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Draughtsmen, Attention!

THERE seems to be quite a demand at present for good architectural draughtsmen, and we have frequent calls from architects who are looking for such help. If draughtsmen needing work will send us their address, we shall probably be able to place them in communication with architects who will employ them. Address THE INLAND PUBLISHING Co., 17 Tribune building, Chicago, Ill.

THE question of convict labor will not down. It has become one of the troublesome, if not one of the most perplexing, questions of the day, and confronts the legitimate manufacturer and the honest laborer at almost every turn. Whether the circumstance is an unusual one or not, the men who prate the loudest against convict labor are not at all times sincere in their convictions. For instance, all the material of one of the most costly and elegant marble palaces reared in Chicago, although still in an unfinished state, has been prepared by convict labor. The contract for the building was let by the day; the marble, in the rough, was brought from Vermont to Joliet, and there cut into form by prison labor. The marble finishings alone in the interior of the truly palatial residence cost \$250,000. The whole structure when completed will have cost well nigh to \$1,000,000. And yet its proprietor has always been openly opposed to convict labor when coming into competition with the work of the legitimate contractor. To have pursued any other course would have been a great detriment to his business interest. With him, however, theory is one thing and practice another. The question of convict labor has been discussed almost to exhaustion, and it would seem very little that is new could be said for or against it. The recent publication of bids for convict labor in Illinois has, however, as is usually the case, stirred up the small manufacturers, who are unable to give the bond required, or, in times of business depression, to keep the convicts employed and carry the accumulated product.

IN some lines of business the injury inflicted on small manufacturers by convict labor is so great that many of them are driven out of the trade. As an illustration of the case, a manufacturer of Chicago puts it in this way:

"I pay my girls twenty-five cents per dozen pairs for cotton socks, and they can make about four dozen pairs per day, or perhaps their wages may not average over five dollars per week. At the figures bid by some of my competitors for convict labor, the cost of manufacture will not exceed eleven cents per dozen, and that, too, without any expense for rent, fuel, watchmen, etc., everything except machinery and stock being furnished by the State. Is it surprising, then, that manufacturers employing convict labor can undersell me 20 to 30 per cent? It is just the same with many other industries. Penitentiary-made boots and shoes, saddles, chairs, and what not, compete on all hands with the same goods made by free labor, to the serious loss of the manufacturers."

When asked the question what remedy he had to propose to a system which works so great an injustice to many well-meaning and honest manufacturers, he could only say that the whole matter rested with the legislature. He made the suggestion, however, to have a law passed that no convict-labor contracts should be let at a figure under 20 or 25 per cent less than the prevailing rate for free labor of the same class. Even then employers of convicts would have a great advantage, not only of the difference in the price of labor, but also in the matter of rents, etc.; but employers of free labor would not be driven out of the market. Very few persons who have not examined into the matter can form any idea of the immense profits derived from convict labor under the existing system. The wages of the convict should be made to benefit himself as well as the State and his employer. To this end two plans might be pursued: one would be, to pay half his earnings into the public treasury, and, if he had a family, pay the other half to his wife and children. If he is not married, let half his earnings be held until his term expires and then paid over, thus enabling him to start out fairly on the path of virtue if he is so inclined. The other plan is, to divide the convict's wages into three parts—one for the state, one for his family, and the other third to be kept for himself. If convicts can not be debarred from competing with honest mechanics in the line of any of the trades, then the basis of competition could at least be in some degree equalized.

ANY city ordinance which imposes a burden upon any one class of citizens to the exclusion of others, who ought, in all justice, to be held equally liable, cannot prove otherwise than a peculiar hardship upon those affected by it. When a new building is to be erected, the masons are always the first on the ground. In Chicago, the ordinance, as it stands, requires the mason contractor to see that the permit for the building has been properly issued, and he must also go to the water office and arrange for the use of water for the building in process of construction, and make a deposit and give bond to indemnify the city against any and all loss that may be sustained by reason of the placing in the streets of any material for the construction of the building, or making any excavations in and about the work to be done pending the completion of the structure, and to leave the street in as good condition as it was when used for the deposit of material. After this bond is given the mason proceeds with his work, and in many instances has the debris occasioned by his work all removed, pending the coming in of the contractors, or while the work of the plasterer, the carpenter, the plumber, the furnace-builder, or the slate-roofer, is going on; yet he must leave his deposit with the city; his bond must continue to be in force, and the liability of himself and his surety attached, in case an accident should occur long after he has completed his contract, removed his appliances, and what material or waste might have been left, and in many instances after the owner has accepted his work and settled with him.

THE injustice of this building law lies in the fact that no matter how many other contractors there may be engaged on the same building, the mason is the sole party upon whom the responsibility rests for maintaining danger signals at night, and upon him also rests the responsibility for any damages that may occur by reason of any act or omission on the part of any other contractor, or contractors, engaged upon the same building. At a recent meeting of the Master Masons' and Builders' Association this question of requiring the contractor of the mason work to give bonds to indemnify the city against damage for accidents from obstructions, etc., was brought up for consideration, and a plan was suggested which proposes to place the several contractors on an equal footing as to liability, and remove the burden from one class alone. It is also proposed to suggest to the council that the ordinance be so amended that the building department shall be authorized to grant to the owner, with his permit to build, the right to use water and have him execute his indemnity bond at the same time, or in the same office, so that all business with the city pertaining to the erection of a building may be transacted in one office, and not in several different departments, as it now is. This, it appears to us, is the better plan, and when this matter is thoroughly understood, owners of property who contemplate building will not interpose a single objection to a law which very properly divides the responsibility equally with all contractors, from those who lay the foundation-stone of the building to those who put on the roof. Numerous cases of unreasonable hardship are not wanting to show that the ordinance as it stands is very far from being even-handed, and its amendment in the form suggested ought to receive proper consideration.

THE Anti-Metric Society has, for want of something better to engage its time, been discussing the question (as though it had any bearing upon the ultimate destiny of architects) whether or not Joseph was an architect. Mr. Lewis Biden, Portsea, England, writes: "Approaching the Great Pyramid of Egypt from any direction, it presents the form of

the Greek letter Delta, and its shape was probably the origin whence tracts of country between the divergent mouths of rivers became so named generally. The entrance approximately exhibits the Alpha, while the boss on the granite leaf shows the Omega." A letter from J. K. Hornish, of Denver, Colo., inquires if the entrance passage of the pyramid looks out on the present north star. Rev. H. Z. Wood answered that the north star is too high by $2^{\circ} 39', 45''$ to be seen from the depths of the entrance passage of the pyramid. A letter from Rev. E. P. Ingersoll, of Rosevale, France, sharply criticised Dr. Redfield's supposition that the architect of the great pyramid was Joseph. The doctor defended his position. A discussion ensued, participated in chiefly by Dr. Redfield, Messrs. Lattimer, Gage and Bond. There was also some discussion on Freemasonry. The meeting where these proceedings took place was Cleveland, Ohio, where a number of the best architects in the country reside. We are glad to know that each and all of them were too busy with their plans and contracts to participate in a discussion of little benefit to either their profession or to the world at large.

THE strike of the journeymen carpenters was foolish mainly because the majority of strikes are foolish; but it is a fact that carpenters receive the lowest remuneration for their work of any of the building trades, considering the skill required and the quantity of tools necessary. But the rate of wages for good carpenters is kept down by those who have not thoroughly learned their trade and call themselves carpenters. There is also a check from another source, and that is foreign emigration. One contracting firm in Chicago keeps a man at the depots for the purpose of picking up Scandinavian workmen as they arrive, and as they know nothing of the rate of wages paid they are hired at a low price, and with a little education can successfully compete with the less skillful grade of American workmen. This condition of things makes a union, as unions now are conducted, unjust; and while good workmen can command good wages independent of a union's demand, it prevents the man of less skill from working, or else compels the contractor to pay more than is right to an inferior workman. When unions will organize on a sensible and intelligent basis, make their organization a graded school, where each member has a standing according to his capability, and the rate of wages paid governed by that, and when they become so stable and reliable that a union card will take the place of the apprenticeship papers of the old world, then, and not till then, will unions be successful, or anything but a continual injury to both the manufacturing or constructing interests and the members themselves.

AS Chicago is situated, with a broad expanse of prairie on one side and the blue waters of Lake Michigan on the other, all the conditions, taking the climate into full consideration, are as favorable, and even more so, for an atmosphere during the greater part of the year as clear as that which prevails in Colorado. No good citizen will undertake to say that such a consummation every day in the week is not to be devoutly wished, nor will anyone deny that such a result can be obtained in only one way, and that is by a rigid enforcement of the smoke ordinance. The smoke nuisance is a public and not merely a local question. Every resident of this city ought to feel an interest in its abatement, and especially those who are largely interested in building enterprises and those who are owners of costly business structures, as well as private residences. We will venture the assertion that not one person in a hundred, who did not know the fact, would ever suspect that the stately building on the northeast corner of State and Washington streets is composed of Vermont mar-

ble, for certainly its smoke-begrimed walls give it the appearance of the commonest stone. Whatever architectural beauty many of our stately public and private buildings may possess is almost hopelessly marred by the dense amount of sooty carbon which falls like a pall over the city, besmearing and almost ineffaceably injuring everything with which it comes in contact. It is not desirable that the law should throw any impediment in the way of our commercial or manufacturing progress, as any legal interference with the industrial interests of the community is to be deprecated and avoided. Yet, since it has proved that a more efficient process of combustion can be secured, even in the case of bituminous coal, so as to obviate the nuisance of smoke, and, at the same time, to be a positive advantage to the consumer, there is no hardship in compelling the adoption of the requisite means for that purpose, when it will confer so great a boon on the rest of the community. It can no longer be said that the difficulties arise from our ignorance of the constitution of fuel, or of the laws of combustion, but from practical obstacles, such as necessarily arise from the variable production of gaseous and other volatile products, and the want of a system and regularity which attends the management of a furnace. Habits of economy and attention to a few simple rules, have not been sufficiently enforced, and it is obvious that much may yet be done in establishing and carrying out a well organized plan of operations. If the management of furnaces in our large printing establishments, our public school buildings, hotels, and a hundred other places where manufacturing proper is not carried on, were consigned to men properly trained for their respective duties,—not to speak of the many excellent smoke-preventing devices which are in the market,—many of these difficulties would vanish, and the atmosphere of our city would become more pure; the architectural beauty of our public and private buildings would be preserved; the general health of the city would be improved; personal discomfort would be lessened, and, from an economical point of view, the saving of fuel would be large.

THAT Western architecture has advanced to a stage where it can be favorably compared with that of Eastern cities, and even Europe, is evidenced by the reproduction of Pullman's office building in the *Building News*, of London, from our illustration in the edition of February. This piece of enterprise on the part of the great building journal of England is to be commended, as also their accurately copying of the descriptive article attending it. In recognizing in this building the genius of its architect, who has given to Chicago so magnificent a structure, the journal is to be commended. It is fortunate for the architectural profession that the possibilities of lithography are such that "absorption" can be practiced by any publisher at any distance, and that at small cost. We are glad to extend full permission to our foreign contemporaries to use our illustrations for the benefit of their patrons whenever they see in them the peculiar merit to warrant their reproduction.

UNTIL within a recent period a practical knowledge of photography was the exclusive property of those who earned their living by it; today the art is so simple, and the instruments and materials for taking pictures are so cheap, that it affords to youth an agreeable and profitable amusement, and to a great variety of trades and professions a most important auxiliary. But to very few if any professions may this simple art be made of more practical use than to architects. By the use of an amateur outfit, which may be obtained at small expense, they can in a few minutes secure an exact copy of any drawing, and the economy in time and money by this

process, as compared with a copy by the ordinary method, is as one to ten, and the result is far more satisfactory, for there is no possibility of error in the reproduction. But its utility is not confined to the office. The architect may carry it with him in his rambles over the country, and find it a most enjoyable traveling companion, and a very serviceable one, for he can readily obtain photographic views of architectural studies that will be more correct in detail than he could obtain by any other means. Building sites, buildings in course of construction, or completed structures, may be quickly photographed, or sketches and drawings that he finds when away from home and that he deems worthy of copying. So many and important are the benefits to be obtained from the dry-plate process, it would seem that it must be an indispensable part of the outfit of every architect. The profession will do well to give the matter attention. Papers descriptive of the art in all its branches may readily be obtained from dealers in photographers' supplies, and the processes of making pictures and reproducing drawings are so simple that they may be quickly learned and successfully used for the benefit of the user particularly and the profession generally.

MANY of our readers have read the article in the May *Century*, contributed by Mrs. Van Rensselaer, on "Good Architecture," but we cannot resist the temptation to commend the pleasant way this lady has of putting a point on a worthy subject. "One rule, moreover," she observes in the course of her article, "may be laid down to guide our criticism. This is the rule that as a work of architecture is both very conspicuous and very long-lived, its aim should be 'to satisfy and not to startle.' The fact that a building is 'striking' is often held to prove it fine. But the best buildings are those which, whether striking or not—oftener not, perhaps, at least in modern work—will seem better and better as the days go by; will not grow oppressive or aggressive or impertinent, or tame, flat and uninteresting, in proportion as they grew familiar." The correctness of this observation will hardly be called in question.

QUITE an interest is being manifested by the profession in the forming of a Western Association of Architects. A number of prominent architects have made expression, in person or by letter to us, deploring the lack of interest in the West and Northwest in existing organizations, and recommending a distinctively Western association, having kindred aims and being in harmony with present organizations. They believe that the only way in which to awaken a lively and active interest in the West in an association is to make it Western and adapted specially to the needs of the West. The great advantages of such a band of brethren in promoting and elevating the work of the profession, and in a social way, are obvious and important. We are heartily in accord with any movement that will benefit the profession, and believe that, with the support and active coöperation of the leading architects in the West and Northwest, an association can be formed in which the profession in this section will take a live interest, and the beneficial fruits of which will be more and more apparent from year to year. The time seems ripe for such an organization, and we invite further expression and suggestions to that end.

WORK on the Home Fire Insurance building is progressing rapidly. The first story and basement will be of Jonesboro rose granite, with Trenton pressed brick and Vert Island red sandstone trimmings above. The ironwork will be furnished by the Dearborn Foundry. It is the company's intention to make this a model office building, not losing sight of the fact that it is a commercial enterprise, and as in exterior design and interior plan the architect has been admirably successful, the renting of the building will be accomplished without trouble, as the demand for convenient office quarters will be fully met.

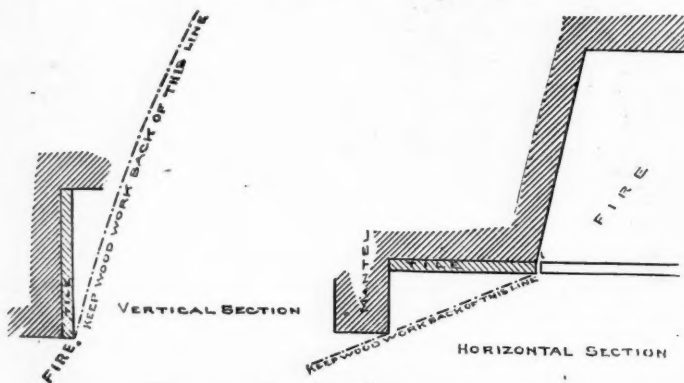
Mantels and Grates.

BY FRANCIS LE BARON.

AN open fire is the soul of the room; it gives it vitality, life; it draws the household around it in pleasant, cosy chat. As the body without the soul is dead, so the room without the fire is dead also. Setting aside for a moment the mere utility of the open fire as a means of ventilation and purification, let us remember that it has its spiritual, its poetical, its æsthetic side, which is good for all men. As the soul is beautiful shining out from a beautiful face, so a fire is more beautiful, shining out from beautiful surroundings, and the grate and the mantel become important features in the room. Marble mantels have their beauty, and their appropriateness in certain places,—as, for instance, in vast halls, where grand architectural effect is desirable; but, to our taste, not in a home, not in quiet domestic architecture, not in the family room, where the household gathers in the ordinary daily life. Marble belongs to the cemetery; it has a monumental, "*memento-mori*" quality which unfits it for domestic use; and when I see a marble mantel or a marble table in a home, I involuntarily look for the "*Hic jacet*" which seems to belong to it. It is like a monument or gravestone brought from the graveyard and put to domestic use.

Wood mantels have all the qualities that household use and beauty demand. What a wide range they offer in color, so that all tastes can be suited and all styles of decoration find a harmony. We may choose the delicate purity of whitewood, or the golden glow of pine, the fine red of cherry, or purple amaranth, or the rich grain of oak and ash, or the glow and splendor of mahogany, or the dusky gleam of black walnut, or the fine, soft finish of birch, or we can bring into our service unnumbered foreign woods to make beautiful the fireplace and set a fitting frame around our beloved fire.

And just here let one thing, and a very important one, be said. *If you put wood into the fire it will burn!* Many of our designers of wood mantels forget this, and their florid efforts blister and burn to the despair and vexation of the careful housekeeper. The mantel-shelf on its under side becomes a mass of blisters; the columned or bracketed sides char and blacken, and the open fire that should give only pleasure is regarded with anxiety, lest it should have in it the terrors of a conflagration. Now all this can be easily avoided. *Keep your woodwork within the line of safety.* This line of safety is easily determined. We give the result of long years of experience in mantel and grate setting, of a scientific, thoughtful man, and if his rule be followed, it will result in entire safety to the most delicate wood mantel, so far as burning is concerned. The rule is as follows: From the front line of your fire draw a line at an angle of about fifteen degrees (15°), and keep all your woodwork behind that line. This is for the sides. For the top, draw from the top of the fireplace opening a line at the same angle, fifteen degrees for a foot above the opening, and then change the angle to thirty-five degrees (35°), and keep mantel-shelf and all the top woodwork behind this line, and you will have no more charred or blistered wood, no matter how hot the fire. To make the matter plain, a sketch of the "*line of safety*" for wood mantels is given.



In wood mantels every taste may be gratified, and the field for design is infinite. The Gothic, the Renaissance, the Colonial, the Queen Anne, offer themselves in all their thousand modifications and combinations to suit modern convenience. A half century ago all our houses had wood mantels; it is no new fashion. The Colonial mantels were all brought from England, as in fact were all the materials for the house. Many of these houses may still be seen in Salem, in Marblehead, in Plymouth, and many other old towns of New England. A friend thus describes to us some old mantels which would be the delight of the art-lovers of today. "Wooden mantels are no new things. They were plenty before marble was thought of, and were of elaborate patterns. Some fifteen years ago I was present at the demolition of an old house in Maryland, built when Anne was queen of England. It contained two mantels of English oak, one at either end of the large parlor, with enormous fireplaces, the mantels

covering the entire end of the room, with cabinets, and shelves, and cosy nooks and corners without stint. The pilasters at the lower parts were worn away by the attrition of several generations of shovels, tongs and pokers, which had leaned against them, but otherwise the mantels were in perfect preservation, with joints as good as new. They had a multitude of small, deeply-moulded panels, the product of Anne's time, and the wood was nearly as hard as iron. The facings were of large black brick, and no trace of fire was visible in any part of the woodwork, although it had been in use a hundred and sixty years.

The artisans of those times put their lives into a piece of work with far more persistency than is done nowadays. It must have taken a workman an entire year to make one of these mantels, unassisted by modern machinery." In those days the chimney-stack was in the center of the house often, a vast structure in itself, a tower around which the house was built. The fireplaces were vast caverns; a tall man could walk into them without bending his head, and they were twelve feet or more in width. It was an old saying that there was space enough for an ox cart and a yoke of oxen to be driven up the chimney. In some of the old Colonial houses still standing in Marblehead and Salem, Mass., there are wood mantels covering the whole side of the room, with delicate mouldings worked in the solid wood, not glued on in the fashion of today, the panels enriched with carving of flowers and foliage in the very best style of the art.

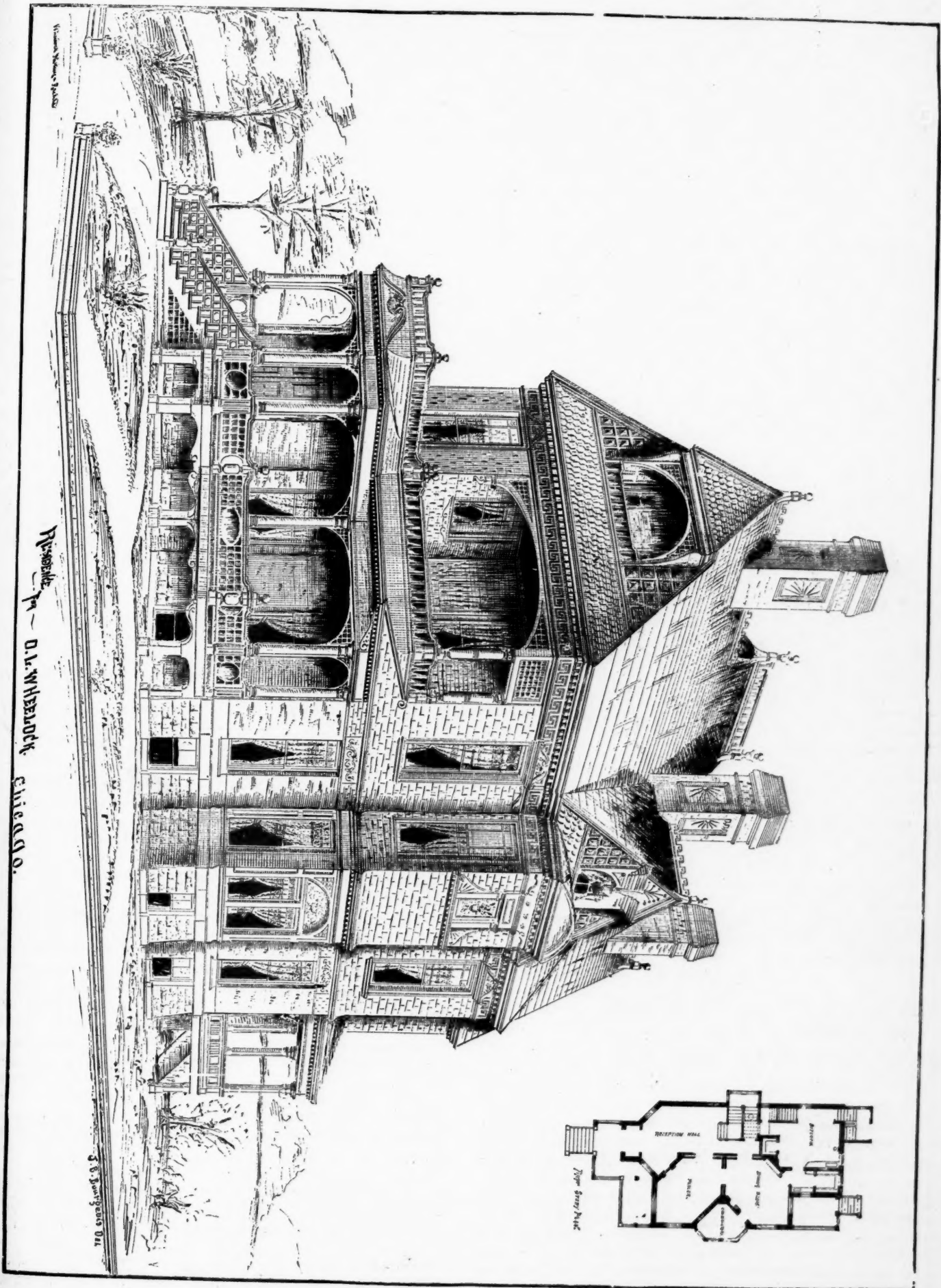
Today comfort has banished the vast cavernous fireplaces, but the open fire is just as cheerful as of old, in its more modest surroundings. A half-century ago there was a raid made on the old-fashioned wood mantels, and, with all their quaint carving and delicate mouldings and panelwork, they were swept out for kindling-wood, and everybody set up in his house the black and gold Egyptian marble mantel. But the reaction has come with an increased civilization, and wood reasserts itself. Wood mantels, tile facings and tile hearths are now the fashion, and a beautiful fashion it is. Long may it last!

In a saunter down Wabash avenue one may see what beautiful things have been done in this line, and how beautiful a feature in domestic architecture the wood mantel, with its tile facing and tile hearth, has become. One feels as he looks into Bruner & Lancaster's, or A. H. Andrews & Co's, or into Albert A. Riley's, or Dibblee's, or the Butler Co's, or into Mr. Lord's new room, at Tobey's furniture store, and sees the beautiful tiles and mantels and grates, as if here were the places to spend money to get the most pleasure and satisfaction from it, and as if the open fire and its surroundings were the principal feature of the house. The Low art tile becomes more and more beautiful and desirable, and there are other very beautiful varieties of tile of American manufacture. Mr. Riley shows some very handsome hand-painted tile, in continuous landscapes; they are French, and he calls the style "*Barbotine*." They are entirely new in the market. At the Butler Co's may be seen a fine display of mantels and grates. The grates most in use are the clubhouse, the portable basket, the peerless and the reversible, and Mr. Lord shows a grate of his own arrangement, with sliding damper and sliding crown-piece, which will keep a good fire from Saturday night till Monday morning without being touched. All these grates can be had cheap in simple iron, or can be made as handsome as one wishes with bronze and silver plate.

The plain tinted tile are becoming very beautiful; some of the English and French glazes are exquisite, and for facings and hearths they are very desirable. France is sending us some new and very beautiful varieties of tile; the newest and most desirable is the Faïencerie de Gien,—a variety just coming into use in the best houses in New York. It has not yet been used in Chicago. There is one bathroom in Mr. Plankinton's house in Milwaukee finished with it, and I am told it is the prettiest thing in the house.

The Nolla tile, made at Valencia, in Spain, is also very artistic, and is coming into use. Mr. Bates, who has always some fine artistic work to show, now in stained glass, now in exquisite carving, and again in elegant furniture, or drapery, or fanciful and novel decoration, has just completed two notable mantels; they are features in the rooms for which they were designed, being eight feet wide by fourteen high, and projecting two feet and a half. One is of red oak, paneled in white oak, the other of mahogany. They are in the Italian Renaissance style, and rich in very beautiful carving.

ARCHITECTS BURLING & WHITEHOUSE are preparing the plans for St. Clemens Episcopal Church, to be erected at Twentieth and State streets. The style will be modern Gothic. The body of the church will be 38 by 100 feet and measure 44 feet to the peak of the roof, the side walls being 14 feet high. There is an excellent arrangement of vestry, choir, organ-loft and lavatory, besides which the seating capacity will be about 300. The construction will be substantial stone foundations, Anderson pressed brick walls, metal roof, with stained glass windows, etc. The cost will be \$20,000. These architects are also about to let contracts for a row of six buildings for Chas. G. Wicker, on Cottage Grove avenue and Thirty-eighth street. They will cover 138 by 77 feet. The first story will be for stores, with two stories for flats above. They will be built of pressed brick, finished in plate-glass and perfect in appointments. The cost will be \$7,000 each.



Development of American Architecture.

R. H. VICKERS.

THE heterogeneous combination of incongruities frequently observable in buildings, especially for church purposes, in many of our American towns, is not a subject for surprise, hardly one for regret. Our people formed structures that suited their simple tastes, and the diffuseness of style, to say the least, marked the absence of restraining and overawing influences. No fettered minds were those that raised church edifices after any fashion that suited the builders. Assuredly the iron of conventionality and prescription had been broken when men raised the edifices that supplied the ordinary worshipers of America with sanctuaries. But since the first feelings of animosity toward the spirit supposed to reside in the "steeple-houses" of the older communities has subsided, and been replaced by softer feelings, mellowed by time, the spirit of architectural taste in public and private has assumed much of its natural expansiveness among us. In searching for models and designs embodying taste and appropriateness men have often asked, "Should we not adopt a style peculiarly American?" The Egyptians, Greeks and Saracens had their peculiar combinations of architectural outlines and elements, and from them modern nations have borrowed, and thereby constructed new ideals suitable for national wants and environments. Should not we do the same?

Omitting the important fact that all these styles were the result of growth, and did not spring from the originating genius of any man or any generation, we may observe that none of the nations mentioned began with the intention of establishing a peculiar style. They built according to their ideas, and a certain type was gradually reached. That type became the national model; and when it had embodied all the elements it could assume, all attempts at progress led inevitably to deterioration. That combination of outline and components which was appropriate to climate and purpose acquired fixity. No room was left for variation, much less for novelty, because certain ideas were embodied in stone and column; and the rigidity of the purpose precluded all departures from the arrangement assumed to be the only one suited to that purpose. This rigidity of form constituted a powerful support to the doctrines originally embodied in the form. The national life lived in the stone, and men became almost incapable of any other association of ideas.

But the moral and political intentions and free expansiveness of the human mind cannot thus accept limitations from the fixedness even of the grandest human handicraft. Independence of thought inevitably produces elasticity of skill. New wants and expanding tastes call for fresh exercises of combination and invention, while retaining fundamental principles of safety and of proportion. Ever multiplying harmonies suggest themselves to the activities of invention and search, as well as the requirements of improved accessions and surroundings, and progress in the arts. Ethics always assume the highest place in a thinking society, and hence the tyranny of symmetry, contour, coloring, deep shades and solemn blendings, coupled with realistic carvings, and perchance the menace of the mighty unseen portentously signified by shapes that seem to carry a revelation from some other world, yield to the potency of cultured reasonings about the higher laws of moral duty and logical truth. Reason ceases to be deprived of her analysis, and is no longer overwhelmed by the sensuous. With the multitude of men, however, fixity of idea, embodied in magnificence of proportion, exercises first an oppressive and then a corroding power. When the mass of mankind becomes bound to fixed ideas of form, and the equally fixed spirit or principle that lives in it, or the still more rigid doctrine expressed by it; when outline becomes stereotyped and identified with national taste, a serious impediment to mobility of thought is at once created. A mortal immobility of soul and an avidity of intellectual susceptibilities creates an induration of feeling hostile to all freshness of form or propriety of adaptation. Men become slaves to their own creations, and the latter dominate like a contagion. The genius which originated the creations themselves is attributed to an age of superior merit and to a higher race of men. It was the emancipated mind and the free philosophy of Attica that clothed the conventional style of Greece in more varied and more charming raiment, afforded opportunity for diversity toward associated groupings, and led to freshness and originality in new departments. The investigating genius of the people rendered progress not only possible, but inevitable. The national games which promoted the arts of music, poetry and song originated the Corinthian style about B.C. 330. The tasteful genius which intertwined the emblems that recompensed merit in these revelries into new combinations, and attached these novelties to the older central style, conferred fresh impetus on skillful composition and encouraged freer play of individual discrimination. The fixity of Egyptian art, as well as of that of the Pelasgi from Cappadocia to Greece and Etruria, was at once the cause of sterility of mind in its founders and of its own resulting decay. An effort to create a taste by a novelty is always associated with narrowness and

incongruity, as in the case of the Christ in Mosaic at Pisa, which expresses the fixed passion of Jacopo Tanti, the restorer of Mosaic, to subordinate all objects alike and all proprieties to his recovered art. The result has been equally lamentable where taste has assumed a national fixedness and rigidity. A grotesque conventionality is the morbid result. But it is to the star of hope and of life, that elasticity of spirit and progressive earnestness which results from changeability and necessity of adaptiveness, which peculiarly distinguishes Americans and their environments, that we are to look for the most lovely efforts of genius. It is to the growing time of our nation—and that time must long continue—that the formative expansiveness of national art must lend its charms. The prevailing tastes and capacities of our people will speak through their constructions, and no limitations can be assigned to either. In order to progress and improve, we need not imitate Chilperic, who imposed penalties on the forbearance to destroy ancient circles and monoliths; nor need we limit ourselves to official genius, like the republic of Florence in 1294, who ordered the communal architect to prepare plans "so that the industry and foresight of man should not be able to undertake anything more spacious or more beautiful." We can safely leave the growth of architectural supply, in grandeur, in form and proportion, as well as richness and harmony of details, to the advanced taste and more liberal and comprehensive requirements of a people whose growing wealth and brighter perceptions will encircle themselves with the glories of construction and handicraft.

Fire-Resisting Construction.

UNDER the above title a late issue of the *Building and Engineering Times* publishes a paper which treats almost wholly of American terra-cotta fireproofing, but which is designated in the article in question as "Terra-cotta Lumber." The American method of applying porous tile to girders, columns, floors and ceilings, to judge from this article, is something almost wholly unknown to English architects, for in the introductory paragraph allusion to it is made as follows:

"There is a material used in fire-resisting buildings by the Americans which appears from the description given of it to possess numerous advantages over those at present used for the purpose of this special class of construction. This material is known as terra-cotta lumber, and the useful and novel properties characterizing it give it an almost unlimited range of employment in science, art and mechanics. It is indestructible by fire, water, frost, gases, acids or age. Its porosity gives it large molecular and capillary attraction. It is a very poor conductor of heat, dampness, sound and electricity. It neither expands nor shrinks under extraordinary and sudden changes of temperature. It will resist the hottest flame for any given length of time. Its weight is one-half that of brick, two-fifths that of marble or granite, and one seventh that of iron.

"These unusual advantages which this substance is said to possess, supplemented by its extreme cheapness, and above all, its susceptibility of mechanical workmanship, are qualifications possibly not possessed by any other known building material.

"The manufacture of this terra-cotta lumber requires the buildings in which it is made to be of the simplest description, and there is no special construction in the machinery or kilns to render the introduction of terra-cotta lumber works into this country a matter of difficulty.

"As no experience of the use of this material in actual construction has been had in England, it must be understood that the following description has been obtained from numerous reliable sources, and from the examination and testing of samples of the material. Experience will alone decide what its real uses will be."

The article then proceeds to describe the "material" used in its manufacture, and proceeds to say:

"The English architect has but a limited choice of materials of a satisfactory fire-resisting nature wherewith to construct his buildings. These may be summed up as brick and terra-cotta. For the construction of walls, however, the latter is too expensive for ordinary use. Consequently brick is the only material which can be relied on as absolutely safe against the all-devouring element. Even this material has its disadvantages. Its size is not suited to economic construction. This defect is, in a measure, obligatory, for the reason that the material of which brick is made, coupled with the manner of making, will not admit of larger bricks being manufactured. Even with the present size the loss by warping in drying, and cracking in burning, is considerable. The smallness of the bricks necessitates the frequent occurrence of mortar joints. The proportion of mortar to brick in a brick wall is as one to five. When a brick wall fails in a fire, it is consequent on the burning out of the cementing bond, making the damage as complete as if the material had been entirely devoid of fire-resisting properties. Brick, when used in the form of arching on iron girders, is of considerable weight, being about 115 pounds per cubic foot. This necessitates a considerable additional cost on the iron-

work alone. The same disadvantage applies to concrete, which weighs from 120 pounds to 130 pounds per cubic foot. What is required is a material combining lightness with a capability for resisting the action of fire. Terra-cotta lumber is a material which appears to have these qualities, being as 'thoroughly proof against fire as asbestos, as workable with edged tools as wood, and as cheap of manufacture as brick.'

"Not only iron but wood construction in any form may be encased with it, by being nailed in the ordinary manner to beams and framing. A building constructed with wooden beams, protected with a casing of terra-cotta lumber, is practically fire-resisting and probably more reliable than iron in the heat of a great fire. Such an assumption is supported by experience. American architects are said to prefer the introduction of timber for floors and supports rather than iron joists. Mr. Arthur J. Gale, the holder of the 'Godwin Bursary,' in his paper on 'American Architecture; etc.,' read at the Royal Institute of British Architects, on his return from his tour in America, alluding to the systems of fireproof construction adopted in that country, observes: 'The manager of a fireproof construction company gave me some interesting particulars. His motto is, "No building can be fireproof unless all constructive ironwork is protected." But if ironwork be not used they protect the wood floors; in fact, they prefer this method. The joists are carefully gauged as to distance apart, varying with the thickness of joists, so as to allow of deafening with brick laid on fillets like ordinary pugging. This is carefully bedded in fine concrete, and the whole covered with a tile, concrete or boarded floor. Underneath is fitted a ceiling of porous terra-cotta (terra-cotta lumber) or cement tile. Countersunk recesses receive a plate of iron, which is screwed into the joist, thus clipping the terra-cotta or tile to the joist; two adjoining tiles, all laid dry, are thus supported. The joints are then pointed in plasterer's stuff, and the plastering finished in the ordinary way.' He further adds that all iron columns, joists and girders are protected with porous terra-cotta, and that the covering is solidly fixed and will withstand blows of falling materials, etc.; and that porous terra-cotta is likewise used for covering the sloping timbers of roofs; furrings inside brick or stone walls, and for attachment to floors having iron girders and segmental arches already existing.

"The manager of the Fireproof Construction Company, Mr. P. B. Wight, referred to by Mr. Arthur J. Gale, in his paper previously quoted, has patented a method of sheathing columns, ceilings, and iron girders, etc., with terra-cotta lumber. *There cannot be a doubt but that the introduction of this useful material into this country would mark a new era in fire-resisting construction.*

"As previously stated, the use of supporting timbers in large pieces in conjunction with terra-cotta would produce a building the fire-resisting properties of which would be equal to any known combination of materials when subjected to the dual influence of fire and water. The cost of a theater, whether constructed with wood or iron supports and terra-cotta lumber, would be considerably less than that involved in the ordinary iron, concrete, brick and stone combination.

"The whole of the stagings of the several tiers now constructed with wood could be protected by terra-cotta lumber, and in fact many of the structural parts could be constructed with this material with about one-third the weight of iron usually used in an iron and concrete building."

Some of our large terra-cotta manufacturers should see to it that their interests are fully represented in England. There certainly seems to be a wide field for them there, and it may be the United States can give to English architects valuable suggestions in the way of fireproof construction.

Brick and Brick Machines.

LETTERS of inquiry from architects and others have been received regarding the merits of different brick machines used about Chicago. The more common is the ordinary "mud" machine, and the Gregg, Chambers, and others of popular make, are also more or less successfully used. But investigation shows that it does not so much depend upon the mechanical perfection of the machine — though of course this is an important factor — as upon the quality of the clay to be worked. For instance, a machine that was a failure at Duluth is doing admirable work in Chicago clay, and one that works indifferently in Chicago clay is a perfect success at Chester, Ill. This fact seems to apply to machines generally, and the best way to secure a brick machine is to work some of the clay it is intended for before purchasing. One of the largest yards in Chicago, and one of the few that are in operation the year round, is that of the Purington & Kimbell Company, and to thoroughly investigate the merits of the Chambers machine as well as to see what was reported to be a model brickyard, this company's works, in the southwestern part of the city, were visited. The plant is using two machines, and has a capacity for about 100,000 brick per day. The clay is obtained from the bank of a canal, and has, during the years since its excavation, been exposed to the freezing and thawing of several winters. The bricks come out symmetrical, and nine-tenths of the ordinary product would be pronounced good sewer-brick, so well made and shapely are they. The crushing strength of ordinary Chicago common brick is said to be about 11,800 pounds to the square inch, while the claim is that these brick will sustain 22,700 pounds to the square inch. Walls of this brick

were examined that in face and in corners showed almost the symmetry of pressed brick. These works have been running in their present shape over two years, and have produced about 27,000,000 brick, working summer and winter. This yard, though perhaps in completeness a little in advance of other Chicago yards, represents but one of the hundreds with which Chicago is surrounded, and the prospect is that the supply of brick for building will always be ahead of the demand, and at a low price, except when a phenomenal building season exhausts the winter's stock and obliges contractors to send to other cities for brick, which occurred to a very small extent this spring, and may never occur again. Included in the Chicago brick supply should be the Indiana pressed and common brick, which are operated by the company already mentioned and several others, and as the clay used is well adapted to brickmaking, the pressed brick made from it entering largely into fronts of Chicago buildings. Enough good brick is now made around Chicago to allow a choice, and builders are making it, and those who would compete for the best trade find it to their advantage to use good machinery, good clay and good workmen in their works. In speaking here of the Chambers machine, it is not the intention to recommend it, but rather to use it as an example of what is done in common brick manufacture, and to show those who are interested what Chicago is doing in the making of this material.

Our Illustrations.

Page 55, details for cottage published last month to cost \$2,300, by architect Julius H. Huber, Chicago.

Page 53, St. Paul Chamber of Commerce, by architects Carpenter & Teltz, St. Paul. The description of this structure, forwarded us by the architects, has been mislaid, and a description will be postponed till next issue.

Page 49, residence for architect O. L. Wheelock, by architects Wheelock & Clay, Chicago. The residence is on Ellis avenue, near Oakwood boulevard, and will be a model of exterior beauty and interior arrangement. It is 60 by 33 feet. The basement will be of brownstone, with a first story of Anderson pressed brick with brownstone trimmings, and the second story with substantial brick walls covered with red slate. The walls and chimneys will be rich in terra-cotta ornamentation, panels, etc. The roof will be of black slate. The interior will be finished in common pine polished in the natural wood, and the staircase will be of polished red oak. The heating will be done by steam. A peculiar and commendable feature is in the disposition made of the sewerage. No pipes will be laid under the house, iron pipes being placed in the ceiling of the basement connecting with the sewer outside the house. The arrangement of the floors gives to each room an extraordinary amount of room and light. The barn is also of brick, plain and substantial. The cost of the completed house will be about \$16,000, and Mr. Wheelock, one of the oldest and best-known of Chicago architects, is to be congratulated upon the planning for himself what he has so long been giving to others, a well-built, attractive and convenient residence.

Supplement.—Manufacturing and salesroom building, for E. Jennings & Co., West Madison street, Chicago, by S. S. Beman, architect. This building, the first and still the best improvement that has been made in the line on the west side of Chicago, is 100 by 95 feet, six stories in height, and is built of St. Louis pressed brick. The roof is of the best red slate, and the front is ornamented with terra cotta and also of galvanized ironwork, the latter feature being a remarkable example of the ornamental possibilities of this metal in competent hands. The ornamental ironwork is also noticeable. The interior construction is extraordinarily heavy, for the purpose of making it secure, and is arranged in the most complete manner for manufacturing purposes, while the first and second floors, with fronts almost entirely of plate-glass, are handsomely fitted up for salesroom purposes. The machinery is in a four-story building, 50 by 100, in the rear, from which shafting is run to the main building for running sewing machines, etc. One department of the building will be used by the company for the manufacture of all the interior drapings and car-furnishings used in dining and sleeping coaches. Another department will be devoted to laundry, and one to shirt-manufacturing; while a fourth will include all the lines of gents' furnishing goods. The building as planned by Architect Beman, and executed under the superintendence of architect Schock, for these purposes, is one of the most complete and substantial of its kind ever erected in the West.

Architectural and Building Notes.

THE Pioneer Fireproof Construction Company will soon remove to their new fireproof building, which is about ready for the roof.

THE Wight Fireproofing Company have removed their office to No. 202 La Salle street, where they have fitted a commodious office with samples of their fireproofing work, especially their ornamental plastering and scagliola work.

THE plans for the Marshall Field office building are being rapidly prepared by Architect S. S. Beman, and the work of erection will commence about June 1. The details of construction have been nearly all decided upon. The building will be 95 by 190 feet, and eleven stories and basement in height.

ARCHITECT W. W. BOYINGTON will immediately erect the towers that have long been lacking on the corners of the Lake Shore and Rock Island Railway depot. They will be built of stone and will be 170 feet high. This architect is also erecting two important stove warehouses. One is for Rathbone, Sard & Co., on Clinton street, near Harrison, 96 by 145, six stories high. It will be substantially built of the Purington & Kimbell Co. common brick, and one for Greenly Bros., 50 by 145 feet, four stories, with pressed brick front.

ARCHITECT S. S. BEMAN is preparing plans for the building up of what will be called Rosalee Villas, in the neighborhood of Fifty-seventh street, for Messrs. Chandler & Co. There are now under contemplation two villas

for Addison Ballard, Esq., at \$4,000 each, a music hall, to cost \$20,000, and Rosalee Inn, to cost \$30,000, besides many residences in contemplation, the tract, one-quarter of a mile in length, being planned for the accommodation of about fifty residences, all of which are to be unique in architectural style, and arranged to give the perspective something of the picturesque.

ARCHITECT J. J. FLANDERS has prepared elevations, plans and specifications for a ten-story office building, to be immediately erected on the corner of La Salle and Quincy streets, for Mr. Mallers. The lot is 40 by 60 feet, and the building will join the Royal Insurance building on the west. Of the walls, the first and second stories will be of granite, the third of bluestone, and the remainder of pressed brick and terra-cotta. It will be thoroughly fireproofed with tile partitions, roof, etc., as all first-class buildings now are, without exception, in Chicago, with fireproofed iron stairs, etc. A unique feature and a thorough novelty will be the windows, which will all be constructed flush with the outside walls, similar to our latest store-fronts, and a slightly projecting bay running the entire height of the building. The vaults will be in the street corner, and their construction will add to the massiveness of the structure.

ARCHITECTS BURNHAM & ROOT have prepared elevations and plans for a skating rink to be erected on the part of the old Carpenter homestead cornering on Curtis street and Washington boulevard. It will be 125 feet on the latter street and 200 on the former. The walls will be of pressed brick, one-story high, the slate and metal roof being pierced with dormers, and otherwise exceedingly ornamental, will add another half-story to the structure, and on the whole the improvement will add to the attractiveness of this portion of the west side. The building will be owned by a company embracing several prominent business men, C. L. Willoughby, F. H. Stanwood, J. J. Read, and David K. Hill representing them. The cost will be about \$50,000. The Loomis building, which will be erected immediately on Adams and La Salle streets, from plans by these architects, by a company of which William K. Nixon is the manager, will be 60 by 165 feet, ten stories in height, will be thoroughly fireproofed, and the walls pressed brick and terra-cotta.

Mosaics.

THE stained glass manufacturing firm formerly known as Kinsella & Haywood is now H. F. Kinsella & Co.

THE Chicago branch of the Clinton Wire-Cloth Company, of Clinton, Mass., has removed to 137 Lake street, where a specialty will be made of their wire, lath and other wire-cloth material.

THE Chicago branch of Berry Bros., of Detroit, manufacturers of a hard oil finish that has become popular for its adaptability to all kinds of hardwoods, have removed to corner of Fifth avenue and Quincy streets.

AN excellent pressed brick, both in color and texture, manufactured by Harris Brothers, of Zanesville, Ohio, is being introduced in Chicago by Messrs. Abbott & Taggart. Harris Brothers make moulded and enameled brick as well. The Chicago agents are located at No. 65 Washington street, but will remove about the 15th.

MR. TRUE WILLIAMS, formerly a well-known engraver in Chicago, and for the several past years earning a national reputation through his work in New York, is again located in Chicago. Mr. Williams' facile pencil and engraving skill is reported to be engaged in the work of perpetuating the faces of several prominent citizens.

C. J. L. MEYER & SON have fitted up a showroom especially to display their stock of wood mantels, which are made from special designs, and with their extensive facilities for manufacture and the extensive practical knowledge of woods possessed by this old firm of millmen, the reliability of any work of their manufacture cannot but be all that is desired.

CONTRACTORS will be interested to learn that a branch has been established in Chicago for the sale of the Seyssel rock asphalt, which has been used in the principal cities of the United States for the past fourteen years. Seyssel Rock Asphalt is a material largely used in the East for floors, cellars, roofs and sidewalks. The company's agent, Mr. T. H. Boorman, has offices in the Builders' Exchange.

THE Tahanto Manufacturing Company, of Boston, who manufacture a new line of interior decorative metallic materials, in bronze, copper, brass, silver, etc., have appointed Mr. Frank W. Balch, of 99 Washington street, their Chicago agent. As this is a new line of goods in Chicago, architects will find an inspection of the samples now on hand quite a novelty. This material is shown in rich designs in the new Wells residence, and is to be used in the new Pullman office building.

SEVERAL prominent residents of Nashville, Tenn., recently took advantage of Mr. A. S. Hopkins', of Henry Dibblee & Co., Chicago, presence in that city, where they have furnished a large amount of Low tiling, to obtain these excellent English tiles for their houses. The Hon. D. T. Porter, among others, ordered an elegant tile floor for his hall, to be made from special designs. This use of tile floors is a pleasing comment on the growing artistic taste among the people of the South.

AN exceedingly interesting exhibit is made on the main floor of the establishment of S. A. Maxwell & Co., it being an octagon-shaped cabinet, ten feet high, showing the varieties of rich work to which Lincrusta-Walton is adaptable. It is especially fine, and should be seen by all architects and decorators. This house also exhibits, in their wall-paper department, the richest designs in foreign and domestic goods, and it is a safe assertion to make, that no goods are too fine for this well known firm to handle.

ARCHITECTS WHELOCK & CLAY have removed from the Unity building to an elegant suite of offices in the new Commercial National Bank building. The senior member of the firm has been located in the former building for twenty-eight years, excepting the brief "interruption" occa-

sioned by the great fire, immediately after which the building was rebuilt. The offices are as light and well arranged as any in the city, and these architects are to be congratulated upon their possession.

THE "plant" for many years used for the manufacture of architectural ironwork at Fifteenth street and Dearborn by the Union Foundry, vacated for their new works at Pullman, has been fitted up, enlarged and improved for the same manufacture by Messrs. Cushing & Foot and called the Dearborn Foundry Co. The work of this company is already being largely sought after by the building fraternity, and as the managers are well known for their practical knowledge of the business, the success of the new company is assured.

MR. H. G. WILLARD, representing the Archer & Pancoast Manufacturing Company, of New York, designers and manufacturers of fine gas fixtures, has come to Chicago, and leased the building No. 252 Wabash avenue for three years, with the purpose of fitting it up in an artistic manner and displaying to the fullest extent the goods made by his company. The fitting up will probably be completed in about a month. This, with the many fine display rooms of gas fixtures already established in Chicago, will give architects and the public all that could be gained by the most extensive travel in search of the unique and beautiful in the line of gas fixtures.

MR. S. W. ADAMS, the popular secretary to the Crane Brothers Manufacturing Company, has resigned his position, and has taken the building Nos. 173 to 179 Canal street, near Adams, formerly occupied by the Wilson Packing Company, where, with a space of 100 by 150 feet, two stories, he has engaged in the business of supplying wrought-iron pipe and boiler tubes, railroad track and locomotive supplies, steam and gas-fitters' tools, pipe for artesian well tubing, steam and water gauges, a full line of brass goods, steam radiators, rubber packing, and manufacturers' and merchants' supplies generally. Mr. Adams' extensive acquaintance among business men, combined with his exceptionally good business qualifications and his thoroughly practical knowledge of all the details of the business, should insure success.

THE use of terra-cotta ornamentation is rapidly growing in the West. The following buildings, reported by True, Brunkhorst & Co., the Northwestern Terra-Cotta Works, which are being decorated with this material, seem to show that it has justly become a necessary component of all building exteriors. In Chicago: Open Board of Trade, New Board of Trade, John D. Parker's office building, Royal Insurance Co. office building, H. Sibley warehouse, Pullman Palace Car Co. office building, Mandel Bros., Mrs. Catherine Price, Pioneer Fire-Proof Construction Co. office building, J. Rathborne's building, Dr. A. Brooks, Geo. M. Barber, Martin Barber, residence, Walter S. Peck, G. M. Miller, S. A. Kent, porch, F. C. Durand; in Minneapolis, Tribune building; in St. Paul, German-American Bank; in Kansas City, general office building Kansas City, Fort Scott & Gulf Railroad Company. In Omaha, Neb., Mr. Pratt's building; in St. Louis, Mo., T. P. Ridille's building; in Burlington, Iowa, P. A. Andre; in Detroit, Mich., A. C. Varney.

IT is gratifying to know that the manufacturing interests of Cincinnati are rapidly recovering from the effects of the late flood. A photograph of the works of the Cordesman & Egan Co., taken when the lower floors of the building were under water, has been received, which shows very forcibly the difficulties and disaster which they met with. They report that notwithstanding this their trade is extremely satisfactory in every respect, and they are running full time and full force on ordered machinery. In order to meet the demand for their product, they have been obliged to add quite a number of machinists' tools, and also put in a new cut-off engine of 150 horsepower, and likewise to make additions on the building. The company have perfected several new machines, among which is the new double cut-off saw, at which three men can work at once, if necessary, doing different kinds of sawing; also a new automatic knife-grinder, which, when once set, requires no further attention from the operator, but does the work and then stops. This machine promises to have a great run. They report that they are selling their new double drum sandpaper machine and their heavy band log sawmill as fast as they can be turned out.

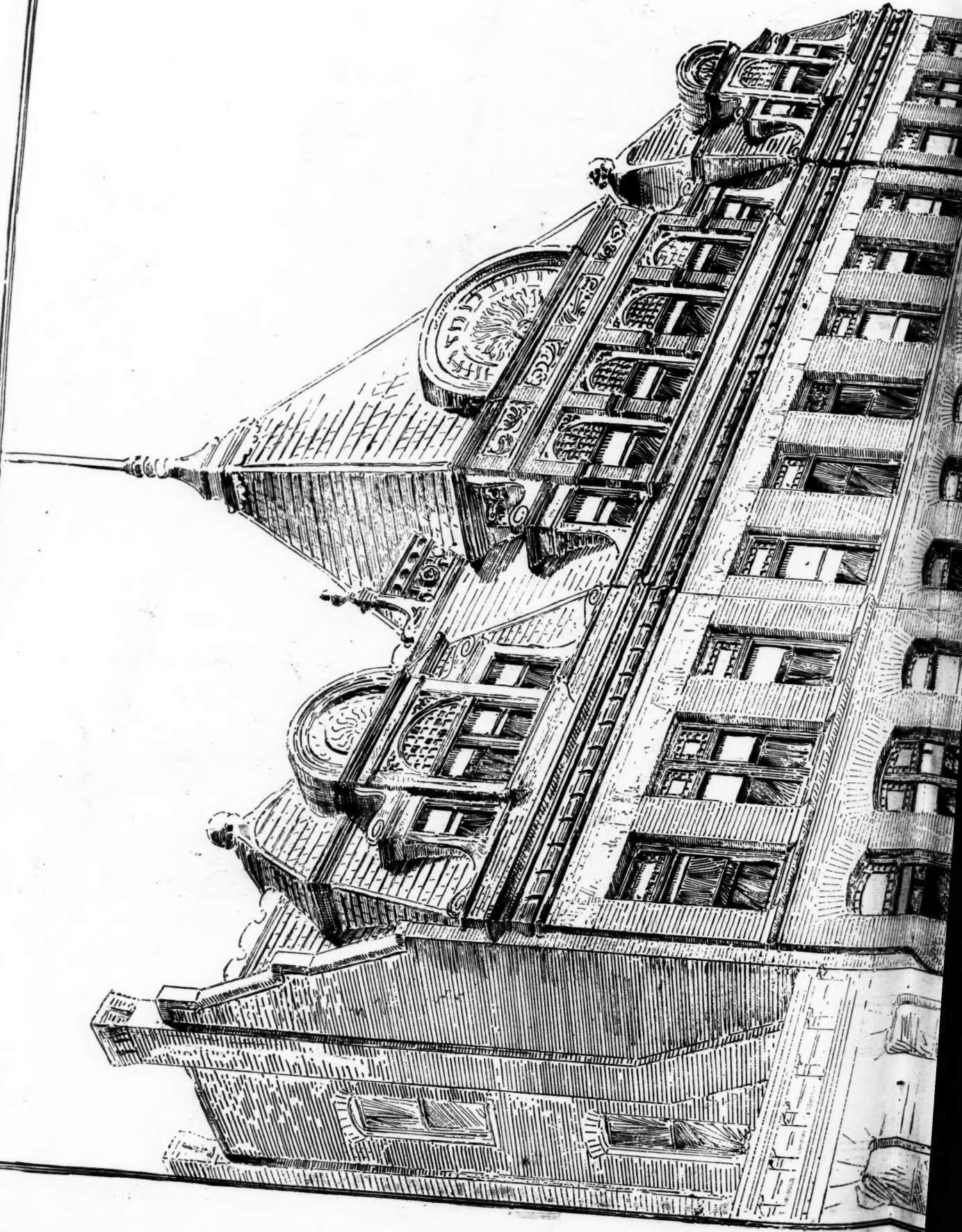
AMONG the many devices of inventive genius recently submitted to the public for consideration and adoption, few will receive more generous attention and cordial approval than Herr's Combined Safety Heater, and the Herr Safety Hot Air Heater, designed by Mr. A. W. Herr, and manufactured by A. W. Herr & Co., of 248 Randolph street, Chicago. The first named is designed for use in railroad cars, halls, stores, dining-rooms, etc., and in addition to a large saving in fuel, its cleanliness, its usefulness in supplying hot air in great or small amount as needed, or in furnishing hot water or steam for charging steam fire-engines or locomotives, or for other purposes, its simplicity of construction and operation, and the many other claims made for it, that of being perfectly safe as a railway car heater, and saving passengers from destruction by fire, in case of a "smash-up," is, perhaps, the most important of its virtues. In view of the terrible loss of life resulting at various times from the burning of railway wrecks, a device that will avert such a calamity becomes one of incalculable importance to the public; and as this one has been subjected to and successfully withstood the most thorough and severe tests, it is destined very speedily to take the place it was designed to fill. The Herr Safety Hot-Air Heater is constructed on precisely the same principles, and for the same uses. Small sizes of this are made for street cars, bedrooms, etc. The improved ventilators, coalhole-vault covers and light registers manufactured by this firm are superior articles, as they combine the largest degree of utility with every convenience for their adjustment and operation. The admission of air and light to underground apartments is a matter of great importance, and the various devices of this company for these purposes are especially adapted for all kinds of subterranean chambers. Their catalogues and price-lists furnish all necessary information concerning these articles.

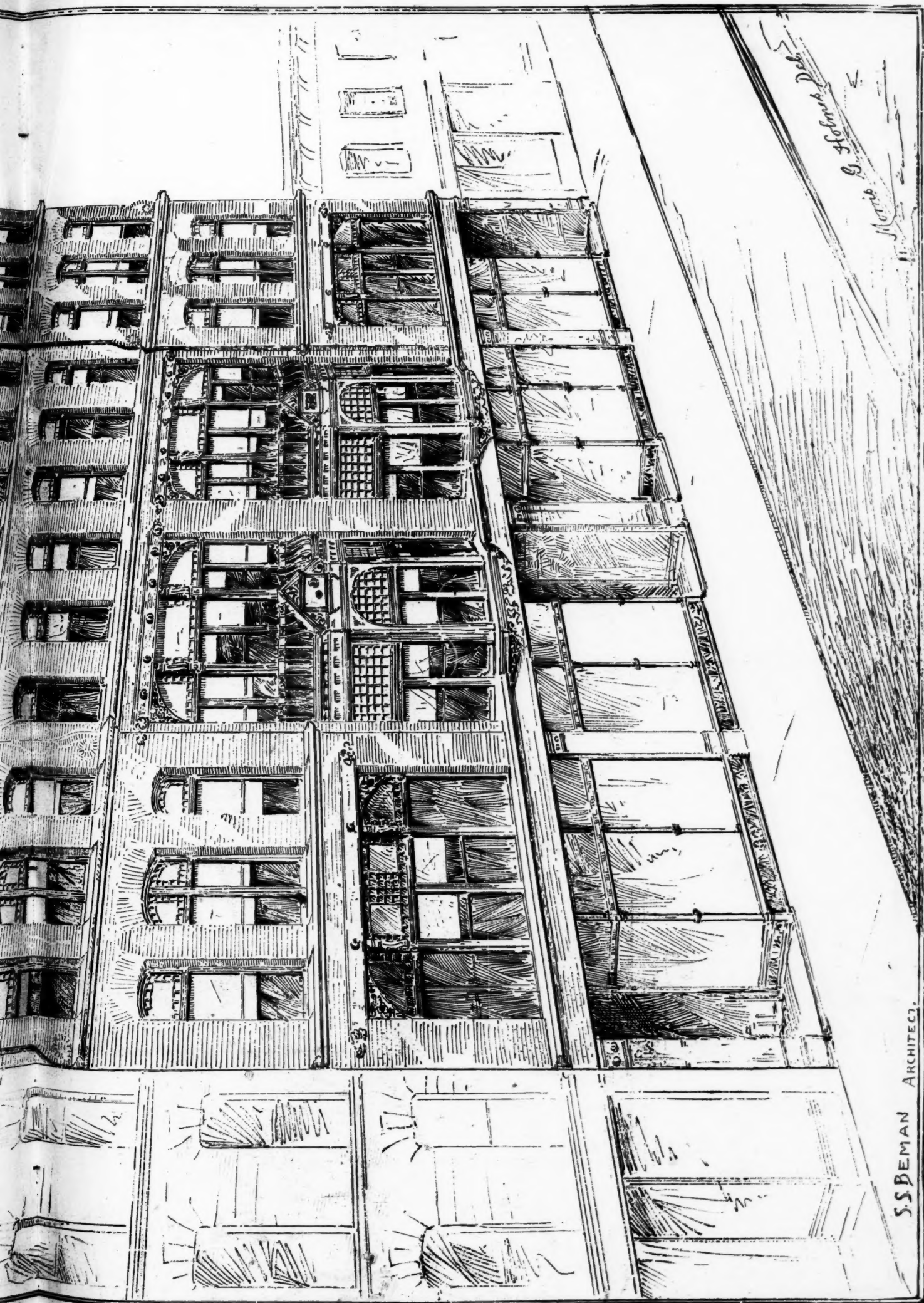


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MANUFACTURING AND SALESROOM BUILDING FOR E. JENNINGS & CO.,

399 to 405 WEST MADISON STREET, CHICAGO.—S. S. Beman, Architect.



ST. PAUL CHAMBER OF COMMERCE.—Carpenter & Teltz, Architects, St. Paul.

New Publications.

THE AIR WE BREATHE AND VENTILATION. By HENRY A. MOTT, Jr., Ph.D. New York: JOHN WILEY & SONS. Cloth, price \$1.

This volume of eighty pages treats of the properties, uses and abuses of the "air we breathe," tells how a vitiated atmosphere injuriously affects the persons who dwell in it, and how it may be kept pure in the dwelling-houses of people. The subject is one that deserves far more attention than it receives. The matter of ventilation is too often committed solely to the contractors and builders. The occupants of houses should be conversant with the subject, and the ways and means of supplying buildings with an unailing supply of fresh air should be fully provided for in the plans and specifications. There is nothing, in all the economic provisions of nature for the support of animal life, so essential as pure air, and this can only be obtained by constant renewal. Dwelling-houses demand a free circulation of air just as imperatively as do the lungs in human bodies. In the cleanest rooms the air is just as liable to become foul as is the water in stagnant pools. Air and ocean,—aye, the universe,—are kept in constant motion by an inexorable law, and this law is the law of all life. It is important, therefore, that a matter of such vital importance should be understood. This book treats of the ventilation of houses, and discusses the merits of several systems. It contains much valuable information upon the subject, and we commend it to our readers as worthy of a careful perusal.

HANDBOOK OF SANITARY INFORMATION FOR HOUSEHOLDERS. By ROGER S. TRACY, M.D., Sanitary Inspector of New York City Health Department. New York: D. APPLETON & Co., 1884. Cloth, price 50 cents.

This volume of about one hundred pages embodies a great deal of useful information upon the subjects of air, ventilation, drainage, plumbing, disinfection, treatment of contagious diseases, and other matters relating to the personal comfort and welfare of humanity. The book is illustrated by diagrams wherever they could be advantageously used. The language is clear, plain and concise, and the work will undoubtedly find a large sale. There are a few points that are open to controversy, and some of its recommendations are not, perhaps, the best, but these are of small importance as compared with the value of others. The chapters on ventilation and drainage and plumbing are especially good. The book is well worth all it costs to any who desire information upon any of the subjects of which it treats.

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- 297,056. Caliper Rule. Stephen H. Bellows, Athol, Mass.
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Synopsis of Building News.

Aurora, Ill.—The local papers and the Rev. C. H. Holbrook are agitating the subject of a hospital for the city. Within a few weeks it has been necessary to perform amputations on strangers injured on the railroads, and there was no place for the operation but the city calaboose. A general hospital is absolutely needed, and will probably shortly be built.

Bloomington, Ind.—As spring advances, the prospects brighten. There is over \$100,000 worth of building under contract already. Forty stonemasons at work on the Indiana University struck for \$3 per day, and work is temporarily suspended, but will start again as soon as new men arrive.

Architect J. L. N. Nichols: For L. D. Rogers, one-story frame, 40 by 45 feet, to cost \$1,400; projected. For W. Baily, one-story frame, 32 by 38 feet, to cost \$800. For M. Beatty, one-story frame, 40 by 43 feet, to cost \$1,400. For W. Stuart, two frame residences, two stories each, to cost \$2,000; size, 30 by 48 feet. For Ben. Rogers, one two-story frame residence, 30 by 50 feet, to cost \$1,000. For W. Hubbard, one frame residence, one-story, 28 by 40 feet, to cost \$500.

Chicago.—The building season is proving better than even builders hoped for, and the work both large and small that has been projected has either commenced or is about to be. The brickyards are all hard at work, and there will be plenty of the new crop within ten days at \$7.50 a thousand.

There is now a prospect of all the buildings reported upon during the past few months being immediately commenced. The fate of the light stone-veneered three and four story structures erected immediately after the fire is shadowed by that of those torn down to make way for larger structures. The three-story "Exchange" building is being removed to make way for the opera house, which will be immediately commenced by architects Cobb & Frost; a four-story building is demolished for the Home Insurance building; the notorious "Tivoli" building will give way to the J. Q. Adams ten-story office building; a block of four-story stone fronts opposite the Grand Pacific Hotel, on La Salle street between Jackson and Quincy streets, are being vacated and demolished, a part of the ground to be immediately occupied by the Mallers ten-story office structure, while the vacant lots are being cleared of rubbish for excavation.

"This vicinity," said a gentleman whose name is connected with one of the finest of our office buildings, looking from the La Salle street windows of the Grand Pacific, "is destined to exhibit the most remarkable collection of structures of any place in the world," and when this is looked into the gentleman's sagacity will be appreciated. Those buildings, which are in the stages between the letting of contracts and completion are the Marshall Field, S. S. Beman, architect; the Home Insurance, W. L. B. Jenney, architect; the Loomis, Burnham & Root, architects; the Mallers, J. J. Flanders, architect; the Counselman, Burnham & Root, architects; the A. J. Parker, J. M. Van Osdel, architect; the Royal Insurance, W. W. Boyington, architect; the Open Board of Trade, Wheelock & Clay, architects, all office buildings of ten stories or over, and McCoy's eight-story hotel, Greg Vigeant, architect, and the new Board of Trade building, W. W. Boyington; while though no contracts have been let, the plans are fully prepared for the Armour, Kent & Bensley office building, of which Burnham & Root are the architects. The plans for the Gaff building have been prepared by Architect S. V. Shipman, and the row of four-story stone front buildings on La Salle street, between the site for the Mallers' building and Counselman's building have been vacated and will be torn down to make room for it. It will be about 71 by 60 feet, ten stories high. These buildings are all on the line of La Salle street between Monroe and Van Buren streets, or surrounding the Board of Trade building. A magnificent spectacle of building activity it surely is.

The street question is at present agitating the public mind, and when the future is looked into the prospect for the next ten years is not encouraging. The oil gas company's mains were large enough till after the new company had finished tearing up the streets to lay their mains, and now they are laying enlarged mains. Then each new telegraph or telephone company that starts must put their wires underground, and this is being done by a telegraph company at the present time. Besides these prospective street-destroying elements, the telegraph and telephone companies can lay no new wires, and they, too, will be obliged, as they should, in the near future, to place their wires out of sight; and as these matters are now conducted each company follows its own sweet will and breaks ground whenever they are ready, so that streets are torn up for months at a time, permits being granted by the city council without regard to the time or the inconvenience to the public. This will continue till so many gaspipes, water-pipes, telegraph cable tubes, etc., are laid that they encroach upon each other, and then will have to be done what should have been done long ago. A tunnel will have to be constructed to include them all, so large that all repairs and additions can be made without disturbing the street pavement. After the city has paid thousands of dollars for stone pavements, and thousands more to repair them where they have been torn up and insecurely laid, it will wake up to the fact that all this could have been saved by prompt action before the evil had gone beyond remedy.

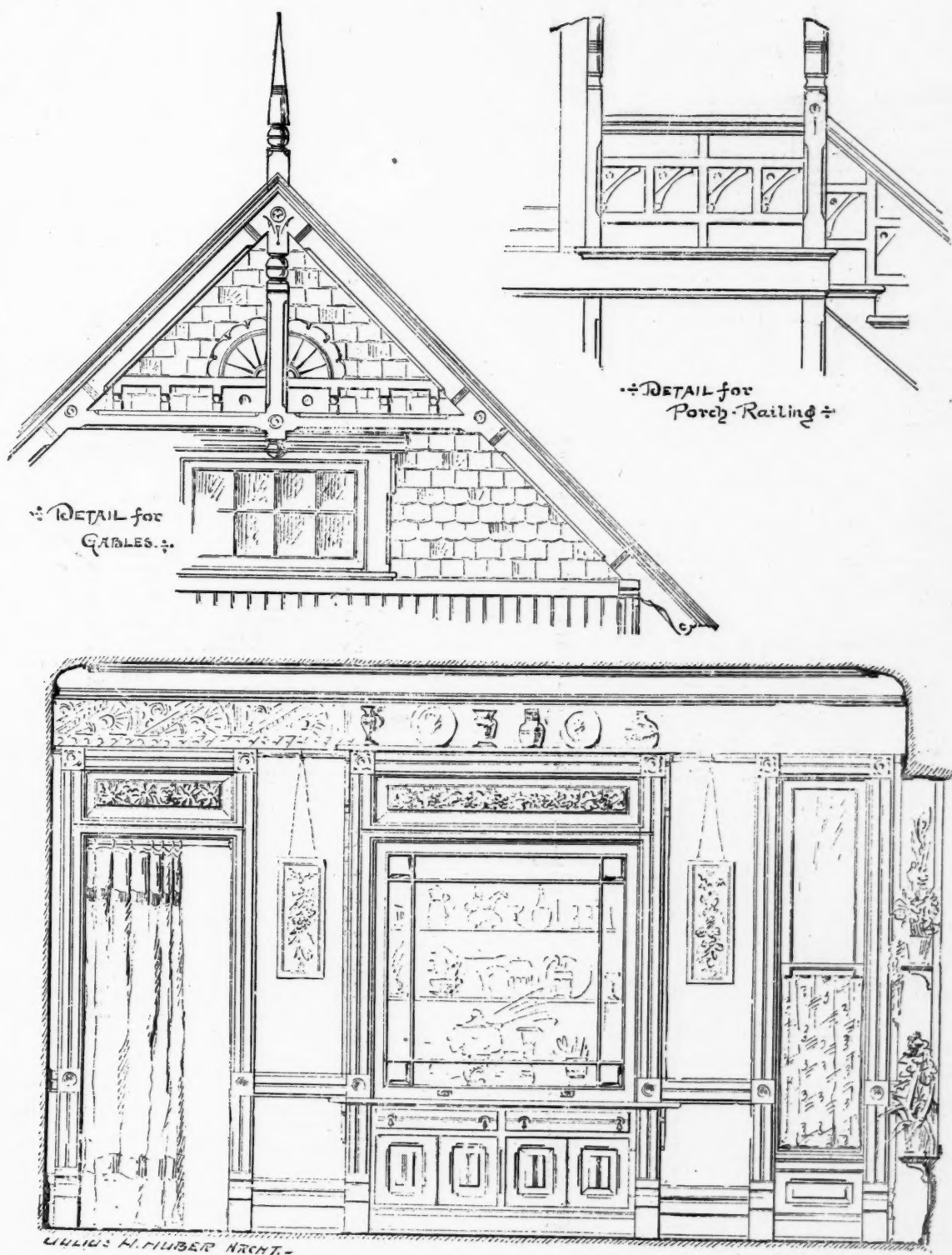
The prices of building material and labor make the cost of building about that of last year, perhaps a trifle lower, but not as much as ten per cent, as it has been estimated. Pressed brick of a fine quality is sent to compete for favor with those already well known from Harris Bros. of Zanesville, from Chester, Ill., and Cincinnati, O. They are each good in color and texture, and as architects are becoming very critical, as a rule have no preferences aside from those their judgment of material commands, each make of brick will be used according to its merits.

There has been less talk of strikes among workmen this spring than ever before. The severe lesson taught the bricklayers last season has been of value to them as well as to other trades, and work is so plenty at good wages there seems to be little likelihood of any difficulty in this direction this year; and should a strike occur, the momentum already gained by the building interest can hardly be now affected.

The building now being erected corner Blue Island avenue and Fifteenth street, for S. W. Rawson, president of Union Trust Company, will contain 25,000 of Hinchliff & Owen's Indiana pressed brick. Robert Tobin, builder. This firm also supply 25,000 pressed brick for a residence for J. H. Pearson, the prominent lumberman, on West Adams street. Burnham & Root are the architects. The trimming is to be of stone, and also several thousand ornamental brick, made by Hinchliff & Owen from special designs, will be used.

Architect S. S. Beman is preparing plans for a residence for Mr. Morrison, of Morrison & Plumber, on Michigan avenue. The walls will be of Anderson pressed brick, cost \$12,000. Also plans for residence for Wm. H. Murray, on Prairie avenue, south of Marshall Field's residence. Walls of Belleville stone and Baltimore brick. Also plans for residence for J. Van Inwagen. The first story will be of stone, with pressed brick above.

Architect Louis Rodatz, for Johnathan Clark, Seventeenth and State streets, two stories, 44 by 60 feet, three stories; also for same party, a store building on State and Harrison streets, 60 by 138 feet, three stories, pressed brick front; also two houses for J. E. Henneberry, on Loomis, near Polk street, 22 by 54 feet, two-story and basement.



DETAILS OF SUBURBAN COTTAGE.—Julius H. Huber, Architect, Chicago.

The plans are being prepared, and Milwaukee pressed brick will be used. Also three stone-front houses, two-story and basement, for Mike Clarkson, on Indiana avenue and Thirty-first street.

Architects Burling & Whitehouse are constructing for George Bullen, Esq., a malt-house, and also a dry-kiln. The kiln is on Michigan street, near St. Clair. It is 50 by 100 feet and 90 feet high. It will be thoroughly fire-proof, and will contain four of Tessler's patent malt-dumping floors. This building will contain all the improvements now known for the drying of malt, and appointed in every respect in a first-class manner. The cost complete will be about \$37,000. The malt-house will be built adjoining the grain warehouse, corner Illinois and St. Clair streets. It will be 100 by 100 feet, seven stories in height, substantially built of brick, and will cost \$35,000.

Architect W. L. B. Jenney is preparing plans for a house for P. B. Woolford, on Dearborn street, south of Harrison, to cost \$7,000. It will be two-stories and basement, and built of Cincinnati pressed brick and cut stone.

Architect L. G. Halberg is building, on La Salle avenue near Eugene street, two houses for himself. They will be 40 by 65 feet, two stories, attic and basement; foundations are in and contracts let; cost about \$15,000. For Mr. A. R. Pool, a residence at No. 49 Indiana street, 40 by 15 feet, three stories and basement, Indiana pressed brick front; cost about \$5,000. For Mr. C. W. Blaisdell, residence on La Salle near Schiller street, 60 by 25 feet, stone front, three stories and basement, ready for contracts May 5; cost about \$7,000. For George C. Hutchinson, residence 38 by 60 feet, on Ashland avenue south of Harrison street, two-story basement and attic, Indiana and Anderson pressed brick; cost about \$12,000. For Mr. Edward B. Esher, two-story and basement residence, 25 by 55 feet, on Winchester avenue near Van Buren street, rock-faced stone basement, St. Louis pressed-brick front, ornamented with courses of moulded brick; cost about \$12,000.

Architect George H. Edbrooke is pushing the work upon a fine hospital and asylum building at Geneva Lake, Wis. It will be four stories in height. Anderson pressed brick is the material that will be used in its construction. It will be finished in hardwood, have a high-pitched roof, with dormers, and approach the Queen Anne style of architecture. The cost, when completed, is estimated at \$150,000. The building is being put up by the Wisconsin Association for the Private Cure of the Insane.

Architects J. T. Moulton & Son are constructing for Richards, Maywood & Co., at Englewood, Ill., a transfer elevator that is a thorough departure from the prevailing type. It is 30 by 200, and so arranged that, instead of elevating the grain, the cars (on a double track) are run upon an incline of 3 feet to 100 feet, a height of about 35 feet. The grain to be transferred is shot down to a scale placed midway below and weighed, and then continues its way into the car below. The house holds five cars on each track, and the double track allows the changing of cars above and below without delay. The capacity of the elevator will be doubled as soon as the business will demand it, and it is certain that the style of this convenient elevator will be largely copied.

Architects Treat & Foltz report the following buildings planned, under way and approaching completion: Residence for C. B. Farwell on Pearson street, pressed brick and brownstone work, three stories and basement; estimated cost, \$100,000. A three-story and basement house for W. H. White, on Superior street, near the lake, to be constructed of pressed brick, at a cost of \$10,000. A house for W. H. Burnet, at Kenwood, of pressed brick and timberwork, to cost \$28,000. A residence for Dr. J. P. Miller, No. 903 West Monroe street; cost \$10,000. A three-story and basement residence for J. S. Norton, at the corner of Division and Stone streets; the basement to be of artesian-well stone; above the basement of pressed brick, with brownstone trimmings; to cost \$16,000. A three-story and basement factory building on South Jefferson street, for M. Benner, to cost \$20,000. A factory building for E. Schneider & Co., at the corner of Twenty-fourth place and Wallace street; cost \$25,000. A three-story and basement residence for R. A. Misewinkle, at Lake View, to cost \$12,000. A frame residence for Mr. Pincoffs, at Kenwood; cost \$4,000. They are completing the four buildings for St. Luke's hospital, on Indiana avenue, the estimated cost of which is \$130,000. An additional story is being placed on the residence of C. R. Cummings, No. 1641 Indiana avenue, and a stable in the rear of the same, the cost of which will be \$15,000. A three-story and basement residence for Rev. H. Johnson, on Halsted street, near Lincoln avenue, to cost \$15,000. A pressed-brick and brownstone residence for James A. Hunt, on Delaware place, three stories and basement; cost \$18,000. Two apartment houses on State street, near Twenty-third, with stone fronts, for E. J. Lehmann, to cost \$10,000. At No. 344 State street, a four-story building, 25 by 90 feet, of pressed brick, with terra cotta trimmings, to cost \$16,000. Finishing two residences on Elm street, near State, for the estate of H. P. Hubbard, to cost \$15,000, and starting work on two residences adjoining, for the same parties, to cost \$16,500. They are about completing the residence of James H. Swan, No. 2623 Michigan avenue, at a cost of \$35,000, and a stable for the same to cost \$8,000. They have commenced work on the two buildings for the Episcopal Theological Seminary on Washington boulevard, near California avenue, which are to cost \$75,000. A block of six stores on West Van Buren street, near Aberdeen, three stories and basement, with flats above, to cost \$45,000.

Architect C. L. Stiles reports that the New High School at Elgin, which was illustrated in this paper some time back, is now complete and ready for occupancy. The building is about 100 by 100, two-story, and has a tower on the southwest corner, 85 feet high; building contains ten rooms, calculated to accommodate 550 scholars. Four main entrances on first floor, with stone steps and trimmings, also two rear entrances; the second floor is furnished with two exits on the outside, scholars being enabled to reach the ground by means of iron stairways, these to be used in case of fire or accident. A large room in front part of second story contains two windows eight feet in width, the upper part of which is of handsome patterns of stained glass; this not only softens the light, but adds greatly to the appearance of the front. The building is of white brick, and trimmed with buff Bedford stone, is complete with all modern improvements, and cost \$32,000. Mr. Stiles has also on hand the following work: Two very neat residences, 24 by 50, two-story and cellar, being erected on Leiter's Addition to La Grange; they are Queen Anne in style; cost, each, \$4,000. A residence for Mr. Shannon, at Hinsdale, just commenced; to cost \$3,000. A two-story and basement tenement house, 23 by 46, for Mr. E. Todd, on Park avenue, built of St. Louis pressed brick, with brownstone trimmings, to cost \$7,500. For Mrs. M. J. Ginty, at Oak Park, two-story cottage, 22 by 44, cost \$3,000. Preparing plans for a brick school-building, at Stanton, Iowa, 45 by 52, two-story, four rooms, cost \$8,000. For Mrs. Carpenter, at Carpentersville, Ill., a very unique Congregational church, 36 feet square, with 20 feet Octagon bays on each side; style Gothic, to be of brick, with limestone trimmings, open trusswork roof; seating capacity 200 persons; cost \$9,000. At La Grange, a Social Hall building, 40 by 128, main hall 40 by 60, dining-room 24 by 31, raised stage 20 by 40; besides dressing-rooms, office, etc.; building is to be used for social entertainments, dances, parties, etc. For Mr. F. B. Leavitt, at Englewood, plans just completed for neat little cottage, 24 by 48, one and one-half story, to cost about \$3,500.

Architect W. L. Carroll has prepared plans for a block of six flats, three stories and basement, 50 feet front by 60 feet deep, for W. E. Hall, to be erected on Aberdeen street, near Jackson. It will be of pressed brick, with an ornamental front, and each flat will contain eight rooms, and a furnace in the basement for each flat. In the center will be a passway through the building to the rear from the sidewalk, and a court between the flats on either side for light and ventilation, with an open court on each side in the party wall. Bams will be erected in the rear. The total cost will be about \$15,000.

Architect J. J. Flanders has prepared plans for two ten-room houses for J. K. Barry, to be erected on Washington boulevard, at a cost of \$20,000. The styles of Francis I. and the Elizabethan are made use of, the materials being Indiana pressed brick and terra cotta, artistically disposed, with light wood verandahs of carved and turned work. Also plans for the erection of the Emerson school, on Paulina and Walnut streets, and the Jefferson school, on Laffin and Nebraska streets. Indiana pressed brick is the material used.

Architect Bemy is preparing plans for the improvement of property near Lincoln park, bounded by Clark street, Webster avenue and Sedgwick street, by the erection of a block of stores and flats for R. Robertson, of Joliet. The buildings are to be faced with Indiana pressed brick, furnished by Hinchliff & Owen. Adam Warner is the contractor.

Architect F. B. Townsend is taking bids on residence, 30 by 72 feet, for W. H. Russell, Calumet avenue, south of Thirty-first street. Baltimore pressed brick and terra-cotta trimmings; two-story; cost about \$15,000.

Architect A. M. Colton is erecting a Presbyterian Seminary on Belden avenue, corner of Halsted street. It will be 130 by 140 feet, four stories and basement in height. The walls will be of Indiana pressed brick, with stone trimmings. The structure will be fireproofed, with brick and hollow tile partitions. It will contain fifty-two rooms. The basement will contain the steam-heating apparatus, janitor's room, bathrooms, etc. The first floor will include a parlor, 19 by 42 feet, with bay window 7 by 13 feet. The remainder of the floors will be laid out in students' rooms, each student being allotted a bedroom and sitting-room; the contracts are all let; the cost will be about \$60,000. For W. C. Comstock, alterations on four four-story and basement flats on Wabash avenue, at an expense of \$20,000. Also barn on corner Adams and Canal, for Gurney Cab Company,

80 by 194, three stories high. The first story will be used for the cab service, with stabling for 174 horses, and sixty-two rooms above for a hotel; cost \$20,000. Also store building for C. H. McCormick, to be occupied by the hardware firm of J. F. Wollensak. It will be 40 by 90, five-stories in height, walls of Indiana pressed brick; cost \$16,000; contracts let.

Cincinnati, O.—The prospects are most favorable, and the prospects are that a large amount of building will be done this season.

Architect Geo. W. Rapp: Order of Cincinnati, frame building, 90 by 150 feet, the entire structure covered with corrugated iron, to cost \$5,500; under way. Remodeling house for Edward Stevens, to cost \$8,798; under way.

Architect James McLaughlin has received from the Courthouse Building Commission the contract for making plans and specifications for repairing the burned structure. It is reported that Mr. Emery is putting up twenty-seven buildings in Chicago.

Architect McLaughlin believes that with a continuation of good weather and no unforeseen delays, the Cincinnati Art Museum will be under roof by the close of the building season.

Architect Des Jardins has completed plans for Dr. H. A. Smith, for a four-story stone-front pressed-brick freestone-trimmed house, to be erected on West Eighth street. Estimated cost about \$10,000.

Architect Hannaford has in his office the plans for Walter Fields' Avondale residence. The dwelling with its large entrance and hall will be broken in outline and have a picturesque effect. The seven-story Derby building, 50 by 100 feet, on the southeast corner of Fourth and Elm, is also in Mr. Hannaford's care.

Architect Anderson has just finished a design for a fourteen-room dwelling to be built on McMillan, near Summit, by John W. Fisher. Also, plans for a pressed-brick dwelling for Julius Mosler, who will build on Seventh, near Baymiller. The execution of plans for remodeling a Methodist church in Vicksburg is in his hands.

Architect Buddemeyer has drawn plans for a five-story brick, stone and terra-cotta building to front 49 feet on Sycamore and extend through to Hammond street. The improvement is to be on the Armstrong estate, and will cost \$40,000. A handsome square tower on the south front corner will add finish to the structure.

Architect Crapsey has been engaged in preparing plans for F. & L. Khan & Bros.' stove foundry, to be built in Hamilton, Ohio. The buildings, three in number, will cover 65,000 square feet, and will require an outlay of about \$30,000. Some of Maysville's (Ky.) good people want a \$12,000 Presbyterian church. Messrs. Crapsey and R. W. Brown are preparing the plans.

The following are the more important building permits recently issued: M. Clements, two-story brick, south side Hathaway, near Baymiller; \$5,000. L. B. Harrison, five-story brick, west side Race, between Fourth and Fifth; \$5,000. J. D. Rumur, three-story brick, north side Clifton avenue, near Ohio avenue; \$6,300. J. Schelenburger, two-and-a-half-story brick, east side Vine, near Boone; \$6,000. Mrs. Lahman, two-and-a-half-story brick, west side Linn, near Liberty; \$6,000. A. Lipa, three-story brick, No. 202 Western avenue; \$4,700. Mrs. R. Beeman, three-story brick, north side Mulberry, east of Incline; \$5,000. Mrs. J. Woods, addition three-story brick, No. 121 Longworth street; \$2,000. J. Boem, two-and-a-half-story brick, south side Calhoun, near Vine; \$6,000. J. B. Lucas, two-story brick, east side Wheeler, near Warner; \$4,000. W. Harrison, two-story brick, southeast corner of Highland avenue and Oak street; \$7,000. D. Conn, two-story brick addition, No. 265 Clinton street; \$2,200. Wm. Hackman, two-story brick, northeast corner Cutter and Everett; \$3,000. P. Lane, three-story brick, north side Warner, west of ravine; \$4,100. T. Soelter, three-story brick, southeast corner of Euclid avenue and Molitor street; \$5,000. J. Farrell, two-story frame, Third and Colard; \$2,500. John Ridder, three-story brick, Lickrun pike, near South Branch road; \$3,000. Ed. Stevens, repair two-story brick, Crown, opposite Home; \$8,500. Dr. Rendigs, four-and-one-half-story brick, northeast corner Woodward and Pendleton; \$12,000. P. Hickey, three-story brick, No. 94 Clark; \$5,000. Dr. J. D. Taylor, repair three-story brick, northeast corner Seventh and Elm; \$7,500. F. Lambert, two-and-one-half-story brick, No. 29 Franklin; \$210. Mr. Johnston, two-story frame, Park avenue, near Lincoln avenue; \$2,000. C. T. Dickson, three-story brick, east side of Gilbert avenue, north of Morris; \$2,500. J. Kauffman Brewing Company, one-story brick, No. 2 Hamis street; \$2,000. F. Schell, three-story brick, southeast corner of Price and State avenue; \$5,000. F. H. Bastian, three-and-one-half-story brick, south side Eighth, near Carr; \$6,200. H. Frey, two-story brick, south side Harrison, near Broadway; \$5,400. F. Sharra, four-story brick, No. 569 Walnut street; \$6,322. K. K. Church, two-story stone front, northeast corner Richmond and Mound; \$15,000. F. Montel, addition to three-story brick, No. 46 Bank street; \$2,500. W. Peckes, two-story brick No. 130 East, Second street; \$2,500. F. L. Funke, three-story brick, northwest corner of Exter and Western avenue; \$6,000. H. Lakekamp, two-story brick, east side of Hackberry, near Madison pike; \$3,000. P. D. Roe, two-and-one-half-story brick, south side of Dorsey, west of Sycamore; \$4,000. Mary Walters, two-story frame, north side of Church, near Gilbert avenue; \$3,000. James McBrain, two-story brick, 15 Sloo street; \$2,200. F. M. Zumbstein, three-story frame, west side Lodge alley, near Sixth street; \$3,800. Mt. Auburn Baptist church, west side Auburn avenue, near Church, two-story stone; \$21,000. F. Burdick, four-story brick, northeast corner Twelfth and Bremen; \$7,000. Mr. Bennett, one-story brick, south side Stable, near schoolhouse; \$1,500. L. Denning, two-and-one-half-story brick, Addison street, near Spring Grove avenue; \$3,500.

Charleston, W. Va.—On the 17th ult. the State Board of Public Works met in this city to take action on the completion of the State capitol, which Contractor Shepard threw up recently, owing to inability to complete for his contract bid—\$150,000. The board ordered Architect Kemble to make out specifications of the different kinds of work, and estimate the cost for completion of the building, which is to be ready for State uses a year from next May. The architect will report as soon as possible, so that the board can advertise for bids for completion of the building.

Cleveland, O.—The new west high school building has just been finished and opened. The edifice is two stories, and is built of brick and stone. It has a frontage of 204 feet on Bridge street, and from all sides presents an imposing appearance. It contains sixteen class-rooms, each 28 by 36 feet, and fifteen feet high. Eight of the rooms are on the first floor, and six of the class-rooms and the assembly-room are on the second floor. The class-rooms will contain fifty-six desks each, and the assembly-room has a seating capacity of six hundred. The cost of the building complete is \$20,000. The principal features of the new building are its ventilating, heating and lighting facilities. One side of each class-room is composed almost entirely of windows extending from floor to ceiling. The desks will be so arranged that the light will come from the left side of the pupils. Set in niches in the walls, opposite the windows, are steam radiators. The ventilation is so arranged that a current of warm air flows across the ceiling from the radiators, drops down to the floor, under the cooling influence of the opposite wall, flows across the floor to the grating under the radiators, and escapes through the ventilating towers, which are heated by steam pipes. By experiment this system has been found to produce a nearly equal temperature in all parts of the room, and afford ample ventilation. The halls are broad and long, and the stairways fully up to the demands of a school.

Columbus, O.—The papers have been objecting to the sum paid by the commissioners for architect's services for plans and superintendence upon the new infirmary building, and hint that "if the architect's fees on the new courthouse are to be fixed according to the rule which seems to have prevailed in building the county infirmary, a nice sum is waiting for somebody." It is gratifying to know that architects are, in a few cases at least, getting paid for preparing plans for public work, and in this case there is little doubt but that architect George H. Meatzel, who is said to have received \$6,168.71 for this work, was not overpaid, or his predecessor, Mr. Kramer, who received \$650. If they are equally judicious in selecting an architect for the proposed courthouse, which is to cost \$500,000, and paying him for his work, they will not only act honorably, but secure for their city an architectural ornament and creditable building. The following important building permits are issued: Adolph Theobald, two-story brick dwelling, 40 by 40 feet, on High street, to cost \$4,000; Henry Hackbarth, two-story brick storeroom, 42 by 31 feet, on Fulton street, to cost \$2,200; John E. Jeffords, five-story brick storeroom and hotel on High street, to cost \$30,000; Columbus Brass and Steam Pipe Works Company, two-story brick and iron shop, 129 by 31 feet, on High street, to cost \$2,000; Eugene Mauch, two-story brick dwelling, 49 by 29 feet, on Dennison avenue, to cost \$2,000; Charles Schwenker, four-story brick storeroom, 95 by 75 feet, on East Spring street, to cost \$10,000; L. Backus, two-story brick addition, 94 by 16 feet to storeroom on High street, to cost \$2,200; L. M. Baker, two-story brick addition to storeroom on South High street, to cost \$3,000. The Broad street bridge, government building, courthouse, new railroads, and many other improvements, indicate a hearty growth in the capital city. The building this year is not in one direction, but in all parts of the city. The census of 1890 will show 100,000 in Columbus.

Detroit, Mich.—The architects are very busy—"too busy to talk," they say. Most of their work is in a chrysalis state. Plans and estimates are being made, and contracts let as fast as possible, and the architects are all well employed. The *Post and Tribune*, in speaking of the Architects' Association, has this to say: The association is working on steadily to a satisfactory basis. One object is to infuse an *esprit de corps*

into the ranks of the profession, so that soliciting and other unprofessional conduct will be discouraged and finally discontinued. The great grievance of which they complain is the lack of a law compelling the people practicing the profession to pass a prescribed series of examinations, and to secure this law the association intends to employ its best efforts. It is not intended to make anything like a scale of rates, but with a certain standard of competency it is claimed that the members of the profession themselves will be secured from unjust competition, and the public generally from fraud. Meetings of the association are held on the first Monday of each month, and an effort is now being made to secure extended quarters in which models, plans, drawings, etc., may be stored, and studied by the members. It is not proposed to limit the membership to architects. Draughtsmen, builders and contractors will be eligible, and it is thought by this extension a powerful body with common interests to preserve will be got together.

The following are the more important building permits issued recently:

John Finn, two-story brick dwelling at 80 Garfield street, \$5,000; Edward Cowhey, three cottages at 168, 170 and 172 Fourth avenue, \$2,100; Thomas Church & Co., four-story brick store on Bates street, \$4,000; Kishner & Co., two frame cottages at 596 and 598 Sixteenth street, \$2,000; John B. Wagner, two-story brick dwelling at 175 Lincoln avenue, \$4,000; Thomas Payne, two-story frame dwelling on Warren avenue, \$5,000; Topping and Fisher, two two-story brick stores at 363 and 365 Woodward avenue, \$5,500; Joseph Henke, two-story brick store at 165 Hastings street, \$4,500; C. L. Cole, two-story brick dwelling at 50 Alexandrine avenue, \$6,000; Joseph Henke, brick store, No. 195 Hastings street, \$4,500; C. L. Cobb, brick dwelling, No. 50 Alexandrine avenue, \$6,000; Morris & Knapp, frame dwelling, No. 679 Fourth avenue, \$2,000; Rebecca Bates, three brick stores, Nos. 339 and 341 Woodward avenue, \$7,000; S. Granger, double frame dwelling, Nos. 179 and 181 Mt. Elliott avenue, \$3,000; W. H. Allison, brick dwelling, No. 104 Canfield avenue, \$9,000; A. Detroyer, brick store, No. 811 Gratiot avenue, \$4,000; E. D. Phillips, brick dwelling, No. 95 Miami avenue, \$5,250; E. Nuppenau, repairs to brick office, Nos. 51 and 53 West Larned street, \$4,600.

Des Moines, Ia.—Bricklaying on the fifth story of the Kirkwood House is being pushed rapidly, and it will be but a short time before it will be completed and a roof put on.

Evanston, Ill.—The building season is opening up with a boom. The prospects of a new road are leading people to buy and build at a rate which probably surpasses any future time. President Cummings, of the Northwestern University, expects to build this season on Chicago avenue, near the university. George C. Wilcox has commenced a \$7,000 addition to his home on Grove street. Foundations are in for Mr. Bass' dwelling on Grove street, near Oak avenue. E. A. Kimball, John B. Kirk and Daniel J. Avery have bought lots on Ridge avenue and will build. B. C. Cole has bought a lot on Greenwood street, 70 by 214 feet, of J. P. Boutelle for \$3,500, and will build at once. The Avenue House addition, which will almost double its capacity, is inclosed. S. S. Neal is erecting a cottage on Benson avenue, S. E. Bradley one on Chicago avenue, near Dempster street, and C. S. Holbrook has contracted for two on Foster street. The Presbyterian Society of South Evanston, recently organized, has bought the northeast corner of Hinman and Lincoln avenues, with a frontage of 114 feet, an average breadth of 125 feet, and depth of 190 feet. They are maturing plans for a handsome edifice. Messrs. L. C. Pitner & Son are contemplating the erection of a large number of houses at Ravenswood and other points under the superintendence of a prominent contractor of Evanston.

Evansville, Ind.—Reid Bros. are building a schoolhouse, two-story and basement in height, stone, brick and Chicago terra cotta; will seat six hundred; cost about \$30,000. Also a residence for Jacob Eide; cost \$10,000. Also in Henderson, residence for Capt. Perkins; cost \$8,000. Also in Princeton, two residences, to cost \$4,000 each.

Geneva, Ill.—The board of supervisors of Kane county met on Wednesday for the special consideration of courthouse improvements. Repairs on the building are necessary "to prevent some humane society from interfering with the county officials for immuring their employes and violators of the law within the walls of the building." The needs of the case were looked into, and it was decided to expend about \$8,000 in heating the building by steam and in thoroughly ventilating it. The much-needed work will be commenced forthwith.

Lincoln, Neb.—Weather backward, and building operations are delayed, but the outlook was never better for the season.

Architect Artemas Roberts: For B. Lombard, Jr., three-story brick, 25 by 100 feet, to cost \$12,000; nearly complete. For P. S. Stewart, three-story brick, 25 by 90 feet, to cost \$5,000; inclosed. For Mrs. M. J. Bond, three-story brick, 25 by 90 feet, to cost \$5,000; inclosed. For J. W. Winzer, three-story brick, 25 by 100 feet, to cost \$7,000; projected. For Hass & Zeb, three-story brick, 25 by 50 feet, to cost \$4,000. For Mr. Alexander, three-story brick, 22 by 50 feet, to cost \$3,500; projected. For E. E. Brown, two-story brick dwelling, 43 by 56 feet, to cost \$12,000; projected.

Mankato, Minn.—The number of brick and wood residences under process of construction is beyond computation in a single day's work, but can be said to be the largest ever made in one day in the city. No place in Minnesota has ever had fairer prospects than Mankato is enjoying at present, and the best of it all is, she has real solid backing. None of it is fictitious, but a genuine, warranted growth, and its limit is beyond computation.

The large double store, 50 by 100 feet, two-stories brick, and stone basement, adjoining city hall on Front street, being built by John F. Meaghan, is ready for the superstructure. This is to be the best built block in Mankato, and is hard to beat anywhere. The foundation is extremely well made, and the basement walls are of an extra thickness. Add to this the fact that its rear door is less than 100 feet from the side-tracks of the Chicago, Milwaukee and St. Paul railroad, and the adaptability of this block for wholesale purposes is most apparent. This block is to be completed by July 1, and will cost \$15,000. It is to have a front of St. Louis pressed brick and French plate glass, and is available for any first-class house who desires to establish a wholesale business in a city which possesses the best advantages for business of any point in the United States.

The new building of Wagen Bros., 24 by 80 feet, has been begun, the excavation having been completed and material on the ground. It is to be completed in July, and will cost \$2,500. It is to be two stories of brick, and stone basement, and will be occupied as a butcher-shop on the first floor, and residence on the second floor, by themselves.

On the corner of Front and Cherry streets, J. A. Lewis is erecting a brick two-story block with stone basement, 22 by 83 feet, the foundation walls of which are well under way. It is to be completed June 1, and is for rent. The lower floor will make one of the finest locations in Mankato for business purposes. The second floor will be divided into suites of apartments for offices or residences. The location of this block will secure its immediate rental. It will cost, completed, \$4,000.

In block 13, the First National Bank have begun the erection of the second section of their block, which is to be 22 by 80 feet, two stories and basement. The first floor is to be a storeroom, not rented as yet, while the second floor is to be apartments or offices generally rented now by the Standard Cement Company and others. The excavation is about completed, and the building will be ready for use about July 1, costing about \$2,840.

Milwaukee, Wis.—The Commissioners of Public Works have issued permits to occupy streets in the erection of the following buildings: A dwelling costing \$3,000, for F. Hallman, on Fifth street; a stone basement, costing \$3,500, for Cook & Hyde, on Eighth street; a brick building, costing \$2,500, for Frank Baltes, on Chestnut street; a frame building, for C. Viermont, costing \$3,500; three frame buildings, costing \$5,000, for Mrs. Newton, on Cedar street; a store costing \$3,650, for C. Rostads, on Railroad street; three dwellings, costing \$6,700, for Geo. Parker, on Florida street.

All Saints' cathedral is undergoing a remodeling so far as the chancel. The latter is being built up and out into the nave, which is expected, when completed, to add much to the effectiveness and comfort of choir and clergy. The former will be raised about one foot above the floor level, while the cathedral clergy will occupy seats on another platform about twice the height of the first from the floor. The interior of the cathedral will at the same time undergo a new frescoing. These repairs and changes will not be completed for about two weeks.

Work on the new Colby block, at the northeast corner of Milwaukee and Mason streets, has been begun, and it is hoped to have the structure ready for occupancy by September, this year. The building will have a frontage of 120 feet on Mason street, and 100 on Milwaukee street, and will be five stories in height. The foundations will be of stone and the superstructure of brick, with Bass Island stone trimmings. The ground floor will be laid out in five stores, while the upper floors will be devoted to offices. The second and third floors will be occupied by the Wisconsin Central Railway Company. The cost is estimated at from \$150,000 to \$200,000.

Minneapolis, Minn.—A building, 78 by 51 feet, divided in the center by a fire wall, came crashing down during the latter part of the past month, injuring two persons seriously. The wooden building which originally occupied the site burned last November, and it was determined to rebuild it at once of brick. Trenches were dug ten feet deep

for the foundation walls, which were laid twenty-two inches thick, in the dead of winter, and this is supposed to be the cause of the fall—that the mortar in the foundations, and possibly in the walls, froze before drying, and, when spring came, weakened by thawing. The foundation for the dividing wall is thirty inches wide at the bottom, and twenty-one inches at the top. The walls were also put up during the winter, and to show how unsatisfactory this sort of work was, an examination of detached brick showed that the mortar, still moist, could be rubbed off with the thumb and fingers. The outside walls were sixteen inches thick, and the fire wall twelve inches up to the second floor, and above that eight inches thick. The walls, roof and flooring were completed, and it was intended to finish the building, ready for occupancy, in three weeks. It was to cost \$80,000. Some time ago it was noticed by the position of the floor beams that the building was settling in the center, and the workmen were preparing to brace up the walls on the inside. They had left the building but a few minutes before it fell.

The interior of the West hotel has been plastered and finished down to the second story, and Architect Buffington adheres to his promise that the building shall be ready for the formal opening by the first day of July.

Work has been commenced on George Brackett's new block at the corner of First avenue south and Second street. J. C. Berry and Frank Berry break gravel to-day for the erection of three brick stores near the corner of Central avenue and Fifth street, east division, to cost \$12,000 to \$15,000. Mrs. M. Whitaker of Mankato is preparing to build a brick block, 44 by 65, and two stories high, with basement, on Third street, between Sixth and Seventh avenues south. The buildings have been removed from the site. The buildings are being removed from the corner of Third street and First avenue north in anticipation of the erection of a substantial brick block on that important corner. Mr. F. B. Long's new block on the corner of Fifth street and Hennepin avenue will be known as the Kasota building, and will be built of Kasota stone. D. B. Searles is to build an \$8,000 residence on the corner of Lyndale and Hawthorn avenues. Fully \$8,000 is being expended in remodeling the Theatre Comique building on First avenue south. John T. Lucas has purchased one half of the old Masonic block at 109 Nicollet avenue for \$25,500. The property belonged to the Hedderly estate. F. D. Nordenburg is to build an addition to his brewery buildings 50 by 100 feet and seven stories high, on the bluff where his present brewery is located. The structure will be of stone, and it is estimated that fully \$50,000 will be expended on the building and its stationary machinery.

The Minneapolis end of the *Pioneer Press* of the 27th ult. reports the following: Ground was broken during the past week by C. E. Gates for a block of fifteen houses, to be located on the corner of Three-and-a-half avenue south and Seventeenth street. The buildings will be two stories high above the basement, and the corner houses three stories high. Mr. Kimball's plans show an exceedingly attractive superstructure. The houses will be built with red pressed brick front, with cut stone trimmings, and with furnaces, gas, hot and cold water and all the modern conveniences. The houses will cost about \$4,000 each, and the improvement will represent an expenditure of \$60,000. E. Baker is building a block of two stores, on the corner of Fourth avenue and Ninth street, to cost about \$5,000. Mr. William Searles has had the plans drawn for a very handsome \$10,000 residence he proposes to build on the corner of Hawthorne and Lyndale avenues the present season. J. S. Bradstreet has commenced work on a house on Second avenue south and Twenty-second street, to cost \$10,000. Plant & Whitney are the architects, but Mr. Bradstreet will probably contribute largely to its features. Its architecture is on the Oriental order. Sixteen houses, to cost about \$1,000 each, are being built at Lake Calhoun, near the motor line station, by L. F. Menage and others. Col. McCrory is building seven more, and L. F. Menage's fifty-room hotel at Lake Harriet is well under way. J. W. Tousey & Son are to build ten eight-room houses at a cost of \$20,000, on sixteen lots in Blaisdell's revised addition, purchased at a cost of \$18,355. B. F. Shaubert has become the owner of the Hurlbut block, purchased recently by Channell & Hayward. The price paid was \$80,000. Washington Yale has purchased the Heaton block, at No. 220 Nicollet avenue, for something like \$40,000. Mr. Heaton will probably build during the summer. B. J. West, Jr., is to build a three-story brick block on the corner of Fourth street and Fourth avenue south, to cost \$20,000. Edward Sexton is building an \$8,000 hotel building on the corner of Twentieth street and Fourteenth avenue south. The building is 30 by 86 feet and three stories high.

Plant and Whitney have commenced work on a house on Second avenue south and Twenty-second street for J. S. Bradstreet, to cost \$10,000. Its architecture is Oriental.

Architect James C. Plant, of the firm of Plant & Whitney, let the contract last week for a three-story warehouse, 44 by 100 feet, to be built on his lot on Fourth street north between Second and Third avenues. The first story will be of cut-stone, the upper portion of red pressed brick. The walls will be strong enough to bear the weight of additional stories when the time comes to add to them. The lower story will be constructed for a warehouse, and the upper ones for flats. The cost of the building will be about \$17,000. Thomas Jeffery is to build six tenement houses on Sixteenth street and Three-and-a-half avenue, to cost \$18,000. J. D. Blake, \$15,000 residence on Mount Curve avenue, adjoining H. B. Beard's. E. P. Snell is to build on adjacent lots a \$7,000 house. C. S. Davidson is to build a handsome house on Highland avenue in Oak Lake this year. Phillip Haefliger's new house, on same avenue, is inclosed, and P. W. De Lancey has commenced work on still another. H. J. Bauman's house, one of the best built and most attractive in the addition, is about done. H. W. Freeman and Frederic Watson are both to build this season on Highland avenue, none of the six houses named costing less than \$4,000 each. Jacob Barge is to build a Tivoli garden on the property recently purchased by him on Third street, next to the engine house. He expects to erect a \$25,000 building. Kalkhoff & Hammond are having the plans drawn and will build a block for wholesale purposes on the corner of Third street and First avenue north, back of the Boston block. The structure will be 66 by 110 feet on third street, and will cost \$75,000. It will be four or five stories high. The old buildings have been removed and the excavation will be commenced as soon as some details in regard to an alley can be arranged. The Harrison property on the corner opposite will be improved. W. B. Jackson and B. Cooper will break ground this week for four stories and warehouses 88 by 100 feet, and three stories high, on the corner of First street and Third avenue north, nearly opposite Deere & Co's warehouse. The building will be erected in the best manner, suitable for jobbers and implement warehouses, and will have vaults, elevators and track facilities. The Monitor Plow Works company will occupy one of the stores. The building will cost \$20,000. J. C. Whitney is to build a row of thirteen tenements, to cost \$40,000, on Sixth avenue south and Fifteenth street.

Madison, Wis.—The opposition to brick as a material, and terra cotta as an ornament, for the construction of the new courthouse, from plans by architect Koch, made by the Board of Commissioners, which was reported last month from a local paper, entirely gave way upon their examination of samples of terra cotta presented by the Northwestern Terra Cotta Company, of Chicago, and upon the decision to build of brick and terra cotta, the contract for the latter material was awarded to that firm. The pressed brick will be furnished by Harris Bros., of Zanesville, Ohio, and will require about 125,000. The terra-cotta contract is large, and will amount to about \$16,000. Captain John Nader, architect and civil engineer, reports that work is opening up quite briskly in Madison this spring. He has finished plans for two new dwellings to be erected at once by Madison's old citizen, William Vroman, on Blair street, in the second ward. The Brown estate is about to enlarge and vastly improve the appearance of the "castle," in the second ward, according to plans drawn by said architect. The Charles Kayser property, on State street, in the first ward, is to be improved. Architect Jones reports that he has been drawing plans and specifications for parties in the city.

Monroe, Mich.—The Monroe Marsh Company is preparing to build a large clubhouse on House Island, half a mile from the lake. It will be two stories high, and have a frontage of 80 feet on the United States canal.

Omaha, Neb.—Large amounts of work are being projected.

Architect C. F. Driscoll: For Geo. P. Stebbins, two dwellings, three stories each, 44 by 20 feet to cost \$7,200; separate contract. For Geo. B. Lane, two dwellings, three stories, 44 by 30 feet, to cost \$5,000. For Mrs. R. M. —, two-story and basement cottage, 24 by 36 feet, to cost \$2,200. For Thos. Callan, hotel and restaurant, 44 by 66 feet, to cost \$3,000. For Robt. A. Reed, two-story dwelling, 24 by 44 feet, to cost \$2,800. For Fred. Forsdyke, two three-story dwellings, 44 by 32 feet, to cost \$4,500. For Kent Hayden, two-story dwelling, 26 by 40 feet, to cost \$3,000. Elsewhere the following: School District, St. Paul, Neb., eight-room school building, 76 by 78 feet, to cost \$14,000. For E. E. Aylesworth, Council Bluffs, Iowa, two-story residence, 24 by 32 feet, to cost \$2,800. For Geo. Metcalf, Council Bluffs, Iowa, two-story residence, 32 by 36 feet, to cost \$4,800. For J. P. Lotta, Tekamah, Neb., two-story residence, 28 by 40 feet, to cost \$4,900. Citizens of Fremont, Neb., Normal school, 76 by 64 feet, to cost \$17,000. For J. W. Love, Fremont, Neb., two-story residence, 38 by 50 feet, to cost \$5,000. For Osterman & Tremaine, Fremont, Neb., two-story and basement stone building, 22 by 100 feet, to cost \$4,800. For H. G. Clark & Co., Omaha, four-story and basement stone structure, 22 by 132 feet, to cost \$11,500. For First National Bank, Cornish, Iowa, bank building, 22 by 100 feet, to cost \$15,000. For Max Mohn, Council Bluffs, Iowa, a three-story hotel, 44 by 100 feet, to cost \$15,000. For J. J. Hawthorn, Fremont, Neb., a two-story dwelling, 40 by 40 feet, to cost \$3,500. School District, Hastings, Neb., eight-room

schoolhouse, 78 by 80 feet, to cost \$18,000; W. L. Van Alslyne, builder. State of Iowa, for Institute of Feeble-minded at Glenwood, a dormitory college, 30 by 32 feet, to cost \$2,000; same at Watertown, 20 by 20 feet, and 100 feet high, to cost \$10,000; same, main building, 150 by 170 feet, two stories and basement, to cost \$50,000; also a gymnasium building, to cost \$2,000. In all the above the buildings are under way.

St. Louis, Mo.—The condition of building affairs promises to be very active for the spring and summer.

Architect W. G. Gains reports the building outlook good and building on the increase. For Theo. Rick, altering brick building, 45 by 20 feet, to cost \$6,000. For George Koptenbrink, three-story brick tenement, 50 by 65 feet, to cost \$7,800; projected. For W. Whiting, one double tenement of brick, 30 by 55 feet, to cost \$4,000; under way. For Mrs. Lahay, a three-story and mansard store, 65 by 50 feet, to cost \$14,000; under way. For M. Bernaring, saloon alteration, to cost \$2,500. For George Kahman, a nine-room brick cottage, 30 by 30 feet, to cost \$4,200. For M. Smith, small dwelling, 20 by 45 feet, to cost \$3,000. For M. Gannon, double tenement, 30 by 55 feet, to cost \$4,300. For Charles Heine, two-story dwelling, 20 by 60 feet, to cost \$3,800. For L. & J. Olden, freight warehouse, 50 by 163 feet, to cost \$8,000. The last six above are all projected. For Morrissey & Glonous, private stable, 35 by 100 feet, to cost \$4,000; under way. For trustees, a small frame church, 45 by 60 feet, to cost \$8,500; projected. Also plans for two buildings not advanced enough yet for further information.

President Flad, of the Board of Public Improvements, has completed a machine for the purpose of testing granite and other stone street-paving material. The use of the machine was suggested by a dispute between the granite contractors, Allen & Vieths, and the board relative to the durable qualities of certain light red granite that had been rejected by the board. The testing consists of laying down a pavement four feet wide and about seven feet long in a substantial manner. A cart on two wheels, containing two tons of lead, is then placed on this pavement, which is made of two kinds of material, one kind under each wheel. This car is attached to a water engine, and is made to run backward and forward at the rate of about two miles an hour, making forty-eight miles, or forty thousand trips, per twenty-four hours. It can only be used on a stone pavement, as the lasting quality of a wooden pavement is said to be its capacity to resist atmospheric influences.

Architect Chas. F. May, Jr.: For Capt. F. R. Rice, residence and stable, brick and terra cotta, house two-story with attic and slate roof, 44 by 75 feet, to cost \$25,000; just finished. For Dr. C. G. Kohlring, three-story stone front residence, 24 by 72 feet, to cost \$9,000; under roof. For John Oberider, store and dwelling, 44 by 70 feet, to cost \$9,000. For Samuel Marlow, two-story stone-front residence, 22 by 50 feet, to cost \$3,500; just completed. For Charles Wunderleck, four three-story brick and terra cotta dwellings, 75 by 72 feet, to cost \$16,000; cellar completed. For Cour. Grote, a three-story pressed brick front dwelling, 23 by 52 feet, to cost \$5,000; under roof. For Aug. Bohnenkamp, two-story pressed brick front dwelling, 23 by 50 feet, to cost \$5,500; cellar finished. Gast. Wine Co., a two-story brick fermenting cellar, 60 by 100 feet, to cost \$8,000; sublet. For C. F. Feirabend, a two-story pressed brick mansard dwelling, 23 by 52 feet, to cost

\$5,000; about to be let. For Henry Hoburg, a two-story pressed brick mansard dwelling, 23 by 52 feet, to cost \$5,000; cellar finished. For Aug. Fitzell, three stone mansard residences, 23 by 52 feet, to cost \$6,000; about to be let. For William H. Shyrock, two-story stone front dwelling, 42 by 50 feet, to cost \$7,500. For I. J. Baker, two-story brick and terra cotta residence, 42 by 72 feet, to cost \$1,200. For Robert Sheehan, two-story stone residence, 23 by 72 feet, to cost \$5,500. For Bachmer & Strangholmer, two stone front residences, 23 by 52 feet, to cost \$5,500. For William Washmidt, one stone-front residence, 23 by 52 feet, to cost \$5,500. For H. Dreer, one brick-front residence, 25 by 70 feet, to cost \$6,000; the last seven above are about to be let.

St. Paul, Minn.—Building prospects still brightening. New plans are being projected, and though the season is still backward, the year no doubt will be a marked one.

Architects Carpenter & Teltz: The St. Paul Chamber of Commerce building. The contractors are: Lucius Warner, brickmason; Wilkins & Romer, carpenters; Adams, Rothwill & Co., ironwork; F. G. Draper & Co., hardware; Beck & Hank, painters and glaziers; James Cullen, plasterer; Graham & Ward, plumbers; Lauer Bros., stone-masons; Frontenac Stone Co., stonecutting; Scribner Roofing & Cornice Co., slaters and galvanized iron work; W. E. Hate & Bro., hydraulic elevators, and Rogers & Davis, steamfitting. For Theo. Hamm, offices and brewery, three stories high and stone, 53 by 45 feet, to cost \$10,000; projected. For Graves, Vinton & Co., bank building of brick, iron and stone. Aberdeen, Dak., 25 by 50 feet, to cost \$10,000; projected.

Architect Egan, of Chicago, has had his plans accepted for the Ryan hotel without a dissenting vote, and some of the contracts are already let. St. Louis pressed brick will be used, Ohio sandstone and terra cotta. The cost of the entire improvement will amount to more than \$1,000,000, with a prospective addition of a \$500,000 annex next year.

Toledo, O.—The Ohio State Journal of the 17th ult., says: Attorney-General Lawrence went to Toledo yesterday to attend a meeting of the trustees of the new insane asylum at that place. It was intended to relet the contracts for work on the institution, but there seems to have been a slight hitch in the work, the architects' estimates of the cost footing \$502,000, while the appropriation is only \$500,000, and it was decided to postpone the letting of contracts for thirty days. A large number of contractors from all parts of the state, including several from this city, were present and were highly disappointed.

Watertown, Wis.—Several fine residences are going up in this thriving little town, together with a \$20,000 hotel.

Youngstown, O.—Reference was recently made to the large number of buildings projected for the coming season. Architect Ellis, among other work, is preparing plans for a costly stone residence for John C. Wick, of the banking house of Wick Bros. & Co., to be erected at the corner of Lincoln and Wick avenues. Adjoining this, the same architect is preparing plans for a fine residence for Mr. Henry Wick. Careful inquiry among contractors shows that at least three hundred residences are now under contract or in process of erection.

Winona, Minn.—Architects Maybury & Son have furnished plans for rebuilding the Methodist church at Rochester, Minn.

PROPOSALS.

HARDWARE.

[At Traverse City, Mich.]

TRAVERSE CITY, Mich., April 2, 1884.
Sealed proposals will be received by the Board of Commissioners until 10 A.M. of Wednesday, June 3, 1884, at which time said proposals will be opened at the office of the Board of Commissioners, at Traverse City, Mich., for all locks, knobs and hinges required for the Northern Asylum for the Insane.

For information relative to specifications and conditions, address

C. M. WELLS, Superintendent.

TILE-FLOOR ARCHES, FURRING FOR CORNICES, AND COVERING FOR IRON COLUMNS.

[At Toledo, Ohio.]

OFFICE SUPERVISING ARCHITECT,
TREASURY DEPARTMENT,
WASHINGTON, D. C., May 10, 1884.
Sealed proposals will be received at this office until 2 o'clock P.M. on the 16th day of June, 1884, for furnishing and fixing in place, complete, the tile-floor arches, furring for cornices, and covering for iron columns, required in the Postoffice, etc., building at Toledo, Ohio, in accordance with drawings and specifications, copies of which and any additional information may be had on application at this office or the office of the local superintendent of the building, on and after the 10th day of May, 1884.

Bids must be accompanied by a certified check, and those received after the time of opening will not be considered.

M. E. BELL, Supervising Architect.

TILE-FLOOR ARCHES, FURRING FOR CORNICES, AND COVERING FOR IRON COLUMNS.

[At Peoria, Ill.]

OFFICE SUPERVISING ARCHITECT,
TREASURY DEPARTMENT,
WASHINGTON, D. C., May 10, 1884.
Sealed proposals will be received at this office until 2 o'clock P.M. on the 16th day of June, 1884, for furnishing and fixing in place, complete, the tile-floor arches, furring for cornices, and covering for iron columns, required in the Postoffice, etc., building at Peoria, Ill., in accordance with drawings and specifications, copies of which and any additional information may be had on application at this office or the office of the local superintendent of the building, on and after the 10th day of May, 1884.

Bids must be accompanied by a certified check, and those received after the time of opening will not be considered.

M. E. BELL, Supervising Architect.

IRONWORK, POSTOFFICE SCREEN AND ILLUMINATED TILING.

[At Cincinnati, Ohio.]

OFFICE SUPERVISING ARCHITECT,
TREASURY DEPARTMENT,
WASHINGTON, D. C., May 10, 1884.
Sealed proposals will be received at this office until 2 o'clock P.M. on the 2d day of June, 1884, for furnishing and fixing in place the ironwork, postoffice screen and illuminated tiling required in the Custom House, etc., at Cincinnati, Ohio, in accordance with drawings and specifications, copies of which for each class of work, and any additional information, may be had on application at this office or the office of the local superintendent of the building.

Bids must be accompanied by a certified check, and those received after the time of opening will not be considered.

M. E. BELL, Supervising Architect.

TILE-FLOOR ARCHES, FURRING FOR CORNICES, AND COVERING FOR IRON COLUMNS.

[At Buffalo, N. Y.]

OFFICE SUPERVISING ARCHITECT,
TREASURY DEPARTMENT,
WASHINGTON, D. C., May 10, 1884.
Sealed proposals will be received at this office until 2 o'clock P.M. on the 16th day of June, 1884, for furnishing and fixing in place, complete, the tile-floor arches, furring for cornices, and covering for iron columns, required in the Postoffice, etc., building at Buffalo, N. Y., in accordance with drawings and specifications, copies of which and any information may be had on application at this office or the office of the local superintendent of the building, on and after the 10th day of May, 1884.

Bids must be accompanied by a certified check, and those received after the time of opening will not be considered.

M. E. BELL, Supervising Architect.

TILE-FLOOR ARCHES, FURRING FOR CORNICES, AND COVERING FOR IRON COLUMNS.

[At Quincy, Ill.]

OFFICE SUPERVISING ARCHITECT,
TREASURY DEPARTMENT,
WASHINGTON, D. C., May 10, 1884.
Sealed proposals will be received at this office until 2 o'clock P.M. on the 16th day of June, 1884, for furnishing and fixing in place, complete, the tile-floor arches, furring for cornices, and covering for iron columns, required in the Postoffice, etc., building at Quincy, Ill., in accordance with drawings and specifications, copies of which and any additional information may be had on application at this office or the office of the local superintendent of the building, on and after the 10th day of May, 1884.

Bids must be accompanied by a certified check, and those received after the time of opening will not be considered.

M. E. BELL, Supervising Architect.

EDWIN A. JACKSON & BRO.

77 BEEKMAN ST., NEW YORK.

Heat-Saving and Ventilating —GRATE.—

WASHINGTON, D.C., March 29, 1883.

GENTLEMEN:—I take pleasure in saying that the three ventilating grates of your make, which I have had in use the past winter, have given perfect satisfaction.

They have fully met your recommendation and come up to my expectations. They keep the rooms in which I use them supplied with a full supply of fresh air, creating a complete ventilation. This air being heated as it passes through the air chamber, pours into the room through the perforations at the top of the grate, bringing a supply of heat which, I think, more than doubles the radiating power of the fire itself.

The one whose operation I have observed personally most closely is in my study, a room about 18 by 28 feet in dimensions, which it keeps thoroughly warm and well ventilated.

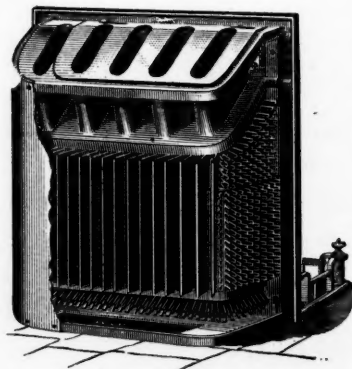
Yours truly,
STANLEY MATTHEWS.

ST. PAUL, Minn., Nov. 17, 1883.

MESSESS. E. A. JACKSON & BRO., New York. Dear Sirs: Your patent "Ventilating Grate," of the Oliver pattern, has fully met my expectations. To all the delights of an open fire it certainly adds the double advantage of economy of heat and perfect ventilation. Until our very cold weather I have been able to heat comfortably a large double room downstairs, and a good-sized room in second story with it, and with no greater expenditure of fuel than necessary for a common grate.

Yours very truly,

CHARLES E. LEE, M.D.



ELKHART, Ind., Jan. 14, 1884.

E. A. JACKSON & BRO., New York. Gents: The grate purchased of you is placed in a sitting-room 18 feet square, and opening from it on the north by double doors is the parlor, 16 feet square, and on the south by double doors opens the dining-room, 14 feet by 16 feet, with eleven windows in the three rooms, extending from the sills or floor, 8 feet high, with ceilings 10 feet high, and all three rooms, with the canal coal in the grate, are nicely warmed and most perfectly ventilated by that one grate.

Very truly yours,

F. A. BENHAM, M.D.

SEND FOR DESCRIPTIVE CIRCULARS, CATALOGUES AND ADDITIONAL REPORTS.