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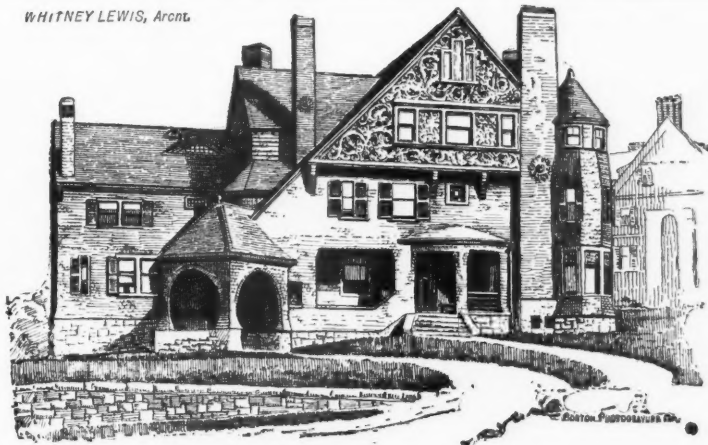
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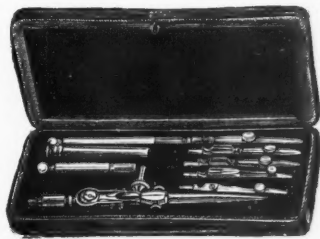
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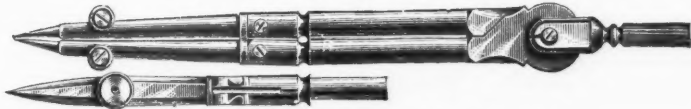
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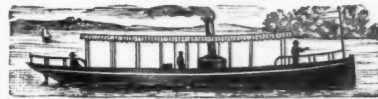


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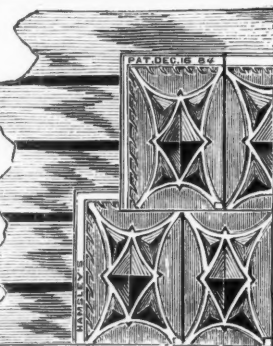
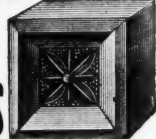
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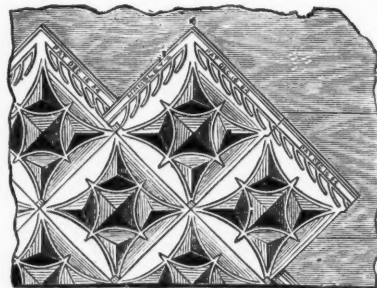
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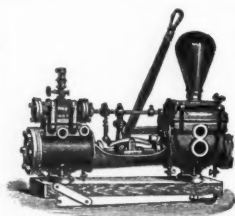
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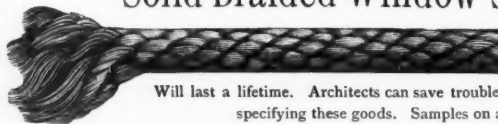
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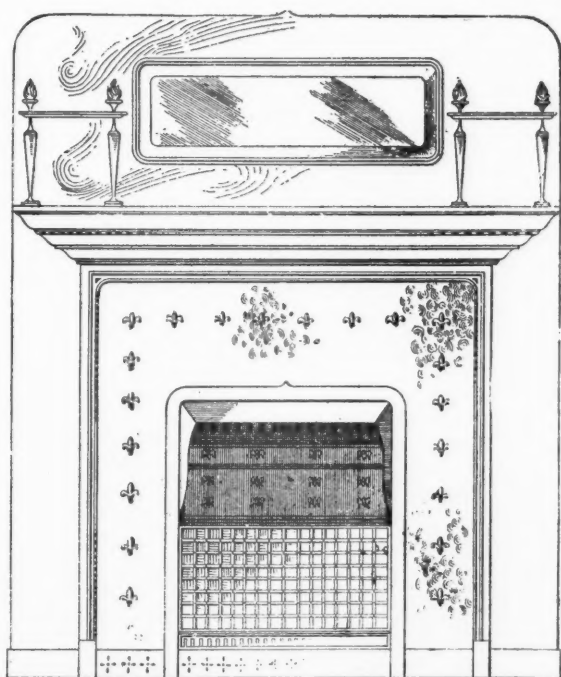
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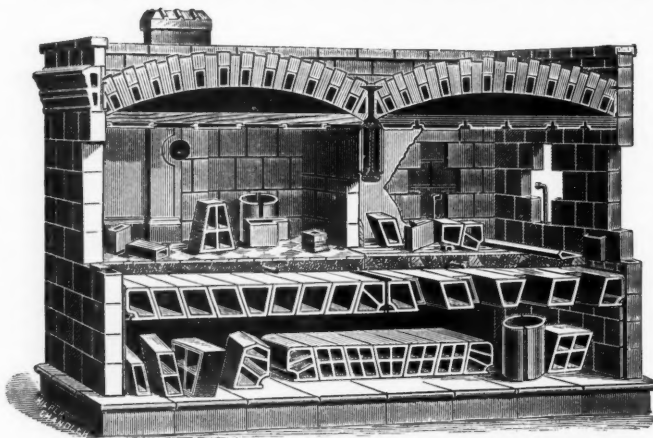
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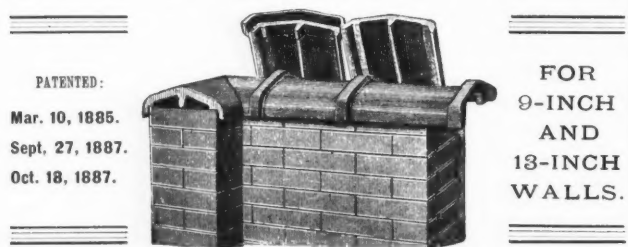
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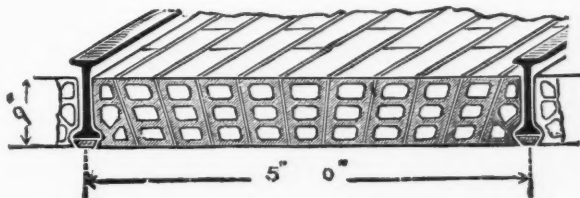
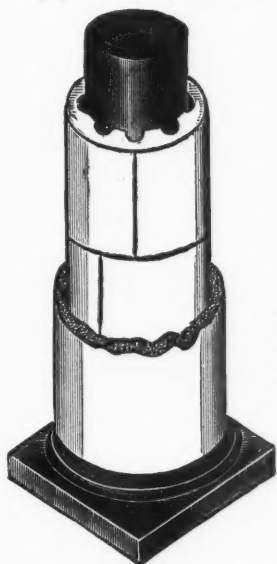
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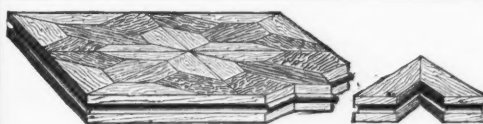
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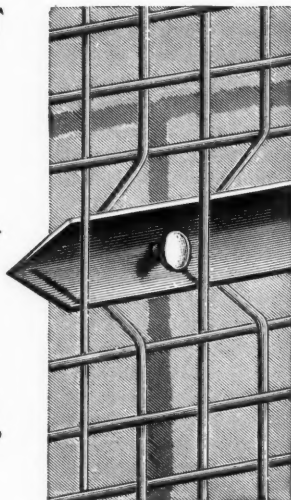
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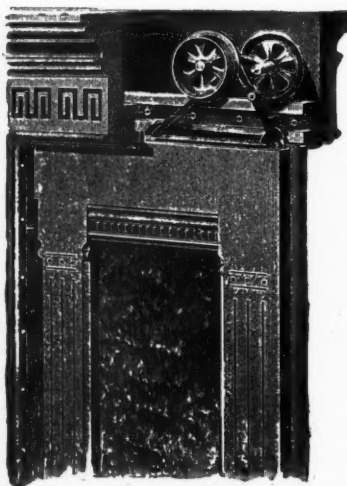
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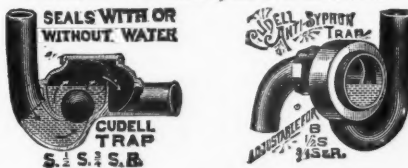
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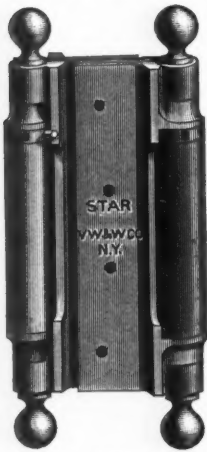
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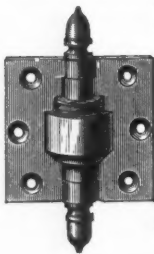
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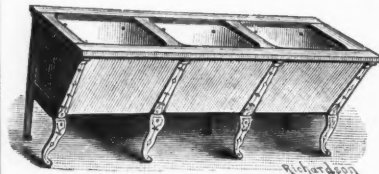
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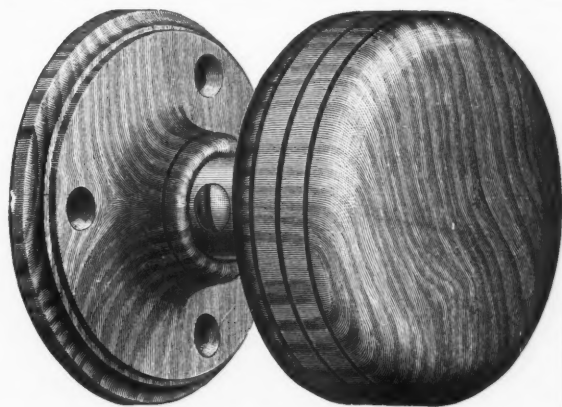


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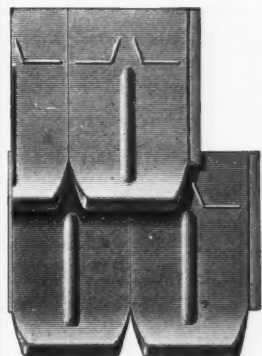
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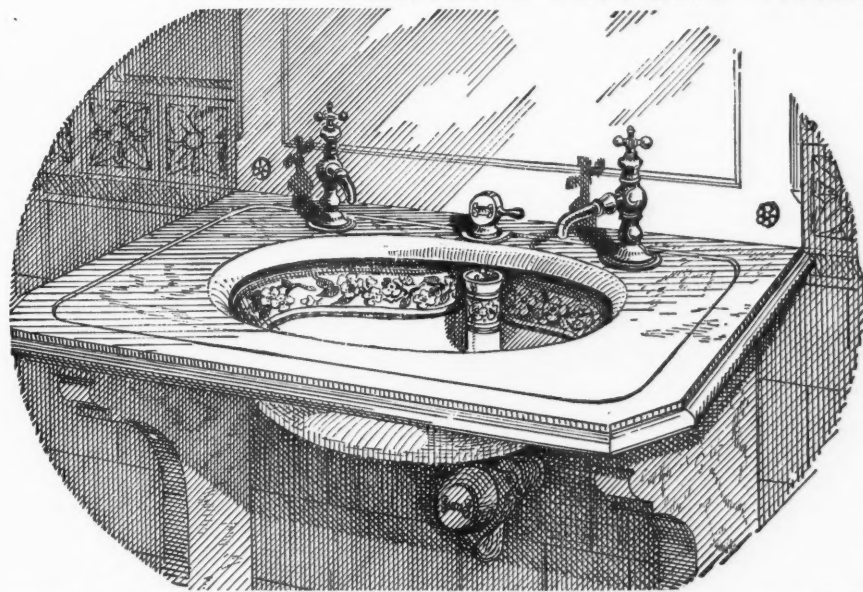
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		Mahogany, St. Domingo, per ft.....		25@		For finishing-nails add \$1.50 per keg.			
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THE SANITAS LAVATORIES.

(BASIN, BATH TUB, PANTRY SINK.)

THE SANITAS PATENT WASH-BASIN.



unvented, can be kept clean under such lavatories. The Sanitas Lavatories on the contrary fill the pipes "full-bore" and strongly scour them. Beware of infringements which are inferior as well as illegal. Accept only the genuine and original standpipe lavatories which are stamped with the name "Sanitas."

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Main Office: 207 Tremont Street, Boston, Mass.

W. F. & D. D. KEARNS, Agents at CINCINNATI, OHIO, 197 West Fourth Street. ST. LOUIS, MO., 511 Walnut Street. Other Branches: NEW YORK, N. Y., 54 Gold Street. CHICAGO, ILL., 47 and 49 Dearborn Street. SAN FRANCISCO, CAL., 40 California Street. OTTAWA, CAN., 236 Sparks Street.

Quick emptying with a standpipe overflow. These fixtures discharge very rapidly, scouring the trap and wastepipes. The overflow pipe stands in a recess in the back of the fixture, and does away with the ordinary foul, secret overflow passage, and the troublesome and dirty plug and chain. A single motion of the hand opens and shuts the outlet. By this device the utmost simplicity, convenience, and cleanliness are obtained. The standpipe may be readily detached from the lifting device to facilitate burnishing or scrubbing. The Sanitas basin standpipe is made either of brass or earthenware. When made of earthenware like the basin itself, all visible submerged metalwork and consequent burnishing is avoided, and the standpipe admits of colored decoration like the basin itself, producing with the latter an ornamented effect altogether original and unsurpassed.

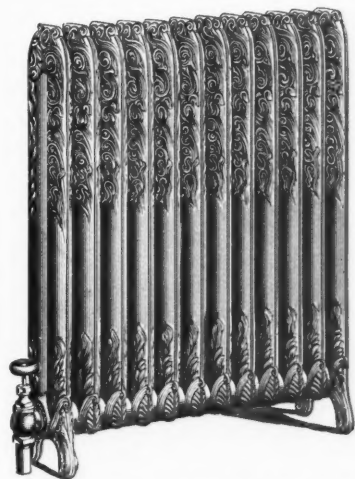
Ordinary lavatories have outlets so contracted that they discharge a stream in size scarcely a tenth of the capacity of their wastepipes. The result is a gradual accumulation of filth therein and a highly unsanitary condition of affairs. No trap or even straight pipe, whether vented or

THE STANDARD CONTRACT.

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ITS CONSTRUCTION
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*Loops contain positively full
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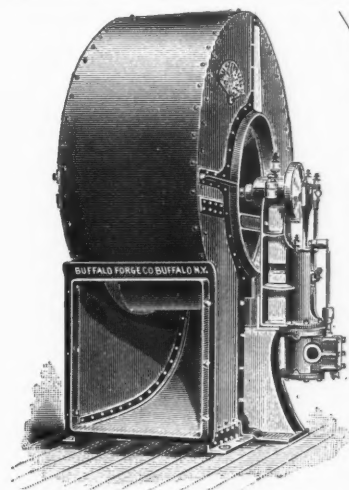
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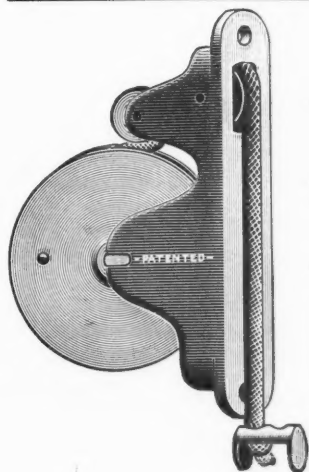
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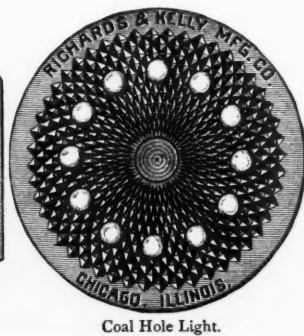
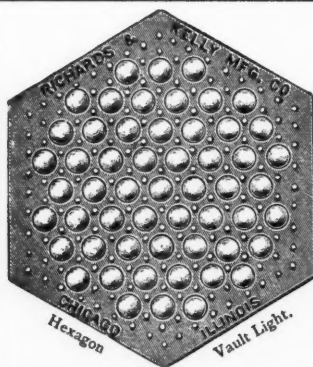
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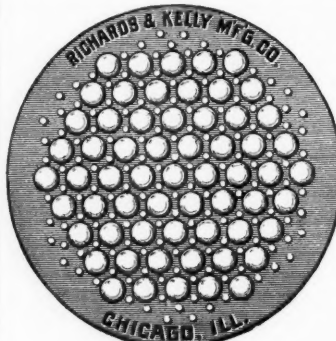


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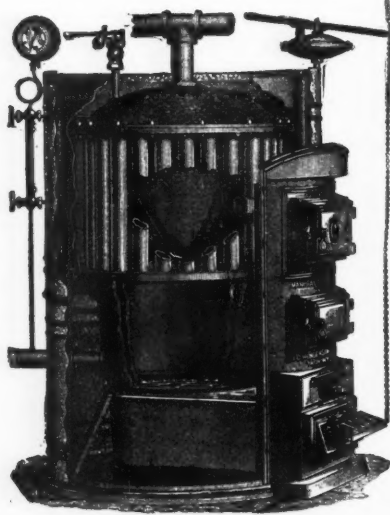
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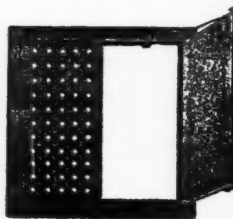
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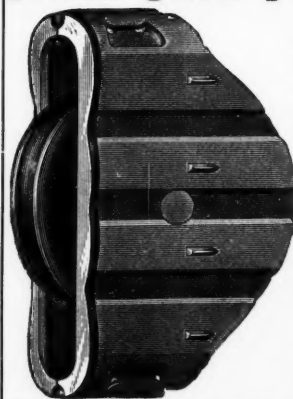
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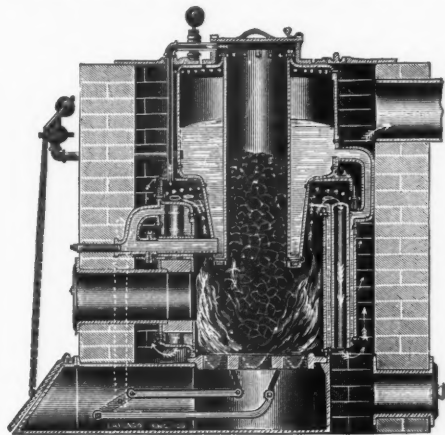
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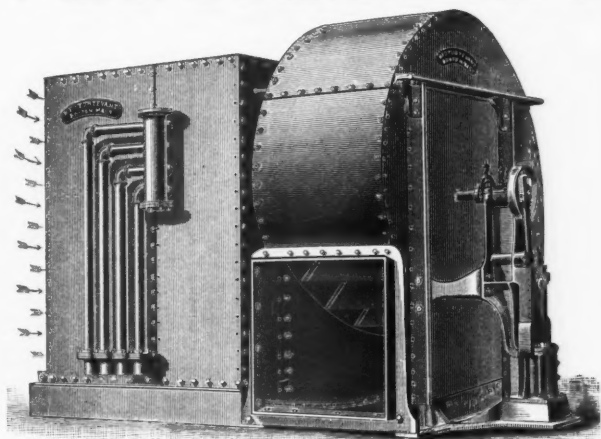
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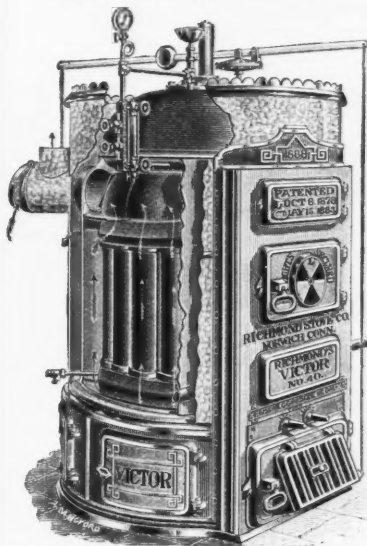
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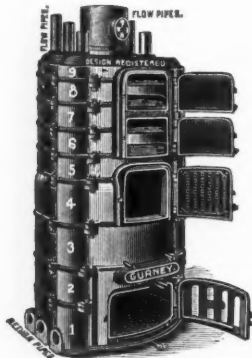
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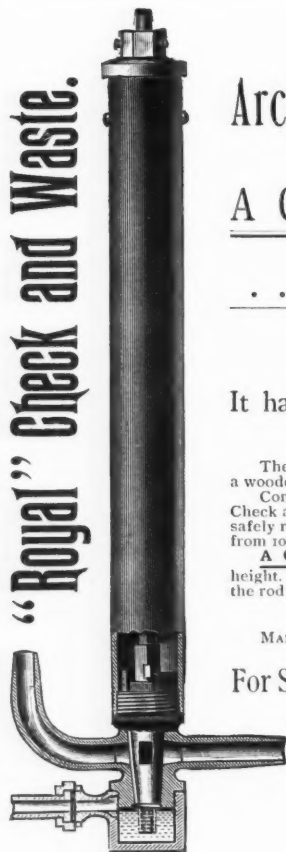
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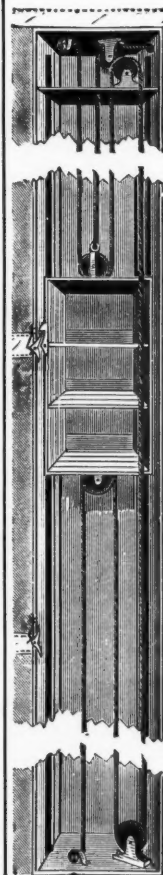
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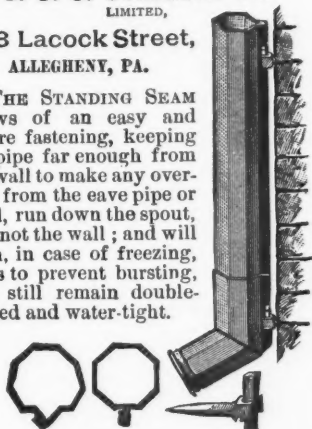
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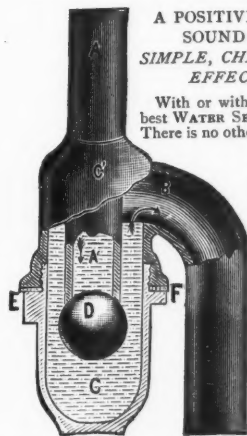
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LESS GAS CONSUMPTION THAN
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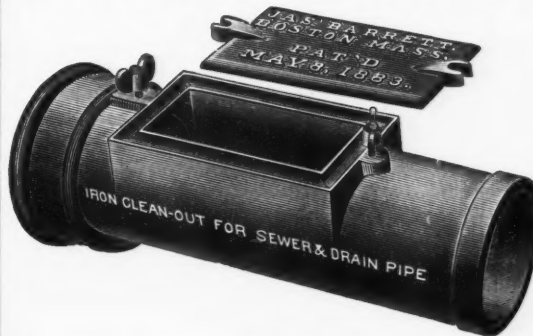
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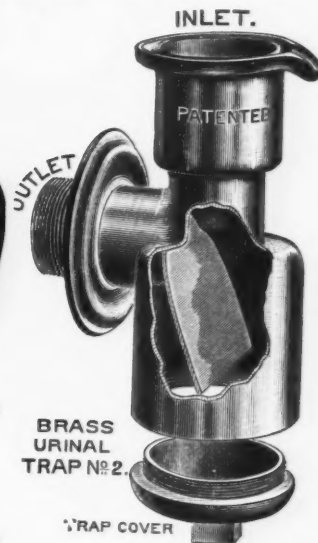


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Send for illustration of Barrett's Recessed Bowl, Stand-Pipe and Brass Trap, with Basin Support. A Perfect Sanitary Wash-Basin.

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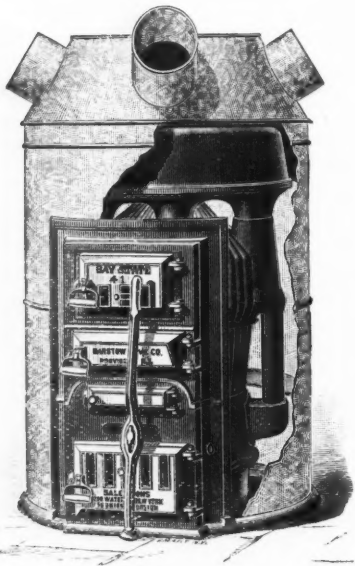
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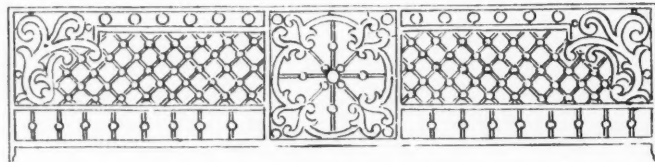
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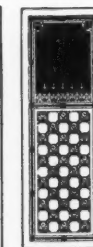
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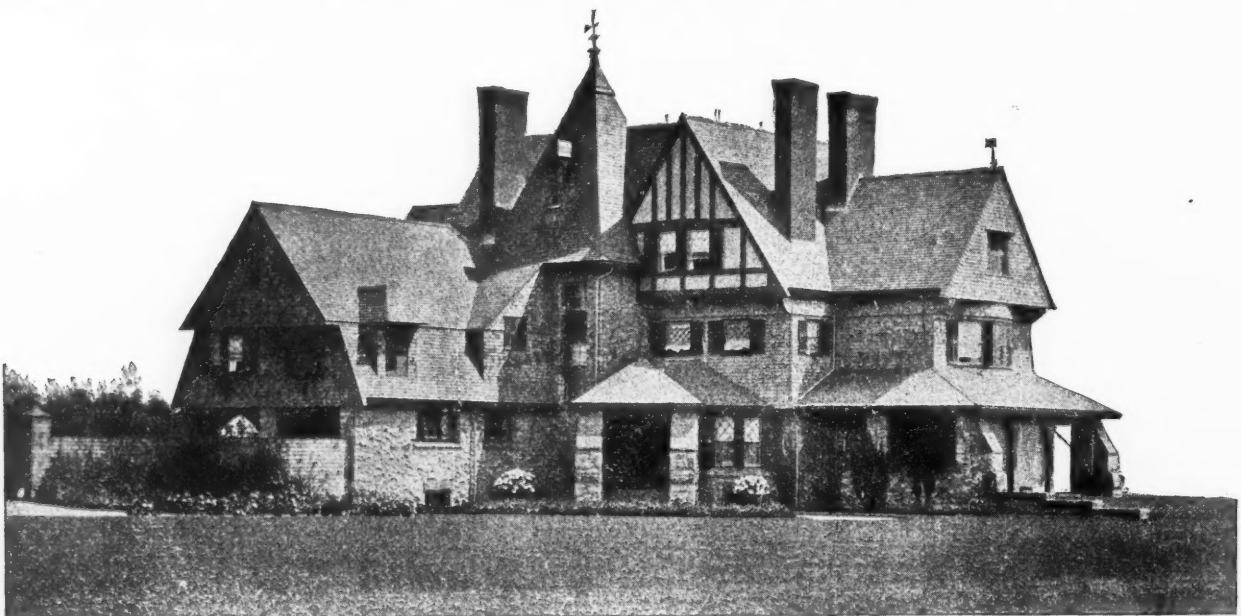
											
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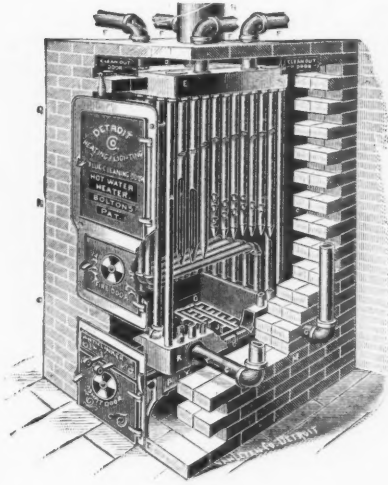
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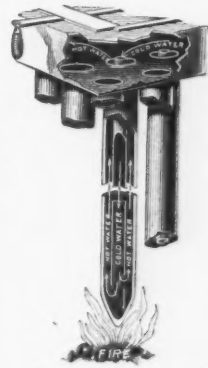
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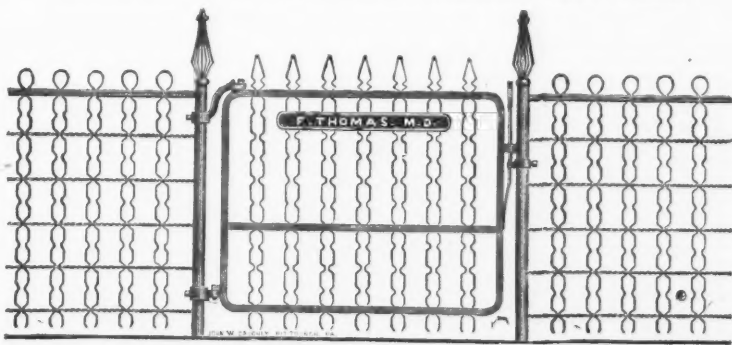
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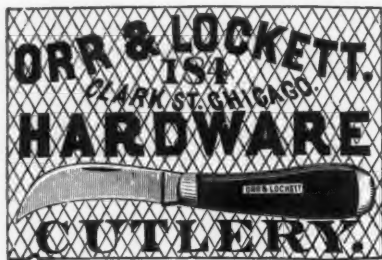
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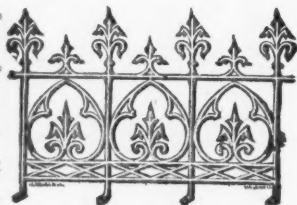
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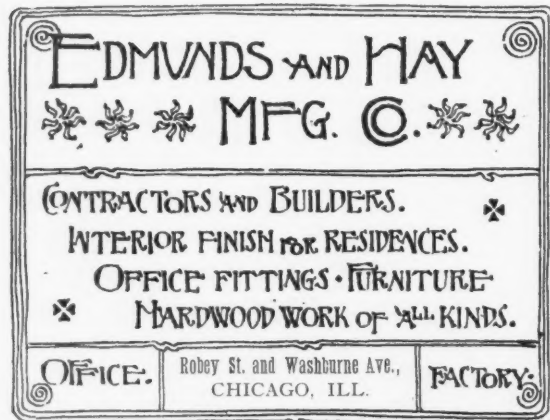
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Vol. XIV.

JANUARY, 1890.

No. 8

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Death of
Architect
George F.
Durand.

Architect George F. Durand, of London, Ontario, died at his home in that city, on December 20, after a protracted illness. He was thirty-nine years of age. Mr. Durand, who was a native of London, first studied his profession in the office of Mr. William Robinson, then city engineer. Going to Albany, New York, he became first assistant to Architect Thomas Fuller upon the capitol building. After that architect resigned his position as architect of the building, Mr. Durand returned to his native city and, in 1878, entered the practice of his profession with Mr. Thomas Tracy, under the title of Tracy & Durand. In 1882, the firm, after enjoying remarkable success, dissolved, upon Mr. Tracy being appointed city engineer, and the business has since been carried on by Mr. Durand, until his last illness. The structures, both private, ecclesiastical and public, erected not only in London, but throughout the provinces, designed by Mr. Durand are many, the more important being the Masonic temples at London and Petrolia; the custom house, Culbourn street and Talbot street Baptist churches, Canadian Savings and Loan Company's building, etc., at London; the Upper Canada College, the Stratford hospital, the Perth county buildings, etc., all showing a designing and constructibility of a high order. Mr. Durand's reputation among Canadian architects is indicated by his being twice elected first vice-president of the Ontario Association of Architects, and it is a strange coincidence that upon the day of his death he was unanimously reelected to that office at the convention in Toronto, at which his absence was remarked and regretted, but none supposing his illness to be of a serious nature. He was devoted to his profession, of an energetic and genial nature, that, with high intellectual capacity, won for him a host of friends, both in and out of the profession, who feel that his early death is a public loss.

Completion
of the
Chicago
Auditorium.

One of the most notable events in the architectural history of this country is the completion of the Chicago Auditorium. The problem, involving the combination of a great hotel, an office building and an auditorium capable of seating 6,000 people, was one never before attempted on so large a scale and its completion is marked by phenomenal success. The opinions of capable critics in regard to the architectural effect of the exterior are varied, a difference in regard to its style rather than its true grandeur, but no one who has seen the interior of the Auditorium has any opinion but that it is a great architectural conception. In point of utility, the occupation of the Auditorium nightly for a month has shown that in facility of ingress and egress, in ventilation, in line of sight, and, more important than all, in its acoustics, the result is far beyond any prophecy. In a European country the architects of such a structure would have been knighted, or have received other marked approval from the government. Here they receive the applause of a great people; they abandon their work to the public in the presence of the chief executive of the nation; and it will be by future generations that the true greatness of their work will be most realized. We have seen the labors of Architects Dankmar Adler and Louis Henry Sullivan upon this work from its inception to the day of its completion, and know something of the difficulties which they overcame in carry-

ing out a grand conception through the environments which, in a commercial country like this, always tend to belittle art and enlarge expediency. They have a long architectural career before them, but future generations will say that when the Auditorium was completed their monument was set up for all time.

Offering Commissions on Materials to Architects. Two letters, written by material dealers to prominent architects, have been forwarded to us for inspection and comment, one of them indorsed, "Here is a sample letter; give these fellows fits through your paper." The letters, which are taken as gross insults by their recipients, are plain business letters, setting forth the merits of the materials manufactured by the writers and courteously presenting a wish for a share of patronage. They are similar to many others we have received from architects similarly indorsed. As they are written in good faith, to all appearances, we will not publish them, but explain for the benefit of all material dealers wherein every letter containing a similar clause to those noted is considered insulting by every architect who honestly practices his profession. The mistake is in offering a commission to the architect upon material, the sale of which is obtained through his influence, as, to quote, "as we have no salesman in your section we will allow you twenty per cent commission on all orders arising from your specifications." No architect can receive a commission honestly. His relation to the owner is as the lawyer to his client. He is not only the designer of the building, but the arbitrator between his client and the contractor, and he is paid for his services by his client. When he specifies a special material he must do so because in his judgment it is the best for the purpose. How can he do this if he is agent for the material, in fact, an employé of the manufacturer? The material dealer not only loses the sale of his material, but risks the chance of any patronage his otherwise business-like letter might bring him, and secures the enmity of the architect when he intimates a belief that he can be bought by offering him a commission. In these days of close competition it is not strange that business men will seek in every way to extend their sales, but we would advise them not only not to offer commissions to architects, but be careful how they do business with any architect who seems disposed to accept a commission.

Canadian Architects and Competition. That new and usually bright and newsy architectural journal, the *Canadian Architect*, gives almost three pages of space in its last issue in trying to show how competitions should not be conducted, taking as a text the recent competition for the Canadian Life Building at Toronto. If the *Canadian Architect* would take a tenth part of the space and denounce competitions as an evil, and then turn to the records of the St. Louis convention of the Western Association, it will find there a policy outlined that, if followed by architects in Canada, or anywhere else, will cure all the evils it complains of, and many more. If architects will enter competitions they should be willing to accept any treatment placing themselves in such a position may entail, and the *Canadian Architect* is pursuing an unwise policy in taking up the cause of "one of the rejected ones," instead of saying, "served you right for entering a lottery scheme, even if there were premiums offered." The competition in question was above the average in fairness; the expert, we believe, was honest and the design creditable to the architects and the owners (we thought it the best among

those exhibited), but an expert was chosen, and the fact of sending in drawings to the competition was an assent to all the conditions, including the verdict of that expert. We would advise our Canadian friends to adopt the Western Association code, and where they feel that they must enter a competition refuse absolutely to enter upon any other basis than that there laid down. It does not destroy the evils of competition, but its provisions reduce the chances of unfairness to a minimum. There are enough capable architects in Canada for owners to select from and feel certain that the work will be creditably carried out, and the public should be taught that in this way only will it avoid the uncertainty that always attends competitions.

Sixth Annual Meeting of the Missouri Association.

The sixth annual convention of the Missouri State Association of Architects was to be held at Kansas City on January 14, but at the urgent request of the St. Louis members, who could not generally attend on that date, the meeting is postponed to February 11. As this is the largest state association west of the Mississippi, its influence extends far beyond the state borders and its acts largely aid those of the National Association in the establishment and maintenance of correct professional practice. The following call was issued by the secretary before the change of date:

The next annual convention of the Missouri State Association of Architects will be held at Kansas City on January 14, 1890. This being the first convention following the consolidation of the W. A. A. and the A. I. A., a number of highly important questions will arise on which the future existence and prosperity of our association and all professional interests in the state depend. Therefore the fullest possible attendance is desired and it is hoped that every architect receiving this circular will appear at this meeting without failure or excuse. Architects not already members are earnestly invited to be present, the interest of one being that of all.

The meeting will be held at the Midland Hotel. The display of architectural drawings is an important feature and it is hoped that all who can will send contributions. They should be expressed to E. F. Fassett, Rialto Building, corner Ninth street and Grand avenue. The association will defray all expenses of expressage both ways, and will hang and re-pack free of charge.

By order of Executive Committee,
JAS. OLIVER HOGG,
Secretary M. S. A. A.

E. F. FASSETT,
President.

The exhibit of architectural drawings at conventions is highly educational and gives architects a glimpse of each other's office work that can be obtained in no other way. Beside attending the convention as urged in the call, special pains should be taken to make the drawing exhibit large and representative, and the added time given by the postponement for one month should make this exhibit most successful. It should be kept in mind by the Missouri State architects as well as elsewhere, that a live state association is vitally necessary regardless of the existence of local chapters, and its form and integrity should be maintained. Without a healthy state government there can be little progressive growth locally.

Reorganization and Work of State Associations.

As a number of state associations hold their annual meetings within the next few weeks, the secretaries of each should secure general instructions regarding the new attitude of state associations toward the reorganized National Association from the Executive Committee which met at New York January 6 to determine the relations of state associations to the national body, the relations of members, etc. There should be a state association in each state in the Union. Whether the members of the state association must also be members of the national body might be left to the state association to decide, but it should be established as a law that all officers should be members. It should also be established that all members in the state and national bodies

have equal standing, but at present there are many architects who would earnestly support a state organization but who would, because of failure to see the advantage, or some other reason, decline to join the national. Almost equal with the professional standing of its members, what the state association of today needs is numerical strength, and this should be fostered in every way consistent with good sense so that the main object of its existence, the securing of legislative action upon the establishment of a legal status for the profession, may be augmented to the fullest extent. With this in view, and it should never be lost sight of among lesser measures for general advancement, the first standing committee of each state association should be that having in charge a bill for the examination and licensing of architects. This should be composed of the strongest and most active members, and should be given full power to call to its assistance other members or expend money and time in the accomplishment of its object. Because the architects of England and France have failed in this is no reason why continued effort should not be made in this country, where an intelligence superior to all other peoples is found in that portion of the public which is called the masses and which hold the reins of all legislation.

**Fire Insurance
Under the
Uniform
Contract.**

Several recent cases of loss by fire on buildings in process of erection, says the *Builders' Exchange*, have brought forcibly to the minds of contractors how carefully the national committees framed the Uniform Contract to secure perfect protection in this regard, and how unfortunate they (the contractors) have been in not demanding and securing the use of this standard form, now that they must face a possible loss, owing to their negligence. The Uniform Contract, in Article 2, provides that the *owner* must in all cases secure insurance, the policies to cover the possible loss of both owner and contractor, as their interests may appear, so that, in event of a fire, there can be no question either as to whom the insurance money shall be paid or as to the right of the owner to demand that the contractor shall proceed to make good the work which he has only partially completed. The old style contracts, as presented by architects all over the country in a thousand varying forms (each one claiming to be the best) invariably leave this important matter of insurance in such indefinite shape that in cases of loss disputes are sure to arise as to the rights and obligations of the two parties to the agreement. In the Uniform Contract this has been thoroughly considered and equitably adjusted, as well as many other points of equal or greater importance, so that if contractors will simply demand its use, they will be effectually protected, and protected in all parts of the country alike. Contractors can expect little sympathy if they neglect to take advantage of the means which has been provided for them to secure the best protection possible, through a standard form of contract.

**Reorganization
of State
and Local
Chapters.**

The first meeting of the executive committee of the American Institute of Architects was held at New York on January 6. The principal matter under consideration was relative to the reorganization of state and local chapters. It was considered primarily to be in every way desirable that the formation of new chapters should in every way be encouraged, and that existing chapters should be continued under the new constitution. While it was thought good policy that all members of chapters should also be members of the

Institute, no desire was felt by the committee to interfere in any way with the freedom of chapters, except in so far as such freedom might conflict with the constitution and by-laws of the Institute, and the general regulations regarding the admission of members. Thus, while a member of a chapter must belong to the Institute, and upon election to the Institute, become a regular member of the chapter, provision is made for an associate membership of chapters by a modification of Article X of the by-laws, which will allow a growth in the chapter outside of the Institute membership. In general, the chapter is left free to make any regulations desired which do not conflict with those provided to secure to the Institute a uniform high standard of membership. In regard to geographical boundaries of chapters, it was thought wise to allow common interest and convenience to govern their jurisdiction, and also because the business of the individual might often make it desirable for him to join a distant chapter. It was decided that five fellows could form a chapter, this small number being prescribed to facilitate the formation of chapters in parts of the country where there are few architects, but where the work of chapters is especially valuable. It is, in our opinion, a wise rule that fellows should be elected to the Institute through the chapters, as it encourages chapter growth, and, at the same time, is a greater guarantee of the character and standing of fellows, as in this way they come to the Institute with the indorsement of all rather than of a few of their associates. A circular letter, it is understood, will be immediately sent to members regarding this matter, and containing a general digest of the question of state and local chapters.

**Fourth
Annual
Convention
N. A. B.**

The fourth annual convention of the National Association of Builders will be held at St. Paul, January 27, 28 and 29. There will be represented by the delegates about seven thousand members, comprising about thirty exchanges, located in cities from Maine to California, which shows somewhat the growth of the association in the three years of its existence. The visitors will be the guests of the St. Paul Builders' Board of Trade, and from the programme we would judge that the entertainment will be royal. The ice carnival will be at its height, and the visit to Minneapolis will be equal in interest with that to St. Paul. The circulars and programme issued, which are published in full upon another page, show how thorough the work of organizing for this important convention has been done by the secretary and the committees in charge. In fact, there is no association in the United States whose conventions are so thoroughly business-like, and, therefore, valuable, as those of the National Association of Builders. It is fast placing the building interests of the country in the controlling position its importance to the people as well as the amount of capital it invests and distributes every year entitles it to, but which would remain entirely unimportant were it not for the thorough organization it is making of the building interests throughout the country. Through it trade schools will become common as other public schools, boys will be permitted to learn trades, strikes will be made impossible through the education of workmen and the fostered inclination toward the arbitration of all differences. One of the strongest evidences of the intelligent character of the association is its thorough coöperation with the architects in all those questions which affect their mutual interests.

Romanesque Architecture.*

CHAPTER VII.

VAULTED CHURCHES.

THE Romans erected many edifices and constructed them throughout all western Europe with such skill and art that the Roman traditions were not lost, even during the epoch of the Barbarians.

The Roman vault, either ribbed or groined, was known to builders for a long time after the fall of Rome. They frequently used these two forms of vault, and their use was constant in the construction of subterranean edifices or crypts, which about the eighth century replaced the confessionals of the basilicas.

It is interesting to notice *apropos* of this subject, that a difference existed between these two works. The confessional was a cell constructed half above and half below the ground; it served as a platform for the altar, and at the same time contained the tomb for the body of a saint, which, according to liturgic laws, had to be placed under the altar. The recess was of small dimension, for it was often easily covered by a single slab of stone. The crypt was completely or partially subterranean. They either made excavations entirely for the place or the natural lay of the ground permitted certain parts to be used in such a manner that the interior of the crypt was lighted. This crypt was composed of a number of compartments, between the foundation of the church, extending under the main altar, and often even under other parts of the church. These compartments were covered by vaults, either simple barreled vaults or barreled vaults intersecting each other, or by large arches whose intervening spaces were filled in with ribbed vaults. All these arches or vaults rested on columns or piers which offered a solid counter-buttress in the sub-basement, being the points of support from above.

But these edifices, because they were vaulted, were not Romanesque. They were constructed according to the Roman method, and they resembled the antique monuments that the architects of the eighth century copied rudely or more or less naively. Moreover, Roman works were not lacking. Numerous examples were found in the southern countries of Europe, especially in those which were not subject to the incursions of the Barbarians from the East and North. There are in the Arena at Arles, which dates from the first century, roofs of very simple construction.

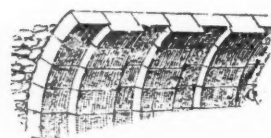


FIG. 131.

They are formed of heavy walls, on which are rested slabs of stone (Fig. 128). This method was known to the Syrians, who used it very wisely, considering the material which they had at their disposal. We studied this kind of construction in the church of Tarkha, Central Syria, built from the fourth to the fifth century on the model of the antique basilicas.

According to Quicherat the amphitheater of Nîmes offers a most finely preserved example of the heavy arch of the Roman epoch. The corridor which forms the last division of the second story is covered with a barreled arch strengthened by ribs which rest on brackets.

At Nîmes, in the Nympha, or Baths of Diana (Roman work of the second century), are barreled arches of large size, whose elements are composed of double arches very ingeniously combined, and the cutting of whose stone is studied with particular care. The arches form, so to speak, permanent circles of stone, between which are fixed slabs of cut stone as key stones, and resting in the rebate on the lateral faces of the heavy arches (Fig. 131). It is certain, however, that architects constructed in the eighth and ninth centuries not only crypts, but vaulted monuments beside, of small dimensions, it is true, and not presenting the difficulties which resulted from the width and height of the nave.

According to Quicherat, the bishop of Toulous, a Merovingian prince, who occupied the See of Venice in 708, had built in the midst of the city a little vaulted edifice, in which to place the relics of St. Maurice and his companions. The palace of Chasseneuil

* "L'Architecture Romane," by Edouard Corroyer, Paris. Translated and abridged from the French for THE INLAND ARCHITECT, by W. A. Otis, architect. Commenced Vol. XIII, No. 3.

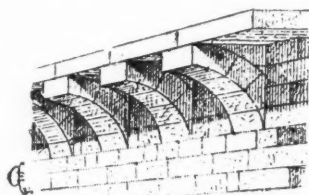


FIG. 128.

must have been constructed by the architects of Aquitania. It seems highly probable that these architects only practiced Syrian traditions introduced by Syrian colonies, which at that time existed among the Merovingians in the center of Celtic Gaul, adjoining Aquitania.

About this time, that is, in the first years of the ninth century, Theodulph, bishop of Orleans, had erected a church whose general arrangement, as well as details, indicate a Byzantine origin. (See foot-note, part I, chapter 16.)

The great Latin churches, covered with paneled wood, often had some of their parts vaulted. First to be mentioned is the rich basilica of Rheims, built during the reign of Louis the Debonnaire, by an architect named Rumald, with stones taken from the walls of the city. According to the chronicles of the time, quoted by Quicherat, this basilica had, up to the end of the tenth century, a pulpit carried on vaults resting against the façade. Then the cathedral of Auxerre, rebuilt in the tenth century, and covered with wood, had two vaulted chapels, giving to the church the form of the Latin cross. It is possible that the large churches built anterior to the year 1000 had the side aisles vaulted, as, for example, the old St. Peter's of Rome, a Roman church with four unequal naves, whose exterior side aisles were covered by vaults.

We might even believe that the greater part of the apses of the antique basilica were constructed of some kind of dressed stone. These apses, or hemicycles, were vaulted in quarter spheres, or half cupolas, whose simple construction presented none of the difficulties which arose when the architects of the ninth century, wishing to cover the great naves of the churches, used the Roman barreled arch and even the Byzantine cupola.

The cupola, however, has played a considerable role in the history of architecture, as has already been noticed in the first part of this work.

In the sixth century the Christians of the East adopted this mode of construction, which revolutionized architecture in that epoch by the systematic use of the cupola, the same as later the Christians of the West caused, in their turn, a revolution in the art of building by the use in churches of the continued

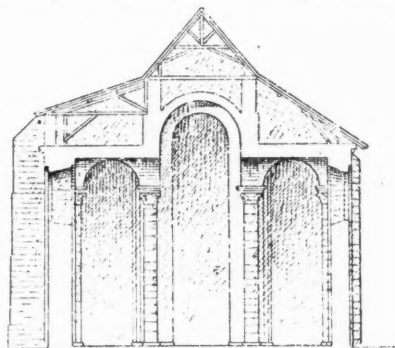


FIG. 133.

vaults maintained by buttresses and flying buttresses. According to Quicherat, the result was different in the two regions, because the point of departure was not the same. Suffice it to say, to characterize this difference, that the Orientals or Byzantines renounced from the first the basilica as a plan for sacred edifices. They transformed the church into a collection of polygonal or square halls, furnished at the same time by heavy walls, the necessary supports for the cupola. With this exception, they remained faithful during more than four centuries to the modes of adjustment and to the proportions of antique architecture.

In the first part of this work was shown the analogy, the similarity, even, which existed between the Byzantine monuments of the sixth century and the great Roman basilicas of the first centuries of the Christian era. Cupolas could be mentioned raised on the transepts of basilicas and covered with wooden roofs. These examples are rare, however, for they oftener built in the same place the lantern tower according to Gallican custom. To sum up what has been mentioned, it may be said, that if the Latins attempted, during the period of the Barbarians, to construct cupolas, and if the Gallo-Franks, in the eighth and ninth centuries, constructed vaults and cupolas of the most simple kind, they only made them according to either Roman or Byzantine traditions, and had not yet discovered the Romanesque formula, which, coming into existence at the end of the tenth century, became established during the first years of the eleventh and grew with such astonishing rapidity during the course of this century.

CHAPTER VIII.

THE CHURCH OF ST. SAVIN (VIENNA)—THE CHURCH OF ST. BENOIT-SUR-LOIRE (LOIRET).

The vault is the chief characteristic of Romanesque architecture, properly speaking, and the Romanesque churches are covered under their roofs by vaults of different forms. In the second chapter of the

second part was a description of the means employed by the first builders of the Romanesque period, means of different styles, using the vaults for side aisles and the sanctuary, leaving to the nave its basilica form with an open timber roof, a reminiscence of Roman traditions.

The first Romanesque buildings bore the marks of the hesitation and fear of the architects, but also the expression of their wish to solve the problem, difficult and complex, of general vaulting. The first and simplest of these problems was already solved by the use of ribbed vaulting with which to cover the side aisles. It remained to cover the central nave. To increase the probability of this covering lasting, the Romanesque architects only gave to the central nave a width about equal to the side aisles; they covered this nave with a barreled vault, and to offset the action of the thrust on the side walls they raised arches from the side aisles to the spring of the central vault, so that these vaults that covered the side aisles served to solidly counter-buttress the central ones.

The Abbey church of St. Savin was constructed toward the end of the eleventh century according to this ingenious system. The nave is formed by two rows of high columns of cylindrical courses, covered by naively sculptured capitals. They carry the arches formed by the intersections of the transverse and longitudinal vaults of the side aisles; on these arches, connecting the columns, rests the half centered barreled arch of the nave. The section (Fig. 133) shows this arrangement. The walls rise longitudinally above the haunches of the central vault. These walls by their weight neutralize the effect of the lateral thrust and support the framework of the roof of the edifice.

If the plan once more recalls the plan of the Latin basilica by this expedient, the elevation dispels it by the suppression of the high

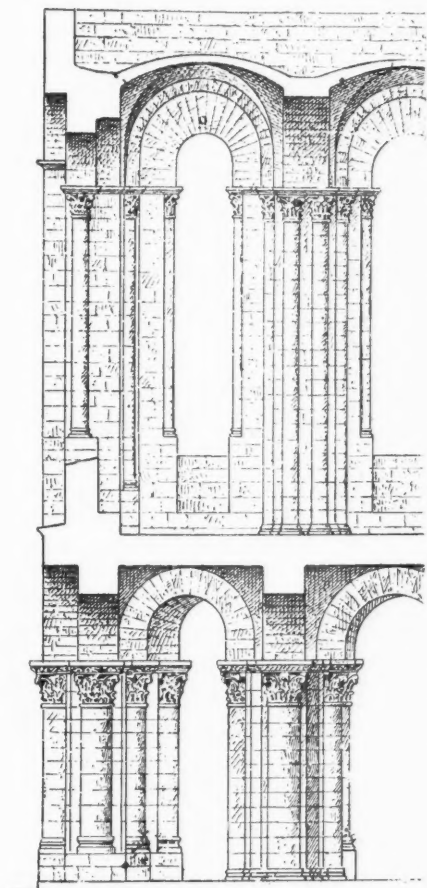


FIG. 136.

galleries and the windows arranged in the upper part of the nave. The nave is now no longer lighted except by light admitted through openings in the side walls, insufficient, especially in the north, to diffuse the light through the center of the edifice; later, however, the Romanesque builders solved this difficulty and found means of lighting the upper parts of the church.

The plan of the nave of St. Savin, as well as that of the transept, with its apsidal, recalls the basilica form of the Norman churches; the choir, however, has its peculiar arrangement; the sanctuary, in the form of a hemicycle or apse, marked by columns, and is surrounded by an ambulatory, vaulted like the side aisles of the nave and cantoned by five smaller apsidal, vaulted in quarter spheres, that of the center being larger than the others.

These apsidal are decorated in the interior and exterior with engaged columns; these are, in fact, ornamental buttresses, whose first appearance we have seen in the churches of Central Syria, in Qalb-Louzeh and Tourmanin, built in the sixth century. They were, however, to begin with, an antique reminiscence.

The origin of this arrangement of the choir has already been mentioned. According to Quicherat it was adopted anew in the fifth

century, the epoch in which the apsidal of the basilica became the Martyrium, that is, the place where the body of the patron saint reposed, and around which the lower galleries lead, offering an easy passage for the faithful.

The form of the choir of St. Savin might, moreover, be compared to that of Vignory, for they both presented a curious resemblance to the apsidal of the basilica of the Holy Sepulcher at Jerusalem, built by Constantine, from 325 to 336. Knowing the immense interest which was attached to the holy place from the earliest times of Christianity, it is easy to understand how the first church erected over the tomb of Christ must have exercised a considerable influence throughout all Christianity. It is copied in a great many monumental imitations, not only in single edifices, but in forms given to the sanctuaries of great Romanesque churches.

The narthex, or, according to Viollet-Leduc, the grand porch, built on the western façade of the church of St. Benoit-sur-Loire, dates from the eleventh century. It is composed of a quincunx of strong piers, open on three of their faces, while the Roman porches generally have closed walls, with exits only from the principal or small doors; it is covered by groined arches. It occupies a large space, and above is a high hall constructed like the lower one, and vaulted in the same way, but much higher. (Fig. 136.) The porch, or, rather, the magnificent narthex of St. Benoit-sur-Loire, which was built before 1030, according to certain authors, presents a superb example of general vaulting, remarkable for its rigorous construction, whose powerful framework yet shows the line of thought of the Romanesque architects. The importance of the thrust of the ribbed arches still being exaggerated, they multiplied the points of support in giving to them excessive dimensions, which were no longer in exact proportion with the vaults, filling the square spaces left between the ribs of the arches. The narthex of St. Benoit-sur-Loire is one of the most beautiful specimens of this kind of work, and one which gives a high idea of the skill of the Romanesque builders of the eleventh century.

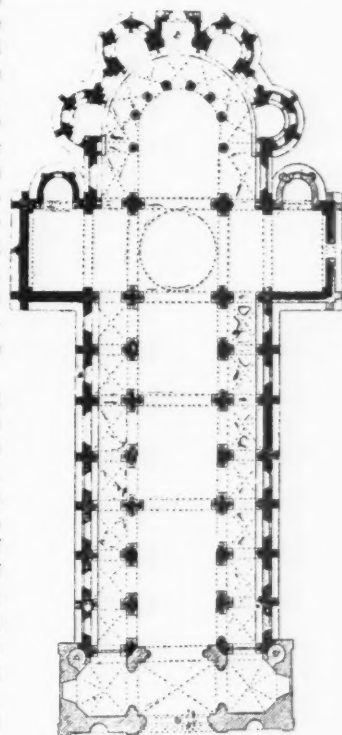


FIG. 137.

CHAPTER IX.

CHURCH OF ST. PAUL AT ISSOIRE—CHURCH OF NOTRE DAME LA GRANDE AT POITIERS—CHURCH OF ST. SERVIN AT TOULOUSE.

The churches of Auvergne, and particularly those of Orcival, of Notre Dame du Port at Clermont, and of St. Paul at Issoire, built about the end of the eleventh century, or in the first years of the twelfth, seem to have been the work of one architect, pursuing the same idea in different buildings; it would almost seem that they were built by the same workmen, as the marks of the master mason cut in the stone were seen in each.

The church of St. Paul at Issoire is perhaps the least ancient of all the churches just mentioned, but it presents the united characteristics of the Romanesque architecture of Auvergne; it marks the great progress achieved by the Romanesque constructors in their system of construction. (Fig. 137.)

The nave is formed of two rows of arcades and of two side aisles, the nave being crossed by bays in pairs and threes, by means of powerful ribbed arches. The barreled vault which covers the central nave is solidly counter-buttressed by half groined vaults.

The side aisles have two stories; the lower gallery is covered by ribbed vaults, placed between the lateral and transverse ribs of the arches. The upper gallery, opening onto the nave by little arched openings, resting on small columns, and lighted by windows cut in the outside wall, is covered by half barreled vaults springing from the side. The choir presents an arrangement similar to that of Vignory

and St. Savin, with this difference, that the small apses contain windows, and that in the circular wall of the apse, between the small apses, windows have been cut, which largely light the passage around the sanctuary. (Fig. 139.)

The small apses are ornamented in the interior with buttresses in the form of columns, such as are arranged in St. Savin, and whose eastern or Syrian origin has been shown.

Below the choir a crypt, reached by two steps, was constructed in the sub-basement of the high church, the floor of whose choir is raised several steps above that of the transept. In the center of the transept, at the extremity of the nave and in front of the choir, rises an octagonal tower. It is carried on the four piers of the transept, the four large arches carrying corbels in the angles, permitting it to pass from the square to the octagon above a vaulted cupola, counter-buttressed, latterly by half barreled vaults, is surmounted by an

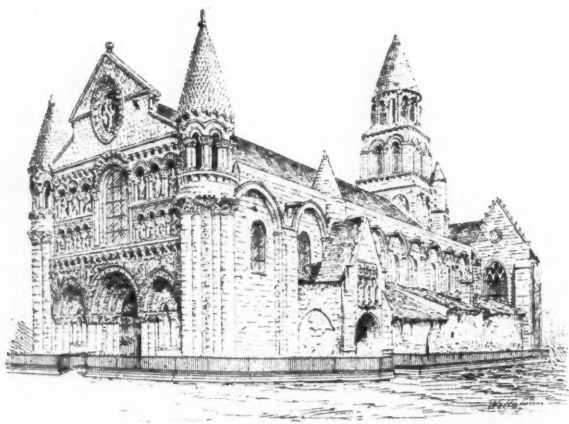


FIG. 141.

octagonal tower whose upper story is a belfry terminated by a pyramid of stone. This carefully planned church of Issoire is built of a coarse-grained stone in the heavy parts, and of limestone in the members ornamented with sculpture. Certain portions are ornamented with mosaics, or, more properly, polychromatic marquetry, which gives to the edifice a very elegant Oriental character, whose origin has been studied in the Latin church of St. Front.

The Romanesque architecture of Auvergne was very successful, which can be explained by the originality of its arrangement, and by its Oriental or Byzantine decoration. The effects of this architecture were soon manifest in the provinces of Nivernais, Limousin, of Poitou, and even Languedoc.

From the end of the eleventh century, or the commencement of the twelfth, the form of circular apses, with chapels jutting out from them, became general.

Poitiers, however, still preserves examples, and at Toulouse, one of the most beautiful of this kind is still to be seen.

The church of Notre Dame La Grande is one of the most curious of Poitiers, so rich in Romanesque monuments. In the interior it



FIG. 143.

presents three naves, equal in height, carved with barreled arches. The system of construction still shows the hesitation, and the constant efforts made by the Romanesque builders at the close of the eleventh century.

A large square tower, terminated in a circular story, crowned by a pyramid, rises at the intersection of the transepts. Its façade, covered with carving, shows the circular associated with the pointed arch, now used for some time, and which has been shown at St. Croix of Montmajor, erected in the first years of the eleventh century.

Two small towers, crowned like the high part of the central tower, and supported by clusters of heavy columns, ornament the angles of the western façade (Fig. 141).

The façade, in which Oriental reminiscences abound, is especially remarkable for its sculptural decoration, with which it is entirely covered, representing the fall and redemption of man. These carvings have a considerable iconographic interest as to idea and expression. One of them, placed above and at the right of the spectator in the side arcade, represents the baptism of the infant Jesus, a very unusual subject, and of which, probably, only one other example exists, on a golden shrine of the thirteenth century, preserved in the treasury of Aix-la-Chapelle.

The church of St. Sernin, in Toulouse, was commenced in 1060 by Raymond, canon of the cathedral of Toulouse, finished in 1096, and dedicated by Pope Urbani II after the council of Clermont, when his word determined the first crusade, and shortly before his death, which occurred in 1099. But the date of the construction must be that of the old church of St. Sernin, for, according to Viollet-Leduc, the one which exists today, and has been brought to completion through different epochs is of the twelfth century. It is one of those vast structures erected in the south of Europe by Romanesque builders (Fig. 143). The influence of the Romanesque architecture of Auvergne is as manifest in the plan as in the details of its construction; it is an enlarged copy of the churches of Clermont and Issoire.

(To be continued.)

Development of Architectural Style.*

BY GODFRIED SEMPER—TRANSLATED AND ARRANGED BY JOHN W. ROOT, ARCHITECT.

CONSIDERING the uniformity of these phenomena we may conclude, from the later and better known phases of the history of the country, that the same kind of disturbances prevailed in earlier ages. According to Xenophon, Cyrus, after distributing the provinces of his empire among his confidants, instructed them, before their departure to their posts, to follow his example, as far as possible, in all cases. They should first form a body of horse soldiers and wagoners from the Persians in their suit and from the inhabitants of the satrapy. They should ask the great landed proprietors of their district to frequently appear at the gates of the palace, there to receive the orders of their liege. The education of the noble children should be under their own control, following the example set in the king's own palace. The adults should frequently be invited to the castle for hunting parties. "He among you," Cyrus adds, "who in proportion to his means entertains the most wagons and controls the most numerous and best cavalry, may rest assured of my special favor. With you as well as with me let the honorary offices be ever occupied by the most worthy. Your table should be plentifully supplied, like mine, to show the splendor of the house, thus making your invitations a token of esteem to those who distinguish themselves. Keep inclosed parks and entertain wild animals therein. Before meals perform military exercises in common with your vassals, and never suffer your horses to be fed before working." Finally, he instructs them to ask those who partake of their honors to follow their example as they followed his. These instructions of the Persian state founder to his officers contain too much inherent truth to admit of any doubt as to their genuineness. I dwelt longer upon this subject because it serves as an example to show how the legislator also acts as founder, or, at least, as reconstructor and upholder of one special building style, which in this case is based upon a series of strictly disciplined households. The complicated does not develop from the simple, but, on the contrary, the smallest residence is a reproduction in miniature of the royal castle. According to Xenophon, Cyrus also established the plan for the royal residence, which, in its essential features, agrees with the traditional arrangement of Asiatic camps.

The camps of Cyrus consisted of four square circumscriptions; the middle one inclosed the royal residence, which was divided into many compartments, and contained the royal body-guard and the most faithful fellows in arms, as well as the servants. The next belt was occupied by the wagoners and by the cavalry. A third formed quarters for the light troops, while the other wall was defended by the heavy troops. By combining this ground-plan with an elevation where the whole towers up in terraces toward the center, we obtain the fixed type of all Chaldean-Assyrian castles known to us through the old authors and the latest discoveries. A fortified camp is the immediate result of the prevalent army system; it cannot be enlarged

* Commenced in Volume XIV, No. 7.

and does not admit of interior development. It is a structure of defiance, depending upon itself and antagonizing the external world.

Whenever two Roman consular armies coöperated, they put up separate camps beside each other. This principle of agglutination governs the growth of all building styles based upon the fundamental idea of the fortified camp, like the Chaldean-Assyrian, the Persian, the Chinese, and even the Indian. It may be compared with the Turan languages, and is probably a Turan-Mongolian invention. By another system of fortification the camp is so arranged that it is subordinate to one controlling elevated object, which, as a key to the entire system of defense, completes the successive control of each defensive belt of the outworks by the one within it. The Chaldeans and Assyrians used a work of man for this highest point of support, the sky-aspiring terrace-tower, which at the same time served as a tomb for the deified grandsire of the dynasty, and also for the priests. This tower shelters the high castle terrace, which is also constructed of brick, and which carries on its terraces individual palaces designed with many offsets, loosely or not at all connected, but distributed irregularly, like oysters on a rock. This collective higher unity is surrounded by the outer rampart inclosing the entire dominion of the castle, like a bastion.

Besides this powerful apparatus of defense the objects which it protected must have their architectural representations. Forming the highest pædium there is, first, the above mentioned high towering temple cell on top of the terrace tower, then a multitude of princely diets and dwelling pavilions, half hidden and dispersed between the shady gardens and the tree-covered offsets of the palaces. Finally, in the outermost territory of the castle, we meet dwellings for liegemen and vassals, caravansaries for strangers, commercial bazars, and on the wide fields the tent camps of tributary trading Bedouins. Above all this variegated confusion, clad in brilliant colors, towers the imposing terrace castle. From elements like these, representing a considerable town in themselves, the command of a ruler suddenly created residences. Thus originated Nineveh, Babylon and Borsippa, whose immense extent and splendor, so highly praised by the ancients, may be explained in this manner. They then, in their entirety, form the highest multiple of the same principle of gradual predominance; the royal castle and its over-towering Belus temple, bearing the same relation to the whole as the highest terrace tower bears to the single dynastic castle.

The system had outlived itself; the Belus temple had already shriveled to a mere symbol, when it was given a new impulse, but in a different direction, by the Persian conquest. Certain fundamental features received a more defined expression; the principal one, however, through metaphorical application, was knowingly and willingly made the symbol of the difference existing between the overthrown old order and the new Persian one. The former fact is revealed by the sober dearth which, in Persepolis, on one side created the separation, and on the other side the subordinate relation to each other of the building-units forming the whole palace plant. They are all alike in principal form, being square colonnaded halls surrounded by outworks, augmented by many squares from the simplest and smallest, formed by four columns, up to the largest surrounded by hundreds. The second and more important of the above mentioned elements is the substitution of a natural point of support for the artificial one of the Chaldean-Assyrian defiance structure. The Rachmid mountain, with its pyramidal summit, against which rests the celebrated Persian castle, obviously contains a known reference to the Babylonian terrace tower. But this reference says, "We, the Achaemenides, are not heaven-defying sons of Nimrod, but pious worshipers of Ormuzd, whose fire-altar alone, established above us, makes us feel strong."

The originality of the Persian structure lay in its submission to a dominating natural elevation. Its light appearance, compared with the condensed masses of the Chaldean structure, is thus explained (want of time prevents a more thorough treatment of this point). But this adjustment to a natural object was not merely the necessary result of the removal of residences from the plains into mountainous regions; it was the product of a new culture. This is proven by Ecbatana, the old city of the Medes, which was also located in a mountainous country, but, according to reliable sources, followed exactly the Chaldean example. Even in locating Nineveh the people had the choice of all the mountain slopes near it.

The new idea did not prevail, however, until Darius became ruler. The sufficiently identified tomb of Cyrus proves this. It is a small model of the Babylonian tomb of Minus and absolutely opposed to the rock tombs of the Achaemenides. This example shows the leap and the recoil of the little after creator, man, in his work of art creation, and contradicts the above mentioned transition theory as applied to

building styles. At the same time it corroborates the assertion that new building styles always result from new culture ideas, originated by individual organizing minds. Let us now cast a rapid glance at the two great east Asiatic culture germs, China and India, which, although totally different from each other, have in common their original warlike constitutions. China lost her elasticity under the influence of an early, active caste of officers, who, with short interruptions, have maintained their power to the present time. Their political aim is the absolute preservation of that state of culture which is, according to their view, the ideal one, and which the Chinese empire had attained three millenia before our era, under the dynasty of the Jaos.

For this reason the palace of Yu, the last and greatest emperor of this dynasty, was made the type of Chinese building art. It consisted of a foreyard, used as a market, and containing the court room and the public scale, and of a record yard in the rear of the other, terminating in an elevated lawn upon which stood the modest private residence of the emperor. This consisted of a light roof, resting upon posts, and covered with roofing of straw or earth; weather had coated it with grass and moss, and time had bent it under its own weight. To such a dwelling is ascribed the origin of the curved, green-glazed roofs of China. Thus the building style of this country was fixed when the column was merely the trunk of a tree, the roof was of straw, the wall braided from bamboo, and a raised lawn with incline took the place of a walled terrace with magnificent stairs. Under such circumstances there could be no monumental development of this style, but it offers opportunities for splendid display, and there is a vast variety of possible combinations of these few elements. In such combinations they are, however, merely externally connected. Thus, here, too, political and legislative influence governs architecture; there is no trace of gradual organic development.

A remarkable similarity exists between these Chinese elements and the monumental styles of western Asia. The Chinese have the same circumvallations, the same terraces, ornamented with isolated building-units, though they are more symmetrically and systematically arranged; nor do we miss the sepulchral temple at the last point of support to the royal residence (at the imperial palace at Pekin). Another curious fact is the fortress-like arrangement of the entire Chinese empire. This peculiarity dates back to the old Emperor Yu, who divided the empire into five concentric districts. The inner square was the emperor's private estate, while the outer belt formed the domicile of the outlaws. Between these were the districts for culprits, vassals and domains. This same figure has been, up to this time, the ideographic symbol of the Celestial empire. Bearing the same signification we find it also in the Babylonian letters (p. 125, line 4).

Before closing my remarks on China, I must mention the most despotic style reformator known to history. Toward the middle of the third century, a young hero from the Tschin-Tschin-Tschin-Huan-Ti, the Napoleon of the Chinese, reëstablished the empire, which was then divided into many kingdoms, and added to it by annexation the entire southern China, bordering Thibet and Cochin China. After annihilating the feudal states he began the immense task of completely transforming the law, legislation, and even the customs of the Chinese. With unheard of cruelty he exterminated the sect of the scientists, and with them all old books of law and annals of the empire.

His subjects, exasperated by so many innovations, he sought to occupy by gigantic building schemes. A waste hill on the river-side, not far from his residence, answered his purpose. He had all palaces of the annihilated vassal kings measured and exactly drawn. He then transported to his palace the valuables contained therein, including the widows and female slaves of the conquered rivals whom he had executed. Next he erected upon the above mentioned row of hills, and according to the plans he had procured, an immense palace, consisting of true copies of the destroyed royal palaces, partly occupied by their former pretty owners, with all the valuables belonging to them. These buildings, whose variety was harmonized by art, occupied an immense area. They were surrounded and connected by a colonnaded portico, a motive previously altogether unknown to the Chinese. This portico fronted a magnificent gallery of two stories, which gave shelter in all seasons. To these building operations, huge as they were, he subsequently added others, which might be considered examples of despotic insanity if we were not compelled to admire the cool calculation and sound political sense in all the undertakings and sayings of this emperor and his minister, Li-tse. Like Nero, he tore down his capital to the ground. The plan of the new city was an imitation of the star-spangled sky. Every fixed star

was indicated by a palace. Every prince and higher officer of the empire had to build upon a certain designated lot, displaying the greatest splendor in his edifice. There were nine hundred palaces, and distributed between them dwellings for seventy thousand families, which had been taken up and removed. His own palace was, naturally, more magnificent than all the rest, and was connected with the large harem, which I have already described, by inclosed halls. The greatest and probably most insane of his works is the Chinese wall, the length of which is from five to six hundred liens. Even this Titan shook in vain the magic circle which inclosed China for five millenia. His spirit followed him to the grave; the old rules of custom, and the documents of the antiquaries were brought forth again from their hiding places, and maintain to this day their almost unimpaired authority.

(To be continued.)

Economy in the Use of Steel in Building Construction.*

BY W. L. B. JENNEY, ARCHITECT.

FIREPROOF work has become the rule rather than the exception in all important buildings. Our cities are growing rapidly, land in business centers becoming more and more valuable, and as a necessary consequence the buildings are built higher and higher.

Chicago has a very wise law, namely, that all buildings over 100 feet high shall be fireproof.

No hotel, theater or apartment house can be popular unless fireproof. Any business man would think himself inexcusably careless if he left a thousand-dollar bond over night in other than a fireproof vault, and yet we trust our greatest treasures, our wives and children, in very combustible buildings, and ourselves are often away on business for weeks at a time. Too many sad examples are recorded of the folly of such risks. It is pleasing to see that at length the importance of fireproof dwellings has come well to the front and is meeting with universal indorsement.

This extended use of iron in building, at a time when other demands are fully equal to the average, has advanced the price of raw material and encouraged the "combination" to advance the price of beams three-tenths cents per pound.

Evidently, it becomes the duty of the architect to study how he may economize and produce the desired results at least expense. An opportunity is offered in the use of steel instead of iron.

The I-beam is the important factor in fireproof construction. When we consider that the ultimate tensile strength of iron beams is but 48,000 to 52,000 pounds per square inch of sectional area, while that of steel is from 63,000 to 70,000, it is easy to see that if the section of the beam is such as to give the greatest practical value to the metal used, there is a saving in the weight of metal by the use of steel instead of iron, amounting to one quarter or even one-third.

As the price per pound is the same for steel and for iron beams the saving in money is enormous. For example, I have under construction a building which will require \$250,000 worth of steel beams. Should iron beams be used it would add at least \$50,000 to the cost, with no advantage, but rather with the disadvantage of the additional load on the columns and foundations. To effect this saving, the architect must base his calculations on a tensile strength of say, 60,000 pounds per square inch, and must be sure he obtains it in the steel.

To be certain of getting this result the specifications must not only demand it, but also that test bars be taken from each "blow" or charge of the converter and tested in the presence of an agent appointed by the architect; and that no beams will be received unless up to the required strength. That it is not difficult to obtain this strength is seen from the "test sheets," showing the testing of 276 "blows" of the converters at the mills, made by an engineer from my office. Of the 276 tests only thirty are below 64,000 pounds and the lowest is 61,500.

As the quality of the steel improves these figures enlarge. I think that even now we might insist upon a minimum tensile strength of 64,000 pounds per square inch, without any increase in the cost to the consumer.

There are other tests required, for example, to insure that the beams shall not take a permanent set if moderately overloaded; that the beams can be punched without splintering and bent without breaking. After all the physical tests are satisfactory, the beams

*A few paragraphs on this subject having appeared anonymously in the *Chicago Tribune*, and, as such an article, to be of value, must have the stamp of authority, Mr. Jenney has, at our request, reviewed and enlarged it.—EDITORS INLAND ARCHITECT.

must be inspected for surface defects, and none but perfectly rolled, straight beams must be received.

It is true that such careful, thorough inspection is expensive to the architect, but the saving is so great that there is no other detail in an architect's practice by which he can save so much money for his client, and it should never be neglected.

There has been much discussion of late as to the relative value of rolled steel columns and cast-iron columns. In bridges the cast-iron has entirely passed out of use. In a building to be filled with heavy running machinery the architect should insist upon rolled steel columns, but for an office building, a store, or a warehouse, when the load is steady, it becomes a question of cost.

For cast-iron columns the architect must insist that from each heat of the cupola two test bars be cast, each of which is tested by placing it on supports and loading in the center with a weight proportionate to the size of the bar and the distance between points of support. Should the bars break, the metal is inferior and not acceptable. Each column should be drilled in two directions for measuring the thickness of metal, and then careful examination made for surface defects. Cast-iron has the disadvantage of being liable to internal defects that the most rigid inspection might fail to detect, and consequently the columns are made heavier than otherwise would be necessary. Even with the disadvantage of greater weight the "proposals" for furnishing cast-iron columns are at present usually less than for rolled steel. To avoid the uncertainty which forces the architect to specify cast-iron columns one-quarter heavier than he otherwise would do, some of the leading foundries are now considering the policy of adding to their plant a large testing machine, in which each column may be tested up to double the load which it is calculated to bear. Any foundry that has such a machine can command the best work at the highest price, for it will save to the owner twenty-five per cent at least in weight of metal now considered necessary for safety.

These are but a small portion of the engineering features that the demand for tall, expensive, fireproof buildings has introduced into a Chicago architect's office.

Evaporation of the Water Seal of Traps.

Editors *Inland Architect*:

In your issue of November, 1889, you quote an advocate of trap venting as saying of ordinary vented S traps, "If the traps are filled even once in two months they will keep their seal intact." Most persons now agree that S traps, which are back vented in the ordinary manner, require refilling as often as once a fortnight to preserve their seals. Official circulars issued to the public by the Brooklyn board of health and other authorities have recommended refilling as often as once a fortnight, and later circulars have urged refilling *once a week* in unoccupied rooms and buildings. My own experiments show that even shorter intervals between filling are needed for absolute security.

It is, therefore, clear, and admitted by its most persistent advocates, that the system of back-venting is a very dangerous one. Its original object was to afford security without constant watch. It is now found that it totally fails in this respect, and that the back venting of most ordinary traps involves the necessity of a degree of watchfulness and attention which experience and common sense show us they will never receive.

My experiments on the rate of seal reduction produced by back venting were made with the greatest care, and show a more rapid loss than is generally supposed to take place. These experiments were made in 1884 for the Boston city board of health, and were first published in the *American Architect and Building News* of June 7, 1884. If this report be studied, it will be seen that every precaution was taken to secure trustworthy results.

Although the experiments on siphonage were made during the same year, and on the same system of piping with those on evaporation, it will be seen by studying the drawings and text of this report, that the former in no way interfered with the latter. No experiments on siphonage were made while the water stood high in the traps during the tests for evaporation, and no disturbance of the water seals was made by this, or any other cause, during the evaporation tests.

It would have been exceedingly careless, and totally unnecessary, to allow any such disturbance. Moreover, most of the experiments on evaporation were made, as shown, on a stack so connected with the rest of the system of piping that such disturbance would have been impossible, even had we not carefully closed the inlet or house side of the traps. We found that a warm flue caused the back-vent pipe to evaporate enough of the water from the seal of the trap to

break it in less than a week, and I am confident that this often happens in practice.

How short-sighted and foolish is it to endeavor to throw discredit on these experiments which were conducted with the greatest care and honesty, and witnessed and subscribed to by well-known and impartial experts; and to argue that because other experiments, made under different conditions, showed a somewhat slower rate of evaporation, that, therefore, cases could never occur in which the more rapid rate might be encountered in practice.

It is likely that the public will very soon awake to a sense of the importance of investigating this matter for themselves. Their boards of health will then find that, with a very small outlay, they can obtain the truth, and that a vast amount of unnecessary complication and expense can be saved in plumbing, and at the same time greater security be obtained.

When we consider the well known unreliability of the vent-pipe in many ways, and the frequency with which it is found totally closed by grease, it becomes something worse than folly to recommend the public to place implicit reliance upon it.

Respectfully yours,

J. P. PUTNAM.

The National Association of Builders.

THE fourth annual convention of the National Association of Builders will take place at St. Paul, Minnesota, on January 27, 28 and 29, 1890. The following circulars of information have been issued by the secretary and show that the work of preparation is, as usual, thorough and comprehensive.

CIRCULAR NO. 3.

ARRANGEMENTS.

Arrangements made by the Contractors' and Builders' Board of Trade of St. Paul, for the accommodation and entertainment of delegates and visitors while in that city are as follows:

1. Accommodations have been engaged at the Hotel Ryan, corner Sixth and Robert streets, for all delegates and visitors, at a uniform rate of \$3 per day. Parties sending names in advance will find rooms assigned on arrival.

2. Reception committees will be in attendance at railroad stations on arrival of trains, to receive guests and convey them to Hotel Ryan.

3. In deference to the urgent request of the Executive Committee of the National Association, no particular entertainment will be offered to visitors until after the close of the convention on Wednesday afternoon.

4. On Wednesday evening the Contractors' and Builders' Board of Trade of St. Paul will offer to the delegates to the national convention and other visitors a banquet at the Hotel Ryan.

5. On Thursday all delegates and visitors are invited by the Contractors' and Builders' Board of Trade to participate in the ice carnival; the day to be spent in sleighing, tobogganing, snow shoeing and sight seeing of various kinds, and the evening in witnessing the first bombardment of the ice palace, arrangements to view which have been specially made so that all visitors will be comfortably provided for. The bombardment will close the festivities on the part of the St. Paul builders.

The Builders' Exchange of Minneapolis extends to all delegates and visitors to the fourth annual convention a most hearty greeting, and claims the privilege of showing them, ere they leave for their homes, the beauties and attractions of the "Twin City."

On Friday morning (at an hour to be announced), visitors are requested to leave St. Paul for Minneapolis on special train. On arriving at Minneapolis (trip occupies but twenty minutes), conveyances will be taken, and a tour of the city made, covering all points of interest, including the great flouring mills which are known as the largest in the world.

At 3 P.M. the visitors will be entertained at a banquet at the West Hotel, and in the evening at a performance at the Grand Opera House. Saturday morning—*Bon voyage*.

Issued by order of the

W. H. SAYWARD, Secretary.

EXECUTIVE COMMITTEE.

CIRCULAR NO. 4 (a).

REGULATIONS FOR THE CONVENTION.

Place of Meeting: In Chamber of Commerce, corner of Sixth and Robert streets, diagonally opposite the Hotel Ryan.

Time of Sessions: Monday morning at 10 o'clock; after that, as convention may vote.

Resolutions: Resolutions must be presented in writing, in duplicate, both copies signed by the party presenting the same. When possible they should be sent to the "Committee on Resolutions," in advance of the convention.

Amendments to Uniform Contract: Any delegate having amendments to offer on the uniform contract must present them to the "Standing Committee on Uniform Contract," who will consider the same and give hearings to those who may desire to be heard. Amendments should be offered as early in the convention as possible, to permit of appointments for hearings.

Voting: All votes (unless otherwise ordered) must be announced by the chairmen of delegations.

Debates: The Executive Committee have endeavored to specially select one person to open the discussion on each subject offered for

consideration, and one person to follow in opposition; the remaining time devoted to each particular subject will be equally divided between the exchanges represented in the convention, each delegation being called upon to express its views.

Papers: The importance and number of subjects pressing for discussion have made it imperative that no papers be read at the regular day sessions, but the committee hope to arrange evening sessions to hear several papers of special interest which have been prepared at their request.

Issued by order of the

W. H. SAYWARD, Secretary.

EXECUTIVE COMMITTEE.

CIRCULAR NO. 4 (b).

PROGRAMME OF PROCEEDINGS.

MONDAY, JANUARY 27, 1890.

MORNING SESSION.

1. Opening address, by the president.
2. Appointment of Committee on Credentials.
3. Recess for presentation of credentials.

AFTERNOON SESSION.

1. Report of Committee on Credentials.
2. Roll call.
3. Offering of resolutions.
4. Appointment of committee to report time and place of next convention, and to nominate officers for the coming year.
5. Report of secretary.
6. Report of treasurer.
7. Report of standing committees.
8. Report of special committees.

TUESDAY, JANUARY 28, 1890.

MORNING SESSION.

1. Discussion of the question, "Shall the National Association recommend the adoption of the eight-hour day in the building trades, and, if so, when and under what conditions?"

(To be continued at morning session of Wednesday.)

AFTERNOON SESSION.

1. Discussion of the question, "The Lien Laws—Shall the National Association recommend that they be abolished?"
2. Discussion of the question, "Sub-contracting—Shall the National Association recommend that it be encouraged?"

WEDNESDAY, JANUARY 29, 1890.

MORNING SESSION.

1. A portion of this session will be reserved for continuation of eight-hour discussion, if necessary. If not needed for that purpose, other subjects that have been presented will be introduced, a list of which will be distributed as soon as possible.
2. Discussion of the question, "Manual Training—Shall the National Association recommend its introduction in the public schools?"

AFTERNOON SESSION.

1. Report of the Committee on Resolutions.
2. Report of the Committee on Time and Place of next Convention, and on Nomination of Officers.
3. Election of officers.
4. Naming and election of officers.
5. Unfinished business.
6. New business. (Amendment to constitution.)
7. Adjournment.

Issued by order of the

W. H. SAYWARD, Secretary.

EXECUTIVE COMMITTEE.

Government Plans and Specifications.

THE following letter from the Treasury Department, published in the *Builders' Exchange*, explains the position of the supervising architect on the subject of furnishing plans to various Builders' Exchanges:

TREASURY DEPARTMENT,
OFFICE OF THE SUPERVISING ARCHITECT,
WASHINGTON, D. C., October 29, 1889.

William H. Sayward, Secretary of National Association of Builders:

SIR,—I have to acknowledge the receipt of your letter of the 26th ultimo, renewing the request that plans and specifications for work on public buildings be furnished to offices of the several building exchanges.

You have misunderstood office letter of the 27th ultimo, in regard to the subject.

The department would send the papers you desire, if it were practicable, but is unable to furnish copies of plans and specifications of work in hand to all builders' exchanges, the supply being used for distribution to those who are assured bidders, upon their application for the same, and it becomes necessary to reserve the plans and specifications for such purpose.

The only expenditure authorized for securing competitive proposals for work, etc., for public buildings, is by publishing advertisements; and to accommodate those who state their intention to submit proposals, the department usually furnishes them, for brief periods, with plans and specifications, and places plans and specifications in the office of the builders' exchange nearest the location of the building

on which the work is to be done, in the office of the superintendent of the building, and in this office, for their use.

The builders' exchanges, through the architectural magazines and journals, in addition to the advertisement in the daily newspapers of the places in which the building is located, have ample notice that proposals are desired, and all who wish to submit bids can find full opportunity for using the plans and specifications under the present office method.

Respectfully yours,

J. H. WINDRIM, *Supervising Architect.*

Ontario Association of Architects.

THE first annual convention of the Ontario Association of Architects was held at the Canadian Institute, Toronto, November 20 and 21. President W. G. Storm, one of the oldest practitioners in Toronto, occupied the chair; S. H. Townsend was secretary.

The following members were present: M. B. Aylesworth, E. Burke, R. W. Gambier-Bousfield, A. E. Boulton, Joseph Connolly, S. G. Curry, Frank Darling, D. B. Dick, R. J. Edwards, J. A. Fowler, H. B. Gordon, Charles J. Gibson, John Gemmell, George W. Gouinlock, William R. Gregg, Mark Hall, George R. Harper, Grant Helliwell, G. W. King, Henry Langley, F. C. Law, E. J. Lennox, W. J. Mallory, Robert Ogilvie, Allmond E. Paull, Herbert G. Paull, James Smith, W. J. Smith, W. L. Symons, Henry Simpson, W. G. Storm, S. H. Townsend, Charles F. Wagner, Mancel Wilmott, H. J. Webster, A. Frank Wickson, E. A. Whitehead, of Toronto; Alfred McCall, D. Ewart, John W. H. Watts, of Ottawa; George F. Durand, H. C. McBride, S. Frank Peters, of London; James Balfour, W. A. Edwards, of Hamilton; Joseph W. Powers, of Kingston; A. A. Post, of Whitby; H. F. Duck, of Ridgeway; G. S. Kinsey, of Port Elgin; James L. Wilson, of Chatham; J. E. Velcher, of Peterborough; Thomas Cuthbertson, Alexander White, of Woodstock.

The features of the convention were the consideration and discussion of a proposed act of incorporation and a paper on professional ethics read by Mr. E. Burke, of Toronto, who quoted liberally from O. P. Hatfield, of the American Institute, and J. G. Cutler, president of the Western New York State Association.

Papers were read by D. B. Dick, on "The Orange (N. J.) Sewage Farm"; by H. P. Gordon, on "Foundations," and by R. W. Gambier-Bousfield, on "Office Management."

The following officers were elected: President, W. G. Storm; vice-presidents, George F. Durand, London; James Balfour, Hamilton; King Arnoldi, Ottawa; secretary, S. H. Townsend; treasurer, D. B. Dick; directors, E. Burke, Toronto; Joseph Powers, Kingston; S. G. Curry, Toronto; D. Ewart, Ottawa; J. E. Belcher, Peterborough; auditors, H. Langley and W. R. Gregg.

Chicago Carpenters' and Builders' Association.

THE regular annual meeting of the Carpenters' and Builders' Association was held at the Exchange, January 9, and was attended by about seventy members. Several amendments to the by-laws to reduce the number forming a quorum, and abolishing the meetings during the summer months, were presented, and the following officers elected: President, William Goldie; vice-president, J. W. Cassell; secretary, James John; treasurer, Peter Kauf; trustees, for one year, William Mavor; for two years, J. F. Tregay, Oliver Sollitt and J. W. Andrews.

The business meeting then adjourned, and the members went to the Sherman House, where a banquet was prepared. There were seated around the tables the following members and guests:

Oliver Sollitt, J. G. McCarthy, W. P. Ketchum, R. C. McLean, J. F. Tregay, Architect Henry P. Harned, William Hearson, Architect O. J. Pierce, Rev. J. P. Brushingham, Architect W. W. Boyington, D. G. Phimister, E. Earnshaw, Frank C. Schoenthaler, Charles W. Gindele, D. V. Purington, J. W. Cassell, Duncan Cameron, William Jenkinson, E. Hoganson, H. G. Knickerbocker, Franc Koapke, Vildmar Lund, F. E. Walter, E. A. F. Hart, E. F. Walsh, William Goldie, W. Irving Clark, John Reese, J. W. Andrews, S. Pickett, John Rawle, V. T. Lund, Alexander Shannon, of Topeka, Kansas; Francois Blair, J. C. Prince, Thomas Burns, James John, William Mavor, Alexander Gordon, Walter T. Clark, George Wakeham, E. Isbell, Alexander Campbell, H. H. Drew, G. R. Gillsdorf, E. W. Gillsdorf, R. B. Willis, Eli Payne, J. Steinmetz.

The music was by Campbell's soloists, and Messrs. J. P. Jones and E. Oldfield sang several duets.

The first toast, "The Carpenters' Association," was ably responded to by President William Goldie, who spoke hopefully of the future of the trade, and earnestly regarding the necessity for trade schools.

Architect W. W. Boyington spoke of the "City of Chicago—the place for the World's Fair." Mr. Boyington said Chicago was a toast no one could respond to successfully, and when it got the world's fair it would be still more impossible, as no one could foretell the future of the city. Referring to the carpenter and joiner of fifty years ago, the speaker made a strong plea for well-trained apprentices in the trades.

The remainder of the programme was responses to toasts, "The Builders' Exchange," by D. V. Purington; recitation by D. G. Phimister; "The Masons' and Builders' Association," by Charles W. Gindele; "The Pulpit," by Rev. H. P. Brushingham; "The Press," by R. C. McLean, editor of THE INLAND ARCHITECT; "The Ladies," by J. G. McCarthy. The orchestra played and the guests sang "Auld Lang Syne," and everybody went home feeling that this, the first banquet of the Carpenters' Association, should be a permanent feature of the annual meeting in future. The entire arrangements were successful and a credit to the committees of arrangement and reception that had them in charge.

Association Notes.

ILLINOIS STATE ASSOCIATION OF ARCHITECTS.

The postponed annual meeting of the association was held on December 15. President W. W. Clay in the chair, and the following members present: John W. Root, D. Adler, L. H. Sullivan, H. B. Hill, J. L. Silsbee, Clinton J. Warren, Samuel A. Treat, L. D. Cleveland, Clarence L. Stiles, Alfred Smith, S. M. Randolph, W. W. Clay, Louis J. Schaub, George Beaumont, O. J. Pierce.

After the usual lunch had been served the president stated that as the usual publication of the minutes had been made in THE INLAND ARCHITECT, the reading of the minutes would be passed and announced the purpose of the meeting, stating that, according to the consolidation of the Western Association with the American Institute, the question of the consolidation of the local chapter of the Institute with the state association should be considered. The secretary read the following letter from the secretary of the Chicago Chapter A. I. A.:

O. J. Pierce, Secretary:

At the regular annual meeting of the Chicago Chapter A. I. A., the following resolution was adopted:

"Resolved, That it is the sense of this chapter that the consolidation of the Chicago Chapter A. I. A. with the Illinois State Association, take place as rapidly as consistent with the reorganization of the American Institute, and the Executive Committee is hereby instructed to take such steps as will lead to such consolidation and that the secretary be instructed to notify the Executive Committee of the State Association of this action." W. A. Otis, Secretary C. C. A. I. A.

Mr. Adler said that whatever was done with the Chicago Chapter, the present constitution and by-laws of the State Association should be preserved, as they were based upon the constitution and by-laws of the Western Association, and the new constitution and by-laws of the Institute was almost an exact reproduction of that and offered a resolution which was not acted upon, directing the present executive to be retained, the name of the Chicago Chapter A. I. A. adopted, and to confer with the Executive Committee of the Chicago Chapter regarding a basis for consideration.

Mr. Beaumont spoke in favor of the body being a state rather than a local chapter, as in case of legislative enactments this would be valuable.

Mr. Hill favored delaying action and allowing the Executive Committees to meet and form a general plan, and report upon the same.

Mr. Treat spoke in the same vein, favoring delay and subsequent action, and in favor of one chapter, and that a state organization.

Mr. Clay suggested that the regular election of officers take place, and the new executive committee take the matter up.

Mr. Root said that a meeting of the Executive Committee of the new American Institute would take place about the first of January, and the matter of state associations would be taken up and a general plan for the reorganization of state associations into chapters would be formulated. There were many questions involved that had not yet been decided: Whether all members of chapters must belong to the Institute, the jurisdiction of each chapter, local or state, must be decided, etc.

Mr. Treat moved that the association proceed to the election of officers for the ensuing year.

On motion of Mr. Adler, the secretary was directed to cast a ballot for the association for Mr. Clay as president. The remaining officers were reflected in the same manner, as follows: President, W. W. Clay; first vice-president, Wm. Holabird; second vice-president, Frederick Baumann; secretary, O. J. Pierce; treasurer, C. M. Palmer; executive committee, S. A. Treat, L. H. Sullivan, George Beaumont and C. L. Stiles.

The subject of consolidation was again taken up, and Mr. Sullivan offered the following resolution:

"Resolved, That the Executive Committee of the State Association meet that of the Chicago Chapter, and be given full discretionary powers, and directed to arrange for consolidation of the two bodies, retaining the present State Association constitution and by-laws, and form as a State Chapter of the Institute under the name of Illinois Chapter.

The resolution was adopted.

Some discussion regarding permanent quarters for the Association followed, and it was intimated that rooms could be procured in the Art Institute Building, and in this event all members of the Association would be made members of the Art Institute. Mr. Root stated that some private discussion of the matter with members had developed that the point of cost would be made a secondary consideration by individual contribution, if necessary.

On motion, the consideration of permanent quarters was added to the work of the Executive Committee, to report at the next meeting, and the meeting adjourned to January 20, 1890.

DETROIT ARCHITECTURAL SKETCH CLUB.

At the last regular meeting of the Detroit Architectural Sketch Club, the following officers were elected for the ensuing term:

President, J. A. Hackett; vice-president, W. B. Stratton; secretary, C. A. Fullerton; treasurer, H. C. Stevens; executive council, A. Kahn, Maxwell H. Grylls, Geo. Harvey.

The club have started a movement to organize the several art societies in the city into an association. One result of such a union will be large and permanent quarters, a large library of art journals, etc.

NEW YORK ARCHITECTURAL LEAGUE.

The annual exhibition of the New York Architectural League is unusually interesting this year as an exhibition, but the drawings sent in competition for the gold and silver medals are not as numerous as in former competitions. The subject, which was "A Gateway for the World's Fair," may have been less interesting to draftsmen, or the home work of the clubs in different cities may have prevented draftsmen from working out the problem. In all there were five designs hung, Julius Harder, of New Haven, receiving the gold and

Claude F. Bragdon, of Rochester, the silver medal. The other competitors were Charles H. Israels, of New York; Maxwell H. Grylls, of Detroit, and E. T. Boggs, of Philadelphia. Notable among the loan exhibits were the fine embroideries of Mr. Henry G. Marquand, the representation in glass of Bolticello's Madonna by the Tiffany Glass Company, and the exhibition of work by the Columbia College architectural students.

NEWARK ARCHITECTURAL SKETCH CLUB.

The Newark (N. J.) Architectural Sketch Club, after a preliminary meeting, met for permanent organization, December 14, 1889. A constitution and by-laws were adopted, and the following officers elected:

President, W. Frank Bowers; vice-president, J. C. Swinnerton; secretary, H. A. Hickok; treasurer, W. C. Hudson. The executive committee consists of F. S. Sutton, A. E. Hudson, W. G. Smith, L. A. Virtue and E. K. Taylor, together with the officers.

It is intended, in addition to the usual monthly competitions, to make a special feature of regular class work throughout the year. This will consist of courses in constructional work, freehand drawing, water-color work, plumbing, architectural history, etc. The courses will be under the direction of specialists in the various branches who are club members. Applications for membership will be received by the secretary, whose address is 762 Broad street, Newark. The club expects to have permanent quarters soon, which will be open every evening to members.

CINCINNATI ARCHITECTURAL CLUB.

In commenting, last month, upon the Cincinnati drawing exhibit, the result of the prize awards was not given. The judges were Architects Alfred Stone, C. A. Cummings, Zach. Rice, W. S. Wicks and S. A. Treat, who awarded the gold medal for the best club exhibit to the Philadelphia T Square Club; the Anderson silver medal for the best individual exhibit to C. A. Blackall, of Boston; the Cincinnati Builders' Exchange silver medal for the best water-color perspective to A. Howard Walker, of Boston; the special gold medal for the best detail drawing to A. R. Ross, of New York, with an honorable mention to E. M. Probst, of New York. Because of the inadequacy of the drawings submitted, the Wayne hardware medal was not awarded.

Mosaics.

THE Tacoma Chamber of Commerce are inviting architects to send competitive drawings for a building to cost \$250,000. Three prizes of \$500, \$300 and \$200 are offered, and the architect who may be selected to receive the regular schedule rates of the American Institute of Architects.

A NEW journal, devoted to paper, stationery and book interests, called *Our Trade*, has been started in Chicago. The first number at hand contains thirty pages of reading matter, well written and printed. It gives evidence of occupying a distinctive field, and that it will prove a valuable exponent of the lines it represents. Cyrus E. Pratt is business manager and W. A. Ballard, editor.

THE collection of paintings by Vassili Verestchagin, the great Russian painter, soldier and traveler, is again on exhibition in Chicago. This time it is being held in the art gallery of the Exposition Building. The paintings are 121 in number, and there is also a wonderful collection of carpets, tapestries, rugs, etc., which the traveler has collected. The collection seems to attract quite as much attention as upon its former exhibition at the Art Institute.

MR. J. P. DUGGER, of Chicago, long and favorably known as a steam-heating expert, and recently connected with the Chicago branch of the steam pump house of Henry R. Worthington, has gone to St. Joseph, Missouri, to take charge of the western branch of the Hexteun Steam Heating Company, located there. The architects of the West will find Mr. Dugger a genial acquaintance and a live business man, whose knowledge of steam heating is always at their service.

ON December 30, Architect W. W. Boyington, of Chicago, celebrated his golden wedding at his residence in Highland Park. As one of the oldest architects in Chicago, both architects and contractors took occasion to express their friendship by making a suitable present. A special train was chartered by members of the Exchange, and a box containing one hundred and twenty \$5 gold pieces was presented, with the following letter:

CHICAGO, December 30, 1889.

W. W. Boyington, Esq.:

DEAR SIR,—This event in your life must be truly gratifying to you, as it is one that it is the privilege of but a few to enjoy. It being your good fortune to attain it, it is a source of great pleasure to your many friends, and we among others desire to offer to you our sincere and most hearty congratulations on this the fiftieth anniversary of your wedding.

To one who has erected so many enduring monuments while living, it is, indeed, a source of pleasure to know that in spite of all the trials and vicissitudes of life (of which you have had a fair share) you should be spared to so ripe an age, and as far as it seems possible, enjoy the happy reflections consequent on a well-spent life, and we sincerely hope that you and your good wife may still be spared for many years to come.

In behalf of a few of your many friends among the members of the Chicago Builders' & Traders' Exchange, and in the absence of being able to express our appreciation for you as a man in a more suitable form, in commemoration of this notable event, we ask you to accept from us this small box containing coin of the realm. We beg that you will receive it with our best wishes for your future happiness, and that the many future days which you and your dear wife may spend together may be like the coin—truly golden.

Though Architect Boyington has finished fifty years of married life and practiced his profession in Chicago many years before the great fire, he is still active and not considered at all "old" by those who have worked with him in twice building the city.

Our Illustrations.

Foreign sketches, by Thomas H. Mullan.

Tenth District School; Plympton & Trowbridge, architects, Cincinnati, Ohio.

Sketch for North Denver M. E. Church; Kidder & Humphreys, architects, Denver.

Residence for Miss M. Wilson, Park Ridge, Illinois; Treat & Foltz, architects, Chicago.

Station at Charlotte, N. C., for R. & D. R. R.; W. M. Poindexter & Co., architects, Washington, D. C.

Houses for the Hubbard estate, corner Elm street and Dearborn avenue, Chicago; Treat & Foltz, architects.

Double house for Mr. A. F. Shuman, East End avenue, near Jackson Park, Chicago; Maher & Corwin, architects.

First prize, gold medal, design by Albert R. Ross, New York. Architectural rendering of an original detail, competition for draftsmen under twenty-one years of age, Cincinnati Architectural Club, in connection with the recent National Exhibition of Drawings.

Business building for Messrs. Bullene, Moore, Emery & Co., Kansas City, Missouri; Van Brunt & Howe, architects, Boston and Kansas City. Now in process of construction; has a frontage of 120 feet on both Walnut street and Grand avenue, and 242 feet on Eleventh street. It is six stories high on Walnut street, and five stories on Grand avenue. It is built of St. Louis pressed brick, and trimmed with red sandstone, and will be used for all the purposes of a wholesale and retail dry goods business. Its interior construction is of wood and iron of very heavy description, the wood construction being fireproofed by approved methods. There will be six elevators, four for passengers and two for freight, and the building will contain its own heating, electric light and power plants. One very unusual feature in this construction is its open promenade, or colonnade, on the three principal streets. In these cases the piers are entirely isolated, and the glass screen of the store front is recessed 6 to 10 feet from the building line, while above the upper stories the building is carried over to the property line, and continued on that line, thus making a covered promenade for shoppers, where they may inspect all the goods displayed in the windows, under cover and off the public sidewalk. There will be upward of 450 feet of showcase window for this display of goods, and it is believed that this feature will prove one of great interest, and that, on account of the immense size of the openings, it will not materially affect the lighting of the building. The building has been treated rather freely in Romanesque, its isolated character enabling the architects to light it abundantly, and, at the same time, leave a very considerable amount of wall space undisturbed by detail and in architectural repose. A considerable amount of terra-cotta and molded brick has been used, and in the treatment of the colonnade heavy copper has been employed. The windows will be glazed with plate glass throughout, and the building will cost, when equipped and ready for occupation, not far from \$450,000.

PHOTOGRAPHURE PLATES.

(Issued only to subscribers for the Photographure edition.)

Residence of Mr. H. K. Needham, Chicago; Burnham & Root, architects.

Residence of Mr. H. B. Nye, Cleveland, Ohio; C. F. Schweinfurth, architect.

Residence of Mr. C. F. Brush, Cleveland, Ohio; George H. Smith, architect.

Residence for Mr. Hugh J. McBirney, Chicago; Burling & Whitehouse, architects.

Double residence for Dr. Z. T. Dellenbaugh, Cleveland, Ohio; C. F. Schweinfurth, architect.

Residence of Dr. E. M. Hale, corner Prairie avenue and Twenty-second street, Chicago; Cobb & Frost, architects.

Entrance, The New York Life Insurance Company's building, Kansas City, Mo.; McKim, Mead & White, architects, New York.

Synopsis of Building News.

Akron, Ohio.—Architect Jacob Snyder: For the B. F. Goodrich Company, office building, 60 by 62 feet; brick, with all modern conveniences; cost \$18,000.

Atlanta, Ga.—Architects Bruce & Morgan: For the Fulton County Court House, a three-story annex, 34 by 45 feet; pressed brick, slate roof, steam heating; cost \$20,000. For D. E. Converse, two-story residence, 60 by 80 feet; cost \$12,000. Also a family hotel, four stories, 80 by 110 feet; cost \$20,000. Also for Converse College, Spartanburg, South Carolina, improvements and additions, 80 by 200 feet; cost \$25,000.

Barnesville, Ga.—Architects Bruce & Morgan: For the Gordon Institute, a three-story frame addition, 60 by 90 feet; cost \$10,000.

Buffalo, N. Y.—Architect E. H. Kelly is preparing plans for a residence for J. H. Ullenbruch, 26 by 70 feet; brick and frame construction; gas fixtures, electric bells, hot air heating, etc.; cost \$9,000. Also a dwelling for Peter Darger, 25 by 44 feet; cost \$6,000.

Architect C. R. Percival has plans for a residence for Mrs. Susan Newman, 30 by 67 feet; frame, with all conveniences; cost \$5,000.

Chicago, Ill.—Architect Clinton J. Warren is making plans for a handsome residence, to be erected on Michigan avenue; granite all round; passenger elevator, electric light, hot water heating, marble floors and vestibules, and mosaic floors, etc.; cost \$90,000.

Architect F. B. Townsend: For F. W. Campbell, twelve dwellings, to cost \$60,000; furnaces, bathrooms, stained glass, etc.; making plans. Also letting contracts for twelve dwellings, to cost \$60,000, for the same owner.

Architect John Otter: For Mr. Akland, a four-story flat building; \$25,000; Bedford stone front, bathrooms, mantels, stained glass, etc.; making plans.

Architect F. R. Schock: For Robert A. Hintze, a two-story frame residence at South Park; stone basement; hot water heating, mantels, bathrooms, stained glass, etc.; preparing plans.

Architect Louis Martens: For Frank Linsonbarth, remodeling two houses into apartment building; \$8,000; bathrooms, mantels, stained glass, etc.; making plans. Working on plans for an eight-story apartment house, to cost \$80,000; steam heat, elevators, mantels, entirely fireproof; electric light, marble vestibules and floors, etc.; Kasota pinkstone front. For Mr. George, just started plans for a two-story dwelling; Bedford stone front, furnace, mantels; stained,

plate and beveled glass. Just finished up sketches for a four-story store and flat building, size 85 by 65 feet; cost \$26,000; Kasota pinkstone front, steam heat, bathrooms, mantels, etc.

Architect Frederick W. Perkins: For A. N. Fuller, a three-story residence, to cost \$30,000; on Ellis avenue, near Forty-ninth street; stone front and sides; hot water heating, stained, plate and beveled glass, etc.; working on plans. For J. W. D. Kelley, a three-story residence, Findlay, Ohio; pressed brick front, with Bedford stone; furnace, mantels, etc.; finishing plans. For P. B. Palmer, a three-story frame residence, on Ellis avenue near Fiftieth street; furnace, mantels, stained, plate and beveled glass, etc.; making plans.

Architect R. G. Pentecost: For A. F. Shuman, a six-story flat building; steam heat, two passenger elevators, marble halls and staircases; cost \$80,000; finishing plans. For Mrs. Watkins, a three-story residence; Anderson rock faced brick and brownstone; steam heat, mantels, stained glass, etc.; making plans. For A. Mendel, two residences, to cost \$30,000; brownstone fronts; hot water heating, marble and onyx mantels, beveled and plate glass, etc.; letting contracts.

Architect William W. Clay: For D. and J. Hardin, a four-story store and flat building; Tiffany brown brick with Connecticut brownstone; steam heat, bathrooms, mantels, etc.; making plans.

Architect J. F. Warner: For Kauffman Bros., a three-story store and flat building; St. Louis pressed brick and Bedford stone; bathrooms, closets, beveled and plate glass. For Mr. Sargent, a three-story store and flat building; St. Louis pressed brick and stone; bathrooms, closets, mantels, stained glass.

Architect Robert Rae: For J. A. Coleman, a two-story residence, to cost \$20,000; brownstone front and sides; hot water heating, mantels, marble floors and vestibules, stained, plate and beveled glass; finishing plans. For Cairnduff & Co., at Edgewater, a two-story store and flat building; bathrooms, closets, stained glass, mantels, etc.; taking figures. For C. E. Eymann, at Warsaw, Illinois, two frame dwellings; cost \$10,000; furnaces, stained glass, mantels, bathrooms, closets; making plans.

Architect Oliver W. Marble: Making plans for four dwellings, to cost \$25,000; Bedford stone fronts, furnaces, mantels, stained glass, etc. For Edward Mendel, two residences, to cost \$30,000; Bedford stone fronts; Grand boulevard, between Forty-first and Bowen avenue. For William H. Pruy, two three-story residences, to cost \$23,000; Bedford stone fronts, furnaces, mantels; stained, plate and beveled glass, etc.

Architects Edbrooke & Burnham: For the Highland Scott Meat Canning Company of England, capital \$5,000,000, a large meat-canning establishment at Buenos Aires, Argentine Republic, South America; the main building, four-story, size 300 by 600 feet; boiler, engine, tank and ice machine building, three stories, size 96 by 200 feet; the whole establishment will cover eight acres of ground, and cost upward of \$1,000,000. For the Calumet Meat Canning Company, at Hammond, a four-story meat canning factory, 80 by 200 feet, to cost \$50,000.

Architect F. B. Shelton: Working on plans for a five-story warehouse, 40 by 150 feet, to cost \$30,000, to be erected on South Canal street; Anderson pressed brick and Bedford stone front; steam heat, elevator, steam power, etc.

Architect W. A. Arnold: Making plans for four frame residences, to be erected at Evanston; stone foundation, furnaces, mantels, bathrooms, stained glass, etc.; cost \$19,000.

Architect William Thomas: For C. Gillespie, a two-story livery stable; cost \$10,000; St. Louis pressed brick and Bedford stone front. Also taking figures for a two-story store and flat building, size 25 by 65, St. Louis pressed brick and Bedford stone front, bathrooms, closets, mantels, etc.

Architect L. G. Hallberg: For Mary Keohane, a three-story flat building, 25 by 75; cost \$12,000; Indiana pressed brick and brownstone, letting contracts. Taking bids for the Central Union Block, to be erected on the northwest corner of Madison and Market streets, six stories, size 200 by 180 feet; cost about \$250,000; steam heat, electric light, six elevators, etc. Letting contracts for seven-story store building, 80 by 160 feet; cost \$150,000; to be erected at 215 to 221 Wabash avenue, steam heat, three elevators, electric light, etc.; now tearing down old buildings.

Architect S. S. Beman: Made plans for a Catholic church to be erected at Pullman, Anderson pressed brick and stone, steam heat, stained glass, pews, etc.; cost \$40,000. For Mr. Niblock, Kenwood, a three-story residence; cost \$15,000; frame, stone basement, steam heat.

Architect W. G. Barfield: For W. D. Hall, a two-story residence, pressed brick and Bedford stone, furnace, mantels, etc. For O. B. Marsh, a two-story frame dwelling, furnace, mantels, stained glass.

Architects Treat & Foltz: For E. J. Lehman, a three-story and basement flat building, 96 by 54 feet; cost \$25,000; pressed brick and Bedford stone; just finished plans. For the Western Electric Company at 257 South Clinton street, two-story addition to factory; cost \$45,000. Just completed plans for a three-story flat building to cost \$15,000, in the rear of 2320 State street, for E. J. Lehman. Breaking ground for residence for W. C. Goudy, on Astor street near Goethe, granite front and side, hot water heating, etc.; cost \$50,000. For H. R. Durkee, a four-story store and flat building, 50 by 82 feet; cost \$22,000; Tiffany pressed brick and Bedford stone.

Architect C. J. Ohman: For A. Park, ten two-story flats, 210 by 40 feet; cost \$35,000; pressed brick and stone.

Architect M. L. Beers: For D. A. Peirce, a three-story and flat building; cost \$12,000; Milwaukee pressed brick, Bedford stone and terra-cotta.

Architect George Grussing: For S. W. Roth, six two-story flat buildings; cost \$21,000; Tiffany pressed brick and Bedford stone. Also making plans for eight three-story stores and flats to cost \$45,000; Kedzie avenue and Carroll street, Tiffany pressed brick and Bedford stone fronts, bathrooms, closets, stained glass, speaking tubes, etc.

Architect Oscar Cobb: For Jacob Litt, at St. Paul, Minn., a four-story building, to contain theater, stores, offices, etc.; to cost \$80,000; steam heat, electric light, 2,000 opera chairs, stained glass, iron beams and columns, etc. Making plans.

Architect Swen Linderoth: For C. W. Kelton, Woodburn avenue, a frame residence; furnace, mantels, stained glass, etc.; cost \$5,000. Also making plans for Swedish Baptist church, to be erected at Meriden, Conn.; furnace, stained glass, bell, organ, etc. A parsonage will also be built next to above, for which plans have not yet been made.

Architect W. J. Van Keuren: For H. W. Kalkenbach, at Oak Park, a two-story flat building; cost \$10,000; Indiana pressed brick front and Bedford stone; making plans.

Architect M. E. Bell: For Lincoln Park, a handsome two-story basement and attic stable; rock-faced Bedford stone, steam heat, etc.; cost \$25,000; working on plans.

Architect F. L. Fry: For W. H. Thomas & Sons, eighteen two-story cottages, to cost \$30,000; Mayenberg pressed brick and stone fronts; finishing plans.

Architect C. H. Frost: For the Illinois Steel Company, a three-story laboratory; cost \$25,000; Anderson brown brick and terra-cotta. A three-story office building, to cost \$30,000; Anderson brown brick, terra-cotta and stone, steam heat, etc.; making plans. For Gilbert B. Shaw, a three-story residence; stone front, hot-water heating, electric light, etc.; cost \$25,000; finishing plans.

Architect W. M. Wolters: For A. Cummings, a four-story store and flat building; \$20,000; pressed brick and Portage stone.

Architect Thomas Wing: For N. K. Fairbank, a four-story store 78 by 173 feet; cost \$40,000; Tiffany pressed brick and Bedford stone; steam heat, two elevators, etc.

Architects Donnellon & Thomas: For M. C. McDonald, a four-story flat building, 30 by 80 feet; cost \$15,000; Polk street near Leavitt; St. Louis pressed brick and Bedford stone; bathrooms, closets, speaking tubes, etc.; making plans. For Mr. O'Donnell, corner of Van Buren street and Third avenue, a three-story store and flat building, 91 by 50 feet; cost about \$15,000; St. Louis pressed brick and stone; working on plans.

Architects Beman & Parmentier: For Hyde Park Club, a three-story building, 70 by 86 feet; cost \$25,000; brown brick and light sandstone; steam heat, mantels, billiard tables, bowling alley, kitchen, etc. For S. B. Howes, two three-story residences, stone fronts, furnaces, mantels, hardwood finish, etc.; \$12,000 each; making plans.

Architect Julius Speyer: Making plans for a Catholic church, to cost about \$200,000, to be built on the corner of Albany avenue and Jackson street; will have a central dome 260 feet high; steam heat, stained glass, etc. For Joseph Desjardin, six two-story houses; cost \$20,000; bathrooms, closets, mantels, etc.

For M. W. Kerwin, a three-story and basement store and flat building; \$25,000; bathrooms, closets, mantels, stained glass; work to be commenced March 1.

Cincinnati, Ohio.—Reported by Lawrence Mendenhall:

According to the calendar this is one of the winter months, but no one would think it, for never for years has there been such an open winter. Brickmasons and plasterers have plied their vocations with profit to themselves and satisfaction to their customers. Everything argues well for a busy season this year, the improvements to be of a substantial nature. Beside dwellings, there will be several fine business blocks erected, which will add greatly to our city's fast improving architecture.

What our city needs to do more than anything is to properly appreciate her citizens, and instead, when a breaking away from old methods and styles is attempted, of decrying the effort, and prophesying failure, to get behind and help push. There is nothing so stimulating to enterprise as encouragement.

There is a little uneasiness among contractors concerning the eight-hour movement, but don't let us cross the bridge until we come to it.

If mechanics can afford to lose twelve hours pay each week, for contractors cannot afford to pay for idleness, then their cry of "poverty" dies away like an echo, and becomes as the idle wind. Capital is the laboring man's best friend.

Although indications are good, yet the gleaming of news is a task.

Architects Samuel Hannaford & Sons have prepared plans for a large stone church for the Methodist Episcopal congregation at Middletown, Ohio; hardwood finish, slate roof, pews, plumbing, gas fixtures, etc. Also a large brick water tower for the Cincinnati Water Works.

Architect Wm. Stanton Robinson has drawn plans for Thomas Lee, Esq., Louisville, Ky., for a row of brick houses at the above named place; materials, brick, grates, iron mantels, terra-cotta, gas fixtures, plumbing, etc. Also a dwelling to be of brick, stone and frame, with furnaces, tile roof, stained glass, grates, wood mantels, plumbing, etc.; cost \$10,000.

Architect J. W. McLaughlin is preparing plans for a large building for Joseph T. Carew, to be erected on the southwest corner of Fifth and Vine streets.

Architect H. E. Siter reports the following: For William S. Groesbeck, Esq., Fifth and Walnut, a large factory for shoe manufacture, 50 by 130, six stories high, of brick; cost \$35,000.

Architects Crapsey & Brown have drawn plans for a machine shop for the Egan Company, Second near Smith; W. H. Stewart's Sons have the contract, and the cost will be about \$25,000.

Architect William Martin Aiken, Fifth and Walnut, can furnish particulars of a large freight depot for the C. & O. R. R. at Cincinnati.

Architect Gustave W. Drach has returned from Europe after a three months' tour. He had a most enjoyable time and beheld many beautiful sights, but will not write a book. Welcome home.

Architect John H. Boll has drawn plans for a beautiful home for Capt. T. B. Collier; materials to be brick and stone trimmings, slate roof, wood mantels, furnaces, plumbing, electric bells, dumb waiters, stained glass, etc.; cost \$10,000.

Architect W. W. Franklin has prepared plans for a house for Walter Taylor, Esq.; materials, frame, shingle roof, pine finish, plumbing, stained glass, furnaces, inside blinds, etc.; cost \$5,000.

Architect S. W. Rogers has prepared plans for a residence for J. W. Haley, Esq.; materials, frame and shingle, slate roof, plumbing, furnaces, stained glass, cement floors, etc.; cost \$4,500. He is also remodeling, etc., Reed's Hotel, 174 West Fourteenth street, city.

Detroit, Mich.—There has been good steady building going on right through the winter to date, and spring prospects are excellent.

Architects Mason & Rice: For William B. Moore, a three-story dwelling, 44 by 77 feet; brick, stone trimmings, slate roof; cost \$15,000. For Mr. Stevens, a one-story addition to dwelling, 23 by 24 feet; brick, stone trimmings, slate roof; cost \$3,000.

Architect Ed C. Van Leyen: For James Holihan, a three-story store and dwelling, 25 by 85 feet; stone, pressed brick front, gravel roof; cost \$9,000.

Architects' names not reported: For City Board of Education, a two-story school building, 80 by 75 feet; brick, with stone trimmings, slate roof; cost \$20,000. Also a two-story addition to school building, 26 by 70 feet; brick, with stone trimmings, slate roof; cost \$10,000. For J. J. Gordon, twenty-five one-story frame dwellings, 25 by 40 feet; shingle roof; cost \$20,000. For E. J. Beaton, a two-story double dwelling, 38 by 56 feet; brick, stone trimmings, slate roof; cost \$5,000. For the Methodist Church Society, a two-story church, 47 by 90 feet; brick, stone trimmings, slate roof; cost \$18,000. For C. L. Cole, two three-story stores and dwellings, 40 by 54 feet; brick, stone trimmings, gravel roof; cost \$5,000. Also two three-story stores, 40 by 60 feet; brick, stone trimmings, gravel roof; cost \$5,000. They will begin work March 1 on J. L. Hudson's new nine-story store, cost to be about \$250,000. The entire building will be required for Mr. Hudson's business.

Dubuque, Iowa.—The coming building season promises to be a very successful one. Among the contemplated buildings are a chamber of commerce, a Masonic temple and an armory.

Fairburn, Ga.—Architects Bruce & Morgan: City school; two stories; 60 by 80 feet; cost \$5,000.

Findlay, Ohio.—Architect George Horn: For Frank Karst, a four-story business building, 60 by 180 feet; brick; cost \$15,000.

Architect S. Baker has plans for a five-story business building, 28 by 120 feet; brick and stone front; cost \$10,000.

Glendale, S. C.—Architects Bruce & Morgan: For A. H. Twitchell, a two-story residence, 100 by 40 feet; cost \$15,000.

Kansas City, Mo.—Architect John Schmidt: For Dr. Thorff's office building, addition of 64 by 108 feet; brick and stone; cost \$25,000.

Architect A. Van Brunt: For W. T. Wait, two-story residence; brick and stone, 25 by 44 feet; cost \$5,000.

Architect F. W. J. Hart: For F. Glenk, two-story residence; brick and stone; cost \$7,000. Also for Benj. Kinderman, a four-story store and office building, 46 by 70 feet; brick and stone; cost \$30,000.

Architects Van Brunt & Howe: For G. F. Ballingall, three-story block of stores and dwellings, 110 by 61 feet; brick, stone and terra-cotta; cost \$15,000.

Knoxville, Tenn.—Architects Baumann Bros.: For J. N. Betterton & Co. a five-story brick business building, 40 by 90 feet; cost \$10,000.

Little Rock, Ark.—Architects Orlopp & Kusener: Mr. Geo. Sander will add two more stories to his building on Second and Center streets and convert it into a hotel, 150 by 150 feet; estimated cost \$25,000.

Architect Fred J. H. Rickon is preparing plans for Mr. H. P. Edmanson for frame residence; cost \$3,000.

The city council passed an ordinance looking to the remodeling of the city hall building, to cost about \$50,000.

Milwaukee, Mo.—Architects C. H. Leopold & Co.: For Mr. R. A. Peschman, two-story frame store and dwelling, 38 by 85 feet; cost \$6,000.

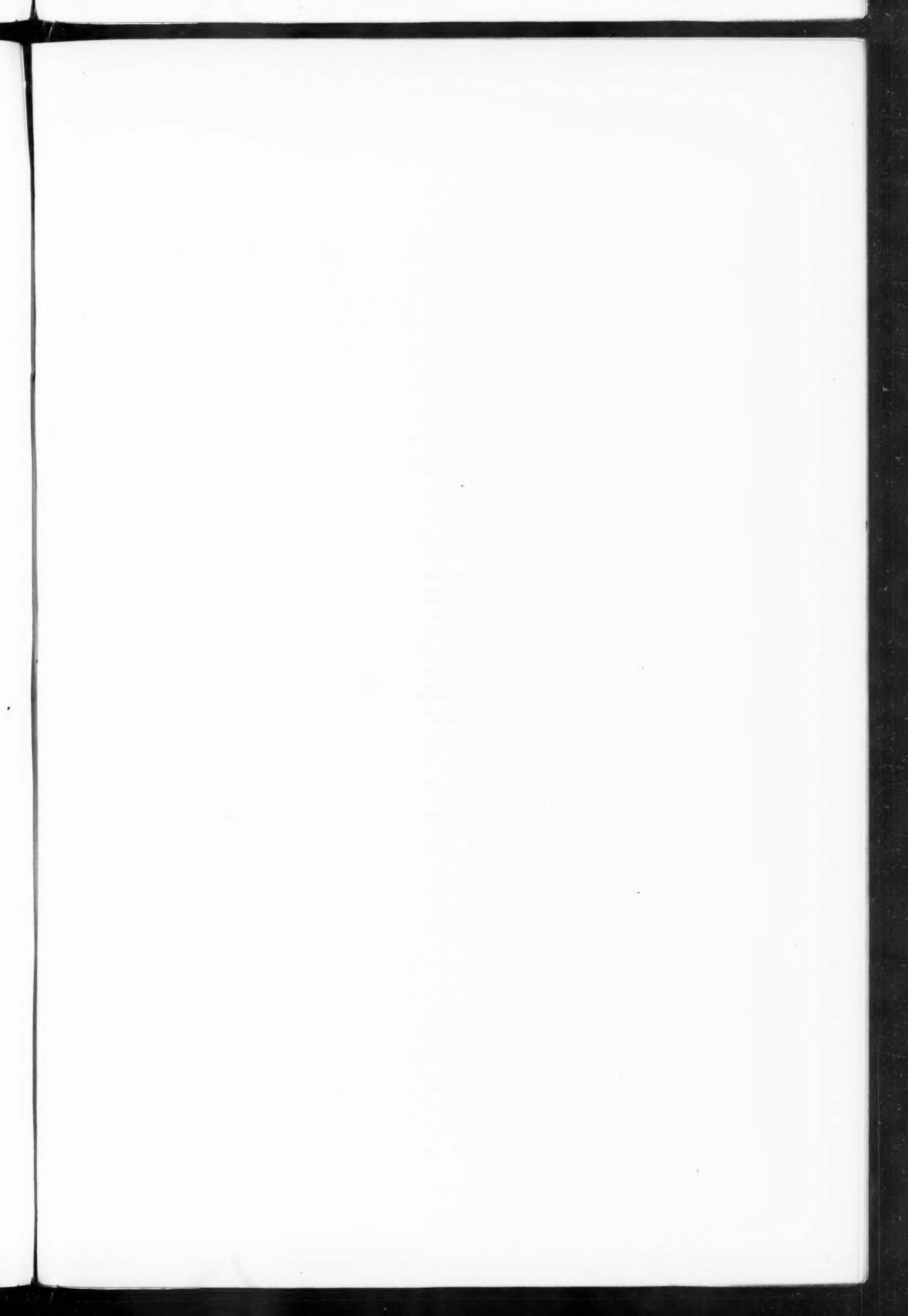
Minneapolis, Minn.—The following will be built in the spring: George H. Holt & Co., two one and one-half-story frame dwellings; cost \$12,000. Also four three-story frame dwellings; cost \$34,000. C. P. Stedman, a two-story tenement row; cost \$16,000. W. W. Whitman, a two-story brick tenement house; cost \$8,000. W. M. Lucas, four residences; cost \$12,000. N. A. Matander, three two-story dwellings; cost \$6,000. J. Brandt, a three-story dwelling and barn; cost \$8,000.

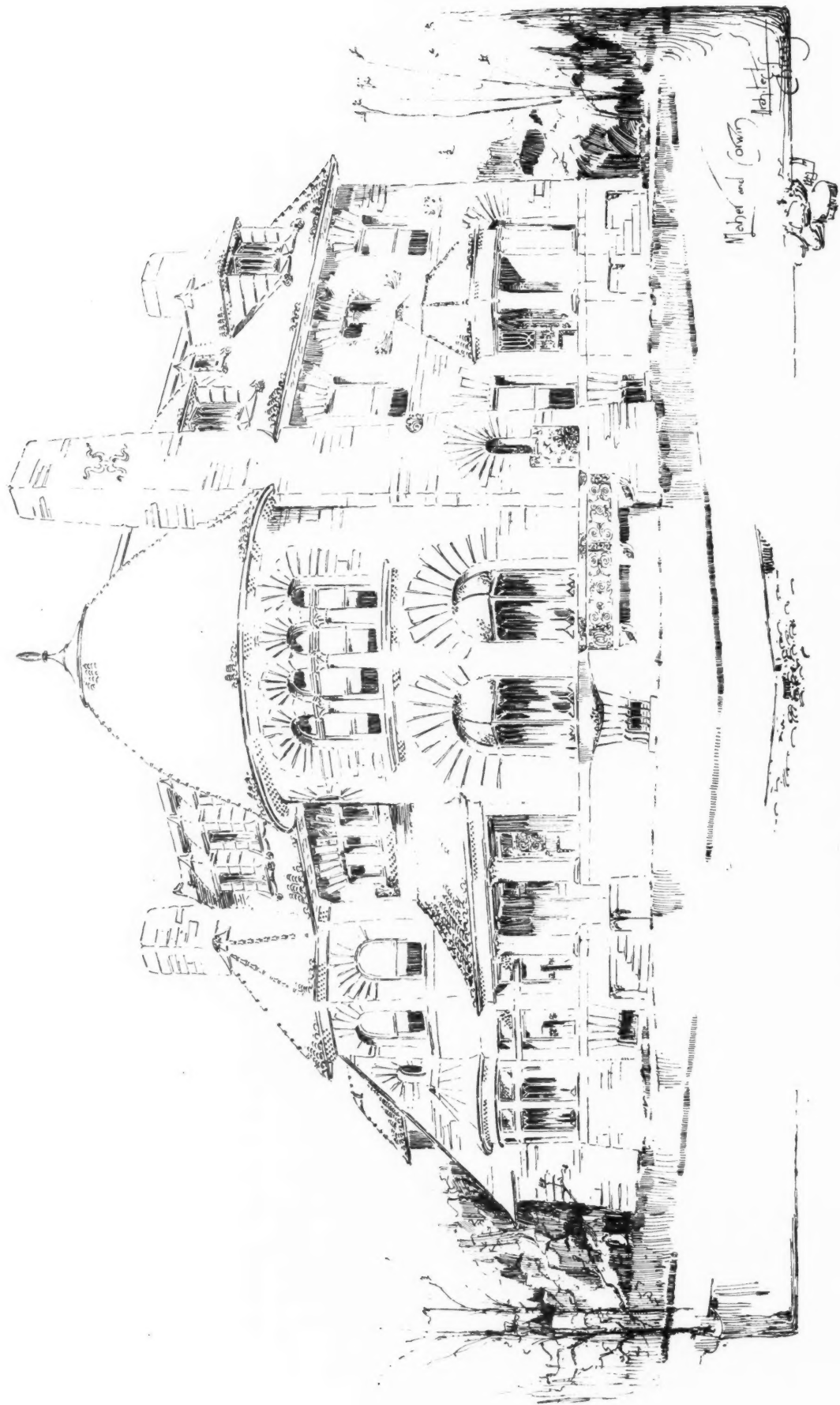
Pittsburgh, Pa.—Architect W. S. Fraser: For John A. Renshaw, three-story dwelling, brick and frame, 34 by 34 feet; cost \$10,000.

Architects Bickel & Brennen have prepared plans for W. J. A. Kennedy, for four dwellings, brick and stone trimmings, hardwood finish and modern appointments. The Allegheny Valley Railroad Company has purchased property on Twelfth and Pike streets, and intend erecting a new freight depot; building to cost about \$150,000.

St. Joseph, Mo.—Architects Perkins & Adams, of Topeka: For the St. Joseph Terminal Railroad Company, a freight depot, 40 by 500 feet, pressed brick and terra-cotta; cost \$50,000.

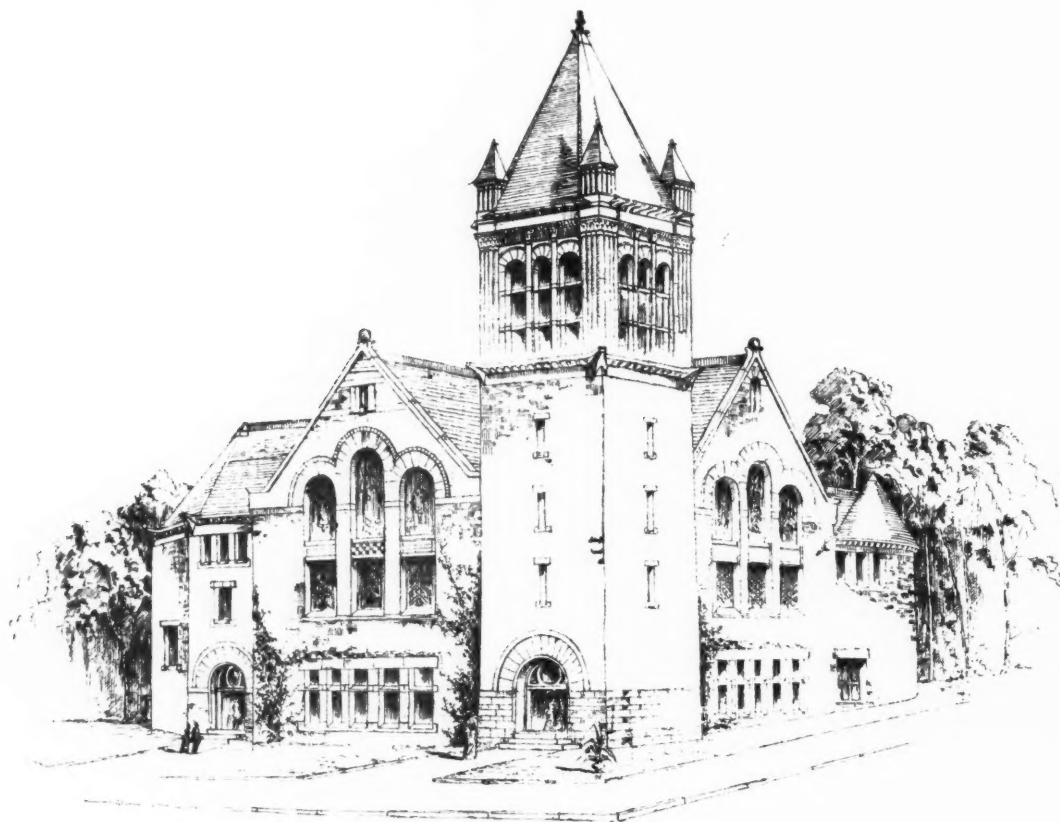
St. Louis, Mo.—Architect I. S. Taylor: For Mrs. Mulhall, two-story brick dwelling, 40 by 60 feet; cost \$15,000. Also has prepared plans for the Globe-Democrat Building.





DOUBLE HOUSE FOR A. F. SHUMAN, CHICAGO.

MAHER & CORWIN, ARCHITECTS.



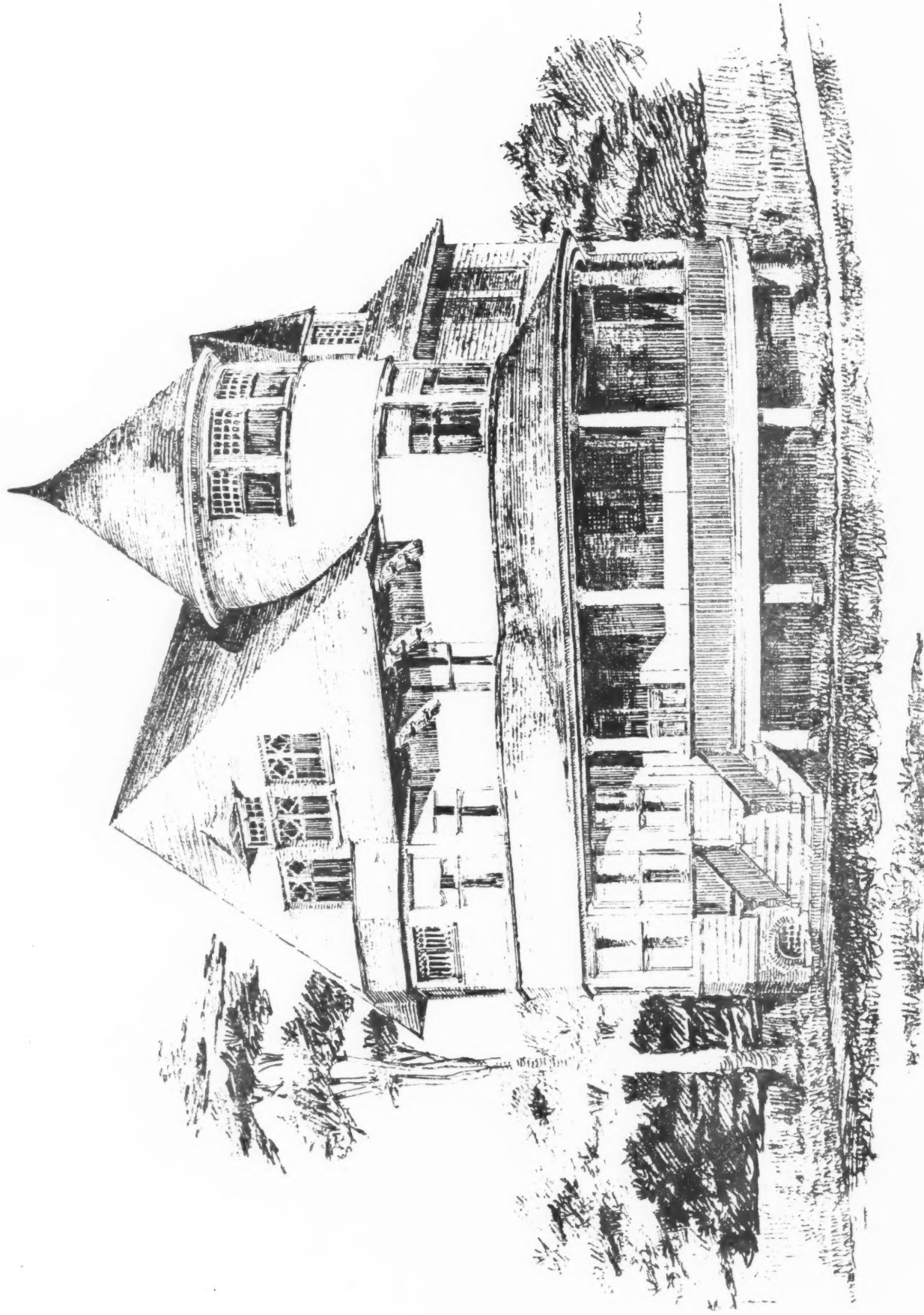
SKETCH OF NORTH DENVER M.E. CHURCH
KIDDER AND HUMPHREYS ARCHT'S

Sketch by Humphreys



FIRST PRIZE, GOLD MEDAL, DESIGN BY ALBERT R. ROSS, NEW YORK.

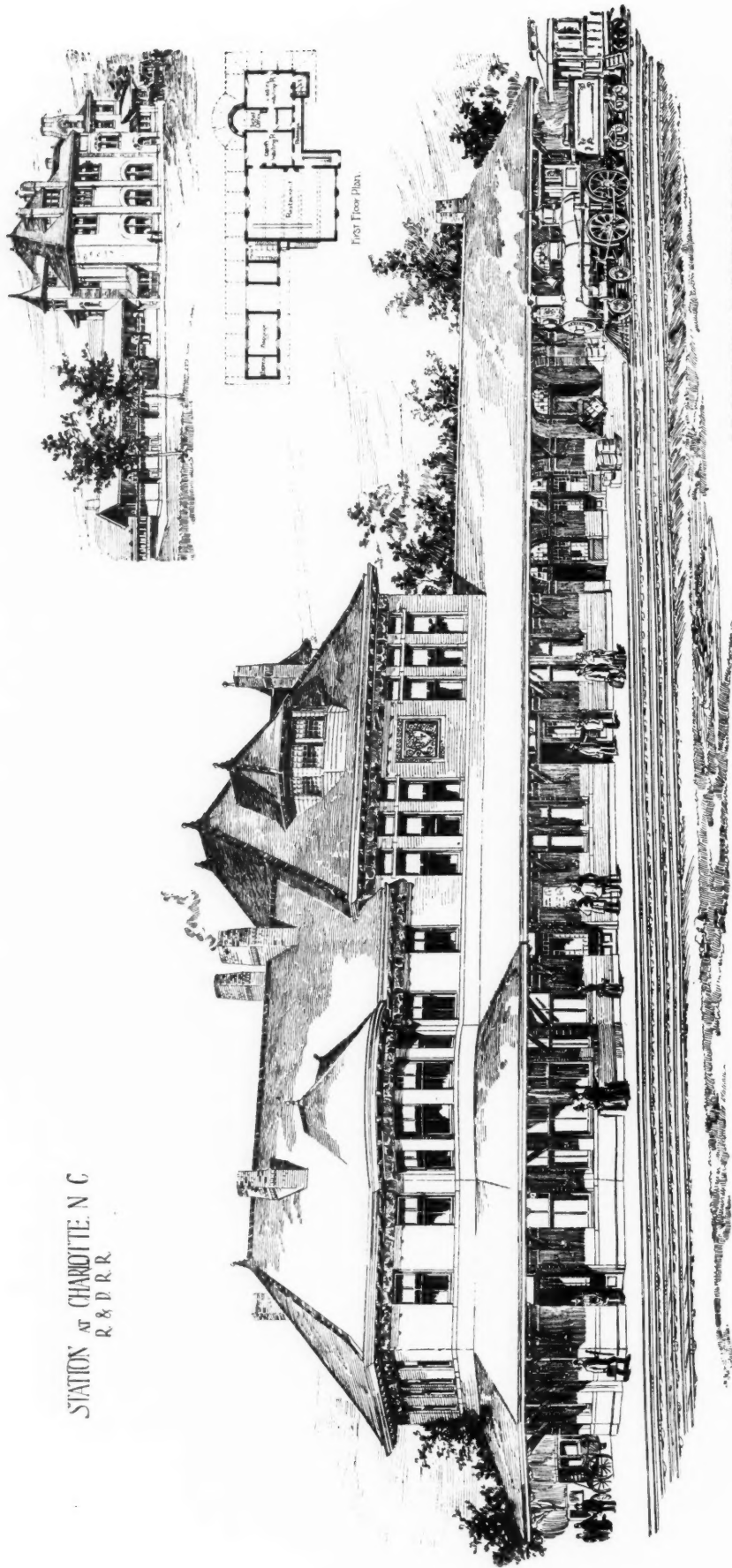
Architectural Rendering of an Original Detail; Competition for Draftsmen under 21 years of age, Cincinnati Architectural Club in Connection with the Recent National Exhibition of Drawings.



RESIDENCE OF MISS M. WILSON, PARK RIDGE, ILL.

TREAT & FOLTZ, ARCHITECTS, CHICAGO.

STATION AT CHARLOTTE, N C
R & D R R



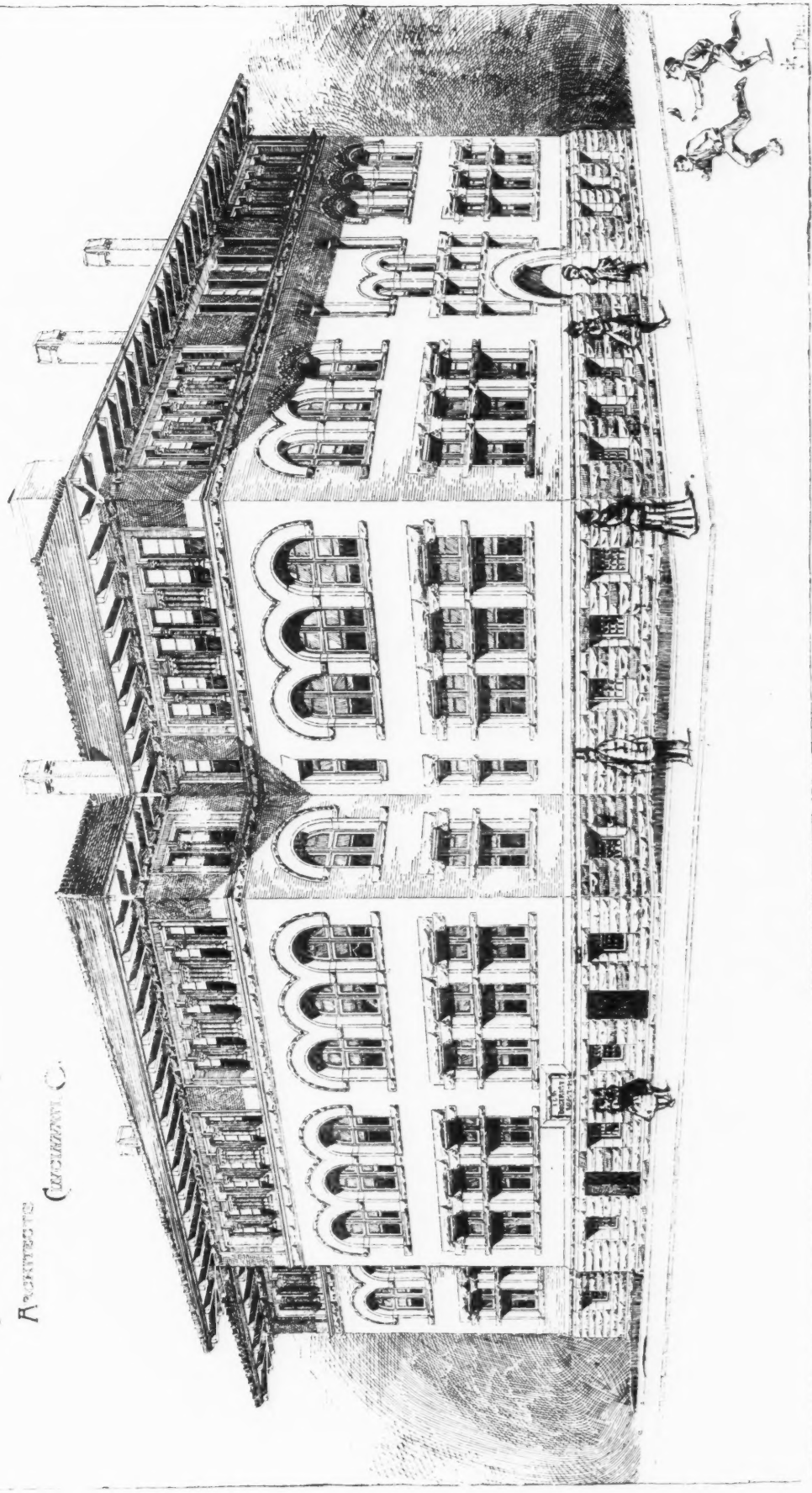
W. M. PONDREXTER & CO ARCHTS WASHINGTON D. C.

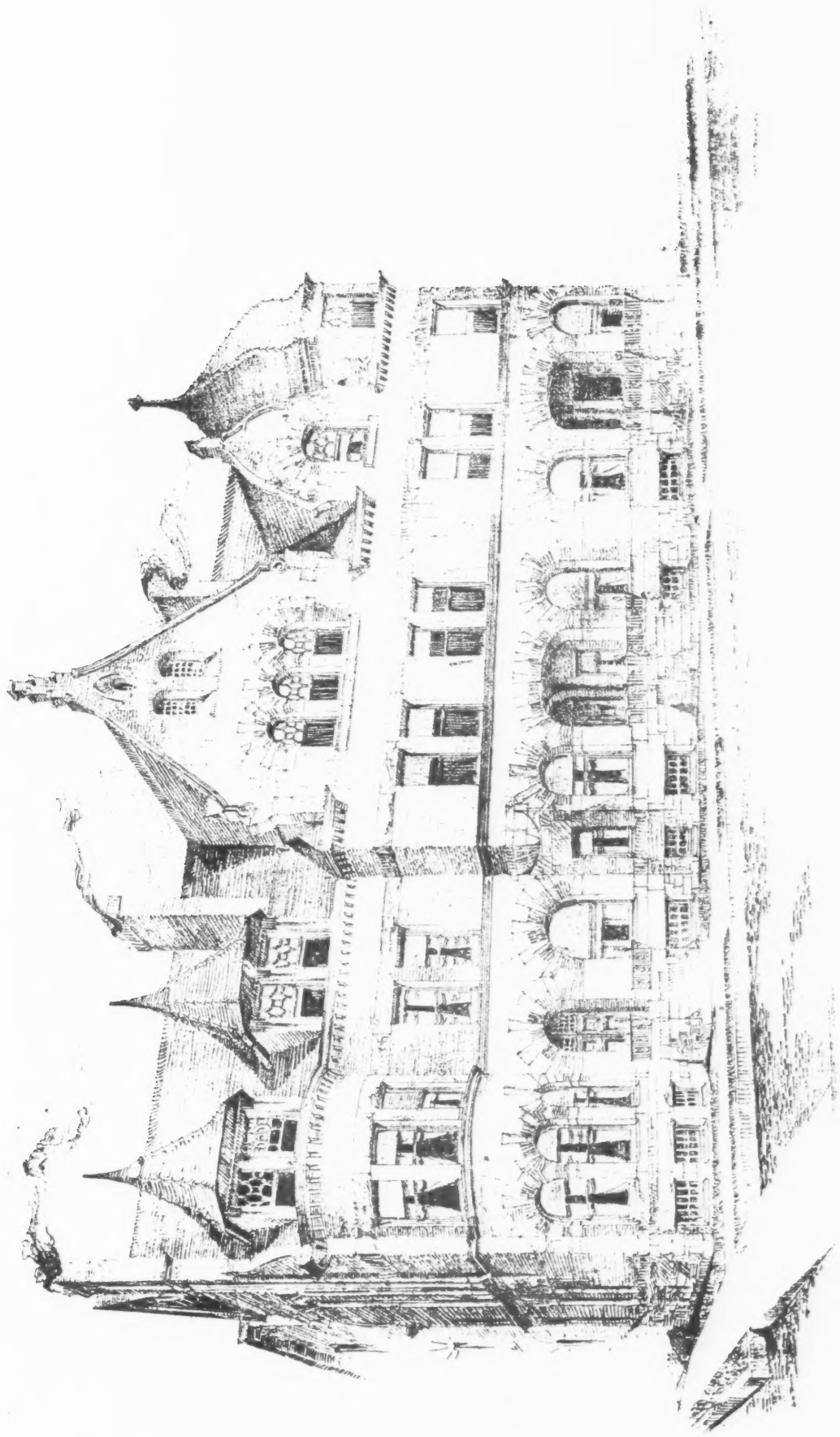
10TH DISTRICT SCHOOL.

Designed by PLYMOUTH & FOWLER.

ARCHITECTS

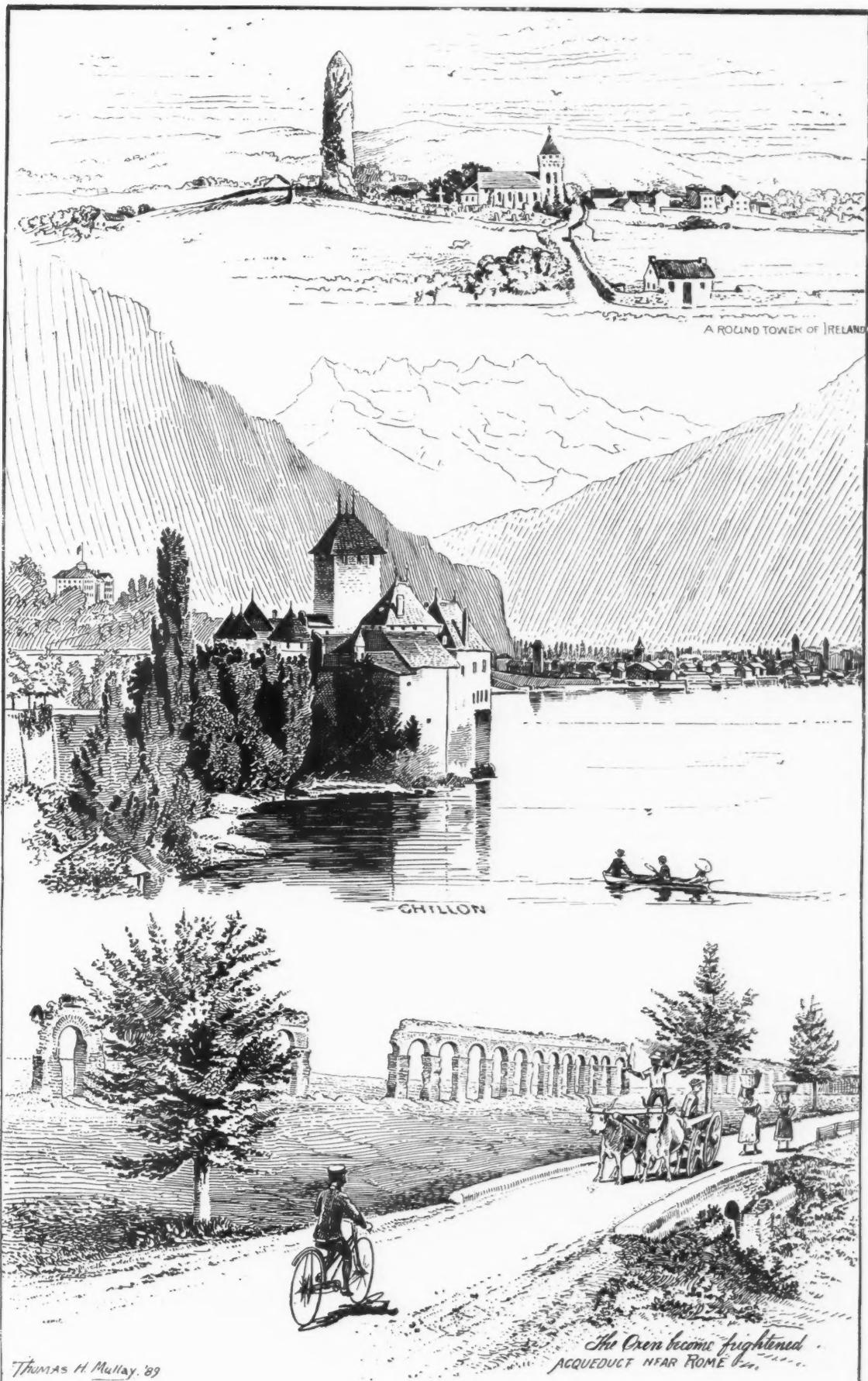
CINCINNATI, O.

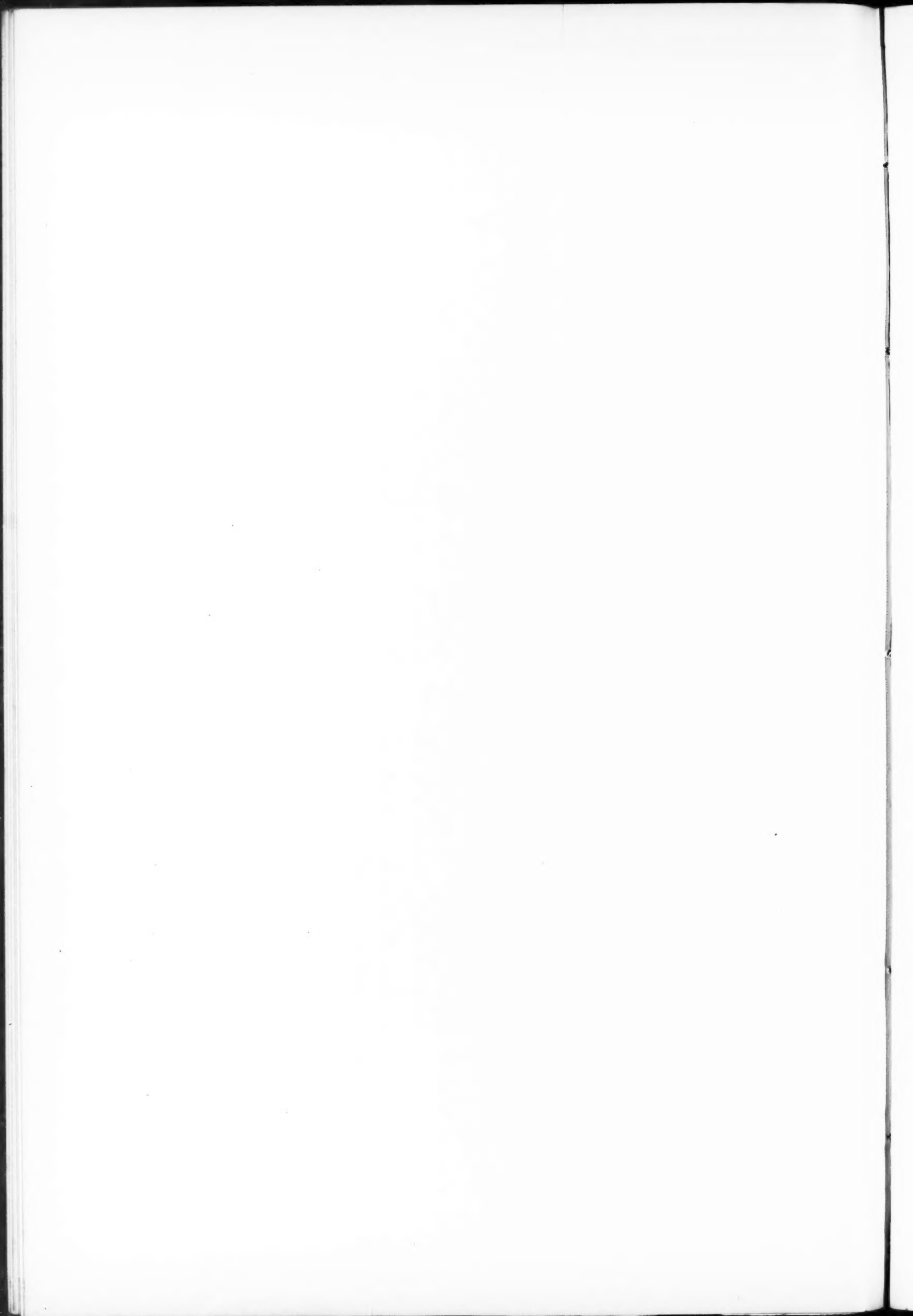


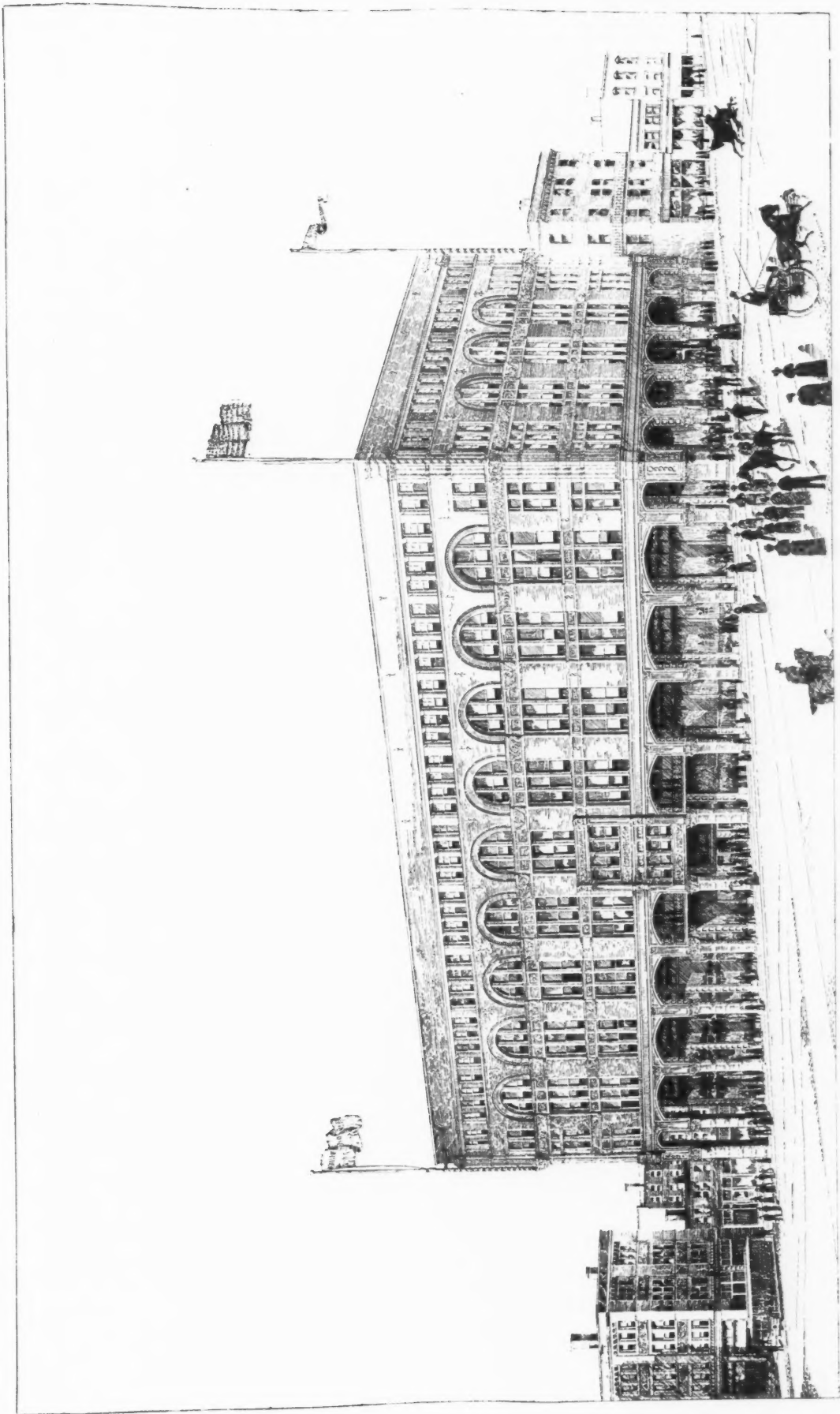


HOUSES FOR THE HUBBARD ESTATE, CORNER ELM STREET AND DEARBORN AVENUE, CHICAGO.

TREAT & FOLTZ, ARCHITECTS.







BUSINESS BUILDING FOR MESSRS. BULLENE, MOORE, EMERY & CO., KANSAS CITY, MO.
VAN BRUNT & HOWE, ARCHITECTS, BOSTON AND KANSAS CITY.



Entered at the Postoffice at Chicago as second-class matter.

A MONTHLY JOURNAL (WITH AN INTERMEDIATE NEWS NUMBER AND A PHOTO-GRVURE EDITION) DEVOTED TO WESTERN INTERESTS.

VOL. XIV. No. 9.

CHICAGO, JANUARY, 1890.

Regular Edition, \$1.00 a Year.
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INTERMEDIATE NEWS NUMBER,

DEVOTED TO

ASSOCIATION AND BUILDING NEWS.

PUBLISHED BY

THE INLAND PUBLISHING COMPANY,

CHICAGO, ILL.

Request for Drawings for Publication. The illustrations of an architectural journal are largely dependent on the drawings sent it by the architects. We hope, therefore, that architects will utilize the winter lull in their work to make carefully rendered drawings of their best designs, that have not been published, and send us for publication if found available.

The Proper Reorganization of State Associations. Probably the most important matter before the members of the American Institute of Architects is the reorganization of state and local associations into chapters of the Institute, and also the organization of new chapters in states where none have existed heretofore. There are two ways of doing this work, a right way, that is simple, and a wrong way, that is apt to destroy the organization or make it ineffective. As a general plan, where there are two local associations, one of the former Institute and one of the Western Association, to be united, the shortest way is to meet jointly, adjourn both bodies, form a convention of the whole, appoint a committee to prepare a new constitution and by-laws, adopt these, and elect officers. The circulars issued by the Executive Committee of the American Institute upon the subject, and the constitution and by-laws, will show in what particulars the rules of the Institute must be followed in the framing of the new constitution. This should also be observed in the reconstruction of all associations, but in this case the old constitution can be remodeled by the executive officers and placed before the members for adoption. In case of doubt regarding the proper procedure, the secretary of the Institute should be asked for a ruling on the subject.

Consolidation of the Illinois State Association and the Chicago Chapter American Institute of Architects.

UPON the date of the regular monthly meeting of the Illinois State Association of Architects, January 20, that body met with the members of the Chicago Chapter of the American Institute, and proceeded to consolidate the two associations under the rules of the new American Institute of Architects. The meeting, preceded by a dinner, was held in the banquet hall of French's restaurant, on State street.

There were present Architects J. W. Root, N. S. Patton, George Beaumont, John M. Van Osdel, Jr., C. O. Hansen, S. M. Randolph, L. D. Cleveland, J. R. Willett, S. V. Shipman, S. A. Treat, D. Adler, John Addison, L. G. Hallberg, H. W. Hill, A. F. Pashley, W. A. Otis, J. R. Silsbee, W. L. B. Jenney, L. G. Quackenboss, C. L. Stiles, J. R. Schaub, Alfred Smith, O. J. Pierce.

In the absence of the president, vice-president and chairman of the Board of Directors of the Illinois State Association, Architect John Addison, president of the Chicago Chapter, occupied the chair at the head of the table, and after the coffee and cigars had been placed before each guest, called upon Architect W. A. Otis, secretary of the chapter, to read the minutes of the previous meeting showing the action of the chapter in regard to consolidation. The chair then called upon Secretary O. J. Pierce for the minutes of the previous meeting of the state association for the same purpose.

On motion of Mr. Hill, Mr. Addison was made permanent chairman, and on motion of Mr. Treat, Mr. Otis secretary of the meeting.

On the chair declaring the minutes approved as read, Mr. Adler stated that it was evidenced by them that both bodies desired consolidation. There were various ways in which this might be accomplished, but he thought the way to consolidate was to consolidate. The main question was whether the new association should be a local or a state chapter. To bring this matter before the meeting Mr. Adler moved as follows:

Resolved, That when the two bodies shall have consolidated, steps shall be taken to reorganize under the name of the Illinois Chapter of the American Institute of Architects.

Mr. Jenney said that he was certainly in favor of the resolution, as there were many advantages in a state organization over a local one.

Mr. Root said in explanation that at the recent meeting of the Executive Committee of the Institute at New York, amendments were proposed to the by-laws which would show the attitude the local chapter would sustain toward the national body. It was deemed essential that every member of the Institute should be a member of a chapter, and that the membership of the Institute should come through the chapters, as this would be a better guarantee of a member's standing; also, that all active members of chapters should be members of the Institute. Provision had been made, however, for an associate membership of chapters, it not being necessary that such be members of the Institute. Again, the Executive Committee declined to say what chapter a member should join, as it might be desirable to belong to a remote chapter, or one or two architects in four or five cities might wish to form a chapter; for these reasons no geographical rules were laid down. Where an objectionable person sought to avoid those who knew him and applied to a distant chapter this would in itself be open to suspicion and lead to a closer investigation. It seemed best in this as in every other secular case, such as in New York, Ohio, Missouri, etc., to first sustain a state chapter and then, as far as possible, local chapters in the several cities.

Mr. Shipman having called attention to the advisability of following the Institute by-laws in the matter, Mr. Adler called for the reading of the circulars issued upon the recent action of the Executive Committee of the Institute, and mailed to each member as a guide to state reorganization. (Printed elsewhere in this issue.) After the

reading of the circulars by the chair, Mr. Adler's resolution was put to vote and carried.

Mr. Adler then offered the following resolutions, which were briefly discussed and then adopted:

Resolved, That all members in good standing of the Illinois State Association of Architects be and are hereby admitted to membership of the Chicago Chapter of the American Institute of Architects, and that the revision of the by-laws of the chapter relating to the admission of members be, and are for this purpose, suspended, and that a list of members of said Illinois State Association of Architects, to be certified to by the president and secretary thereof, shall determine who are members in good standing of said association within the meaning and purport of this resolution.

Resolved, That in such reorganization the constitution and by-laws of said chapter be modified so as to comprise those of the reorganized American Institute of Architects, and that the Executive Committee be and is hereby instructed to take steps to that effect.

Resolved, That the officers of the Chicago Chapter of the American Institute of Architects shall be and are hereby directed to take the necessary legal steps for the reorganization of said chapter, under the general incorporation act of the State of Illinois, and that in such reorganization the name shall be the Illinois Chapter of the American Institute of Architects.

A discussion followed regarding the charter of the chapter, in which the fact was developed that the Chicago Chapter, next to that of New York City, was the oldest chapter of the former American Institute.

On motion of Mr. Willett the Chicago Chapter adjourned.

Mr. Treat, taking the chair, called the members of the Illinois State Association to order, and Mr. Adler offered the following resolution:

Resolved, That whenever the necessary steps indicated by the resolutions passed, had been taken, that at such time the Executive Committee of the Illinois State Association be directed to turn over to the officers of the Illinois Chapter of the American Institute all property belonging to the Illinois State Association, and that they be directed to vacate the charter of the state association.

The resolution was adopted.

The Illinois State Association adjourned *sine die*.

The members of the Chicago Chapter were then called together, and a resolution by Mr. Shipman, directing that all the property and funds of the Chicago Chapter of the American Institute be transferred to the Illinois Chapter, was carried.

Someone here called for a statement regarding the funds in the treasuries of each association, and Mr. Root protested that the marriage had up to this point been wholly a love affair, and that no question of marriage settlements, dower, etc., had entered into it, and begged that this ideal condition should remain for the present.

On motion, the officers of each association were made a committee to draw up a constitution and by-laws, secure a state charter, and report at the next meeting.

This ended the business of consolidation for this meeting, and the members proceeded to take up the report of the committee appointed at the last meeting of the state association upon securing permanent quarters for the association.

Mr. Treat called for the report, and Mr. Stiles, the chairman, reported regarding a proposal of the Art Institute, which did not seem to be received with much favor because the charge for rent exceeded the amount the association should pay.

Some discussion followed in regard to the quality of the quarters the association should occupy, and Mr. Treat called attention to what the draftsmen had done in the way of quarters.

Mr. Root said what Mr. Treat stated was much to the point. The sketch club was a very vital and progressive organization. He was in favor of a fine being imposed upon members who were absent from meetings.

Mr. Willett parenthetically observed that the chapter tried that in the old days, and it did not work, as the members stayed away altogether.

Mr. Gay objected to the parallel between the "adult" draftsmen and the juniors, as the former were able to do something without any hints from the draftsmen.

Mr. Beaumont explained in detail how successful the Chicago Architectural Sketch Club had been in maintaining elegant quarters, and a motion was passed directing the chair to appoint a committee of three on permanent quarters, to report at next meeting.

Mr. Adler introduced the following resolution:

Resolved, That in the newly organized state chapters the annual dues shall not be less than \$15.

The resolution was seconded by Mr. Treat.

Mr. Jenney proposed an amendment, which was not seconded, that the annual dues should not be more than \$15.

Mr. Willett spoke of the experience of the chapter after the great fire, when the dues were \$25.

Mr. Adler said it was interesting to know what happened "before the war," but now we had before us the experience of two organizations. One (the chapter) able to have but one meeting and pay for but one supper per year, and another that, while it had existed but five years, paid dues most of the time of \$25, and which, because of a large surplus in the treasury unused, had been reduced to \$15. It seemed that now times and customs have changed. Associations as well as individuals are judged much by dress and the money they have. If the Association advertised that the architects of Chicago could not pay more than \$15 for improvement and advancement they had better hide their diminished heads. There are times when it is necessary to entertain visiting architects, and the Illinois State Association could always do this handsomely. In connection with legal proceedings, or the work of committees sent to the state capitol, as for other things, money was required, and the State Chapter could not expect to be a body respected and able to accomplish what it was formed to do if afraid to ask architects to pay current expenses and have a surplus for all other purposes. Mr. Adler reviewed the situation among architects before and after the great fire, when the older

architects looked down upon the younger, and the young men looked upon the older as old fogies. Now all this was changed, and each respected the capabilities of the other, and no depression in business would again cause the dissolution of the association and cause the members to forego the enjoyment and benefit derived from the past five years' monthly meetings. In the past of the chapter Major Jenney and Major Willett stood preëminent among the architects of that day, understanding what they should be to each other, and practicing it, and they should not now feel that the high standard of professional intercourse then shared by them could not be practiced now, and if they will look at the history of all the state associations and of the Western Association they will see that there is little likelihood of a repetition of those things that then caused them to lose faith. Returning to the original proposition contained in the resolution, Mr. Adler said that the association could not expect to have the respect of the public unless they had at all times the command of money professional bodies were expected to have for the furtherance of its interests.

Mr. Jenney said he thought all agreed with Mr. Adler that the great benefit is in the pleasant social intercourse.

Mr. Willett said that the early days of the chapter should go into history, as these latter days were going into history. The meetings then were valuable, as these were valuable. He well remembered the meeting of the chapter in the old Drake block, at which Mr. Wight, of whom as a brother architect he had the most kindly remembrance, and who was ever progressive in spirit and ready to give to others the experience he had acquired, and Mr. Boyington, likewise, gave him the first knowledge he acquired of Chicago soil and foundation construction. The Chicago Chapter was always valuable, and the architects of today were reaping the benefit of what it had done.

After some further remarks the question was called on Mr. Adler's resolution, which was carried.

The chair appointed as a committee of three on permanent quarters, Architects S. A. Treat, Clarence L. Stiles and J. W. Root.

The meeting then adjourned, subject to the call of the committee on organization, which consists of the officers of the two old associations.

Chicago Builders' and Traders' Exchange.

THE seventh annual meeting of the Chicago Builders' and Traders' Exchange was held January 20. The meeting was called to order at 12 o'clock, by President D. V. Purington.

The secretary, James John, made his report which showed the total receipts from all sources during the year to be \$15,247.25, the total expenditures during the year \$12,876.88. The treasurer's report showed the total balance in the treasury \$14,040.06. The actual membership on January 1, 1890, was 596.

During the year four members had died, Messrs. J. B. Sullivan, J. Y. Macomb, M. Cossman and E. P. Wilce.

The regular ticket for officers was then put in nomination, and the meeting adjourned to 8 P.M., the polls being open until 5 P.M., in charge of Alexander G. Murray, Daniel Freeman and E. C. Kimbell, the inspectors of election.

On the meeting being called to order at 8 o'clock, President Purington read the following report for the Board of Directors:

To the Members of the Builders' and Traders' Exchange:

GENTLEMEN,—Your Board of Directors desire to submit their sixth annual report for the year ending December 31, 1889.

As will be seen by the reports of the secretary and treasurer, we are stronger numerically and financially than we were one year ago. This is due somewhat to the change in the by-laws of the Exchange, which provided for an increase in the initiation fee to \$300 after the membership reached 600. At the close of 1888 we numbered 574, while at the present time we number 596, a total gain of 22. The query will arise in the minds of many, why the initiation fees have been raised to \$300, while the membership is only 596? The answer is that the Board of Directors elected to membership sufficient to complete the number to 600, but of that number several failed to qualify, and the decision of a majority of the Board was to the effect that such election complied with the spirit and intention of the by-law.

The total gain in assets of the Exchange is \$2,862.84, of which \$1,207.19 is in cash. Four of our most valued members have been removed by death during the year. Two members were expelled during the year. These expulsions were both for the same cause, namely, failure to comply with the decision of an arbitrating committee. Your Board cannot but indulge in the hope that the example set by this Exchange in thus promptly expelling members who failed to keep to their agreement to stand by the result of an arbitration will prove a salutary one.

With the numbers and financial standing of the Exchange your Board of Directors are justly proud. It is, however, questionable if these alone are sufficient to guarantee that efficiency and usefulness that the founders of this Exchange aspired to for it.

It has seemed to many of us that we were simply drifting; that we were gradually, almost imperceptibly, becoming mere machines; that in some way we were falling far short of that ideal exchange we formerly hoped for; that, from the very nature of things, is almost an inevitable result of a strict compliance with Article I of our by-laws, which says, "Any individual of good repute, whose vocation connects him with the trade or industries of building, may become a member of this Exchange upon election by the Board of Directors and payment of the initiation fee."

The present, as well as the past, Board of Directors have been compelled to follow this by-law. The result has been that every man of good moral character, whose vocation connected him ever so remotely with the building interests, was admitted to membership, and the government and management of the association has been shared equally by the hod carrier (if he chose to apply for membership) and the largest contractor.

All will agree that such institutions as ours are much more likely to fail by reason of too rapid growth than by a slow, careful, consistent addition to their numbers.

Our condition is but a repetition of other bodies with similar objects. The Boston and Philadelphia Exchanges have both reorganized on a plan wherein the government of the Exchange is vested in a smaller body, and with most satisfactory results.

So far we have steered clear of difficulties, but the time may come when the numerical strength of our Exchange will be a stumbling block in the way of our progress toward that standard of excellence which should be our goal.

We should not be satisfied to rest on the reputation of being the largest Exchange in the United States. What we want as the representatives of Chicago building interests, what we should have is the best, most useful and most

beneficial Exchange of its kind in the world, and all our energies and efforts should be devoted to this end.

Your Board of Directors tender to the members at large their thanks for the uniform courtesy and kindness extended to them during the year, and extend to their successors their best wishes for the future.

Respectfully submitted,
D. V. PURINGTON, *President*.

The report of the Board of Directors was well received by the assembled members, and following this, result of the ballot was announced by the secretary, which was the election of the entire regular ticket by a considerable majority, though an opposition ticket, containing some of the leading members of the Exchange, was in the field.

Following is the ticket as elected, the total number of votes cast being 297, the number opposite each name indicating the number of votes cast for the candidate:

President—W. P. Ketcham (199).
Vice-president—J. G. McCarthy (292).
Second vice-president—John Rawle (204).
Treasurer—Joseph Downey (294).
Secretary—James John (195).
Board of Directors (for two years)—C. W. Gindele (212), Walter T. Clark (212), T. C. Diener (184), W. H. Alsip (180), W. H. Iliff (195).
Inspectors of election for 1891—John Rogers (206), W. H. Janu-ary (200), A. Biemolt (207).

The remainder of the evening was devoted to speeches from the officers elect. Mr. Charles H. Gindele spoke long and earnestly in favor of more effective work by the Exchange, and of the value of the National Association, calling attention to the valuable work of the national body in securing the Uniform Contract form. Mr. Gindele gave some examples where the Exchange was deficient in exercising its influence in protecting its members against dishonest or unjust architects, a work wherein other Exchanges of much less strength and influence were effective.

The speech of the evening was that of First Vice-President-elect J. G. McCarthy, who took occasion to suggest that the Exchange could and should adopt the practical work of establishing trade schools in Chicago. Mr. McCarthy, after stating the necessity for such schools and the duty of the Exchange to devote the surplus in the treasury to this purpose, proposed that a committee of five be appointed by the president to work in conjunction with the Board of Directors and take the preliminary steps.

The resolution was unanimously passed and the meeting adjourned, the president announcing that the Committee on Trade Schools and the standing committees of the year would be appointed by the Board of Directors, called together for this purpose on the 24th instant.

At a meeting of the Board of Directors, January 24, the following standing committees for 1890 were appointed:

Committee on Membership—A. J. Weckler, chairman, W. H. Iliff, W. H. Alsip, Robert Vierling, T. C. Diener.

Committee on Arbitration—Robert Vierling, chairman, C. W. Gindele, T. C. Diener, W. H. Iliff, W. T. Clark.

Committee on Rooms—E. V. Johnson, chairman, W. T. Clark, C. B. Kimbell, W. H. Alsip, M. B. Madden.

Committee on Finance—M. B. Madden, chairman, E. V. Johnson, C. B. Kimbell, A. J. Weckler, C. W. Gindele.

Library Committee—George C. Prussing, A. W. Murray, C. D. Montague.

Special Committee on Trade Schools—J. G. McCarthy, chairman, D. V. Purington, George Tapper, William Goldie, F. V. Gindele.

Sometimes "I," Sometimes "Jay."

WHILE evidences of a poetic instinct are often discernible in the designs published in this journal, and there have been poetic effusions written by architects of celebrity, it is in no way common for "a little thing of me own," bearing evidence of genius, but having been "just dashed off, you know," to come from the pen of an architect. Rare as this may be, it is rarer still for an architect to drop into poetry, like "Mr. Wegg," in answer to an official letter. But this has happened, and the result shows that one architect who stands among the highest in ability to design in his state, has a talent heretofore hidden but none the less versatile, as the following letter from that prince of good fellows, C. I. Williams, of Dayton, will show.

The secretary of the Institute furnished the treasurer with a list of members, requesting him to make corrections to names and addresses. Mr. Treat said that Mr. Williams' initial was "J.," not "I.," where-upon Mr. Root writes Mr. Williams for the correct initial, receiving the following reply:

DAYTON, Ohio, January 10, 1890.

J. W. Root, Secretary A. I. A.:

At your recent instigation
For official information,
Risking mortal indignation,
Treat doth lie.

Without pause or hesitation
I make this declaration,
The correct abbreviation
Is an "I."

But there are times that I might mention,
Say after a convention,
Fearing forcible detention
By the way;

To avoid the law's intention
And save trouble without mention,
Exercising due invention,
Then its "Jay."

Very truly yours,
CHAS. I. WILLIAMS.

Executive Committee American Institute of Architects.

THE first meeting of the Executive Committee of the new American Institute of Architects was held in New York, January 6. The matter of the reorganization of state associations was taken up, and as a result the following circular letter has been sent to all members of the Institute, accompanied by one containing the proposed amendments, which take the form of a letter ballot, and should be marked with the assent or dissent of the members, and returned to the secretary. The following is the circular letter:

AMERICAN INSTITUTE OF ARCHITECTS.
OFFICE OF THE SECRETARY,
THE ROOKERY, CHICAGO, JANUARY 15, 1890.

DEAR SIR,—At the last meeting of the Executive Committee of the American Institute of Architects, the most important question discussed was the status of chapters of the Institute and the relations now existing and in future to exist between chapters and the Institute.

The following statements represent the unanimous opinion of the committee:

1. That the continuation in active form of existing chapters and the formation of new chapters of the Institute were equally important; for it must always be true that they are the centers of the most active work and greatest influence.

2. That each fellow of the Institute should be a member of a chapter, for the above mentioned reason, leaving him free to join such chapter as would best suit him.

3. That all regular members of chapters should be fellows of the Institute. It was thought that the position of any member of a chapter of the Institute was anomalous when he was not a fellow of the Institute.

4. That chapters should be given the utmost possible latitude, subject to the charter, constitution and by-laws of the Institute, and the restrictions above mentioned. This would allow chapters to elect such associate members as they chose, determine the amounts of their initiation, dues, etc., and generally to manage their own affairs. At the same time, close relationship would exist between the Institute and its chapters, to the great advantage of both, without disturbing such architectural organizations as now exist, which should have affiliation with the Institute.

5. That all fellows of the Institute should be elected from the chapters. This would tend to raise the standing and ability of fellows, and would increase the growth and effective work of the chapters.

To accomplish the above results, amendments to the by-laws are suggested, which are herewith inclosed, and which the committee trust you will adopt.

Please, in voting, write "Yes" or "No" upon the face of the proposed amendments and return at once to the secretary.

JOHN W. ROOT, Secretary A. I. A.

The following are the proposed amendments to the constitution, necessary to carry out the plan of formation of chapters suggested by the Executive Committee:

PROPOSED AMENDMENTS TO BY-LAWS A. I. A.

Begin Article I, Section 2, as follows:

"No person shall be elected a fellow of the Institute unless he shall have been elected an associate member of a chapter."

Rest of section as now.

In Article I, Section 6 to be added as follows:

"Every fellow of the Institute shall be a member of a chapter."

At present Article X reads as follows:

"The Institute shall encourage the formation and continuance of state and local associations, which shall be known within the Institute as chapters. These bodies shall continue and shall be organized under charters from the Institute, which may be granted by the Board of Directors, and which shall clearly define the limits of territory and jurisdiction of the bodies existing or to be formed. The general formation, government, standard of membership and form of election of members in these bodies shall be uniformly prescribed by the Institute, but each body shall have the power to make such further rules and by-laws as it may deem best, provided no action shall be taken which shall conflict with the constitution and by-laws of the Institute."

This to be amended to read:

"The Institute shall encourage the formation and continuance of state and local associations, which shall be known within the Institute as chapters. These bodies shall continue and may be organized by five or more fellows of the Institute under charters from the Institute, which may be granted by the Board of Directors. The general formation, government, standard of membership and form of election of regular members in these bodies shall be the same as in the Institute, but each chapter shall have the power to make such further rules and by-laws and elect such associate members as it may deem best, provided no action shall be taken which shall conflict with the constitution and by-laws of the Institute. Associate members of chapters when elected as fellows of the Institute shall become regular members of chapters."

Vote Yes—No.

By order Executive Committee A. I. A.

JOHN W. ROOT, Secretary.

American Fine Arts Society.

THE organization of the American Fine Arts Society has been practically completed. At present this organization consists of five of the vigorous art societies of New York, namely, the Society of American Artists, the Architectural League, the Art Students' League, Society of Painters in Pastel, and New York Art Guild. The plan of the organization is to erect a handsome building adapted to the purposes of art exhibitions and art education. Each of the societies in the organization is to have its allotted quarters in the building, and each is to have its proportionate area of space for its individual exhibits. The entire capital subscription of \$50,000 to start the organization has been raised, nearly two hundred artists, sculptors and architects being among the subscribers.

But what is known as the gift fund is counted upon to be the mainstay of the enterprise. This is a fund donated outright by the patrons of New York. Already \$30,000 has been sent in. Among the contributors are Cornelius Vanderbilt, George Vanderbilt, D. O. Mills, John D. Rockefeller and Robert Golet. Great activity to increase this fund is reported, and there is a possibility that subscriptions amounting to \$200,000 will be announced in the next forty-eight hours. Most of the details of the new organization and the funds at its disposal will be announced at the dinner of the Architectural League at Morelle's in West Twenty-ninth street on Monday evening. "The formation of this powerful union," the committee having the matter in charge announces, "is doubtless the most important step yet taken in the establishment of a true school of American art. It will correspond with the Ecole des Beaux Art in Paris. It brings together no less than three hundred artists and architects of merit and as many more ambitious students. The union is destined to become the art power of the country."

Association Notes.

WASHINGTON CHAPTER, AMERICAN INSTITUTE OF ARCHITECTS.

The regular monthly meeting of the Washington Chapter, American Institute of Architects, was held in the chapter room, Friday evening, January 3, Mr. William M. Poindexter, president, in the chair. After the reading of the minutes of the previous meeting by the secretary, Robert Stead, there was an exhibition of lantern slides thrown on a canvas. The subjects were: View of Constantinople; Cloister of St. Bertrand; Church of St. Ambrose, Milan; Exterior of St. Sophia, Constantinople; three interiors of St. Sophia; Cupola of Gallo Tower, Bolivia; Leaning Tower, Pisa; Baptistery Tower and Cathedral, Pisa; Interior Baptistery Tower and Cathedral, Pisa; St. Apol., Nuoro, Ravenna (two views); Entrance Doorway, Church, at Arles; Bourges Cathedral; Church of the Seraglio, Constantinople; Baptistery of Florence; Palace of Justice; Interior of Cathedral, Caen; St. Front, Peregux, France; Notre Dame, Poitiers, France; Paray le Monial; Church of St. Vitale, Ravenna; St. Mark's; Church of St. Ambrose; Entrance Church at Poitiers; Cathedral at Rouen; Cathedral at Angoulême; Bordeaux Church; St. Croix, and about thirty others. There was also an exhibition of photographs taken by Mr. J. L. Robinson, architect, of Dublin, during the annual excursions of the London Architectural Association in the years 1888 and 1889, showing views of Haddon Hall, Wollaton Hall, Ely Cathedral, Castle Acre Priory, Peterborough Cathedral, Houghton Hall, etc., 264 in all.

DENVER ARCHITECTURAL SKETCH CLUB.

The second annual meeting of the Denver Architectural Sketch Club was held January 8, the officers being reelected for the year:

President, E. Rice; vice-president, J. Bevan Phillips; treasurer, T. A. Green; secretary, William Cowe.

Board of Directors, R. Willison, J. Janisch, H. Thomas.

Membership Committee, J. Spencer, R. Willison, J. Nichols.

J. Jacobson was elected an honorary member.

After an eight months' organization, with various vicissitudes and changes of officers, the club is now getting down to a firm footing, and the outlook for the ensuing year is very promising. Several competitions have already taken place with a fair return of sketches from various members. The programme for the coming year is being formulated, and promises to be one of special interest to the members from its varied subjects embraced, and will undoubtedly prove a practical benefit to all the members participating in competition. The financial condition of the club, under the excellent management of its treasurer, is very promising, and all the members are enthusiastic over the prospect of a successful year's work. The club is now at work on a competition for a casino for Marblehead Beach, Boston, Massachusetts. This subject being given them by the well-known firm of Andrews, Jacques & Rantoul, of Boston and Denver, who offer a liberal reward for the best design submitted. This subject being new and original, considerable interest is manifested over the competition.

EDINBURGH ARCHITECTURAL ASSOCIATION.

A lecture on "Some Early Scottish Architects" was given January 9 by Mr. J. Balfour Paul, advocate, to the members of the Edinburgh Architectural Association, in the hall, 42 George street. Mr. H. J. Blanc occupied the chair. Having pointed out that few records as to the designers of our cathedrals and castles were available, the lecturer proceeded to mention some of the most prominent of Scottish architects of early times. He said that Gilbert of Moray, bishop of Caithness, in the first part of the thirteenth century had the credit of designing and building at his own charges the church of Dornoch, the remains of which were still in existence, incorporated with the present parish church. The Castle of Kildrummie, in Aberdeenshire, was also probably erected by him.

In the fifteenth century a family of the name of Merlyoun was largely employed by the king in executing work at Stirling Castle,

Dunbar, and other royal fortresses. Thomas Cochrane, the favorite of James III, who fell a victim to the vengeance of Angus and other nobles, was stated to have been an architect, though his exact position in the king's household had always been doubtful. Another architect of that century, Sir James Hamilton, of Fyvirait, came to a violent end, being executed on a charge of inventing an infernal machine by which the king was to be shot from the tower of Linlithgow. A distinguished man, William Schaw, held the post of king's architect to James VI, and he restored Dunfermline Abbey, and was buried there.

After alluding to some of the nobles who were instrumental in erecting the leading mansions and castles of Scotland, the lecturer gave an account of the family of the Mylne. Belonging to Aberdeen, they gradually came south, and in the seventeenth century John Mylne was located in Edinburgh, and was member of parliament for the city. He was buried in Greyfriar's churchyard. His nephew Robert was the builder of Mylne's Court and several other premises in Edinburgh. A descendant of his built the North Bridge, and another attained eminence in his profession in London. The lecturer subsequently made reference to the claims put forward by Inigo Jones, Wallace, Aytoun and Balcanquhall as the designers of Heriot's Hospital.

Mr. Paul also spoke of Sir William Bruce of Kinross, who restored Holyrood in 1671, and in conclusion gave sketches of James Gibbs, Colin Campbell and the elder Adam. A vote of thanks was passed to Mr. J. Balfour Paul for his lecture.

Mosaics.

WINTER TOURS TO TEXAS AND MEXICO.—The Iron Mountain route has on sale round-trip winter tourist tickets to the resorts of Texas, Mexico and the Southwest at greatly reduced rates. Through Pullman buffet sleeping cars to the Gulf of Mexico and the Rio Grande, and only one change to the City of Mexico and San Francisco. Ticket offices, 102 North Fourth street and Union Depot, St. Louis.

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The annual course of Tuesday afternoon lectures upon art, at the Art Institute, Chicago, for members and students is in progress, as follows:

Seventh lecture, January 28, 4 P.M., by Mr. Lorado Taft; subject, "Early Greek Sculpture," illustrated by the stereopticon.

Eighth lecture, February 4, 4 P.M., by Prof. Edward S. Morse, of Salem, Massachusetts; subject, "Household Art in Japan."

Ninth lecture, February 11, 4 P.M., by Prof. Edward S. Morse; subject, "Art Hand Works of the Japanese."

Tenth lecture, February 25, 4 P.M., by Rev. Frank W. Gunsalus; subject, "Millet and Burns."

A lecture will also probably be given in February by Miss Amelia B. Edwards, the distinguished author and Egyptologist, and later a lecture by Prof. Halsey C. Ives, director of the St. Louis Museum and School of Art.

An important extra course of evening lectures upon sculpture, classic and modern, illustrated by the stereopticon, will be opened by Mr. Lorado Taft, Thursday evening, February 6, at 8 o'clock, and continued every Thursday evening for ten weeks, until April 10.

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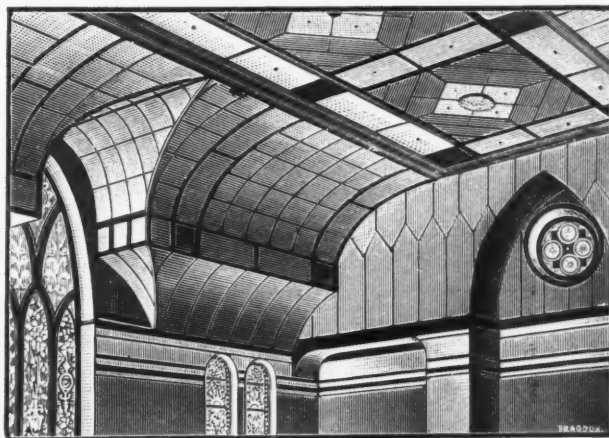
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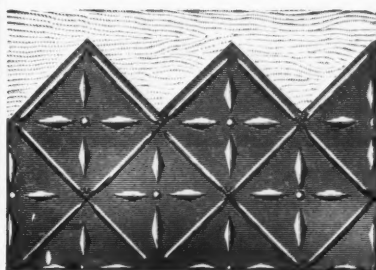
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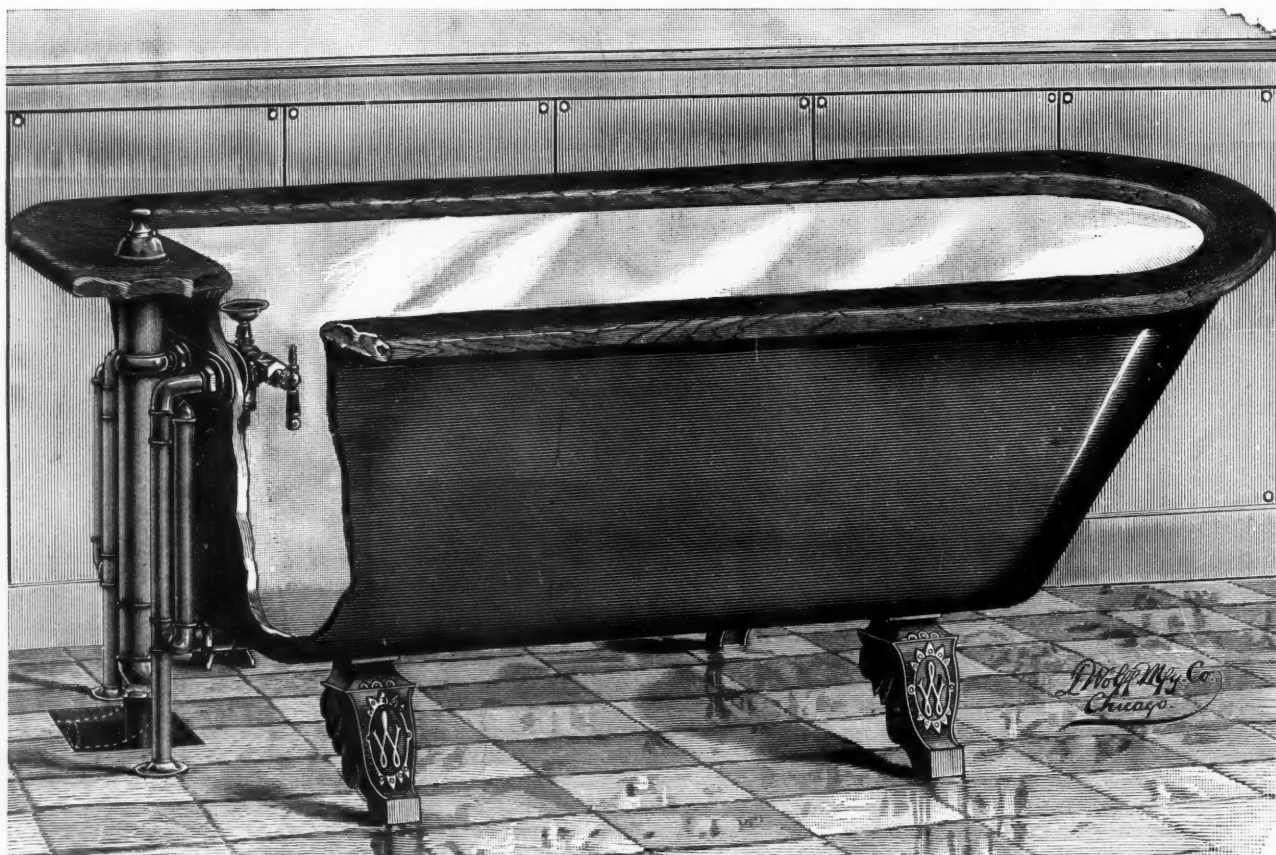
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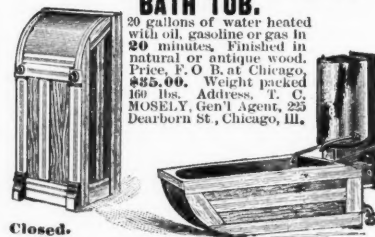
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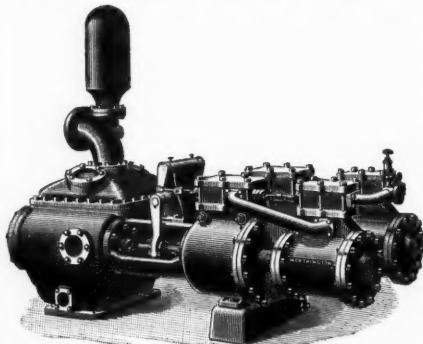
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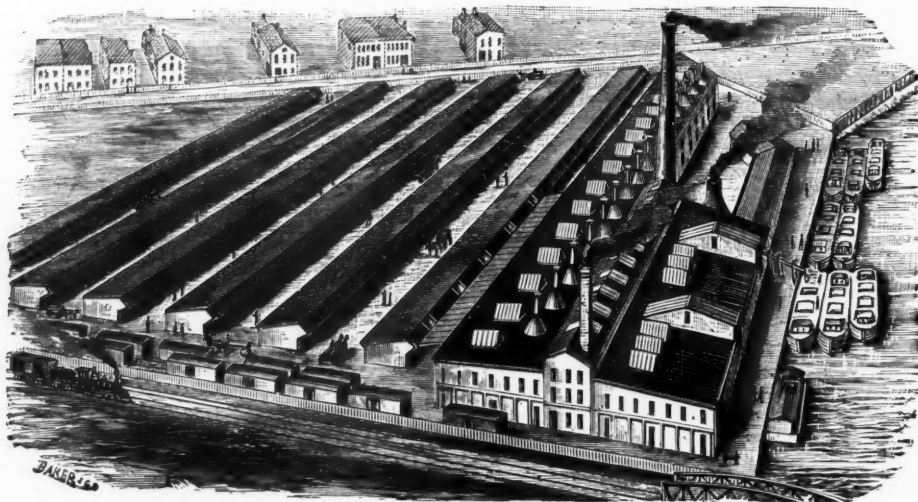
This pattern of Worthington Pump is recommended in any service where the saving of fuel and operating expenses is an important consideration. In such cases their greater first cost is fully justified, as they require 30 to 33 per cent less coal than any high-pressure form on the same work.

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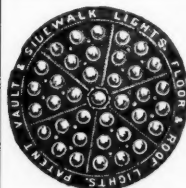


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THE INLAND ARCHITECT AND NEWS RECORD.

Vol. XIII.

ADVERTISERS' TRADE DEPARTMENT.

No. 3

Improved Drawing Instruments.

In order to produce satisfactory work the mechanic must have good tools, much labor and expense being thus saved. For the mechanical draftsman and architect it is even more important to have reliable instruments, as small inaccuracies would often render his drawings useless. We have had the pleasure to examine Riefler's Patent Drawing Instruments, for which Messrs. F. Weber & Co., Philadelphia and St. Louis, are sole agents, and found these goods to embody those essential points necessary for strictly first-class instruments. In addition to the high excellence of quality and finish, they are improved in construction, thus making them superior to the style heretofore used by the profession.

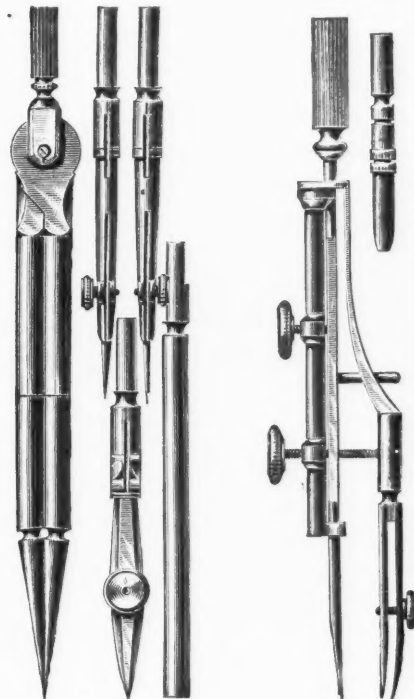


FIG. 1.

FIG. 2.

Fig. 1 represents the system of construction of a drawing compass, showing that the legs of the instrument are cylindrical, which secures for them increased strength without adding to amount of metal. The points are cone shaped and adjusted with the utmost accuracy, and, being screwed into the legs, can be replaced when necessary at a small cost. The needle points are made of the very best steel, and being of equal diameter either one can be withdrawn and an artist's lead inserted. The construction of the joints is undoubtedly the

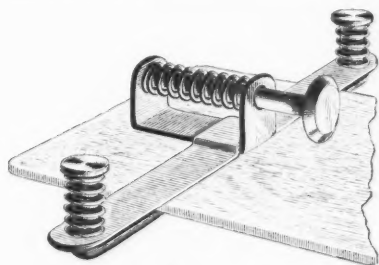


FIG. 3.

most important improvement, as no screws project and instrument can be handled and adjusted with greater ease. A portion of the cylindrical leg is reduced in diameter to fit in a corresponding socket and the solid end split to make a light joint. The turning of the parts is prevented by a small wedge, which fits accurately in the groove in socket.

For drawing minute circles the Spring Bow Pen and Pencil is especially desirable, and is

self-adjusting, as indicated in Fig. 2. Of the other instruments we might mention the dotting pen and ruling pens, all of which are finished in best possible manner. The collection includes all instruments required by architect, engineer, etc., and each piece of finest quality. German silver and the best Huntsman's steel are used in their manufacture and each piece carefully tested by Mr. Riefler before leaving his factory. Messrs. F. Weber & Co. are also sole agents for Weed's T Square Holder, a simple and very useful attachment of great value to any draftsman using a T square. It is attached to blade of T square, as indicated in Fig. 3, and held firmly to drawing board by the springs shown. The slipping of T square is thus avoided, and enables the draftsman to use board at an angle without the necessity of holding square in position. The small cost, 50 cents, brings it within the reach of every person. Messrs. F. Weber & Co. will cheerfully send illustrated list to all applicants.

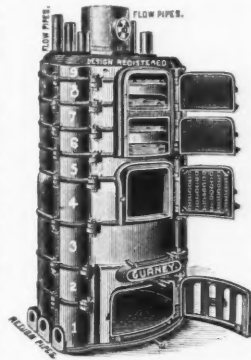
Hot Water Heating.

DURING the past few years, heating by hot water has been extensively introduced into the United States, and it is destined to become very popular and largely adopted as soon as its advantages and economy are more widely and fully known and understood.

Eminent medical authorities in this country and in Europe pronounce this system very healthful; it is indorsed by leading sanitary and heating engineers and is recommended by prominent architects on account of the *uniformity of heat secured with economy of fuel and absolute safety.*

An article by J. W. Drysdale, M.D., and J. W. Hayward, M.D., of England, published in *Health and Comfort in House Building*, says: "As a proof of the healthfulness of hot water heat, we may notice that one of us who had lived four years in a house heated by the hot water system is a general practitioner of medicine, which involves being frequently called out at all hours of the day and night, yet no increased liability to cold or delicacy of any kind has been observed; on the contrary, whereas previously, when living in ordinary houses, he frequently suffered from bronchitis and quinsy, he has never had either disease since living in his present house, and a member of his family who had previously to spend several winters in a warm climate is now able to remain at home and go about in the open air. For prevention of disease we hold such a house a most important auxiliary." The hot water system of heating is not a new thing. It has been in practical operation for many years, and is largely used in the principal government departmental buildings in this country and has been for a great many years used in the large cities of Canada, namely, Toronto, Montreal, Quebec, Ottawa, and in the British provinces. It has given the very best satisfaction in the extreme cold climates of those places, and it has met with great favor in the United States where adopted. It is being rapidly and successfully introduced in New York, Chicago, Detroit, Kansas City, Portland, Ore., and numerous other cities. It merely needs to be seen and its advantages known to become more universally adopted and used.

The Gurney Hot Water Heater is especially designed and adapted for hot water heating. It is easy to erect, most economical in fuel, simple to manage, presents the largest possible heating surface to the fire, is moderate in cost, and fully guaranteed.



Trade Notes.

THE firm of Knisely & Miller Bros., composed of Abraham Knisely, James A. Miller and Robert B. Miller, having been dissolved by the death of Abraham Knisely, the surviving partners have assumed all guarantees, will complete all contracts, and collect all accounts of Knisely & Miller Bros., and of the firms to which they were successors, and will continue the business at the same location, 129 and 131 South Clinton street, Chicago, under the firm name of James A. Miller & Bro.

MR. I. P. FRINK, of 551 Pearl street, New York, of patent reflector fame, whose reflectors are extensively used with gas, oil, electric, and daylight, has orders now on hand covering a great variety of buildings, among which are, Eliot Street Congregational Church, Newton, Mass.; St. George's Church, Astoria, N. Y.; Baptist Church, Bristol, Conn.; Tabernacle Baptist Church, Brooklyn, N. Y.; Centenary M. E. Church, Jacksonville, Ill.; Pilgrim Congregational Church, Duluth, Minn.; Garland Street M. E. Church, Flint, Mich.; Free Reformed Church, Jersey City, N. J.; First Presbyterian Church, Englewood, N. J.; Cumberland Presbyterian Church, Murfreesboro, Tenn.; the court house at Las Animas, Col.; the town hall at Wickford, R. I.; the assembly rooms of the school buildings at Mechanicsville, N. Y., and Galveston, Texas; the art galleries of David C. Lyall, Brooklyn, N. Y.; W. H. Hogencamp, Paterson, N. J.; Chatelet Club, Newark, N. J.; opera house, Wilkesbarre, Penn., and Paris, Mo., retail carpet department of Arnold, Constable & Co., New York, and Heath & Drake, Newark, N. J.

MESSRS. MERCHANT & CO., of Philadelphia, are about to issue a work on the subject of tin roofing, for the benefit of architects, which they have had compiled at considerable expense and labor by one thoroughly versed in the subject of tin roofing. It touches on different features of the subject which have heretofore never been published. While this work is issued partly as an advertisement of their guaranteed plates, it will be found to contain very valuable information. It is for distribution to those who want the information, though it is not their purpose to send it out broadcast, as it is too valuable a work in itself to go into the wastebasket. The book will be nicely bound, and the title will be "A Tin Roof." Messrs. Merchant & Co. have done all in their power to bring about the use of a better class of material, and were the first to introduce plates, every sheet stamped with the brand and thickness, and as the doing away with the wasters, or imperfect sheets, has been the cause of great loss of profit to this concern, in their determination to keep faith with the architectural profession, they find that in some cases even leading architects are today simply using their brands as a figurehead, and are inserting in their specifications not only cheaper brands than theirs, but brands the wasters of which can be obtained and will be used. Consequently they have now taken the stand to simply ask the architect to drop their brands entirely if they are to be used with inferior goods, as they do not care to be held responsible by their clients when the roof proves inferior by reason of the use of cheaper material than they offer to the public.—*Manufacturers' Record.*

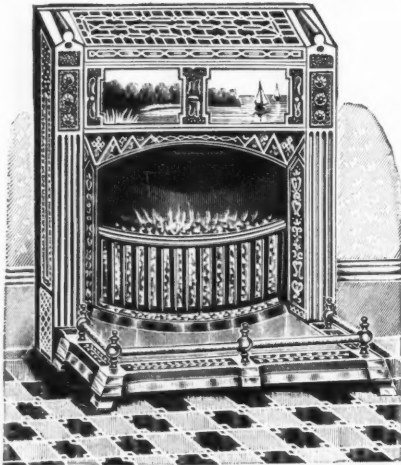
Railroad Notes.

CITY OF MEXICO SPECIAL.—The beautiful Pullman palace hotel car "International" will leave Chicago for the City of Mexico March 12, 9 A.M., via Chicago & Alton railroad, on its second trip to the City of Mexico. Stops will be made at Austin and San Antonio, Tex., Zacatecas, Agues, Calientes, Hot Springs, Leon and Silac, Mexico. Cost of the trip, including railroad fare both ways, meals and Pullman accommodations for eleven days, \$150.00. For maps, time tables, etc., call or address R. Somerville, city passenger and ticket agent, Chicago & Alton railroad, No. 59 South Clark street, Chicago, Ill.

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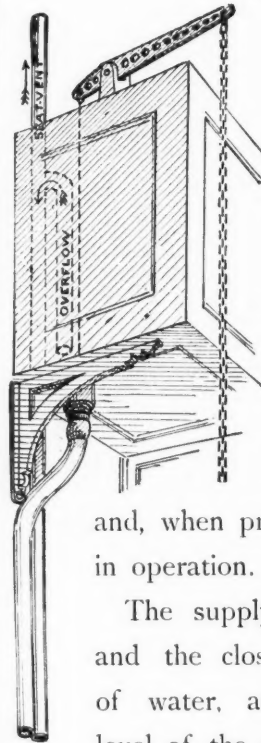
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and, when properly set, almost noiseless in operation.

The supply-pipe between the cistern and the closet stands permanently full of water, and, discharging below the level of the standing water in the bowl, the action is instantaneous and the noise of flushing is deadened, so that, when properly set and with the cover down and toilet-room door closed, no sound can be heard from without. The water is held in the supply-pipe by atmospheric

pressure and will instantly restore the trap seal should it at any time be lowered by evaporation or siphonage.



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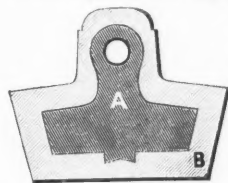
"MODERN ARCHITECTURAL DESIGNS AND DETAILS" for March is a most excellent number, and will be well appreciated by architects and builders who are fortunate enough to be on the subscription list. It is unnecessary to state the object of the publishers of this journal, as the title indicates it so concisely that he who runs may read. Sixty plates comprise the contents of this March number, covering as many different interesting architectural suggestions.

MESSRS. A. H. ABBOTT & Co., of No. 50 Madison street, Chicago, have issued a very comprehensive catalogue and price list containing 226 pages, which covers about everything in the mathematical instrument, drawing instrument and drawing material line, known to the professions represented. The reputation of this firm, like old wine, needs no bush, therefore all that is required in making mention of this excellently printed and illustrated catalogue is to say, its possession by surveyors, architects and draftsmen generally, will be found to be of almost incalculable advantage.

THE attention of manufacturers, importers and dealers in building materials and appliances is invited to the advertisement of Bicknell's Advertising Bureau, in another column. Mr. A. J. Bicknell's long experience and connection with the architectural and building trades, as a publisher and advertiser, is a guarantee of his knowledge of the mediums best suited to the introduction and sale of the various articles that enter into the construction and finish of buildings. In the establishment of this bureau, Mr. Bicknell takes the position of not confining himself to the interests of any one publication, but of placing the business of his patrons where the result will be the most satisfactory.

IN many parts of the country there is a return to tin when a durable and reliable roof enters into the items of a building. For a time tin roofs got into bad repute, owing to a depreciation in the value of the material growing out of a too keen competition among manufacturers, but experience has taught that cheapening an article by deteriorating its quality is a poor way to make money, hence there has come about a return to the more legitimate road to success, i. e., a rivalry to produce the best goods at the lowest rational prices. Prominent among those who are succeeding best in this direction may be named James B. Scott & Co., whose "Scott's Extra Coated" roofing plates are meeting with universal commendation among architects and builders.

ATTENTION is called to the fact that in Powell's patent new improved rubber stoppers with metal core, this metal core is completely covered by the rubber casing, as shown in the cut A B. This overcomes the objection in the old style rubber stoppers in which the brass stud that holds the ring sometimes pulled out. The metal core



SECTIONAL VIEW.
A is the metal core.
B is the rubber casing.

gives such weight to the stopper that it cannot float out of its socket. The outside of the stopper being entirely of rubber no damage can be done to the most fragile basins, or the copper lining of bath tubs.

Railroad Notes.

THE long promised Oklahoma reached via Missouri Pacific railway will be thrown open to settlement by the message of President Harrison, April 22, 1889. The section which, by that action is made public domain, is located in the center of the Indian territory and comprises an area of about 2,000,000 acres of the

most desirable uncultivated land now available in the United States. The Missouri Pacific railway, as usual, is the first to place the advantages of its complete train service and through car equipment before the public for reaching this new Canaan. Daily through trains run from St. Louis and Kansas City to points in Southern Kansas and Indian Territory, adjacent to Oklahoma, where the great majority will outfit preparatory to settling on their homesteads. The great feature of this road is its through coaches and free reclining chair cars. For descriptive land matter and a correct map of Oklahoma, address company's agents or H. C. Townsend, general passenger and ticket agent, St. Louis, Mo.

THE BURLINGTON'S "ELI."—The formerly popular Vestibule Fast "Eli" Train of the Burlington Route has been resumed between Chicago and Kansas City, St. Joseph and Atchison, leaving Chicago daily at 5:30 P.M. The Burlington's Vestibule Trains to Omaha, Denver and St. Paul will continue as before. They are the best trains between Chicago and points mentioned. Tickets can be obtained of any ticket agent of connecting lines, or by addressing P. S. Eustis, G. P. & T. A., C. B. & Q. R. R., Chicago, Ill.

CITY OF MEXICO SPECIAL.—The beautiful Pullman palace hotel car "International" will leave Chicago for the City of Mexico March 12, 9 A.M., via Chicago & Alton railroad, on its second trip to the City of Mexico. Stops will be made at Austin and San Antonio, Tex., Zacatecas, Agues, Calientes, Hot Springs, Leon and Silac, Mexico. Cost of the trip, including railroad fare both ways, meals and Pullman accommodations for eleven days, \$150.00. For maps, time tables, etc., call or address R. Somerville, city passenger and ticket agent, Chicago & Alton railroad, No. 59 South Clark street, Chicago, Ill.

Wisconsin Central R'y.

NOTES from the diary of tourists, commercial travelers, business men and others has revealed:

- That the **Wisconsin Central** has the unequalled indorsement of all;
- That the **Wisconsin Central** has today the most popular line between **Chicago and Milwaukee, and St. Paul, Minneapolis and the Northwest**;
- That the **Wisconsin Central** is daily adding to its admirers as the recognized **Pullman** line between **Chicago and Milwaukee and Ashland, Duluth and Lake Superior**;
- That the **Wisconsin Central** touches the most prominent points in Wisconsin, and that it has more important business centers on its through line than any other railway to and from the **Northwest**;
- That the **Wisconsin Central** has made an enviable reputation with its peerless **Dining Car Service**;
- That the **Wisconsin Central** runs fast trains on which all classes of passengers are carried with commodious and distinct accommodation for all;
- That the **Wisconsin Central** has representatives distributed throughout the country, who will cheerfully give any information that may be desired, and that its terminal Agents are specially instructed to look after the comfort of passengers who may be routed via its line.

For detailed information, apply to your nearest Ticket Agent; or to representatives of the Wisconsin Central Company.

WM. S. MELLEN, General Manager. **JAMES BARKER,** Genl. Passr. & Tkt. Agt.

LOUIS ECKSTEIN, Asst. Genl. Passr. & Tkt. Agt. **MILWAUKEE, WIS.**

Comments of the Press on a New Book, by

MERCHANT & CO.,

ENTITLED:

"A Tin Roof."

SOMETHING WORTH READING.

"A Tin Roof" is the title of a little book just issued by Messrs. Merchant & Co., 517 Arch street, Philadelphia. The purpose of the publication is to supply to builders, architects and the general public some exact information as to the best methods of constructing a tin roof and as to the right materials to be used to secure satisfactory and permanent results. We especially recommend the book, which is intended for gratuitous distribution, to mill owners. They are very apt to entrust the matter of roofing wholly to builders, and they usually know really very little about the character of the tin used or the excellence or defectiveness of the job. This pamphlet will help them to protect their interests. It is very explicit, perfectly comprehensible, and we think wholly trustworthy. It is quite profusely illustrated, and the cuts indicate processes of applying tin roofing which insure excellence.—*Evening Telegraph (Phila.) Feb. 16th.*

A VALUABLE BOOK.

Under the title, "A Tin Roof," Messrs. Merchant & Co., Philadelphia, have published a valuable work on the subject of roofing materials. No architect can afford to be without the book, as it treats very fully on a subject with which he should be conversant. The book has been compiled by one thoroughly versed in the subject of tin roofing; and it touches on different features of the subject which have heretofore never been published, and it is to be questioned whether the information could be obtained by architects from the roofing trade. The closing paragraph of the book is as follows: "We are prepared to prove that we were the first to introduce guarantee plates and stamp every sheet with the name of the brand and thickness; and having also done away with the imperfect or waste sheets to further protect architects (who wish to specify, and property owners who want to use the best), we feel that we have a right, under these circumstances, to ask that our guarantee brands shall not be specified along with other brands in the market, which are inferior in quality, coating, weight and assortment." Architects throughout the country will do well to secure a copy of the book, which can be done by addressing Merchant & Co., Philadelphia.—*Philadelphia Evening Call, Feb. 18th.*

Messrs. Merchant & Co., of Philadelphia, are about to issue a work on the subject of tin roofing for the benefit of architects, which they had compiled at considerable expense and labor by one thoroughly versed in the subject of tin roofing. It touches on different features of the subject which have heretofore never been published. While this work is issued partly as an advertisement of their guaranteed plates, it will be found to contain very valuable information. It is for distribution to those who want the information, though it is not their purpose to send it out broadcast, as it is too valuable a work in itself to go into the waste basket. The book will be nicely bound, and the title will be "A Tin Roof." Messrs. Merchant & Co. have done all in their power to bring about the use of a better class of material, and were the first to introduce plates, every sheet stamped with the brand and thickness, and as the doing away with the wasters, or imperfect sheets, has been the cause of great loss of profit to this concern, in their determination to keep faith with the architectural profession, they find that in some cases even leading architects are to-day simply using their brands as a figure-head, and are inserting in their specifications not only cheaper brands than theirs, but brands the wasters of which can be obtained and will be used. Consequently they have now taken the stand to simply ask the architect to drop their brands entirely if they are to be used with inferior goods, as they do not care to be held responsible by their clients when the roof proves inferior by reason of the use of cheaper material than they offer to the public.—*Baltimore Manufacturing Record, Feb. 9th.*

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In rolls 24 feet long by 12, 16, 20, 24 and 32 inches wide.

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Imported Damp-Resisting Solution.

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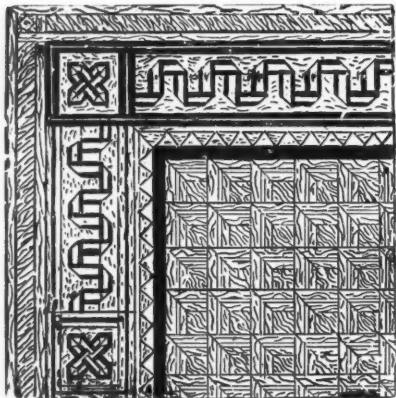
IMPORTERS' AGENTS,

159 LA SALLE ST., - - - CHICAGO, ILL.

22 MILK STREET, BOSTON, MASS.

J. DUNFEE & CO.,

MANUFACTURERS AND
DEALERS IN



WOOD * * CARPET

PARQUET, INLAID and
STRIP FLOORS.

Wainscoting, Room Mouldings
and Weather Strips.

104 & 106 Franklin St.,
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FACTORY:
204 to 212 S. Clinton Street.

Send for Catalogue. Esti-
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Established 1873.

J. VAN INWAGEN, President. JOEL TIFFANY, Vice-President.
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Tiffany Pressed Brick Co.

Office, 161 LA SALLE ST., CHICAGO.

TELEPHONE No. 579.

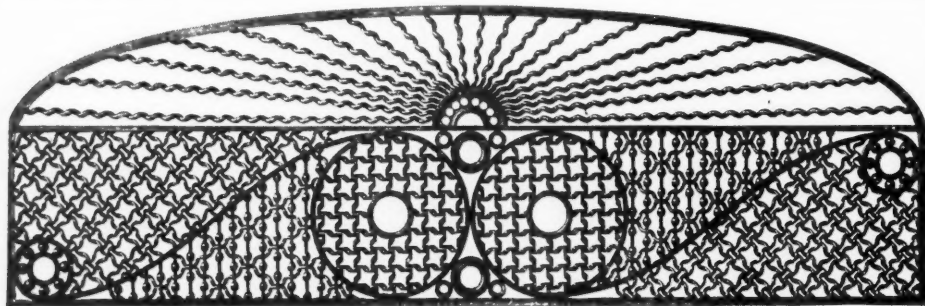
MANUFACTURERS OF FIRST QUALITIES OF

Plain and Ornamental Pressed Brick.

A prominent New York Architect writes of our best grade: "I consider them far superior to any Philadelphia or Baltimore bricks that I have used or seen during an experience of twenty-five years."

SAMPLES SENT ON APPLICATION.

Orders promptly filled for Chicago and other markets.



No. 4005

MANUFACTURED ONLY BY

G. S. RANSOM & CO., CLEVELAND, OHIO.

There is no limit of design into which this can be made. It is made of any domestic or imported woods, finished natural, stained, or in white and gold or bronze. All leading decorating, drapery or furniture houses will supply you. Patented as an article of manufacture, Sept. 15, 1885.

NEW YORK OFFICE, No. 5 WEST TWENTY-SEVENTH STREET.

That Beautiful,
Ornamental and
Decorative
Woodwork

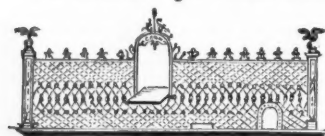
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DOORS,
TRANSOMS AND WINDOWS,

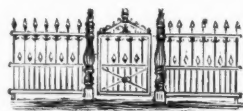
KNOWN AS

MOORISH FRET-WORK, is

FRED. J. MEYERS MANUFACTURING CO.,



MANUFACTURERS OF



BRASS AND IRON WIRE COUNTER RAILING,
WROUGHT IRON FENCES, ROOF CRESTING,

Iron Shutters, and every description of Builders' Iron Work.

Also Wire Window Guards, Stable Stall Guards, Bank
and Counter Railings, etc., etc.



OFFICE AND WORKS:

419, 421 and 423 Madison Street, Covington, Ky.

SEND FOR ILLUSTRATED CATALOGUE.



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THE INLAND ARCHITECT AND NEWS RECORD.

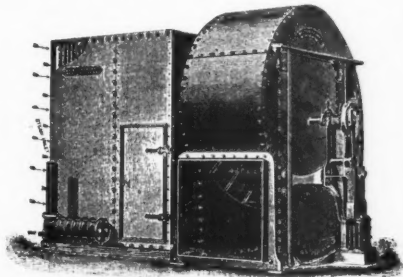
Vol. XIII.

ADVERTISERS' TRADE DEPARTMENT.

No. 7

The Sturtevant System of Heating and Ventilating.

That positive ventilation can be secured by the use of mechanical means has become an acknowledged fact, and the fan accepted as the best device for the purpose. The economy of combining the heating and ventilating systems into a single yet dual system, although seemingly obvious, does not always appear to be considered in the provisions made for air and heat supply in habitable buildings. A



moment's careful thought will, however, reveal many advantages resulting from this combination. These have been fully appreciated by B. F. Sturtevant, the veteran blower manufacturer, of Boston, Massachusetts, who has designed and manufactures what is known as the Sturtevant Steam Hot Blast Apparatus for heating and ventilating by a single apparatus. The standard type of apparatus is clearly shown in the accompanying figure, and consists of a volume fan driven by direct connected steam engine, and a steam heater of special construction, through which the air is drawn. Among the advantages resulting from the use of this apparatus are the following: An ample supply and a positive circulation of warmed or cooled air is secured at all times, independent of the state of the weather. A plenum condition is put upon the air within the building and all leaks are outward. The air may be cooled in summer by running water through the heater pipes. The air, and therefore the heat, is perfectly distributed. Owing to the high velocity of the air across the pipes, a saving is claimed of 60 to 80 per cent in heating surface as compared with direct radiation. The entire heating surface is combined in a single heater (generally placed in the basement) and encased in a steel plate, fireproof jacket. It costs practically nothing to run the engine, as the exhaust steam is completely utilized in the heater. There is no annoyance from leaking or freezing, and a single steam valve controls the whole heater. This apparatus is being rapidly introduced in school buildings, public buildings, manufactories, etc., and is acknowledged to be a superior device for securing the required results. A copy of a very comprehensive "Treatise on Ventilation and Heating," containing a complete description of the various applications of this system, will be mailed on application to B. F. Sturtevant, Boston, Mass.

Railroad Notes.

THE tourist book recently issued by the Missouri Pacific Railway, entitled "Summer and Winter Health and Pleasure Resorts," is beautifully illustrated, and while covering all points on its lines, is especially graphic concerning Colorado and other Rocky Mountain summer resorts. This book contains 140 pages of reading matter and illustrations, and will be mailed free on application to H. C. Townsend, General Passenger and Ticket Agent, St. Louis, Mo.

THE summer months have begun, and in making plans for your summer vacation we beg leave to call your attention to the delightfully cool summer resorts located along the line of the Wisconsin Central, among which are Lake Villa, Fox Lake, Waukesha, Cedar Lake, Neenah (Robert's Resort), Waupaca, Ashland and others. Pamphlets containing valuable information will be sent free upon

application to James Barker, General Passenger and Ticket Agent, Milwaukee, Wis., or to H. C. Fuller, City Passenger and Ticket Agent, 205 Clark street, Chicago, Ill.

TOURIST TICKETS at the following rates are now on sale at the city ticket office of the Wisconsin Central, 205 Clark street, and at the Central passenger station, corner of Polk street and Fifth avenue, Chicago to Burlington and return, \$3.50; to Waukesha and return, \$5; to Cedar Lake Park and return, \$6; to Fond du Lac and return, \$8; to Oshkosh and return, \$9; to Neenah and Menasha and return, \$9.35; to Waupaca and return, \$11.10; to Ashland and return, \$18.50; to Bayfield and return, \$18.50; to Washburn and return, \$18.50; to St. Paul and return, \$20; to Minneapolis and return, \$20; to Lake Minnetonka and return, \$20.75; to Helena, Montana, and return, \$75.10; to Spokane Falls, W. T., and return, \$90, and others. The return limit on these tickets is October 31.

A NEW solid train between Chicago and New York. Commencing Sunday, June 2, the Chicago & Grand Trunk railway, in connection with the Grand Trunk and the picturesque Erie railway, will put in effect a through solid train daily between Chicago and New York, in both directions, via Niagara Falls. Through coaches and Pullman sleeper between Chicago and New York, and through buffet Pullman sleeper between Chicago and Philadelphia, the Philadelphia sleeper running via Lehigh Valley railway from Niagara Falls. East-bound, the new train leaves Chicago, daily, 2:35 P.M.; arriving, Niagara Falls, 7:00 A.M.; Buffalo, 8 A.M.; New York, 10 P.M.; Philadelphia, 9 P.M. West-bound, leaves New York 6:00 P.M.; Philadelphia, 4:30 P.M.; Buffalo, 6:30 A.M.; Niagara Falls, 7:20 A.M.; arriving Chicago, daily, 10 P.M. All meals on Chicago and Grand Trunk railway served in Pullman dining car.

WHEAT LANDS OF COLORADO.—The comprehensive and thorough investigation of the composition of American wheat, from all the great wheat-growing states and territories of the country, made by the United States Department of Agriculture (Division of Chemistry), 1882 to 1885, placed Colorado wheat at the head of the list. "It is Colorado which leads our country in the production of a large grain, containing a large amount of albumenoids. This state shows what the possibilities are of raising a perfect wheat." [Bulletin No. 1, p. 36.] "Among the individual states, Colorado sustains the reputation which was gained in last year's report of producing the finest wheat." "The Colorado wheats are certainly the best which have been produced in this country." [Report 1883, pp. 210, 211.] One million acres of free government land, adapted to wheat raising, are still subject to entry in the Colorado rain belt, along the Burlington lines to Denver and Cheyenne. Folder giving map and full particulars, also a large roller map of the United States, sent free by addressing P. S. Eustis, general passenger and ticket agent, C. B. & Q. R. R., Chicago.

Trade Notes.

DR. MEREDITH'S new church in Brooklyn, one of the largest churches in that city, is plastered with King's Windsor Cement, and is worthy the attention of architects and builders, as it is one of the finest specimens of plaster work in that vicinity.

MR. W. R. EMERSON, of Boston, is remarkable among the architects of the East for the cleverness of his country and seaside house work, and the beauty of their exterior coloring, and it may interest readers to know what he is doing at this time. He has recently erected a group of fine cottages on the beach at Newport, all of which are stained with very soft shades of red, brown, green and gray of the Creosote stains. Another similar group, of which he is the architect, is being erected at Martha's Vineyard, on land of the Vineyard Haven Co. These exteriors are treated with

the same material as the Newport group, and will be made to blend harmoniously with the landscape. This method of exterior coloring is coming more and more in vogue, and is universally successful and artistic.

THE new station of the New York & Northern Railroad, at Yonkers, New York, has just been plastered with King's Windsor Cement, and is worthy of the attention of all in that vicinity who contemplate building—Mr. George Edward Harding, 40 Exchange Place, New York, architect, and Mr. Perry, contractor.

Accurate Drafting Instruments.

The accuracy and speed of the draftsman depends largely upon the character of the instruments he uses, hence, perfect tools is a desideratum not to be overlooked at the outset of the draftsman's career rather than the cost, since instruments originally perfect in all their parts are sure to retain their excellence, however trying or constant their use may be.

It is on this basis the genuine Alteneder instruments, the results of over forty years' practical experience to obtain perfection in material, shape, construction, temper, etc., are submitted, with the conviction that for convenience in handling, rapidity and delicacy of adjustment, they are unequalled.

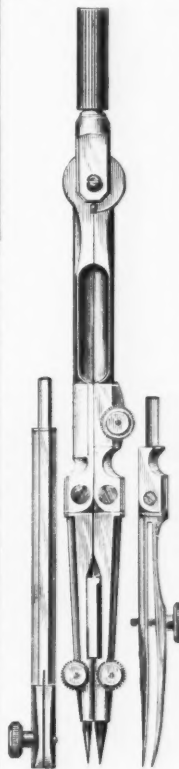
This illustration shows the Alteneder's patent joint dividers, invented by Theo. Alteneder, in 1850, and again in 1871. It was the first attempt to do away with sector joints, and has proved to be the only perfect joint for drawing instruments. The body and legs of the dividers are first cast heavy, and afterward compressed in steel dies, which produces a hardness of the metal that makes it possible to cut a screw-thread in it that will hold. The knuckle joints are secured by screws, and can be loosened or tightened if necessary. In cheaper instruments these parts are secured by rivets with imitation screw heads, which, when they become loose there is no way of tightening, and the tool becomes useless.

The pen is made of the very best steel, in one piece, and of a shape and temper the results of long experience. This insures the points will always match. The upper blade is made in the form of a spring, which facilitates cleansing, and has all the

advantage of a hinge without its disadvantage—a side strain of the blades which causes the points to stand away, making it impossible to rule perfect lines.

The ruling pens of this firm are of similar construction and of national reputation.

The secret of the success of the Alteneder instruments lies in the fact that the inventor is a practical draftsman and mechanic, hence knows what draftsmen need, and is able to produce it, and that he personally supervises the manufacture of the firm's goods, and as every instrument turned out is stamped with the firm name, it is a guaranty of genuineness and a warranty of perfection. Prominent architects and civil engineers indorse the superiority of these goods, as may be seen in an elaborate catalogue which is sent on application. The firm has now in press a new book entitled "Points About Drawing Instruments," intended as an aid to draftsmen. It will be mailed to applicants on receipt of postage.



KING'S WINDSOR CEMENT

For Plastering Walls and Ceilings.

Has 300 per cent more tensile strength than lime and hair plastering, and therefore must materially strengthen the structure.

It is 200 per cent harder than lime and hair plastering, and therefore renders the walls less liable to injury.

It will not chip, pit or crack.

It requires one-third less labor.

It does not require any hair or other fibre, and therefore is perfectly fire-proof.

Houses finished with this material can be occupied in safety from four to six weeks earlier than those finished in the old method.

Work done with this material does not require any sizing for decorating or papering.

It is perfectly fire and vermin proof.

Mortar made of this material has one-third less water in it than the old style of lime and hair mortar.

The work can be finished with any material and is warranted not to discolor it.

The material can be finished in any style that the ordinary plastering can.

It adheres equally well to any building material.

Experience has proved that ceilings well soaked from leaking roofs have not been injured where this material has been used.

It seasons so rapidly that carpenters can follow the plasterers almost immediately, and the two sets of mechanics can practically work at the same time.

It is peculiarly valuable for setting tile, slabs, and laying front brick.

It requires less material than the old system, there is much less weight on the building, and adds to, rather than detracts from, the strength of the building.

It has elasticity and great tensile strength, which enables the surface to be decorated or painted within a very short time after it is applied.

No more shrinkage of wood-work from green plaster where this material is used.

Any mechanic who understands his trade can apply it.

Endorsed and used by N. Y. C. & H. R. R. R., and by users of Building Materials in various sections of the country.

For further particulars apply to or address

J. B. KING & CO.,

PATENTEES AND SOLE MANUFACTURERS,

24 STATE STREET, - - - - - NEW YORK.

Also sole M'frs King's Celebrated "Diamond" Brand Calcined Plaster.

RUDDOCK & SEYMOUR,

SOUTHERN LUMBER.

CYPRESS,

For all uses. Finishing Lumber, Tubs, Tanks, Laundry and Creamery Work, 1, 1½, 2, 2½ and 3 inches thick.

YELLOW PINE.

Flooring, Ceiling, Finishing Lumber, etc.

OFFICE AND YARD—ILLINOIS CENTRAL PIER,

CHICAGO.

U. S. MAIL CHUTES

Enable you to mail letters without leaving the floor on which your office is located.

NOW IN ALL FIRST-CLASS BUILDINGS.

CUTLER M'F'G CO., Rochester, N. Y.

SOLE MAKERS.

PATENTED.

Furniture Business for Sale.

A Chicago Furniture and Decorating business, long established, and having a large and first-class trade, will be sold on very reasonable terms. Owner wishes to retire.

Address "Furniture," care *Inland Architect Office*.

Fresh, Reliable, Valuable News

—OF—

Building, Engineering and General Improvements

BEGUN AND CONTEMPLATED IN THE NORTHWEST.

In order to meet a most urgent call for RELIABLE and FRESH news regarding all operations in the line above specified, we are now issuing a special report, which we are making a very thorough and accurate compilation, as our facilities for gathering such news are probably greater than those possessed by any other firm now engaged, or likely to engage, in the business in the Northwest, and that those who contemplate subscribing, or are solicited to subscribe for the same, may be informed upon this point, we give an outline of our methods of work.

The information is sent to subscribers not later than the second or third day after its receipt, thus making a bi-weekly report necessary, at least during the building season. In every instance, we seek detailed information concerning the improvements reported, and send, when necessary, a second or even third report to subscribers, a service we think that has not hitherto been undertaken by any paper or agency. Our purpose is to give our subscribers the most accurate, thorough and valuable report that can be compiled.

Sample report and terms of subscription will be sent upon application.

Address

N. W. BUILDER PUB. CO.,

46 Union Block, St. Paul, Minn.

The Osborne Steam Engineering Co.

Desire to call the attention of ARCHITECTS AND OWNERS to their system of construction for

COMBINED HEAT, POWER AND LIGHT PLANTS,

Whereby a large reduction in fuel, labor and repairs is obtained. FACILITY AND EASE OF MANAGEMENT is characteristic of this system.

Plans, specifications and superintendents furnished promptly and at reasonable prices. Correspondence solicited.

PRINCIPAL OFFICE:

504 Chicago Opera House, CHICAGO, ILL.

PROPOSALS.

COLORADO STATE CAPITOL.

PROPOSALS FOR CAST-IRON COLUMNS FOR THE COLORADO STATE CAPITOL BUILDING.

Scaled proposals for furnishing 122 cast-iron columns, complete, in place, will be received by the secretary of the Board of Capitol Managers until 1 p.m., mountain time, on Monday, July 1, 1889, and then opened by the Board.

The columns are to be put in place in the building as required, and properly set according to the plans and specifications, which are to be seen in the office of the superintendent, P. Gurney, at the Capitol grounds, Denver, Colorado. These columns will weigh, when complete, with bases, capitals, lugs, etc., about 210 tons, more or less, but bidders must make their own calculations.

All proposals must be accompanied by a small sample casting, showing the quality of material and workmanship that the bidder proposes to furnish, and with a certified check on a responsible bank for the sum of \$1,000 as a guarantee that the bidder will enter into

contract to furnish and erect the columns at the prices bid, if the contract is awarded to him.

Proposals to be indorsed "Proposals for Cast-Iron Columns," and addressed to the Secretary of the Board of Capitol Managers, P. O. box 2291, Denver, Colorado, or delivered at the office of the Board, 44 Barclay Block, 1755 Larimer street.

By order of the Board.
DONALD W. CAMPBELL, Secretary.
Denver, Colorado, May 3, 1889.

NOTICE TO CONTRACTORS AND BUILDERS.

Scaled proposals will be received until June 15 next, for the building of a Methodist church, of brick and stone, on lot 121, in Yazoo City, Miss., as per plans and specifications in the hands of the building committee in this city, made by Benjamin D. Price, of Philadelphia. The committee reserve the right to reject any and all bids. Bond and approved security will be required. Address all communications to

J. F. POWELL,
Chairman Committee.

JUST PUBLISHED.

INTERIOR DECORATION.

By ARNOLD W. BRUNNER } ARCHITECTS.
AND THOMAS TRYON, }

One quarto vol., cloth. Price, \$3.00.

Containing, besides Introductory Remarks, Chapters on The Hall, The Staircase, The Library, The Parlor, The Dining-room, The Study, The Bedrooms.

INLAND PUBLISHING COMPANY,

19 Tribune Building, - - - CHICAGO, ILL.

Please mention THE INLAND ARCHITECT when corresponding with Advertisers.

THE INLAND ARCHITECT AND NEWS RECORD.

Vol. XHI.

ADVERTISERS' TRADE DEPARTMENT.

No. 8

Railroad Notes.

FROM August 21 to 28, 1889, inclusive, the C. B. & Q. R. R. will sell at half rates, or one fare for the round trip, tickets to Milwaukee and return from all points on its lines, on account of the National G. A. R. Encampment at Milwaukee. These C. B. & Q. excursion tickets will be good to return August 27 to September 5, inclusive; but by special arrangement, an extension to September 30 may be obtained by applying, prior to September 3, to the agent at Milwaukee having the matter in charge. Between Chicago and Milwaukee the tickets will be good for passage in either direction via the Goodrich Line of steamers, the C. M. & St. P. R'y, or the C. & N.-W. R'y. Tickets and further information can be obtained of C. B. & Q. ticket agents, or by addressing P. S. Eustis, general passenger and ticket agent, Chicago.

On June 3, E. O. McCormick, for the past three years general passenger agent of the Monon Route, resigned that position to occupy a similar one with the Cincinnati, Hamilton & Dayton Railway, with offices located at Cincinnati. His place will be filled by Mr. J. A. Barker, well known as the general passenger and ticket agent of the Wisconsin Central Railroad. An interesting interview took place between Mr. McCormick and the clerks in his office, just before his departure, in which one of their number presented their chief with a valuable diamond stud, as a token of their appreciation of his uniform kindness. It was an interesting study to see the surprise upon Mr. McCormick's face as the twenty odd clerks filed into his private office, the earnest expressions of good will by the spokesman and then the utter inability to reply of the usually energetic and decisive passenger agent, who, for perhaps the first time in his official life, found himself unable to instantly respond in terse, well-chosen words as occasion required. As one observed, "Mr. McCormick has certainly gained and held the good will of all he came in contact with as surely as he made money for the road he represented."

TO THE SEASHORE AND THE WHITE MOUNTAINS ON THE FINEST TRAIN IN THE WORLD.—The next "Seaside and White Mountains Special," Solid Pullman Vestibuled Train of the Chicago & Grand Trunk Railway leaves Dearborn Station, Chicago, Wednesday, July 10, at 5 P.M., and each Wednesday thereafter during the tourist season. The attractions of Niagara Falls, Thousand Islands, Rapids of the St. Lawrence river, Montreal and the glorious scenery of the White Mountains are all enjoyed by passengers on this modern hotel on wheels. The entire train, including dining car, barber shop, ladies' and gentlemen's bathrooms, library and observation car, with four magnificent Pullman Vestibuled Sleeping Palaces, all lighted by electricity,

runs through to the Atlantic coast without change of any car. The ladies should not overlook the special feature of a "lady attendant," who accompanies the train. Passengers for the White Mountains, Rangeley Lakes, Poland Springs, Portland, Bar Harbor, Old Orchard, York Harbor, Portsmouth, Isle of Shoals and all the seaside and mountain resorts of New England, should secure accommodations early on this finest train in the world, by applying to E. H. Hughes, general western passenger agent, Chicago & Grand Trunk Railway, 103 Clark street, Chicago, Ill.

Trade Notes.

THE office of J. B. King & Co., the manufacturers, is at 24 State street, New York. The plastering department is represented by Mr. Lovell H. Carr.

A LARGE number of Catholic schools on Staten Island, New York, have been plastered with King's Windsor Cement, and more will soon be plastered with the same material.

THE New York Central & Hudson River Railroad have given King's Windsor Cement, for plastering walls and ceilings, a severe test, with the result of which they were so well pleased that John D. Fouquet, the head architect, has given J. B. King & Co. a very strong letter recommending it to all who want first-class plastering.

"DURESCO" is the name of a most excellent petrifying liquid material for covering brick walls before plastering, to prevent exudations from appearing on the surface. In regard to this use of the material Architect W. L. B. Jenney recently sent the following letter to Howard Fleming, the New York agent for "Duresco" in the United States:

Mr. Howard Fleming, No. 23 Liberty street, New York.

DEAR SIR,—Some years ago I used some two kegs of your white petrifying liquid "duresco" to cover brick walls before plastering. It was very successful, in fact, the only thing of the kind I ever used that was satisfactory. * * * After all these years not a stain has passed through the plastering. Why it does not come into general use I cannot see. It is wanted.

Yours very respectfully,
W. L. B. JENNEY.

Mr. Jenney's letter was one of inquiry; his strong statement can be taken as positive evidence of the exceptional qualities of the material. Its principal value, however, is covering brick walls with a permanent wash in any color desired. It is the only material we know of that can be depended upon for this purpose and brick walls can be improved permanently at slight cost by its use.

UNDER the title of "Heat and Light," (part I), the Detroit Heating and Lighting Company has just issued a very handsomely gotten up circular pamphlet, presenting in an intelligent manner the many merits claimed for the Bolton hot water heater. A part of the text comprises

several hundred names of prominent citizens of Chicago, Detroit, Buffalo, Minneapolis, Baltimore, New Orleans, Nashville and other cities and towns who have introduced it into their dwellings and attest its claims. The Bolton heater was first introduced in the Canadas eleven years ago, where its universal success attracted attention on this side of the lakes, and since its introduction in the United States in 1887 it has been yearly gaining in favorable notoriety among architects and householders.

ONE of the largest contracts of the year for pressed brick is that for the Wisconsin Central railroad depot at Chicago. Brown brick are to be used, and ornamental brick are to take the place of terra-cotta. The entire contract for the plain pressed and the ornamental brick was awarded to the Tiffany Pressed Brick Company, which is now in the market as a competitor for the largest contracts where great strength, freedom from alkali and beauty of form and color are desired. The Tiffany Company has just filled orders for four carloads of their best brick to go to the Pacific coast, Washington territory, on which the freight was over \$61 per thousand brick.

MR. GEORGE W. MURPHY, of 76 Dearborn street, Chicago, has just completed replenishing his establishment with a fine display of novel sanitary plumbing appliances for which he has the exclusive control in this city. Among them is the noted "syphon closet," which has been in litigation for a number of years and just recently decided in favor of Mr. F. C. Wells and now forms one of the constituents of what are known as "Wells sanitary appliances," all of which have received the indorsement of the best sanitarians of this country. Although these supplies are well and favorably known elsewhere, they are now being first introduced in this market by Mr. Murphy and with very promising success. Another specialty of the establishment is the celebrated "Smith syphon jet" which was treated of at some length recently in THE INLAND ARCHITECT. It, as is well known, has been in great favor on the Pacific coast for a number of years and recent manufacturing facilities have enabled it to be put on the market at a material reduction from former prices. Another of the specialties of this house is the "Hygiene sewer flushing cleaner." But it is not the intention to inventory the novelties and standard lines kept by Mr. Murphy; the motive is to call the attention of architects, builders and house owners to the fact that the time they will spare to investigate and examine what is to be found at No. 76 Dearborn street will be time advantageously spent. It is not necessary, in this community, to refer to the character of the head of this enterprising house. Six years of successful business enterprise is the only needful guarantee of honorable and upright dealing.

"MILWAUKEE CEMENT."

"THE BEST NATURAL CEMENT IN THE WORLD."

CAPACITY, 4,000 BARRELS PER DAY. —:- ANNUAL SALES, 400,000 BARRELS.

CORRESPONDENCE SOLICITED.

FOR UNIFORMITY OF GRIND AND ULTIMATE STRENGTH IT STANDS UNRIVALED.

MILWAUKEE CEMENT Co.,
154 WEST WATER ST., - - - MILWAUKEE, WIS.

DICKINSON BROS. & KING, AGENTS, 204 Market Street, Chicago.

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Has 300 per cent more tensile strength than lime and hair plastering, and therefore must materially strengthen the structure.

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RUDDOCK & SEYMOUR,
SOUTHERN LUMBER.

CYPRESS,

For all uses. Finishing Lumber, Tubs, Tanks, Laundry and Creamery Work, 1, 1 1/4, 1 1/2, 2, 2 1/2 and 3 inches thick.

YELLOW PINE.

Flooring, Ceiling, Finishing Lumber, etc.

OFFICE AND YARD—ILLINOIS CENTRAL PIER,

CHICAGO.

U. S. MAIL CHUTES

Enable you to mail letters without leaving the floor on which your office is located.

NOW IN ALL FIRST-CLASS BUILDINGS.

CUTLER M'FG CO., Rochester, N. Y.

SOLE MAKERS.

PATENTED.

F. M. HICKS CO.

Manufacturers of

BUILDING IRON WORK,
SKYLIGHTS, FLOOR LIGHTS, AREA
—AND—
SIDEWALK LIGHTS.

103, 105, 107 W. Monroe St., CHICAGO.

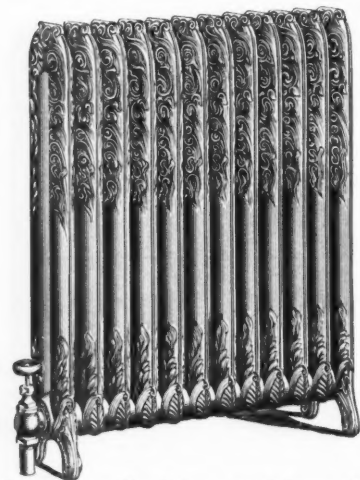
WANTED

At once, an artistic draftsman to take charge of office. Address, stating experience,

VARIAN & STERNER,

DENVER, COLO.

PERFECTION RADIATOR



**ITS CONSTRUCTION
IS THE BEST.**

*Loops contain positively full
areas of heating sur-
face claimed.*

Its appearance is the most artistic and ornamental, and can be decorated to harmonize with its surroundings, even when placed in apartments with most costly and elegant furnishings.

WRITE FOR CATALOGUE.

Michigan Radiator and Iron Mfg. Co., Detroit, Mich.

The Osborne Steam Engineering Co.

Desire to call the attention of **ARCHITECTS AND OWNERS** to their system of construction for

COMBINED HEAT, POWER AND

LIGHT PLANTS,

Whereby a large reduction in fuel, labor and repairs is obtained. **FACILITY AND EASE OF MANAGEMENT** is characteristic of this system.

Plans, specifications and superintendents furnished promptly and at reasonable prices. Correspondence solicited.

PRINCIPAL OFFICE:

504 Chicago Opera House, CHICAGO, ILL.

SITUATION WANTED.

Position wanted by a young draftsman, aged 27. Would like a position in a good architect's office in Milwaukee, Wis., or Chicago, or Detroit, Mich. Has knowledge of drawings, pen and pencil, sketch-plans and office work.

Address O. E. L., 917 Forest Ave., Kansas City, Mo.

SITUATION WANTED.

An architectural draftsman, well up in general design and details, and able to make thorough working drawings, desires an engagement. Address "Draftsman,"

Care of INLAND ARCHITECT.

WANTED.

A situation with an Architect, by a gentleman aged thirty, of superior education and character and a student, with considerable self-taught experience in the west drafting and supervising construction from own plans. Position desired more than salary. Address, W. I. HARWOOD, St. Albans, Vt.

Please mention **THE INLAND ARCHITECT** when corresponding with Advertisers.

THE INLAND ARCHITECT AND NEWS RECORD.

Vol. XIV.

ADVERTISERS' TRADE DEPARTMENT.

No. 1

Railroad Notes.

FROM August 21 to 28, 1889, inclusive, the C. B. & Q. R. R. will sell at half rates, or one fare for the round trip, tickets to Milwaukee and return from all points on its lines, on account of the National G. A. R. Encampment at Milwaukee. These C. B. & Q. excursion tickets will be good to return August 27 to September 5, inclusive; but by special arrangement, an extension to September 30 may be obtained by applying, prior to September 3, to the agent at Milwaukee having the matter in charge. Between Chicago and Milwaukee the tickets will be good for passage in either direction via the Goodrich Line of steamers, the C. M. & St. P. R'y, or the C. & N.-W. R'y. Tickets and further information can be obtained of C. B. & Q. ticket agents, or by addressing P. S. Eustis, general passenger and ticket agent, Chicago.

FIGURE IT OUT FOR YOURSELF.—It is not an example in arithmetic, neither is it a problem in geometry, but it is simply this, that in figuring out a route for your summer vacation, the delightfully cool summer and fishing resorts located along the line of the Wisconsin Central, among which Fox Lake, Lake Villa and Antioch, Ill., Waukesha, Cedar Lake, Neenah, Waupaca and Ashland, Wis., come vividly to view. Wisconsin has, within the last five years, become the center of attraction for more pleasure-seekers, invalids, hunters and fishermen than any other state in the Union, and each visit increases the desire to again see the charming landscapes, breathe the balsam fragrance that is a part of the invigorating atmosphere, wander through the colonnades of stately pines and hook the speckled beauties with a hand-made fly. Pamphlets, entitled "Fox Lake" and "Summer of 1889," may be obtained from Louis Eckstein, assistant general passenger and ticket agent, Wisconsin Central, Milwaukee, Wisconsin, or George K. Thompson, city passenger and ticket agent, 205 Clark street, Chicago, Illinois.

THREE MORE TRIPS OF THE FINEST TRAIN IN THE WORLD TO THE SEASHORE AND THE WHITE MOUNTAINS.—The next "Seaside and White Mountains Special," solid Pullman vestibuled train of the Chicago and Grand Trunk railway leaves Dearborn station, Chicago, Wednesday, July 31, August 7 and 14, at 5 P.M. The attractions of Niagara Falls, Thousand Islands, Rapids of the St. Lawrence River, Montreal and the glorious scenery of the White Mountains are all enjoyed by passengers on this modern hotel on wheels. The entire train, including dining car, barber shop, ladies' and gentlemen's bathrooms, library and observation car, with four magnificent Pullman vesti-

buled sleeping palaces, all lighted by electricity, runs through to the Atlantic coast without change of any car. The ladies should not overlook the special feature of a "lady attendant," who accompanies the train. Passengers for the White Mountains, Rangeley Lakes, Poland Springs, Portland, Bar Harbor, Old Orchard, York Harbor, Portsmouth, Isle of Shoals and all the seaside and mountain resorts of New England should secure accommodations early on this finest train in the world by applying to E. H. Hughes, general western passenger agent, Chicago and Grand Trunk railway, No. 103 Clark street, Chicago, Illinois. Tourist tickets to all Eastern summer resorts are now on sale, good to October 31.

Trade Notes.

THE opening of Havlin's Theater, between Eighteenth and Twentieth streets, on Wabash avenue, Chicago, has been in every way an unqualified success, and South Side people have reasons to congratulate themselves that this beautiful amusement temple is now under control of so capable and successful a manager as Mr. John H. Havlin.

THE Herendeen Manufacturing Company, Geneva, N. Y., have had just issued from the press a neat 100-page book (paper covers) descriptive by text and engravings of the well-known "Furman steam and hot-water heaters." It also treats of the philosophy of house-heating by this method of warming the more pretentious class of buildings, as well as contributes much other valuable information thereto which will be gladly received by the public. The closing pages are devoted to several hundred testimonials from those who have utilized the Furman in their buildings, all speaking in unmistakable language of its excellences.

A SUCCESSFUL experiment, valuable to the mining community, was made last week at the laboratory of the Joseph Dixon Crucible Company, of Jersey City, N. J., U. S. A. A piece of iron was used 10 inches long, 2 inches wide, and one-sixteenth of an inch thick. One half of its surface was painted with Dixon's Silica Graphite Paint, the other half left unpainted. It was then suspended for several days in a bath of dilute sulphuric acid. The acid bath was much stronger than any sulphur water met with in mining. Taking the iron from the bath, the unpainted part was found eaten off to about one-half its original bulk. The painted part did not sustain even the slightest blemish. This proves conclusively the ability of this paint to withstand sulphuric acid, and demonstrates its usefulness, particularly in mining, where iron piping is laid in sulphur water.

An Excellent Sash Pulley.

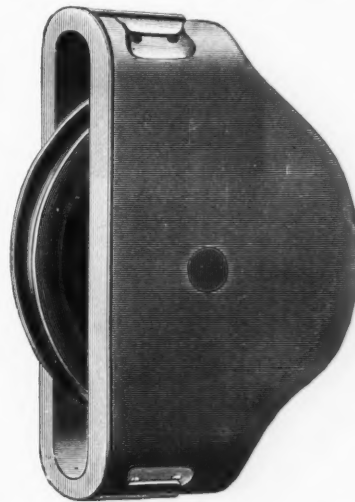
The accompanying cut shows the No. 21 Ideal Sash Pulley, manufactured by the Stover Manufacturing Company, Freeport, Illinois, which claims for it several points of excellence not to be found in any other make. The pulley wheel has a cone axle cast to it, under a new process, which is claimed by the manufacturers to greatly enhance the working qualities—

First, in point of accuracy.

Second, in the matter of durability and light running.

Third, rendering it perfectly noiseless in operation.

The bearings in case are made in reference to the cone-shaped axle of pulley, and when

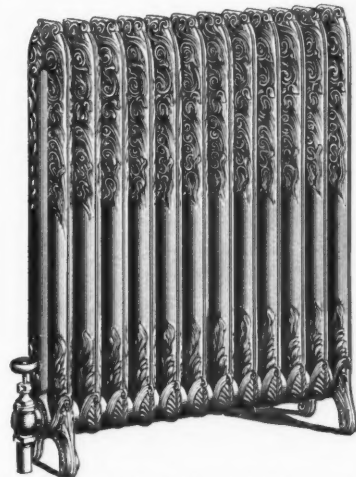


put to actual use, the weight of window and sash weight applied to the sash cord running over the pulley wheel causes it to run to a center, or midway between the two sides of case, thus relieving it from contact with sides of case and overcoming the friction and noise.

This company makes various styles of cone axle-bearing sash pulleys, together with a line of builders' hardware, which are already very popular with the trade. The pulley shown in this connection is more particularly adapted for the mill trade, as it is readily applied with mortising machines such as are in general use, or may be applied by hand in the usual way.

The company will, on application, send sample free, with catalogue illustrating the different styles of goods manufactured by them.

PERFECTION RADIATOR



ITS CONSTRUCTION
IS THE BEST.

*Loops contain positively full
areas of heating sur-
face claimed.*

Its appearance is the most artistic and ornamental, and can be decorated to harmonize with its surroundings, even when placed in apartments with most costly and elegant furnishings.

WRITE FOR CATALOGUE.

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The Osborne Steam Engineering Co.

Desire to call the attention of **ARCHITECTS AND OWNERS** to their system of construction for

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LIGHT PLANTS,

Whereby a large reduction in fuel, labor and repairs is obtained. **FACILITY AND EASE OF MANAGEMENT** is characteristic of this system.

Plans, specifications and superintendents furnished promptly and at reasonable prices. Correspondence solicited.

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504 Chicago Opera House, CHICAGO, ILL.

"MILWAUKEE CEMENT."

"THE BEST NATURAL CEMENT IN THE WORLD."

CAPACITY, 4,000 BARRELS PER DAY. -:- ANNUAL SALES, 400,000 BARRELS.

CORRESPONDENCE SOLICITED.

FOR UNIFORMITY OF GRIND AND ULTIMATE STRENGTH IT STANDS UNRIVALED.

MILWAUKEE CEMENT Co.,
154 WEST WATER ST., - - - MILWAUKEE, WIS.
DICKINSON BROS. & KING, AGENTS, 204 Market Street, Chicago.

KING'S WINDSOR CEMENT

FOR PLASTERING WALLS AND CEILINGS.

300 PER CENT MORE TENSILE STRENGTH, 200 PER CENT HARDER,
AND REQUIRES ONE-THIRD LESS LABOR THAN
LIME AND HAIR PLASTER.

Houses can be Occupied in from Four to Six Weeks Earlier than those
finished in the old method. Does not Chip, Pit nor
Crack. Any mechanic who understands
his trade can apply it.

Among prominent users of King's Windsor Cement are the following:

Hascal Dodge, Pittsfield, Mass.
H. Wales Lines Co., Meriden, Conn.
E. A. Catfield, New Haven, Conn.
R. G. Dun, New York.
L. Mandery, Rochester, N. Y.
J. J. Roberts, Plasterer, New York.
Morphy Bros., Amsterdam, N. Y.
J. P. Hier, Syracuse, N. Y.
N. Y. C. & H. R. R. R.

Geo. Stone & Son, Plasterers, New York.
Geo. C. Westinghouse, Pittsburgh, Pa.
Barnes & Ladow, Mechanicsville, N. Y.
New York & Northern R. R.
West Shore R. R.
Peddie Memorial Church, Newark, N. J.
J. (W. Halsy Wood, Arch.)
Lesley & Trinkle, Philadelphia, Pa.
James McGill, Washington, D. C.

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J. B. KING & CO.,

PATENTEES AND SOLE MANUFACTURERS,

24 State Street, - - - NEW YORK CITY.

Also Manufacturers King's Celebrated "Diamond" Brand Calcined Plaster.



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WARREN'S

Incorporated 1858

NATURAL ASPHALT ROOFING.

"ANCHOR BRAND."

TRADE MARK.

An outgrowth of over forty years' experience in FELT AND GRAVEL ROOFING, in both warm and cold climates, embracing about thirty years in New England and Canada.

20,000,000 FEET USED WITHIN 10 YEARS.

SEND FOR PAMPHLET CIRCULAR No. 6.

WARREN CHEMICAL & MANUFACTURING CO.,

114 JOHN STREET, NEW YORK.

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tractor, Engineer & Decorator.

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Sample Copy, 25c.

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tectural Books and Miniature Catalogue of
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23 Warren St., New York.

HOT-WATER SALESMAN WANTED.

Wanted, a traveling salesman for Hot-Water
Heater and Portable Gas Machine. Address,
stating fully experience, etc.,

DETROIT HEATING & LIGHTING CO.,
DETROIT, MICH.

WANTED

At once, an artistic draftsman to take charge
of office. Address, stating experience,

VARIAN & STERNER,
DENVER, COLO.

ELEMENTARY GRAPHIC STATICS
—AND THE—

Construction of Trussed Roofs,

A Manual of Theory and Practice.

By N. CLIFFORD RICKER, M. Arch.
Professor of Architecture, University of Illinois; Fellow
of the American Institute of Architects, and of the
Western Association of Architects.

One Octavo Volume, Cloth, 158 pages, 115 illustrations
Price, \$2.00.

INLAND PUBLISHING COMPANY,
19 Tribune Building, - - - CHICAGO, ILLINOIS.

THE INLAND ARCHITECT AND NEWS RECORD.

Vol. XIV.

ADVERTISERS' TRADE DEPARTMENT.

No. 4

Hamsley Metal Shingles.

The desirability of a roofing material that shall be less destructible than wood, more durable than gravel and tar, less expensive than slate, without the objectionable features of the ordinary tin process, and that shall be free of a proneness to leakage, and substantial withal, has been the goal for which inventive genius has been aiming. It seems to have been attained by the invention of the shingle known

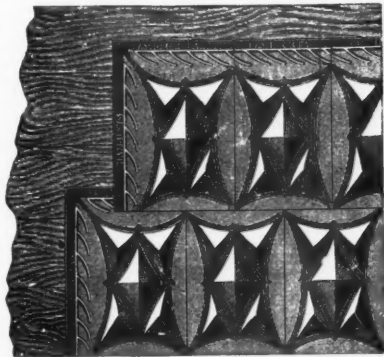


FIG. 1.

as the Hamsley Metal Shingle, which not only makes a sound, strong roof that resists all weathers and storms, but is highly ornamental as well, and adapted not only to roofing, but to the ornamentation of gables, sidings and such exterior parts of buildings as have heretofore been decorated by parti-colored slates and wooden shingles. Architects and owners who have adopted them in construction have not been backward in giving testimony of their worth, and that the manufacturers expect a largely increased market for them in the immediate future is plain, from the fact that the facilities of the plant have been greatly increased by the introduction of additional and newly constructed and rapid-working machinery.

A good understanding of the character and adaptability of this peculiar metallic roofing material may be gathered from the subjoined

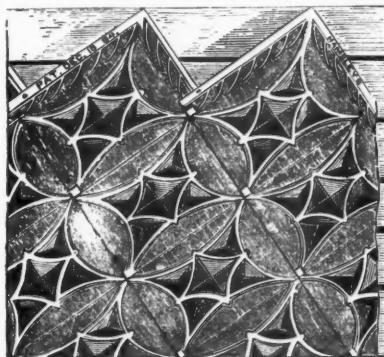


FIG. 2.

engravings and explanations. The first shows a section of roof covered with shingles of this pattern laid square; the second a section of roof (the most advisable method of laying them) covered with the shingles laid diagonally; the third shows the shingles detached and placed in such shape as they would take in forming a roof as shown in the second cut. For a further understanding it may be stated, these shingles are stamped out of a single piece of the best quality of tin plate, with an embossing in the center so arranged as to turn the water upon the center of the shingle in the next row. The sides, which underlap the succeeding shingles, have a long, straight rib, with several curved ribs extending over the metal some 2 inches. The opposite sides have an edge $\frac{1}{2}$ inch wide turned at right angles.

At the point B indicated in the third engraving, there is a slot $\frac{3}{4}$ inch long, depressed

on the side toward the curved ribs. On the opposite side is a slit $\frac{3}{4}$ inch long, having a tongue marked D in the engraving, which is used in joining the shingles together, and by

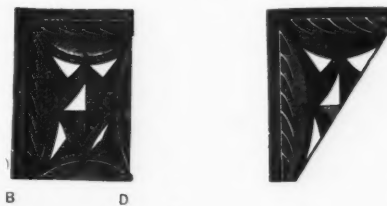


FIG. 3.

this means are securely interlocked. The fourth engraving gives a general view of the Hamsley Metal Valley and the method of connecting the shingles therewith. Figure 2 in this engraving is an enlarged section of the bending edge of the valley, and shows the lower edge of a shingle interlocked. Figure 3 shows the lower edge of the valley piece, and indicates how the edge is bent over to facilitate the insertion of the upper piece into the next lower section.

By this construction the manufacturers claim to produce a shingle strong and substantial; that cannot be turned up, after put in position, by the severest storm; that is impossible for the joints or laps to open, and has

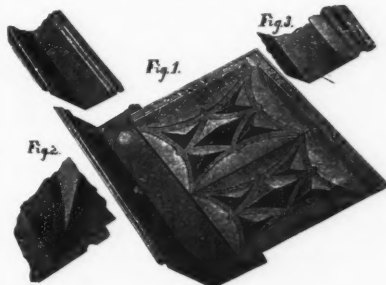


FIG. 4.

ample provision for expansion and contraction, and is a security from rain, snow, wind or fire.

A very attractive circular, explanatory and illustrative of these goods, has been issued by the headquarters of the Hamsley Metal Roofing Company, No. 18 Cliff street, New York, which is being sent to all applicants.

Railroad Notes.

THE coming season will probably witness a greater volume of tourist travel to Mexico and southern California than ever before. In the direction of Mexico, everything is new and interesting, and the inducements in the shape of low round-trip rates and unsurpassed car service via the Iron Mountain route from St. Louis, will induce many to visit those favorite winter localities.

THROUGH CARS WITHOUT CHANGE FROM CHICAGO TO PORTLAND, ORE.—The Wisconsin Central and Northern Pacific lines are now running through Pullman vestibuled sleepers and free colonist cars between Chicago and Tacoma, W. T., and Portland, Ore. To those familiar with the agonies of "changing cars," little need be said of the advantages possessed by a through line. To enter a car at Chicago and keep the same seat by day and the same berth by night until the journey's end is reached is a point that cannot be underrated. The colonist cars are a special feature of the through service, affording conveniences to the home seeker that are second only to those enjoyed by the traveler in his luxurious Pullman. With his own bedding brought with him or purchased in Chicago the colonist makes up his bed at the starting point and retires each night a "king in his own domain," until he reaches the far Northwest. The train known as the "Pacific Express," leaves the

Grand Central Passenger Station, at the corner of Fifth avenue and Harrison street, at 10:45 P.M., daily. For tickets, berths in Pullman or colonist sleepers, etc., apply to George K. Thompson, city passenger and ticket agent, 205 Clark street, or to F. J. Eddy, depot ticket agent, Grand Central Passenger Station.

Trade Notes.

ARCHITECTS Treat & Foltz are executing important additions to residence of N. K. Fairbank. Among other features the dining room is to be enlarged by a semi-octagonal addition, the sides and ceiling of which are filled with stained glass in delicate tracery design. Healy & Millet are making the latter.

THE Smith & Anthony Stove Company, of Boston, Mass., have issued a 100-page descriptive, illustrated catalogue of their multiple stoves, ranges, furnaces and products, which it would be well for architects and owners to have among their literature. The Hub stoves and ranges of these factors have a well-earned celebrity, a specialty being made of hotel and restaurant goods.

THE remaining contracts for the decoration of the auditorium building, namely, the frescoing of the rehearsal hall, main dining room and parlors of hotel and café have been awarded to Healy & Millet, who are executing frescoing of main hall. The work of Healy & Millet has thus far proved so satisfactory to the auditorium association that these contracts were awarded without competition.

CHARLES L. PAGE, for so many years known for the superior quality of his work in fire-place, mantel and tile work, has established a merchandise brokerage office at 337 Wabash avenue, and solicits architects, builders and owners to place their orders for wood mantels, tilework, grates, wrought-iron fences, grills and bedsteads, gas fixtures, stained glass, artistic furniture, curtains, draperies, carpets, and all house, office, store or bank furniture and fittings through him, and assures them of liberal treatment and scrupulous attention.

SWALLOWED HIS TEETH.—Last month Mr. J. A. Crawford, of Quincy, Ill., while drinking a glass of water had the misfortune to swallow his false teeth. Death resulted almost immediately. Just previous to the occurrence he drew an accident ticket issued by the Employers' Liability Assurance Corporation, Limited, of London, from one of the automatic ticket boxes now so commonly seen in railway stations and elsewhere all over the country. The company promptly paid the \$500 insured by the ticket. This is a pretty good return for 5 cents.

"WARMING, VENTILATING AND SANITARY CONSTRUCTION FOR SCHOOL AND PUBLIC BUILDINGS" is the title of a very readable pamphlet issued by the Fuller & Warren Company, Troy, N. Y., and Chicago, Ill. It is, as it purports to be, a "common sense" treatise on the principles, the methods and apparatus for healthful and economic results, and should be read by all who are interested in the construction of public buildings of whatever character, and also by those who would live in comfortable, healthful homes. It is a logical essay, expressed in simple language, such as may be understood by a mind of the commonest comprehension. The positions taken are illustrated by test diagrams; also by engravings of public buildings where the practical application of the theory has amply demonstrated to be correct, corroborated by the testimonials of parties knowing the facts. This firm has had a large and extended experience in the subject matter of their little book, having been for years the manufacturers of the well-known and popular Fuller & Warren furnaces, and know whereof they speak. This book ought to be in the library of all architects, county and school boards, and, in fact, of every owner or prospective owner of a building. By its perusal much perplexity may be avoided, and time and money saved. Copies will be sent on application to the Fuller & Warren Company, Troy, N. Y., or Chicago, Ill.

N. A. Boynton President.
C. B. Boynton Vice Pres.
E. E. Dickinson Secy. & Treas.

INVENTORS OF ALL
BOYNTON FURNACES ETC. WHICH HAVE BEEN
ON THE MARKET SINCE 1849

The Boynton Furnace Co.

Principal Offices
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Sole Man'rs of Boynton's Furnaces, Ranges,
Baltimore Heaters, WITH LATEST PATENT
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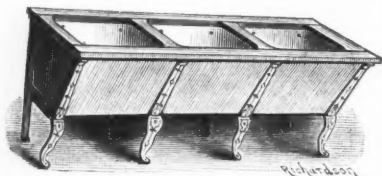
WORKS—PACIFIC AVE
JERSEY CITY, N.J.

STEWART CERAMIC COMPANY,

312 PEARL ST., Cor. Peck Slip, NEW YORK,

Sole Manufacturers, under Morahan's Patents, of the Celebrated

Solid White Crockery Stationary Wash Tubs.



SHOWING THREE TUBS SET UP.

THE ONLY PERFECT SANITARY TUBS
NOW IN EXISTENCE.

VERY STRONG.

No Seams to Open.

ABSOLUTE CLEANLINESS SECURED FOR ALL TIME.

WELL GLAZED.

WILL NOT ABSORB, LEAK OR DECAY.

The only Solid White Crockery Wash Tub ever made in the world. Do not buy imitations until you see the Genuine "Morahan's Patent" stamped on the front of every Tub. Washboard and Soap Cup molded in every set. Will outlast any house.

Solid White Crockery Sinks, Comprising Butler's Pantry, Kitchen, Slop, Etc.

Made of same material as the Tubs. Very strong, well glazed, no labor required to keep clean.

Liberal Terms to the Trade.

Send for Price List and Catalogue.

BARRETT'S SANITARY GOODS.



Warranted to Stand all Air or Water Tests.

Send for illustration of Barrett's Recessed Bowl, Stand-Pipe and Brass Trap, with Basin Support. A Perfect Sanitary Wash-Basin.

JAMES BARRETT,

193 Tremont Street,

BOSTON, MASS.

BRASS
URINAL
TRAP No. 2.

TRAP COVER

MEACHAM & WRIGHT,

MANUFACTURERS' AGENTS FOR

UTICA AND LOUISVILLE

HYDRAULIC CEMENTS

AND DEALERS IN

Lime, Michigan and New York Stucco
and Portland Cement,

98 MARKET ST., CHICAGO.

TELEPHONE 434

SEWER FIRE BRICK AND FIRE CLAY.

RHOADS & RAMSEY,
148 ADAMS ST.
(Rookery Building.)

Yards—111 North Oakley Ave.
35th St. and L. S. & M. S. R. R.,
and Englewood.

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GAS FIXTURES

AT FACTORY PRICES.

Special Inducements to the Trade.

Office and Salesroom at Factory,

67 & 69 S. Canal St., near Madison St.,

CHICAGO.

H. S. HOLDEN.

ROOFING

FOR STEEP OR FLAT ROOFS.

Applied by any one. One-third the cost of tin. Send for sample and circular free.

T. NEW MFG CO., 32 John St., N. Y.

B. F. NOURSE & BRO.,
25 Michigan Avenue, Chicago,
Northwestern Agents.

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THE INLAND ARCHITECT AND NEWS RECORD.

Vol. XIV.

ADVERTISERS' TRADE DEPARTMENT.

No. 3

Five Thousand Per Cent Interest.

A GOOD INVESTMENT.

PENNSYLVANIA HOSPITAL,
Philadelphia, October 11, 1889.
Col. Tuttnall Paulding, Manager Employers'
Liability Assurance Company, 416 to 420
Walnut street, Philadelphia:

DEAR SIR,—I am greatly obliged for your prompt attention to the claim made upon your company, on account of recent accident with which I met in being thrown from a car of the Philadelphia Traction Company. The tickets, upon which my claim was based, had just been drawn from one of your automatic accident boxes and the promptness with which my claim has been met is quite in accord with the great convenience in procuring your policies from the boxes.

The investment of 15 cents has resulted, within a few hours, in my receiving from your hands a check for \$750 to pay the claim for my serious accident. Again thanking you, I beg to remain,
Yours truly,

(Signed) JAMES L. BUTLER.

P. S.—My residence is 122 E. Upsal street, and my office with the Equitable Life Insurance Company of New York, at Harrisburg, where I shall be glad at any time to say a good word for your company should it be necessary.

The above was paid for the loss of the left arm, as the result of being thrown from a cable car on October 2, 1889.

The automatic ticket boxes of the Employers' Liability Assurance Corporation, Limited, will be found at railroad depots.

Deposit in the United States for the benefit of all policy-holders, \$550,000.

No one should travel without taking one or more of these tickets. Ten tickets can be taken, insuring up to \$5,000.

Trade Notes.

The well-known firm of Merchant & Co., Philadelphia, has just closed a contract with the United States government to furnish the mints with 100,000 pounds copper blanks for making pennies and 50,000 pounds nickel blanks for coining five-cent pieces. The firm report a large increase of business in their guaranteed roofing plates.

J. S. BULL & Co., of Cortland, New York, keep a large stock of Puget Sound red cedar and California redwood shingles for sale in random and dimension widths. Also all kinds fancy butts, ribbed and planed or rough. Architects and builders will find this a great convenience, as they will deliver them, freight paid, to any point. Samples free.

The Pullman Company are building some elegant cars to be used for Grafton's tours through Mexico the coming winter. These cars are specially designed for long trips and are veritable palaces on wheels. We advise our readers contemplating this grand trip of a lifetime, to send to J. J. Grafton, 199 Clark street, for a beautiful book, free, descriptive of these tours.

OWING to their business having grown too large for their present offices, the Gurney Hot Water Heater Company, of Boston, Massachusetts, will remove on November 15, 1889, to 163 Franklin street, corner Congress street, where they will have all their offices on the first floor and will be pleased to meet all inquiring friends. The offices will be heated by hot water, using the Gurney Heater and the new Gurney Radiator, and a full line of samples will be on exhibition on the floor. All interested are invited to call.

M. LEDWIDGE and John M. High have formed a partnership, under the firm name of Ledwidge & Co., and have opened a store at 238 Lake street, Chicago, for the sale of tin plate, sheet copper, galvanized iron, black irons, solder, sheet-zinc and tinnings' supplies generally. Mr. Ledwidge has hitherto been manager of the Chicago branch of Merchant & Co., of Philadelphia, his entire connection with that firm covering a period of six years.

He is, therefore, fully conversant with the requirements of the trade in which he has now embarked as a principal, and also enjoys a wide acquaintance. His partner, Mr. High, has had experience also in the Chicago iron trade, acquired through a connection with some of the large firms of the city.—*The Iron Age, New York.*

RUNDLE, SPENCE & Co., Milwaukee, Wisconsin, manufacturers of steam and gas fitters' brass and iron goods, have put a good deal of money, to judge from appearances, in a 200-page book, bound in flexible muslin covers, describing and cataloguing the varied product of their extensive establishment, which "goes without saying," covers about everything demanded in the practice of these two important trades. It will be understood that the book is a price-list as well. It will pay every steam and gas fitter well to have a copy of this book within easy reach when about making estimates.

MR. WILLIAM T. HUMES, well and favorably known throughout the builders' hardware trade of this country as vice-president and general manager of the Hopkins & Dickinson Company for the past six years and a half, has resigned his connection with this house to ally himself with the firm of Orr & Lockett, of Chicago. This firm makes a specialty of fine hardware, and in this line does a business second to none in the country. Mr. Humes brings to them a large experience, and will doubtless prove a valuable aid in increasing and extending their business throughout the West. Mr. Humes assumed his new position November 4.

We are informed that in the suit, in the eastern district, of the Bridgeport Wood Finishing Company, New Milford, Connecticut, *versus* New York Wood Finishing Company and others, for infringement of the celebrated Wheeler patent covering the use of ground silex, quartz, feldspar, etc., in wood filler, subpoenas were served on all the defendants, citing them to answer on the first Monday of November, 1889. Application for an injunction, during the pendency of the suit, was made to the court. The Bridgeport Wood Finishing Company has branches at 240 Pearl street, New York, and 211 East Randolph street, Chicago.

THE HON. A. S. Hewitt, ex-mayor of New York, is erecting a dwelling house at his country seat, at Ringwood, Passaic county, New Jersey, which for cheapness, originality, durability and fireproof qualities, will probably excel any structure ever erected. The ex-mayor first erected a balloon frame; this he covered inside and out with New Jersey woven wire fireproof lathing; on this he placed a moderately thick coat of adamant plaster, serving the roof in the same manner. As a result he will have a stone house, positively fire, damp and vermin proof, at less than one-half the cost of a cheap frame building and a thousand times more durable.

THE rapid strides that have been taken within the past few years toward a perfect system of house plumbing has been apparent to the least observing. Of late this journal has had occasion to call attention to several important plumbing appliances that emphasize this new era, and in this number it has the satisfaction of calling attention to a recent invention, or rather three of them, by Mr. P. H. Gundermann, a practical plumber of Chicago. They consist of a "check and waste" apparatus, a "flange trap" for connecting waste-pipes to sewers, and a "hand hole" to the sewer trap, by which that trap can be examined, substances removed and flushed without difficulty. By referring to page — of this number an intelligent understanding of this new departure may be arrived at through a sectional engraving of the "check and waste" and a detail engraving showing the full connections of the complete system—"check waste," "flange trap" and "hand hole." Explanatory text accompanies the engravings. To even an ordinary observer it seems quite plain that Mr. Gundermann's appliance is a good step in a right direction;

certain it is, he has such confidence in its merits and excellence, a confidence reinforced by practical testing, that he offers to guarantee it for five years, that is, that it will not, in that time, get out of order, and be absolutely sure in action all the time. Those who are at all interested in house building cannot afford to ignore this new candidate for plumbing honors.

ATTENTION is called to the new DeGolyer's Rock Finish Varnish, manufactured by the Watts DeGolyer Co. This company have long been favorably known all over the country, and now have an article of superior merit for wood finishing. The claims are that it produces a smooth and durable surface, impervious to the action of atmosphere or moisture of any kind, and will stand the influence of alkali, adhering to the wood like cement. The prices and terms of the company will always be found as favorable as any other first-class house offering similar goods, and its facilities for manufacturing are of the best.

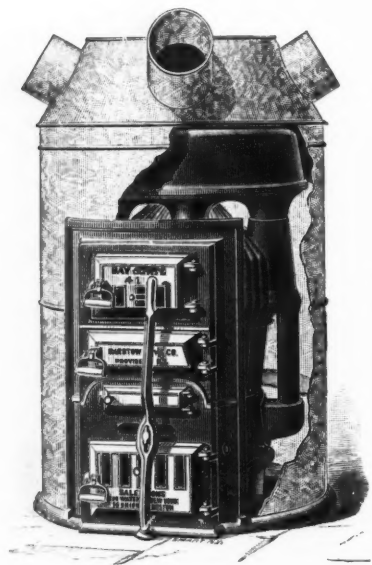
W. R. OSTRANDER & Co., Nos. 21, 23 and 25 Ann street, New York, have just issued a 104-page, revised catalogue and price-list (seventh edition) of their specialty goods, namely, speaking tube hardware, pneumatic call bells, house electric supplies, including electric bells, electric annunciators, electric gas lighting apparatus, etc., bell hangers' hardware and bell hangers' tools. The book is profusely illustrated with engravings showing the variety of goods catalogued. Among the pneumatic novelties are a speaking tube annunciator and "stationary phone," the latter enabling deaf persons to hear a speaker in a public hall, church or theater without difficulty. This book is good literature for an architect or builder to have, and offers many suggestions which will be welcomed in many quarters.

Railroad Notes.

THE coming season will probably witness a greater volume of tourist travel to Mexico and southern California than ever before. In the direction of Mexico, everything is new and interesting, and the inducements in the shape of low round-trip rates and unsurpassed car service via the Iron Mountain route from St. Louis, will induce many to visit those favorite winter localities.

QUICKEST TIME TO ALL POINTS IN TEXAS.—The Chicago & Alton Railroad, with its connection, the Iron Mountain Railway, at St. Louis, Missouri, now makes the quickest time of any route from Chicago to Galveston, Houston, San Antonio and the City of Mexico. The only line running Pullman buffet sleeping cars. For further information, and tickets, sleeping car reservations, etc., call at city ticket office, Chicago & Alton Railroad, No. 195 South Clark street, Chicago.

THROUGH CARS WITHOUT CHANGE FROM CHICAGO TO PORTLAND, ORE.—The Wisconsin Central and Northern Pacific lines are now running through Pullman vestibuled sleepers and free colonist cars between Chicago and Tacoma, W. T., and Portland, Ore. To those familiar with the agonies of "changing cars," little need be said of the advantages possessed by a through line. To enter a car at Chicago and keep the same seat by day and the same berth by night until the journey's end is reached is a point that cannot be underrated. The colonist cars are a special feature of the through service, affording conveniences to the home seeker that are second only to those enjoyed by the traveler in his luxurious Pullman. With his own bedding brought with him or purchased in Chicago the colonist makes up his bed at the starting point and retires each night a "king in his own domain," until he reaches the far Northwest. The train known as the "Pacific Express," leaves the Grand Central Passenger Station, at the corner of Fifth avenue and Harrison street, at 10:45 P. M., daily. For tickets, berths in Pullman or colonist sleepers, etc., apply to George K. Thompson, city passenger and ticket agent, 205 Clark street, or to F. J. Eddy, depot ticket agent, Grand Central Passenger Station.



Bay State Furnaces and Ranges.

..... ECONOMICAL .. POWERFUL .. DURABLE.

An experience of FIFTY YEARS in the Manufacture of HEATING AND COOKING APPARATUS. The most complete line of CAST-IRON AND STEEL-PLATE FURNACES in the country.

Estimates furnished upon application. Send for our treatise on Hot Air Heating.

BARSTOW STOVE CO.

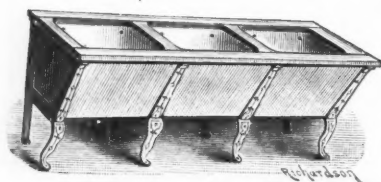
230 WATER STREET, NEW YORK. 56 UNION STREET, BOSTON.
PROVIDENCE, R. I.

STEWART CERAMIC COMPANY,

312 PEARL ST., Cor. Peck Slip, NEW YORK,

Sole Manufacturers, under Morahan's Patents, of the Celebrated

Solid White Crockery Stationary Wash Tubs.



SHOWING THREE TUBS SET UP.

THE ONLY PERFECT SANITARY TUBS
NOW IN EXISTENCE.

VERY STRONG.

No Seams to Open.

ABSOLUTE CLEANLINESS SECURED FOR ALL TIME.

WELL GLAZED.

WILL NOT ABSORB, LEAK OR DECAY.

The only Solid White Crockery Wash Tub ever made in the world. Do not buy imitations until you see the Genuine "Morahan's Patent" stamped on the front of every Tub. Washboard and Soap Cup molded in every set. Will outlast any house.

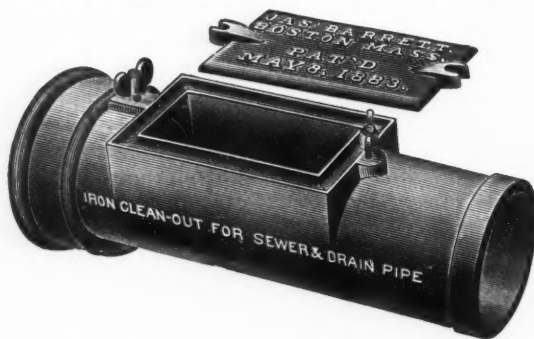
Solid White Crockery Sinks, Comprising Butler's Pantry, Kitchen, Slop, Etc.

Made of same material as the Tubs. Very strong, well glazed, no labor required to keep clean.

Liberal Terms to the Trade.

Send for Price List and Catalogue.

BARRETT'S SANITARY GOODS.

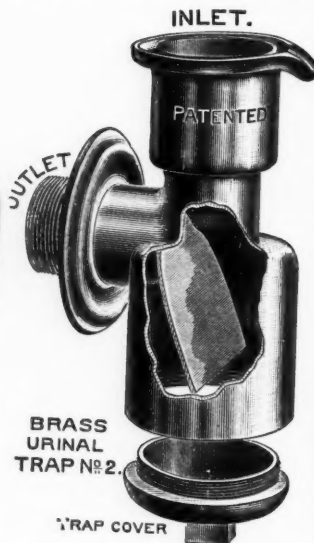


Warranted to Stand all Air or Water Tests.

Send for illustration of Barrett's Recessed Bowl, Stand-Pipe and Brass Trap, with Basin Support. A Perfect Sanitary Wash-Basin.

JAMES BARRETT,

193 Tremont Street, - - BOSTON, MASS.



Please mention THE INLAND ARCHITECT when corresponding with Advertisers.

MEACHAM & WRIGHT,

MANUFACTURERS' AGENTS FOR

UTICA AND LOUISVILLE

HYDRAULIC CEMENTS

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*Lime, Michigan and New York Stucco
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98 MARKET ST., CHICAGO.

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AND
FIRE CLAY.

RHOADS & RAMSEY,
148 ADAMS ST.
(Rookery Building.)
Yards—111 North Oakley Ave.
35th St. and L. S. & M. S. R. R.,
and Englewood.

PIPE

GAS FIXTURES

AT FACTORY PRICES.

Special Inducements to the Trade.

Office and Salesroom at Factory,

67 & 69 S. Canal St., near Madison St.,
CHICAGO.

H. S. HOLDEN.

ROOFING

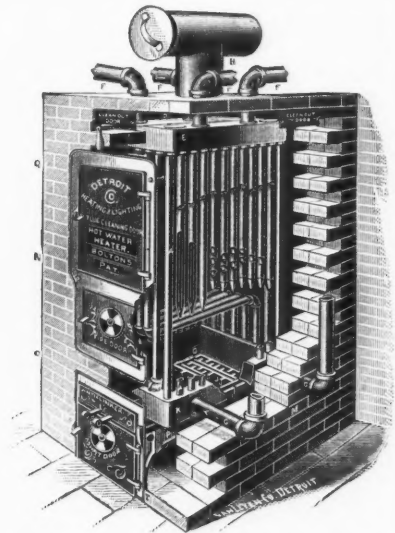
FOR STEEP OR FLAT ROOFS.

Applied by any one. One-third the cost of tin. Send for sample and circular free.

T. NEW MFG CO., 32 John St., N. Y.

B. F. NOURSE & BRO.,
25 Michigan Avenue, Chicago,
Northwestern Agents.

The Bolton Hot-Water Heater.



In the evolution of modern house construction, on no detail has more mental labor been expended than on the detail of house-warming. It is a long road, and pretty well macadamized with failures, from the old-fashioned fireplace with its open hospitality and standing invitation to every air current, within and without, up to the devices of the present hour. Therefore, when we come to consider the prominent house-warming methods of the day we should not magnify the few objectionable features that remain but of the many that have been overcome by the excellencies that have been forced by persistent mental effort to take their places.

Of the three leading house-heating methods—hot air, steam and hot water, the latter two take precedence, owing to their capacity to a wider and larger application from a common center, as no building, however large, is beyond their heating power. Steam heating having been longest in the field its merits are best known. It is only of late years that hot water has come into public notice as a house warmer, and it is noticeable that it is not only attracting general attention all over the country, but is quite frequently a written item in the specifications of a large number of architects who are called upon to plan buildings "with all the latest improvements," while eminent engineers and sanitary experts are open advocates of the system in preference to any other, giving as their reasons its healthfulness, safety from fires and explosions, simplicity of construction, economy of maintenance and durability.

There are several excellent hot-water heating devices before the public, all of them having merits peculiar to themselves. One of the most popular is what is known as the "Bolton Heater," manufactured by the Detroit Heating & Lighting Company, and which the company by an honorable competition is creditably striving for "first place" wholly upon its merits.

The accompanying engraving will give the examiner a good idea of the heater and the principles upon which it is constructed. The manufacturers make a point in the use of wrought-iron in the construction of their boilers as against cast-iron which, as is known, is liable to unavoidable defects, from the process of casting. The Bolton Heater, therefore, it will be understood, is constructed of light, tough, wrought-iron pipes, and so placed as to interpose a minimum of metal between the water and the heat of the fire and may be said to be practically one piece. The only cast-iron used is the two water chambers, forming respectively the base and top of the boiler. The upper chamber is pierced with flue holes for the escape of smoke and gas; the lower one surrounds the gate. It will be seen that all the pipes are vertical—to promote a free and

rapid circulation—except one row which passes horizontally from back to front, forming the top of the fire pot. Above the horizontal pipes it will be observed is an arrangement of vertical pendant pipes. These pendant pipes perform an important work, as inside of each there is a circulating tube, extending from top to bottom, and open at both ends, and thus become an auxiliary circulator, by taking the warm water from the top of the boiler down to the lower extremity of the pipe, just above the fire, and returning it many degrees hotter. Through this means it is claimed a more vigorous and rapid movement of the water can be had than by any other. The outer construction, when placed, is of brick, except the necessary doors, but there are no bricks or other non-conducting substances within, to absorb heat or produce clinkers. Every water-heating part is uniformly exposed to the direct heat of the fire. A more detailed description of this admirable house-warmer could be given, but the company has made that unnecessary by issuing some very readable literature, giving a most complete outline of everything, and also a large list of localized patrons who have fully tested the heater and know whereof they speak. Recalling attention to the fact that the "unpardonable sin" is ignorance, in the interest of the public welfare, we invite attention to said literature, which may be had on application at headquarters, either Detroit or Chicago.

Interesting Illustrations.

Messrs. Merchant & Co., Philadelphia, New York, Chicago and London, England, the celebrated manufacturers and importers of superior roofing tins, who some time ago sent out a souvenir phototype of the Eiffel Tower to the trade, have again shown their business enterprise and love of the artistic by printing and publishing three souvenir engravings of the renowned bridge constructed over the river Forth, Scotland, and which they are mailing to their patrons, architects, engineers and builders. Two of the three are photogravures; the third, an outline engraving to give an idea of the altitude of the bridge by comparison with seventy-seven of the most noted architectural and engineering constructions of ancient and modern Europe, including St. Peter's at Rome, the Old St. Paul's at London, and the Second Pyramid at Gheezeh. But two of the seventy-seven exceed the height of this famous bridge, namely, the Cologne Cathedral and Old St. Paul's at London. A brief comparison between the great Eiffel Tower and this mammoth bridge will give some idea of the magnitude from an engineering and construction point of view of the latter. The Eiffel Tower is 1,000 feet high. The Forth bridge if put on end would be 5,280 feet high. The Eiffel Tower contains 7,500 tons of steel. The bridge has 53,000 tons. Each of the two great spans is 1,710 feet. The Brooklyn bridge at New York covers 1,600 feet. Accompanying this last souvenir of this wide-awake firm is a very interesting descriptive "leaflet."

Suit Against a Paint Company.

Today in the circuit court a petition for an injunction and \$10,000 damages against the John A. McDonald Paint and Glass Company, was filed by Dobson, Douglas & Trimble, attorneys for Franklin K. and George B. Dexter, partners as Dexter Bros. The plaintiffs, who are paint manufacturers of Boston, Mass., set forth that they are the original makers of a valuable paint or stain for shingles, the trade mark being "Dexter Brothers' English Shingle Stain"; that they have advertised the product at great expense and caused the same to become widely celebrated and used. Two years ago they appointed John A. McDonald & Co. their western agents, which business house was constituted of John A. McDonald, doing business alone, and furnished the agent with large quantities of circulars, samples and advertisements to be scattered through the country. Subsequently Richard Hanrahan and William McDonald became associated with

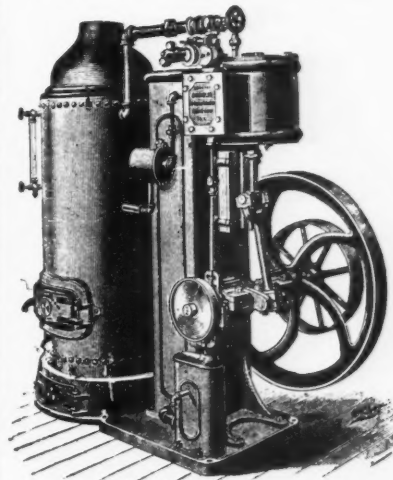
John A. McDonald in an incorporated company, which succeeded to all the business interests and liabilities of John A. McDonald.

It is further alleged that, by reason of the high standing that the stain had obtained through advertising and actual use, John A. McDonald & Co. daily received large orders for same, and that since the merging of the old house into the corporation many additional orders have been received. Plaintiffs also aver that instead of filling the orders so received with "Dexter Brothers English shingle stain" that John A. McDonald & Co. and the John A. McDonald Paint and Glass company supplied their customers with a cheap and fraudulent imitation manufactured by themselves, selling it under the name of and representing it to be the genuine "Dexter Brothers English Shingle Stain."

An injunction restraining defendants from further infringing upon plaintiff's copyright, and \$10,000 for past damages in that behalf are asked.

The manner in which Dexter Bros. discovered the alleged bad faith of their agents was through a letter of complaint from a Kansas man who thought that he had purchased some of the genuine article. As the home company had never received an order from this section attorneys were employed to inquire into the situation. Ten gallons of Dexter's English stain were ordered of the McDonald company and what purported to be that article was delivered. The attorneys for the Dexters state that the bill presented for payment was made out in the name of Dexter Bros.—*Kansas City Evening News, October 23, 1889.*

Willard Condensing Engine.



The extensive sale of gas engines and hot-air engines, notwithstanding the high cost of the engines, and of gas, reveals the very general demand for an engine of small power, say two to four horse power, for the use of small industries, which shall be perfectly safe, and the manufacturers of the Willard Condensing Engine (of which an illustration is given) who have been engaged in the manufacture of small engines of various types for the past ten years, believe that, in this new engine, which they have now put upon the market for the first time, they offer a motor which possesses all the advantages of other motors of this class, and is free from the structural faults that exist in some of the other machines. The manufacturers claim that the cost of fuel will not exceed one cent per horse power per hour; that it requires no watching; does not increase the rate of insurance, can be safely managed by a person having no knowledge of engines, and that it is absolutely safe under every and all circumstances, and cannot be exploded because there can be no steam pressure whatever.

The manufacturers, in putting this engine upon the market, desire to impress upon the public the fact that it is not a hot-air engine or

ADVERTISERS' TRADE DEPARTMENT—Continued.

a kerosene oil engine or a gas engine, but is a condensing engine using a small quantity of steam at less than one pound pressure, burning wood or coal, and is perfectly simple and reliable; making no noise or objectionable smell.

A full descriptive circular, with illustrations and prices, can be obtained by addressing Charles P. Willard & Co., 236 Randolph street, Chicago.

The Peerless Brick Company.

In the new Master Builders' Exchange, Philadelphia, on Seventh street above Chestnut, there will be located some very important concerns connected with the building interest, and your correspondent has just been hunting up some interesting items of information respecting some of them. Chief among the number will be the famous Peerless Brick Company, heretofore located at 1003 Walnut street. By November 1 they will move to a suite of two spacious offices, just at the head of the stairs, on the second floor of the Master Builders' Exchange. The first floor of this building, it may here be remarked, is to be devoted entirely to a permanent exhibition of all materials and manufactures entering into the construction of our modern buildings. And the Peerless Brick Company will probably have the largest and most important display of the entire series. It will consist of artistically arranged samples of the many shapes and designs and colors of the plain and ornamental bricks made by them, and also beautifully constructed fireplaces and mantelpieces made entirely of bricks manufactured by the company. There is not the least doubt but the exhibit of the company will attract great attention and be the means of materially stimulating the demand for their productions.

The Peerless Brick Company have been in business for about fifteen years past, and their business has from the first grown at a wonderful rate. The company started out with the expressed design of elevating the art of brickmaking to the high position that it ought by rights to occupy in this enlightened age. And how well this object has been carried out is shown by the extent to which the "Peerless" bricks are used in such a number of the largest, most costly and most elegant buildings in this and other countries. And it is acknowledged by the most competent critics that the company's work surpasses, in sharpness of angles and beauty of color and finish, anything produced either at home or abroad. The company now make over 500 kinds of bricks, in shapes, ornaments and colors, by means of which the skillful architect can produce effects impracticable with other materials, and combining the desirable elements of indestructibility, elegance and economy. Even stone buildings are much improved, from an esthetic point of view, by the introduction of the warm rich colors produced in these bricks and which cannot be had in stone.

The company's plant, at Old York road and Nicetown lane, this city, comprises some seventy acres of land. The works are inclosed and heated, so that brickmaking goes on all the year round. The capacity is from 15,000,000 to 20,000,000 brick per annum. The equipment of special, patented machinery, etc., is the finest of its kind in the world. The business of the company, it may be added, is under the management of the following gentlemen: Wm. H. Melcher, president and general manager; Charles Henry Hart, vice-president and solicitor; G. R. Vogels, assistant manager, and J. B. Johnson, secretary and treasurer. — *The Mercantile and Financial Times*.

Window Sash Cord.

It is now well understood by those having practical experience in the care of large buildings, and should be by the ordinary householder, that there is much more difference in the wear of different grades of sash cord than there is in the price of the good and the poor article. With an increase in cost of 2 or 3 cents per sash, a good cord may be obtained that will outwear half a dozen of the cheaper

kind. A good, braided cord, of first-class material and proper finish, will last nearly as long as the window.

The durability is greatly increased by a process of waterproofing, to which the Samson Cordage Works, of Boston, have been paying considerable attention of late. The tests which they have made indicate that it will, at least, double the durability of the cord.

There has recently been a great deal of soft, poorly finished braided cord put on the market, and it is not strange that those who have had experience with this grade only should express their disapproval. There is just as much difference, however, between a solid, braided cord with a smooth finish and a soft, rough cord, as between a steel ax and an iron one.

If architects would be careful to specify first quality goods, and would see that they are used, owners would have much less annoyance and expense in keeping their windows in order.

There is a good demand for the best, and with this in view, nothing but first quality cord is sent out with the "Samson" label.

Trade Notes.

HOTEL CASTLETON, St. George, Staten Island, is being stained with Cabot's Creosote Shingle Stains.

F. W. DEVOE & Co., New York, and Coffin, Devoe & Co., Chicago, have reason to feel proud, having taken the only gold medal awarded at the Paris Exposition for best varnishes. When it is understood that a most searching investigation was had by a jury composed of practical European master car painters, the character and significance of this award, as the "best high grade railway varnishes," becomes apparent and establishes the claim of the manufacturers that they make unexcelled varnishes.

THE motion for an injunction in the case of The Bridgeport Wood Finishing Company vs. The New York Wood Finishing Company, came on to be heard before his Honor Judge Wheeler, in the Circuit Court for the Southern District of New York, November 15, and was argued by S. J. Gordon, Esq., for the complainant, and Albert Comstock, Esq., for the respondent. The judge reserved his opinion, but handed it down the next day, sustaining the Wheeler Patent and ordering the injunction to issue.

IMPROVEMENTS will never cease so long as the needs and the genius of humanity exist. Every day something or other is projected to fill "a long-felt want." The "Goodrich self-heating and folding bathtub" is among the latest candidates for public favor and, unless all signs fail, it will be elected by a large majority. In other words, will find a welcome in thousands of homes where it is the one thing needful. As its name indicates, whether there are hot water appliances or not, it is possible to have a neat, cosy, comfortable bath without a special bathroom and bathroom appendages and appliances, simply by an attached local heat from a gas jet, gasoline or kerosene burner, and when you are through bathing, all there is to show for the privilege is a neat, ornamental piece of furniture standing in the room. See what Mr. T. C. Mosley, 225 Dearborn street, Chicago, has to say about it in his advertisement in the INLAND ARCHITECT.

THE Babcock & Wilcox boilers received the *Grand Prix*, the *Diplome d'Honneur* at the Paris Exposition, the highest award given to any exhibitor. This award was not cabled with those to American exhibits, because, the boiler being made in their Glasgow shops, it was placed in the British section, and the award was made to the Babcock & Wilcox Co., as English exhibitors. This acknowledgment of the superiority of this boiler is the more noteworthy because of the high character of the jury, and because from the first the manufacturers have endeavored to build their business entirely upon the merit of their manufacture, and from the standpoint that a steam boiler cannot be too good or too safe. That

they have succeeded in this is shown by the fact that their business is now several times the largest in the world in their line, and their boilers are favorably known and in use in every country on the globe.

Railroad Notes.

BURLINGTON ROUTE TO OMAHA, LINCOLN AND DENVER.—The best train to the above points is "The Burlington's Number One" solid vestibule train, with through dining and reclining chair cars and sleepers, leaving Chicago at 5:30 P.M. daily. Tickets via the Burlington Route can be obtained of any ticket agent of its own or connecting lines.

BURLINGTON ROUTE TO THE PACIFIC COAST.—It is the only line by which from Chicago, Peoria or St. Louis you can reach the Pacific coast, either via St. Paul or Minneapolis, via Denver, via Council Bluffs or Omaha, or via Kansas City or St. Joseph. Tickets via the Burlington Route can be obtained of any ticket agent of its own or connecting lines.

THE coming season will probably witness a greater volume of tourist travel to Mexico and southern California than ever before. In the direction of Mexico, everything is new and interesting, and the inducements in the shape of low round-trip rates and unsurpassed car service via the Iron Mountain route from St. Louis, will induce many to visit those favorite winter localities.

BURLINGTON ROUTE TO THE WEST, NORTHWEST AND SOUTHWEST.—No other railroad has through car lines of its own from Chicago, Peoria and St. Louis to St. Paul and Minneapolis, to Council Bluffs and Omaha, to Denver and Cheyenne and to Kansas City and St. Joseph. Tickets via the Burlington Route can be obtained of any ticket agent of its own or connecting lines.

EXCURSION TO CANADA.—The Chicago & Grand Trunk Railway has arranged for a Canadian excursion, leaving December 20, 21 and 22. Tickets good to return up to and including January 7, 1890. Tickets will be sold to all points in Canada at very cheap rates. For full particulars and information, apply to E. H. Hughes, General Western Passenger Agent Chicago & Grand Trunk Railway, 103 South Clark street, Chicago.

QUICKEST TIME TO ALL POINTS IN TEXAS.—The Chicago & Alton Railroad, with its connection, the Iron Mountain Railway, at St. Louis, Missouri, now makes the quickest time of any route from Chicago to Galveston, Houston, San Antonio and the City of Mexico. The only line running Pullman buffet sleeping cars. For further information, and tickets, sleeping car reservations, etc., call at city ticket office, Chicago & Alton Railroad, No. 195 South Clark street, Chicago.

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THE INLAND ARCHITECT AND NEWS RECORD.

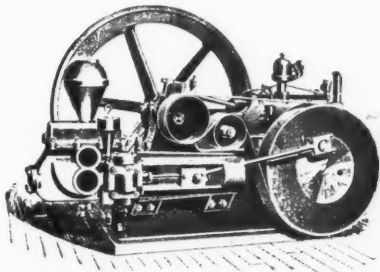
Vol. XIV.

ADVERTISERS' TRADE DEPARTMENT.

No. 8

Otto Gas Engine and Pump.

There is during summer and spring season often complaint made by the tenants and visitors to our large office buildings of the heat, odor and coal dust emanating from the basements, where boilers are left going to supply the power required for elevators or pumps. The steam heat, which is such comfort and convenience in winter, becomes a nuisance in summer time. It serves the purpose to supply power to the elevators, and can, therefore, not be stopped. Many owners of buildings have stood before this dilemma, but have not been slow in solving it by using gas power for elevators and pumps, and low pressure steam in winter for heating. They have felt benefited by the more simple and safe appliances of this combination, and also have saved in fuel and



SIZE B-ENGINE AND PUMP.

cost of attendance, as less skilled attendance can be used and the care for the machinery need not be so continuous and constant, and does not involve the responsibility of high pressure steam for heating and power. In consequence of this, gas-power pumping plants of considerable capacity have been used, and the running cost of some fifty of them in Chicago was found to average only \$29.30 per month for each hydraulic elevator.

For apartment houses or private residences where hydraulic elevators are now frequently introduced, the Otto Gas Engine Works have designed the combination herewith illustrated. The capacity is about 2,500 gallons per hour for a height of about 100 feet, and the pump is driven by belt in a noiseless manner. It is also provided with the well known by-pass valve used on the combinations of heavier capacity and by which the delivery of water is kept in proportion to the needs of the elevator. Many architects have doubtless felt a want for a gas engine pumper of moderate capacity, and will certainly welcome the new size and design.

Trade Notes.

ATTENTION is directed to advertisement in this number of Merchant & Co. The firm announce that Messrs. Houston & Harris, of Minneapolis & St. Paul, represent in those cities Merchant's guaranteed roofing plates, and have a full stock of all regular sizes and thicknesses.

THE Cincinnati Corrugating Company, manufacturers of corrugated iron roofing, siding, ceiling, arches, lath, etc., have favored this journal with a copy of their new catalogue and price-list, which has as a frontispiece an engraving of their new rolling mill plant at Piqua, Ohio. The letterpress gives a full description of the company's output and methods of utilizing the same. It is a timely text book, since iron is becoming so great a factor in modern building, and no doubt will be welcomed by all who are actively engaged in building operations.

ON former occasions THE INLAND ARCHITECT found cause for reference to the Bower Sewer Gas Trap and it has become so well known to the plumbing fraternity as a simple and effective device, that a description of its peculiar construction is unnecessary. That its place in the market is not ephemeral is quite apparent from the increased and growing

demand, which must certainly be gratifying to the manufacturers. It evidently has come to stay with the best sanitary plumbers' supplies. Those, if any, in the trade unacquainted with this trap can glean an idea of its construction and mode of appliance and operation from the cut in the advertisement in this paper and can get fuller particulars by addressing the company at Cleveland, Ohio.

THE coming season will probably witness a greater volume of tourist travel to Mexico and southern California than ever before. In the direction of Mexico, everything is new and interesting, and the inducements in the shape of low round-trip rates and unsurpassed car service via the Iron Mountain route from St. Louis, will induce many to visit those favorite winter localities.

THE A. A. Griffing Iron Company, of Jersey City, New Jersey, and Chicago, Illinois, manufacturers of the Bundy Radiator, for steam or hot water heat, have just published a handsome quarto illustrated catalogue, giving full information regarding this very popular house-heating device—whether public buildings, stores, churches, hotels or family dwellings. This publication has been made necessary by very many improvements that have, through experience, been taken advantage of, so much so that former catalogues and illustrations fail to present to the building public the progress made within the past two years. The catalogue gives the names and residences of several thousand patrons scattered all over North America, and some of them in the Old World. The catalogue should form a part of every architect's literature, and be found among the tools of all wide-awake steam-fitters.

A GREAT many manufacturers are puzzled how to make or obtain what is now called a "sixteenth century finish." This finish can be obtained very readily and improved on by skilled workmen by using the Bridgeport Wood Finishing Company's "sixteenth century water stain." In using this where it is intended the oak should be dark, the wood should be stained in such places and blended as is desired, and when dry filled over with their antique oak or walnut wood fillers. On quartered oak a very nice sixteenth century finish is obtained by staining the oak with their sixteenth century water stain, and with a cloth, rubbing it off well, in this way the hard parts of the wood are wiped entirely clean, thus allowing them to show prominently, and then by filling the oak over with either their antique oak or walnut wood fillers, and, rubbing that off, a very beautiful result is obtained. Some very fine work done by this method is now on exhibition in New York. The result may also be accomplished by first filling with the antique oak filler, and then in spots staining with their sixteenth century oil stain.

THE following has been received, and is strong evidence of the merit of the goods mentioned:

The Joseph Dixon Crucible Company, Jersey City, New Jersey, closes 1889 with satisfaction. Our business has been larger in every branch than in 1888. Our chief new departure in 1889 has been in the large increase of equipment at our Graphite Mines at Ticonderoga. We have laid the lines there for a five years' continuous run—tearing down and rebuilding almost everything much larger than before.

The specially large increase in the sales of Graphite Paint, Graphite Grease, Graphite Oils and other Graphite lubricants, has pushed us to this. The sales of our standard and well known Dixon Stove Polish, Dixon Crucibles, and Dixon "American Graphite" Pencils have also largely increased.

Our plant now includes five steam engines with a total of 375-horse power, nine steam boilers of 600-horse power together, and the use of 150-horse power water power.

We employ 550 persons, and our pay roll averages \$4,500 per week. We have direct

connections with the telegraph companies and the Long Distance Telephone Company.

So far as we can see the prospect for 1890 is bright.

JOHN A. WALKER,
Secretary and General Manager.

Railroad Notes.

QUICKEST TIME TO ALL POINTS IN TEXAS.—The Chicago & Alton Railroad, with its connection, the Iron Mountain Railway, at St. Louis, Missouri, now makes the quickest time of any route from Chicago to Galveston, Houston, San Antonio and the City of Mexico. The only line running Pullman buffet sleeping cars. For further information, and tickets, sleeping car reservations, etc., call at city ticket office, Chicago & Alton Railroad, No. 195 South Clark street, Chicago, Robert Summerville, city ticket agent.

THROUGH CARS WITHOUT CHANGE FROM CHICAGO TO PORTLAND, ORE.—The Wisconsin Central and Northern Pacific lines are now running through Pullman vestibuled sleepers and free colonist cars between Chicago and Tacoma, W. T., and Portland, Ore. To those familiar with the agonies of "changing cars," little need be said of the advantages possessed by a through line. To enter a car at Chicago and keep the same seat by day and the same berth by night until the journey's end is reached is a point that cannot be underrated. The colonist cars are a special feature of the through service, affording conveniences to the home seeker that are second only to those enjoyed by the traveler in his luxurious Pullman. With his own bedding brought with him or purchased in Chicago the colonist makes up his bed at the starting point and retires each night a "king in his own domain," until he reaches the far Northwest. The train known as the "Pacific Express," leaves the Grand Central Passenger Station, at the corner of Fifth avenue and Harrison street, at 10:45 P.M., daily. For tickets, berths in Pullman or colonist sleepers, etc., apply to George K. Thompson, city passenger and ticket agent, 205 Clark street, or to F. J. Eddy, depot ticket agent, Grand Central Passenger Station, near Harrison street bridge.

THE NATIONAL ASSOCIATION OF BUILDERS.—At this date the attendance promises to be large at the annual meeting, to be held in January, at St. Paul, consequently transportation arrangements for members of the association and their families are beginning to be considered, in view of which, bear in mind that the Burlington route, C. B. & Q. R. R., runs solid trains with unsurpassed dining and sleeping car service from Chicago to Minneapolis. For the greater part of the distance its tracks skirt the east bank of the Mississippi river, amid such a wealth of charming scenery that the Burlington's line to St. Paul and Minneapolis has been aptly called the "picturesque line." The Burlington route has, in addition to its line from Chicago, two lines from St. Louis to Minneapolis and St. Paul, one via the east bank and one via the west bank of the Mississippi river; the east bank line having direct connection from Peoria. One cannot help being pleased with the journey to St. Paul and Minneapolis, if it is made over the Burlington route. Especially is this the case when to unsurpassed facilities is added a never-ending panorama of delightful scenery en route, as the road follows the bank of the Mississippi. Of this a noted press correspondent has written: "The whole journey to St. Paul and Minneapolis is a delight. Woodland and prairie, farms and towns, on the one hand; the winding river, the passing steamers, and the most charming scenery on the other." If you are contemplating going to the National Association meeting at St. Paul, and wish further information in regard to the facilities of the Burlington route to that point, please communicate with the nearest of its advertised representatives, or address P. S. Eustis, general passenger and ticket agent, Chicago, Burlington & Quincy Railroad, Chicago, Illinois.

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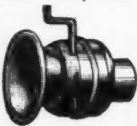
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PROPOSAL.

NOTICE TO ARTISTS.

STATE SOLDIERS' AND SAILORS'
MONUMENT COMMISSION,
INDIANAPOLIS, IND., U. S. A., Nov. 25, 1889.
Sealed drawings of designs and proposals for the
erection of a statue, "Liberty," upon the State Sol-
diers' and Sailors' Monument, now being built in
Circle Park, this city, will be received at this office,
room 51, State House, until 2 o'clock P. M., May 1, 1890.
The right is reserved to reject any or all designs and
proposals, without cost to this commission. The
official Instructions and Code for competing artists
will be forwarded upon application.

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