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THE INLAND ARCHITECT AND BUILDER

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THE INLAND ARCHITECT AND BUILDER has a larger circulation in the West than any building journal in the country. Advertising rates are very reasonable, and will be made known on application. We take pleasure in directing attention to the high character of our advertisements.

Index to advertisements in this number will be found on page xiv.

ALBANY, New York, is selected as the place of holding the annual meeting of the American Institute of Architects for 1884. The date set is October 22, and in the State of New York this is one of the loveliest months of the year. The desire of a majority of the members being expressed in favor of that city, that they might enjoy an opportunity of studying some of the remarkable buildings now in process of erection there, the trustees have made arrangements by which the convention may meet there conveniently. To the Eastern members of the profession this occasion will be looked forward to with considerable anticipation; but to those of the West, past experience leads us to fear that a good intention will be the limit of their attendance. This is not as it should be. The trustees of the institute impartially follow the popular voice, and the meetings are only held east because the majority of the members wish it. The excuse offered by some, that "it is too far," is not in all cases valid, for when, two years ago, the convention was held at Cincinnati, on purpose to interest and accommodate Western architects, it was somewhat discouraging to observe no architects from St. Louis and but one from Chicago in attendance. For the past three years the "West," which may in this case designate all the cities west of Cleveland, Ohio, has been represented at these conventions by but one architect. The architects who are too busy, or for other reasons do not go, are not aware of the benefits they would derive or the pleasure they miss by their continued absence from these conferences of the profession. We earnestly hope to see a full attendance of architects from every Western city at this convention this fall, and believe that not only will they be greatly benefited, but their future work improve by that exchange of ideas which forms one of the valuable features of these meetings. Though the details of the meeting are not yet arranged, and will in the future be announced, notice is given that ample time may be given to architects for preparation.

THE demand for a convention of Western architects is imperative, judging from letters received from prominent members of the profession throughout the West; and in response to this we would announce a call for a meeting of all architects, particularly those of the South and West, to convene at Chicago on the second Wednesday in November next. An opportune letter from Architect Henry Lord Gay, published in this issue, opens the way for a large convention to meet and discuss those matters upon which the future usefulness and advancement of the profession depends without cost to the architects; and we sincerely hope that not only will the architects be unanimous in their attendance, but that the intervening time will be devoted to the forming of projects that have for their object the good of the profession. It is also important that local associations attend as associations, and in their meetings during the intervening time discuss the question of the advisability of establishing a Western association as a central body to which all may bear intimate relations, both as individual members and as associations. We would also suggest that architects forward to us expressions upon such points as they think should be discussed in this convention.

THIS movement is called forth, in a large degree, by the small attendance of Western architects upon the annual meetings of the American Institute; and though for the past few years Western members of that body have been requested to exert themselves in the work of increasing the attendance upon meetings of the local chapters, the membership has not enlarged in a degree corresponding with the increase of the profession in the West, while the rolls of the Institute show that a large majority of names of Western members of former years have lapsed. The Chicago convention is intended to in no way interfere with the existing institution, but to aid it in the work it has so long and creditably performed. It is therefore apparent to the majority of the profession that the time has come when the architects of the United States should be more united in their action, and this can only be accomplished by the meeting of those who have the future architecture of the country in their charge. The rapid strides the West is taking in every direction shows the imperative necessity of architects keeping pace with it in their endeavor to leave behind them those monuments that endure and to which the citizens of the future may point with pride and look to as the foundation of American architecture.

THAT a new era has begun in the history of American architecture is evidenced by the many measures of reform that are discussed, both by the associations and by the architects generally. That of competitions is one of the more important. The American Institute of Architects have addressed a concise and comprehensive circular to the profession generally, calling for their views upon the subject, and combination against the "no cure no pay" system that has almost irreparably ruined our public architecture; and now the Architectural Association of Des Moines, Iowa, have taken the matter in hand with the prospect of a full support from all the architects and associations in the West. The architects certainly have this matter in their own hands, and by united action can not only benefit themselves but raise the standard of the profession to an elevation it is in some respects sadly in need of. It is a healthy sign when such men as compose not only the associations referred to, but others

throughout the country, are alive to the needs of the profession, and so intelligently discuss and endeavor to work out this much-needed reform.

ANOTHER of these movements is the tendency among our profession in almost every city toward association. The proposed convention of Western architects is a movement that is not only gaining the written commendation of architects throughout the South and West, but the action of local societies point to it as the means by which the profession may be brought to act in unison. It has been suggested by one association that the institute systems of England and America have been failures. But, while their success in drawing architects together in local association may have been limited, and there may be a better way to accomplish this, the American Institute has effected, and thoroughly too, all the reforms, and given to the profession in America all the standing that it has enjoyed. It is the "bedrock" upon which will stand all the prosperity and advancement that we may in the future reach, and to which those must go down who in the future search for the foundation of those ethics that regulate the art of building in America, even though they may be lost to sight and covered by the imposing structure of organization effected by those that are now succeeding it. It is fortunate for our profession in this new world that the traditions of the art are so broadly and plainly written, and so easily interpreted that he who runs may read, and if he will honestly study the past, the future can have nothing for him but what is highest and best in architecture.

THAT philanthropic enterprise, the Chicago Manual Training School, the funds of which were contributed by the Commercial Club of Chicago, was opened in February last for the reception of pupils, and closed its first half-year in June, with an enrollment of seventy-two. Its success has been very gratifying to its friends. The interest taken in the school by the public has been greater than was expected, although it was well known that the progress of the undertaking was closely watched by many who have the cause of education at heart. Hundreds have visited the school, have studied its plan, and have been impressed with the idea that the school is admirably adapted to the needs of the time. The enthusiasm of the pupils has been noted by even the most casual observer; the work of their hands, which, for the past term, has been wholly in wood, would do no discredit to a trained mechanic. The boys who have been engaged in woodworking the past year will, in September, enter the forge-shop, and in September, 1885, the machine-shop. This school is not a trade-school, in which trades are taught. In this respect, it is wholly unlike the New York trade schools, in which young men are instructed in plumbing, plastering, etc. In the Chicago school, the use of tools is taught for the sake of the manual and mental training which is to be obtained therefrom, as well as for the skill which may be acquired for future use. It is believed that a boy's hands are an essential part of the boy, no less than his head; that his hands ought to be trained no less than his brains; that the boy whose mind only is educated, is only partially educated. Several important things result from this style of education. The boy so trained is better acquainted with the world in which he lives than the boy who has had no such training. He is better informed concerning the character of the men who compose the vast majority of mankind. He has learned not to despise a laboring man because he is a laborer. He appreciates the skilled mechanic as a man of brains, as well as the writer or the speaker; that he may be much more a man than a mere clerk, whether by "clerk" is meant a keeper of books

or a salesman. He has also developed self-reliance, since he has learned something of his own ability to work. And while he has mastered no particular trade, he has laid the foundation for several, being able, with a few months' practice, to take his place as a skilled mechanic.

BUT the Manual Training School does more than simply put a boy in the way of earning a living (though this of itself ought to be sufficient to commend it to all); it gives a boy the essentials of what is usually known as a high-school education. Whatever culture can be had from algebra, geometry, literature, physics, chemistry, Latin, if he desires it, the Manual Training School gives him. The advantages thus offered are recognized by our best citizens. The school is not, as might be supposed from its name, a reform school for vagrants. Of the seventy-four boys in attendance the past term, the catalogue shows that twenty-three were sons of merchants, twenty-two sons of manufacturers and mechanics, five sons of physicians, etc. The catalogue also states that twenty-six boys entered the school from the city and other high schools. If any one of our readers is in doubt as to the social standing of the patrons of the school, let him send to Director Belfield for a catalogue, and examine the list of pupils. On the other hand, the school is not for the sons of the well-to-do only, nor simply for the children of those in moderate circumstances. Read the following sentences from the catalogue:

"The founders of the school desire that its advantages may be enjoyed by all who desire them, especially by boys who, by reason of age, scholarship, mechanical aptitude, and good moral character, are fitted to enter the school, but whose lack of means prevents. The parents of such boys are invited to consult with the director, since provision has already been made for the payment of the tuition of a few worthy boys, and it is hoped that many permanent scholarships may be endowed for this purpose."

The citizens of Chicago have reason to congratulate themselves on the establishment of this school in their midst. Its permanent success is assured by the men who have it in charge. Its doors are open to worthy youth. It is manned with excellent instructors. It is equipped with the best and most modern appliances for the prosecution of its work. It must be, it will be, worthy of the city of Chicago, and of the great Northwest.

SMOKE, its evil effects, and prevention or disposal, is at present a much agitated question on both sides of the Atlantic. In England, besides the acts bearing upon the question in regard to factories, etc., an act has lately been placed before Parliament to include private houses. Of this the *Builders' Weekly Reporter*, of London, says:

An important step in the matter of legislation has been made during the past few days. On the 26th of June, a Bill moved in the House of Lords by Lord Stratheden and Campbell to amend the law for suppressing smoke in London, passed its first reading. The Bill is not yet printed, but we may inform our readers that its main object is to extend the provisions of the Smoke Abatement Acts, which apply to the Metropolis, to the chimneys of private houses, and to include all trades and furnaces which are at present outside the reach of those Acts, although not specifically exempt. The proposed measure is, no doubt, one which may seem at first sight too sweeping for public acceptance at present. At the same time, we have reason to believe that the Bill will receive influential support, including that of some of the largest owners of metropolitan house property.

As was stated by the mover of this bill the increase of smoky chimneys in London is about 75,000 annually. This amendment to the area and scope of previous acts appears to be merely a necessary adjustment of detail to meet the extended area of the metropolis, and to include the new trades which have sprung up recently. In the cities of the United States, and we take Chicago as that in which a rigidly enforced smoke ordinance to be most necessary, the question is yet only agitated in regard to industrial establishments, of which there are about 3,479 in Chicago, steam locomotives, tugboats, etc., all of which, as a rule, burn soft coal. Smoke has been declared a nuisance, and the Supreme Court has confirmed the decision, but a vacillating municipal policy has until of late made little progress toward its abatement; and now while the city authorities pretend to be active, dense

volumes of smoke meet the eye everywhere, from mills, factories, tugboats and locomotives, and the fabrics in our stores are injured to the amount of thousands of dollars each year, the façades of our fairest architectural creations are completely blackened, and the health and comfort of the citizen and visitor are injured by that useless, aggravating and unnecessary destroyer of health, happiness and beauty called the "smoke nuisance." We do not know what means our English neighbors have for its prevention; but in this land of enterprise and invention there is no lack of practical consumers and methods of using fuel that not only will have the desired effect, but add to the profits of the user as an economic measure.

M. H. COBB, in the *Journal of Progress*, has prepared a valuable article and table showing the relative wages paid in England and America in all lines of labor, and the relative cost of bread staples. The figures, which are compiled from the best official information obtainable, show a surprising difference in the price of labor, while the cost of breadstuffs and living is almost parallel. We give the comparative table of the wages paid to the building trade in 1883.

ENGLAND. Weekly Wages.	UNITED STATES. Weekly Wages.
Carpenters and joiners.....\$8 83	\$13 78
" ordinary.....5 52	
Bricklayers (master).....9 38	18 40
" ordinary.....6 08	
Masons (best).....7 94	18 40
" ordinary.....4 96	
Plasterers (best).....8 83	16 32
" ordinary.....5 53	

The statistics for the United States represent the average wages paid in the Middle States, but as the general average is larger no fault can be found with this.

While these figures are significant, they need to be supplemented by those representing the relative cost of breadstuffs, to show how far in advance of that of the English workman is the position of the American, and how little the free-trade policy of the English government helps as it must affect the condition of her people. The principal staples range about as follows:

ENGLAND. Cents.	UNITED STATES. Cents.
Flour per lb.....04	04
Beef, good.....20	16
Mutton, good.....22	16
Pork, ".....18	16
Ham, ".....22	17
Bacon, ".....15	16
Codfish, ".....08	08
Cheese, ".....18	20
Eggs per doz.....30	25
Potatoes per bush.....63	\$1 00
Milk per quart.....08	08
Lard per lb.....16	16
Butter, good.....30	35
Tea, ".....80	50
Coffee, ".....40	28
Sugar, ".....07	08
Rice, ".....08	10
Rents (4 rooms).....\$5 00	City.....\$96 00
" 6 80 00	" 144 00
Borough rates per year.....4 85	

The rents seem cheaper in England, but at their lowest will not make up for the vast difference in wages; and when we consider that the rents in our small manufacturing towns are far below the figures given, and the houses are invariably superior to those occupied by the workman of England, and also the fact that few of our workmen will consent to live, eat and sleep in the same room, but are fortunately able, from the rate of wages paid, to do better, the arguments of the disciple of Cobden seem those of an earnest but sentimental enthusiast. The fact needs little argument other than careful scanning of the above figures, representing income and expenditure, to show the average man that if free trade can do nothing for an island the size of the State of Illinois, crowded with population and constantly requiring breadstuffs and manufactures from abroad; how can it benefit a great country with every resource for production and consumption within her sea-swept borders?

SOME of the evil effects of convict labor are being felt in Minneapolis, as they are in every locality where the competition upon cut-stone contracts brings this class of labor in competition with regular tradesmen. It being understood that the stone for several of the largest structures at this great building point is being prepared at Joliet, Illinois, and that the same contracting firm for prison labor is now bidding for other important work, the Trades and Labor Assembly met, and in mass meeting demanded that they should not be placed in competition with prison labor. So long as there is a demand for this class of labor contractors will furnish it, but the states should make laws to protect the industries that need skilled labor for their promotion and place their convicts in some other attitude than legitimate competitors for honest labor. In the line of stone-cutting the custom probably grew out of the stone-breaking for macadamized roads, etc., by convicts, and, as in other lines, the convict has been educated into the field of skilled labor. This may be a good idea, but it seems to us to be all for the convict and very little for the honest man. The state could very easily devise means for keeping convicts busy, and even for making them profitable, without interfering with many of our best and most important industries. It also lies with architects and owners to distinguish between the honest man and the convict, and see that the preference rightly belongs to the honest workman, and not the state's ward.

CHICAGO has been criticised, and that in no less a representative paper than the *Philadelphia Record*, and of no less a representative city than Philadelphia, and, worst of all, the criticism becomes a comparison between Chicago architecture and enterprise and that of Philadelphia. From half a column of correspondence devoted to the belittling of all that makes Chicago the first city upon the continent in all that marks enterprise, growth and metropolitanism, we glean the following brief extracts, which we notice and print that a few true statements may be made, rather than to push into undue prominence that which otherwise would probably remain unnoticed by any but Philadelphians who have never traveled, and disbelieved by those who have. Notice the following:

* * * Chicago is just the sort of town you would expect to find in such a country. It is big. It has some big buildings. It has, or soon will have, a big board of trade building and a big city hall. It has already two of the biggest hotels east of the Rockies, and rows upon rows of big bank and insurance buildings. * * * There is a big natural lake in front of the town, and a big natural prairie behind it. I think this sums up its principal attractions. It is just like every other western town—a big overgrown boy. It is not nearly as big as its plan, yet it is much bigger than its actual growth. Its architecture is very varied. None of it is beautiful except a few houses—two or three—on Michigan avenue, which, as a residence street, does not begin to compare with the residence streets of other western towns,—to say nothing of those in the East. Its streets are in a terrible condition—a mass of badly-laid wooden blocks, full of ruts and holes. The sidewalks on Wabash avenue and on other streets of equal importance are made of planks. * * * The Exposition building, in which the convention was held, is a dingy disgrace to the town. The park and boulevard system has still the ragged edge of incompleteness. * * * Then the people—those wonderful people whose city water-works are over the fountain of some perpetual youth! Why they're just the same sort of people you will find anywhere. They look tired, though, as if their effort to keep their boom abreast of their brag had exhausted their energies. I saw no electrical energy—no particular energy of any sort. The people do not begin to be as energetic as the people of Philadelphia. Everything moves slowly and a trifle wearily. As I said, it is a big town—a big, overgrown, pork-packing town, with a noisy board of trade attachment. * * *

The writer concedes us some "big" buildings, big hotels and big insurance buildings, but would it not have been as well, and a deal more truthful, if he had said the City of Brotherly Love has within its borders no office buildings such as those recently erected in Chicago, and of which the Pullman building is a representative; no insurance buildings such as the "Royal" or the "Home," or such hotels as the Palmer and other hostelrys, which enjoy a reputation for size, facility and comfort that is national, and last, no bank buildings such as the First National or Commercial National banks, that are models for the financial world? Philadelphia has one of the finest depots on the continent, and Chicago is about to acquire its equal, and it will be made of Philadelphia brick, because

there are some men of enterprise even in Philadelphia, and they are welcomed and treated with cordiality and fairness when they come to Chicago, their enterprise being their passport.

IN regard to its architecture, the writer concedes a few residences of merit to Michigan avenue, when not only that street, but the broad avenues, Prairie, Wabash, Forest, Indiana, Calumet, with all their intersecting streets, and others not mentioned, on the south side; the whole section east of State to Lincoln Park, on the north; the streets, excepting Madison, which is a business street, from Fulton street and Washington boulevard to Van Buren street, on the west side;—all grand and picturesque, with their many shaded drives and a display of architecture that at least the city of Philadelphia cannot show the first idea of. In that city they use green stone, and the houses are, as a rule, ugly. In Chicago, a residence that is acknowledged by one of the best of New York architects to be beyond criticism is made of this (really beautiful when properly used) material, but we do not use it in combination with glaring white marble. In regard to the condition of the streets, the writer should have been silent, for he had forgotten the stone cobbles of Philadelphia upon the approach of the early milk or baker's wagon as he vainly tries to take his morning nap. The streets in the center of the city are laid with square blocks of granite, those in the residence portion generally of cedar blocks, but in good condition, and as level as a floor, and the boulevards, of which there is rather more than less than fifty miles, are macadamized. A few short streets in the outskirts may be out of repair, but nowhere are there "ruts and holes" such as we have seen in Philadelphia in business sections; and the sidewalks are, as a rule, of flat flags of limestone, and there are absolutely none of red bricks with grass growing in the interstices. Chicago is almost surrounded with parks that, although not improved to their allotted boundaries, are equal in artistic arrangement and in natural growth to those of which Philadelphia may well be proud, but which leads to the thought what might Fairmount not be if it belonged to Chicago and had such a board of park commissioners to improve it. If Chicago is the best watered city on the continent, it is due to the Chicago enterprise that built a tunnel for three miles under the lake to secure it. And in general, to speak of Chicago people as being without energy renders the writer of such a libel ridiculous even to Philadelphians. The people of that city, above all others, are conservative and their financial credit is above all question; but when, as is commonly said there, the fire-engines go slow "because a man was killed once," and the merchant is more inclined to sit in his counting-room and wait for the world of trade to come to him, the method of procedure is certainly safe, it is cautious, but it is a cautiousness that would have left Chicago a howling wilderness upon the shore of an unknown lake, instead of being what her energy and enterprise have made her,—a wonder of growth, prosperity and substantial power.

Improvements of the Roman Campagna.

THE sanitary amelioration of the Campagna was determined upon and decreed by a law passed December 11, 1878. It was ordered, as a work of public utility, that the marshes and ponds existing in the Campagna should be drained, and, in addition, the collecting of the springs and the regulating of the soil by means of a complete canal system of all the waters, comprising the underground waters. By virtue of a law recently passed, the work is to commence by improving, agriculturally, a zone of ground within a radius of about six miles from the center of Rome. The total area of the Agro Romano is 525,316 acres; that included in the circle of six English miles is about the seventh part of this surface, or

77,647 acres, which are subdivided thus:—Town, 3,546 acres; rivers, 1,043; vineyards, gardens, parks, or villas, and intermingled roads and streams, 18,611. The remaining 54,447 acres are now used for pasture, wood, and quadrennial sowing, and to that surface is specially applied the agricultural amelioration which becomes obligatory on all the landowners. The Italian government desire to attain their object without infringing on the rights of property, and they express their intention of leaving to proprietors a certain liberty in the choice of the works to be executed, and of the cultivation best adapted to the soil. The proprietors are invited to present a report in which should be indicated the agricultural improvements which they intend carrying out on their own account, and which should specify the quality and extent of the proposed cultivation of trees, plants and herbs, and the roads and buildings for workmen and horses. A special agricultural commission will examine and modify these propositions, and will decide for those proprietors who have made no proposals which are the best improvements to adopt, and the estimated time and expense. In case the improvements are not effected, the government will have the right of expropriating and at once occupying the land, with indemnity according to the general law on expropriation, and will have power to let the land on lease or to alienate it; and the obligation to execute the improvements will, in this case, devolve upon the tenant or purchaser, under pain of the devolution of the land. Those who construct any buildings in any part of the Campagna within or beyond the zone formed by the circle of six English miles will enjoy exemption from taxation for ten years, and the increase of income, which will be obtained by the agricultural improvements of the land comprised in the zone, will be exempt from land tax for twenty years; and equal exemption will be conceded to the proprietors of the Campagna anywhere beyond the zone, if they execute, at their own expense, the agricultural improvements. Vice-Consul Franz says that "the future will show if these means are sufficient to execute the enterprise, which, in the opinion of the government, has become a national obligation, to endeavor to deliver the capital from the tyranny which the malaria and the deserted country exert round Rome, and in changing the Agro Romano into a fertile and flourishing region."

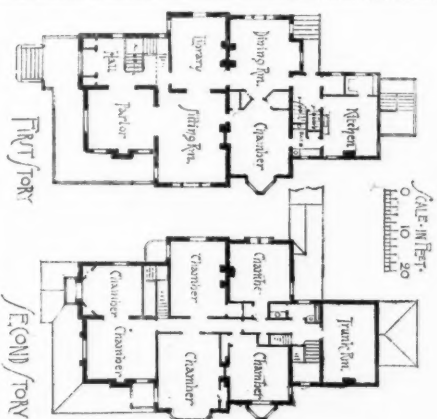
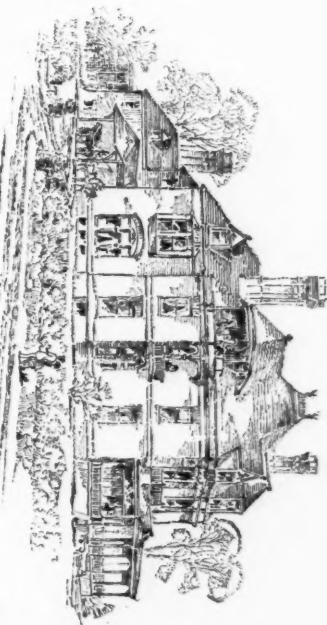
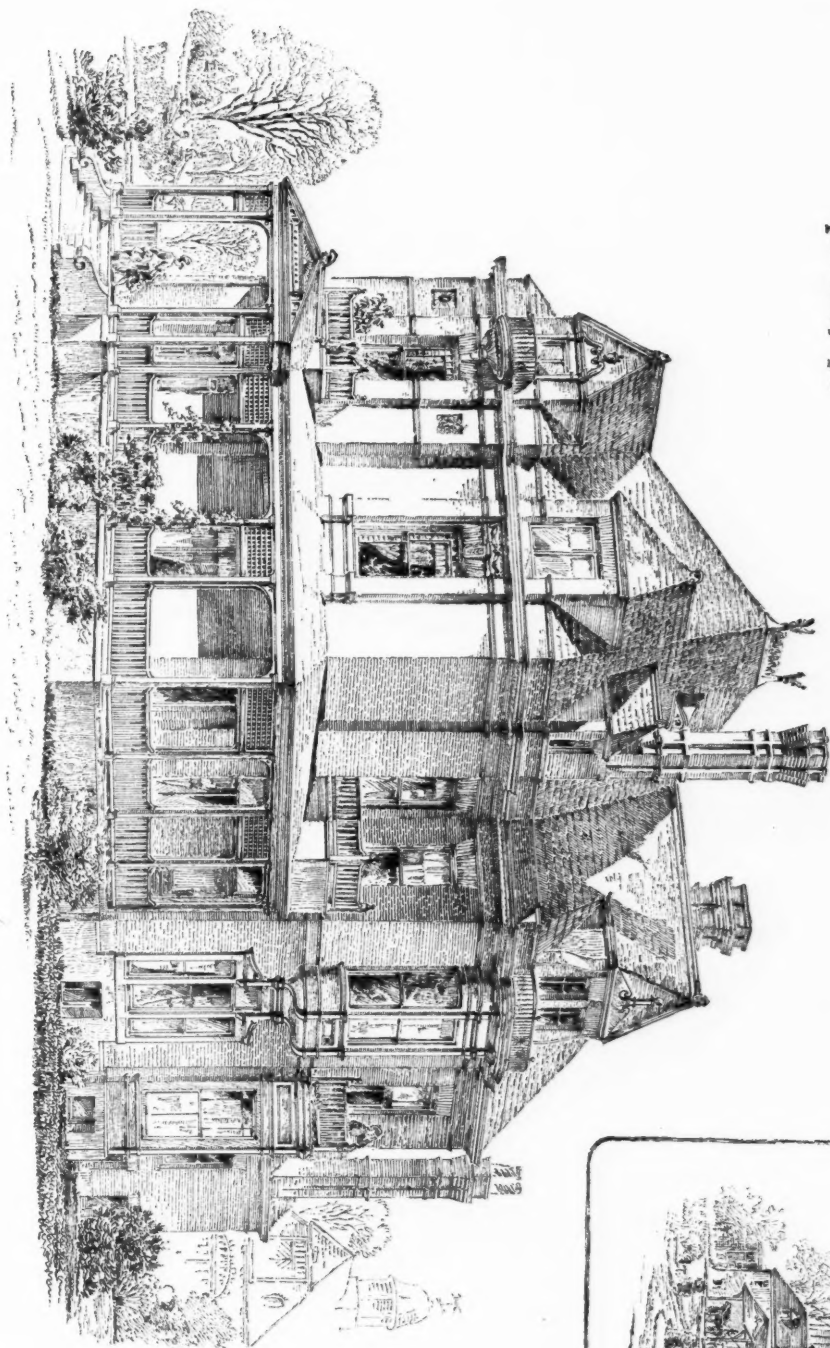
The Baths of Cleopatra.

BY THÉOPHILE GAUTIER.

THE baths of Cleopatra were built in the midst of immense gardens filled with mimosas, aloes, carob-trees, citron-trees and Persian apple trees, whose luxuriant freshness afforded a delicious contrast to the arid appearance of the neighboring vegetation. There, too, vast terraces uplifted masses of verdant foliage, and enabled flowers to climb almost to the very sky upon gigantic stairways of rose-colored granite; vases of pentiletic marble bloomed at the end of each step like huge lily flowers; and the plants they contained seemed only their pistils; chimeras caressed into form by the chisels of the most skillful Greek sculptors, and less stern of aspect than the Egyptian sphinxes, with their grim mien and moody attitudes, softly extended their limbs upon the flower-strewn turf, like shapely white leverettes upon a drawing-room carpet. These were charming feminine figures, with finely chiseled nostrils, smooth brows, small mouths, delicately dimpled arms, breasts fair-rounded and daintily formed; wearing ear-rings, necklaces, and all the trinkets suggested by adorable caprice, whose bodies terminated in bifurcated fishes' tails, like the women described by Horace, or extended into birds' wings, or rounded into lions' haunches, or blended into volutes of foliage, according to the fancies of the artist, or in conformity to the architectural position chosen. A double row of these delightful monsters lined the alley which led from the palace to the bathing-halls.

At the end of this alley was a huge fountain basin, approached by four porphyry stairways; through the transparent depths of the diamond-clear water the steps could be seen descending to the bottom of the basin, which was strewn with gold-dust in lieu of sand. Here figures of women, terminated in pedestals like caryatides, spurted from their breasts slender jets of perfumed water, which fell into the basins in silvery dew, pitting the clear watery mirror with wrinkle-creating drops. In addition to this task these caryatides had likewise that of supporting upon their heads an entablature decorated with Nereids and Tritons in bas-relief, and furnished with rings of bronze to which the silken cords of a velarium might be attached. From the portico was visible an extending expanse of freshly humid, bluish-green verdure and cool shade,—a fragment of the Cale of Tempe transported to Egypt. The famous gardens of Semiramis would not have borne comparison with these. We will not pause to describe the seven or eight other halls of various temperature, with their hot and cold vapors, perfume boxes, cosmetics, oils, pumice-stone, gloves of woven horsehair and all the refinement of the antique balneatory art brought to the highest pitch of voluptuous perfection.

HOVE FOR ALL NATURE'S
[INDIAN] IND



HOUGHTON Mifflingford & Stearn, Agents

INDIANAPOLIS. IND.

The Construction of Fireplaces and Chimney Flues.

BY FRANCIS LE BARON.

THIS is a very important branch of house-architecture for the safety of the house, and the comfort of the household depends upon it. Many architects neglect it, overlook it, or know nothing about it, and so houses burn down, and smoky chimneys make scolding wives, according to the old proverb. The chimney-stack was once the most important part of the building; in fact, the house was only a shed built round the magnificent tower of the chimney-stack. It used to be said that a yoke of oxen could be driven up an old-fashioned chimney, and stepping into the vast fireplace one could look up the long funnel, like the shaft of a coal-mine, and see the stars at midday. For many years the chimney flue has been growing

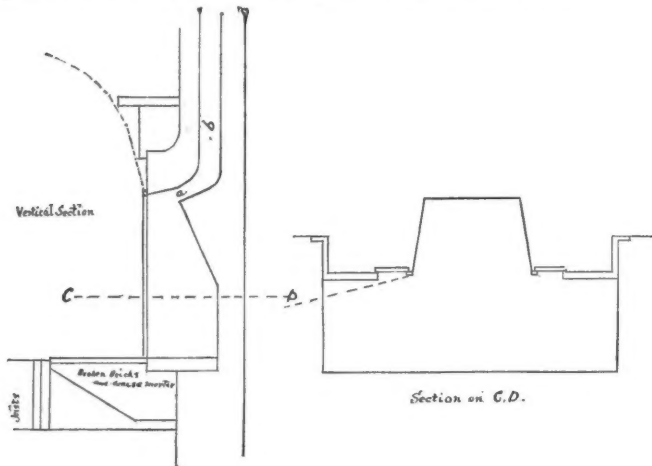
"Small by degrees and beautifully less,"

and now a chimney swallow finds himself very much cramped in his family arrangements, and even this small hole is often filled with brick and mortar thrown down by careless workmen while constructing the chimney above. And first, as to the construction of the hearth, we give the experience of Messrs. Bonner & Lancaster, whose years of faithful work have made them very wise in this direction. Where stone or brick arches are turned from the wall to the trimmer joists under the fireplace no danger from fire need be feared, and when these arches are thoroughly built trouble seldom occurs. It is in filling rooms with fireplaces as an afterthought, and on floors not provided with brick arches, that fires are to be guarded against.

There should always be a space of *at least nine inches* between the underside of the hearth and any woodwork, from the back of the fireplace to the front of the grate. No better substance than broken brick and coarse mortar can be used for filling in the space under the hearth. If the floor joists are too narrow to permit of this nine-inch space, then the hearth must be raised above the floor, or the ceiling of the room below must be boxed to the required dimensions.

Porous brick and hollow tile are good *if nine inches of space be filled in with them*, but they are no better than broken brick and coarse mortar, though they be called "*fireproof*." It will not be safe to depend on spaces of confined air to resist the penetration of heat where it is continuous, as under a fire-grate. Any porous, incombustible substance is better than a solid one, but it takes *nine inches* of it to make a fireplace safe. "During thirty years of constructive work in this line," says Mr. Lancaster, "I have never had an accident where this rule was observed."

There is but one way to build a fireplace which will give the best possible results. This is shown in the vertical section in sketch. The



aperture "a" should be no greater in area than the smallest place in the chimney. There should be a brisk suction through "a" continuously after the fire is lighted, and the ascending column of heated air in the chimney may be depended on to produce it, if it has *any sort of chance to do so*.

It takes great effort and ingenuity to construct a *bad chimney*, but it can be done by persistent trying, and some few architects may be depended on to do it every time. They obtain their results by providing for everything about the building but the smoke-flues, and then follow the zigzag of a lightning flash to get them through the roof. Chimney swallows are often found dead in the fireplaces below, dazed and killed by these crooked chimney flues. Sometimes the owner of one of these crookednesses runs with streaming eyes to the architect and shrieks, "My chimney smokes!" and is advised to pile on top of it a terra-cotta chimneypot, or finial with a very small area of flue, and the dire result is, that family and architect fall tooth and nail on the innocent fireplace builder, dispute his bill, rend him in pieces, and reduce him to ashes in the fire of their indignation.

Now, all fireplaces are amenable to the laws of nature, and if a bad chimney be built over a good fireplace, then the righteousness of the fireplace shall be upon it, and the wickedness of the chimney shall be upon it, and you shall not save the wicked chimney by the imputed righteousness of the fireplace. These same natural laws will insure good drafts and perfect immunity from smoke if their few simple requirements are observed.

Make the flue *straight*; angles and short turns are inadmissible.

Make it smooth, to avoid friction from the ascending air.

Make it *large*, not less than 60 inches area of suction for 22 or 24-inch grates. Don't contract the sectional area anywhere, especially at the top. As a chain is only as strong as its weakest link, so a chimney has only the effectiveness of its smallest area. What goes into the flue at the bottom must get out at the top; if it can't get out at the top, it can't get in at the bottom, and that means *smoke*.

We have known architectural wisdom to place on a chimney of 66 inches area of flue a most artistic, elegant, graceful and superb terra-cotta chimneypot with an opening only five inches in diameter. All summer long the glory of the chimneypot was the pride and delight of the family. Alas! this pride was nipped by an untimely frost; fall came, the fire was kindled, and eyes were red with weeping, and black were walls and hangings and furniture with smoke. Five times was that fireplace pulled down, and five different men tried their hands at rebuilding it; at last, a big wind blew off the chimneypot, the smoke rushed out and soared rejoicing to heaven, all tears were wiped away, the house was like the plumed knight, and the *last* fireplace builder received the credit and got his pay.

Genius in Architecture. I

BY JOHN CLIFFORD, ARCHITECT.

THE chief and only distinction between the ancient and modern worlds, from an artistic point of view, finds its highest expression in the progress made in the development of architecture in each succeeding generation. The artistic impulse thus engendered was never confined to local or individual experiments, but found its free expression in separate features which contributed to the organic unity, the consummate masterpieces of the creative imagination. Architecture is the most fascinating art; its study has been to many a man the crowning glory of a sublime life-task. It is one of the essential requirements of this time-honored profession that it should be adaptive, taking the impress of the forms and characteristics of human requirements; and however necessary it may be to restrict it within certain limits, it is still more desirable that it should be free and untrammelled to enable it to fulfill the demands made upon it by the advancing intelligence of our times. This aspect of the case forcibly illustrates its development, first in regard to the conditions which regulate its growth, and, secondly, in the artificial resources brought to bear upon it with a view of adjusting it to the enlarged destinies of man—both views combined representing the devious process by which it is made the exponent of human condition, not only in a state of nature but in the highest phases of civilized life.

The progress of our municipal and material growth goes on like the development of nature—a constant alternation of forces, each destined to absorb the other—the achievements of one generation acting as a stimulus to the thoughts and discoveries of the next—the future being so exclusively contemplated as to completely obliterate every vestige of the past, and swamp all thoughts and memories in their swift current. It is on this account that architecture should be made to bear the most glowing attestation to departed greatness, and endeavor to do justice to those unpretending but essential merits which result from genius rather than character, and like the musical strains of a great master leave no other record than that which lingers in the soul they have warmed with the fire of inspiration. A study of this subject is of such vital importance to the public that it should not only be made to celebrate the occasion, but to transmit its spirit and hallow its remembrance. The consciousness of our distinct national life cannot fail to excite a spirit of emulation, particularly when we consider that architecture is constantly applying its inexhaustible resources to the promotion of human happiness.

No one can fail to perceive the possible influence of a high degree of artistic taste upon man's destiny, the unexplored avenues of wealth open to the practical application of mechanical skill and industry, and the extraordinary natural advantages of our inland metropolis as the arena of great improvements in the art of construction. All worthy enterprises in this chosen field of labor are more or less recognized and honored. The characteristics of human ingenuity, which have reached their acme in no class of our citizens more conspicuously than among architects, are not without their higher types of development among people who unite to a taste for mechanical pursuits a comprehensive view of their utility and results, combining at the same time with a knowledge of material laws

RIVERSIDE SCHOOLHOUSE.—J. C. COCHRANE, Architect.



a remarkable sagacity in their application,—possessing both the faculty to originate and an enthusiasm and strength of moral purpose to advocate improvements of a character essentially adapted to modify the status of society and advance the interests of a profession to which they have consecrated the best efforts of their lives.

The steam-engine, the electric telegraph, the telephone and sewing machine form a distinct era in human progress, which signally illustrates the truth of the assertion that art combined with mechanism form the most vital principle in the universe. This is not only evident in physical results, but is also noticeable in achievements which emancipate man from the tyranny of nature by continually multiplying their beneficent agencies in his behalf. The superiority which is wholly intellectual when not developed in action to meet the exigencies of society incarnates itself too completely to provide for its permanent glory. It seldom affords a vantage ground to the desire for brilliant results without being tangibly embodied in a form more or less identified with the constructive arts. The limning, the artistic research, the prevalence of a cultivated standard of taste, as well as an inspiring literary sympathy, accounts for the complete and satisfactory manner in which architectural experiments are chiefly developed,—particularly when we consider that in no city on this continent do we find more glowing realizations of our desire to excel in this artistic province than our own city. The palatial structures that line our streets and boulevards afford an extraordinary demonstration of the predominance of architectural taste in the Garden City. Yet there is more evidence of ingenuity than genius, the absence of which is accounted for by the fact that the career of an inventive architect exposes him to peculiar trials not only of patience but equanimity. The author and artist can privately test their works before hazarding a public ordeal, but the public nature and great expense of the architect's experiments render it indispensable to submit himself to a scientific jury before his success is guaranteed. Thus the triumphs of architecture evince a gradual approximation to success in almost every instance, and prove conclusively that a division of labor and a union of talent and industry is absolutely essential to high achievements and practical results. But these are generally accomplished through patient self-devotion and by overcoming great and incessant difficulties, and therefore it is just that the architect who brings a great scientific idea or architectural project to a successful practical development should reap all the honors and emoluments. Genius may suggest novel and promising enterprises, but they are useless to mankind until embodied and applied by consistent and pertinacious thinkers in this as in other departments of social welfare.

Constructiveness is a distinct tendency which, in order to realize success in its highest phases, must be impelled and guided by scientific knowledge; an acquaintance with the principles and aptitude of the lever, the wheel and axle, the pulley, the inclined plane, the wedge and screw, when combined with the other natural forces, become infinitely more available when reinforced by equal intelligence in hydraulics, construction, and all other artistic enterprises. Through such an acquaintance with the laws of matter, human genius sways its energies and makes them subservient to purposes of utility and enjoyment.

The Inter-State Exposition.

FROM a mechanical and also an art standpoint, the Inter-State Exposition, held annually in Chicago, this year promises to be an extraordinary success. The Exposition will open September 4 and close October 18. Secretary Reynolds reports that the machinery department will rival that of the railway exhibit a year ago, and that several of the most prominent woodworking machinery firms of the country will exhibit the latest improved devices for the manipulation of wood. There will also be a wide range given to the many special devices that enter into the construction of our homes, and, as heretofore, their furnishing and decoration also. All the available space was applied for a month ago, and since then many applications have been received. The mechanical exhibit is to include several processes not before shown, such as cotton spinning and spooling, woolen looms, and weaving and lapidary work; Mexico is to make a show of her agricultural and mineral products, for which the Chicago, Burlington & Quincy Railway Company is now making arrangements on behalf of the Mexican Central. The art exhibit, in the interests of which Miss Sara T. Hallowell has been abroad the past year, will contain many of the finest paintings exhibited in the Paris Salon. There will be a special exhibition of the painting, "John Brown on his way to execution." The sculpture show will consist, as heretofore, of castings from the antique. Thirty thousand dollars has been expended in improvements on the building, which has received a coating of fireproof paint—the ceiling blue, the trusses red—at a cost of \$7,000. The brick addition will cost \$14,000. Crane Brothers are putting in another elevator just north of the south fountain, which is to run between iron columns and be provided with an air-cushion. The art hall has been made as nearly fireproof as possible, having a metal roof, iron doors and fire walls for the gallery.

The art department will also contain a special exhibit of the best works of local artists, and the magnificent Earle, those enterprising and talented young artists, Messrs. Rosenberg and Field, who are perhaps the most promising of our local talent, will be represented, and Mr. Bromley has already sent in a list of exceedingly fine sketches that will add to the more than

local fame he has already acquired. Miss Annie Shaw, whose realistic work has attracted much attention in past years and won for that young artist many friends, will also be well represented.

The attendance should not only comprise those interested in agricultural pursuits, but all to whom the knowledge of mechanical or building improvements should not lose this opportunity for becoming posted in these various lines.

Our Illustrations.

Pages 10-11. Fragments of European Architecture, sketched by Irving K. Pond, 1884.

Page 15. The "Geneva" Apartment Building, situated at 49 and 51 Rush street, Chicago; for L. P. Hansen; John Addison, architect. The building is 50 feet front by 84 feet deep, three stories and cellar high, and is arranged for six families. The exterior is built of rock-faced buff Bedford stone, with coarses of blue Bedford. The interior is conveniently arranged, well lighted and ventilated, and heated by steam, and finished in a simple and tasteful manner, and is supplied with all the accessories that go to make living in an apartment house pleasant and healthful.

Page 7. Riverside Schoolhouse. J. C. Cochrane, architect. The building is 67 by 94 feet, extreme measurement. Height to top of cornice, 37 feet 9 inches; to top of roof, 76 feet, and to top of belfry finial, 106 feet. Is built of brick, with cut-stone trimmings, with the basement story faced with rock-faced limestone, the roof covered with slate—also the front central bay and the base of the belfry. Style of architecture, Queen Anne. The windows and doors to have transoms filled with very rich cathedral glass—brilliant colors. The interior to be finished with pine, painted in positive colors. The contract for the building proper was awarded to Mason & Berger for \$18,844; steam heating to E. H. Cook & Co. for \$1,920; plumbing and sewer work to Bassett & Benow for \$713; the outside sewer and water pipe to H. H. Remington for \$330; making a total cost of \$21,807. The building, when completed, will doubtless be the most modern, in plan and style of architecture, in Cook county, and one that the people will justly be proud of.

Page 15. Residence for G. A. Whitney, Waterloo, Iowa, by Josselyn & Taylor, architects, Des Moines and Cedar Rapids, Iowa. The building has a cellar under all, and contains laundry, dry vegetable, provision, boiler and fuel rooms. Foundation of stone, cellar-floor cement. It is a regular frame house, with 4-inch common brick veneer stained and tuck-pointed. Roof of shingles dipped in hot oil. The plastering is rough work, painted in the principal rooms. The woodwork of interior is of oak, butternut, ash, hard and soft pine, all finished with light hard oil. The mantels are all of wood; hearth and fireplace trimmings and vestibule and conservatory floors of tile. Heating is by steam with direct and indirect radiation. Bathroom complete, and stationary washbowls, with hot and cold water in two chambers. Tank in attic is supplied from two large rainwater cisterns. Lighting by gas. The drainage is disposed of through a Field's flush tank and sub-surface irrigation, which worked through the past winter perfectly satisfactorily. The house stands on a six and one-half acre lot, on high ground, commanding a fine view. It was something over eighteen months in building—all except steam heating, plumbing and gasfitting was by day's work, and is well built. Cost, about \$15,000.

Page 5. Residence of A. H. Nordyke, Esq., Indianapolis, Indiana; Hodgson, Wallingford & Stem, architects, Indianapolis. This house is built of red brick set with red mortar, and trimmings of stone and terra cotta. The interior finish embraces a choice selection of woods. Hall and dining-room quarter oak fumigates, parlor San Domingo mahogany; cherry in sitting-room and library, while sycamore, gum, white maple, chestnut, white walnut and ebony cherry are used for the various chambers. The kitchen and laundry (in basement) and their accessories are finished in white ash. The fireplace treatment is a feature. In the parlor the grate-frame, andirons and fender are of antique brass, with facings and hearth of Mexican onyx. The sitting-room has a glazed fireplace, with arch and spandrels filled with repoussé brasswork. The fireplace of the dining-room is entirely of terra-cotta. The facings of that in the library are art-metal tiles. Most of the hearths are Sienna and Roselle marble, the remainder being glazed tile. The mantels are of wood. These, together with other interior details, will shortly be illustrated. The architects have taken entire charge of the decorations—i. e., frescoing, designing special pieces of furniture, draperies, stained glass, etc. All the principal floors have appropriate wood carpeting. The heating is steam, low-pressure indirect. All plumbing waste-pipes are trapped, and have outlets and fresh-air inlets, and are carried up in such position that they can be heated so that there can be no accumulation of gases. All closets are ventilated on this same principle. The laying off of grounds, stable, fencing (wrought-iron with stone terrace), walks, cisterns, filters and drainage has been included in the architects' plans.

The New Panorama.

THE new Panorama building on Wabash avenue, at the southeast corner of Hubbard court, has entered upon its third month of usefulness, and is continually crowded with visitors. The immense building was finished in nine weeks, and presents an example of the rapidity with which large structures can be erected by people thoroughly in earnest in what they undertake. The building is polygonal in plan, and occupies a plot of ground one hundred and thirty feet on Wabash avenue, one hundred and seventy-four feet on Hubbard court, and is fifty-four feet high. The roof is of iron, spread out like an immense umbrella, and resting on substantial brick walls. The company erecting and operating the building is known as the American Panorama Company, and has a capital of \$200,000. Mr. Franklin H. Watriss is the president and Maj. J. B. Hinman, late of the Chicago Tribune, manager. The panorama represented is illustrative of the Franco-Prussian war of 1870, and represents the battle of Montetaux, painted by M. Paul Philippoteaux. The building is lighted by the Excelsior Electric Light, and the walls are faced with a fine quality of Indiana red pressed brick.

A Welcome Offer.

THE PERMANENT EXHIBIT AND EXCHANGE OF BUILDING MATERIALS.

CHICAGO, August 1, 1884.

To the Editor Inland Architect and Builder:

The proposition made through your paper for the organization of a Western Architectural Society to convene at Chicago should receive the encouragement and substantial assistance of every architect, and of those concerned in architectural constructions. To assist in perfecting of such an organization, I will contribute the entire expenses required for the initial meetings, and will provide an assembly-room for the same. I make this offer, first, as I have an interest in the general welfare of the profession, and the desire that the architects of the West shall form an association that shall have some life and action to it, and, second, the efforts that I have put forth to establish a permanent exhibit of building material I desire to continue; and as such an exhibit is for the direct use and inspection of the architect, I consider that it is properly within the province of this institution to furnish a place of meeting for the proposed organization, and to render all aid possible that will further the interests of the profession.

Very respectfully submitted.

HENRY LORD GAY.

Practical Sanitary Measures.

CARTHAGE, Ill., July 24, 1884.

To the Editor Inland Architect and Builder:

Apropos to your article in last number of INLAND ARCHITECT AND BUILDER in regard to "The proneness of humanity to procrastinate * * * in the matter of sanitary measures for public safety," etc., I inclose you a circular issued by the mayor of our little city, which deserves the credit at least of being prompt and well meant. We have long enjoyed great immunity from sickness, yet all good citizens greet with satisfaction the action of our mayor. It will amount to several "ounces of prevention," even if cholera never visits us. I wish to add my name to the list of architects favoring a Western Association. If I deserve not a position far up in the grand pyramid, I shall feel honored in being accepted as a foundation stone. The Des Moines architects are right, the growth must be upward, and a broad footing is necessary to stable building.

Yours truly, G. W. PAYNE, Architect.

The following is the circular referred to. It outlines a plan that should be copied in every town in the West, and public-spirited citizens everywhere should follow the excellent example of those of the city of Carthage.—[Ed.]

TO THE CITIZENS OF CARTHAGE.

At the recent meeting of the State Board of Health, held in Springfield, July 2d and 3d, 1884, the following resolution was adopted:

Resolved, That, while epidemic cholera may be excluded from this country by thoroughly enforced quarantine regulations, yet the best attainable sanitary condition of every locality in the state should be secured, so that in the event of Asiatic cholera effecting an entrance, notwithstanding quarantine, the disease may be met and fought under the most favorable circumstances; and the Secretary is, therefore, hereby authorized to take such action as in his judgment will most promptly obtain a thorough sanitary organization of the state, and the adoption and enforcement of the measures necessary to improve its general sanitary condition.

In conformity to the above the Secretary of the State Board desires that all cities shall be thoroughly cleaned. It is not likely that the cholera will reach our country this season, but it may. It should be remembered that everything which is done in the direction of sanitary improvement benefits the general health of a city and prevents epidemics of any kind. It is therefore obvious to all that nothing in this line should be left undone that can be done to prevent sickness in our city. In this view of the matter, the present authorities are determined to have the city thoroughly cleaned at once. Night soil, garbage, and all other forms of decomposing organic matter, are highly prejudicial to health, and their foul odors are indications of danger.

Clean streets and alleys, and gutters properly drained and kept free from unsightly and filthy accumulations, are of even greater importance during the heat of summer than at other times. The healthy condition of the atmosphere of a locality largely depends upon the conditions of its thoroughfares.

The foundation of healthy living is, obviously, the individual home and its surroundings. Houses, cellars, yards and outbuildings should be carefully inspected, and all accumulations of garbage, refuse and filth of every description should be removed, or, when this is not practicable, they should be rendered harmless by appropriate treatment.

Therefore, it is earnestly requested that at once upon receiving this notice all persons will carefully examine their premises, viz.: Barns, pig pens, chicken houses and privies, and if they are not already well cleaned to see that they are thoroughly cleansed. All manure piles in barn lots or alleys adjoining your premises should and must be removed. Let us do this at once and save health, and even life itself.

Within five days after this notice is received the proper officer will examine all such places as are named above throughout the city, and where the same are in a bad condition, and the request in this notice has not been fully complied with, the ordinances will be promptly and impartially enforced.

Carthage, Ill., July 18, 1884.

O. F. BERRY, Mayor.

The U. S. Encaustic Tile Company.

INDIANAPOLIS, IND., July 29, 1884.

DEAR SIR,—It becomes my duty to notify you that I have been appointed by the Superior Court of Marion County, Ind., Receiver of all the property and effects of the United States Encaustic Tile Company.

All bills, notes and accounts owing or to become due to said company have, by the order of the court, been assigned in writing to me, and you will therefore account only to me therefor. All work hereafter done, and all sales, will be on my account. The order of the court directs me to continue the business as heretofore. I expect to be able to fill all orders, and to finish all work contracted for, promptly and satisfactorily. There is now a large stock of tile on hand, and the stock will be kept up. Orders for new work are solicited and will receive prompt attention.

It is hoped by the stockholders that the company will be speedily re-organized and its affairs taken out of court, until which time I hope to be favored with your esteemed orders.

J. L. MOTHERSHEAD,
Receiver U. S. Encaustic Company.

The affairs of the United States Encaustic Tile Company were placed

in the hands of a receiver July 24, the cause being not from any mismanagement of their magnificent plant, but owing to the failure of other concerns through which they became involved. The confession amounted to \$200,000, but we are informed by the receiver that they "propose continuing the business as heretofore, pushing it in every way possible, and mean to keep up with and distance our competitors," a sentiment that flavors of strong Western energy and enterprise, and which, with their excellent manufacture, should effect rather a victory than even a seeming defeat.—[EDITOR INLAND ARCHITECT AND BUILDER.]

Architectural Competition.

DES MOINES, Ia., July 21, 1884.

Editor Inland Architect and Builder:

Inclosed please find circulars Nos. 2 and 3 on architectural competition. We expect more to follow, having a distinct plan in mind, and working in the opposite from what some might expect, we propose to narrow down to the particulars. Having first shown a high aim, we will suggest the way and try to direct to it. Yours respectfully,

E. H. TAYLOR, Secretary A. A. D. M.

CIRCULAR No. 2, ON ARCHITECTURAL COMPETITION.

The St. Louis close competition, which has ended as usual, and the open but straight-jacket one for the Boston library, not as yet decided, are worthy of general consideration by both the profession and those who have charge of such undertakings.

The \$10,000 devoted to the purpose by the city of Boston, and the \$5,000 employed in secondary prizes at St. Louis, would undoubtedly produce truly valuable results were the competition open to all civilization and properly managed.

Those in charge of such competitions are, however, evidently in advance of American architects upon whom they depend, and who, as a rule, do more to hinder them than to encourage. The sums offered are evidently sufficient to obtain good results, and equally expressive of a blind willingness to progress on the part of those in charge.

Why the results rather hinder than advance architecture should be considered. It is of first importance in such undertakings that affairs be entrusted to the most capable men, who should have full liberty and power of action. Such judges should not only be capable of making just decisions, but have full authority to decide to the best interests of architecture, even to the reporting that a competition has failed to produce results worthy of rewards offered.

We are well aware American architects will not applaud such decisions; nevertheless they will have to face such music before many years.

A civilized system of adjudging will most certainly place competition beyond the interference of lawsuits.

Nothing could be of greater service to architecture in America at the present moment than what was in the power of Boston to bring about through her library competition. Had she introduced so wise a plan as the employment of three experts to advise in making awards—one valuing first principles as highly as Vaudremer; one as thoroughly versed in the beauties of architecture as Garnier, and one as capable and far-seeing as young Nénot, how inestimable would be the value of their criticisms and decisions! They would see that the way pointed out by Labrousse for the construction of such buildings was not ignored, and impress the fact that some advance beyond what was already known would be necessary to obtain the reward of a first premium.

The effect of such a blow upon the profession in America would be most healthy. Respectfully submitted by the Architectural Association of Des Moines, Ia., July 12, 1884.

J. S. BLAKE, President.

E. H. TAYLOR, Secretary.

CIRCULAR No. 3, ON ARCHITECTURAL COMPETITION.

The shameful mismanagement of competitions in this country and in England greatly blinds the Anglo-Saxon to the only successful method of developing architecture.

This method is so well recognized in more civilized lands that America, not being entirely under British influence, cannot long be kept in ignorance.

Only where competitions are properly conducted has architecture proved its usefulness and developed a natural growth. All nations that thus permit architecture to develop attain one and the same result. This is all the more remarkable when, at the same time, England and America only add to each other's confusion.

On the Continent, especially in Belgium, France and Italy, they are working on a plane that England may never attain to. America must turn from England if she wishes to advance. It is fortunate for her not all her blood has come from such a source.

Architecture is every day proving its high rank among the arts that speak—that speak a language that is universal, superior to dialects. The nations that recognize this give to art free course. They are coming shoulder to shoulder. America should not lag behind.

They who have once listened to that language are too charmed to ever forget the force, the grandeur of its power.

How well it has expressed the strength of organization in the *Arc de l'Etoile*! With what simplicity it calls attention to the stored-up knowledge in the *Librairie Ste. Genevieve*; so charmingly re-echoed and applied in the "Library and School of Art" of the department of the *Bouches du Rhone*! With what noble grace, what majesty, it honors at Marseilles the entrance of the Durance water to the city! With what wisdom it has taken up the law of primary education of '79! How it proclaims and exalts justice at the Belgian capital!

Today, in the very ashes of old Rome, it is arousing Italy to a greater empire. The greyest head uncovers to architecture when acknowledging that the city of the Great King shall be "the perfection of beauty, the joy of the whole earth."

When architecture is honored in this land as it is in the very smallest lands more civilized, it will not fail to show its value. The architects themselves should be the first to show respect.

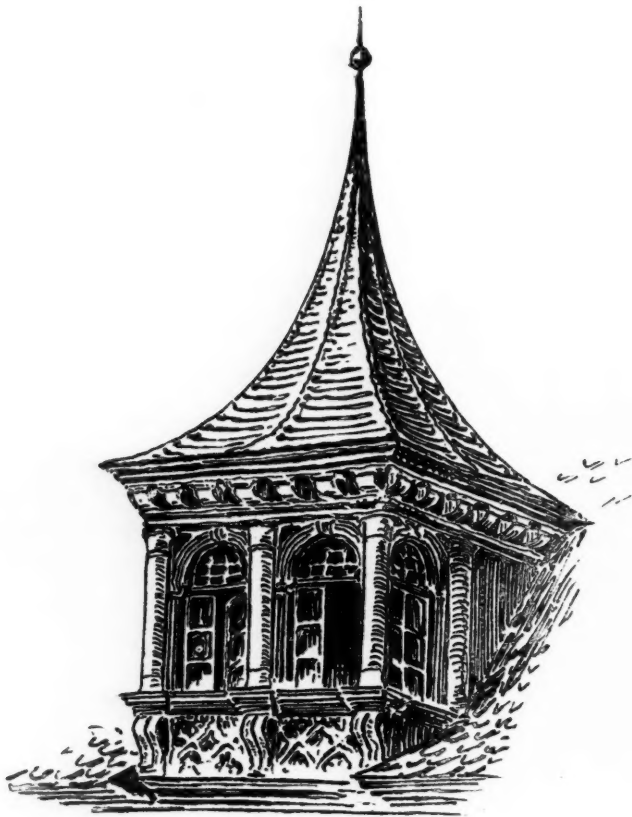
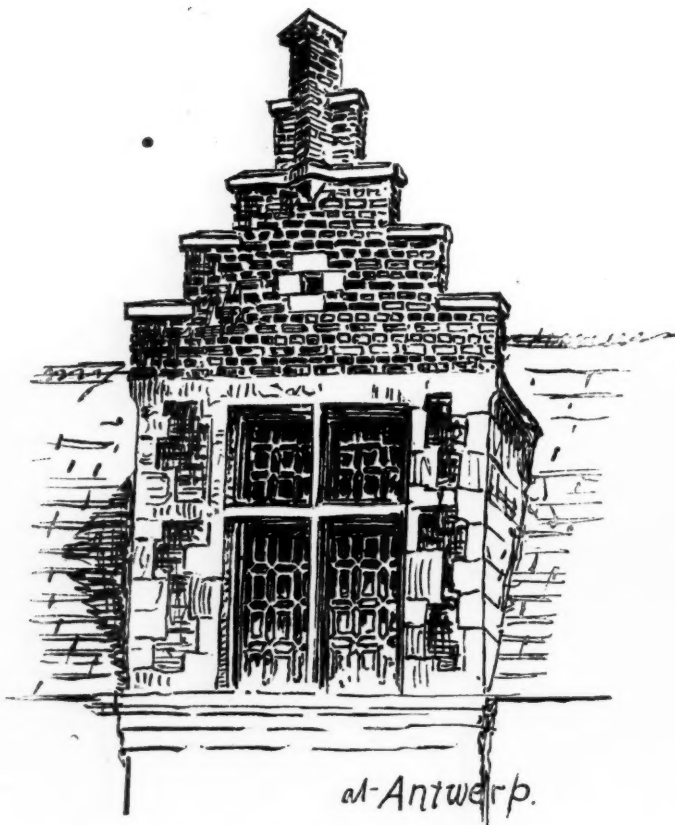
May they proclaim the achievements that are the glory of architecture under fairer skies, and demand that judges who honor such achievements, and not favoritism and rascality, or ignorance, decide the construction of works that would, in this land also, show the worth of architecture which in no land should be put to shame.

Respectfully submitted by the Architectural Association of Des Moines, Ia., July 16, 1884.

J. S. BLAKE, President.

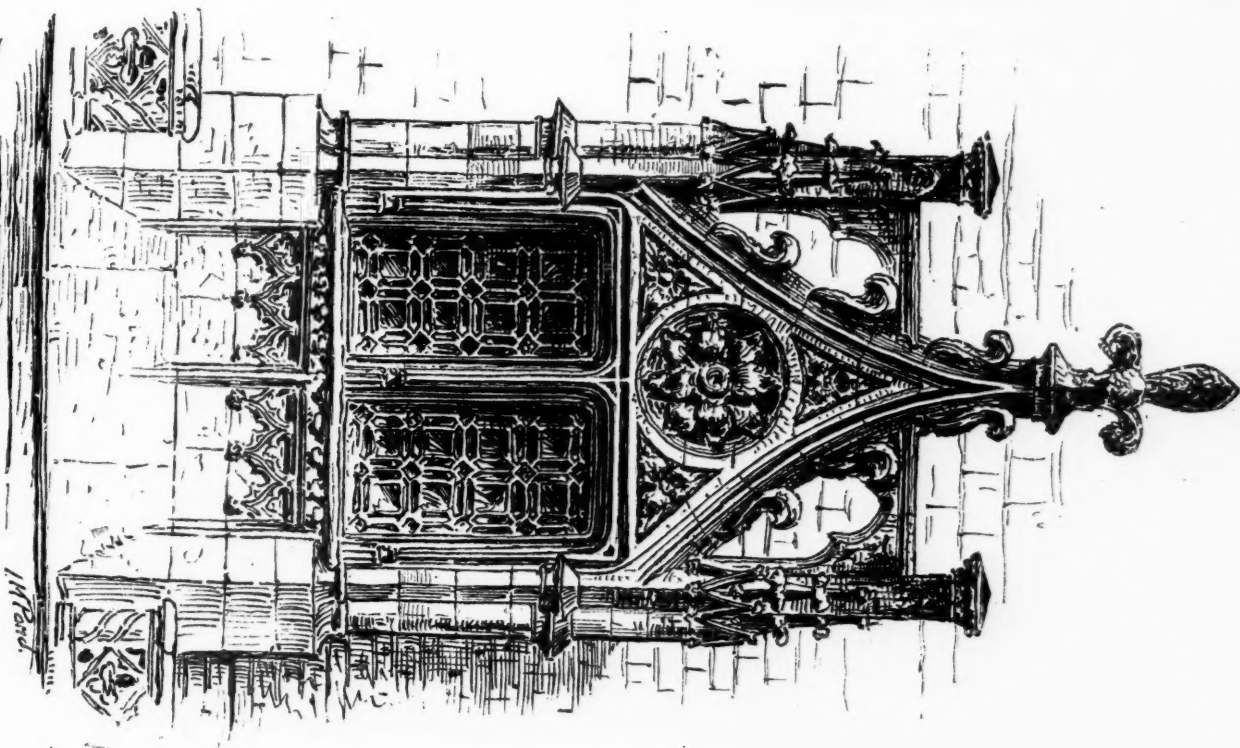
E. H. TAYLOR, Secretary.

IRVING K. POND, whose travels in Europe have been noted in this journal in contributions both illustrative and written, has returned much benefited in health and with a store of architectural information that will be in the future invaluable. Mr. Pond also has brought a large portfolio of sketches and note-books full of notes upon the architecture of the past as observed in the corners of Europe visited by him, destined to form a series of articles, which the public will be treated to in future pages of this journal. We are glad to welcome Mr. Pond home again, for the West has need of architects of broad information and ready intelligence, and there is no better school for gaining this than among the countries whose architecture became old before this country was known.

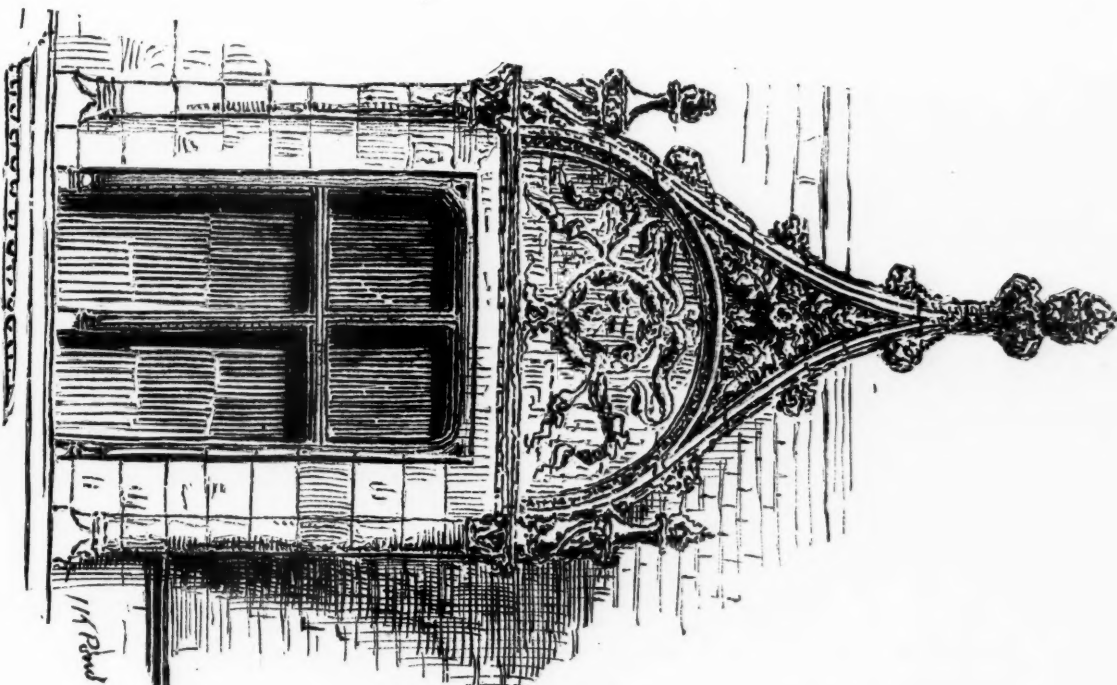
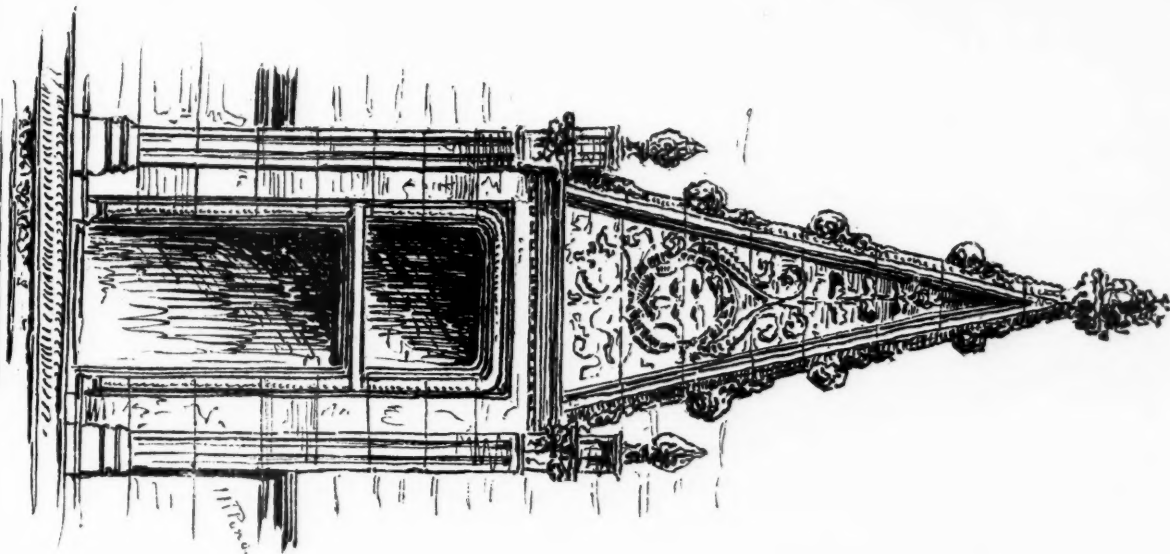
*At Nuremberg**At Nuremberg**at Antwerp.**at Lucern.*

FRAGMENTS OF EUROPEAN ARCHITECTURE.—SKETCHED BY I. K. POND.

Dormer at Blois.



Dormer at Tours.



FRAGMENTS OF EUROPEAN ARCHITECTURE.—SKETCHED BY I. K. POND.

A Fireproof Office.

A RECENT building, which has for several months attracted the attention of citizens of Chicago, and also those who pass the corner of Sixteenth and Clark streets in the cars of the several railroads entering in that vicinity, is the new office building of the Pioneer Fireproof Construction Company. It is 24 by 48 feet, two stories and basement high, and is built entirely of fireproof, or fireproofed material. It is a remarkable example of the possibilities of hollow tile in wall construction of any description, as well as when used as a covering material for protection against fire. The walls rest upon a stone foundation, and are composed of 5-inch hollow tile, set and pointed in red mortar, but otherwise without change from the natural surface of the material, which is a uniform buff color. The walls are lined on the inside with 3-inch hollow tile, to give an additional stability, made necessary by the constant jarring by heavy trains passing upon the track about ten feet from the walls. This inner lining in this case carries the floor joists, which in ordinary cases may be set into the outer wall. The roof is pitched, and irregular in shape, formed of wooden rafters, which rest upon the tile wall without additional plate. The roof is covered with slate placed in the ordinary manner. The floor joists are also of wood, and these, together with the rafters and all other wood material used, are covered with fireproof material. The partitions are all of 3½-inch hollow tile, and are as firm and solid as a brick wall and much lighter. The arrangement of the building for the use of the company is complete, as every department of work can be accommodated. In the basement are stalls for five horses, a shop, furnace, and storage rooms. This has no interior communication with the floor above. The first floor contains the counting room, the general manager's room adjoining, and the president's room in the rear. These offices are most handsomely fitted up. They are finished in butternut, with hardwood floor, and walls tastefully decorated. The office safe is built into the wall at a height sufficient to give easy access. A vault is also constructed for the reception of papers. The hall, which occupies one side of this floor, leads to a well arranged stairway of hardwood, which gives access to the second story, where the drafting department is located. This room is well lighted from three sides, and is the envy of every draughtsman who visits it. The arrangement and finish of this office building not only gives to the company an elegant and convenient place of business, but shows to what extent the material of which it is composed can be used in construction. The exterior is decorated with red terra cotta, which harmonizes well with the buff tile, but tile can be painted to any color and made to accommodate any design.

A Revival in Woodworking Art.

IT seems that this is a wooden age, an era when the artificer in wood holds, as it were, the art of home finishing, which is getting to be home furnishing, upon the point of his chisel. The timber lands of not only our own most prolific of countries, but of the world, are laid under tribute for material for his artistic hand to fashion into beauty and vertu. Our houses are trimmed with domestic and foreign woods, each room representing some particular form, color, and species of wood, or with panels, wainscoting, ceiling, etc., showing the best productions of all the forests from northern California to Ceylon worked up by the chisel of the wood-artist into artistic and harmonious shapes. The house of C. J. L. Meyer & Sons Co., in their extensive and conveniently fitted showrooms, show the extent to which the manipulation of woods is carried; and especially in domestic woods their taste is displayed in such a shape that the architect can see the form that design will take when interpreted by their skilled workmen. In one showroom, doors and casings of oak, beech, maple, cherry, walnut, mahogany, and in fact all the woods that this country produces, are shown, some in their natural state and some with the polish which a fine oil finish gives to the surface. In the mantel and mirror department, which is especially fine, the display is as varied as it is beautiful. Here we see a mantel and mirror frame of mahogany, untouched by the finisher. The carving is elaborate, and the design in the highest degree artistic. Cherry is a favorite wood for mantels, and also curly maple, while very soft and beautiful effects can be procured by the careful handling of beech and birch wood. The mantel and mirror manufacture of this firm is becoming well-known, their designs being the product of one of the best designers in the country, and that, together with the skill their long experience in the mill business has given them, a class of trade that is not only enviable, but will promote the best efforts in the production of all that is new and artistic in this important industry.

A Handsome Piano Case.

ONE year ago W. T. Thomas, a Canadian architect, who planned the handsome house of George Stephen, president of the Canadian Pacific Railway at Montreal, also designed the furniture, including a piano-forte, all to be in Queen Anne style. The order for the piano was given to a firm in Boston, and plans and specifications were sent to them. The design of the architect was followed throughout, and the instrument was finished a few days ago. It is of the small grand pattern, and is built of the satinwood of South America, finished in different styles to produce contrasting effects. The case proper is made of nine pieces of satinwood veneering glued together to form one continuous body, which reaches from corner to corner. This is laid off in panels, which are inlaid with rare and costly woods of South America, and bright metal. One panel contains a lyre, the frame of which is of tulipwood, and the strings of metal; the vine that leads away from it on either side has its stem of amaranth, its leaves of cocobola, and its leaf skeletons of glittering metal, while the whole has a snakewood border. A sprig of oak has its acorn cups of amaranth and its bulbs of metal, producing the effect of nature. The carving of the shoulders and scrolls is elaborate, and the polish of the wood rivals the finest satin, and is so brilliant as almost to produce an optical illusion. The legs of the instrument are like the arched doorways of a palace. Each

consists of two columns of satinwood, exquisitely carved and inlaid, which come together at the top to form the arch. A gilded caster rolls under each column. The color of the case is the natural color of the wood, and the value of the instrument is \$4,000.

Stone Quarrying Machine.

ARCHITECT John Crump, of Philadelphia, has invented and just patented a machine called the patent "Quarrier and stone-shaper." It possesses so many points of intrinsic merit and is of such practical utility as to bid fair to create a complete revolution in quarrying. The machine consists of a portable upright boiler and engine from four to ten horsepower. The blade, or cutter, resembles a circular saw. The machine works on level or on inclined uneven surfaces on which is laid a flat iron railroad track carrying the steam boiler engine and cutter apparatus. The cutter works backward and upward at slow speed so as not to heat the steel cutter teeth while it feeds and cuts forward at the rate of about one inch per minute by thirty-two inches deep in the softer rock; it cuts faster in very soft rock, and less in hard. It cuts the stone as it lies in the earth into blocks of any size or any form of straight lines desired. Its daily capacity is from twenty-five to seventy-five feet of rock in length and thirty-two inches deep. It is estimated that it saves from twenty-five to seventy-five per cent in labor for dressed stone. The saving of the great waste arising from powder blasting and from handling are also strong points of merit. The expense of running the machine, including fuel, oil and attendance, ranges from two to five dollars, and it has been demonstrated that two machines will do the work of forty men.

Architectural and Building Notes.

DURHAM HOUSE DRAINAGE Co. will furnish their system of iron drainage for the Home Insurance building. This ensures to this magnificent structure the best possible system of drainage and sanitary arrangements.

MR. A. D. CONOVER, civil engineer and sanitary engineer, late of Madison, Wis., has opened an office at 51 Montauk Block, making a specialty of designing and superintending work for steam heating, etc. etc.

THE Grand Central depot at Cincinnati, W. W. Boyington, architect, Chicago, was formally opened July 31. M. E. Ingalls, president of the Cincinnati, Indianapolis, St. Louis & Chicago road, gave a reception on the occasion. The building cost \$800,000.

ARCHITECT GARNSEY has just completed the erection of the first Congregational church at Sycamore, which will be dedicated on the 9th inst. B. Davies & Son, of Chicago, were the mason contractors, and were very successful in giving to that society a building that will be substantial. It is built of stone and cost about \$18,000.

ARCHITECT B. S. TOLAN (successor to T. J. Tolan), of Ft. Wayne, Ind., is about to commence the erection of a new courthouse at Muncie, Delaware county, Ind. Bids will be received until 1 o'clock P.M. on the first Thursday after the first Monday in September, 1884. The building is to be of stone externally and iron construction, thoroughly fireproof, and first-class in every particular.

G. E. HASKINS, the interior decorator and furnisher, has received a commission for the decorating and furnishing of the residence of P. P. Mast, Esq., of Springfield, Ohio. The residence is one of the largest and most handsome in the state, and from one to two years will be consumed in its decoration, and it is needless to say that in the hands of Mr. Haskins it will excite the admiration of all who may be so fortunate as to see the work upon its completion.

ARCHITECT W. L. B. JENNEY has been unanimously appointed architect for the Union League Club, which will build immediately upon their lot, southwest corner of Jackson street and Fourth avenue. The building will be six-stories and basement high, but the details have not as yet been arranged. This is the greatest compliment Mr. Jenney has yet received professionally (unless it be the appointment as senior engineer on General Sherman's staff during the war). The cost of the building cannot be estimated, as this will depend upon future plans.

SAYS the *Builders' Weekly Reporter*, of London, England: Six Staffordshire blue bricks, made by Mr. Joseph Hamblet with his improved machinery, were tested at Kirkaldy's on the 4th inst., and resulted in their averaging a crushing strength of 1,064 tons to the square foot. This exceeds the crushing resistance generally given of granites, but the mean results of experiments with Aberdeen granite, which is considered the hardest and strongest kind, Mallet found the crushing resistance on cubes about 1.5 in. square to equal 22,681 lbs. per square inch, or about 1,440 tons per foot.

It is said that the wood on the north side of a tree will not warp as much as that from the south side, and that if trees are sawed in planes that run east and west, as the trees stood, it will warp less than if cut in the opposite direction. However this may be, it is certain that the tendency to warp when sawed into boards is much greater in green than in dry wood, and that the convex side of the curve is always toward the heart. This warping, due to unequal shrinkage, and to the more open texture of the external portion of the tree, is not found to occur in the middle plank or board of the log, excepting as it may in slight degree reduce the breadth. This quality of not warping, which is in many cases absolutely indispensable for certain uses, as, for example, in the sounding-boards of pianos, is secured in the case of spruce timber by first quartering the logs, and then sawing them with the angle downward. It is then sawed into boards very nearly at right angles with the line of annual growth, and a small triangular strip must be taken off to make the board square edged, but qualities of stability and strength are secured that could not otherwise be had.—*Ex.*

ARCHITECTS C. P. Thomas and John Rodger have formed a partnership under the firm name of Thomas & Rodger. Of these gentlemen Mr. C. P. Thomas has long been known through his works in the Chicago building field, and always with credit to his architectural ability and business integrity. Mr. Rodger is a gentleman and, what is better, a Scotchman; and though educated in Scotland, his latest work has been designing under the direction of some of our leading architects, he having left the office of architect S. S. Beman to form this partnership. The firm is a strong one, and we wish for and predict its success.

THE State Capitol Commissioners of the State of Georgia met in the Senate chamber on July 15 to open the proposals for the construction of the new state house. The *Atlanta Constitution*, from which a few facts are gleaned, says a large number of the bidders were present, the faces of the assemblage being remarkable for intelligence and decision of character. In the report as published, the figures of about forty of the proposals are given, only two of which embraced the entire building. These two were the bids of Chas. Pierce & Co., of Indianapolis, Ind., for \$1,198,202.27, and the Hallowell Granite Co., of Maine and Chicago, for \$1,163,624.17. As the amount appropriated for the building was \$1,000,000, the commissioners had predetermined to limit the contract for the entire building to \$800,000, and therefore no bid was accepted. Since then, the plans for the interior, which were very elaborate, have been modified and cheapened so as to bring the cost of the structure within the limit of the appropriation, and new proposals are called for. The bidders in the first instance having been on the site, and having had opportunities to canvass the cost of getting materials onto the ground, will probably be able to figure more closely than they did the first time. There was a vast difference in the bids for some parts of the work.

Lumber Notes.

THE loss of three lumber yards at Toledo, Ohio., by fire, July 9 aggregated \$370,000.

THE annual sales of sawed lumber in the United States are estimated to aggregate \$223,000,000.

OWING to extremely low water in the Chippewa, no lumber is running to the Mississippi, and no improvement is expected until the September rise.

A REPORT from Eau Claire says a strike of rivermen resulted in a compromise, the employers allowing \$1.25 per day. Most of the oar-pullers resumed work, though many sought work in the Minnesota harvest fields.

A CONVENTION of lumbermen will be held at Chicago, August 20, inst., to decide whether or not the Northwestern sawmills will be shut down after September 15.

THE Export Lumber Company, of New York, in their recent semi-annual report, give the amount of white pine lumber exported from that city at 34,873,000 feet, the largest amount which has been exported for the same period in eight years.

THE sawmill-owners of several districts of the Northwest have under consideration a proposition to shut down September 15, prox., but it is said the millmen of Minneapolis decline to be a party to the arrangement.

THE *Southern Lumberman* says there need be no fear of the exhaustion of yellow pine for some time to come, as the great pine belt of the South, which crosses southern Georgia and Alabama to the waters that flow into Mobile bay, covers an area of 11,500,000 acres.

TWENTY-FIVE sawmills in operation between Lynchburg and Danville, Va., produce annually 32,500,000 feet of lumber, worth at place of shipment \$10 per 1000 feet. This lumber section was opened to market by the extension, ten years ago, of what is now called the Virginia Midland Railway.

A CONVENTION of the lumber manufacturers of the Northwest is called for August 20, at the Grand Pacific hotel, Chicago. The principal questions discussed will be that of limiting the manufacture of lumber, and the feasibility of shutting down of mills early in the fall, and other questions in this connection.

THE report of the Bureau of Agriculture for the year 1883 gives the annual value of forest products at \$700,000,000. The magnitude of this sum is more clearly comprehended by comparison with the aggregate value of other products, by which it is found that it is nearly one-fourth of the reported value for the same time of all the corn, wheat, oats, hay, cotton, iron, gold and silver ore combined. The larger portion of the forestry product is in the form of lumber, but the bark for tanning purposes is a large item. The manufacture of matches, it is said, requires wood to the value of \$3,298,562.

THE U. S. Consular agent, writing from Truxillo, under date of July 8, 1884, to the *Southern Lumberman*, mentions a very extensive variety of woods of great value that abound in Honduras, and adds that "Honduras supplies numerous dye-woods—the fustic logwood, dragon's blood, anatta, and yellow sanders; also trees producing gums and medicines—as the sarza, copaiba-tree, copal-tree, liquid amber, palma christie, cascarilla, vanilla, and finally, Ule or caoutchouc. In fact, there is hardly a tree but possesses some special value for the purposes of the builder, the cabinet maker, the tanner, dyer, shipwright and the druggist."

THE New Orleans correspondent of the *Lumber Trade Journal*, referring to the contemplated Exposition at New Orleans, says: "I know of no exhibit from the South that will so clearly show one of its vast resources as that of its forest products. Lumbermen have begun selecting samples for exhibition. For size of trees, peculiarities of grain, and different varieties of timber, the exhibition promises to be well worthy of examination, and it is trusted that the effects on the many lumbermen of your section who are expected to visit us will influence at no late day the introduction of Western energy, skill and enterprise in the development of the lumber industries of this section."

THE timber trade of Hamilton, Ont., is much smaller this season than last. McArthur Bros. and Mr. MacRae are doing little, and Mr. Murphy, of Quebec, is shipping, instead of rafting. Flat & Bradley are rafting, but not to such an extent as last year. The rate from Hamilton to Garden Island or Collin's Bay is \$22, which is about \$13 less than what used to be considered a fair figure. The low rates are a result of fierce competition of the railroads with the vessels. One timber merchant says that the railroads offered to carry his timber from where it was cut up north to Quebec for very little more than it costs to raft it and send it by the lake and river.

Mosaics.

THE contract for the frescoing of the new Board of Trade has been let to E. Phillipson, of Chicago.

THE works of J. H. Pike & Son, scagliola and Accacia artists, are about to establish works in Chicago. They do all kinds of column and pilaster work and show sixteen different samples of imported marble set in mosaic work in combination with common Vermont marble.

THE high place Western architecture is making for itself in the line of both substantial and ornamental buildings is one of the grandest signs of American progress. THE INLAND ARCHITECT AND BUILDER, Chicago, is a reflex of this from month to month.—*Toledo, O., Sunday Journal.*

THE handsomest exchange that reaches our table is THE INLAND ARCHITECT. Its appearance is a perpetual source of delight to the printer; while its contents are as excellent as its typographical appearance is beautiful. The paper is a jewel of the first water.—*Clay, Ottawa, Ill.*

ARCHITECT J. C. COCHRANE has prepared plans for an addition to the Michael Reese Hospital, and the improvements will shortly be made at a cost of \$30,000; also the residence of E. Y. Moore, at Evanston, which is under roof and will soon be finished. The style is Queen Anne, and will cost about \$6,000.

THE purchase of a block of ground for a union depot at Clinton, Iowa, by a joint commission of the Chicago, Burlington & Quincy railway officials, with those of the Clinton & Cedar Rapids, which latter is practically the same as the Burlington, Cedar Rapids & Northern, will indicate the immediate erection of a depot at that point.

AMONG other amusement places that have been through the decorators' hands this summer, are the Academy of Music and the Chicago Museum. H. J. Milligan executed these commissions, and they are tasteful examples of the latest and best interpretation of the proper mode of decorating amusement halls. The effects in the Academy are especially fine, and this house is as beautiful as it is otherwise attractive to the theatre-goer.

IN the absence of an ample supply of water and the necessary plumbing, the earth-closet is a sanitary device of the greatest importance. There is nothing so potent in the absorption of offensive gases and odors as dry earth, and to all who need such appliances we commend the Myers Sanitary Depot, 94 Beekman street, New York, dealers in plumbers' supplies and water-closets and earth-closets of the most approved description.

IT is with pleasure we call attention to the advertisement of the French Silvering Ornamental Glass Company, of St. Louis. This is the largest concern of the kind in the West, and they are doing very fine work in the several departments. The company lately secured the services of Mr. A. H. Wallis as manager. Mr. Wallis has had many years' experience East, being with Redding, Baird & Co., of Boston. He has a general supervision over every department, and says he can duplicate Eastern prices and guarantees all work to be the best. Special attention given to mosaic and allegorical work.

CLOCKS and clock towers have largely superseded the bell tower, and in the line of clocks of this character those worked by electricity, having electric dials, have the precedence. Their variety is endless. The E. Howard Clock and Watch Company, of New York, have become largely identified with the furnishing of tower clocks. One of the largest quarter-strike clocks in the country is now being placed by them in the tower of the courthouse at Lima, O., and the illuminated dial of the Union depot, recently completed at Detroit by architect Eidlitz, marks the railroad time by a clock of this firm's manufacture. In Chicago there are several towers, notably those of the Northwestern and the Western Indiana railway depots and the new Board of Trade building, that will be supplied with clocks of the best manufacture.

As the merits of Portland cement are becoming better appreciated, the consumption is increasing annually, but it is well for architects, engineers and contractors to bear in mind that a great deal of inferior stock is imported at New York and other Eastern ports, which Mr. John C. Trautwine found to his cost, for he says in his *Engineers' Pocket Book*: "Many spurious and inferior articles are sold under the name of Portland cement." Portland cement made by such well known manufacturers as I. B. White & Bros. or Gebbs & Company, of England, and the Stettiner Company and Lagerdorfer Company, of Germany, have established a reputation for uniformity of strength and fineness and are extensively used. In fact, the author whose name we have mentioned carried his appreciation so far as to state that "White's Portland cement is exceeded by none." When the cost of transportation from seaboard to this city is considered, it is more economical to use well established brands than any sent on consignment, which evidently are not appreciated at place of manufacture.

ALL good housekeepers hate dust as they do the very — old-fashioned last year's bonnet, and especially do they hate the light ashes flying from under the grate, dimming the snow of the lace curtains, abasing the pride of the shining bric-à-brac, marring the reflective beauty of mirror or panel, and suggesting forever penitential psalms and sitting in sackcloth and ashes. To all these sufferers we recommend the Common Sense Ash Dump, invented by Charles L. Page. It is simple; it is economical; it can be put under any grate at the cost of a dollar or two. It is a small bit of cast iron, but it does its work; a touch and it swings on a pivot and dumps the ashes without dust, or it slides back and gives passage for the ashes from the grate. Everyone likes to wield the poker; it is fascinating

as any sceptre, and this little "dump" instigates to a skillful use of the universally popular implement. It saves time and labor, health and temper. It is a cast-iron little servant; will stand any amount of abuse and not answer back; does its work meekly and is never impudent; never grumbles at the "feed"; never is ruffled by the fiery temper of its "grate" superior; in fact, is so thorough and so reliable that we may say of it, as used to be said of a good book, "No household ('gentleman's library' used to be the term) is complete without it."

THE "fireplace" is one of the institutions which give way very reluctantly to modern improvements. That the stove more fully supplies the need for which the fireplace was designed, and at much less expense for fuel, is universally conceded, and yet no human residence is considered complete that has not the open fireplace. The use of furnaces or stoves may render it wholly superfluous for heating purposes, and yet the occupants of the house would not be satisfied to dispense with it, and are always gratified to see the fire glowing in the grate and to sit around the cheerful hearth when the fitful light illuminates and darkens by turns the faces of the complacent semi-circle looking into it. Around no other part of the house does so many happy associations cluster, and no occasion is fraught with more solid home comfort than when, after the work of the day, the family gather around the open fire. But for all times and occasions the old-fashioned fireplace will not do. It is, at times, entirely too one-sided in the distribution of its benefits, and can never have the unqualified approval of the shivering individual who seeks its warmth on a very cold day. The modern fireplace, however, is a different thing. It is so constructed as to save and throw into the room much of the heat which in the old-fashioned kind would go up the chimney, but has all the advantages and comforts of an open fire. The Jackson Ventilating Grate, which is so constructed, saves a large portion of the heat which in the old-time fireplaces would go up the chimney, and at the same time warm a large room as thoroughly in all parts as a stove would warm it. The grates are made on the principle of a furnace, with an air-chamber, which is supplied with air from the outside of the house, and discharges the heated air through a register into the room just as rapidly as the air in the room is drawn out by the draught of the chimney. By this means thorough ventilation is secured also at no expense of cold currents from crevices in doors and windows. Grates of this kind are constructed so as to warm rooms on different floors, by a pipe which conducts the air from the chamber behind the fire to the room above. In these air-chambers there are over fifteen square feet of radiating surface. The chambers are separated from the fire by a cast-iron shell, which has no joints and affords no chance for gas to get through, and which, with the air circulating freely behind it, cannot become so intensely heated as to burn out. From the descriptions of this heating device which come to us, we feel confident it will meet a long-felt want.

New Publications.

THE ELECTRIC LIGHT IN OUR HOMES. By ROBERT HAMMOND. London: FREDERICK WARNE & CO.

This little book contains sundry lectures delivered by Mr. Hammond at sundry times, and explains in a popular form the principles of the science, the apparatus and fittings used, all the necessary arrangements for the use of the electric light in private residences, and the advantages to be derived from it. The subject in its various bearings is fully illustrated by woodcuts, and there are two photographs of rooms, dining and drawing rooms, in the author's house, which are fitted with electric lamps. The book will be found instructive and interesting.

"THE ART INTERCHANGE," New York, is doing more for the advancement of home art and the instruction of amateurs than all the other art publications this side of the Atlantic combined. In the number of July 31, "Le Printemps," by Alfred Stevens, an exquisite picture (18 by 8½ inches), was given as a supplement. It shows a landscape, in the foreground of which is the full-length figure of a girl leaning against one of two trees, which rise straight, tall and bare behind her. The immediate foreground is filled with grasses, wild-flowers and birds, while a little to the left is a small tree in full blossom. The picture as a whole is one of the most beautiful examples of engraving ever offered to the public, and is well worthy of a frame. Published by William Whitlock, 140 Nassau street, New York. Price \$3 a year.

Inventive Genius in Building.

- 301,124. Device for Preventing Percussion or Water-Hammering in Pipes. Francis Hyde, Toronto, Can.
- 301,125. Hoisting Apparatus. Maximilian Jucker, Florence, Wis.
- 301,131. Mold for Brick and Re-Pressing Machines. Geo. H. Kuntz, Belleville, Ill.
- 301,149. Mixed Paint. Henry C. Pettee, Vallejo, Cal.
- 301,153. Hoisting Apparatus. De Witt Clinton Prescott, Marinette, Wis.
- 301,155. Brick-Kiln. John Puerner and William Haumerson, Jefferson, Wis.
- 301,157. Weather-Strip for Window-Sashes. George P. Rasck, Des Moines, Ia.
- 301,230. Ventilating Sewers. William M. Green, Chicago, Ill.
- 301,231. Crane. P. Henry Griffin, Detroit, Mich.
- 301,252. Alarm-Lock. Alexander F. McCollam, Fair Play, Cal.
- 301,264. Hot-Air Fireplace. Doyel Pearson, Memphis, Tenn.
- 301,362. Weather-Strip. John T. Hall, Zenobia, Ill.
- 301,388. Door-Hanger. Edward T. Prindle, Aurora, Ill.
- 301,429. Window-Shutter. Ludwig F. G. Boeckelmann, Davenport, Ia.
- 301,453. Blind-Slat Adjuster. Richard M. Martin, Minneapolis, Minn.
- 301,468. Combined Ice-House and Cooling-Chamber. John Alexander, Toronto, Ontario, Can.
- 301,471. Brick-Machine. George H. Aregood, Chicago, Ill.
- 301,501. Weather-Strip. David B. Kingsbury, Ravenna, O.
- 301,586. Safety-Catch for Elevators. William Giles, Mount Olive, Ill.
- 301,587. Brick-Kiln. William M. Green, Chicago, Ill.
- 301,742. Composition for Roof-Paint. Samuel N. Metzler, Jackson, Mich.
- 301,760. Cowl. Ephraim Sears, North Salem, O.
- 301,765. Hod-Iron. Andrew J. Spicer, Portland, Ore.
- 301,856. Hanging Bells. Gardiner Campbell, Milwaukee, Wis.
- 301,862. Burglar-Alarm. John B. Chase, Aurora, Ill.
- 301,885. Fireplace. Egbert Dewey Haven, Albany, Ore.
- 301,904. Chimney. Charles B. Loveless, Worthington, Minn.
- 301,932. Valve for Water-Closets. William Smith, San Francisco, Cal.
- 301,970. Key-Holder. Robert Duerr and George F. Rohn, Milwaukee, Wis.
- 302,003. Hydraulic Elevator. Albert F. Knorr, San Francisco, Cal.

- 302,030. Fireplace Stove. James D. Richards, Patriot, Ind.
- 302,078. Elevator. Jacob Wilmenour, Washington, Ind.
- 302,095. Weather-Strip. Gustav Burkhardt, Homer, Ill.
- 302,110. Waste-Pipe Protector. Hirsch S. Danziger, Chicago, Ill.
- 302,149. Burning Brick, Tile, etc. John K. MacIver, Detroit, Mich.
- 302,172. Self-closing Hatchway. Richard D. Thackston, St. Louis, Mo.
- 302,180. Crane. Samuel T. Wellman, Cleveland, O.
- 302,183. Handle for Crosscut-Saws. John Quincy Adams, Jr., Blanchard, Mich.

Synopsis of Building News.

Attien, Ind.—Architect Geo. W. Pearson reports not much doing, but outlook good, with the following all under way or completed: For Mr. A. Zeigler, a two-story eight-room brick residence, to cost \$3,000. For Mr. Frank Fenestine, a two-story six-room brick residence, to cost \$2,000. For Mr. John Maguire, a one-and-one-half-story frame cottage, to cost \$1,500. For a stock company, a three-story and basement mill, 40 by 60 feet, to cost \$6,500. For the city fire department, a one-story brick building, 40 by 70 feet, to cost \$3,000. For Orie Clark, a two-story "Queen Anne" residence, eight rooms, to cost \$3,000. For Mr. Geo. Pearson, a two-story seven-room "Queen Anne" residence, to cost \$2,500. For Mr. R. Beamer, a two-story frame residence, ten rooms, to cost \$2,500. Also several smaller houses, ranging in price from \$800 to \$1,500.

Atlanta, Ga.—Architects Bruce & Morgan report building not so active since the financial crisis; material and labor cheaper than last season. The following is work of their office: Newton county courthouse at Covington, Ga., two-story brick, 72 by 100 feet, with slate roof and galvanized iron cornice, cost \$28,000; under way; James Smith, builder. Hall county courthouse at Gainesville, Ga., two-story brick, 86 by 95 feet, slate roof and galvanized iron cornice, cost \$30,000; under way; James Smith, builder. Campbell county courthouse, Jackboro, Tenn., two-story brick building, 50 by 70 feet, slate roof, galvanized iron cornice, to cost \$16,000; contracts will be let August 15; address J. S. Lindsay, clerk. For Col. C. M. McGhee, memorial library building, 45 by 105 feet, three-story, pressed brick and stone, slate roof, to cost \$25,000; work done by the day. At Newnan, Ga., a Baptist church, brick building, 50 by 100 feet, slate roof, to cost \$15,000; under way; J. S. Westbrook, builder.

Carthage, Ill.—Architect Geo. W. Payne reports building operations quiet now, although mechanics are kept busy on small work, repairs, etc. The main building on the county poor farm burned on the 23d inst. It was a three-story brick, 50 by 64 feet, with shingle roof. All the floors, partitions and ceilings were of southern pine; even the outside brick walls were lined on the inside with the same inflammable material; no wonder, then, the fire did its work in less than two hours. It was only by the almost superhuman efforts of the superintendent that no lives were lost. The building cost about \$10,000; was insured for \$6,000. A meeting of the supervisors is called, at which some action will be taken to rebuild immediately. It is to be hoped the lesson will not be lost, and that the next building will make some pretensions, at least, of being fireproof.

Cheyenne, Wyo. Ter.—Architect Jas. Anderson reports prospects for steady improvement are very favorable, with the following buildings under way: For Idelman Bros., a three-story brick building, 40 by 132 feet, to cost about \$42,000; E. R. Hurd, builder. For Mr. Edward Blewett, at Fremont, Neb., a two-story brick residence, 52 by 64 feet, to cost \$19,000. For W. A. Johnson, at Green River, a two-story brick and stone building, 30 by 100 feet, to cost \$11,000.

Chicago, Ill.—The work of the month has progressed steadily, the only new office building placed in architects' hands being that for Mr. Hansen on the J. Q. Adams lot. Plans for this are being prepared by architect John Addison. It will be six stories in height and will cost about \$160,000. The first floor will be devoted to restaurant or store purposes and the remainder fitted up for offices. The sum to be expended will allow of complete fireproofing and other requisites of a first-class building. The price of common brick has fallen so low that the builders are figuring upon an active fall. The work reported this month from the city offices averages about equal to that of last month, and the majority of architects reported unperfected plans for future work.

Secretary Ambler, of the Citizens' Association, is about to issue a report upon the tenement house question. It gives figures regarding alleged overcrowding of the poor in unhealthy tenements, and as a remedy proposes the formation of a building association and the erection of tenements upon the Peabody plan of London, with the purpose of not only supplying comfortable homes but at a moderate rent.

The boulevard system of Chicago, which now aggregates something like fifty miles, is to have an addition by an extension of the Michigan avenue boulevard from Thirty-ninth street to Fifty-fifth street, through Hyde Park. This action of the Hyde Park commissioners will leave the street from Thirty-fifth to Thirty-ninth street to be boulevarded by the city, which should be immediately done and make Michigan avenue a boulevard six miles in length, and one of the longest and most handsome drives in the country.

Architects Burling & Whitehouse have let contracts for two stores for Judge Trumbull, on State street, brick, three stories and basement, 22 by 75 feet each, cost about \$16,000. Also have prepared plans for the Church of the Epiphany, on Ashland avenue and Adams street. It is 119 by 55 feet; has a seating capacity of eight hundred. It is to be built of Lake Superior variegated stone, Norman Gothic, high roof, covered with Bangor slate, low walls of rock-faced stone.

Architect J. W. Ackerman has prepared plans for a residence for S. J. Sherwood on Thirty-seventh street, near Linley avenue; pressed brick front, two stories and a cellar, 22 by 55 feet, cost about \$6,000; contracts not let.

Architect W. L. Carroll has prepared plans for a frame residence for Rev. Joseph Cummings, L.L.D., at Evanston, two stories, basement and attic, 30 by 58; no contracts let. Also prepared plans for a cottage for L. E. Rivlet at Lake Mills, Wis. Queen Anne style of architecture, two stories and cellar, 30 by 47 feet, containing eight rooms, cost \$1,500.

Architect J. J. Flanders has prepared plans for a residence 25 by 69 feet, for H. C. Morey, on Jackson street near Ashland avenue, Indiana pressed brick and cut stone, two stories and basement, with mansard roof. The first story is stone, the mansard story slate, cost \$10,000. Also three-story and basement brick flats, 24 by 72 feet, cut stone front, on Aberdeen street near Madison, for the estate of Mr. Bernard.

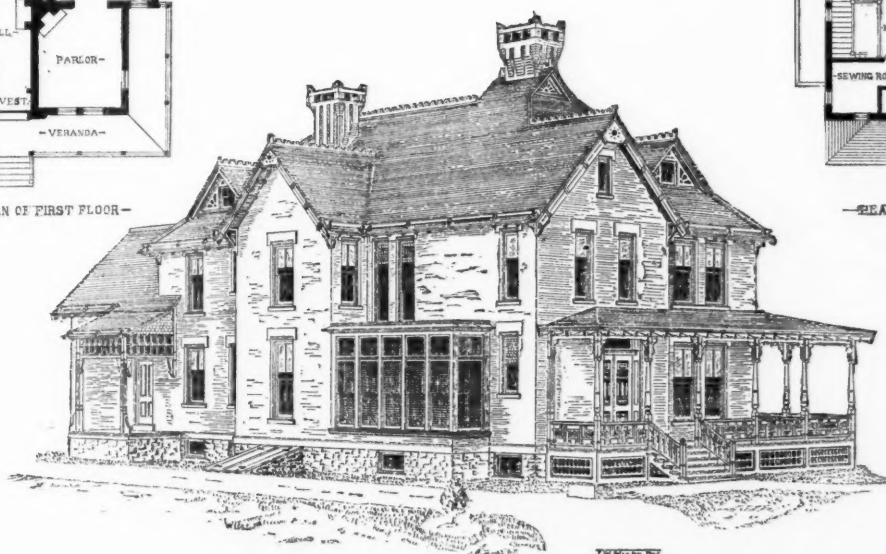
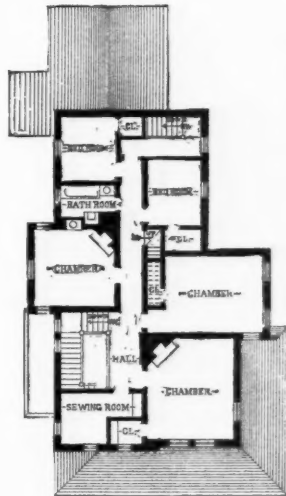
Architect W. W. Boyington has just finished a block of stores and flats on West Twelfth street, for Messrs. Greenlee Bros. They are built of brick, four stories and basement, 50 by 108 feet, cost about \$20,000. Also prepared plans for a block of stores and flats on the corner of Thirty-fifth and State streets, three stories, pressed brick, 75 by 140 feet, cost about \$35,000. Also just finished for Rathbone, Sard & Co., warehouse on South Clinton, north of Harrison street, five-story brick, 120 by 100 feet, cost \$50,000. Also contracts let for the Commercial Deposit vaults in the Royal Insurance building. It contains capacity for nine thousand boxes, anterooms for ladies and gentlemen, will be warmed and ventilated by a system of steam forced into the rooms, and pulled out by the means of forced ventilation as well as exhaust ventilation. It is intended they will be among the finest deposit vaults known in the world. They will increase the cost of the building about \$50,000.

Architects Bauer & Hill have let contracts for two houses on La Salle avenue near Division street, for W. F. Stolker, Lemont Limestone front, three stories, basement and attic, 45 by 76 feet, cost \$21,000; they are divided into six flats. Also contracts let for three flats for A. C. Hesing, on Chestnut street between State and Cass; pressed brick and Burling Stone basement, three stories, 24 by 70 feet, cost \$10,000.

Architect M. L. Beers is taking figures on a residence for Capt. Thos. G. Butlin, president of the Goodrich line of steamers, to be built near the corner of Fifty-first street and Jefferson avenue, Hyde Park. The house will be built of brick, two stories and basement, 40 by 56 feet, Queen Anne style, cost about \$11,000. The upper rooms will be elaborately finished in hardwood. Also building for Miss M. A. Waters a flat at 2943 South Park avenue, built of pressed brick, two stories, 23 by 56 feet, cost about \$4,000. Martinsen & Ottesen, builders.

Architect Alfred Smith has plans for two-story flats, 25 by 84 feet, for D. R. Frazer, to be built on Greenley near Oakley street, of brownstone, Anderson pressed brick and terra cotta, cost about \$10,000. Also two stores for Mr. Mooney, on Cottage Grove avenue near Twenty-fourth street, three-story and basement, of brick, 44 by 48 feet, cost about \$10,500. Also under way, two flat buildings for Wm. Hoyt, on Illinois street near Cass, four-story and basement, built of brick, 50 by 46 feet, cost \$16,000.

Architects Treat & Foltz have a house for Geo. W. Adams, on Indiana avenue near Twenty-third street, built of Anderson pressed brick, brownstone trimmings, two stories and basement, 25 by 74 feet, cost \$6,500; A. J. Holburg, builder. Also a house at Peoria, Ill., for W. F. Reyburn, frame, three stories and basement, 36 by 40 feet, cost \$8,000. Also for E. J. Lehmann, Mansard roof on residence at 399 Michigan avenue, cost about \$15,000; J. G. Lobestine, contractor. Also preparing plans for a residence for W. J. Watson, to be built of brownstone, three stories and basement. Also taking estimates on a three-story and basement house for J. W. Elsworth, to be built on Forty-sixth street, cost \$40,000.



Architect J. H. Huber is preparing plans for a double flat building, two stories and basement, for M. W. Diffley, on Finney street near Wentworth avenue; brick, 50 by 50 feet, cost \$8,500. For Mrs. P. Portman, a \$6,400 dwelling at No. 603 West Superior street. Also a two-story and basement brick building for flats, on Dearborn avenue, for J. H. Betterman, brownstone front, 25 by 70 feet, cost \$10,000. Also four frame cottages for Mr. Goudey at Lake View, cost \$2,500 each. Also a residence for Mr. Staab, on Lincoln Place, of brick, one story and basement, 25 by 56 feet, cost \$3,500. Also Tammany hall in Rochester, N. Y., to be built of brick and stone, 60 by 75 feet, three stories, cost \$10,000. Also a residence for Mrs. E. Ermal, on West Randolph street, brick, two stories, cost \$7,000. Also plans for W. A. Young for three-story brick flats, 22 by 56 feet, at 328 Market street, cost \$7,000. Also a coalshed for J. L. Hashney, on the corner of Halsted street and the river, cost \$10,000. No contracts for any of the above let.

Architects Wheelock & Clay have plans for the remodeling and construction of the Heinemann College and Hospital on Groveland avenue near Twenty-ninth street, and are receiving bids for the same. The building heretofore occupied, and which was burned several months ago, will be much handsomer and more convenient than ever before. It will be 64 by 40 feet, built of brick and stone, four stories, with a large balcony over the entrance, cost about \$10,000. Also a house for Mr. Logan, at 2919 Prairie avenue. It will be of pressed and moulded brick, three stories and basement, 30 by 65 feet, cost \$30,000. Also a stable for L. J. Lamson, on Grand boulevard near Thirty-eighth street, two-story brick and stone trimming, high-pitch roof, 42 by 21 feet, cost \$4,000.

Architect H. R. Wilson reports: For Mr. Alexander Moody, corner Washington boulevard and Leavitt street, a two-story and attic residence, 34 by 54 feet, cost \$15,000; under way. For Mr. W. H. Durant, at 626 West Monroe street, a three-story and cellar residence, 25 by 60 feet, to cost \$6,000; under way. For Mr. E. Ramsdell, at 239 Warren avenue, two-story, cellar and flats, 28 by 62 feet, to cost \$6,000; under way. For Mr. W. R. Raymond, at 3002 Vernon avenue, two-story, cellar and flats, 24 by 58 feet, to cost \$5,000; under way. For Mrs. A. Heller, Twenty-ninth street and Wabash avenue, two-story and cellar residence, 25 by 60 feet; also a barn, 25 by 30 feet, cost \$8,000; projected. For Mrs. L. J. Whitman, on Congress east of Laflin street, a three-story stone front dwelling, 22 by 66 feet, cost \$8,000; under way. For Mr. A. L. Sass, at Racine, Wis., a factory building, 28 by 130 feet, to cost \$10,000; under way. For Mr. C. H. Briot, 1013 North Clark street, a three-story apartment house, 24 by 48 feet, to cost \$4,500; under way. For Mr. W. H. Hafner, at 355 South Hoyne avenue, a three-story residence, 24 by 42 feet, to cost \$5,000; under way. For Capt. Beckwith, on Park avenue, two two-story and basement residences, 20 by 50 feet, cost \$8,000; under way. For Mr. Frank Campbell, Loomis and Jackson streets, two three-story residences, 32 by 60 feet, cost \$8,000; under way. For Mr. B. A. Weaver, two-story flats, 24 by 50 feet, to cost \$3,000; under way.

Architect J. M. Van Osdel is building an addition to the Memory office building on the corner of Pacific avenue and Van Buren street. It is of brick, 50 by 70 feet, cost \$5,000. Also flats for Mr. Doering on Irving place, corner of Monroe street. They are two stories and attic, 66 by 25 feet, of pressed brick with brownstone trimming, cost \$8,000. Also a \$12,000 residence at Nos. 889 and 891 West Adams street, for J. W. Maynard.

Architect J. N. Tilton is building a house at Kenwood and Forty-seventh streets, for Isaac N. Ash. It is a frame residence, two stories and cellar, 42 by 42 feet, interior finished in hardwood, cost about \$10,000. Also three stores on Halsted street, for the estate of J. K. Case, three stories, 75 by 64 feet, built of pressed brick, with stone trimmings. The upper stories are finished in flats, cost about \$22,000.

Architect L. B. Dixon is building a residence for John G. Shortall, on Prairie avenue, near Sixteenth street, of variegated brownstone, basement of brick, slate roof, two stories above basement, cost about \$12,000. For Chas. I. Dangler a residence on Prairie avenue, south of Twenty-ninth street, to be built of St. Louis pressed brick, with Connecticut brownstone trimmings, two stories and mansard roof, 25 by 83 feet, cost \$15,000. Also a residence for Mrs. Julia Slafier, on Forest avenue, between Thirty-first and Thirty-second streets, brick front, two stories and basement, 25 by 60 feet, cost about \$7,000; McNeal Bros., builders. Also seven cottages for C. D. Dupee, on Lake avenue, corner of Fifty-second street. They are to be of brick, 20 by 55 feet, and are for tenement purposes, cost about \$1,800 each; Messrs. Aelmers & Bro., builders. Also two three-story store buildings, 38 by 60 feet, for Wm. Brown, on the corner of Douglas and Rhodes avenues, stone front on Douglas avenue and brick on Rhodes avenue. The two upper stories will be divided into flats, cost about \$12,000. Also plans for a residence for W. W. Randall, on the corner of Thirty-seventh street and Lake avenue, 35 by 50 feet, two stories and low basement, brick front, stone trimmings, cost about \$6,000. For Mrs. E. W. Dupee, two residences, 23 by 60 feet each, on Forty-sixth street near Greenwood avenue, frame, with brick basements, cost about \$7,000; Hogan & Gravy, builders. Also remodeling a house for Mr. D. H. Benton, on Prairie avenue, near Forty-sixth street, cost about \$5,000.

Architect John Bruhns is building a block of brick stores and flats, 65 by 65 feet, for J. Keilmann, on the corner of Lincoln avenue and Larrabee street, four stories and attic high, cost about \$14,000. For G. Schert, at 441 Sedgwick street, a tenement house, built of brick, three stories and basement, 22 by 60 feet, cost about \$8,000. Also a brick residence, two stories and basement, 22 by 56 feet, for Mr. Kaub, to cost \$6,000. For F. Enders, brick store and flats, on Chicago avenue, to cost about \$10,000. For J. Lehmann, at 49 Rush street, a three-story brick residence, 25 by 73 feet, to cost about \$9,000. For Chas. E. Heyer, on Lincoln avenue, a three-story brick building, 22 by 66 feet, to cost \$7,000. For John Hanson, adjoining the above, a brick residence, two stories and basement, 22 by 52 feet, to cost \$4,000. For A. Carstens, a three-story brick tenement house, 21 by 64 feet, to cost \$5,000. For J. Schumm, on Mohawk street, three-story brick flats, 22 by 60 feet, cost \$7,000. For Mr. Hedrick, on Larrabee street, between Burling street and Belden avenue, three-story flats, 22 by 64 feet, to cost \$8,000. Also a store and flat building, 25 by 64 feet, on Eighteenth street, for J. Claussem, to cost \$6,000. Also a four-story building of flats, 25 by 80 feet, for J. Richardson, on the corner of Blackhawk and Hurlbut streets, to cost \$9,000. Also a two-story frame building, 25 by 52 feet, on Lake avenue, for J. Schulinn, to cost \$5,000. Also at No. 1 Hurlbut street, for G. Williams, a three-story brick building, 24 by 60 feet, to cost \$6,000. For Mr. Bluemerth, a three-story frame residence, 62 by 48 feet, on Lake avenue; cost \$4,500.

Architect J. Otter is building a three-story and basement brick house 21 by 68 feet for J. H. Rumsfeld, at 125 Townsend street, to cost \$6,000; A. Spies, carpenter. Also one-story and basement house, 22 by 50 feet, on Halsted, near Sedgwick street, for J. Sweeney, cost about \$3,000; A. Johnson, mason; Peter Larson, carpenter. For D. O'Connor, a brick store and dwelling-house, 25 by 80 feet, on the corner of Market and Locust streets; cost \$10,000; masons, Fagerland and Nelson; carpenter, T. Larson. For M. O'Shaughnessy, a two-story and basement store and dwelling-house, 50 by 80 feet, corner Clark street and Belmont avenue, cost \$8,500; masons, Fagerland and Nelson. For M. A. DeLang, a two-story and basement brick residence, 22 by 71 feet, to cost \$6,000. For A. Monson, on Hill street near Sedgwick, a three-story and basement brick residence, 23 by 49 feet, to cost \$7,500; mason, C. Lind; carpenters, Sendgren and Bush. For J. Nelson, a dwelling-house on Miller avenue near Oak street, three stories and basement, of brick, 40 by 46 feet, cost \$8,000; mason, A. Johnson; carpenter, C. Nelson. For J. Hart, on the corner of Townsend and Locust streets, a four-story and basement dwelling-house, 25 by 80 feet, cost \$12,000; masons, Haushalter and Luhring; carpenters, Ramcke and Repsold. Also a two-story brick dwelling, 22 by 54 feet, for A. W. Johnson, at 733 West Twenty-second street, cost \$5,800; mason, C. Linstrom; carpenters, P. Larson & Co.

Architects Holabard & Roche are building a Presbyterian church at South Evanston; frame, 54 by 42 feet, cost \$8,000; contracts not let. Also a residence for John Neill, at 2963 Wabash avenue, brick, two stories and cellar, 25 by 70 feet, cost \$8,000; carpenter, J. C. Russell. For Mrs. Isabella Marten, a brick residence, two stories, attic and basement, 22 by 54 feet, cost \$4,000; carpenter, Edwin Pildick; masons, Meagher & Cameron.

Architects Radall & Patton (successors to Geo. P. Randall) have plans for a brick schoolhouse, 95 by 72 feet, eight rooms, at Sheboygan, Wis., cost \$20,000; contracts not let. Also a brick addition to the Oak Park schoolhouse, 46 by 72 feet, cost \$10,000; F. M. Ellis, contractor. Also a brick schoolhouse, four rooms, at Marion, Ohio, cost \$9,000. Also an Episcopal church at Waverly, Iowa, brick, cost about \$4,500.

Commissioner of Buildings Alexander Kirkland has planned for the city a \$11,000 brick engine-house at 177 East Erie street, Thomas Courtney, builder.

Architect Greg. Vigant is building the M. E. church on the corner of Western avenue and Monroe street; Anderson pressed brick; 91 by 108 feet, with tower or steeple 80 feet high. The body of the church is 64 by 50 feet. It contains a Sunday-school room, lecture room, auditorium and gallery; interior finished in hardwood; to cost about \$30,000; Jas. Kelly, contractor. Also plans for a brick residence for Mr. Thomas Sennott, two stories and basement, 22 by 61 feet, on Loomis street near Harrison, cost \$5,000; no contracts let. Also a brick store building, two stories, 57 by 80 feet, for Mrs. Clouthier, on Blue Island avenue and Laflin street. The upper story will be for flats; Jas. Kelly, contractor.

Mr. A. G. Beaudry with Mr. Vigeant has made plans for a residence for A. W. Blovin, at 9 Tompkins street, near McAllister place; two-story and cellar, brick, 22 by 42 feet, cost \$2,000.

Architect Ed. Baumann is building two houses on Maple street east of LaSalle for F. Campe; three stories and basement, with stone front, 67 by 46 feet, cost \$11,000; Jno. Mountain, mason; carpenters, Mackey & Norske; cut stone, E. Burkhart. Also a house for F. Woltz on East Indiana street, east of Wells, brick, three stories and basement, 25 by 71 feet, cost \$8,500; mason, G. Eberlin; carpenters, Peterson and Paine.

Architect H. F. Starbuck is building a residence for D. S. Marsh, on Lake avenue. It is three stories and basement, faced with Anderson brick, and terra-cotta trimmings, 25 by 60 feet; cost \$15,000; carpenter, John Workman. Also remodeling a residence for F. C. Smith, cashier of C. B. & Q. R. R. Also just started to build a block of department houses, on Calumet avenue, for Nelson Monroe, three stories, brick and terra-cotta trimmings, 60 by 70 feet; cost \$15,000.

Architect L. G. Halberg is building for J. H. Smith, on Lincoln place, a residence of Anderson pressed brick, stone, with terra-cotta ornamentation, three stories and basement, 23 by 70 feet, containing fourteen rooms; cost \$8,000. For A. W. Ring, at 446 Belden avenue, a residence of Anderson pressed brick, two stories, attic and cellar, 23 by 51 feet, with octagon bays on side and front, cost \$6,500; mason, M. Otteson; carpenter, A. M. Mangson. For Aug. Warner, a residence, at 503 Dearborn avenue, Indiana pressed brick, with stone and terra-cotta trimmings, three stories and basement, 21 by 70 feet, containing twelve rooms, cost \$10,000.

Architect O. Johnson has plans for a residence for J. M. Bishop, at Joliet, Ill., two-story frame building, with stone basement, Queen Anne style, 24 by 52 feet, cost \$4,500. For H. J. Sawyer, at the same place, a frame cottage, 30 by 44 feet, cost \$2,300. Also a house at Evanston for Mrs. S. L. Deshon, two and one-half stories, frame, 25 by 44 feet, cost \$3,000; S. J. Hicks, contractor.

Architect F. W. Wolf is largely engaged in the building of breweries. He reports a brewery in New Orleans, one in New York, one at Bismarck, one at Yankton, one at Cleveland, Cincinnati, Alleghany City, Indianapolis, and also extending Schlitz brewery at Milwaukee.

Architect J. F. Doerr has made plans for a block of stores and flats at the corner of Archer avenue and Butterfield street, for Henry Feid, to be erected by Gutrich Brothers. The structure will have a frontage of 104 feet on Archer avenue by 89 feet on Butterfield street, and will be three stories and basement in height. The front will be of Anderson pressed brick, trimmed with stone, and a galvanized iron cornice, cost \$20,000.

Architect Rehboldt has completed drawings for three two-story dwellings, to be erected for J. L. Stagg, at Nos. 152 to 158 Leavitt street. The fronts will be of Indiana brick, trimmed with sandstone, cost \$18,000.

Architect Cass Chapman has planned for H. Byrne two residences, at Nos. 2628 and 2630 Wabash avenue. The fronts will be of greenstone trimmed with brown, cost \$18,000.

Architect Ruehl is planning two three-story dwellings for Frank Honemichel, to be erected at Nos. 636 and 638 Blue Island avenue. The fronts will be of Anderson pressed brick, trimmed with terra cotta, cost \$15,000.

Architect Fred Baumann is building a residence for Mr. Featherstone, on the corner of Washington and Wood streets, three stories and basement, 60 by 60 feet; Mr. McCormick, contractor. Also a dwelling-house for J. H. Smith, at 43 Lincoln place, to cost \$10,000.

Cincinnati, O.—Architect Samuel Hannaford is to build a seven-story business block, 79 by 104 feet, for Mr. H. W. Derby, on the corner of Fourth and Elm streets, to cost \$100,000.

The following building permits have been issued recently: Jas. M. Glenn, four-story brick dwelling, corner Sixth street and Broadway; S. Hannaford, architect; cost \$10,000. Morris White, four-story brick dwelling, corner Court and Vine streets; cost \$18,000. Baptist Church Congregation, corner Kemper Lane and McMillan street, cost \$15,000. H. W. Derby, seven-story brick dwelling, corner Fourth and Elm streets, cost \$40,000. Mike Joker, one-and-one-half-story brick dwelling, Mickens avenue, cost \$10,000. Lawrence Grace, two-story brick dwelling, corner Coleman and Dayton streets, cost \$7,000. J. B. Washburn, three-story brick dwelling, corner Blue Rock and Terrel streets, cost \$9,000. F. Wibbelman, three-story brick dwelling, corner Liberty and Cutter streets, for Catholic Church, cost \$9,000. Jas. Oker, four-story brick dwelling, 735 Central avenue, cost \$8,000. A. B. Ritterman, two-and-one-half-story brick dwelling, corner Ohio avenue and Calhoun streets, cost \$6,000. J. H. Thowar, three-story brick dwelling, 472 George street, cost \$5,000. John Kilgour, three-story brick dwelling, corner Hatch street and Observatory road, cost \$6,000. A. H. Hosenmeyer, three-and-one-half-story brick dwelling, Mulberry street, cost \$5,400. H. Wrigman, three-story brick dwelling, Dandridge street, cost \$5,500. James Louer, two-story brick dwelling, corner Cutter and Lime streets, cost \$5,000. Jos. Ausdermore, two-story brick dwelling, 253 Browne street, cost \$5,000. St. Anthony's Church, one-story brick school, corner Budd and Carr streets, cost \$5,000.

Cleveland, O.—The First Presbyterian Church, of this city, which is now in the process of rebuilding, will, when completed, present a different appearance on the interior than it did before the fire. Instead of being one of the darkest churches in the city, as heretofore, the architects have made novel arrangements whereby the church interior will be bright and elegant. The entire seating arrangement whereby the church interior aisle having been abolished, and two side aisles substituted. The stairway in the tower which leads to the gallery has also been removed and placed in the church proper. The gallery, instead of extending the full length of the nave, has been cut off about two-thirds of the way toward the pulpit, and that portion over the entrance has been swung around in a circle to meet the two side galleries. The two towers will be utilized for ventilating purposes. The roof has been entirely taken off and an open timber roof with a barrel vaulted ceiling substituted in its place. Skylights of beautifully colored glass will increase the light in the church at least threefold. One of the main features of the improvements, however, will be the chancel. It is to be built of oak with three elegantly carved stationary chairs with high gabled backs, forming a base for a carved oaken screen, twenty-eight feet high, surmounted with a tracery gable, the screen itself being inclosed in the chancel arch, which is to be decorated in exquisite frescoing in keeping with the design. The entire work will be completed by September 1.

Architects Eisenmann & Blunt report: For the Board of Education, the Waverly street school building, the Standard street school building, and the Sibley street school building, each are 138 by 83 feet, have twelve rooms, and cost \$35,000; all under way. Bids have just been received for the Clark avenue and Kinsman street buildings; they are to be the same as the above mentioned. The board have advertised for bids on the Sumner street building, to be the same, and cost the same as each of the above.

Dallas, Tex.—Architect J. E. Flanders reports present condition and outlook good; at present engaged upon the following work: For Shackelford county, Tex., a stone courthouse, three stories, 60 by 80 feet, metallic shingle roof, galvanized iron cornice, cost \$45,000; under way. For Stephens county, a three-story stone courthouse, 62 by 82 feet, cost \$35,000; under way. For Eastland county, a three-story stone courthouse, 62 by 82 feet, cost \$40,000; putting on roof. For Dallas county, a record building, 25 by 54 feet, two-story brick and stone, iron roof, cost \$17,000; under way. For Ellis county, a record building, 55 by 62 feet, two stories, brick and stone construction, iron roof, cost \$14,000; contracts not let. For Kaufman county, a two-story jail building, 55 by 62 feet, cost \$30,000. Merchants' Exchange building, two fronts of St. Louis pressed brick and stone trimmings, three-story and basement, 65 by 90 feet, cost \$50,000; nearly completed. Grand Windsor Hotel, W. E. Hughes owner, a stone building; 100 by 200 feet, four stories high, cost \$90,000; nearly completed. For Mr. F. H. Cockrell, a two-story brick business block, 75 by 200 feet, to cost \$20,000; under way. For Messrs. Murphy and Bolunz, a three-story brick business block, 25 by 90 feet, cost \$10,000; under way. For Mr. W. H. Young, a two-story frame residence, 44 by 68 feet, cost \$5,000; under way. For Mr. W. J. Mahoney, a one-story frame cottage, 36 by 44 feet, to cost \$2,000; under way.

Denver, Colo.—Architect E. P. Brink reports: For the Alkire estate, a two-story brick residence, 45 by 64 feet, also a barn, cost \$10,000; under way. For Mrs. A. L. Fisher, a two-story brick residence, 25 by 50 feet, cost \$5,000. For Mrs. Mary Walters, a two-story brick residence, 32 by 70 feet, to cost \$6,500. For Oddfellows, a hall at Longmont, Colo., two-story brick, 25 by 80 feet, cost \$8,000; under way. For George Charpiots, three stores and apartment house, two stories, 50 by 125 feet, cost \$18,000; under way; C. W. Abbott, builder. For C. J. Hughes, a two-story residence, 34 by 74 feet, to cost \$6,000; preparing plans. For Gen'l Bela M. and A. S. Hughes, a block of stores and offices, 62 by 75 feet, two-story brick, cost \$15,000; projected.

Emporia, Kans.—Architect C. W. Squires is preparing plans for a school-house to be erected at Burrton, Kans., at a cost of \$10,000; also for a residence for Mr. D. G. Thrall, at Eureka, Kans., to cost about \$3,000.

Architect Heidrick is preparing plans for a dwelling-house to be erected on the Poorman Farm, just west of Emporia, to cost about \$4,000.

It is said that Messrs. Baird Bros. will soon erect a fine business block on the corner of Merchants street and Sixth avenue.

The new Evangelical church is rapidly approaching completion, and will be dedicated August 10, upon which occasion Bishop R. Dubbs, of Cleveland, O., will officiate. Contractor Sprague has just finished extensive repairing of the Jay Block.

Frankfort, Ind.—Architect J. W. Hammond reports present condition and outlook good. The following buildings are now under way: First ward schoolhouse, brick and stone construction, to cost \$8,000; U. M. Palmer, builder. For G. Q. Goodwin, a store building, 22 by 74 feet, of brick and iron construction, cost \$3,000. For Mr. Geo. Dinwiddle, a two-story frame dwelling, 35 by 57 feet, cost \$3,500. For Mr. J. K. Steele, a frame dwelling, to cost \$3,500. For Mr. Seigfried, a frame cottage, to cost \$1,500; Dale Norris, builder. Also repairing the M. E. Church at Colfax, Ind., brick, 40 by 60, to cost \$1,000; under way.

Grand Rapids, Mich.—Architect D. S. Hopkins has the following work in progress: At Muskegon, Mich., for the Muskegon Furniture Co., a brick block to cost \$8,000. Also brick block with hall for I. O. O. F., to cost \$12,000. A frame block of five two-story tenements for Mr. A. H. Wood, to cost \$6,000. A frame dwelling for Mr. A. C. Truesdal, to cost \$3,500. A frame dwelling for Mr. H. Haas, to cost \$2,500. At Goshen, Ind., a frame residence for Mr. D. H. Hawks, to cost \$3,000. At Ft. Wayne, Ind., a frame dwelling for Mr. J. A. Schoaff, to cost about \$4,000. At Peoria, Ill., a frame residence for Mr. N. G. Moore, to cost \$4,000.

Hastings, Neb.—Architect C. C. Rittenhouse reports: Present condition good, prospect for future very promising; doubtless there will be a great deal of country work done this fall. A two-story frame dwelling, 34 by 52 feet, to cost \$5,000, for Mr. J. B. Webster; now under way. For Hon. R. A. Batty, a two-story frame residence, 30 by 46 feet, to cost \$4,000; under way. For Hastings Opera House Co. and Wm. Kerr, a three-story Opera House and bank building, 67 by 120 feet, to cost \$45,000; under way; Ellis & Hubbard and Sam Chancey, builders. Frahm Bros., a two-story store and office building, 22 by 60 feet, to cost \$4,500; under way; Scales & Clark, builders. For D. Soman & Son, a two-story office building, 22 by 56 feet, to cost \$5,000; projected. Hastings College, a three-story dormitory, 70 by 81 feet, to cost \$20,000; under way. For Rev. J. L. Lower, a two-story frame residence, 30 by 36 feet, to cost \$2,200; under way. For Rev. Mr. Powell, a two-story frame residence, 24 by 32 feet, to cost \$1,600; complete. All the above are at Hastings. At Plum Creek, Neb., a two-story brick school building, 68 by 74 feet, to cost \$11,500; not contracted. At Wahoo, Neb., a three-story brick school building, 70 by 74 feet, to cost \$14,000; under way. At Minden, Neb., a frame church building, 32 by 42 feet, for the Presbyterian Society, to cost \$2,800; not contracted. At Arapahoe, Neb., a two-story brick school building, 48 by 62 feet, to cost \$7,600; not contracted. At Grand Island, Neb., a two-story four-room addition to schoolhouse, 45 by 49 feet, to cost \$7,600; under way; J. D. Purdy, contractor.

Indianapolis, Ind.—Architect E. H. Kecham reports: For Mr. Frank H. Blackledge, a two-story dwelling, 32 by 52 feet, to cost \$2,500; under way. For Mr. J. J. Turner, a residence, 30 by 57 feet, first story of stone, second of tile and terra cotta, to cost \$6,000; under way. For Mr. O. J. Morris, a two-story frame dwelling, 30 by 42 feet, to cost \$2,000; under way. For Mr. Wm. Houeisen, a brick business block, 50 by 50 feet, to cost \$6,000; under way. For Mr. Fred. La Faver, a one-story cottage, 28 by 40 feet, to cost \$1,600; under way. Also a church at Richmond, Ind., 25 by 50 feet, to cost \$4,000.

Kansas City, Mo.—Architect L. L. Levering reports: "Quite a number of buildings spoken for to be erected in the fall, also some for next spring. Temporary hull in building just now, which might still be considered as *great activity* in some cities." Nearly completed for Mr. Wm. Budd, a double two-story brick, 47 by 52 feet, with fourteen rooms, cost \$4,700. For G. M. White, a two-story eight-room brick residence, to cost \$4,200; under way. Also Christian Church at Marshall, Mo., brick with stone trimmings, basement and gallery, with "dish" floors; the whole structure will be 50 by 56 feet, will have two spires, cost \$20,000; under way.

La Harpe, Ill.—Architect W. L. Ross reports: For Judge Elting & Co., at Scottia, Ill., a one-story frame building, 48 by 70, to be used as a general store building, about finished, cost \$2,500; Ross & McAllister, contractors.

Laramie, Wyo. Ter.—Architect W. A. McKenzie reports: Times are dull here. The depressed condition of Union Pacific interests affects us very much, as they have lately discharged three hundred hands here. The population of Laramie is now 4,000.

Architect J. T. Holliday has planned for Trabing Bros. a large warehouse, 50 by 96 feet, two stories and basement; it will be of brick and iron construction, interior plastered throughout, and furnished with gas, water, heating and sewerage pipes. The contract has been let to Hon. W. H. Holliday for \$13,000.

Logansport, Ind.—Architect J. E. Crain reports: Outlook favorable. Houses ranging from \$800 to \$1,500 are being built in all parts of the city, and are in great demand. Work has commenced on the Insane Asylum here, which will cost \$285,000. The following buildings are now under way: For Miss C. M. Orr, a two-story brick residence, 36 by 66 feet, to cost \$6,500; J. E. Crain, builder. For Mr. P. H. McGreevy, a two-story frame residence, 30 by 52 feet, to cost \$1,600; John Isert, builder. For Mr. Amos Keefort, a two-story brick residence, 32 by 51 feet, to cost \$2,500. For Mr. J. B. Forgy, a two-story frame residence, 42 by 61 feet, to cost \$6,700. Parsonage Baptist church, two-story, brick, 32 by 48 feet, to cost \$2,800. For Mr. M. R. Frazer, a two-story brick residence, 33 by 68, to cost \$5,500. For Dr. J. H. Shults, a three-story office building, 20 by 82 feet, to cost \$4,000. For Mr. F. Bugman, a two-story business block, 23 by 70 feet, to cost about \$3,500; J. E. Crain, builder. For Mr. J. D. Furgison, a three-story business block, 48 by 106 feet, to cost \$16,500. For Mr. Andrew Prescott, a two-story frame dwelling, 32 by 46 feet, to cost about \$1,400. For Mr. Benj. Pittman, a two-story dwelling, 20 by 42 feet, to cost \$1,250. For Sarah S. Worstal, a two-story frame dwelling, 32 by 53 feet, to cost \$1,600. For Dr. A. H. Landes, a two-story frame dwelling, 34 by 42 feet, to cost \$1,800. For Mr. Wm. Graffice, a two-story frame dwelling, 22 by 38 feet, to cost \$1,400. Also a two-story brick residence projected for Mr. F. M. Harwood; it is to be 31 by 53 feet, and cost \$2,800.

Minneapolis, Minn.—John Dunwoody is to build a double tenement on Fourteenth street between Nicollet avenue and Vine place, to cost about \$10,000. J. C. Gale will probably commence the work of building a residence on his lots in Yale Park, soon after his return from his European trip. H. F. Spooner is to build a residence on Vine place, between Grant and Fourteenth streets, after the general style of Mr. Burnett's residence on Chicago avenue, to cost \$6,000. Work has been commenced on the round house, shed, elevator and other buildings being erected for the St. Paul & Northern Pacific. The walls of the baggage room for the union depot near the suspension bridge are also being put up. J. A. Ridgway is to commence the erection of a handsome residence on Nicollet avenue and Thirty-eighth street. The new street-car barns built on the fair grounds are endorsed. They have been built with reference to an extension through the fair grounds property, when it shall be abandoned for its present uses and platted. Samuel Adams is building a double house of twenty rooms, to cost \$7,000, on Fourteenth avenue south, between Fifteenth and Sixteenth streets. The new elevator, A No. 2, is going up at the rate of two feet a day. One hundred and eighty men are employed upon it. The Moffitt-Johnson block on Western avenue is being rebuilt. The walls are up to the second story, and they are built to stay this time. The transfers for the first six months of the year show a trade in realty exceeding \$12,000,000.

Architect C. F. Struck is the architect of the Harmonia block reported last month. Building permits have been issued as follows: Augsburg Seminary, three-story wooden dormitory of twenty-four rooms, west side Twenty-second avenue, between Seventh and Eighth streets south, cost \$5,000. E. Telefun, two-story, eleven rooms, wooden dwelling, Eleventh avenue south and Ninth street, cost \$3,500. Same owner, two-story, ten rooms, wooden dwelling, Fourteenth avenue and Fourteenth street south, cost \$1,800. Same owner, two-story, twelve rooms, wooden dwelling, Fifteenth avenue and Fourteenth street south, cost \$3,000. Same owner, two-story, ten rooms, wooden dwelling, Reversible avenue and Fourth street south, cost \$1,800. Peter Peterson, two-story, seven rooms, wooden dwelling, 2614 Seventeenth avenue south, cost \$1,500. J. Miner, two-story, twelve rooms, wooden dwelling, Twenty-second avenue, between Lake and Thirty-first street, cost \$3,250. Charles W. Oehler, one-and-one-half-story, seven rooms, wooden dwelling, southeast corner Tenth street and Seventeenth avenue north, cost \$2,000. John Kelly, two-story, wooden, double dwelling, six rooms each, north side of Eighth avenue northeast, between Second and Third streets, cost \$3,500. Mrs. S. J. Williams, two-story, ten rooms, wooden dwelling, Stevens avenue corner Fifteenth street south, cost \$4,000. J. S. Bell, two-story, eleven rooms; brick-venered dwelling and brick-venered barn, southeast corner Park avenue and Fourteenth street, cost dwelling \$20,000, barn \$1,500; \$21,500. Leland & Crocker, fire-limit permit, a brick skating rink at corner First avenue south and Sixth street, cost \$19,500. J. S. Kingman, same kind of structure on North side of Second avenue south, between Franklin and Twenty-second street, cost \$3,500. City of Minneapolis, two-story brick engine-house on north side of Blaisdell

avenue and Twenty-eighth street, cost \$9,154. Mrs. Clara Gardener, two-story wooden stone-front dwelling, south side Seventh street, between Eighth and Ninth avenues south-east, estimated cost \$2,200.

Marselles, Ill.—Architect A. W. Allen reports building business good; all mechanics are busy at good wages. The following buildings are now under way: For Mr. Fremont Carr, a two-story frame dwelling, 32 by 30 feet, to cost \$2,800; Isaac Gage & Co., builders. For Mr. Edwin T. Reed, a two-story frame dwelling, 40 by 46 feet, to cost \$3,000; Edwin Allen, builder. For Mr. Martin Armstrong, a two-story frame dwelling, 24 by 30 feet, to cost \$1,500.

Neillsville, Wis.—Architect C. B. Bradshaw reports present state of building trade is fair, and outlook favorable. The following buildings are under way and projected: For Mr. Dewhurst, a two-story frame store building, 33 by 75 feet, veneered with brick; cost \$4,000; under way. For Mr. E. Eiler, a two-story frame brewery, 40 by 75 feet, veneered with 8-inch brick wall; cost \$12,000; projected. For Mr. H. Schuster, a two-story frame dwelling, to cost \$2,000; under way. For Mr. Thos. Kerns, a two-story frame dwelling, 34 by 50 feet; cost \$3,000; under way. A Catholic Parsonage frame building, brick veneered, 30 by 60 feet; cost \$3,800; under way. For Mr. W. S. Covill, a two-story frame dwelling, 30 by 36 feet; cost \$2,700; projected. For Mr. Jas. L. Gates, a one-story brick warehouse, 17 by 50 feet; cost \$1,000; projected.

New Ulm, Minn.—Architect J. Brendt reports: A public school building two-story and basement, 80 by 75 feet, to be built of Mankato white brick; cost \$20,000; under way. For Mr. C. Dahne, a two-story and basement brick dwelling, 36 by 30 feet, to cost \$3,000; under way. A Lutheran college building, 80 by 40 feet, two-story brick, with stone basement and mansard roof; cost \$18,000; under way. Also two-story cottage, 20 by 30 feet, for Mr. D. Morry, to cost \$1,800; under way.

North Springfield, Mo.—Architect S. B. Abbott reports building outlook good, has a number of buildings on hand, among which is a three-story and basement hotel, for the Ozark Hotel Co. It is to be constructed of brick and stone, with Mullion finish and cut-stone trimmings, galvanized iron cornice. The building is 100 by 138 feet, with a large court; contracts all let and work under way; to cost \$45,000.

Ottumwa, Ia.—Architect Edward Clark reports: For Rev. F. J. Ward, a parsonage, 26 by 36 feet, of brick, stone and iron construction, two stories, nine rooms; cost \$2,400; under way. For J. B. Field, a single tenement house, two stories, seven rooms, frame, with stone foundations; cost \$1,800; under way.

Peoria, Ill.—Architect S. G. Whitford reports business very dull, brick selling at \$5 per thousand and no demand. The following work is from his office this season: For Kingman & Co., a five-story brick block, 60 by 140 feet, cost \$25,000; completed; Wm. Shroder, builder. For the Transfer Co., a four story business block, 60 by 140 feet, cost \$20,000; completed. For Calvary Mission, a two-story Sunday-school building, 60 by 86 feet, to cost \$12,000; completed. For Mr. Philip Zell, a two-story frame residence, 38 by 50 feet, cost \$12,000; completed. For Mrs. Mahlow, a frame residence, cost \$6,000. For J. A. Merser, a frame residence to cost \$3,500; under contract. For Town of Bradley, a three-story brick building, 40 by 65 feet, to be used as a home for aged women, cost \$12,000; John Flinn, builder. For Mr. Wm. Dixon, a two-story frame dwelling, 26 by 50 feet, cost \$4,000. For Mrs. M. Lathrop, three two-story frame tenements, 66 by 85 feet, to cost \$10,000. For Mr. John Flinn, a two-story frame dwelling with slate roof, 24 by 45 feet, to cost \$4,000; under way. For Mr. Jas. Beamblo, a two-story frame dwelling, 22 by 36 feet, cost \$3,000; not yet commenced. For Mr. Wm. Shroder, a double house, two stories high, 42 by 60 feet, cost \$6,000. For The Peoria Starch Company, a bonded warehouse, 60 by 60 feet, cost \$4,000; completed. For Mr. L. Sweetens, a two-story frame dwelling, 26 by 36 feet, cost \$1,750; not contracted. For Mrs. H. Holman, a frame dwelling, 38 by 50 feet, to cost \$8,000; not contracted.

Peru, Ind.—Architect S. R. Berry reports there are a number of buildings being erected, and everything looks favorable. The most important work Mr. Berry has on hand is an Opera House for Messrs. Smith & George. The building will be 52 by 132 feet, with stores and offices in front, auditorium on the ground floor, with seating capacity of one thousand; cost \$20,000.

Seneca, Mo.—Architect H. C. Miller reports building outlook good at present, but some fears are entertained that the corn crop will be a failure in this section. Wheat harvest is over and fair crops reported. With a fair amount of rain corn will improve, and building will boom this fall. Mr. Miller has the following work under way: For Mr. J. G. McGanon, a two-story brick building, 50 by 100 feet, cost not estimated. For Mrs. Hick, a two-story brick building, 25 by 100 feet, to cost \$2,500. For Mr. Wm. Cary, a two-story frame dwelling, 28 by 28 feet. Also a number of small cottages.

Sioux City, Iowa.—Architects Corry & Martin report: For Mr. Jno. Pierce, a four-story brick and stone store building, 75 by 20 feet, to cost \$4,000; under way. For Mr. J. R. Munday, a two-story and basement brick business block, 22 by 75 feet, to cost \$5,400; under way. For Water Works Company, a one-story brick engine-house, 40 by 80 feet, to cost \$7,500; under way. At Pipestone, Minn., a frame residence for Mr. F. Close, to cost \$5,300; projected. A frame residence for Mrs. Humble, cost \$2,000; under way. For Close Bros., brick addition to hotel building, cost \$14,000; under way; A. Halseth, builder. For a syndicate, a two-story stone block, 60 by 73 feet, to cost \$17,000; under way. For Black & Co., a two-story stone business block, 122 by 75 feet, cost \$26,000; under way; A. Halseth, builder. At Hubbard, Neb., a frame chapel, 24 by 50 feet, to cost \$1,200; projected. At Lemars, Ia., frame residences for Mr. G. A. Samins and Mr. P. H. Deal, to cost \$3,000 each; under way. Also a frame residence for Mr. H. P. Cornish, at Cherokee, Kan., to cost \$2,000; projected. For Mons Pierce, a frame residence, to cost about \$3,000; under way. For Mr. G. S. Stephens, a frame residence, to cost \$4,300; under way. For Mr. Fawcett, a frame residence, to cost \$4,000; under way.

St. Louis, Mo.—A movement is on foot to form a stock company for the purpose of building a large and handsome building to be used as a riding school for ladies and children. At a meeting of a number of prominent citizens, a committee, consisting of Messrs. Bell, Cole, Niedringhaus and Whittaker, was appointed by the chairman, Gen. Sherman, to solicit subscriptions to defray the expense of the building, which is estimated at about \$15,000. A novel and interesting feature of the proposed academy will be the organization of a cadet cavalry corps, to which boys of from ten to sixteen years will be eligible. The stock will be limited, only enough being issued to suffice for the erection of the building. The school will be used for riding purposes exclusively. A New York institution of this class is run with great success, and it is proposed to conduct this one upon the same principle.

Architect Thos. Furlong has a row of five houses on Carr avenue, between Twenty-second and Twenty-third, for Hon. W. Kernon, of England. They will be tenement flats and cost about \$1,000 each.

Architect James McGrath has commenced the erection of a residence house for John W. McCullagh, Esq., on West Pine street. The frontage of the ground is 50 feet, and the building and the ground together will cost about \$13,000.

Architect A. A. Cook, the superintendent of the construction of the First Congregational Church, on Delmar near Grand avenue, reports progress satisfactory. The building is now so far advanced that they are raising the roof. All of the contracts have been let with the exception of the frescoing. Hayney, Spencer & Co., of Richmond, Ind., have the contract for the pew furnishing, which, in the body of the church, will amount to about \$1,400. The church will, it is expected, be ready for service on the 1st of January next. The building is a handsome stone structure, and will cost about \$80,000.

Permits for the following buildings (with the exception of the work of architect Hyatt) have been issued since June 24.

Architect E. Mortimer has the following new work in hand: For Unity Church, a one-story addition to chapel, on Armstrong avenue, between Park and Carlyle streets, to cost \$4,000; Mr. Bonsack, contractor. For the St. Louis Mutual House Building Co., on east side Bacon street, near N. Market, a two-story seven-room dwelling, to cost \$3,200; J. V. Majors, contractor. For same company, on the south side of Stoddard street, near Glasgow, a two-story seven-room dwelling, to cost \$3,500; M. B. Scanlon, contractor.

Architect Chas. K. Ramsey: For Mr. W. P. Mullen, on Dayton street, a two-story ten-room house, to cost \$9,000. For Miss H. W. Hudson, on Finney avenue and Krum street, a two-story eight-room dwelling, cost \$6,000. For himself, a two-story six-room frame dwelling, on the south side of Maple street near Beach, to cost \$2,000.

Architect Chas. F. May: For Caroline Hoelmer, on east side of Davis street, between Fifteenth and Sixteenth streets, two three-story six-room dwellings, to cost \$3,500. For Mr. F. W. Towegge, on North Market street, a two-story six-room dwelling, to cost \$3,000.

Architect Jos. Stander: For Mr. A. Henrich, on Cherokee street, a two-story six-room dwelling, to cost \$1,400. For Mr. M. Borsing, two two-story houses, twelve rooms, on Cherokee street, to cost \$3,200.

Architect C. E. Iilsley: For Mr. James Layton, a two-story eight-room dwelling, to cost \$5,500.

Architect and contractor J. J. Heffner: For Dr. Garcia, on Chouteau avenue and Thirtieth street, three two-story dwellings, seven rooms each, cost \$13,000; and one two-story dwelling, eight rooms, to cost \$2,000.

Architect E. Jungensfeld: For Philip Bardenhimer, six two-story six-room houses, to cost \$15,000. For the Anheuser-Busch Brewing Co., a five-story malthouse, to cost \$40,000.

Architects Aug. Beinck & Co.: For Chas. Oslerman, on Cass avenue, a two-story dwelling, seven rooms, cost \$2,000. For J. B. Rubleman, two two-story and mansard dwellings, eight rooms each, cost \$6,000. For Messrs. Hampter and Eckhoff, on Eleventh street, a three-story furniture factory building, to cost \$7,000. For the St. Louis Stamping Co., a four-story factory building on Main street, to cost \$7,000.

Architect H. E. Peiper: For Mr. W. Koopmann, two two-story and mansard roof residences, nine rooms each, cost \$5,600; Reimmers & Thompson, contractors.

Architects Geo. I. Barnett & Co.: For Mr. Knox, on Fifth street, near Morgan, alterations in Nugent's store, cost about \$5,000.

Architects P. F. Meagher & Son: For Mrs. T. Dodd, on Market street, two two-story six-room dwellings, cost \$5,000.

Architect A. P. Hyatt has just completed an elegant suite of rooms in the Armory building for Company E, Third Regiment, at a cost of \$1,200. Is also adding one story to E. H. Kemper's building, at East St. Louis. This work will be completed about September 1; cost about \$2,500.

Architects John W. Barnes & Co., are about to erect on School street a two-story six-room dwelling for Mr. John I. Dozier, to cost \$3,800.

Architect O. P. Koenig has taken out a permit to build a two-story six-room house, on Sheridan street, for Mr. Fred Keil, to cost \$2,700. For Hy. Stoor, two two-story six-room dwellings on Glasgow avenue, cost \$7,000.

A permit was issued to the Murphy Varnish Company for the erection of a four-story warehouse, to cost \$20,000; contracts sub-let.

Architect A. L. Miller: For Mr. Frank McMahon, a two-story ten-room dwelling, to cost \$5,000; Thos. Roache, contractor.

Architect I. S. Taylor has taken out a permit to build two two-story dwelling-houses, six rooms each, for Marie E. Green, on Grand avenue, to cost \$5,000; W. Green, contractor.

Architect H. E. Pieper: For Mr. M. Berker, a two-story five-room house, to cost \$3,000; J. Keefe, builder.

Architect Paul Hersch: For Mr. Herman Konert, two two-story dwelling-houses, eight rooms each, cost \$6,200.

Architect H. Brinkmeyer: For Elizabeth Lang, three two-story and mansard dwellings on Cass avenue, to cost \$8,200; H. Heitman, builder.

Architect Johnson: For Mr. Geo. Kohrman, a three-story and mansard dwelling, seventeen rooms, on the corner of Arsenal and Columbus streets, to cost \$5,800.

Architect J. V. Majors: For Adeline M. Loehr, a two-story six-room dwelling, cost \$2,700. For Messrs. Wilson & McNairy, two two-story and mansard dwellings, nine rooms each, on east side of Coleman street near North Market, cost \$6,700. The architect is the contractor of both the above.

Architect T. H. Torrence: For Mary A. Walsh, on Salisbury street, a two-story and mansard dwelling, thirteen rooms, cost \$4,000. The architect is the contractor.

The St. Louis Gas Light Company have taken out a permit to build a two-story purifying room on Second street, to cost \$7,000; contracts sub-let.

E. C. Robbins has taken out a permit to build a two-story eight-room residence, to cost \$6,000; contract sub-let.

Architect B. Koester: For Mr. H. Dierkes, two two-story and mansard dwellings, eleven rooms, on the corner of Nebraska and Keokuk streets, cost \$4,500; R. Rolfus, builder.

Architects J. B. Lindsay & Son, for Mr. E. C. Lindsay, on North Market street, a two-story seven-room house, to cost \$3,000. The architects are the contractors.

Contractor J. Herman is building for himself, on Missouri avenue, a two-story and mansard dwelling, eight rooms, cost \$4,500.

Contractor Theo. Kohnen is building for himself, on Eleventh street, a three-story nine-room house, cost \$2,000.

F. G. Gorman, contractor, is building for Chas. Hess, a two-story nine-room house, cost \$4,000.

Jos. Reith is building for himself a two-story ten-room dwelling, cost \$4,000.

A. Bollinger: For himself, a two-story seven-room dwelling, cost \$3,000.

Contractor D. Faugmann: For Mr. Chris. Zeiner, four two-story dwelling-houses, six rooms each, cost \$6,000.

Ed. Thomssen is building for Michael Foerstel, a two-story twelve-room dwelling, cost \$4,000.

St. Paul, Minn.—Building permits have been issued as follows: A. R. Kiefer, one-story double frame store, 40 by 48 feet, on the north side of Minnehaha street, between Mendota and Arcade streets, cost \$2,490. William C. Cunningham, three-story brick printing-office, 25 by 85 feet, on the south side of Fourth street, between St. Peter and Wabasha streets, cost \$7,000. Moritz Watter, two-story brick veneered double dwelling, 44 by 64 feet, on the southeast side of Pleasant avenue, between Third and Chestnut streets, cost \$5,500. Walter Mann, alteration of the three-story stone building on the southeast corner of Robert and Third streets, cost \$3,000. Greenleaf Clark, three-story brick block of dwellings, 60 by 52 feet, on the corner of Fifth and Oak streets, cost \$12,500. Jacob Arnold, two-story frame dwelling, 22 by 48 feet, on the north side of Ellen street, between Kent and Mackubin streets, cost \$3,000. H. P. Hall, four-story brick printing-office, 25 by 100 feet, on the south side of Fourth street, between Wabasha and St. Peter streets, cost \$12,000. J. H. Broome, two-story brick-veneered store and dwelling, 22 by 65 feet, on the north side of Martin street, between Rice and St. Peter streets, cost \$4,500.

Toledo, O.—The contract for the asylum has been awarded to M. J. Malone & Co. for about \$400,000. Mr. James Winans, civil engineer and superintendent, has been retained to take charge of the entire work.

Architects Gibbs & Co. are building a block of two-story brick and frame tenement houses, on Superior street, for Mr. Hubbard, to cost \$7,000.

Architect N. B. Bacon, for J. D. Ford, a two-story frame dwelling, cost \$5,000; J. Hales, builder. For Mr. S. C. Schenck, a two-story brick dwelling, to cost \$16,000;

A. Bently, builder. For Mr. John Winfield, a two-story frame dwelling, cost \$2,700. For Mr. R. Geysel, a two-story frame dwelling, to cost \$2,500. For Messrs. Jno. R. & Fred Boier, two two-story brick dwellings, cost \$8,000; John Valentine, builder. For Mr. P. H. Berdan, a double two-story brick dwelling on Madison street, to cost \$11,000; J. B. Hassett, builder.

Solomon Spear & Sons are building for S. Spear a two-story brick dwelling, to cost \$6,000.

Messrs. Miles & Horn are building for themselves a one-story brick office-building; cost, \$3,000.

Architect A. Liebold, for Mr. Mack, a two-story brick dwelling on Madison street, cost \$6,000; Carl Schmul, builder.

J. S. Vanfleet is building for Messrs. Rayner & Seagrave, a block of five brick dwellings, two-story and cellar, cost \$14,000.

Architect L. Welker, for Mr. Webber, a two-story and basement brick dwelling, cost \$5,000.

Topeka, Kan.—Architects Haskell & Wood report: Entire State booming, with immense crops, Republicanism, Prohibition, etc. We notice that Parker & Kreuger are credited as the architects of Salina, Kas., college. They are the contractors on the building. We are the architects, and have charge of the work. Will soon let contracts for College of Emporia, a Presbyterian college, to cost \$60,000, reported some time ago. Also have on hand a jail for city of Newton, Kas., to cost \$7,000. A city hall and enginehouse for city of Newton, to cost \$10,000. For Hutchinson, Kas., national bank, a three-story stone building, to cost about \$12,000. For James King, Esq., Topeka, residence, to cost \$6,000. Indian school building at Devil's Lake, Dak., to cost \$18,000. Academy at Hesper, Kan., to cost \$5,200. Schoolhouse, District 83, Shawnee county, Kas., to cost \$3,000. Schoolhouse at Needosha, Kas., to cost \$3,200. A residence for Mr. G. Grovernor, at Lawrence, Kas., to cost \$3,700.

Architect H. M. Hadley reports: Business still "booming." Plans in office for one-story frame, 35 by 50 feet, for Mr. Geo. C. Moser, to cost \$2,000. For Mr. James Hagerman, a two-story frame, 50 by 80 feet, veneered with brick, to cost \$7,500. For Mr. J. K. Hudson, a block of stores, 75 by 175 feet, brick and stone construction, cost not estimated. For Messrs. Will Brown and S. H. Butler, at Fall River, Kas., a two-story store and bank building, 27 by 75 feet, to cost \$5,000. For Mr. Jos. Block, at Detroit, Mich., a two-story business block, stone, 25 by 70 feet, cost \$4,400. For Miss L. Thomas, a two-story frame residence, 38 by 48 feet, veneered with brick, to cost \$3,700. Also addition to residence for Mr. J. C. Waters, to cost \$1,000.

Architect C. B. Hopkins reports business has been very good so far, and prospects good for this fall. He has the following work on hand: For Col. Dennis, State librarian, a two-story frame dwelling, 40 by 65 feet, to cost \$10,000; under way. For Mrs. Adams, a two-story frame dwelling, 40 by 50 feet, cost \$5,000; just completed. For Rev. Lewis Bodwell, a block of four brick stores and tenements, 90 by 40 feet, to cost \$16,000; under way. For Mrs. Ritchie, a stone store building, 25 by 80 feet, cost \$4,200; just completed. For Washburn college, a two-story and basement dormitory, 52 by 100 feet, to be built of brick, cost \$16,000; projected. For city of Topeka, a two-story brick school-house, 40 by 75 feet, to cost \$6,000; projected. For Mrs. McCampbell, a two-story frame cottage, 34 by 40 feet, to cost \$2,500; projected. For Mrs. Jones, a two-story brick addition, 20 by 40 feet, cost \$2,500; projected. The above are all in Topeka. Also the following work in Minneapolis, Kas.: For Mr. Simonds, a block of three stores, two stories, 25 by 80 feet, to cost \$12,000; projected. For Mr. Campbell, a two-story frame building, 40 by 60 feet, to cost \$6,000; projected. For Mr. Mason, a two-story frame house, 35 by 50 feet, cost \$4,000; under way. For Mr. Smith, a two-story frame house, 35 by 45 feet, cost \$3,200; under way. For Mr. Priplet, a two-story frame house, 35 by 45 feet, to cost \$3,000; projected. For Mr. Garver Saling, a two-story frame house, 40 by 65 feet, to cost \$9,000; projected.

Wahoo, Neb.—Architect J. F. Patterson reports present condition not good, but prospects of lots of building in the fall, especially among the farmers, as they have the best crops they ever had. The following work is under way: For school section 39, a two-story and basement brick school building, 75 by 36 feet, cost \$16,675. For Mr. Henry Anderson, a two-story frame dwelling, 66 by 49 feet, cost \$6,200. For Mr. W. H. Dickinson, a three-story brick hotel, 22 by 50 feet, cost \$3,000. For Mr. E. Lyle, a brick bank building, 22 by 44 feet, cost \$7,000. A Presbyterian church, frame, with brick foundation, 32 by 54 feet, cost \$3,000. Also twenty-five or thirty other buildings, ranging in price from \$500 to \$2,500.

Youngstown, O.—Architect C. H. Owsley reports the following buildings in course of erection: For Mr. James Parmelee, a three-story brick and stone store building, 45 by 80 feet, to cost \$15,000; Thos. Connell, builder. For Mr. C. S. Bissell, a three-story brick and stone building, 42 by 80 feet, to cost \$14,000; Thos. Connell, builder. For Mrs. Mary Muldoon, a two-story brick and stone store building, 44 by 75 feet, to cost \$8,000; Thos. Connell, builder. For Mr. Wm. Murdock, a two-story brick and stone store building, 25 by 75 feet, to cost \$5,500. For Mr. U. A. Andrews, brick and stone residence, to cost \$10,000. For Mr. I. Kirk, at Warren, O., a brick and stone residence, to cost \$8,000; contract not let.

Zanesville, O.—Architect H. C. Lindsay reports building very dull at present, but outlook good for fall work. Quite a number of buildings talked of, among them a large steam mill. Mr. Lindsay has the following work on hand, for city of Zanesville: A workhouse, two-story, brick, 76 by 112 feet, to cost \$20,000; T. B. Townsend, builder. A cemetery vault and chapel, of stone and pressed brick, 30 by 30 feet, cost \$5,500. For W. S. Bell, a three-story store building, of pressed brick and stone, 22 by 100 feet, to cost \$4,500; under way; Evans & Son, builders. For Mr. L. Kuester, a two-story brick residence, irregular in size, to cost \$2,000; under way. For Mrs. Koekel, a two-story brick tenement house, 30 by 55 feet, to cost \$3,800; under way. A boat-house, 32 by 70 feet, Swiss architecture, cost \$2,500. For Mr. J. Robinson, a two-story frame residence, irregular in size, to cost \$2,000; under way. For Mrs. Annie Webster, a two-story frame residence addition, to cost \$2,000; under way. For Mr. A. J. Andrews, a two-story brick addition to residence, to cost \$1,800; under way. For Mr. A. C. Smith, a two-story frame residence, irregular in size, to cost \$2,500; under way. For Mr. W. C. Townsend, a residence of pressed brick and terra cotta, irregular in size, to cost about \$12,000; contracts not let. Also several residences ranging from \$1,600 to \$2,000 in cost.

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.

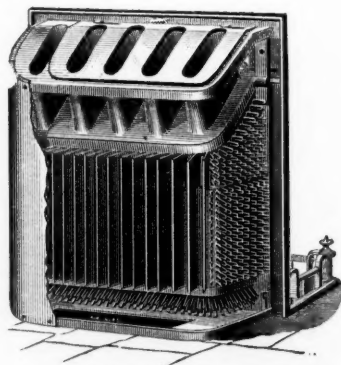
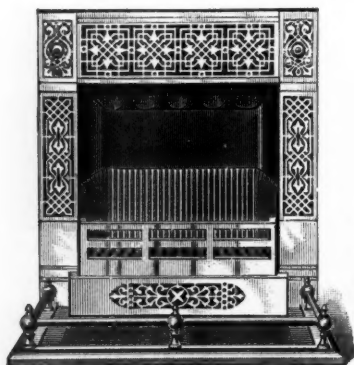
Yours truly,
STANLEY MATTHEWS.

St. Paul, Minn., Nov. 17, 1883.

Messrs. 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.

THE INLAND ARCHITECT AND BUILDER.

SUPPLEMENT.

Vol. IV.

AUGUST, 1884.

No. 1

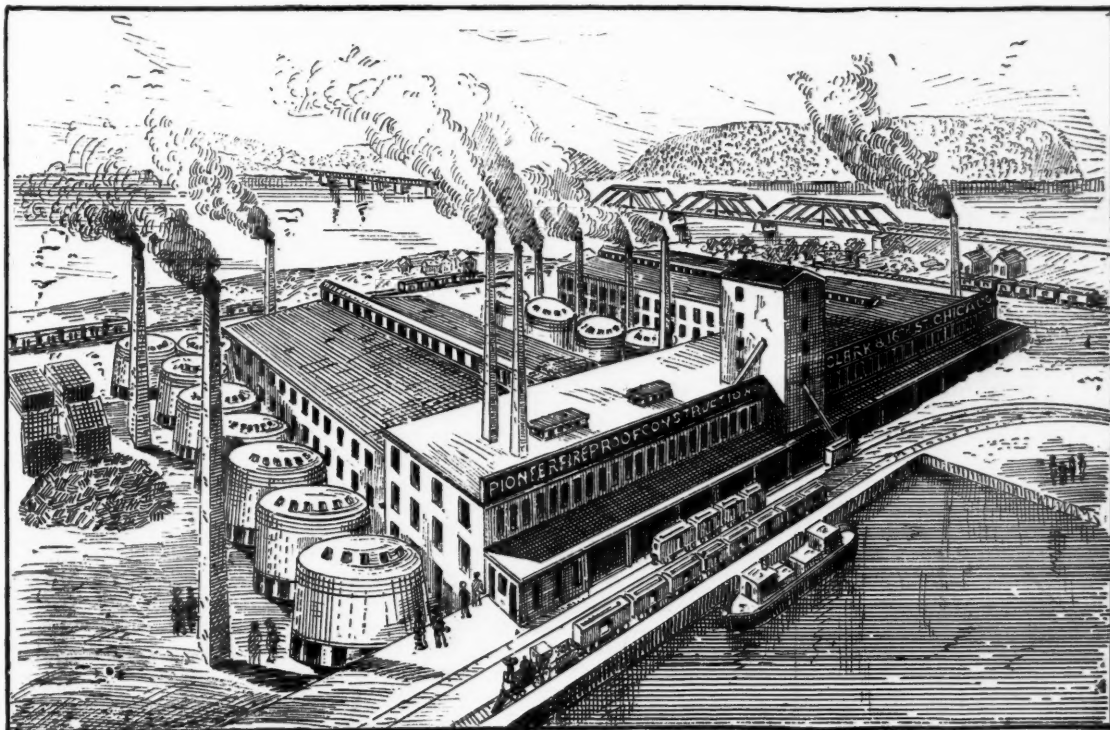
A Visit to a Fireproof Material Works.

NOWHERE in the world is the fireproofing of important buildings so general as in Chicago and other western cities. In European cities, where stone and brick construction is more general than here, there is less danger from fire, but never before in the history of building has the thorough fireproofing of all parts of a structure been accomplished. Upon visiting one of the many large office buildings under construction in Chicago now being treated in this way, that being built for the Royal Insurance Company of London, by architect W. W. Boyington, fireproofing in all its details was seen. Between the brick walls and main partitions are heavy iron girders supported upon iron columns, these girders supporting iron joists in the general methods of iron construction. But recognizing that unprotected iron is as dangerous as wood in case of fire, fireproof tile have been made to cover each particular piece of ironwork. Columns have been fitted with concave sheets 2 inches thick; between the joists were flat arches of hollow tile, the arches ranging from 4 to 9½ feet in span and the material from 5 to 12 inches in thickness. These prefatory remarks will indicate how it happened that the writer in response to an invitation from Mr. Ernest V. Johnson, the manager of the Pioneer Fireproof Construction Company, who place the larger part of the fireproof work in Chicago and the West generally, inspected this building, and with Mr. M. Morris, the building superintendent, accompanied that gentleman on a visit to the company's works at Ottawa, Ill., which we illustrate.

the woods and throwing its "angel paths" through the trees, adding to the restfulness of the scene, and all making this trip along the Fox river long to be remembered. It was four miles from Ottawa that Mr. Johnson, a facetious gentleman, as everybody knows, directed our attention to the "damed river" and showed us the dam that supplies his works with motive power. It was also remarked that for a river of such beauty it was strange it was so frequently damed by the people along its banks. A "feeder," a small canal in size, originally built to supply the Illinois canal from this dam, follows the river at a higher level. Ottawa is reached; past large flint-glass works, plate-glass works, across the Rock Island railway tracks and a bridge, we land at the depot and are welcomed by Mr. Ongston, the superintendent of the tileworks.

The Clifton House, where we enjoyed an excellent supper, is one of the largest and best arranged and built hotels in the state outside of Chicago. It was built in 1874, by architect W. W. Boyington, and has, through the energetic management of mine host Rogers, a reputation that ranks it with those of the metropolis.

The evening was devoted to seeing the tileworks, for to our surprise the work is kept up without intermission day and night. In view of a more extended and systematic inspection by daylight this was made simply a visit. We pass the courthouse, built last year by Architect M. L. Beers, points of which are discussed during a walk of less than five minutes to the factory, which is situated on the river, in the center of the city, where, upon entering the office, we are received by the superintendent and conducted



It was a glorious trip in glorious company, or, as a prominent builder remarked upon being told of the trip, "It would be a big thing for Chicago if we had a dozen more men like our friend there" (meaning our host). The time of starting was 4.45; the route chosen, that of the Fox River branch of the C. B. & Q. railway. Architects, builders, and all other active men who look forward to a railway ride as a time of rest, speak highly of the comforts of the C. B. & Q. railway, or better still, take it when they can, whether it be to an Illinois town or the city of Mexico or California. Need we tell of the trip? From the smoke and heat of the city shooting out into green fields, beautiful little towns lying on the edge of green seas of prairie-grass or wheat-fields, the "shore" marked by bright and many-colored flowers, and the view spreading away, sometimes over miles of green as level as the sea on a calm day, to the blue sky beyond, or again gently rolling like the sea after a storm.

Following the beautiful Fox River valley, the river with its wooded banks, its dells, its gorges and rocky banks, now on one side, now on the other, and again an hundred feet below as we rush over one of the 72 bridges that are passed before Ottawa is reached, the rest we have looked for comes and we can hardly determine whether it is from the comfortable seats of the smoothly gliding train rushing over its perfect roadbed or from the beautiful scenery that everywhere meets the eye.

The time is passed in comments on the building sites, or the possible quality of the stone in the ledges on the river bank, in reminiscences and in personal biography, with glimpses of cool hollows and shady groves of elm and maple trees exceedingly inviting, the sun just ready to drop behind

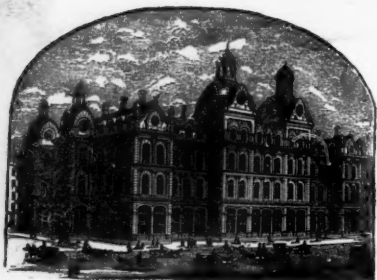
through the works. Steam presses, handled by brawny men, pressing out the different forms of tile by the light of frequent gas-jets, the tile in embryo being placed on barrows and to disappear in the darkness. Again, lit by a flaring gas-jet, we come to huge rollers, around which several men are working, shoveling in clay and scooping it out again; and as the writer, at the manager's suggestion, threw a huge block of clay under the immense wheels, and the slow revolving weight of iron drew it in, labored, stopped, and finally, slowly but surely, crushed it, we were forcibly reminded of Longfellow's lines:

"Tho' the mills of God grind slowly,
Yet they grind exceeding small."

The kilns were in full blast, and, with their fire-doors open and the red light streaming out upon the half-naked men, a hades in miniature was represented.

Finally we found our way back to the hotel, and being shown to a large room, with a bed for each of the party, the desire of the meeting was that we keep together rather than scatter to separate apartments. Here we enjoyed the delicious breeze and other delicious things till the thought of an early start in the morning sent us to bed, where, just as Morpheus seized us, a huge beetle, who had been contemplating suicide for some time, dashed his brains out against the wall and dropping to the floor left us to undisturbed repose.

The first glimpse from the windows in the morning was one to be remembered. Away over the roofs around were the wooded bluffs and



U. S. CUSTOM HOUSE AND POSTOFFICE BUILDING, CHICAGO.
James G. Hill, Arch't.



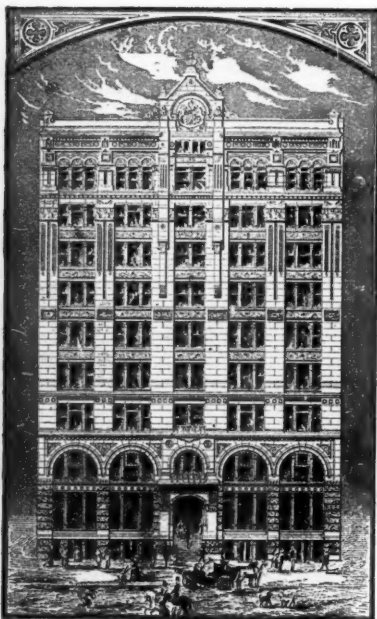
RYAN HOTEL, ST. PAUL, MINN.
J. J. Egan, Arch't.



HIRAM SIBLEY WAREHOUSE



COUNSELMAN OFFICE BUILDING, CHICAGO.
Burnham & Root, Arch'ts.



ROYAL INSURANCE BUILDING, CHICAGO.
W. W. Boyington, Arch't.



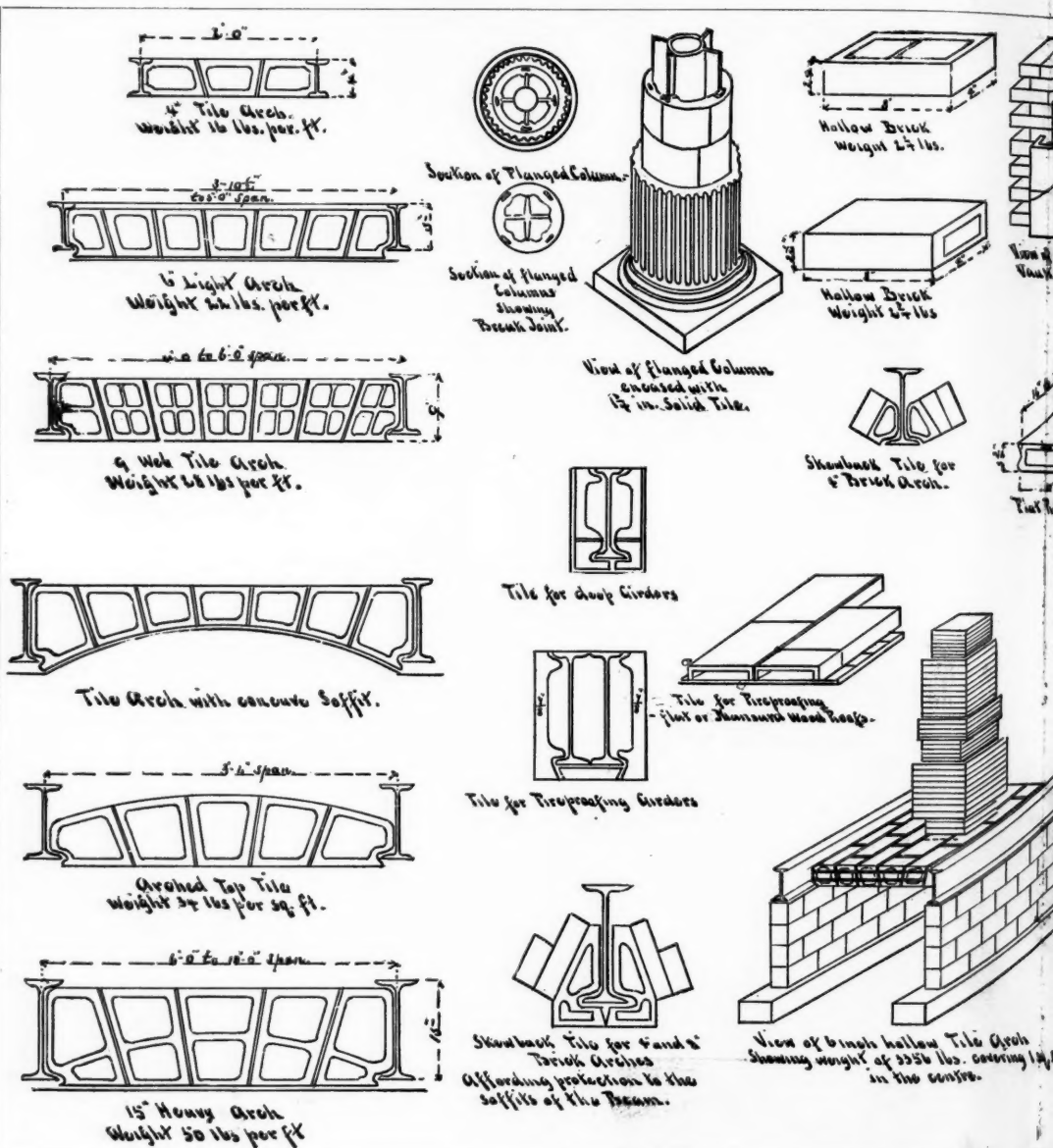
BOARD OF TRADE BUILDING, CHICAGO.
W. W. Boyington, Arch't.



CITY HALL AND COUNTY COURTHOUSE, CHICAGO.
J. J. Egan, Arch't.



PARKER OFFICE BUILDING
J. M. V.



VIEWS OF VARIOUS SYSTEMS OF HOLLOW TILE INTRODUCED



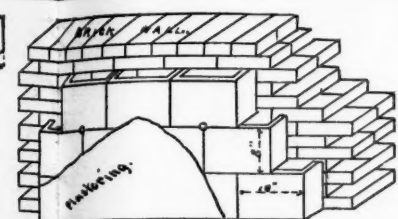
LEY WAREHOUSES, CHICAGO.
Geo. H. Edbrook, Arch't.



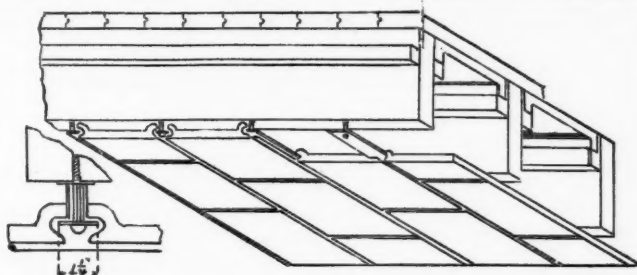
STILMAN APARTMENT BUILDING, CLEVELAND, O.
H. W. Phillips & Co., Arch'ts.



MARSHAL FIELD & CO., RETAIL STORE,
CHICAGO.
E. S. Jenison, Arch't.

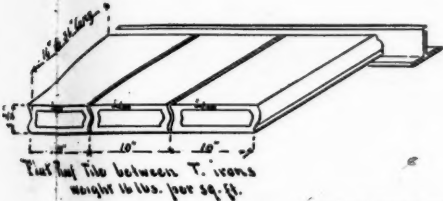


View of hollow Tile Turning for outside Walls
Plastering
Weight 8 lbs. per sq. ft.
Special Sizes made to order

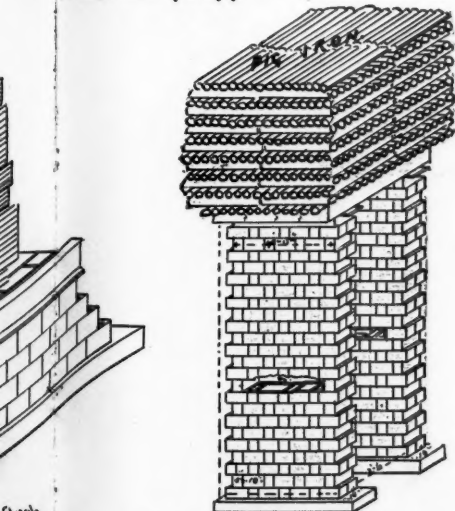


Detail of Attachment.

Fire Proof Tile Suspended Ceiling
Applied as protection to Wood Floor Joists
Weight 5 lbs. per sq. ft.

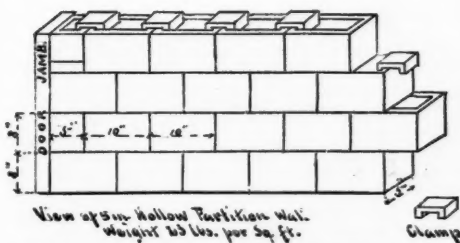


Tile laid between T. irons
Weight 10 lbs. per sq. ft.

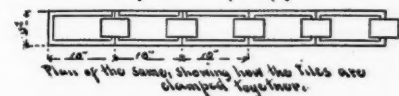


Open
Weight 14 lbs. ft.

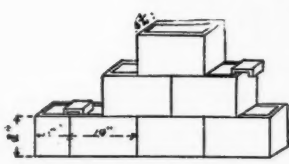
View of double 5 in. hollow Tile Walls
Loaded with 250 lbs. of cast iron equal to 60,000 lbs.
or 38 tons per linear foot of wall; or 14 tons
per linear foot of wall after making the
openings A and B.



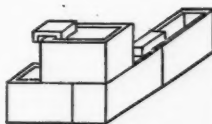
View of 5 in. hollow Partition Wall.
Weight 13 lbs. per sq. ft.



Plan of the same, showing how the tiles are
clamped together.



View of 5 in. hollow partition wall.
Weight 13 lbs. per sq. ft.



View of corner formed of
5 in. hollow Partition Tile.

PRODUCED BY THE PIONEER FIREPROOF CONSTRUCTION COMPANY.



OFFICE BUILDING, CHICAGO.
J. M. Van Odel & Co., Arch'ts.



WEST HOTEL, MINNEAPOLIS.
L. S. Buffington, Arch't.



MONTAUK BLOCK, CHICAGO.
Burnham & Root, Arch'ts.



PULLMAN'S OFFICE BUILDING, CHICAGO.
S. S. Beman, Arch't.

BY THE PIONEER FIREPROOF CONSTRUCTION COMPANY, CHICAGO.

rocky shore of the Illinois river, which is joined by the Fox at this point on its way to the Mississippi; the valley between its banks lying in the soft light of the morning sun, green, fresh and as restful as the song of the robin in the cherry-tree in the garden below.

After a hearty breakfast, Mr. Johnson, anxious to show the beauties and manufacturing facilities of the city, called a carriage, and, accompanied by mine host of the hotel, we drove through streets lined by shade-trees, across bridges and out upon a well worn macadamized road eastward to the clay mines of the Tile Co. These cover fourteen acres. The first stratum is loam, the second shale, the third about two feet of a good quality of coal, and at last a 12-foot vein of the best quality of fireclay, with outcroppings of a fine white and plastic potter's clay. The claybank stands on a picturesquely located hill, and though at present the clay is hauled by wagons, the company contemplate a tramway that will carry the clay by gravity most of the distance to the works.

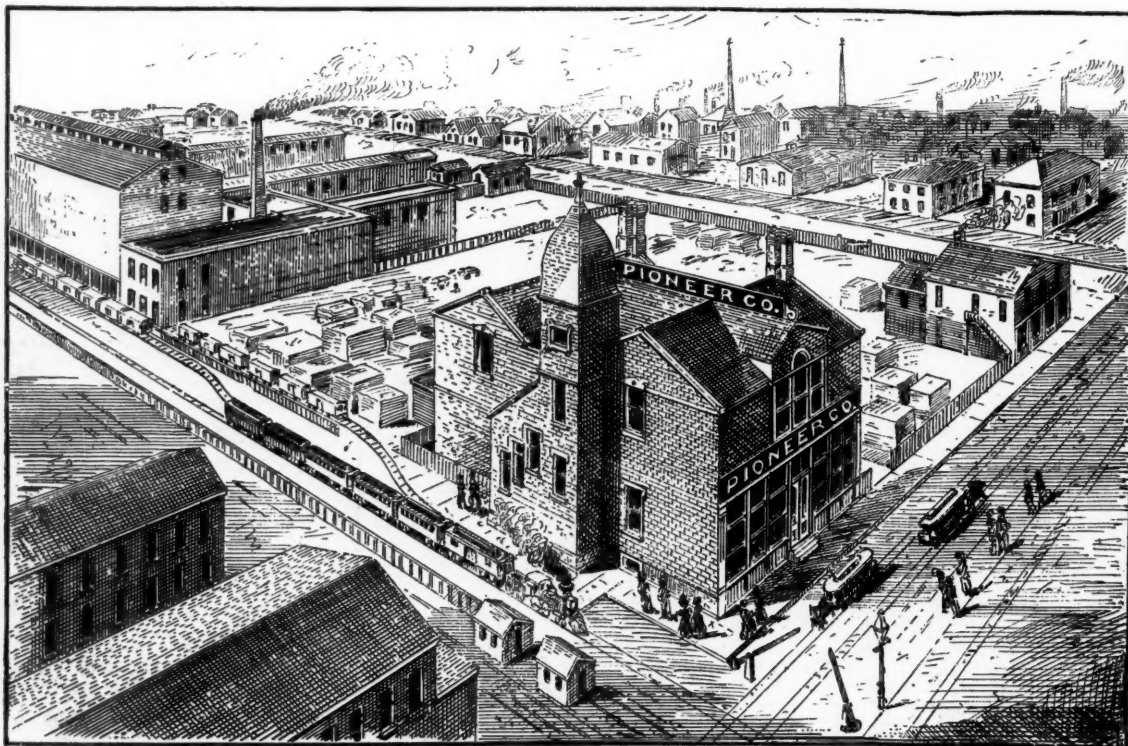
The drive was long and enjoyable, and at last the factory was again reached, and a regular inspection commenced, after bidding farewell to Mr. Morris, who was obliged to return to the city, it being the first time he had been absent for an hour since the Royal building was commenced. We regretted to see him go, as a better companion, more intelligent and honorable gentleman than he is not found; his experience and friendliness adding much to the pleasure of the trip.

Conducted by the foreman, we were shown the clay-cellar under the driveway, which has a capacity of about 1,000 tons, where the wagons unload the clay through hatchways. This clay is carried to the huge crushers. This apparatus consists of a large circular pan revolved by the huge shaft leading from the water-power, and two cast-iron wheels about 5 feet diameter by 10 inches of thickness and 4,500 pounds weight, which are in turn revolved by the pan beneath, the rotary motion of the pan and the

inside diameter at the base, about 12 feet high in the center, and built of firebrick. The doors are upon an improved plan patented by Mr. Johnson, the bands around the kilns being fastened to an iron door frame, which receives the expansion or contraction of the bands. About eleven kilns a week are burned, the action of the heat upon the clay being exceptionally perfect, few cracks being observable in the finished tile.

The motive power of these works consists of 125-horsepower, run by a 25-inch Victor Turbine wheel under a 28 foot head. Two boilers are used for heating and supplying steam for the die presses, and an engine of 60-horsepower is held in reserve for emergencies, for as these works run night and day the possibility of a stoppage from any cause must be provided for. This hydraulic plant is considered by experts to be the best that has ever been placed in the West. The water-wheel is set on a solid base of natural rock, supported upon iron rails. A four-foot pit is dug in the rock below the wheel connected with the tail race. The water from the hydraulic basin, which is 27 feet above the tail water, is conducted to the wheel through a 4-foot iron pipe 120 feet long, water being taken from 3 feet below the water-level in the basin above. This obviates all difficulty from sticks, grass and other obstructions passing through the pipe, and interfering with the operation of the wheel, and effectually does away with the possibility of all leaks.

The history of these works is as rapid as it is extraordinary. Three years ago an old mill was converted into a small factory, and with additions and improvements has become what the visitor now sees, the largest and best conducted fireproofing manufactory in the West. A great deal of work besides the construction of fireproof buildings, kilns, etc., has been done. Some parts of the works have been built on raised ground, and underneath the walls the tail race from the water passes through an arched tunnel and



straight motion of the wheels set at right angles with the shaft giving them an enormous grinding as well as crushing power. The crushed clay finds an outlet in the side of the pan, where it is caught up by ordinary elevator buckets and carried to the top of a tower 70 feet high, where it is forced through a screen, and passing through a chute is conveyed again to the ground floor, where it is tempered in a similar machine to the crusher, the wheels only being about half as thick. There are two sets of crushers and two tempering machines, and their capacity is about 100 tons per day. The tempered clay is again elevated and distributed to several steam-presses which produce the tile. The press consists of a cylinder placed in a perpendicular position, and works a plunger which forces the clay through the dies and on the floor below the tile is cut to the required length and wheeled away to the dry-rooms.

The dry-rooms are arranged in two three-story buildings, all built of 3½-inch hollow tile. In fact, the company use hollow tile wherever it is possible, in walls, chimney stacks, etc., as it has proved to be the best material to withstand the heat; the surface of a kiln chimney being comparatively cool with a coal fire on the inner side.

These buildings are arranged with three straight floors with half-story communications made by easy inclines so that material can be readily transferred from floor to floor. They cover 90,000 feet of space and were almost entirely covered with the different descriptions of hollow tile which are constantly turned or handled on the floor till dry enough to burn. The tile is also moved from floor to floor by an ingeniously arranged belt elevator fitted with shelves. The dry-rooms are all fitted with over 13,000 feet of steam pipes to assist in drying.

Perhaps the most important feature of this great "plant" is the burning kilns. These, thirteen in number, are arranged in two tiers, and are all of the latest improved pattern. They are circular in form, about 22 feet

out to the river beyond. This water tunnel had to be built directly below a row of kilns, and as the chimney stacks are large and heavy the engineering skill exhibited is worthy of note.

The officers of the company are Mr. George M. Moulton, president; Mr. A. T. Griffin, vice-president; Mr. E. V. Johnson, secretary, treasurer and general manager; and it is due to the latter gentleman's enterprise and business sagacity that the building and progress of these works is due. The buildings were planned by him; he is the patentee of a number of the different patents of the company, not alone in the different descriptions of tile, but in much of the superior apparatus employed in the manipulation of the clay, notably the firekiln doors, which are an invaluable improvement upon those ordinarily used. As the business of the company extends to all parts of the country, Mr. Johnson has become widely known to architects everywhere, and few young men enjoy a more enviable reputation than he.

These are the facts gathered through an inspection of these works, and with the 100 men employed in their manipulation and the important part they occupy in the building field, they should be visited by every owner who is contemplating extensive building, for all extensive structures should be thoroughly fireproofed, and that in a reliable way with reliable material. We have written somewhat upon the pleasure of the trip that future visitors may know that a trip here can be made a holiday as well as a matter of business, and if the moneyed men of Ottawa would look at the possibilities which surround the future of their fair town, they would spend some of the wealth they have accumulated, and at an early day the city would not only be the finest in the West but double its population, and be famed alike for its manufactures and its pleasure resorts.

A description of the Chicago office building, illustrated above, will be found on page 11.