store. For the Jno. Kaufmann Brewing Co., a new brew house, 32 by 70 feet, of brick and terra-cotta; cost not known. Mr. Rapp is perfectly at home in all that pertains to brewery work, and has several fine buildings to make this assertion good.

Architect Henry E. Siter has his time well employed with the following: Remodeling the Ohio Valley National Bank; remodeling the Market National Bank. For Mr. Abe Fuest, two new store fronts of iron for a remodeling job. For Wm. Corry, Esq., a frame house of six rooms, with slate roof and pine finish. For H. H. Vaile, Esq., a row of five houses of brick and frame, eight rooms each, with slate roof; quite picturesque. For Mr. O. Reish, a beautiful brick and frame residence of two and a half stories, ten rooms, slate roof, etc. For Mrs. N. A. Jeffries, a frame house of 12 rooms, with slate roof.

Architects Buddemeyer, Plympton & Trowbridge report: For Chas. W. Bell, a brick residence two and a half stories, nine rooms, pine and white walnut finish, and slate roof; cost \$5,500. For H. M. Lane, a picturesque half timber and shingle residence, containing seven rooms; cost \$3,000. For Chas. Rosenstill, a four-story brick tenement building for six families; cost \$4,000; time well employed, and good prospects.

Delphos, O.—Architects Kendrick & Shrimpton, of Fort Wayne, Ind., report: For Catholic Society, a parochial school building; to cost \$10,000.

Dubuque, Ia.—Architects F. Heer & Son report: Present prospect for the spring is very promising; the following projected work: St. Catharine, German Catholic church, 40 by 86; cost \$4,500, contracted. Church at Osage, Ia., 40 by 88; cost \$4,000 contracted; N. Hill, Dyersville, Ia., residence, 32 by 38; cost \$4,000; T. Minke, Same place, store 25 by 60; cost \$2,500. Mrs. Mohr, same place, residence 25 by 35; cost \$4,000. P. Keine, Dubuque, store and dwelling, 26 by 40, cost \$2,000. Mrs. Kunze, same place, residence 22 by 34, cost \$2,500. Mr. Pickenbrok, same place, remodeling residence, cost \$3,000. Store, McGregor, Ia., 25 by 60, cost \$3,000. Contracts let for Church Sacred Heart at Dubuque, cost \$36,000. Residence T. Rueger, 22 by 34, contracted; cost \$2,000.

Architect F. D. Hyde, reports: For G. B. Birch, remodeling large brick residence, adding new slate roof and attic story, new carriage porch, bays, etc.; cost about \$4,500. For W. S. Bradley, block of three two-story and attic brick residences, 60 by 56 feet; cost \$8,000; plans in preparation. For A. A. Cooper, two-story and attic stone residence, 45 by 70 feet, slate roof; cost \$30,000; plans in preparation.

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G. W. Thompson reported Memphis as the unanimous choice of the committee as the place for holding the next annual meeting.

A vote of thanks was passed to the official board of the First Cumberland Presbyterian Church for the use of their lecture room by the convention.

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

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

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

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

THE CHICAGO ARCHITECTURAL SKETCH CLUB meets every alternate Monday, Builders' and Traders' Exchange. W. G. Williamson, secretary.

THE WESTERN SOCIETY OF ENGINEERS meets the first and third Tuesdays of each month at 4 o'clock, P. M., at 15 East Washington street, Chicago.

ARCHITECTURAL ASSOCIATION OF MINNESOTA.

The revised bill for the examination and licensing of architects in the State of Minnesota, presented to the senate by the state association, through Senator Sheffer, met with disaster, its consideration by that body having been indefinitely postponed by a majority opposition vote.

SOCIÉTÉ CENTRALE DES ARCHITECTES.

The officers of the Société Centrale des Architectes, of Paris, France, for the present year are as follows: President, M. Bailly; vice presidents, M. Hermant and M. P. Sédille; secretary, M. Paul Wallon; assistant secretary, M. Mounier; secretary of publications, M. Constant Bernard; librarian, M. Raulin; treasurer, M. Simon Girard. These addresses may be useful to American societies who may wish to communicate with the Société Centrale on some matter of architectural interest.

BUFFALO SOCIETY OF ARCHITECTS.

A circular letter has been sent to the most reputable architects in western New York, by the Buffalo Society, calling for a conference looking toward the formation of a state association, and a respectable number of replies have already been received, all, with out exception, in favor of the proposed organization, so that the committee feel very much encouraged, and will push the matter to a speedy consummation. The Buffalo society is being rapidly extended in membership, including several draughtsmen as junior members, who are already members of the "Buffalo Architectural Sketch Club," a union that will be of benefit to both societies. A new departure has been instituted in the manner of conducting the business of the societies. Four standing committees have been appointed, one on "woods used in building," one on "building stone," one on "brick," and one on "limes and cements." The membership of these committees includes a junior member to each, who, while they have no vote or voice in the conducting of the business of the society, are thus brought actively into the work of accumulating a fund of information and samples on the subject in question. The society has not, as yet, felt strong enough to take up the many legislative matters that

will form one of the purposes of the state association when formed, but its members are disposed to use their best efforts to familiarize themselves with the materials which they constantly handle. With this end in view the committees have been appointed, whose duty it shall be to compile all possible information on the subject, and also to collect samples, properly labeled and classified, of which they hope to have a respectable exhibit. The committee on woods made a partial report at the meeting, March 2, bringing into the society thirty-four classified and labeled samples of local woods, finished on one side, and of uniform size. The informal discussion of these samples by the members present could not fail to be of interest to anyone interested in building, and the value of this class of the society's work can hardly be overestimated.

CHICAGO ARCHITECTURAL SKETCH CLUB.

The meeting on February 28 was well attended, and listened to an excellently delivered and very instructive talk upon ventilation by W. M. Green, of the Exhaust Ventilator Company.

The competitive drawings for a three-room village schoolhouse were handed in.

Mr. McLean submitted a proposition that the club make drawings for the title page of a menu card for the builders' and traders' banquet, which occurs March 31, which was accepted, the drawings to be submitted at the next meeting, March 14. They should be drawn on a sheet about five inches by eight inches or longer. It is deemed a good opportunity for the club to show its appreciation of the many courtesies extended it by the Exchange, and should be improved.

The Chicago Press Club are desirous of receiving designs for a monument for its lot at Rosehill Cemetery, and through Mr. Root asked the club to present a suitable design. A vote was taken, and the club unanimously agreed to submit competitive designs in a special competition, to be closed one month from date. The monument is to cost \$1,500, exclusive of the material (Georgia marble), which has been donated.

KANSAS CITY ARCHITECTURAL CLUB.

The draughtsmen of Kansas City organized an association February 21, with fourteen members, and elected as officers, J. Van Brunt, president; A. H. Ramsden, vice-president; Willis J. Polk, secretary; W. M. Kenyon, treasurer. The executive committee will consist of these officers and L. S. Curtiss. The proceedings of the club will be similar to those of the Chicago club, holding semi-monthly meetings, with monthly competitions, reading of papers, etc. The Kansas City Society of Architects is taking a lively interest in the club, and giving it much encouragement.

CINCINNATI ARCHITECTURAL SKETCH CLUB.

The draughtsmen of Cincinnati have organized a sketch club, with a membership of about twenty-five. The officers are: president, J. W. Adams; vice-president, L. G. Dittoe; secretary, Arthur Steadman. The club will meet every two weeks on Thursdays.

Our Illustrations.

Fireplace of endolithic marble, by Architects Berg & Clark, New York.

Competitive design elevation and plans for the Carnegie free library, at Allegheny, Pa., by James W. McLaughlin, architect, Cincinnati, Ohio.

Designs submitted in the Chicago Architectural Sketch Club competition for a 25-foot city front; by W. B. Mundie, first prize; W. R. Ray, second prize; R. M. Turner, third prize; F. O. Fraenkel and Richard Wood.

Club house for the Park Club, at north entrance to Rosalie court, South Park Station, by S. S. Beman, architect, Chicago. Brick; dimensions, 30 by 60 feet; first and second floors finished in hardwood; cost, complete, \$13,000.

The Pickwick, an eight-story apartment house, Chicago; Burnham & Root, architects. Brick; interior, including trimmings, doors, stairways, etc., finished throughout in butternut, by the C. J. L. Meyer & Sons Company, of Chicago. Apartments for fifteen families.

The Argyle, an eight-story apartment house, Chicago; Burnham & Root, architects. Brick; interior, including trimmings, doors, staircases, etc., finished in oak, by the C. J. L. Meyer & Sons Company, of Chicago. The Argyle and the Pickwick are the largest structures of this class erected west of New York, and are well planned for apartment purposes.

Residence for Mrs. Elizabeth T. Hoagland, northeast corner of Lake avenue and Fifty-first street, Hyde Park, Ill., by M. L. Beers, architect. The finish of main part of first story is of selected butternut with a furniture polish. The balance of the house is in clear pine, finished in the natural wood. One feature of the house is the "den," which is in the front octagon upon the second story stair landing. The house is fitted up with all modern conveniences.

PHOTOGRAVURE PLATES.

(Only issued to subscribers for the Photogravure edition.)

Residence of Wm. J. Watson, Chicago; Treat & Foltz, architects.
Residence of H. O. Warner, Chicago; Burnham & Root, architects.
Residence of Joseph Frank, Chicago; Burnham & Root, architects.
Residence of S. B. Barker, Chicago; Wheelock & Clay, architects.
Residence of F. G. Logan, Chicago; Wheelock & Clay, architects.

A CIRCULAR letter, issued by the Illinois Terra Cotta Lumber Company, of Chicago, states that the agency of E. D. Morris & Co. for the company had expired by limitation; that they are the sole owners for the rights of manufacture and sale of porous terra-cotta in the State of Illinois, and that the output of the company's factory had lately been considerably increased, and it was now able to furnish any quality or description of fireproof roofing material and hollow building tiles.

An Endolithic Fireplace.

THE question is often asked an architect: "What ought we to build the hall fireplace of?" The answer is usually, marble, stone, terra-cotta, tile, or a combination of the same. The most recent material used for this purpose, however, is endolithic marble. With this material it has become possible to build and to have a most artistic hall fireplace at moderate cost.

It will be seen from the illustration in this number, by Architects Berg and Clark, of New York, that is, as far as black and white will convey the idea, where color plays so large a part, that the designers have taken advantage of the possibilities offered by endoliths, and have produced a hall mantel, strong in design and beautiful in color. Indeed it would have been almost impossible to have obtained sienna and numidian in as large blocks, or as beautifully marked as the endoliths used in this mantel, and if obtainable, the expense would have been beyond all reason, while as it is the mantel costs very little. But then, it may be said, "Endoliths are imitations, and of doubtful durability." This is a misstatement, that can be best answered by a definition and an explanation. The definition is of the word imitation, while the explanation is the history and nature of endoliths. An imitation is a copy in another material, and generally inferior one, of something which we know it is not, as for example, marbleized slate and grained woods; we know they are only counterfeits or likenesses; but on the other hand, if a chemist should produce gold in his laboratory, it would be gold just as much as if he had got it out of a mine, and therefore not an imitation. This is just what has taken place in the discovery of endolithic marble. The chemist reproduces the operation of nature; using white marble as a base, he changes it through and through its entire substance into a colored marble, say sienna, which will yield the same constituents when subjected to chemical analysis, as that quarried; moreover, this being true, the matter of durability is also settled. Furthermore, endoliths have been in use some years without showing any sign of disintegration, but on the contrary, have proved themselves more durable than quarried marble.

Hand in hand with the discovery of endoliths, there were a number of new pigments brought to light—pigments having the wonderful property of entering the marble vertically, at right angles with the surface, so that a picture, or any design painted with them, can be forced below the surface and afterward the marble polished, making in this way an imperishable decoration. What! paint marble? Yes, why not? Because it is bad art. Not if we are to believe the Greeks, who in the best period of their art not only painted the subordinate details of their white marble and stone buildings, but sometimes the entire edifice; not if we are to believe the Gothic architects, who used color freely upon the stonework of their churches, shrines and tombs, as witness the Rochester cathedral, with its stone shafts and arches painted alternately red, green and yellow. The only possible objection to the legitimate use of paint is its lack of permanence, an objection met by endolithic pigments, which have the quality of permanence in the highest degree. If there was ever an excuse for mosaics, whose value depends upon their durability, there is a two-fold reason for using endoliths—first, because they are as durable; secondly, because they are free from the disagreeable cement lines. Architects Berg and Clark have used in their mantel, and it seems with great success, almost all forms of endoliths.

Railroad Notes.

For several years the Michigan Central has had in its Atlantic express a most admirable and convenient through car line from Chicago to Boston and other New England points, and its popularity has steadily increased. It has enjoyed a great advantage over its competitors, not only in the directness of its route and the splendid scenery of Niagara Falls, Central New York, the Mohawk, Hudson, Housatonic and Connecticut valleys, and the Berkshire Hills, but in its connections with the great four-track New York Central and double-track Boston and Albany and its splendid equipment, making fast time with sureness and with safety.

In the arrangement of grand excursions the Missouri Pacific Railway takes the lead. Its California excursions, leaving St. Louis and Kansas City about twice a month for Los Angeles and San Francisco, at a round trip fare of \$72 for some eight days' steady travel, are well known and very popular, being particularly attractive to winter tourists, from this being the southern route, free from the dangers of snow blockades. This road now offers a new attraction in a grand excursion to the City of Mexico, to leave Chicago, Detroit, St. Paul, Louisville and other leading cities on March 8, and St. Louis and Kansas City a day later. The entire fare for the round trip is only about \$100. Tickets are good for sixty days, and can be extended on application, and the excursion will be attended all the way by a special superintendent to care for the comfort of the tourists, both in their own land and in Mexico.

Synopsis of Building News.

Abilene, Kan.—Architect Geo. W. Shaffer reports: Outlook very promising. For L. B. Johns, two-story and attic frame dwelling, 36 by 42 feet; stone foundation; steam heat, mantels, etc.; cost \$4,000; under way.

Buffalo, N. Y.—Architects Silsbee & Marting report: Ingersoll Memorial Chapel, corner of Jewett and Summit avenues; cost \$20,000. For C. B. Germain, residence; cost \$15,000.

Architects M. E. Beebe & Son report: For A. G. Hatch, stores; cost \$12,000. For J. S. Grimms, stores; cost \$30,000.

Architects C. K. Porter & Son report: For Bronner Bros., storehouse; cost \$10,000. Architect L. Saenger reports: For Cooperative Brewing Company, storehouse; cost \$30,000. For Clinton Brewing Company, sheds and barns; cost \$5,000.

Architects Green & Wicks report: For Granger & Co., "Granger Block"; cost \$60,000; Schmidt & Bro., builders, for Geo. H. Lewis, "Niagara" Hotel; cost \$100,000; Chas. Berwick, builder, for Dr. Roswell Park, residence; cost \$10,000.

Architect Geo. J. Metzger reports: For Riverside Driving Park, stock barn; cost \$10,000.

Architect W. W. Carlin reports: For Emanuel Levi, stores and flats; cost \$30,000; J. H. Tilden, builder.

Caro, Mich.—City Clerk reports: City Hall, 85 by 70 feet, two stories and basement, brick, with stone and iron trimmings; cost \$6,000; not yet let; to be commenced about April 1; H. S. Hollister, architect.

Chicago, Ill.—The tendency toward dwellings of moderate cost, both for owners' occupancy and rental, stores and flats, rather than large structures, seems to gain as the spring work begins to show in the contractors' hands for execution. There will be a larger number of costly residences built this year than for several years past. The weather favors building, and though excavators have to wedge the top crust, the frost is not deep, and building is exceedingly active throughout the city.

Architects Edbrooke & Burnham report: For Frank H. Ray, three-story building, 64 by 180 feet, 1445-8 Wabash avenue; to be used as a livery stable, store and laundry, with apartments above; pressed brick, with Vert island stone, copper and terra-cotta trimmings, galvanized iron cornice, composition roof, iron channels, beams, etc.; skylights, stained glass, closets and bath, carriage elevator; cost \$25,000; John Angus, mason; Alex. McIntosh, carpenter; building under way. For Frank Gazzolo, four-story store and office building, 40 by 50 feet, 86 and 88 West Madison street; Amherst stone and iron front; galvanized iron cornice, composition roof, iron channels, beams, etc.; skylights, closets, bath, etc.; cost \$25,000; under way; John Angus, mason; E. Moore, carpenter. For W. J. Edbrooke, three two-story residences, 50 by 55 feet, on Forty-first street near Drexel; brick, stone trimmings, galvanized iron cornice, composition roof, skylights, stained glass, closets and bath, wood mantels, hot air heat, electric bells, speaking tubes; cost \$12,000; under way.

Architect W. G. Barfield reports: For J. H. Allen, two-story frame dwelling, 27 by 40 feet, at Woodlawn; stone basement, hardwood finish, stained glass, closets and bath, hot-air heat, wood mantels; cost \$3,000. For A. Berg, brick and stone residence on Wabash avenue near Thirty-fifth street; cost \$10,000. For John O'Malley, three-story stores and flats, 125 by 150 feet; brick, stone trimmings; cost \$22,000.

Architect W. W. Boyington reports: Contracts for addition to L. S. & M. S. and C. R. I. & P. R'y Depot have been let as follows: Masonry, Wm. Munson; carpentry, Thos. Clark & Son; ironwork, Dearborn Foundry Co.; fireproofing, Wight Fireproofing Co.; steam-heating, Hay & Prentice Co.; plumbing, Hugh Watt; painting, J. B. Sullivan & Bro.; terra-cotta, Northwestern Terra-Cotta Co.; roofing, Wm. Powell & Co.; tile roofing and copper work, Wm. B. White; total cost of improvement \$107,000. Contracts for additional story to the National Life Building were let as follows: Carpentry, Gordon & Covil; ironwork, Bouton Foundry Co.; skylights, Wm. B. White.

Architect Alfred Smith is taking figures on buildings of C. H. Jordan, for which plans were made last spring. They include a three-story and basement store and flat building, 25 by 80 feet, on West Madison street, opposite Page, to cost \$10,000, and two two-story residences, 48 by 69 feet, pressed brick and stone; cost \$13,000; work to be commenced at once.

Architect Clarence L. Stiles reports: For Gabriel Frauchere Owen, two-story tenements, 143 by 50 feet, corner of Sibley street and Vernon Park place, brick, composition roof, galvanized iron cornices, closets and bath, slate mantels, electric bells, speaking tubes, etc.; cost \$18,000; J. W. La Croix, mason; Billie & Ducasse, carpenters. For David Graham, two-story frame cottage, in Woodlawn, closets and bath, stained glass, hot air heat, hardwood finish, wood mantels, electric bells, speaking tubes, etc.; cost \$4,000.

Architect W. I. Beman: For E. L. Jayne, two-story frame dwelling; cost \$5,000. For A. W. Hayward, two-story and basement dwelling 44 by 52 feet; cost \$8,000. For R. A. Shailer, two-story and basement dwelling; cost \$9,000. For C. E. Seaton, two-story and basement dwelling; cost \$8,000. For E. F. Gordon, two-story dwelling; cost about \$8,000.

Architect Wm. H. Drake: For Dr. Quinlan, brick warehouse, 40 by 90 feet; cost \$15,000 to \$20,000. For P. Ewan, five-story hotel building, 90 feet front on West Madison street, near Jefferson street.

Architects Treat & Foltz: For H. Van Schaak, ten two-story and basement dwellings, 20 by 40 feet each, on Lawrence avenue; cost \$26,000.

Architects Jenney & Otis: For Dr. Tucker, three-story and basement residence, 22 by 70 feet, on Dearborn avenue; granite front; cost \$13,000.

Cincinnati, Ohio.—Reported by Lawrence Mendenhall. Until the building season fairly opens, the gleaming of notes that will interest the readers of architectural journals, is not an easy task. Of course at this time of year extensive improvements are talked about, and land and improvement syndicates formed, but as all that glitters is not gold, so do these fail to materialize in every instance. But I am safe in asserting that suburban building will partake of the nature of a boom this season, but consist mainly of the medium-priced houses.

The cable and elevated railroads projected and completed, have done much toward opening this "Pandora box" to our architects, who are, by the way, entirely too modest.

The young draughtsmen of the city have organized the Cincinnati Architectural Sketch Club. The officers are good, live young men, and competent, namely: President, J. W. Adams; vice-president, L. G. Dittoe, and secretary, Arthur Stedman. They meet on Thursday twice a month.

Our Builders' Exchange took formal possession of their new quarters on February 24, in Mechanics' Institute building, the cradle in which many of our now prosperous mercantile associations were rocked. They have now no reason to be ashamed of their rooms, and can boast of not only clean, light rooms, but of having a live organization.

The Building Exhibit Co. have elected Wm. H. Stewart, president, and L. H. McCameron, secretary, both live men.

The new Army is now a settled fact, and the trustees are advertising for a lot upon which to build. The amount appropriated is \$100,000.

On my rounds, the following notes were obtained:

Architect Jas. W. McLaughlin is preparing plans for a new bank building for the First National Bank of this city. The present building is a three-story brick, which does not denote the solid condition of its occupant. The basement or first floor will be granite, and the remaining two of pressed brick, with terra-cotta, gables, and tourelles, and fireproof construction. The size of structure is 55 by 75 feet, and will cost \$80,000.

Architects Forbush & Green report: Alteration for the Merchants' National Bank, and a safety deposit vault, costing \$13,000. A residence for Alvin Patton, Esq., built of brick and frame, with shingle roof, containing nine rooms; cost \$5,000.

Architect Geo. W. Rapp reports: A residence and store for B. Ellermann, Esq., containing eighteen rooms, pine finish, tin roof. For J. E. Lapp, alterations and additions of store. For the Jno. Kaufmann Brewing Co., a new brew house, 32 by 70 feet, of brick and terra-cotta; cost not known. Mr. Rapp is perfectly at home in all that pertains to brewery work, and has several fine buildings to make this assertion good.

Architect Henry E. Siter has his time well employed with the following: Remodeling the Ohio Valley National Bank; remodeling the Market National Bank. For Mr. Abe Fuest, two new store fronts of iron for a remodeling job. For Wm. Corry, Esq., a frame house of six rooms, with slate roof and pine finish. For H. H. Vaile, Esq., a row of five houses of brick and frame, eight rooms each, with slate roof; quite picturesque. For Mr. O. Reish, a beautiful brick and frame residence of two and a half stories, ten rooms, slate roof, etc. For Mrs. N. A. Jeffries, a frame house of 12 rooms, with slate roof.

Architects Buddemeyer, Plympton & Trowbridge report: For Chas. W. Bell, a brick residence two and a half stories, nine rooms, pine and white walnut finish, and slate roof; cost \$5,500. For H. M. Lane, a picturesque half timber and shingle residence, containing seven rooms; cost \$3,000. For Chas. Rosenstill, a four-story brick tenement building for six families; cost \$4,000; time well employed, and good prospects.

Delphos, O.—Architects Kendrick & Shrimpton, of Fort Wayne, Ind., report: For Catholic Society, a parochial school building; to cost \$10,000.

Dubuque, Ia.—Architects F. Heer & Son report: Present prospect for the spring is very promising; the following projected work: St. Cathrine, German Catholic church, 40 by 86; cost \$4,500, contracted. Church at Osage, Ia., 40 by 88; cost \$4,000 contracted. N. Thill, Dyersville, Ia., residence, 32 by 38; cost \$4,000; T. Minke, Same place, store 25 by 60; cost \$2,500. Mrs. Mohr, same place, residence 25 by 35; cost \$4,000. P. Keine, Dubuque, store and dwelling, 26 by 40, cost \$2,000. Mrs. Kunze, same place, residence 22 by 34, cost \$2,500. Mr. Pickenbrok, same place, remodeling residence, cost \$3,000. Store, McGregor, Ia., 25 by 60, cost \$3,000. Contracts let for Church Sacred Heart at Dubuque, cost \$36,000. Residence T. Ruegamer, 22 by 34, contracted; cost \$2,000.

Architect F. D. Hyde, reports: For G. B. Birch, remodeling large brick residence, adding new slate roof and attic story, new carriage porch, bays, etc.; cost about \$4,500. For W. S. Bradley, block of three two-story and attic brick residences, 60 by 56 feet; cost \$8,000; plans in preparation. For A. A. Cooper, two-story and attic stone residence, 45 by 70 feet, slate roof; cost \$30,000; plans in preparation.

Emporia, Kan.—Architect George W. Shaffer, of Abilene, reports: For W. C. Simpson, two-story frame dwelling, 33 by 54 feet, stone foundation, mantles, etc.; cost \$3,000; plans completed.

Englewood, Ill.—Architect W. W. Boyington, of Chicago, reports: For J. Ingram, five three-story stores and flats, brick, terra-cotta trimmings; cost \$30,000; J. Ingram, builder.

Florence, Kan.—Architect George W. Shaffer, of Abilene, reports: For Albert M. Howell, two-story frame dwelling, 32 by 36 feet, stone foundation; cost \$2,500.

Fort Wayne, Ind.—Architects Kendrick & Shrimpton, report: For J. C. Peters, remodeling and additions to hotel building; cost \$15,000. For St. Vincent asylum, stable; to cost \$3,000.

Great Bend, Kan.—Architect Z. O. Fligg reports: Outlook good. For A. C. Fair & Bro., two-story business block 100 by 100 feet, pressed brick front, stone trimmings, galvanized iron cornice; cost \$16,000. For Moses Bros., and A. J. Buckland, two-story business block, 50 by 80 feet, pressed brick front, stone trimmings; cost \$8,000. Plans on the boards.

Hartford, Conn.—Architect Clarence L. Stiles, of Chicago, Ill., reports: For Mrs. M. J. Merrill, two two-story residences, 50 by 62 feet, Philadelphia pressed brick, Connecticut brownstone, tin roof, galvanized iron cornices, skylights, closets and bath, wood mantels, electric bells, etc.; cost \$10,000; contracts to be let in Hartford.

Hudson, Wis.—Simon Hunt, superintendent of schools, reports: A new school house to be erected, for which plans will be adopted within the month of March.

Ironton, Ohio.—Architect A. Druiding, of Chicago, Ill., reports: Plans prepared for St. Lawrence Church; to cost \$24,000. Also for St. Joseph's church; to cost \$25,000.

Kalamazoo, Mich.—Architect M. W. Roberts has prepared plans for a two-story school house, 74 by 76 feet; brick, Amherst or Berea stone trimmings, galvanized iron cornice, closets, stained glass, furnace heat, hardwood finish; cost \$14,000; contracts not let.

Leavenworth, Kan.—Architect A. Druiding, of Chicago, Ill., reports: For Fort Leavenworth Catholic Church, 45 by 80 feet; pressed brick, stone trimmings; cost about \$10,000.

Little Rock, Ark.—Architect F. Harding reports: For J. E. Biscoe, two-story frame residence, 38 by 65 feet; contract not yet let.

Architects Pettifer Bros. reports: For Peter Hauger, brick block of four stores; cost \$4,000.

A bill has been introduced in the state senate to appropriate \$20,000 for additional buildings at the Arkansas Industrial University.

Louisville, Ky.—A general and healthful activity in real estate has been inaugurated, which will probably escape the unhealthfulness of a boom, but will raise the price of real estate generally and stimulate building.

The Walnut street Baptist church congregation have again considered the building of a church edifice, and have decided to ultimately erect a building to cost not less than \$100,000. At present they propose building the chapel at a cost of about \$18,000, arranged so that it will serve all the purposes of church and Sunday-school services, and in about five years build the main edifice. They propose to secure the plans by competition, confined to local architects. There is a movement on foot to establish a builders' and traders' exchange. There are now associations of master carpenters and master painters, and the general wish among both architects, contractors and material men is that an exchange should be established.

Plans are under advisement for a home for fallen women, to be erected this summer.

Architect C. J. Clarke has prepared plans for rebuilding the workshops of the Kentucky penitentiary at Frankfort, recently destroyed by fire.

Architect D. Y. Murphy has made plans for extensive additions to the Ohio Falls Car Works.

Plans for a large hotel at Sheffield, Tenn., are being made by Architect H. Wolters. Architects McDonald Bros. have been appointed architects for the new Odd Fellows hall and opera house at Aurora, Ind.

Mr. Oscar Haupt, for a number of years chief draughtsman in the office of Mr. Mason Maury, and under whose superintendence the Kenyon building was constructed, has located in Birmingham, Ala., and has been intrusted with the erection of a number of dwellings and business houses.

The Stonemasons' Union has adopted a schedule of prices which, if acceded to by the master masons, will increase the cost of rubble masonry from 10 to 15 per cent. The effect of this will be that rubble masonry will be very little in demand, inasmuch as brick foundations can be laid cheaper, and some of the architects have already signified their intention to use brick instead of stone for underground work, should the increased prices of labor be kept up by the Stonemasons' Union.

Architects are busy preparing for spring work, and a number of large dwellings and stores are spoken of.

Manton, Mich.—Architects Wm. Johnson & Thos. Emery, of East Saginaw, report: For School Board, two-story school building, 79 by 49 feet, brick, stone trimmings, galvanized iron cornice, tin roof, furnace heat, iron channels, beams, etc., hardwood finish; cost \$8,000; to be commenced at once; I. F. Gillespie, Traverse City, contractor.

McPherson, Kan.—Architect Geo. W. Shaffer, of Abilene, reports: For Amos E. Wilson, two-story frame dwelling, 36 by 48 feet, stone foundation, mantels, etc., cypress wood finish; cost \$3,500; plans completed. For J. R. Fisher, two-story and attic frame dwelling, 39 by 54 feet, stone foundation, steam heat, mantels, tiling, etc.; cost \$7,000; plans completed.

Milwaukee, Wis.—Architect A. Druiding, of Chicago, Ill., reports: St. Joseph's convent, to be erected in Greenfield Park, 386 feet front, four stories high; cost \$115,000.

Architects E. V. Koch & Co: For C. Borchard, stone business building, to cost about \$20,000. For Wm. Ballou, residence, to cost about \$10,000. For H. Lowenbach, frame residence, to cost \$6,000.

Architect S. S. Beman, of Chicago: For H. L. Palmer, brick and stone residence; cost \$25,000.

Architects E. Townsend, Mix & Co.: For J. S. Harvey, frame dwelling; cost \$8,000; also remodeling residence for J. G. Flint; cost \$5,000.

Minneapolis, Minn.—Among the building permits recently issued are the following: F. W. Chase, two-story frame laundry building; cost \$5,000. S. E. Foster, three-story brick stores; cost \$9,000. Chute Bros., one-story brick store building; cost \$3,000. C. Mengelkoch, three-story brick store; cost \$8,000. Sol. Smith Russell, residence; cost \$12,000. C. G. Van Strum, brick store building; cost \$8,000. A. H. Paus, brick store building; cost \$8,000.

Nashville, Tenn.—This city is in the midst of a genuine full-fledged real estate "boom." A great deal of the property that is rapidly rising is outside the city, and here, in many cases, the values may be called fictitious, but inside the city the price of property has been far below that of corresponding districts in either cities, and the rise is natural and will place the city in a better position and make general business as well as building more active. The competition for a Y. M. C. A. building was close, and the design of Architect G. W. Thompson was accepted.

A Builders' and Traders' Exchange has just been organized, with a membership comprising most of the best contractors and material men in the city.

Rockford, Ill.—City clerk reports: The city architect has prepared plans for engine house, brick, two stories; cost \$2,500; to be completed in November; O. Truman, general contractor; building under way.

Saginaw, Mich.—Architect F. W. Hollister has prepared plans for a two-story frame, veneered with brick, seminary building, 54 by 72 feet, for the Evangelical Synod of Michigan; cost \$8,000; to be completed August 13, 1887; Schwarz & Ruff, contractors.

Springfield, Mo.—Architect W. E. Foley reports: Two-story school house, 58 by 62 feet; shingle and tin roof; cost \$7,000; not let.

St. Louis, Mo.—Architect T. B. Annan: For the Hall Estate, two-story store and flat building, 75 by 50 feet; cost \$10,000. For Mrs. S. W. Griffith, two three-story brick dwellings, 40 by 53 feet, stone trimmings, slate roof; cost \$10,000; W. B. Harter, contractor.

Architects Geo. I. Barnett & Son have prepared plans for J. E. Kaine, for block of nine dwellings, 16 by 48 feet each; cost \$16,000.

Architect J. H. McNamara: For Louis Ottund, three-story residence, 34 by 69 feet, brick, stone front, slate roof; cost about \$8,000.

Architect A. M. Baker: For Wm. Corbett, two-story residence, 21 by 60 feet; cost \$4,200.

For Mathew Devlin, four two-story brick dwellings; cost \$7,000.

Architect Geo. W. Pieppers: For Bowman Dairy Co., two-story store and flats, 45 by 58 feet; cost \$16,000.

Architect J. W. Herthel: For Evangelical Society, one-story brick church, 44 by 80 feet; cost about \$8,000.

Architect Thomas Walsh, who has prepared plans and is superintending the erection of the new college church, and St. Louis University buildings, on Grand avenue, between Lindell avenue and Pine street, has taken out a permit for the erection of the university building, the cost being given at \$196,000. This only includes the university proper, and the residence for the professors and scholastics. The university hall, which will be built on the Pine street side of the college property, will be built on another permit. The foundations of the university and residence for the professors are almost completed, and it is calculated that the brickwork will be commenced in the early spring. The work will be pushed rapidly when the foundations are completed, and the buildings will be ready for occupancy about a year hence. It is estimated that it will cost about \$100,000 extra to finish and furnish the institution.

St. Paul, Minn.—Among the permits recently issued are J. T. McMillan, two-story brick dwelling; cost \$15,000. Dowling & Ruse, two-story frame tenement; cost \$6,000. G. Gustavson, two-story brick store; cost \$5,000. Peter Fehlen, two-story brick store and dwelling; cost \$8,000.

Van Buren, Ark.—Geo. Wood is to build a two-story brick business block, 30 by 115 feet.

Water's Penn. Oil Co. will build a large oil tank to supply the western trade.

A cannery factory is soon to be erected here.

Wichita, Kan.—Architects Patton & Fisher, of Chicago, Ill., report: For Fairmont College, three-story college building, 120 by 100 feet; brick, stone trimmings, slate roof, skylights, closets, steam heat, hardwood finish, electric bells, speaking tubes, etc.; Building to be commenced April 1. Bids to be opened in Wichita. Rev. J. H. Parker, president board of trustees.

Winfield, Kan.—Architects Nier, Hogg & Bryam, of Kansas City, Mo.: For C. Ferguson, stone store building, 46 by 100 feet; cost \$15,000. For H. P. Albright, stone store building, 46 by 80 feet; cost \$10,000.

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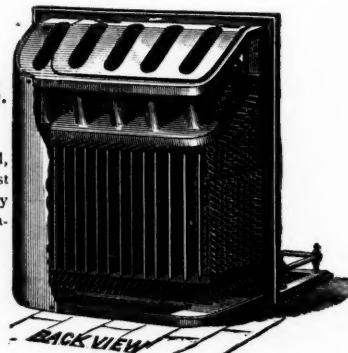
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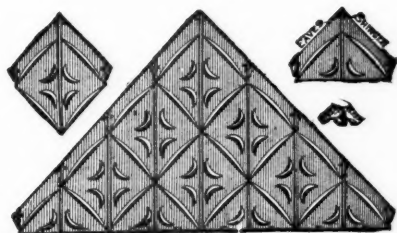
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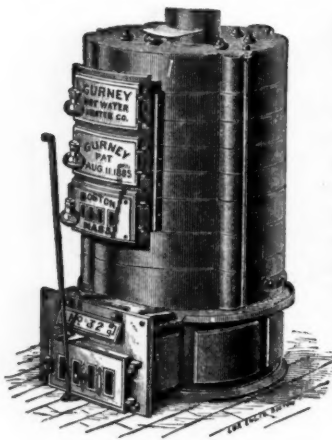
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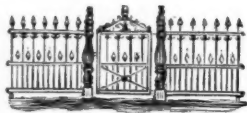
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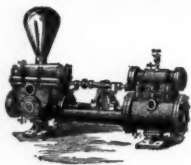
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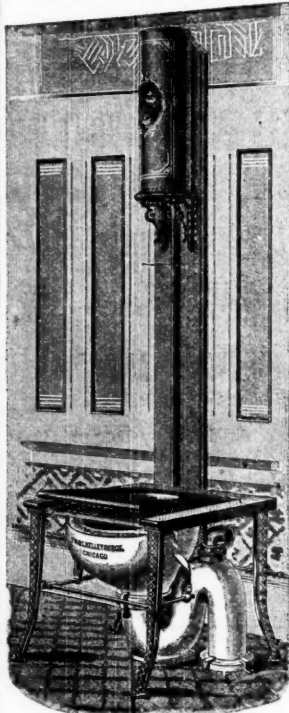
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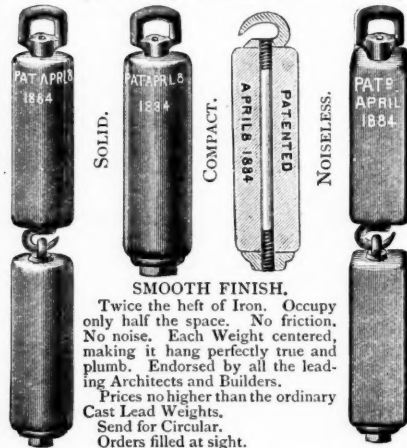
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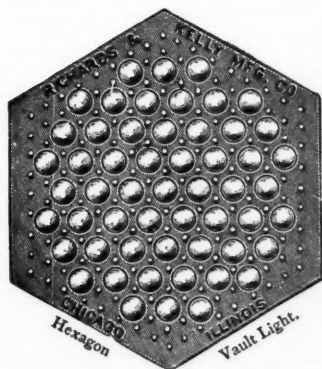
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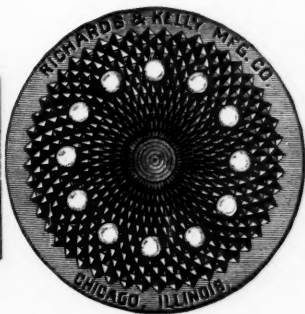
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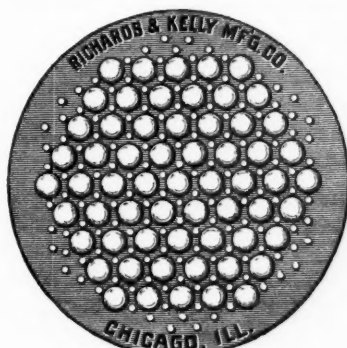
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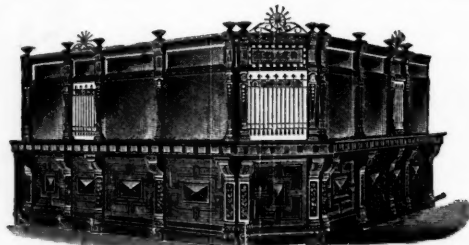
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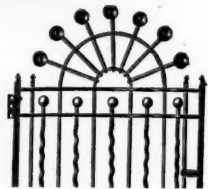
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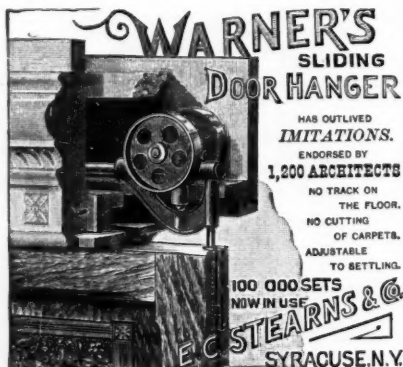


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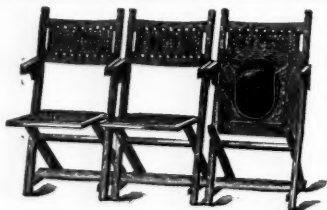
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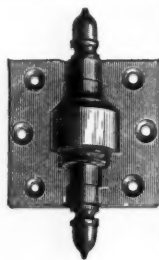
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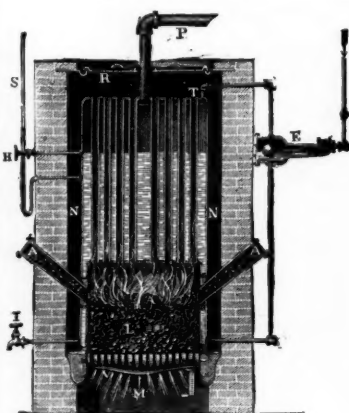
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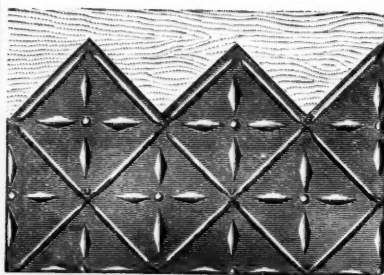
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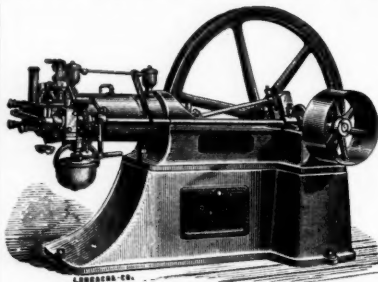
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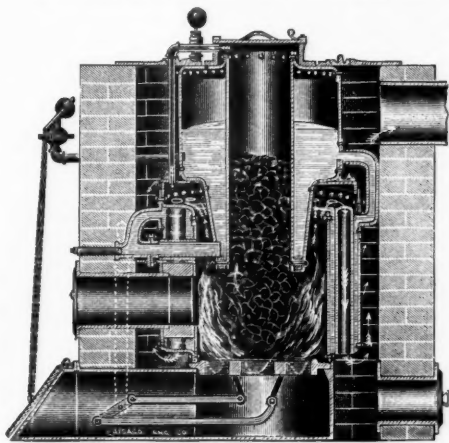
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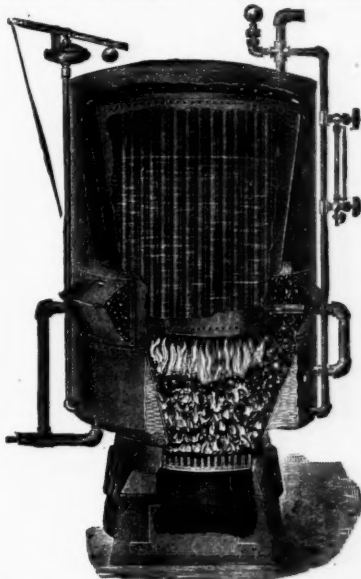
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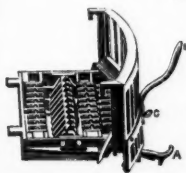
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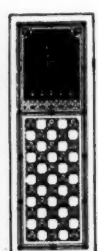
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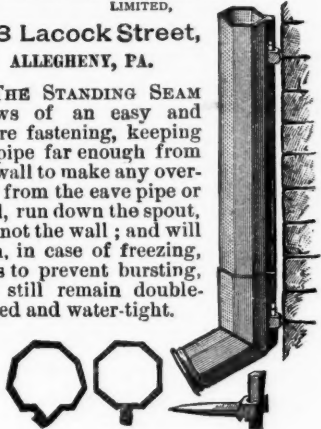
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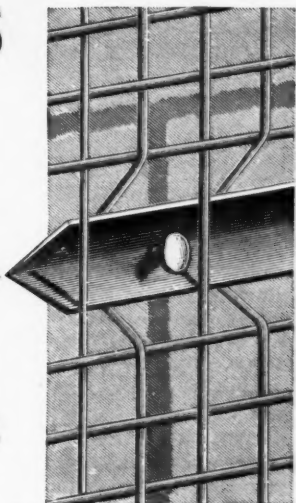
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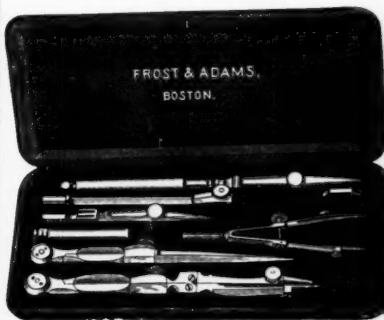
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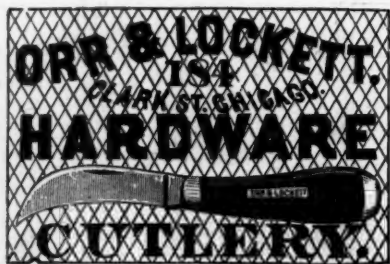
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