

THE INLAND ARCHITECT AND BUILDER.

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THE INLAND ARCHITECT AND BUILDER

A Monthly Journal Devoted to

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Construction, Decoration and Furnishing

IN THE WEST.

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Architects and Builders throughout the West will confer a great favor on the Editor of this Journal by sending him news pertaining to the craft in their section of the country, particularly items of new buildings.

THE INLAND ARCHITECT AND BUILDER will spare no endeavor to furnish valuable news and information to those interested, professionally or incidentally, in the planning, building, decorating and furnishing of homes or commercial or public structures. A variety of attractive illustrations will be presented in each number, the best of engraving and printing contributing to their production.

Letters containing the latest building news and gossip from St. Louis, St. Paul, Detroit, Cincinnati and other points will be a prominent feature, and correspondence is invited from architects and builders throughout the country.

The aim of this Journal is to become the medium of communication between those in whose interests it is published. Matters of news and valuable facts appropriate to this Journal will be promptly published and proper credit given.

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.

IMPORTANT TO SUBSCRIBERS.

As unauthorized parties are collecting subscriptions on our account, subscribers should insist upon agents showing credentials from this office or from responsible subscription and news companies.

TWO notable events are dated to occur on the 24th instant. One of great local interest is the formal opening of the East River suspension bridge at New York. This great and unrivaled feat in bridge engineering has been watched by the public and lauded or adversely criticised by the press since its conception, but now it is finished and the people of two great cities are joined, to the benefit of each, and the bridge will stand one of the wonders of the century.

Perhaps creating a greater, more universal interest is the great gathering of railway appliances in International Exposition at Chicago. The great Exposition building is not near adequate to contain all the machinery and other exhibits, but for two blocks south of the building temporary structures have been erected for their further accommodation. One of the more important results of the gathering of mechanical appliances will be the tests of stone, iron, and other materials by the testing machine sent here for the purpose by the Yale Lock Manufacturing company, of Stamford, Connecticut. These will be very exhaustive and the results will be fully described in a future issue.

THIS exposition of railway appliances will bring together perhaps the greatest collection of railway construction and equipping material ever exhibited. The capacity of the building has been increased by numerous additions to an area of 500,000 square feet, and tracks will be laid along the lake front for experiments with rolling stock. An electrical railway will be placed in operation showing the advancement electricians have made with electricity as a motive power. The exhibit will be divided into eight departments alphabetically arranged, each department comprising an entire branch of railway appliances. In thus bringing together in competitive display all those appliances which form the safety and the elegance of the cars in which we ride, and in displaying the marvelous genius of this century, this age of steam and iron, the managers have done a work that deserves well of the city so much favored. Chicago is the railway center of the continent, and the enterprise which has always marked her lesser ventures will certainly stamp this as the greatest special exhibition ever given of the products of the mechanical world.

PLEASANT words, full of encouragement, come to us from our able and honored contemporary, *The American Architect and Building News*. In a recent editorial it kindly says:

We owe an apology to two of our contemporaries for having allowed some weeks to elapse before saying what we might to welcome them to the field of technical literature. *The Builder* * * * The other new-comer is the INLAND ARCHITECT AND BUILDER, published monthly in Chicago by the Inland Publishing Company, and containing primarily such information in regard to local building matters as may be most acceptable to the profession in that busy place. It is surprising to see how much matter of this kind there is, and it is pleasant also to observe the skill and care with which it is sifted and arranged. The editorial paragraphs in the two numbers which have so far appeared seem to us of unusual value and interest, and we take pleasure in congratulating the profession in the West upon the high character of the journal which promises to represent it.

These words are particularly welcome as we have been awaiting with considerable interest an expression from this high and conservative source. That it is an expression of approval is to us doubly gratifying.

ZUÑI, that wonderful little city planted among the sand wastes of New Mexico, and the strange people who inhabit it, have come before the notice of the great American people in several ways of late, but always with credit to themselves. Mr. Cushing's interesting paper running through the recent numbers of *The Century*, with his interesting descriptions of their house-construction and general habits has given them some notoriety and placed them in a favorable light before the people. Now an officer in the United States army, a relative of a well-known senator has looked upon their small territory and tried to appropriate its most valuable quarter. Among these sand-hills are two springs and in the survey which gave the limit to the reservation set apart by the government for them to occupy forever, this most valuable section was left out. The president's attention was called to the matter, and these people whose architecture is different from that of all other tribes of men, and whose intelligence seems to have existed from some far-off age of enlightenment, if not of civilization, have been reinstated and can now rest secure. The Zuñis have in their solid walls the evidences of having stood changeless through the centuries and it certainly should give them an uncontrovertible right to the country they call theirs, for beside their city walls, memorials of forgotten ages, our great civilization is but the passing of a caravan of gypsies, the coming and going of a day and night.

TWO months have passed of as fine building weather as Chicago has ever experienced, and with as fine a building prospect as was ever presented, in total inactivity, because ignorant men have become strong enough to hold the wheels of its progression. And the bricklayers' union is deserving of no sympathy whatever. In January they notified the contractors of their desires. On the second of February Mr. Prussing, the secretary of the builders' association, proposed the appointing of a committee for the purpose of arranging matters permanently for the season. This overture was rejected, and so have been all others that have been made by the master builders up to the present time. That the strike has been wholly unadvised and only resulted from the thorough ignorance of the heads of the union, is evidenced by the fact of their utter rejection of all overtures for a settlement from the master builders. The end, however, is near. First, every day the strike is continued brings foreign bricklayers to Chicago, and they are at once given work. There are already more stonemasons in the city than can be used; and, second, the Trades' Assembly, who have been active in supplying money to the strikers, will, because of their continued refusal to try to meet the builders and bring about an amicable settlement, refuse to farther contribute to their support, and this will bring even the most obstinate to their senses. We are glad to see the reputable architects and owners joining with the contractors in this great issue, and hope the principle so long fought for will be so thoroughly established that it will be many years before Chicago is again troubled by a strike in any class or trade. We only sympathize with the poor families of these men, who will suffer in the coming winter by the loss of the work of the past two months.

THE thorough lawlessness which has characterised many of the actions of the striking bricklayers' union, has taken from them much of the sympathy they were at first presumed to be entitled to by fair-minded people. As an

example, when the blank contract which was to be signed by the masters' executive committee and a committee from the bricklayers' union was read before the union, a dozen members moved to "lay the paper under Mr. Prussing's table," thus declaring that they would have nothing to do with the appointing of a committee, or make a move toward an arbitral settlement.

WHO is Fred Kelterneck, "architect"? A man giving that name, and claiming to be an architect, offers "to furnish plans for buildings to contracting firms composed of members of the bricklayers' union at \$20 and \$25 each." Aside from the questionable propriety of offering aid to would-be contractors, who in many cases are not even good bricklayers, the unprofessional manner of bidding for work at such reduced rates, leads sensible people to believe that the "architect's" plans are expensive at even "\$20 to \$25" a set. Echo answers, "Who is he?" for his name is not even to be found in the city directory.

Architecture.

LECTURES DELIVERED AT THE UNIVERSITY OF CHICAGO.

BY W. L. B. JENNEY, ARCHITECT.

PART III.

MAN first existed in the savage state. Forced to struggle for an existence with the wild beasts of the period, the mammoth, the rhinoceros, the cave-bear; to obtain food and to shelter himself from the weather, he employed his superior intelligence and invented weapons of defense and for hunting.

The first great starting-point in man's industry was the use of fire; with fire he could cook his food, warm his body, fell trees, harden the points of his spears, toughen the withes used to bind around sharp stones to form hatchets, bake his crude pottery and keep off the ferocious animals while he slept at night.

The next step in civilization was the hut, the origin of architecture. The cottage, the mansion, the palace, the temple, the church, the tomb, are all modifications of the hut; therefore the study of the hut is an introduction to the study of architecture.

With the nomads the hut must be portable, and consisted of skins drawn over poles, as in the wigwam of the Indian, or of the tent of skins or of canvas.

These can be carried on pack animals, pitched or taken down and packed in a short time, and is as much of a home as is allowed to a family subsisting solely on a few domestic animals, for they must often change their abode to seek fresh pastures.

The most primitive fixed habitation was probably the hut built of logs notched together at the ends, with a roof of same material, brought to a ridge or peak by shortening the logs at each course, and filling between them with clay mixed with straw. The chimney, if any, was a hole in the roof.

Another form of the primitive hut which was probably used in the mountainous regions of central Asia, consisted of walls of stone laid in clay, with a flat roof of logs, covered with clay, mixed with straw, and well pounded while wet.

In the extreme North the huts are made of sods and stones, plastered with mud, they have a semi-spherical shape with a single opening at top, to serve the general purposes of door, window and chimney.

The requirements are very simple, solely a protection from excessive cold. When these huts are buried in snow and occupied by a family, a little fire of peat or small sticks will preserve the temperature within the limits of possible endurance.

In the Soudan, in Africa, Denham and Clapperton in 1824 reached a place so infested by flies and bees that the

inhabitants could not move out of their houses during the day. As these insects will not enter very dark places, nearly absolute darkness as a protection from these pests was the requirement above all others to be satisfied. Their houses were literally formed one cell within another, five and six in number. They give no drawing of these huts, but they were probably of thatch, so common in Africa, which allows some light to penetrate the walls, hence the necessity of so many envelopes.

This form of building the hut is of course very local, but it serves as another example of that great principle that the form of the building grows out of the requirements modified by the material at hand, and the degree of civilization of the builders.

As another example let us examine the Malay hut in the Philippine and neighboring islands, situated within the tropics, in the region of earthquakes and those fearful gales known as typhoons, one of which has only within a month divested a large part of the city of Manila. The requirements are therefore strength to resist a vigorous shake and a fearful blow, and to be cool under a scorching vertical sun.

The rains are at periods severe, and tidal waves roll over the low shore lines. Reptiles and insects and wild animals are numerous. These create a requirement that the floor of the house shall be well up above the ground.

As the Malay does not read nor write, very little light is required.

As the cooking is done out of doors, there is no chimney to the house.

The available materials are tree trunks for posts and timbers.

Bamboo, which grows in great quantities and of large size, like gigantic fishpoles, for the sides and floors as well as much of the framework.

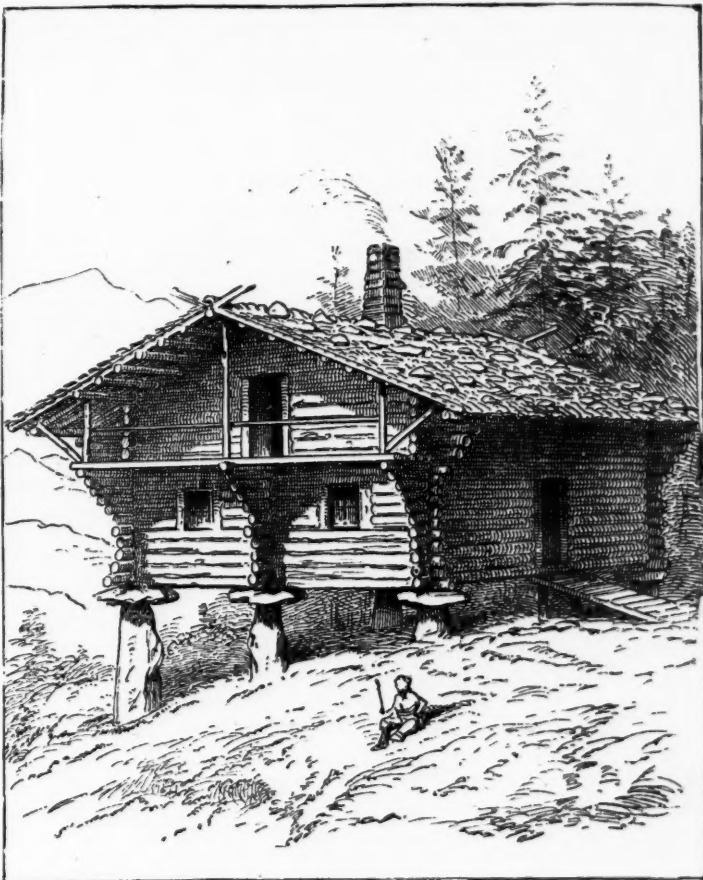
The leaves of the palm for the thatch, and the rattan, a long and very tough vine of the palm family, very useful to tie the work together.

The Malay is naturally lazy. He had rather lie on his back in the shade and smoke his cigar, and study out the easiest way to build his house, than to run the risk of doing an unnecessary stroke of work. Moreover, his ancestors, for no one knows how long, have been building in the same way, so that he has only to look about him to find the problem well worked out.



Asking the assistance of a few friends whom he has helped on a similar occasion, he cuts a few trees of proper dimensions for the posts and timbers, and builds his hut. The roof is a foot thick and is an excellent protection against both sun and rain. The sides are basket work of split bamboo, and the floor of bamboo slats, covered with mats. This hut satisfies the requirements to the fullest extent. The air circulates through it in every direction, rendering it as cool as a hut can well be. Mats hung over the door

and windows secure the necessary privacy and darken the interior to the exclusion of flies and mosquitos. Housecleaning is made easy. The floor mats are turned over from time to time, and the use on the opposite side shakes



[From Viollet le Duc.]

the dirt down between the slats of the floor. The whole has been produced for the least possible labor.

The Aryans under similar circumstances build of logs and thatch. Many ancient dwellings were built in the still waters of sheltered and shallow parts of lakes, known as Lacustrine. These belong to no special race; they are found in Switzerland and other parts of Europe, and in Asia. They were built by the yellow race, the Chinese and Turanians, and at times by the Aryans, to make their isolation in the water a protection from man and beast.

When built by the yellow race they are much like the Malay hut of bamboo and mats, when by the Aryans they were of logs. To quote Viollet le Duc, "Whether it was the result of natural predisposition or of the environment by which the various races of mankind were surrounded at the outset, it happened that these races adopted certain methods of construction, methods whose original elements are handed down from age to age, and make their appearance at the present day as manifestly as do the roots of each of the languages spoken by those primitive races."

Thus far we have treated architecture in its earliest beginnings from its starting points, directed and governed by, and originating out of, the simple requirements of protection from the elements and for privacy. Architecture as a fine art had not yet existed at these epochs and in these localities. Art is due to other causes.

"It is evident," says Viollet le Duc, "that at certain times art has been developed with singular energy, has been honored, cultivated and beloved, while at others it has fallen into indifference, neglect, or even contempt." It is customary to divide the history of art, accordingly, into periods of glory and periods of barbarism. But what is barbarism?

A people may be barbarous, according to our modern point of view, that is savage, superstitious, fanatical, without order or system in any of its movements, governed by the most imperfect laws, and yet possess very perfect arts,

and on the other hand a nation may be civilized and polished to the very highest degree, organized under the most refined philosophy, and adorned by the most polite manners, and yet in its arts be degraded or even barbarous.

Barbarism, in the sense of *cruelty*, can have no influence on the arts, for history shows but too many examples of the prevalence of this unhappy instinct of human nature among people who have brought the arts to the very highest degree of development.

Thus while the Greeks were building the Parthenon at Athens, they were plunged in all the cruelties of the Peloponnesian war; while the Romans were spreading their civilization over the known world and enriching their most distant possessions with monuments of admirable skill, they amused themselves with mortal combats between slaves who had no cause for mutual hatred, and systematically gratified the savage curiosity of an idle populace by casting human beings to be devoured by the wild beasts of the circus. And in later times while Christians were covering the East and West with the most inimitable works of art, they were slaughtering and burning one another at the stake for mere difference of opinion on a dogma, or on the interpretation of a text. Evidently we have no use for the word *barbarism* in this sense. It is used in the arts only in its broader sense of *uncivilized*.

In comparing the arts of different periods it is not a question of degree of civilization, but of condition more or less favorable to the development of art. Institutions, politics, science, letters and the arts do not develop together. In science we excel all that has gone before. We have steam derricks, and stone planers with a dozen knives cutting at the same time; steam rubbing beds, and saws with diamond teeth that cut stone almost as fast as the tools of the ancients would cut old cheese, and yet the Parthenon at Athens is still the architectural gem of the world. We have schools of anatomy much in advance of anything in Greece, and yet we have no sculptor like Phidias. The chemists make many pigments unknown to Titian, and put them in a shape to facilitate to the fullest extent the painter's work. And yet, we have no one that paints like Titian or Paul Veronese.

We have railroads, telegraphs, telephones, electric lights, and much else that the ancients would have thought knowledge reserved only for the gods, and yet we have no Homer, nor have we advanced beyond classic times in many branches of literature. What conditions are favorable to the arts we will endeavor to learn. This is one of our lessons.

History of Chicago Architecture.

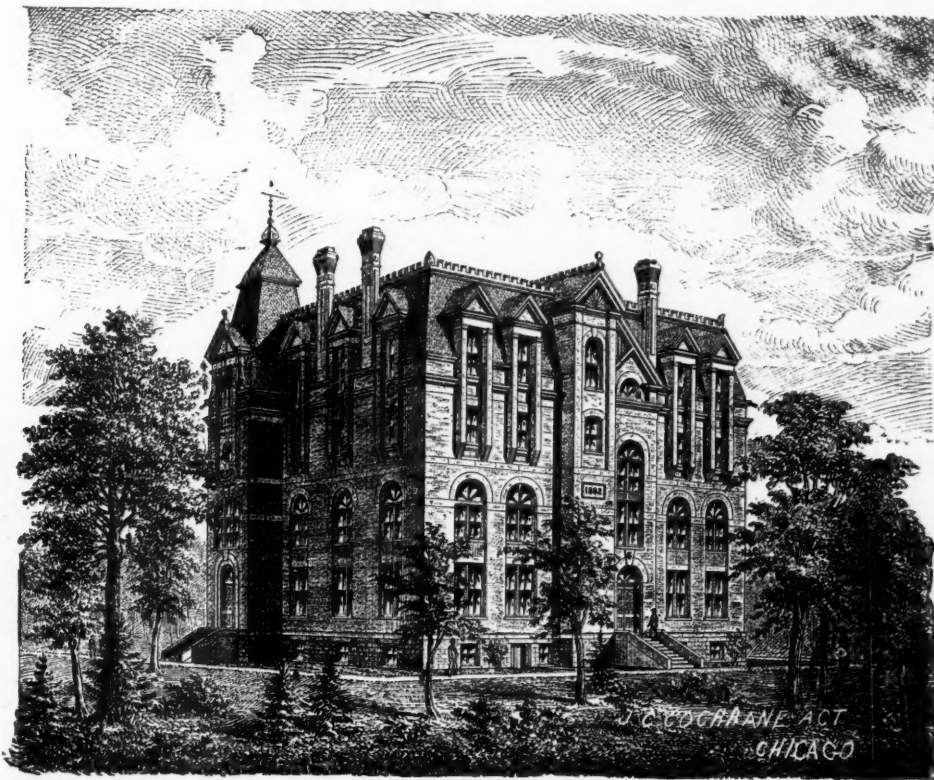
PART III.—OUR GRAIN ELEVATORS.

RECOLLECTIONS OF JOHN M. VAN OSDEL.

THE great number of these gigantic structures indicate the vastness of the grain trade of our city. Strangers may be astonished at the extravagance of our business palaces and the costly and beautiful homes of our business men, but are amazed at the necessity of so many huge buildings to accommodate a single branch of the business of Chicago. The extent of this branch places us in the front rank of the grain markets of the world. It may be of interest to note its inception, rise and progress, and the necessity of suitable accommodations for its reception, storage and shipment. There were no buildings constructed purposely for the storage of grain prior to 1848, but several of the frame warehouses located on either side of the river, east of the branches, were used for storage of grain in limited quantities. In 1842 and 1843, machinery was introduced into six or seven of these storehouses for elevating and distributing the grain into bins arranged in the upper lofts of the buildings; one horse walking on an endless revolving platform was sufficient to run the machinery in these primitive elevators. The grain was received from farm wagons driven close to the front of the building, where the bags were emptied into a receiving hopper, from which the grain passed into the weighing hopper inside of the building. After being weighed, a valve was drawn in the bottom of the hopper, and the grain passed down to the elevator buckets. It was necessary to form a pit several

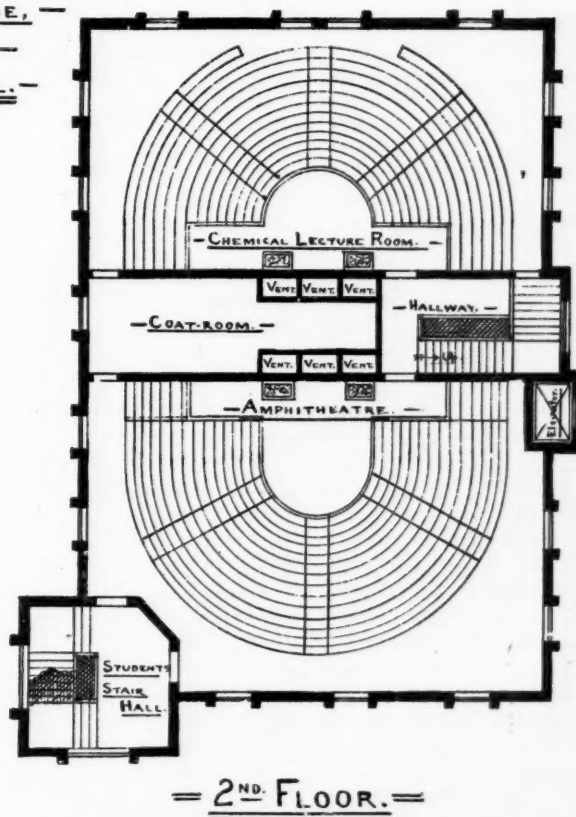
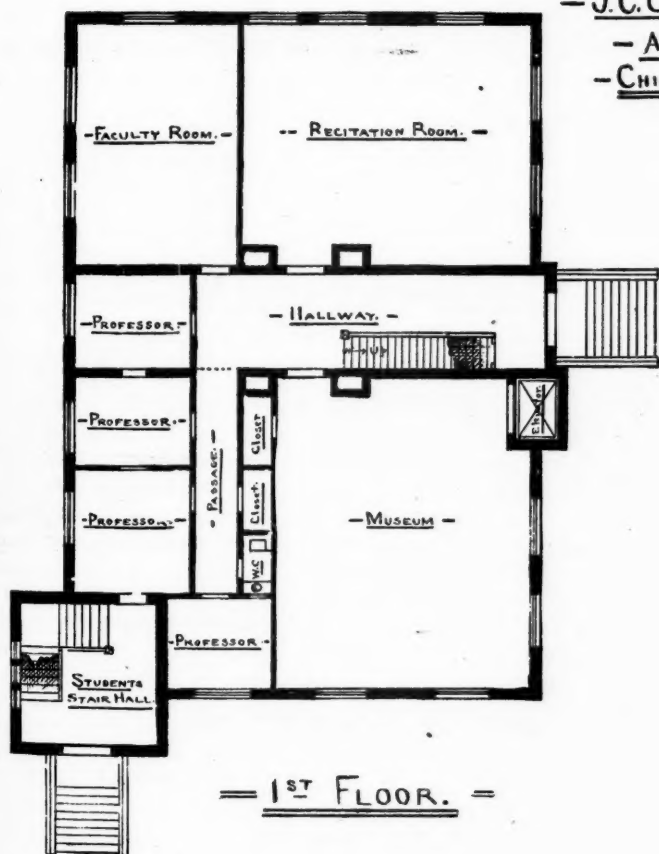
feet below the surface of the ground, to allow the grain to descend to the elevator. These pits were formed of circular water-tight tubs, 8 or 9 feet diameter and 7 or 8 feet deep, as the surface of the ground was not more than 2 feet above the surface of the river. Farmers brought their grain to Chicago in wagons containing from thirty-five to forty bushels a distance of 100 miles, and returning home with a load of salt and lumber. Much of the grain was from the northeastern part of Indiana. The wagons, generally covered with a white cloth, were called prairie schooners. The roads leading out across the level prairies surrounding Chicago, were almost impracticable for loaded wagons in wet seasons. The first railroad leading out from Chicago, "the Galena," now the "Northwestern," had, in 1848, been completed for six or seven miles to the "sand ridge," now known as "Austin." Mr. William B. Ogden, the president of the road, invited a number of gentlemen to make an excursion to the sand ridge on the new road. Among the guests were B. W. Raymond, John B. Turner, Joel C. Walter, Stephen F. Gale, Geo. W. Dole, Julian S. Rumsey and others. On their return trip they discovered three wagons loaded with grain hub-deep in the soft prairie, and apparently fixed for the season. Mr. Ogden suggested that they assist the farmers by loading the bags of grain on their car, which was done, the guests assisting in the performance. This was the first car-load of grain brought to Chicago. In 1843, Messrs. Newberry & Dole erected a large warehouse on the northwest corner of Clark and South Water streets, having one of the endless platform horse-power, which made considerable noise when in motion. Mr. Julian S. Rumsey suggested to Mr. Dole that the horse be hoisted into the attic of the building, and perform his labor on a circular track drawing upon a sweep or lever. This was accomplished, and persons were often amused at seeing a horse's head thrust far out of a small opening in the Clark street gable of the building, where the animal seemed to enjoy the fresh air and birdseye view of the city. In 1848, George Steele built a frame elevator on the northwest corner of Wells and South Water streets; the machinery moved by steam. In 1849, E. H. Haddock and M. O. Walker built a frame elevator on the southwest corner of River and Dock streets; and, in 1850, Messrs. Horace Norton and Joel C. Walter erected a building, 40 x 80 feet, three stories high, on the northeast corner of Dock and River streets, the walls of stone work, for the purposes of an elevator. Slips were cut in the basement of these two last-mentioned buildings, to admit canal boats from the river. Then followed in rapid succession elevators of increased capacity by Flint & Wheeler, Munger & Armour, Gibbs, Griffin & Co., all frame buildings; then the Galena elevator, a brick building; also the Illinois Central elevators in 1855 or 1856, of brick, the interior of all of heavy framework. In 1857, the Northwestern elevator at Indiana street, on the north branch of the river, was built in a novel manner; the entire walls of the building and the partitions forming the bins were formed of 2 x 6 scantling laid in horizontal courses flatwise and firmly nailed down, one course upon another, until the desired height was obtained. This system of elevator building was invented by Alexander Miller, a very skillful mechanic, who had been engaged since 1843 in constructing and arranging the machinery of our elevators. Every elevator in the city built since 1857 is on Miller's plan of construction. In 1855, the Great Western Railway company, of Canada, advertised a premium for the best plan of an elevator, to be built for them at Hamilton, C. W. There were twenty-nine plans submitted, of which four were from Chicago. After a careful examination, Mr. Miller's plan was unanimously awarded the premium. Mr. Miller has superintended the construction of eighteen of our largest elevators. The warehouses of 1842 would receive about 300 bushels per hour, and ship by hand, in boxes, about 1,000 bushels per hour. At the present time one elevator can receive 28,000 bushels per hour, and can ship 50,000 bushels in the same time. The largest elevators can store one and three-quarter million bushels of grain.

THE stock of pine lumber and shingles in the Chicago market, compared with that of 1882, shows an increase in the lumber supply of 6,487,405 feet, and a decrease in shingles of 13,956,661.



— MEDICAL COLLEGE, STATE UNIVERSITY OF IOWA. —
— AT IOWA CITY. —

— J.C. COCHRANE, —
— ARCHT. —
— CHICAGO, ILL. —



Decoration in America.

LOUIS J. MILLET.

PAPER III.

DESIGN and color, those two factors of decorative result, are so closely allied that the rules of one define the functions of the other. The process of the mind in composing a polychromatic ornament is but one. We conceive of its coloration and its form at the same instant, and the probability is that having appeared in our imagination simultaneously both color and design are harmonious as being necessary part of a same conception. But our mode of transmitting our composition is not only slow, but is such that two operations have to practically be gone through. First the careful study of form and outline, then the coloring of the different parts; and often in the developing of these two elements, the composition loses its original distinctness, we partly forget the link that joined them in our mind, and the harmony between the form and color is reached only after a visible effort. This is certainly the great difficulty in good designing, for no pleasing effect can ever be obtained if a struggle for supremacy is visible between the form and color of a decoration, even though the colors may be in harmony with one another, and the design itself be of correct taste. The effect will always be an unsettled one. In Pompeian, Moorish and Gothic art the study of these principles had reached such a comparative perfection that certain laws might have been framed from them which will remain true in every period. Thus, if we examine Gothic interiors, we notice that in the surfaces, which because of their dimensions or position give, when colored, the general tone of the interior, shades of similar colors were used, and effect by analogy was preferred to contrast. While in the smaller portions that were made noticeable either by their architectural importance, such as columns, capitals and architraves, or by their richness of relief, such as carved panels or borders, complementary colors were used, producing effect by contrast and opposition, and the richness of these portions of the edifice were made all the greater by the plainness and repose of the surrounding surfaces.

In Pompeian art we notice that the line of ornamentation in an apartment extended along the upper part of the walls, while the lower part, or dado, as we call it, was almost invariably plain and as unobtrusive as possible, just as if the artist had tried to make the apartment look as if it only was to be seen above the line of dado. The reason of this was partly a practical one and partly a theoretical one. Such decoration below a certain line would probably have been rapidly destroyed by its proximity to articles of furniture, etc., and the theoretical reason, based on the laws of perspective was and is still that to appreciate the general effect of a room, in fact to see it in such a way that the eye takes in the greater surface, we have to look at a point above our height, and it is to induce the spectator to do this, that the decorator called the attention to the upper part of the walls by means of placing there a line of richness which we call a frieze. In that way the general decoration and proportions of a room were noticed.

As far as warmth of color is concerned, we see that in southern countries strong and warm tones were used because color had to be tuned to a higher pitch in order to be effective under the glow of the southern skies. The decorations, carpets, and other manufactures of Eastern people, show their appreciation of this. Even the Moors, finding in Spain a climate resembling somewhat their own, built the Alhambra, that marvel of color.

But the Gothic artists, who were studying an art adapted to a colder climate, where the rays of the sun were less intense, made use of cooler and softer tints, excepting, however, when the powerful colors of stained glass were introduced, giving to the churches the same glow as the sun to the Alhambra. Then the mediæval artists understood that a higher diapason of color could be introduced and then, and not until then, were seen the gorgeous colors of mediæval frescoes.

. The Use of Stained Glass.

THE nearer we harmonize with nature the nearer do we come to securing beautiful effects in color. The effect of a blue sky is heightened by a green hillside or a flower-covered plain. So in the art world, which copies nature, and in the combinations of stained glass. It is centuries since stained glass was first made in Venice and in England, and until a very recent date there was as little improvement in its general manipulation as in the making of violins, or of birch canoes. While this is true in a general sense, the stained-glass artists of today are much more talented, and while the same serrated strips of lead are used to join the fragments that go to make the window, the selection of these fragments is more harmonious. Then, too, a greater variety of kinds of glass is made. With the Antique and Cathedral we have also the Venetian, and better than all the rest for the production of fine artistic effects, we have the rough and opalescent glass, made in New York. With this latter glass no painting is used, but the effect is produced purely by the selection of the colors and their harmonious arrangement, the lead lines often being used to help out the design.

The use of stained glass, for so many centuries confined to the decoration of churches and palaces has become so universal, that scarcely a house of any architectural pretensions can be found that has not stained glass in door or window, and even to fire-screens its use is applied, and here, as everywhere that the effect of light is available, its beauty is enhanced.

A beautiful sample of glasswork comes from the East, where a large amount of capital has been collected for its manufacture. It is a revival of Egyptian or Persian art, and so many are the varieties of color and effect to be produced, it is beyond all description. One sample is a glass fish, with all the silver scales delicately defined; another is a combination of rainbow colors, and with it, as a prominent scientist expressed it, a room could be set with this material and sparkle and glow as though set with all the precious stones and metals the world can produce. All these different descriptions of glass display the purity of color with the sparkle of the diamond, and give ample scope to the taste and skill of the artist.

And why can this not be but the beginning of an epoch that will bring to the world some of the magnificence that, though to our cultivated minds seems to have been barbaric, still was magnificent, that tradition and only tradition tells us of? It certainly promises well, for already the stained-glass artists are beginning to produce more ambitious subjects. In a recently completed club house landscapes, marine views and moonlight scenes were produced with natural glass, and with wonderful fidelity to the effect of color, and a leading firm of artists have in contemplation the illustration of a popular poem upon the windows of a projected mansion. Beautiful designs in floral work, are also one of the signs of an improved and æsthetic tone in stained-glass manufacture, and the West has in her Chicago stained-glass artists one of the factors that will in the near future give to her homes much beauty, and win for her much well-deserved renown.

Improvements in House Drainage.

THE system of plumbing, sewerage and sanitary ventilation planned by J. J. Wade, and shown by our illustration, is to be commended for simplicity and thoroughness, every point of danger being apparently guarded. By this system, instead of an earthen drain-pipe a castiron pipe dipped in asphalt or tar with its joints firmly calked with lead, is placed on small iron standards within an arch of masonry running under the house. A running non-siphon trap is placed on the pipe at the curb wall within a manhole, and is provided with a 4-inch ventilating pipe carried to the surface. The drain-pipe is thoroughly ventilated by pipes carried through the roof, running, where possible, through chimneys. The catch-basin is carried to the surface, and is also ventilated by a pipe running through the roof. To relieve stoppages all pipes are provided with manholes, and are readily accessible. Under the bathroom is a properly constructed safety pan with wastepipe. All tubs, sinks, bowls and closets are thoroughly trapped and ventilated, and are set without surrounding wood-work, thus being always open to inspection.

The system is the embodiment of improvements suggested by twenty-five years of practical, intelligent service in sanitary work, and where it has been used it has given excellent satisfaction.

Furniture.

IN the days of our great-grandfathers, the primitive days we call them now, when the wheels of time revolved more slowly and deliberately, the days before the world had caught the velocity and uncompromising headlong rush with which all things seemed to be affected upon the invention or application of steam power, the furniture was of a different mould and quality than that of the present day. Instead of the heavy bedstead built into the wall when the house was new and made to last for generation after generation to come into the world upon, and upon which again to pass out of the world, unmoved and unmovable as the stone walls of the house itself, we have the lighter furniture of the present day. Indeed, in this country especially, where the "world moves," each year as the almanac heralds the first of May the fashion has all gone to light and graceful house furniture. The taste of the present day is illustrated by the display in our great furniture establishments, and through the courtesy of Mr. Frank Tobey, of the Tobey Furniture Company, one of the most enterprising dealers in the West, the writer was permitted to examine all the latest fashions in household goods, and to compare them with what our fathers thought to be sufficient for their needs in their day. Here is a chamber set, made of solid walnut and veneered with the most beautiful of walnut burl. Eleven hundred dollars is the price, and fit for the palace of royalty, or, what perhaps is more to the point, of a "bonanza king."

Walnut, first used as a substitute for mahogany, then because of its beauty and strength, became more generally introduced. At the present day so much is being used and exported that the wood is becoming more scarce year by year. Fortunately for the growing trees the fashion is again changing and reverting to "old mahogany." Sideboards of every design imaginable are manufactured, mahogany is the favorite wood, some richly carved and of elaborate design, with back pieces of plate mirror glass, and others as elaborate but of more stability and heavier mould. The forests of Yucatan and Central America are full of this beautiful wood and the new railroads which are opening up Mexico to commerce will certainly bring this and other beautiful and now costly woods to our markets at prices within the reach of all. Though the bedstead or the sideboard is not of the heavy, clumsy pattern of "ye ancient day," still the tendency is to copy the antique, and the surface of the mahogany is stained to give it an old look. Yes, everything is antique, or copies the antique, and about the only thing modern is yonder folding-bed that looks like an elaborate dressing-case or secretary with a mirror in its imitation doors. True, our grandfathers never slept in folding-beds, but they are handsome and convenient beyond a doubt. These mirrors with frames of Venetian glass cut and sparkling surely are artistic and beautiful, and these beautiful furniture wonders are not heavy, but are like the times, built to please the present fancy and the present fortune, too, of the purchaser, yet all bear some shadow of the ancient and antique, excepting those chairs with polished horns for backs, and they are as modern as the Texas cowboy and as inimitable.

Manufacturers are vying with each other in the production of beautiful shapes, and the West with her supply of material is not lacking in men of enterprise and genius, who keep even pace with the demand of the times, and with artistic talent and mechanical skill shape the furniture that make our homes the center of the world, the haven of rest, and the place of comfort.

Art Notes.

THE old but ever new subject, "Niagara Falls," is to be painted by two of Chicago's most promising artists, Messrs. Green and Bromley, who started last week to Niagara to collect studies of that great "badger blender."

MR. GAY is doing a good work here, and that the work is appreciated is evidenced by the recent sale of his marine view, "On the Coast of Maine," to a New York lady. Mr. Gay's "Morning by the Sea" is of equal merit, and shows talent for marine conceptions and a fidelity to the most subtle effects of marine color.

STEVENS' Art Gallery exhibits a collection of monotypes, copies of pictures from the great Russian gallery, "The Hermitage," at St. Petersburg. Until last year these paintings were not allowed to be copied, and as these are the first of the collection ever exhibited in America, it is of peculiar interest to lovers of art in Chicago. Mr. Stevens' new gallery possesses the finest facilities for the advantageous display of art works of any gallery in the west. The exhibition of Chicago artists' work is a decided success, and creditable to Mr. Stevens and the artists represented.

THE first reception of the Art Guild given in their new hall in the Weber building took place on the evening of the 11th instant. Quite an elaborate musical programme was enjoyed by the audience, after which dancing was indulged in. Among the artists whose works were exhibited in the Guild rooms, Mr. Earle, Mr. Bromley and Mr. Green were the more prominent. The invitations were, as usual, decidedly unique. They were etched by Mr. Earle and printed on fine cards.

MESSRS. ROSENBERG & FIELD have gone to New York, where they will arrange to spend the summer among the pastoral scenes in Brittany. Prof. Henry Spread will start in June for Europe, to gather material for a somewhat ambitious picture already commenced. People in general do not half appreciate the fact that the artists who leave the city every summer and scatter over the face of the earth into out-of-the-way corners, and live like nomads, do it for the love of their art, the production of the natural and beautiful, and confer an unrecompensed benefit upon those who look at the finished picture and judge it by its commercial value, and forget the genius and hard work that gathered the elements from nature and produced it.

Special Correspondence.

ST. PAUL AND MINNEAPOLIS.

ST. PAUL, Minn., May 20, 1883.

Editor Inland Architect and Builder:

Although there is no "boom" to be recorded in regard to the building situation, the activity in some localities, especially that in the neighborhood of Summit and University avenues, indicates that building is by no means at a standstill, and the improvements under way indicate one of the most active of building seasons ever known in St. Paul.

The tendency is for syndicates to form for the purpose of purchasing tracts of ground, dividing them into building sites.

Baker & Stone have done much to solve the problem of cheap homes in St. Paul. One tract they have purchased and laid out in lots 40 by 129 feet, is called Oakville Park addition; also one hundred acres on Fort street, has been purchased by them and laid out in the same manner, and farther negotiations are in progress. Messrs. Grove, Oppenheim & Co., are also selling their lots rapidly.

Among the builders, Adam Golzian is about to construct twelve houses on Dayton's bluff, and has arranged for the construction of thirty more, to be sold on monthly payments to laboring men.

The new opera house is fast becoming a reality, the walls being built as rapidly as the work can be pushed.

The foundations for several residences have been begun on Summit avenue.

Three stores of Herzog's stone building, on Fourth and St. Peter streets, are up.

A \$5,000 residence is about to be built for Mr. A. C. Fuller.

The second story has been reached on Commodore Davidson's brick; also on that of J. H. Davidson, adjoining.

The strike of the plasterers on the 14th, will probably cause some inconvenience, but plenty good non-union men are to be had, and a thorough stoppage of work is not anticipated.

Mr. Washburn's house is being rapidly finished.

MINNEAPOLIS.

At a recent meeting held to secure subscriptions for stock and make arrangements for the establishment of a market at South Minneapolis, one hundred and twenty-seven shares were subscribed. The capital stock is \$50,000, at \$50 a share. The plan submitted Architect Haley is extremely creditable, and the interior arrangement sensible and convenient. The dimensions are 226 by 75 feet. The building will be heated by steam and lighted by electricity.

The excavations for Coulton's block to be built, Nicollet and Ninth streets, are made, and this mammoth enterprise is destined to be a monument to its projector, and an honor to Minneapolis.

The new union depot will cover the site of the first house ever built in Minneapolis.

The work on the new West hotel is progressing. This hotel, of which L. S. Buffington is the architect, is to be one of the finest in the country, and will cost \$1,000,000. It is to be finished in stone and pressed brick, and will be fire-proofed throughout by the Ottawa Tile Company, of Chicago.

The laying of stone sidewalks in the business portion of the city is progressing, and soon will place these streets in fine condition.

ST. PAUL.

DES MOINES.

DES MOINES, Iowa, May 14, 1883.

Editor Inland Architect and Builder:

The building boom continues unabated. While but few large and costly buildings have been projected during the past month, the number of moderate cost structures, principally dwellings, in course of construction, mostly without the aid of an architect's service, is unprecedented. A reporter of the *Daily Press* claims to have counted over three hundred new buildings in progress of construction, all in plain view from the roof of the west wing of the Capitol building.

Most of the buildings heretofore mentioned in this correspondence have made good progress during the month, but our local manufactories are unable to supply brick in sufficient quantities, although the weather has been very unfavorable, both for brick making and laying.

Sanford E. Loring, of terra-cotta fame, and without doubt the best expert judge of clays, and of all matters relating to the manipulations of clays for building material, pronounces the clays found in the vicinity of Des Moines of the finest quality and the best adapted to the finer grades of pressed brick and terra-cotta, of any to be found in America, and yet we are importing all our pressed brick from Philadelphia and St. Louis. While I do not want to use your columns for free advertising, if this should meet the eye of an experienced and skilled pressed brick manufacturer with capital and pluck, I would advise him to investigate Des Moines clays with reference to the manufacture of pressed and the finer grades of brick.

The terra-cotta manufactured by True, Brunkhorst & Co., of Chicago, for the new opera house, the Des Moines National Bank building and Clapp's block is now being placed in position, and is much admired by our citizens.

Iowa has no good building stone suitable for dressing, our principal supply coming from the Ohio quarries, and with such a superabundant supply of good clay so well adapted for terra-cotta and pressed brick, it is like carrying coals to Newcastle, to import stone from Ohio and brick from Philadelphia.

Among the new buildings recently projected is a four-story business block adjoining the new Des Moines Bank building, to be of the same style of architecture, and owned by ex-mayor George Sneer, Esq., Bell & Hackney, architects; a block of eight stores on East Locust and Sixth streets, four stories in height, owned by Messrs. Garver, Miller, Christy and others. I have been unable to learn the architect's name.

Bartlett & Son are at work on the plans of Lake Presbyterian church, Chicago, to be of pressed brick trimmed with terra cotta, to cost \$20,000.

DE MOIN.

DETROIT.

DETROIT, Mich., May 18, 1883.

Editor of the Inland Architect and Builder:

The building boom has not abated since my last letter. The architects say that a greater demand for immediate construction was never known in the history of Detroit building. The demand seems to be for the better class of residences, and a large number are of brick.

The number of contracts let were considerable less than last month, presumably because the architects and builders already have all they can well attend to. The following is a list of the more important permits issued up to date:

BUILDING PERMITS.

Jas. Anderson, brick dwelling, 23 Spruce street	\$ 4,900
A. Beaton, three frame dwellings, Fourth avenue	3,000
Nuppenan & Clark, brick schoolhouse, corner Cass avenue and Stimson street; G. W. Lloyd, architect	30,000
A. Beaton, frame dwelling, 585 Third street	3,500
H. George & Son, frame dwelling, 17 Prentiss avenue	3,000
G. W. Buffum & Co., two brick dwellings, Charlotte avenue, Nos. 181 and 183	6,000
M. W. Scoville, two frame dwellings, Fourth avenue	4,000
Julius Hess, brick dwelling, 46 Canfield avenue	8,000
Richard Nelson, brick shop, Plum street	4,000
A. C. Varney, brick dwelling, Second street	5,000
Julius Hess, additions to brick brewery, Grand River avenue	10,000
Robert Bird, three frame dwellings, Seventh street	10,500
J. F. Weber, frame dwellings, Sixth street	12,000
H. L. Beaulieu, frame house, 409 Fourteenth street	4,000
Mason & Rice, brick house, 20 Peterboro street	12,000
H. George & Son, frame house, 159 Willis avenue	4,000
J. & H. Wagner, two brick houses, 32 and 34 Joy street	8,000
W. H. Holland, five brick houses, Sprout street	19,000
Alex. Chapoton, four brick stores, 384 to 390 Gratiot avenue	5,700
Mason & Rice, brick factory, First street	7,000
Mason & Rice, brick dwelling, 1008 Woodward avenue	12,000
W. H. & C. F. Gibson, two frame houses, 838 and 860 Cass avenue	6,000
Robert Robertson, brick house, 8 Howard street	5,000

Albert Albrecht, brick storehouse, 56 Croghan street	12,000
Nuppenan & Clark, brick warehouse, Atwater street	5,000
Donaldson & Meier, brick store and dwelling, 421 Clinton street	8,600
Joseph Schragar, brick store and dwelling, 501 Gratiot street	3,000
N. J. Rogers, frame dwelling, 363 St. Aubine avenue	4,000
W. G. Vinton & Co., brick house, 34 Peterboro street	9,000
A. Chapoton, brick house, Peterboro street	10,000
A. C. Varney, brick warehouse, 96-100 West Congress street	23,000
A. C. Varney, four-story brick wireworks, 214 West Congress street	14,000
A. C. Varney, brick house and barn, East Montcalm street	8,000
A. C. Varney, brick house, 17 Peterboro street	6,000
A. C. Varney, double brick house, Cass avenue	10,000
A. C. Varney, two brick houses, 21 and 23 Bagg street	17,000
A. C. Varney, frame house, Cass avenue	5,000
A. C. Varney, brick house, 505 Cass avenue	7,000
J. A. De Gaw, two brick stores, Michigan avenue	6,000
Julius Hess, brick house, 555 Second street	6,800
Julius Hess, brick house, 557 Second street	12,000
Julius Hess, addition to brewery, Grand River avenue	6,000
Julius Hess, addition to church, Campen avenue	4,900
H. W. Holcomb, frame dwelling, Fourth Avenue	4,000
G. W. Vinton & Co., brick house, 96 Joy street	5,000

BUILDER.

CINCINNATI.

CINCINNATI, May 20, 1883.

Editor of the Inland Architect and Builder:

There is little change to report in the building aspect of Cincinnati. The following list of the more important building permits will serve as an indication of the way the spring work among builders is increasing:

BUILDING PERMITS.

Miss Belle McIntyre, two-story frame dwelling, Park avenue, near Vine street	\$ 5,000
August Miller, three-story brick dwelling, State avenue, near Gest street	9,000
A. McKaid, three-story brick dwelling, Third avenue, between James and Rachael streets	4,000
John Hater, three-story brick building, Betts street, between Central avenue and John street	6,000
Wm. Buck, four-story stone front building, southwest corner McLean and Harrison avenues	12,500
Mark Levi, alteration to four-story brick store, southeast corner Pearl and Walnut streets; Chas. Crapsey, architect	7,000
J. H. Empson, ten two-story brick dwellings, Linn street, near Wade street; Wm. Wicker, builder	15,000
Mosler & Co., four-story brick factory, northeast corner Bank and Denman streets	11,000
D. Fix, three-story brick building, Harrison avenue	3,000
A. C. Richards, three-story brick dwelling, Kemper lane, near Windsor street	11,000
Geo. Stribley, four-story brick building, Fourth street, between Main and Sycamore streets	3,000
Strobridge & Co., five-story brick printing-house, on Canal street, near Race street; Samuel Hannaford, architect	40,000
J. J. Abbihl, two-story brick building, southwest corner Vine and St. Clair streets	3,000
Henry Jenny, two-story brick building, Vine street, between St. Clair and Wayne streets	3,000
A. Lowhouse, three-story brick building, Poplar street, near Dalton avenue	4,000
Clement Oskamp, four-story stone front store, Central avenue, between Eighth and Ninth streets; Henry Bevis, architect	15,000
A. Brust, three-story brick building, Oak street, near Buckeye street	3,500
Mrs. Bice, three-story brick dwelling, David street, near Central avenue	4,000
Mrs. B. Hart, two-story frame dwelling, Hawthorne avenue, near Warsaw Pike	4,500
H. Herning, two-story brick building, Calhoun street	4,000
A. Smith, two-story brick building, Wheeler street	3,000
Miss Kate Riley, three-story dwelling, No. 129 Longworth street	5,000
Twenty-six permits for repairs	26,000
Total permits to date, 270	1,056,100
Total cost to date	
Jas. L. Haven, three-story brick building, north side Commerce street between Elm and Plum streets	3,400
Jas. Blackard, two-story brick building, east side Gilbert avenue, between Locust and Kemper streets	3,000
Ed. Bice, two-story brick building, northeast corner June and Reading streets	2,000
Miss Ella Platt, two-story brick building, York street	3,500
John C. Thoms, repair two-story brick building, west side Central avenue, between Fourth and Fifth, known as Thoms' Hall	15,000
E. Gurney, three-story frame building, Browne street	4,500
John J. Pfeffer, three-story brick building, corner Harriet and Gest sts.	7,000
D. H. Baldwin & Co., four-story brick store, Fifth street, between Wood and Stone streets	7,000
C. H. Weiss, two-story brick building, 660 Sycamore street	3,500
Wm. Onitges, four-story brick building, 512 Race street	7,000
Peter Scherer, three-story brick building, southwest corner Liberty street and Central avenue	10,000
Mrs. F. Darusmont, four-story brick building, 917 Vine street	10,000
A. J. Mullane, two-story brick building, corner Central avenue and Third street	4,000
George Schutter, three-story brick dwelling, corner Fourteenth and Race streets	3,000
James Mack, two-story frame dwelling, 588 Eastern avenue	7,000
J. H. Weston, five-story brick store, 27 West Sixth street; A. C. Nash, architect	14,000
J. C. Thoms, two-story brick theater, Central avenue, near Fifth street; Henry Bevis, architect	15,000
Zion Congregation, two-story brick building, Breman street	3,800
John Kahley, two three-story brick buildings, Central avenue, near Clark street	13,000
Henry Hussman, two-story brick building, 742 Front street	3,300
Mrs. Sara Gibner, three-story brick building, 198 Plum street	3,000
Mrs. Jane Coates, two-story frame dwelling, Denman street	
Blocker, Sachs and Gretels, five-story brick factory, corner Seventh and Sycamore streets	12,000
B. H. Hathaway, two-story frame dwelling, Park avenue, near Warsaw Pike	2,900
Mrs. S. Gibner, addition to three-story brick building, 198 Plum street	2,500

GRAND HAVEN millmen are setting a grand example by agreeing to close down on the afternoon of decoration day. This should be followed by similar action in other cities, until decoration day becomes a recognized natural holiday, on which to commemorate the glorious deeds of the noble men who went forth in their country's defense in her great hour of peril.

Architectural and Building Notes.

THE average rate of wages paid in Chicago at this date for bricklayers, is \$3.75; carpenters, \$2.75 to \$3; stone-cutters, \$3 to \$3.50; plasterers, \$4.

On the 11th instant the boiler of Gueyer's shingle-mill, located at Napponee, Ind., exploded. The building was entirely wrecked, two men killed and four others fatally wounded.

ONE of the most serious of the casualties during the storm at Evanston was the demolition of a partly finished house, which buried Jasper Adams in the ruins. He fortunately escaped with his life, but had a limb broken in two places, and was otherwise injured.

T. C. GOUDIE, contractor, is constructing for J. Frank two stores with three stories of flats above, at the corner of Indiana and Robey streets, at a cost of \$8,000. Cass Chapman is the architect. Also four two-story flats for Dr. Buchan, at Chicago avenue and Robey street, costing \$4,000. J. Wilson is the architect.

EVANSTON, one of Chicago's most flourishing suburbs, the seat of the Northwestern University and Theological School, met with an "evil wind" on the 9th. A tornado swept through the town totally wrecking two churches, unroofed another, and blew in the windows of a fourth, also throwing it out of plumb, rendered it unsafe, and blew down several houses in process of erection.

THE Atchison, Topeka & Santa Fé railroad is about to build a new general office building at Topeka, Kan. Messrs. Burnham & Root are the architects, and have completed plans for the building, which will be 75 by 180 feet, four stories and basement high, and constructed of pressed brick and stone. The arrangement is very convenient, and the building will be substantial and well equipped.

THE Mortimer, Tapper and Grannis building is up to the seventh story, and already presents a fine appearance. The structure is being thoroughly fire-proofed by the Ottawa Tile Company. This company are also furnishing all the hollow brick for the lining of the inside walls of the Board of Trade building. The Wisconsin State Capitol will also be fire-proofed by them, and the new courthouse of Clinton county, at Franklin, Ind.

THE new residence to be built on the corner of Cass and Ontario streets for Judge Lambert Tree, by Peabody & Stearns, architects, of Boston, will be 70 by 62 feet, two stories, basement and attic in height. The walls will be Romanesque in style constructed of Long Meadow brown stone, rock faced similar to that used in the walls of the Union Club. The building will be completed in 1884. Mr. Ion Lewis represents the architects in Chicago.

AMONG the daily chronicles of the building and real estate interests of Chicago, the department devoted to these lines by the *Inter Ocean* is prominent. Always alert for news, intelligent in its selections, minute and critical in its descriptions, the department has become valuable to all who endeavor to keep posted upon the current transactions in real estate and the growth of the city's building interests, a recognition that is earned by successful competition and faithful work.

A VERY ingenious, yet simple and practical device for opening and closing outside blinds, is called the Dudley Blind and Shutter Worker. It is connected with the hinge and acts by leverage, and a child can open or shut the blind without opening the window. Architects say it is a valuable invention, and as the cost is but a small degree greater than a common set of blind-hinges, its rapid introduction is assured. Matteson & Gardner are the Western managers, with offices at the Grand Pacific Hotel.

THE Wight Fireproofing Company has been awarded the contract for the complete fireproofing of the new \$500,000 building to be erected for the Mutual Life Insurance Company, of New York, on Nassau, Cedar and Liberty streets, covering the site of the old New York postoffice. The contract for fireproofing will amount to \$104,250. This fireproofing company have also the contract to build and finish seventy-two fireproof columns in the first arcade of the United States pension office at Washington, of which Gen. M. C. Meigs is the architect.

THE terrible losses by fire that made the history of the past winter a notable one has directed the attention of inventors toward the improvement of fire-escapes. For several years the Benner escape has been before the public, and the well-known practical connection of "Mat Benner" with the fire department of Chicago, as its chief, and under whose management the fire department reached the rank of first in promptness and efficiency in the country, has given him a knowledge of the subject second to none. The constant improvements in the different styles of escapes and standpipes made by Mr. Benner have in them the practical solution of the fire-escape problem.

A NOTABLE instance of the growth of our suburban towns and the increasing value of building sites, is evidenced by the proposed erection at Evanston of a block of fine houses by Mr. Holbrook, from plans by Burnham & Root. This is about the first instance where buildings have been erected in blocks in the suburbs about Chicago for residence purposes. The front elevation is unique in style, and the front is composed of pressed brick and slate. That these fine houses are said to be all rented before the foundations are completed, is a decided indication that such houses are soon to be introduced, and, while it deprives the country resident of a lawn about his premises, it affords the landlord a better

rental for his ground than could be obtained from an old-style cottage and a hundred feet of green grass around it.

It is said by good authorities that \$90,000,000 are destroyed by fire in the United States yearly. The greater proportion of this is caused of course by non-fireproof structures. That lath and plaster ceilings are one of the greatest aids to a spreading fire in a building is beyond question; but while the material is cheap it will always be used by those who build cheap and do not count the risk of fire. The Clinton Wire Cloth Company, of Clinton, Mass., have invented and placed on the market a wire lathing which serves all the purposes of a fireproof wall. It is composed of a network of wire which securely holds the plastering, so that its cracking and falling off is impossible. It is in such shape that it can be applied to any wall, and even roofs can be covered by it and made secure. The cost is an objection only in falsely economical minds. Far better to pay twice the price of a lath and plaster wall and save insurance, for with this new material a substantial wall is secured, and indemnity from its catching fire guaranteed.

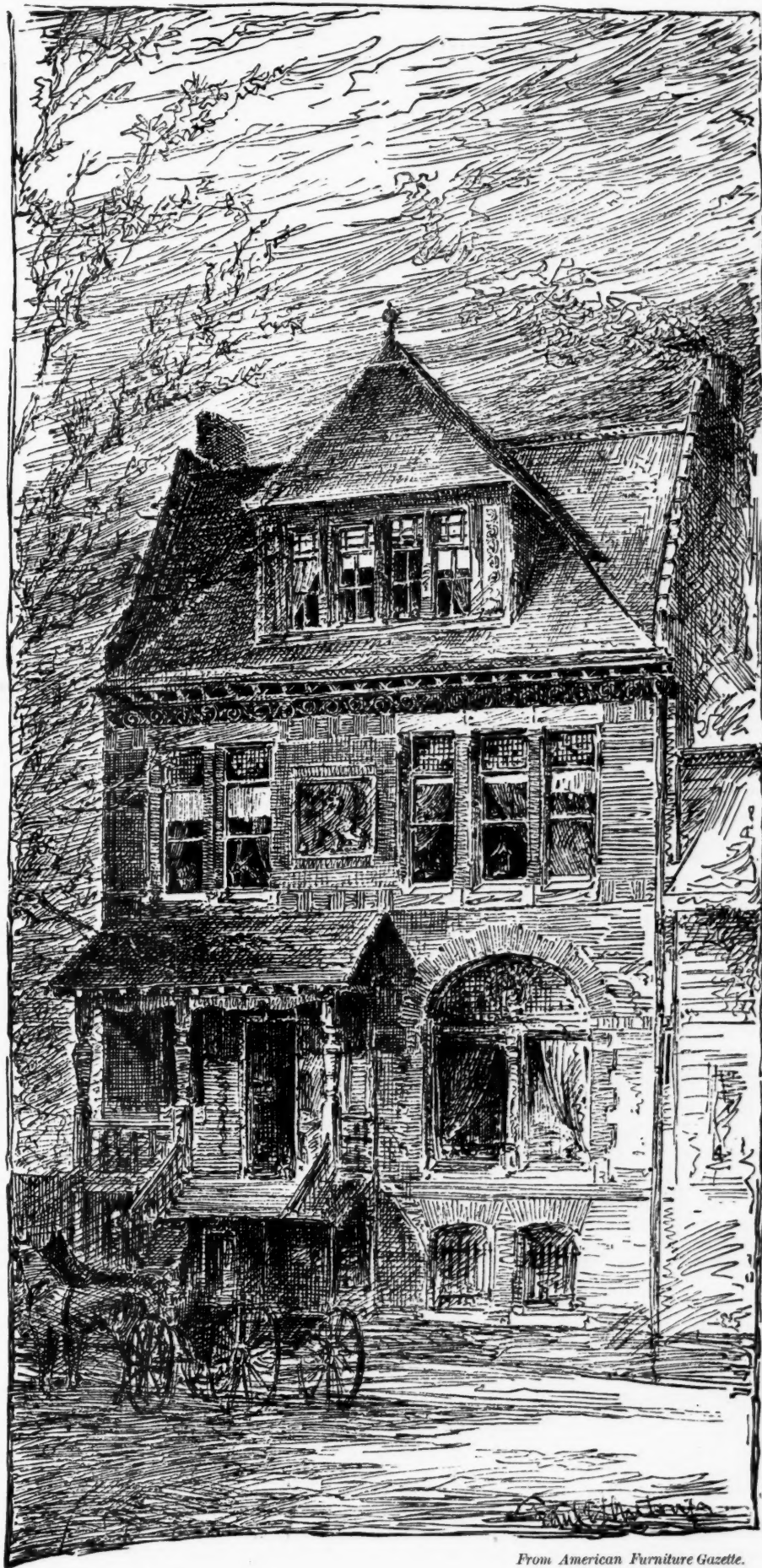
Personal Gossip.

DOWNING VAUX, the son of the prominent New York architect, Calvert Vaux, is suffering from the effects of gas poison, having some months ago narrowly escaped suffocation. The young man recently disappeared and was gone for several days before he was found aimlessly wandering in the country. The young gentleman is said to be affianced to the daughter of Edwin Booth, the actor, and his misfortune is doubly sad on this account. He is twenty-six years old, of exceptional good habits, and a gentleman of high moral worth and social standing, and has already secured some fame as an architect of ability and promise.

W. L. B. JENNEY, one of the INLAND ARCHITECT's regular contributors, has of late been complimented by the publication of his article upon "Suburban Architecture" in *The Artist*, of London, England. This journal is a leading authority in Europe upon art matters, and Mr. Jenney's article, written in his fluent, graceful style, suited well the columns of this conservative journal and gave to this architect the just recognition his talent as a writer and experience as an architect seems to warrant. It might here be incidentally mentioned that the name of W. L. B. Jenney is upon the army records as senior captain, additional aide-de-camp in the regular army, and was assigned to engineer duty on the staffs of Gens. Grant and Sherman. The forts at Cairo and Memphis and many field works, during the rebellion, were built by him, his knowledge of military engineering being part of the architectural education acquired at the Ecole Centrale des Arts, etc., Paris, France. In 1876-7 Mr. Jenney was professor of architecture at the University of Michigan.

THE following interesting piece of biography we clip from the *Southern Lumberman*, and it is a fitting tribute to true architectural genius and honest endeavor. It is headed "John W. Root," and says: "This rising young architect, at present located in Chicago, is a son of Sidney Root, Esq., of Atlanta, Ga., and grandson, on the maternal side, of the late Judge Clark, of the same state. At the close of the war, when John was still a child, he gave evidence of rare talent for music and drawing. He was sent abroad and entered a first-rate grammar school, but was provided as well with masters specially to teach the subjects of which he was so fond. Returning to New York, where his parents then lived, after a few years, he entered the office of a leading architect of that city, and soon astonished his preceptor by his facile drawing and originality of conception. Music supplied his idle hours with a delightful recreation, and by practice added to his natural gifts, he soon became a master of the organ. Upon removing to Chicago some ten years ago, he formed a copartnership with Mr. Burnham, since which time success upon success has attended him, and as some of Chicago's most beautiful buildings are creations of his, monuments to his memory have been unconsciously built which will engrave his name for all time to come upon her historical tablets."

THE art of perspective drawing with the architect is not so much a practical necessity as an accomplishment; but the owner's desire for "a picture to see how it will look," makes the accomplishment, when possessed by a practical architect, valuable. Among those who have acquired a reputation for perspective drawing, both in finished water-colors and in the line of free hand sketches or line drawings for illustration, is Mr. Paul C. Lautrup. This gentleman was for a number of years the chief designer in the United States Architect's office at Washington, and latterly with Messrs. Burnham & Root, of Chicago, where, in the capacity of principal draftsman, he has executed perspective drawings of the many large public buildings and private residences which this firm have had in charge. Mr. Lautrup has now placed his services at the disposal of the public, and opened architectural offices at 157 Washington street. His influence has been felt throughout the field of architecture, and as he has given to the younger architects, through his perspective drawings, a knowledge of the finer effects in architectural work, so has he pleased the general public by showing the pleasing features of proposed or completed buildings and perpetuated their architectural details. The accession of Mr. Lautrup to the general field of architecture is a matter for public congratulation, and deserving of much recognition by the future builders of Chicago and the West.



From American Furniture Gazette.

RESIDENCE OF J. H. WRENN, ESQ., CHICAGO.

Chicago Building Permits.

The following permits for buildings to cost \$2,000 and over, have been issued since the 29th of April:

John Rinder, two-story dwelling, 24 by 60, 3429 Auburn street.....	\$ 3,000
H. H. Castens, three-story dwelling, 38 by 80, 61 Hubbard street.....	10,000
F. Kaersten, two-story dwelling, 22 by 60, 242 Vine street.....	3,200
A. J. Kirkwood, two three-story dwellings, 38 by 62, 336-338 La Salle ave.....	6,500
Charles Schwarze, two-story dwelling, 21 by 60, 345 North avenue.....	3,500
John Kollassa, two-story dwelling, 21 by 56, 30 Bradby street.....	3,600
John Samp, one-story dwelling, 21 by 50, The field near Clybourn street.....	2,800
Charles Breitsprack, two-story dwelling, 22 by 32, 92 Wendell street.....	4,400
Wm. Frost, two-story dwelling, 32 by 70, 419 Dearborn avenue.....	20,000
B. Stowell, two-story dwelling, 20 by 50, 459 Dayton street.....	4,300
E. Sweeney, two-story dwelling, 22 by 50, 453 Taylor street.....	3,000
J. N. Goger, eight two-story dwellings, 132 by 66, Adams, west of Oakley.....	24,000
T. A. Herber, two-story dwelling, 24 by 60, 721 Larabee street.....	7,000
Morley & Ransdell, two two-story dwellings, 40 by 58, 1000-1002 Adams street.....	8,000
A. Crane, four one-story dwellings, 20 by 38, Emerald avenue, between 29th and 30th.....	4,600
Board of Education, three-story school, 86 by 117, Wentworth avenue and 3rd street.....	70,000
James Bachan, two-story dwelling, 44 by 45, 703 W. Chicago street.....	4,500
M. Buckley, one-story dwelling, 34 by 100, 215 Robey street.....	6,000
Joseph Kreal, three-story dwelling, 24 by 60, 423 18th street.....	4,700
J. Anderson, one-story dwelling, 24 by 60, 160 Centre avenue.....	5,000
A. Watson, basement, 100 by 34, 915½ Depuster street.....	3,500
H. R. Wilson, two-story store and dwelling, 21 by 37, 629 Monroe street.....	3,000
Chas. H. Clingman, two-story dwelling, 24 by 39, Washington Boulevard, near Central Park.....	5,000
Wm. Gregory, two-story flats, 22 by 38, 21 Wesson street.....	3,500
H. Geselbracht, five two-story dwellings, 100 by 39, 174-182 La Salle avenue.....	15,000
James Edwards, two-story dwelling, 24 by 60, Wabash avenue, near 34th street.....	7,000
Wm. Hallmann, two-story dwelling, 24 by 39, 21 Marfaret street.....	2,600
M. Burbuck, three-story flats, 22 by 45, 2971 Dearborn street.....	4,000
T. Jabarek, two-story flats, 21 by 56, 739 Loomis street.....	4,000
Thomas Farland, two-story store and dwelling, 22 by 59, 274 Loomis st.....	4,000
B. Schaus, two-story dwelling, 21 by 38, 705 Larabee street.....	2,000
T. Griffin, three-story dwelling, 26 by 50, 819 N. Clark street.....	8,000
C. Geksk, three-story flats, 22 by 69, 179 E. Huron street.....	6,000
James Polka, two-story flats, 21 by 56, 600 Throop street.....	3,000
James Pelko, two-story dwelling, 24 by 40, 820 Allport street.....	2,500
H. Pilgrim, two-story dwelling, 21 by 50, 637 Harrison street.....	3,500
C. Kam, two-story store and flats, 24 by 64, 2604 Wentworth avenue.....	3,500
Thos. Callaghan, two-story dwelling, 20 by 42, 375 Hubbard street.....	2,000
Mrs. M. Griffith, two two-story dwellings, 33 by 70, 973-975 Adams street.....	5,000
Chas. Cahagen, three-story store and flats, 25 by 82, northeast corner of North avenue and Dayton street.....	10,000
O. H. Rocke, two-story barn, 40 by 46, 2442 Michigan Boulevards.....	3,500
Annie Davies, two-story dwelling, 20 by 38, Vernon avenue.....	4,000
John Walt, two-story dwelling, 24 by 76, 3448 Wabash avenue.....	8,000
B. Wolf, two-story barn, 27 by 36, 2448 Wabash avenue.....	2,000
Anson Stager, one-story addition, 26 by 92, 1737 Michigan avenue.....	15,000
A. Cumes, two-story dwelling, 21 by 56, Hickory and Judd streets.....	3,700
Jas. S. Kirk, five-story flats, 60 by 90, North Water near Pine street.....	25,000
C. W. Marks, one-story addition, 27 by 91, 61 East Washington street.....	4,000
Wm. Scott, two two-story dwellings, 33 by 48, 877-839 Adams street.....	5,600
Wm. Dyncewize, one-story dwelling, 25 by 60, 530 Waller street.....	2,500
A. R. Gordon, two-story flats, 22 by 48, 1177 Jackson street.....	2,500
Joseph D. Tomaso, four-story addition, 20 by 20, 214 Sangamon street.....	2,500
Chas. Busom, two-story dwelling, 20 by 50, 513 Sedgwick street.....	4,800
R. Hill, three-story dwelling, 25 by 80, 254 Ogden avenue.....	2,000
John Rich, two-story dwelling, 22 by 60, 14 Evans street.....	3,000
Theo. Johnston, two-story dwelling, 24 by 60, 53 W. State street.....	2,500
Carl Fenz, two-story dwelling, 22 by 56, 738 Girard street.....	2,500
Blomgren Bros. & Holersburg, four three-story flats, 100 by 69, 456 to 462 Hurlbert street.....	35,000
Edward Burk, two-story dwelling, 22 by 40, 500 Twenty-sixth street.....	3,000
John Murphy, two-story dwelling, 24 by 32, 430 W. Indiana street.....	2,200
J. Brybejl, two two-story dwellings, 48 by 45, Western avenue and Armitage avenue.....	4,500
E. Schlick, four-story store and flats, 25 by 94, 437 N. Clark street.....	12,000
John Roula, two-story dwelling, 20 by 32, 482 Union street.....	2,500
F. C. McKay, two-story dwelling, 22 by 26, 326 Ashland avenue.....	3,000
Mary E. Lands, two-story dwelling, 64 by 50, 292 Horntage avenue.....	9,000
J. B. Quinn, two-story dwelling, 22 by 23, 959 Polk street.....	2,000
Mathews & Cornwall, two three-story dwellings, 50 by 67, 648-650 Monroe street.....	15,000
John Rode, two-story dwelling, 20 by 67, 286 Hastings street.....	5,200
E. B. Wheelock, three-story flats, 25 by 76, 514 Jackson street.....	7,000
Fred Crumbaugh, three-story flats, 150 by 58, northeast corner College and Rhodes streets.....	75,000
J. L. Hocibe, two story dwelling, 26 by 55, 900 Ashland avenue.....	9,000
A. Filhanck, three-story flats, 22 by 60, 436 South Jefferson street.....	5,400
V. Kindera, three-story dwelling, 22 by 78, 572 Center avenue.....	6,000
C. B. Formed, two-story stable, 96 by 36, Pearson, near Pine street.....	5,000
Wm. Shlotterbach, two-story-dwelling and store 23 by 62, 455 13th street.....	4,000
Henry Lift, four-story store and dwelling, 117 by 74, 407-417 North Clark street.....	35,000
H. W. Martin, two two-story dwellings, 40 by 40, 137-139 17th street.....	4,000
M. J. Relph, two-story dwelling, 22 by 48, 33 Congress street.....	2,500
H. H. Aldrich, two two-story dwellings, 38 by 60, 194-196 Ashland avenue.....	12,000
M. Doorak, three-story dwelling, 22 by 68, 136 Taylor street.....	6,000
F. Conrad, two-story dwelling, 20 by 67, 539 West 18th street.....	5,200
C. J. Singer, two-story barn, 73 by 64, 116-124 Lincoln avenue.....	9,000
Elizabeth Klaner, two-story dwelling, 28 by 60, 596 La Salle avenue.....	7,000
N. G. Langlois, two two-story flats, 48 by 56, Hensnoy, near Hoyne street.....	15,000
P. H. Rice, three-story flats, 44 by 65, 46-48 South Carpenter street.....	5,000
J. Roed, two-story flats, 21 by 56, 392 Water street.....	2,000
Chas. Dittmen, two-story dwelling, 20 by 40, 60 13th street.....	2,000
O. Johnson, three-story flats, 23 by 72, 81 West Huron street.....	4,400
W. B. Ogden's estate, four two-story dwellings, 96 by 73, 380-386 Ontario street.....	13,000
Thomas Mahoney, two-story dwelling, 22 by 40, 3807 Dearborn street.....	3,000
Howling & Crawhurst, two one-story cottages, 20 by 32, 32d and Wallace streets.....	2,000
F. Hardt, two-story dwellings, 25 by 76, 3830 State street.....	5,700
F. Mackan, two-story dwelling, 22 by 54, 124 Polk street.....	3,700
Reynolds & Dale, three-story store and dwelling, 74 by 62, 2719-2723 State street.....	24,000
G. W. Stanford, three two-story dwellings, 50 by 50, 416-418 Jackson street.....	9,000
Wm. Lang, three-story store and flats, 72 by 65, 2628-2634 State street.....	15,000
S. S. Greely, three-story dwelling 30 by 42, 56 Bellevue place.....	7,000
Chas. T. Foerster, two-story dwelling, 40 by 60, 524 Hubbard street.....	8,500
S. Baragwanath, two-story shop and dwelling, 24 by 56, 1253 Milwaukee avenue.....	4,000
C. Schumacher, one-story cottage, 23 by 40, 519 Thirteenth street.....	2,000
C. Lasman, four-story store and dwelling, 25 by 80, 416 Halsted street.....	6,500
L. C. Kuhnert, two four-story stores and dwellings, 50 by 80, 418-420 Halsted street.....	13,000
H. R. Sortman, four two-story dwellings, 80 by 38, 323-329 Leswirs street.....	8,000
Chicago Board of Education, three story school, 117 by 86, Leavett and Lexington streets.....	80,000
E. F. Johnson, two-story store and dwelling, 24 by 64, 1298 Lake street.....	2,000

E. P. Palmer, two-story dwelling, 30 by 60, 2839 Prairie avenue.....	12,000
Jas. Hauska, two-story dwelling, 20 by 20, 113 Brown street.....	3,000
John Mountain, three-story flats, 25 by 70, 269 Superior street.....	8,000
W. E. Wimbald, two-story dwelling, 25 by 48, Astor near Scott street.....	6,000
Wm. Griffiths, three-story flats, 22 by 64, 598 North Clark street.....	7,000
W. B. Murtha, two-story store, 20 by 30, 124 South Halsted street.....	2,000
J. H. Swan, two-story dwelling, 43 by 79, 2623 Michigan avenue.....	30,000
Wm. Schall, two-story dwelling, 21 by 70, 772 North Robey street.....	3,000
A. Newman, two-story dwelling, 21 by 93, 201 Burling street.....	5,000
G. Hafemuistor, two-story dwelling, 21 by 68, 43 Bissell street.....	3,500
Chas. Badell, two-story dwelling, 21 by 68, 45 Bissell street.....	3,500
Wm. Parson, three-story dwellings, 2243 Michigan avenue.....	7,000
I. Franks, two three-story dwellings, 48 by 55, 482-484 Indiana avenue.....	12,000
H. C. Brown, two-story dwelling, 22 by 54, Belden near Dayton street.....	4,000
J. C. Anderson, two-story dwelling, 32 by 30, Polk, near Ogden avenue.....	3,000
Tobias Samuelson, three-story flats, 49 by 50, Center ave. and Ohio street.....	10,000
H. Holt, two-story dwelling, 20 by 70, 406 Noble street.....	3,500
Henry Schroeder, two-story dwelling, 20 by 70, 335 North Ashland avenue.....	3,000
Bender Bros., two-story dwelling, 20 by 70, 681 Chicago avenue.....	3,000
G. B. Lathrap, two-story flat, 22 by 45, Webster near Lewis street.....	2,600
C. K. Beckett, two-story dwelling, 22 by 62, 3640 Indiana avenue.....	3,000
M. O'Connell, two-story flats, 21 by 60, 300 West 14th street.....	3,000
Hel. Jones, two-story dwelling, 22 by 52, 481 Warren avenue.....	3,000
Wm. Juelsdorf, two-story dwelling, 22 by 47, 1012 West 12th street.....	2,500
Frank O. Ken, two-story dwelling, 24 by 80, 700 Noble street.....	5,000
Wm. Hoyton & Co., five-story store, 28 by 55, 11 Michigan avenue.....	5,000
C. Barton, two-story store and dwelling, 22 by 68, 402 North Huron street.....	3,000
Julius Zittell, three-story flats, 50 by 70, 641-643 Harrison street.....	12,000
A. Maguson, three-story flats, 30 by 40, 8 West Ohio street.....	2,500
M. Borts, two-story dwellings, 20 by 60, 878 Twenty-first street.....	3,000
John Ehlers, two-story dwelling, 20 by 30, 736 Chicago avenue.....	2,000
John A. Lind, three-story store and dwelling, 42 by 100, Franklin and Ontario streets.....	20,000
Aug. Bright, two-story dwelling, 21 by 50, 297 Loomis street.....	4,000
Christ Holz, two-story dwelling, 20 by 50, 165 Webster avenue.....	2,500
J. Sidlack, two-story dwelling, 21 by 57, 59 Fisk street.....	3,400
F. Prindville, two-story dwelling, 20 by 60, 110 Cornell street.....	7,000
E. Land, three-story store and dwelling, 24 by 60, 3614 State street.....	4,500
E. Oleson, two-story dwelling, 19 by 5, 26 Lemoyne street.....	2,500
Hammill & Congdon, three-story dwelling, 50 by 70, 273-275 La Salle street.....	15,000
Christian Reformed Church, two-story dwelling, 22 by 41, 523 West Fourteenth street.....	3,000
M. E. Johnson & Co., two-story barn, 52 by 64, rear 34 West Twelfth street.....	2,000
William Hunkel, two-story dwelling, 22 by 48, 451 West Twelfth street.....	4,500
Barrett & Kemball, two-story barn, 32 by 69, 153 Hooker street.....	3,000
W. P. Smith, six two-story dwellings, 117 by 45, Irregular, 15,000 cubic feet, Rhodes avenue and Thirty-second street.....	18,000
Aug. Kuha, two-story dwelling, 22 by 50, 151 Fowler street.....	3,500
Ryan Bros., three-story store and dwelling, 25 by 57, 1199 Milwaukee ave.....	3,500
Fred. Krehn, two two-story stores and dwellings, 48 by 80, 484-486 Larabee street.....	11,000
A. Kaiser, two-story dwelling, 21 by 60, 148 Maxwell street.....	3,500

One hundred and fifty-three permits were issued for buildings to cost less than \$2,000. The total number since April 20th was 319, total cost aggregating \$1,326,150.

Lumber Notes.

ABOUT 4,000,000 feet of logs were got in on Beaver creek, Michigan, last winter.

CHICAGO handles one-twelfth of the entire lumber product of the United States.

PENSACOLA, Florida, shipped upward of 19,000,000 feet of lumber during the past year.

MR. G. W. HOTCHKISS, secretary of the Lumberman's Exchange, is seeking rest in Europe.

LAKE freights for lumber from Manistee to Chicago is \$1.75; from Menominee, \$1.75; from Ludington, \$1.50 and \$1.62½; from Grand Haven and Muskegon, \$1.37½.

MR. B. L. ANDERSON, president of the B. L. Anderson Company, expects to sail on the Cunard steamship Servia, from New York, for a visit to his native land, and will probably be at his post again on or before July 1.

THE last lumber dealers' lunch was given by Martin Ryerson & Co., April 27. Messrs. Ballard, Ryerson, Dean, Carpenter, and other veterans in the lumber trade, recalled some of the early anecdotes and incidents of the business.

A RECENT test of a new method of rendering wood non-inflammable, was made in New York city. The preparation is a chemical one, the ingredients not being made public. Georgia pine charged with it and subjected for thirty minutes to a heat of 2,000 degrees, was only slightly charred. One of the inventors claims the chemicals will protect the wood a number of years.

THE quotations for lumber in carload lots is: clears and selects, two-inch plank, from \$30 to \$47; southern pine flooring, \$30 to \$35; one-inch finishing, \$33 to \$45; twelve-inch stock boards, \$35 to \$39; dressed and matched flooring, \$15 to \$36; siding, \$18 to \$21.50; common and cull boards, \$11 to \$14; timber 4 by 4 to 8 by 8, \$14; two-inch joist and scantling, \$13 to \$15; shingles, \$2.90 to \$3.10; lath, \$2.60.

THE sixth annual meeting of the National Association of Lumber Dealers convened at the Tremont House, in Chicago, on the 9th inst. A. H. Trego, of Hoopston, Ill., presided. This association, which has a membership of over 550 retail dealers in Illinois, Iowa, Wisconsin, Ohio, Indiana, Minnesota, Kansas, Nebraska, Colorado and Dakota, has for its object "the protection of its members against wholesale dealers and manufacturers to consumers, and giving such other protection to its members as may come within the limits of a cooperative association." Seventy-five members were in attendance. General business was transacted and the meetings were made semi-annual, the next to occur the first Wednesday in December, 1883. The officers elected for the year were A. H. Trego, Hoopston, Ill., president; N. H. Pike, Chenoa, Ill., vice-president; H. M. Dingfelder, Hamilton, Ohio, D. E. Steiger, Cameron, Mo., N. F. Dalton, Vincennes, Ind., directors.

New Patents.

- 277,156, Fire-Escape Tower. Semon J. Pardessus, Brooklyn, N. Y. Filed February 26, 1883. (No model.)
 275,799, Window-Refrigerator. Eugene H. Benoist, St. Louis, Mo.
 275,802, Sewer-Inlet. Edward Z. Collings, Camden, N. J., and Charles F. Pike, Philadelphia, Pa.
 275,803, Sewer-Flushing Device. Edward Z. Collings, Camden, N. J., and Charles F. Pike, Philadelphia, Pa.
 275,815, Screw-Tap. Cicero R. C. French, Providence, R. I.
 275,816, Fire Escape. David Friedheim, New York, N. Y.
 275,832, Door Brace or Stay. Philo J. Lockwood, Auburn, Ind.
 275,837, Bath-Room. Jas. C. McLaughlin, Cincinnati, O.
 275,838, Water-Closet. Jas. C. McLaughlin, Cincinnati, O.
 275,841, Apparatus for making Roofing Fabric. Henry M. Miner, Pittsburgh, Pa.
 275,852, Sliding Car-Door Hanger. Edwin Prescott, Arlington, Mass.
 275,857, Hydraulic or other Elevator. Gustavus N. Reiff, Philadelphia, Pa.
 275,860, Bit-Brace Fastener. Elmore E. Rose, Springfield, Mass.
 275,895, Fire-Escape. Haskett D. Eastmann, Minneapolis, Minn.
 275,900, Bowl for Water-Closets. Joseph J. B. Frey, New York, N. Y.
 275,903, Sash-Holder. Frederick H. Gross, Deer Isle, Me.
 275,905, Fire-Escape Ladder. Lucius Hamlin, Sebago Lake, Me.
 275,911, File-Handle. Geo. W. Hill, Stark's Point, Wash.
 275,933, Fireplace. Garner L. Morrison, Brooklyn, N. Y.
 275,950, Elevator. Bradshaw Sewall, Farmington, Me.
 275,962, Fire-Escape. William Ulrich, Rock Falls, Ill.
 275,978, Strainer for Water-Faucets. Geo. F. Barrington, San Francisco, Cal.
 276,000, Spring-Hinge. John K. Clark, Buffalo, N. Y.
 276,030, Fastener for the Meeting-Rails of Sashes. Hiram T. King, Rochester, N. Y.
 276,057, Fire-Escape. Daniel Luscher, Cincinnati, O.
 276,076, Elevator. Wm. H. Ridgway, Coatesville, Pa.
 276,081, Permutation-Lock. Rutus Sarlis and Virgil C. Holland, Gainesville, Texas.
 276,082, Window-Guard. Bertha Schmitt, Brooklyn, N. Y.
 276,085, Metallic Roofing. Emil Severin, Aurora, Ind.
 276,090, Fire-Escape. Alfred W. Sperry, Hartford, Conn.
 276,102, Chimney-Cap. James H. Watt, Barnesville, O.
 276,106, Disinfecting Water-Closets. Horace E. Wells, Cleveland, O.
 276,217, Sewer-Gas Trap. Ambrose Blatchly, San Francisco, Cal.
 276,219, Window-Frame. William Boisen, Luzerne, Iowa.
 276,228, Brick-Machine. Israel Cullen, Pittsburgh, Pa.
 276,241, Portable Hanging Scaffold. John H. Hanavan, San Francisco, Cal.
 276,247, Mallet. Solon G. Howe, Detroit, Mich.
 276,255, Door-Latch. Philip Mathes, Idlewood, Pa.
 276,261, Urinal. James McGinley, Chicago, Ill.
 276,293, Lime-Wash for Coating Buildings, etc. Joel H. Sharpless, Kennett Square, Pa.
 276,325, Sliding Door-Pull. William H. Andrews, New Haven, Conn.
 276,332, Elevator. Cyrus W. Baldwin, Chicago, Ill.
 276,333, Door-Latch. Judson A. Baldwin, Shelburne, Vt.
 276,342, Door-Latch. Samuel W. Billingsley, Woodberry, Md.
 276,377, Deodorizing and Disinfecting Water-Closets, etc. Edward Z. Collings, Camden, N. J.
 276,383, Fire-Escape. David Crowley, Washington, D. C.
 276,386, Fume-Arrester for Chimney-Flues. Max Freudenberg, Ems, Germany.
 276,396, Elevator. William F. Hall and Philip G. Hubert, New York, N. Y.
 276,409, Sash-Holder. Numon N. Horton, Kansas City, Mo.
 276,412, Shingle-Machine. Pleasant R. Houpe, Oak Forest, N. C.
 276,416, Window-Sash. Benjamin Hurtubes, Rahway, N. J.
 276,423, Chimney-Protector. John G. Keller, Monticello, Ill.
 276,436, Float for Water-Closet Valves. Henry S. Lord and Robert E. Day, Hartford, Conn.
 276,468, Fire-Escape. Wesley Rees, Memphis, Mo.
 276,470, Disinfecting Apparatus for Water-Closets. Charles S. Rice, Jr., Chicago, Ill.
 276,476, Boring and Tenoning Machine. William H. Ryan, Belton, Tex.
 276,481, Water-Elevator. William M. Scott, Lockport, N. Y.
 276,491, Elevator. Charles Lievens Soye, Brussels, Belgium.
 276,499, Method of Treating Lumber. Ephraim J. Story, Washington, D. C.
 276,507, Locking-Latch. George H. Van Winkle, Hornellsville, N. Y.
 276,509, Sash-Weight. Reuben Vosburgh, Oregon, Ill.
 276,511, Spike. Abram Wakeman, Jr., New York, N. Y.
 276,540, Hinge. Thomas L. Rivers, Mount Vernon, Ill.
 276,541, Wire Nail. William D. Sloan, Brooklyn, N. Y.
 276,544, Brick and Tile Machine. Garrett Van Winkle, Avon, Ill.
 276,549, Brick and Tile Machine. James C. Anderson, Highland Park, Ill.
 276,563, Shutter and Fastening therefor. Jonas Cooper, Washington, D. C.
 276,585, Fire-Escape. George Hofmann, Jr., and Austin D. Hoffmann, Chicago, Ill.
 276,587, Store. James A. Houston, Boston, Mass.
 276,610, Fire-Escape. George W. Lindsey and Harry W. Raleigh, Baltimore, Md.
 276,622, Vise. Jacob A. Painter, Arthur, Ill.
 276,623, Locking-Latch. Frederick Palmer, Hampton, Va.
 276,626, Door-Opener. Martin L. Powell, New Castle, Ind.
 276,654, Eaves-Trough Hanger. Jonathan P. Abbott, Cleveland, O.
 276,669, Fire-Escape. William F. Clerik, Boston, Mass.
 276,715, Fire-Escape Ladder. James Riley, New York, N. Y.
 276,730, Fire-Escape. Albert P. Sturtevant, Norwich, Conn.
 276,736, Fire-Escape. Henry B. Walbridge, Brooklyn, N. Y.
 276,761, Incidence-Window. Friedrich Bredehorst, Bremen, Germany
 276,767, Automatic Elevator-Hatchway Guard. Joseph Byers, Newtonville, and George Taylor, Everett, Mass.
 276,784-5, Elevator. Levi Daso, Pioneer, O.
 276,815, Fire-Escape. Gustavus Heidel, St. Louis, Mo.
 276,831, Windmill and Derrick. Isaac W. Lamb, Parshallville, Mich.
 276,849, Safety-Apparatus for Elevator-Platforms. Volney W. Mason, Providence, R. I.
 276,858, Door-Lock. Alphonse Montant, New York, N. Y.
 276,861, Dry-Pressing Brick-Machine. Henry B. Morrison and George Willett, Motley, Minn.
 276,886-7, Window-Sash. Alexander Rudolph, San Francisco, Cal.
 276,913, Sash-Weight. Gary B. Smith, Denver, Col.
 276,942, Knob-Attachment. Robert S. Watson, Bay City, Mich.
 276,958, Spring-Hinge. Charles B. Clark, Detroit, Mich.
 276,969, Fire-Escape. Arthur C. Hitchcock, Decorah, Iowa.
 276,973, Fire-Escape. George Kelly, Chicago, Ill.
 277,053, Device for Lighting Gas by Electricity. John B. Odell, Chicago, Ill.
 277,333, Iron Cross-Tie. John Parr, Humboldt, Neb.
 277,335, Splice for Telegraph Cables. William R. Patterson, assignor to Western Electric Company, Chicago, Ill.
 277,157, Take-up Box for Shaft-Journals. Frank I. Pearce, assignor to Link-Belt Machinery Company, Chicago, Ill.
 277,158, Bench Vise. Granville W. Pittman, Keokuk, Ia.
 277,060, Machine for Reducing Wood to Paper Pulp. Joshua Prickett, assignor of two-thirds to W. S. Prickett and A. H. Mellen, Marinette, Wis.
 277,351, Horizontal Guide for Saws. James J. Sadler, McBrides, Mich.
 277,026, Saw-Handle. Joseph Hall and L. St. Andre, Clear Lake, Wis.
 277,073, Safety Attachment for Elevators. Peter J. Singer, Chicago, Ill.
 277,363, Car-Coupling. Earl S. Smith, Chase, Mich.
 277,364, Saw Jointer. William H. Smith, Upper Alton, Ill.
 277,212, Elevator. Jacob B. and W. M. Brimer, Richland Centre, Wis.
 277,000, Railway Sleeper and Chair. Thomas J. Bronson and A. Armstrong, Jacksonville, Ill.
 277,216, Horse-Power and Capstan. Charles C. Brush, Crystal, Ia.

- 277,407, Furnace. Gustavus E. Buschick, assignor of one-half to C. E. Gregory, Chicago, Ill.
 277,109, Washboard. Edward Butzbach, Evanston, Ill.
 277,111, Window-Screen. John W. Carman, Fort Atkinson, Wis., assignor of part to E. Terhune, Chicago, Ill., and G. F. Patterson, Fort Atkinson, Wis.
 277,224, Rubber Dam-Clamp. John P. Carmichael, Milwaukee, Wis.
 277,145, Line-Changer for Telephonic and other Electrical Purposes. Charles H. Lothrop, Lyons, Ia.
 277,198, Transmitting Telephone, Receiving Telephone. Myron L. Baxter, Aurora, Ill., assignor by mesne assignments to Overland Telephone Company.

Trimmings and Shavings.

ACCORDING to the *Wiener Gewerbe Zeitung*, a chemist of Vienna has invented a new kind of glass, which contains no silice, potash, soda, lime or borax. In appearance it is said to be a brilliant crystal, perfectly transparent, white and clear, and is susceptible of being cut and polished. It is completely insoluble in water, and is not attacked by fluoric acid, but can be corroded by hydrochloric and nitric acids. The most important feature that it possesses is that, when in a state of fusion, it adheres to iron, bronze and zinc.

THE National Museum at Washington is supplied with electric apparatus in all its completeness and variety. It is illuminated with the electric light. A system of telephones and electric call-bells furnishes communication between all the rooms in the immense building. Electricity supplies the light to the photographic laboratory, so that the clouds never interfere with work. Sixteen electric clocks indicate meridian time to the occupants of the building. An electric register marks the regular rounds of the watchman, and the raising of any window or opening of a door is at once indicated to the janitor by an electric annunciator. The same system is being extended so as to call prompt attention to the opening of any case in the museum.

THE special feature of the new observatory at Columbia College will be a paper dome. "This will be the fourth paper dome in the world." The first one made is at the Troy Polytechnic Institute, the second at West Point, and the third at Beloit College. While that at West Point is the largest, the one at Columbia College will be the best in construction and arrangement. The method used in the manufacture of the paper is kept a secret, the makers using a private, patented process. The dome is made in sections—semi-lunes, as they are technically called. There are twenty-four of these sections. They are bent over toward the inside at the edges, and bolted to ribs of wood. The thickness of the shell is only three thirty-seconds of an inch, but is as stiff as sheet-iron. On one side of the dome is the oblong opening for the telescope, and over this is a shutter (likewise of paper, but stiffened with wood lining) which slides around on the outside of the dome. "The whole dome is so light that the hand can turn it. The inside diameter is twenty feet and the height is eleven feet. The floor of the observatory is one hundred feet above the ground; because of the tall buildings around it. The building is rapidly approaching completion, and the dome is already in place."

Our Illustrations.

The illustration on page 57 is a residence built for J. H. Wrenn, Esq., by Messrs. Burnham & Root, architects. The perspective was drawn by Paul C. Lautrup. The building is of brick, with terra-cotta ornamentation. A large quantity of stained glass is used for interior and exterior effect, and the woodwork is preserved in its natural colors.

Page 51, Medical College of the State University of Iowa, at Iowa City, Iowa; John C. Cochrane, of Chicago, architect. The building was completed during the past fall at a total expenditure of \$30,000. The building is 60x84 feet, four stories and basement in height. The walls are of pressed brick with stone trimmings, and the basement walls are of rock-faced stone. The interior is finished throughout in an appropriate manner. In the basement are two large anatomical rooms, besides a reception room. From this reception room to the fourth floor is an elevator, with doors at each story. The fourth story is entirely occupied by a dissecting-room, lighted by windows on the sides and also from a skylight above. The other floors are devoted to the lecture-rooms, professors' rooms, microscopical rooms, laboratory, museum, etc. These are well arranged and abundantly lighted. A commendable feature of the interior arrangement are the stairways, those for the students being entirely separate from the main entrance. The heating is accomplished by steam, both direct and indirect radiation being used. The plans of the principal floors are given.

Exchanges Received.

The Decorator and Furnisher, New York; *The Mississippi Valley Lumberman*, Minneapolis, Minn.; *The Painters' Magazine*, New York; *Building*, New York; *The American Furniture Gazette*, Chicago, Ill.; *American Architect and Building News*, Boston, Mass.; *The Watch-Maker and Metal-Worker*, Chicago, Ill.; *The Sanitary News*, Chicago, Ill.; *The Carpet Trade and Review*, New York; *The Furnisher*, Chicago, Ill.; *Dubuque Trade Journal*, Dubuque, Iowa; *The Carpenter*, New York; *The Artist*, London, Eng.; *The Southern Lumberman*, Nashville, Tenn.; *The Indicator*, Chicago, Ill.; *Lumberman's Gazette*, Bay City, Mich.; *Southern Manufacturer and Builder*, Louisville, Ky.; *The Painter*, New York; *Art Interchange*, New York; *U. S. Monthly*, Chicago.

New Publications.

MODERN PERSPECTIVE: A treatise upon the principles and practice of plane and cylindrical perspective. By WILLIAM R. WARE, professor of architecture in the school of mines, Columbia College. James R. Osgood & Co., publishers. In Chicago, S. A. Maxwell & Co. Retail price \$5.

This work consists of a series of papers upon perspective, which appeared originally in the *American Architect and Building News*, revised and having several additional chapters and pages of illustrations. The subject is treated in a simple, practical and comprehensive manner, and much is made clear that is not commonly understood. Supplementing the discussion of plane perspective by several chapters on cylindrical or panoramic perspective, is a feature of value to the landscape painter or the historical painter, as well as to the architect and draughtsman. The fresco painter and the scene painter are instructed in the ways for limiting the space required for making drawings in perspective, enabling them to adapt a proportionally large picture to the size of the room in which it is to be produced. In this connection the views of the author are novel and interesting. The book is accompanied by a portfolio of valuable plates illustrating the text, and greatly facilitating the study. All who have to do with perspective drawing, will find in this book much to interest and instruct.

PRACTICAL CARPENTRY, a guide to the correct marking and laying out of all kinds of carpenters' and joiners' work with solution of the various problems in rip-roofs, gothic work, centering, splayed work, joints and jointing, hinging, dovetailing, mitring, timber-splicing, hopper work, skylights, raking mouldings, circular work, etc., to which is prefixed a thorough treatise upon carpenters' geometry. By Fred T. Hodgson. Industrial Publication Co. publishers, New York, 1883. Price \$1.

To give a description of this little work would be to write a treatise incorporating nearly every fact and figure that comes to the carpenter in a life's experience, and the information is so compact, clear and concise that the reader can understand the explanations of the most difficult problems as clearly as if his boss or his benchmate were laying down the law and emphasizing it with a hammer on the end of a jackplane, and when the subject is finished it is like the jackplane after the hammering—it is set. Mr. Hodgson, in his works upon carpentry and its individual branches, has the happy faculty of making his explanation perfectly clear, and displays not only a most thorough knowledge of the subjects handled, but a knowledge of the wants of the class he is seeking

to instruct and benefit. Like "The Steel Square and its Uses," "The Builders' Guide and Estimator's Hand-book," this volume of "Practical Carpentry" is all, and a great deal more, than it pretends to be. With its varied and important information upon questions that come to the workman in some shape every day, it should find a place in the tool-chest of every carpenter in the country.

AMERICAN COTTAGES, consisting of forty-four large quarto plates containing original designs of medium and low-cost cottages, seaside and country houses, etc., together with form of specification for cottages. William T. Comstock, New York.

These designs, of which a majority have been published in a building journal issued by the publishers, have been carefully compiled in quarto form, and in an illustrative way exhaustively discuss the subject of cottages at moderate cost. There is a great demand throughout the country, the West particularly, for just such designs. In many towns an architect is not available, and if he is, the multiplicity of designs will materially aid in the selection of a plan suiting the needs of the prospective occupant. The plans are from the hands of some of the best known and talented architects, and saying that each plan has greater or less merit as the outline of a convenient and well-arranged house, is but doing justice to the gentlemen whose professional services have from time to time been required to solve just such problems as some of these cottages present, viz: How to obtain a neat, well-arranged and convenient cottage at a moderate cost. As a collection of solutions to the interrogation of all prospective builders, we heartily commend "American Cottages."

The publishers of *The Art Interchange* announce that the "Notes and Queries Department" of that journal is growing so rapidly in popularity that it is somewhat difficult to find space for answers to all the questions addressed to it. They have decided, therefore, to issue an eight-page extra on May 22, thirteen columns of which will be given up to notes, queries and answers, treating, among other subjects, on artistic furnishings, embroidering, repousse work, wood carving, decorative oil painting, stencilling, painting on china, and leather work. This department is of great practical benefit to all interested in art. The extra will be furnished free to regular subscribers of the *Art Interchange*, and can be bought by others through news companies for ten cents, or by addressing the *Art Interchange*, 140 Nassau street, New York.

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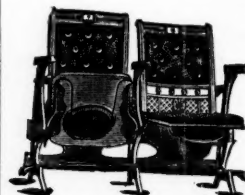
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