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THE INLAND ARCHITECT AND BUILDER

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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.

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.

SUBSCRIBERS SWINDLED.

Numerous letters have come to us from New York, Boston, St. Louis, and other points, complaining that the writers had subscribed for THE INLAND ARCHITECT AND BUILDER and not received it. Investigation shows that a swindler named W. H. Gault has been personating in the East R. C. McLean, editor of this paper, and he has harvested a large number of subscriptions. Gault is rather under medium height, has light complexion, and a peculiar, one-sided appearance of the mouth. In St. Louis a number of subscriptions have been taken by a fraud signing himself W. H. Barker, agent. He is described as being about 45 or 50 years old, some six feet tall, and with grayish hair and beard, and a smart talker. These men are impostors, and are wholly unauthorized to represent us in any way. Subscribers should insist on canvassers showing satisfactory credentials from this office or from responsible subscription or news companies. If circumstances are suspicious, send subscription direct to this office.

FROM well-authenticated information it was manifest that an imperative necessity existed for a change in the method of providing the government with buildings, and we were hopeful that the now progressing investigation of the Supervising Architect's office at Washington would prove to be something more than a mere gloss-over of known abuses. It is quite clear this hopefulness was based upon a delusion, as the how-not-to-do-it policy of the Secretary of the Treasury is so well adapted to a first-class veneering job, that it will not be his fault if everything that needs to be covered up is not so thoroughly hidden the people will never know how greatly they have been outraged in the squandering of millions of dollars on meretricious buildings, and for work that never was done. Nevertheless, with all the handicapping it has not been possible to hide the fact that abuses have abounded in the Supervising Architect's office, and of so flagrant a character, that should the President, without waiting for the assembling of Congress to provide a better way and means, in his indignation at the offenses instantly dismiss the whole outfit, from Supervising Architect down to the humblest clerk, and "shut up the shop," the people would not become alarmed at any assumption of despotic power, but we apprehend, *au contraire*, would hold the act in livelier remembrance than any other of his administration. This being effected, as we have suggested, the supervision of the government's architectural affairs can be placed in the hands of the engineering corps, and the architects and contractors employed from among those most reputable, and by the same method as pursued in the designing and erection of the buildings of private individuals or corporations.

THE growing evil of the times, catered to and seemingly fostered by all classes of business in the fabrication of "cheap" wares—educating the people to take advantage of their fellows by leading them to look for a more than fair equivalent for their money, has made no more deplorable display of its demoralizing effects than in the field of architecture and building. The truth of this allegation needs no other confirmation than will be found in a casual examination of the buildings that have been erected in this country within the past few years. In Chicago, which in this respect is probably no worse than many other cities, we may safely say there are thousands of houses greater wrecks after a five or six years' existence than a century's use and exposure could possibly have made them had they been honestly constructed.

Unquestionably, in many instances, these failures are the product of an unfortunate compromise of planner and builder with the cupidity of men who wish for large returns in rentals from small investments, and speculators in real estate who project such architectural deceits for "equities," or to dispose of adjoining lots at prodigious prices. Yet, the most of them are the result of ignorance and a false economy in the owners, who subsequently learn through the continual round of expense attendant on the maintenance of their questionable shape of habitation of vermin or human, the sad lesson of their folly.

Since the legislation of the day in regard to this admitted evil does not appear, either through the dereliction of those whose duty it is to see the law is executed or from the inadequacy of the law itself to stay it, it devolves upon the architects and builders, through the channels of

"associations," to stand up as an uncompromising barrier between the people and this cupidity and ignorance, and decline hereafter to be a party, in any sense, to any other than honest building.

Such a line of action would bring about an honorable competition that would effectively assail the evil in its stronghold. With architects inspired only with a spirit of just pride and emulation; diligent to see their plans and designs carried out in their fullness; knowing the market value of the material entering into the composition of buildings, as well as the market price of labor, and capacitated to discriminate between legitimate bids and those incipient of fraud; rejecting such as failed to recognize a reasonable profit to the contractor for honest work, would make it in the future impossible to perpetuate those architectural enormities now raising on every hand—a disgrace to our civilization.

Apparently the only hope of the country for a correction of this great evil is by a compulsory education in building ethics at the hands of honorable architects and builders, who, by a severe disciplining of the unworthy, whenever and wherever an infraction of the law of honesty in building obtains, would speedily end it.

Certainly it is high time that some adequate steps were taken in this direction.

THE responsibility or liability of the actual owner of realty to a non-tenant who may be injured through any defectiveness of the premises has just been decided in Texas. An action for damages for injuries suffered in crossing a defective passage-way in a building was brought against the landlord. This passage-way was on the second story of the building, which was rented to different persons for offices and bedrooms, and the plaintiff was legally in the building. In this case, *Marshall vs. Hoard*, the plaintiff was defeated, and he appealed to the Supreme Court of Texas, where the judgment was affirmed. Judge Waite, in the opinion, said: "It appears that the plaintiff was in the passage-way, not on the invitation of the defendant, but of one of the tenants on the second floor. At common law the occupant, and not the owner, is bound as to the public to keep the premises in such repair that they may be safely visited by the public, and the occupant is liable, *prima facie*, to third persons for injuries. And when there is a liability on the part of the landlord it exists only in favor of persons who stand strictly upon their rights as strangers. Those who claim on the ground that they were invited into a dangerous place must seek their remedy against the person who invited them. If they are the guests of the tenant, he, and not the landlord, is the person from whom they must seek redress for injuries by the defects in the premises."

THE master plumbers of the country have just closed a conclave at New York city for the purpose of establishing a national organization, looking after the welfare of the craft. As to what was done, the meager telegraphic reports of the meeting leave us somewhat in the dark, yet, it appears, in looking after the general weal of the fraternity, the ethics of the craft was considered of sufficient importance to call for the adoption of a resolution providing for an examination into the moral and intellectual character of applicants for apprenticeship, and extending the term of tuition to five years. We are not in accord with the burlesquing of this important gathering by the Associated Press, which afforded no intelligent information of what was done by the convention, for we believe in

co-operative movements of this character if, when in looking after the rights and interests of Number One, the rights and interests of Number Two are not forgotten and are recognized.

THE Supreme Court of Illinois has recently rendered a very important decision, which affects all classes, and has decided and settled a question that has very generally been held reversely, namely, that Sunday contracts are not binding. The court holds that they are legal and hold binding. The case which brought out this decision was a *verbal* one between a vessel owner and a vessel master. The former, W. E. Richmond, engaged the latter, Chas. K. Moore, in February, 1882, to command the schooner *Tempest* at \$1,000 for the season. Subsequently Richmond backed out. The captain, depending upon the engagement, refused other vessels that were offered him. The suit originally came up in the superior court. The defendant first alleged the captain had not accounted for certain money to a Mr. Bruce, owner of the *Champion*, as the grounds of his refusal. Mr. Bruce swore that he did account for the money. The defendant then fell back on the fact that the agreement to employ the plaintiff was made on Sunday, and that it was null and void, and, further, there was no written agreement or contract. The court decided Captain Moore's contract was a good one and binding, and allowed him the season's pay (\$1,000), after deducting what he had earned on another vessel, which entitled him to \$566. Richmond appealed to the appellate court, which decided the superior court was right, but allowed the case to go to the supreme court for the reason, although a small case, it involved a great question, and was one on which the supreme court had never passed. The supreme court affirmed both decisions below.

Sunday contracts are hereafter legal, and all people are to conduct their business and make their contracts with this fact in view.

Architecture.

LECTURES DELIVERED AT THE UNIVERSITY OF CHICAGO.

BY W. L. B. JENNEY, ARCHITECT.

PART V.—EGYPT.

AT a period far remote, more than four thousand years before the present era, a great and populous people occupied the valley of the Lower Nile. Memphis was their capital city. Cheops, in the vigor of youth, occupied the throne. The mummy of his father, Snefron, reposes in the pyramid of Meydoum, some thirty miles above the capital, on the left bank of the great river.

Cheops, the king, belongs to the Fourth Dynasty. The period is known as the Old Kingdom, or the Ancient Empire, and the first ten dynasties of kings are called the pyramid builders.

The history of the first three dynasties is lost in Egyptian darkness. Menez was the first king, who lived, according to the latest chronology, about the year 5004 B.C.

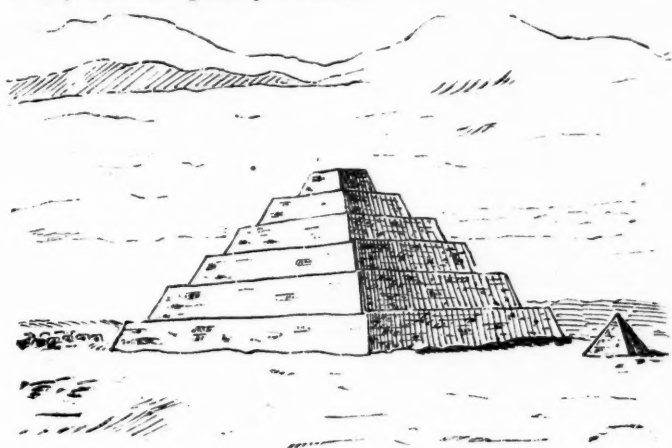
The step pyramid of Sakkarah tradition attributes to the King Ouenephes, of the First Dynasty. If this is correct, for it is not fully established, it is the only pyramid remaining to represent the three first dynasties of Egyptian kings.

It would seem to be a religious belief during the Ancient Empire that if the mummy could but remain undisturbed for three thousand years, the spirit that left the body at death would then return, and life would be resumed exactly where it left off three thousand years before, in the midst of old friends, relations and servants, and be continued in health and happiness forever after.

ward. This belief is pictured on the early tombs. They show nothing of a funereal character; the defunct is represented engaged in those occupations he most enjoyed during life. With this belief it can be easily understood that a great and powerful monarch like Cheops, whose will was the supreme law, would commence his pyramid, according to the fashion of his time, for the protection of his mummy, as soon as he was fairly seated on his throne. To this end a site was selected on the left bank of the Nile, opposite Memphis, just beyond the cultivated ground, on the edge of the desert, near the Great Sphinx, and leveled off. The excellent limestone of the neighborhood was quarried and the pyramid commenced.

A pyramid was not built like an edifice of the present day,—the entire foundation laid out in the first instance, and the entire structure carried up story by story.

A pyramid should be as large as the king could build during his reign. As life was uncertain in those days, it was necessary to so construct the pyramid that it could at any time be quickly finished.

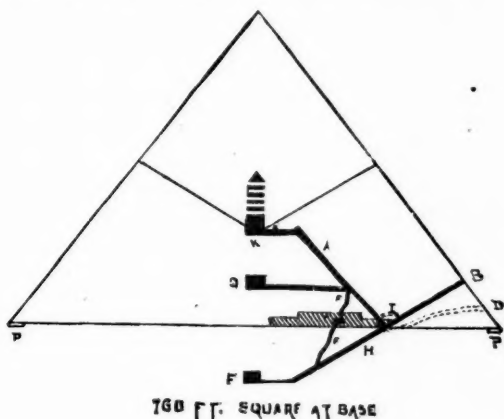


SAKKARAH RESTORED

A small pyramid was built in steps, like the step pyramid of Sakkarah. In this were the passageways and burial-chamber.

This pyramid was covered with an envelope, also in steps, and thus the size was gradually increased, and at the same time the pyramid always preserved in a condition that admitted of its ready completion, either by the king in his declining years, or by his relatives should he be suddenly removed.

The largest pyramid is that of Cheops, though that of his successor, Chepheron, is but little inferior.



CHEOPS

K is the king's chamber, where the empty sarcophagus was found by Al Mamoun.

Q is called the queen's chamber, for which there is no authority whatsoever. B is the entrance that was closed by the revetment of inscribed stone that once covered the entire pyramid.

E F H are passages and chambers that would seem to be constructed to mislead those that might find their way into the pyramid, for the passages to the king's chamber K were closed by large stones sliding in slots.

V—Ventilators.

In the year 825 A.D., the Caliph Al Mamoun, son of Haroun el Raschid, of the Arabian Nights, in the true

spirit of his time, conceived the idea that such a stupendous construction, apparently for no purpose, could only contain an enormous treasure, and, therefore, broke his way in. The true entrance B was hidden, but as all pyramids are entered from the north, the point C was chosen, and the work commenced. The stone was so hard that the workmen were upon the point of abandoning the undertaking, when a lucky blow shook down the gate stone, suspended in slots at I. This was considered a good omen, and a hint from the Genius of the pyramid to proceed. The entrance was soon forced and the passages leading to the king's chamber reached, but naught was found except an empty sarcophagus. The tomb had probably been rifled long before, maybe in the time of the Persian conquest. Some sixty or seventy pyramids have been explored, all of which appear to be royal sepulchers. There has been much foolishness written about the so-called "Religion of the Pyramids." Intelligent men have wasted much time and ingenuity in measuring the great pyramid in English inches—a modern invention. The Rev. Dr. Seiss, of Philadelphia, published a book in 1877 entitled "A Miracle in Stone." He sees in the great pyramid a work inspired by God—a whole system of theology and science. He reaches wonderful conclusions by adding, subtracting, multiplying and dividing pyramid measurements, astronomical distances, mean temperatures, etc., and reaches the melting point of platinum, the circumference of the earth, or the cubical contents of the Ark of the Covenant, and such like things. It is often said that "figures won't lie," but there is nothing that can beat them when some fanatic tries to prove that the world will end at a certain date, or that all the known sciences and mathematical discoveries are foretold in the one great pyramid.

Auguste Mariette Bey, a French Egyptologist, in charge of the museums and monuments of Egypt—the best known authority on all such questions—says: "As to the especial purpose for which the pyramids were intended, it is doing violence to all that we know of Egypt, to all that archaeology has taught us on the subject of the monumental habits of the country, to imagine for a moment that they could ever have been intended for aught else than tombs."

"The pyramids are tombs, massive, entire, everywhere hermetically sealed, even in their most carefully constructed passages; without windows, without doors, without external openings of any kind. They are the gigantic and ever impenetrable sepulcher of a mummy. And even had one of them exhibited in its interior an accessible passage, from whence, as from the bottom of a well, astronomical observations could have been made, that pyramid would not have been in accordance with its purpose. In vain shall it be said that the four sides, turned to the different points of the compass, denotes an astronomical intention; the four sides are thus set because they are dedicated, for mythological reasons, to the four cardinal points; and in a monument so carefully constructed as a pyramid, a side dedicated to the north, for example, could not, by any possibility, be turned to any other point but the north."

"The pyramids, then, are nothing but tombs, and their enormous bulk could not be held as an argument against this theory, since there are some which are scarcely eighteen feet high. Moreover, there does not exist in Egypt a single pyramid that is not the center of a necropolis—a fact which confirms in the most emphatic manner the character of these monuments."

What remains now of the pyramids is only the nucleus. Originally they were covered with a smooth casing terminating in a sharp point; this casing has entirely disappeared.

Being tombs hermetically sealed, each one of the pyramids, or at least each of those that served as the sepulcher of a king, possessed an exterior temple which was built within a few yards of the eastern façade. The king deified, as a sort of incarnation of the divinity, was here worshiped.

The three great pyramids of Geezeh possess like all other pyramids each an exterior temple.

About 600 yards to the southeast of the great pyramid is the Sphinx, a natural rock, a part of which has been cut

into the shape of a gigantic human head, representing the god Amachis.

Near the Sphinx is a construction about which there has been much discussion. Some think it a tomb, others a temple. It would seem probable that it is a very ancient tomb, older than the pyramid, for there was found a tablet on which King Cheops ordered repairs to the Sphinx, which as a statue of a god adorns this tomb.

The pyramid of Cheops stands in the necropolis of Memphis. The tombs of the necropolis date from almost every period, those of the ancient empire predominate. These take the form of a truncated pyramid, built of enormous stones, and cover the well at the bottom of which reposed the mummy.

Sakkarah, a little further up the river, is very rich in ancient tombs. The exterior is a small building containing one or more chambers. These chambers are almost all decorated. Those of the ancient empire are as little funereal as possible. The defunct is represented standing or sometimes seated with the staff of office in his hand, his wife by his side, his children close by, his servants standing before him; in some, women of his household are dancing, musicians are playing on various instruments, and singers accompany them, beating time with their hands. In one picture the defunct is shooting in the marshes; he is standing upright in a bark made of papyrus reeds, with one hand he holds some call-birds, and with the other he lets fly over the aquatic birds dispersed among the tall reeds a curved stick which whirls round and round. Near by in the water are hippopotami and crocodiles. On another picture are charming representations of pastoral life. These chambers were open to all comers, and on fête-days the relatives met together here, bringing offerings of all sorts called funereal gifts.

After the ancient empire the religion undergoes some changes. An army of strange and fantastic gods has invaded the walls of the tombs, and the defunct is seen in the other world peopled with beings mostly impossible to describe.

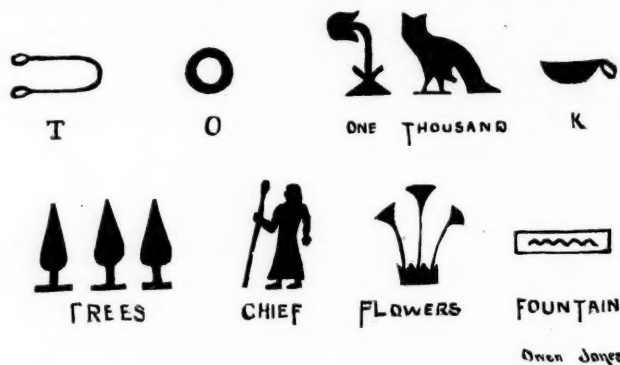
In regard to Egyptian chronology I shall say but a few words, the whole question is too complicated to be discussed here. The authorities are the lists of Manetho, an Egyptian priest, and the monuments. The works of Manetho are unfortunately lost, but extracts remain. There are lists taken from Julius Africanus, and the two versions of the chronicle of Eusebius, which, however, do not agree. The authority of Manetho, an Egyptian priest writing of his own country from the archives of the temples, must always carry great weight. These studied in connection with the inscriptions so numerous everywhere on the monuments have enabled Egyptologists to arrange an outline of Egyptian chronology.

The Ancient Empire dates back so far in the past as at first to excite incredulity. Certain it is that the more that is known the more remote these dates become. Fergusson, in 1849, placed the ascension of Menez, the first king, 3906 B.C. Mariette Bey, in 1877, after long study in Egypt, with all the advantages the Khedive and a long preparation could give, placed the commencement of his reign in the year 5004, expressing the belief that could the lists of Manetho have reached us intact, we should find them extending over a still wider range.

The language of the Egyptians is neither Semitic nor Indo-European. It is one of the principal types of that group of languages which may be called Chamitic or Turanian. After it had greatly degenerated it became merged in the Coptic, which represents the language of the demotic or popular character rather than that of the hieroglyphs. This demotic character was used after the sixth or seventh century B.C., for deeds, books and other writings. It is called also the Euchorial. The inscriptions on the monuments are in hieroglyphics, which for a long time had been forgotten and were unreadable.

In the year 1799, Mr. Boussard, a French artillery officer, while digging intrenchments around the town of Rosetta, discovered a fragment of a "Stela," a word used in Egyptian archaeology to designate a rectangular, flat stone, generally rounded at the top, which was used by the Egyptians for all sorts of inscriptions. This stone was carved in the reign of Ptolemy V. Probably it was

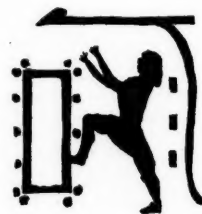
thought little of at the time, but became the most valuable of Egyptian discoveries. It is known as the Rosetta Stone. The king came to the throne when a child, and in the ninth year of his reign, B.C. 196, when he was declared of age to govern the kingdom, the priests made a decree recounting his titles, his virtues and his piety toward the temples, and declared that his statue was to be worshiped like those of the national gods, and that it was to be carried with them in all sacred processions on the Nile. The enactment ends in the important words that "the decree is to be carved at the foot of the king's statue in three kinds of writing, namely, in sacred letters or hieroglyphics, in the demotic or common Egyptian, and in Greek." Here, then, we have an inscription in hieroglyphics with a Greek translation; with this help Dr. Young and Champollion were enabled to read this most ancient kind of writing which had been a sealed book for so many centuries.



Hieroglyphics are read from either direction as the figures face. The names of the kings are enclosed in an elongated oval terminated by a straight line. That of Chop, or Cheops, as he was called by Herodotus, was single, those of the later kings, who claimed to reign over upper and lower Egypt, were double.



CARTOUCHE
OF
CHOFU



ARCHITECT
Open Jaws

The hieroglyphic of an architect is peculiar. He seems to have finished a plan of a temple which he is kicking out of his office; behind him are three stones to shy at him should the cost of the building exceed the estimate, and over his head is a gallows to hang him on should the building fall during construction.

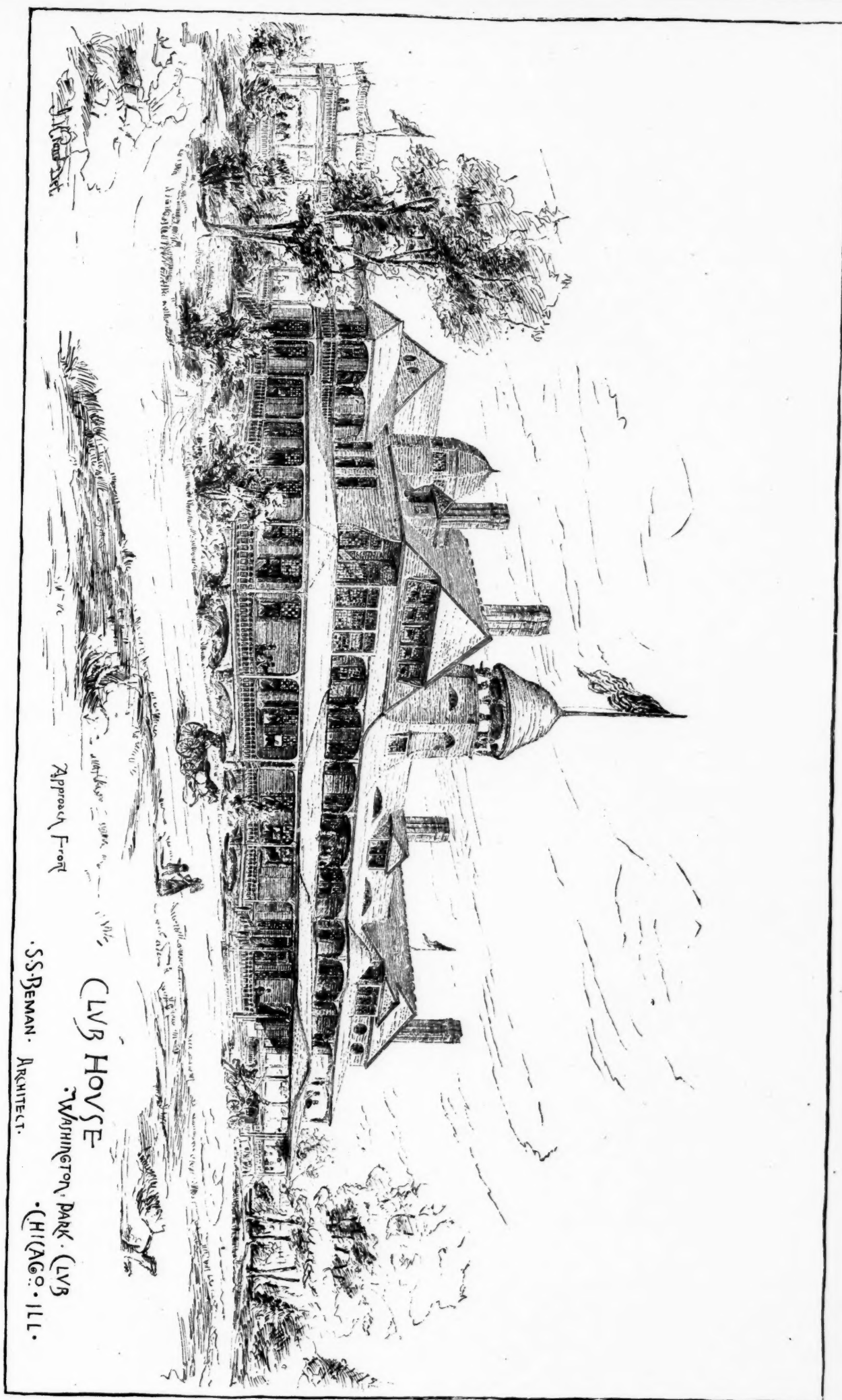
(To be continued.)

History of Chicago Architecture.

PART V.

RECOLLECTIONS OF JOHN M. VAN OSDEL.

THERE are so many points of interest in the history of Chicago, that are more or less connected with its architectural advancement, that the writer finds it difficult to arrange the matter in proper order of sequence. The necessity of elevating the grade of the city will be better understood by the following general statement of the topography of its original surface. From the Fort (at Rush street bridge) south on Michigan avenue, the surface of the ground was, as it is now, about nine or ten feet above the surface of the lake. The surface drainage was from Michigan avenue west to the river, and from State street west was nearly a level plain, elevated some two or three feet above the river. The topography of the north division



was similar, the surface declining from Rush street toward the west. The surface-water cut large gullies in the soil, known as sloughs; three of these sloughs opened into the main river. One at State street was about sixty feet wide at the mouth, and extended in a southwesterly direction to the site of the present Tremont House. Another had its outlet between Clark and La Salle streets, and extended inland across Lake street. The third and most formidable one was on the north side, near Franklin street, being eighty feet wide at the river, and extending north through the Kingsbury and Newberry tracts to Chicago avenue. In 1838 the city employed the writer to build a bridge across this last-mentioned slough at North Water street, at the same time to build one across the north branch of the river, for the continuation of North Water street to the west division, being the first bridge across the north branch, and occupied very nearly the position of the present Northwestern railroad bridge. The bridges were supported on piles; that across the river was furnished with a platform thirty feet long, which was counterbalanced with weights, and was made to rise from a horizontal to a vertical position to admit the passage of vessels. The depth of water in the slough was sufficient to float the scow on which the pile-driver was arranged, and broad enough to allow the necessary movement of the vessel to bring the piles into their proper position. There were no lumber-yards in the city prior to 1839. Vessels loaded with lumber would tie up close to the river bank and deposit their cargoes in a promiscuous pile; builders would purchase in large quantities and do their own assorting. Geo. W. Snow established the first lumber-yard in 1839, occupying a lot 80×150 feet on the southwest corner of State and South Water streets. The next year Sylvester Lind opened a small yard on the triangular lot formed by Randolph street on the south, Market street on the east and Water street on the west. This lot is not now in existence. It seemed to be an encumbrance, and the city made an arrangement with Lind to give him the waterfront lot immediately north of Randolph street bridge for his triangular lumber-yard. Mr. Lind erected a large five-story block of buildings on this lot (being remarkable as having been unharmed by the great fire of 1871, which destroyed every building in its neighborhood). These two little lumber-yards were the pioneers of the great establishments of the present day. The grade established by the city in 1855 made it necessary to build stone walls around each block to retain the filling of the streets. These walls placed under the outer edge of the sidewalk are known as "curb-walls." The spaces between these walls and the buildings have been utilized by the property owners as extensions to their basements or cellars. Temporary sidewalks of plank were arranged on these walls, with rude stairs leading down to the stores. The "public square" had to be filled and its surface raised to grade. The courthouse in the center of this square was 164 feet front from east to west, and 132 feet from front to rear. The Cook county jail was arranged in the basement of this building. It would not do to interfere with the light or ventilation, so an area wall was built on a circular plan, 180 feet diameter, circumscribing the entire building. This wall was raised three feet above the street grade, had coping of heavy cut stone, surmounted with massive iron railing. This arrangement gave ample areas for light and ventilation. The square was filled to conform to grade, with earth obtained by dredging the river. Mr. James Brown, of Boston, an expert in raising buildings, contracted with J. D. Jennings, to raise his store on the northeast corner of Dearborn and Randolph streets. This was done in 1857, and was the first brick building raised to new grade. An entire block of heavy buildings on north side of Lake street, extending from Clark to La Salle street, was raised simultaneously. This was accomplished in 1859. The raising-business extended through seven years, from 1857 to 1864. The first sidewalk formed of self-supporting cut stone was placed in front of the McCardle restaurant, on the east side of Dearborn, between Lake and Water streets. The stones were twelve feet long and six inches thick, resting on the curb-wall at one end, and upon a light brick wall at the other end. There was some hesitation at first in adopting the cut-stone vault-covers, and on three sev-

eral occasions parties endeavored to construct a series of flat, thin brick arches, abutting in rolled iron beams, to support a pavement to form sidewalk, but they persistently and uniformly collapsed as soon as the centers were removed from under the arches. The prejudice gave way very soon, and the cut-stone covers came into general use. Mr. Reed, the druggist, in 1860, had a sidewalk constructed in front of his store, on north side of Lake, between Clark and LaSalle streets, formed of a single stone, twenty feet four inches long, sixteen feet wide and ten inches thick, weighing nearly twenty-two tons. This stone was from Singer & Talcott's quarries at Lemont. It was transported by canal-boat to Chicago, and moved on rollers from the boat to the building. It was being moved about the time the republican convention was in session here, and some wag labeled the stone in large, painted letters: "The Republican Platform."

Art of Pure Color.

BY JOHN W. ROOT.

TO painting, one of the greatest limitations is that it has been compelled to deal with subjects capable of being outlined, and a slight glance at nature will show us how great this limitation is. Generally speaking, it may be said that, almost without exception, all tendency moods of nature, and those which appeal to the deepest emotions, are those where outlines are entirely subordinate, and colors salient—twilight, sunset, soft-clinging mists of early spring mornings, waving grasses or mossy rocks upon the bottom of some crystalline brook; a thousand beauties of moonlight and starlight, the weird, fantastic scenes revealed by flashing meteors, bursting rockets or ghostly auroras, all these things, and others too endless to mention, move us to our very being, yet live in nature only. No artist who ever lived has painted more than their shadows. In the effort to reproduce these classes of phenomena upon canvas, close and accurate observation was necessary, and, unfortunately, all painters were trained by tradition and education to observe form rather than color. So true is this that every painter of eminence has lamented that he was in so many ways incapable of seeing, or at least of continuing to see, colors as they are.

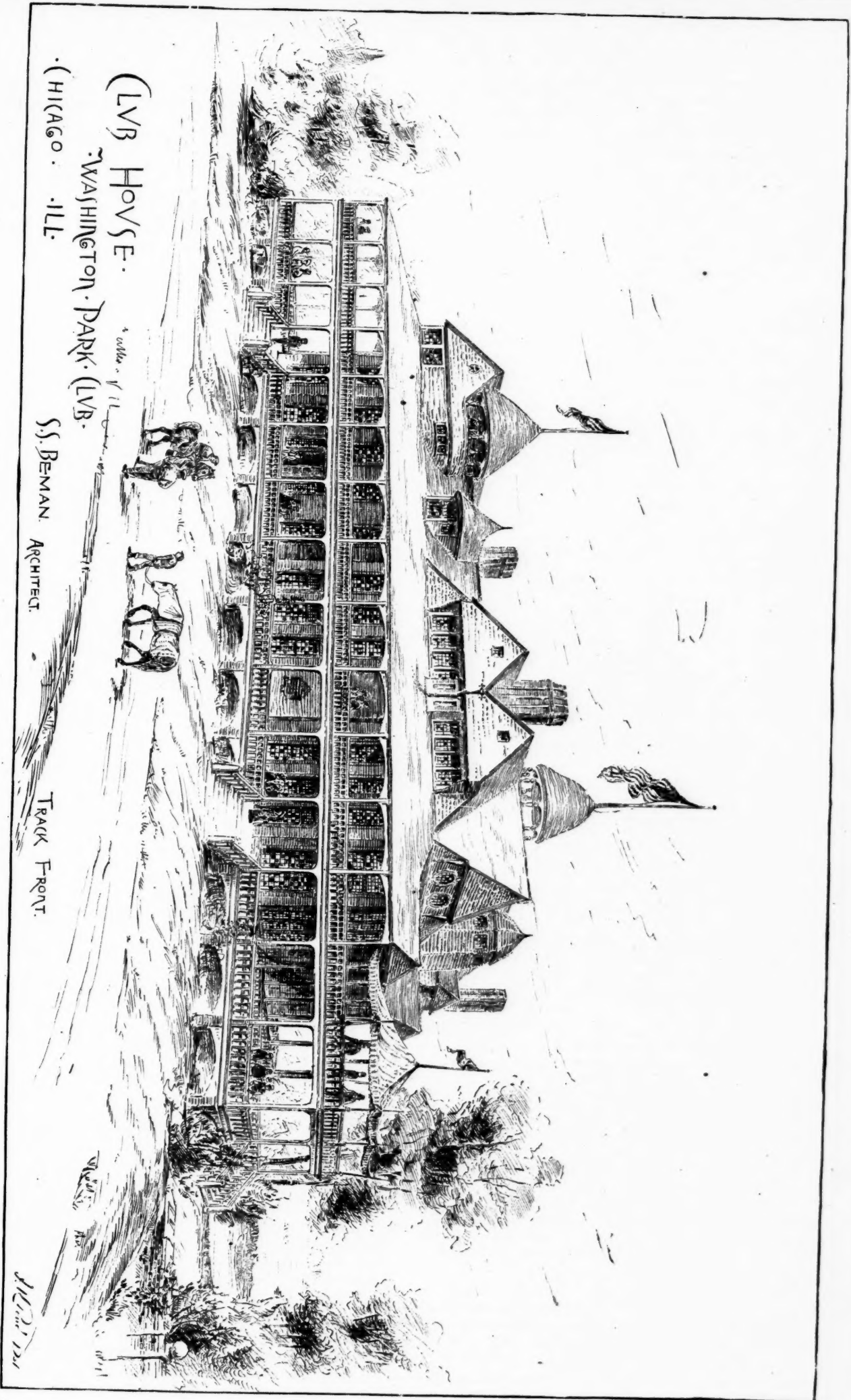
Once the notion of pigments and their conventional relations to mere color is fixed in the mind, the great difficulty is to avoid seeing colors in nature as so much Antwerp blue, or Hooker's green, or brown madder. To commit this error is to kill true art. In the effort to avoid a sin so deadly, the impressionists took upon themselves the difficult task of cultivating their power of observing absolute colors in nature, and, as we have seen, all art was the gainer.

Coincident with their efforts light was coming from a new quarter, science. In Germany and England Helmholtz, Von Bezold, Young and Tyndall were engaged in close analytic study of the science of optics and acoustics, developing in both facts which shed wonderful light upon the world of art. Among these facts were those which contributed to clearer conception of the act of seeing, as mental judgment of molecular changes, to a clearer appreciation of color-blindness and effects in color of contrast and gradation, and to a new conception of primary colors. In addition to these facts were others equally valuable as to the nature of light and its absorption and refraction, and the consequent true definition of color.

In this science was performing a new and wonderful work. As all modern science does, it followed the search of truth for truth's own sake, and in the search found vast treasures with which art might decorate the world. At the same time it gave to every thoughtful artist certain valuable checks upon his own less accurate observation, and certain absolute and unquestionable data, obtained by men who had no dogmas to defend nor theories to sustain. These checks and data were the more valuable to the artist, because his own observations were often made inaccurate, not only by defects of vision and by preoccupation, but also by the fact that he travels a road so often trodden by other and greater men. These, having gone before, have left for him a thousand statements of what he must expect to see at every step of his journey, and looking for these things he too often sees them where they are not or fails to find them where they are.

In science this sort of fallibility is less common, for here every observation is verified, not by the vision of a few great men, but by the logic of human reason and the test of human experience. To science, then, will art turn, that she may have her semi-paralyzed optic nerve galvanized into new and truer vision, and that she may gain from the laboratory instruments for the expression of her own thought. The aid thus contributed by science to art will lie rather in the direction of color than of form, for form is mathematical and mensurable, about which science has said all that is to be said. No increased knowledge of anatomy can help make a greater Praxiteles. But upon color the effect of scientific investigation is immediate.

By this added light art may hope to find in painting a truer representation of those effects in nature so largely dependent upon color, which has hitherto been most difficult to reproduce; for with this fuller knowledge the artist, striving to render upon canvas new



or phenomenal effects, will have new and better guides to his own impressions, as well as new and more lasting pigments on his palette.

What the full effect of this influx into the painter's art will be we cannot now say, nor, indeed, can we ever fully measure. It will manifest itself yet more strongly than it has done and in new directions, in increased precision and truthfulness of sight and technique, in wider scope of subject and in improved pigments.

Upon the arts of stained glass and mosaics, the effect of the new art will be more direct and immediate. Each of these has for centuries remained subordinate to painting. The few periods of history, when they have for a moment blossomed, not as parasites, but from their own roots, only serve to make more evident their general dependence. Yet it is evident that the glory of stained glass and mosaics is distinctive and peculiar, while subjects well adapted to painting must suffer when translated by media so crude and unyielding in form as these. In stained glass, hard lines of lead tend to destroy all delicacy of form, and in mosaics the lines of juncture are equal barriers; so that any effort to produce in either of them such effects as are possible upon canvas will only be successful at the sacrifice of their own distinctive beauties. These beauties are those of color, and of inherent brilliancy of tone. No painter who ever lived could put upon canvas a shadow of the gorgeous color that flames in a glass jewel or rondel, or that flickers in the opalescent glaze of an old majolica plaque.

This was recognized by artists in Venice and Florence, and there and elsewhere most enchanting work was done by them in glass and pottery, without for a moment departing from a true conventional treatment of their material. What these men did, we have begun to do. In Venice, Salviati has revived some of the glories of old Venetian glass, but here in America the art of stained glass manufacture and design has taken higher rank than elsewhere. Once the limitations of glass are confessed and its vital beauties recognized, it takes a new place among fine arts, for it surpasses painting in its possibilities for color, as much as it is surpassed by painting in the matter of form.

The pigments used upon canvas must always be more or less evanescent; those of glass are unfading. The ultimate crystallization of any vehicle used will always prevent painters from producing successfully the most brilliantly lighted or the half-illuminated scenes of nature, while in these, stained glass is most potent. When the artist wishes to produce mere arrangements of color and light, like the luminous flushes of dawn or the flashing crimson and gold of sunset, he can in glass vie with nature herself.

Look for a moment at several pictures which might be produced by a master in stained glass. In one is a gradation of purples, olives, black, pale opals, with a light streak or two of flashing yellow or crimson, all grouped without symmetrical form, yet all full of the utmost depth and tenderness of color. In this picture lurks the beauty of twilight, when the last rays of the departed sun were almost gone, none left but such as had been caught and tangled in the clouds.

In another symphony (to use the Whistler term) are leaded together by waving lines a series of colors, beginning at the bottom with deep greenish blue, and ceasing at the top with pale sea green. In these colors are infinite changes, varying with each new slant of the sun's rays, and full of the shimmer and translucence of the sea itself. Through this deepening sea and beyond are seen flashing colors of fish, pale crimson of coral and rainbow tints of shell, with colors of sea-anemone and seaweed, and the gold of seashells.

In another picture, against the pure blue of a morning sky, is drawn the rough yet firm line of an old stone wall, upon which, all gray and brown, grows a profusion of morning glories. They rest upon the sober colors of the stone in deep greens and purples, gradually growing lighter toward the top of the wall, and there flash into a wealth of opals, brilliant green and rosy tints, lustrous with the glow of morning shining through, and full of the sparkle of dew.

In these, which are but three of a thousand possible pictures, the charm lies in purity and brilliancy of coloring and in their ever-varying tones. In painting, the intensity and shade of any color, once determined, remains fixed; but in glass, while a color retains its general tone, it is endlessly changing, as in nature. Hence, whatever arrangements of color may be found in nature may be reproduced in glass.

The same charms characterize mosaics in a lesser degree, and for this reason both glass and mosaics have been, and will again soon be unfailing resources for all sorts of decorative effects. Think for a moment what our streets might become, if to the somber grays of stone or reds of brick were added the full unfading bloom of glass, marble and tiles. These combined by artists of sensibility, who would defer somewhat to the relatively repressed type of the Anglo-Saxon race, would fill our cities with the eternal joy of color. Every one will recognize how vast the change would be and how greatly it would contribute to our pleasure. Look back but a few years and recall the period when red brick began to be used with some appreciation of its inherent beauty. What oases in our street architecture these glowing walls of brick presented, contrasted as they were with all the smoke-begrimmed and smoke-absorbing stone fronts! These were related to what had gone before, as a single harmonious chord would be to mere noise; but in a few years there will be everywhere, as in a lovely symphony, the full verdure of woods, the warm blue of summer sky, the eternal joyousness of blooming flowers, crystallized into

unfading colors, and greeting us in our daily avocations. Indeed, I see no limit to what may be done when we have artists educated to a nice sense of blended and complementary colors. Why should not the entire front of our house be encrusted with the wealth of colored glass and encaustic tiles? If this were so the dignity of the architectural artist is enhanced, and architecture rises one grade higher among the "fine" arts. Now, it is mainly at its best the negative politeness of no offense, while then it would become a positive politeness conferring high pleasure. To those of us who have shuddered over the monstrosities which greet us in our daily walks, I confess there is something appalling in the thought that to the perpetrators of these will be given another and far more potent means of offense. But we must remember that the older type, which was planted a hod-carrier and bloomed an artist, is obsolescent and must soon die, and in their stead there will be men who are in their own arts at least a little above the grade of the educated laity. This sounds like the weather prophecy of a Wiggins, but I make it with the same confidence of my prototype. Now, in the painting, every true artist of an architectural subject, as Church's "Parthenon," or Fortuny's "Mosque at Cairo," or Earle's "Stirrup Cup," each wall surface or column gains new interest from its varied coloring. Soon the same beauty will cover every creation by the true artist in more lasting materials, and we will learn to forestall the witchery of time, or the tender embroidery of mosses and lichens, with loveliness almost as great.

Special Correspondence.

MINNEAPOLIS.

MINNEAPOLIS, MINN., July 3, 1883.

Editor *Inland Architect and Builder*:

There are signs of a lull in the real estate "boom" in this city, due to the very hot weather of the past four days. The market is still in a healthy condition, and prices are normal rather than speculative.

The total transfers of real estate for the first half of 1883 number 5,260, with considerations amounting to \$13,669,782. Judging from previous years, these figures will easily be doubled for the whole of the current year. The transfers of St. Paul covering the same period are figured at \$8,110,750, a smaller sum by one-third than Minneapolis shows, but yet a very large one as compared with Eastern cities.

In a majority of cases these transfers are to persons from the East, who come to these cities to invest money, sure of a rapid rise where population doubles on itself every decade.

The increase in population here will be this year probably fully 20,000, owing to the getting into working shape of the new railroad shops of the Chicago, Milwaukee & St. Paul railway and the Minneapolis & St. Louis railway. These, with additions to our harvester works and flouring-mills, will employ over 3,000 more men than last year.

A thorough canvass by the *Real Estate Review* of this city shows, built or in course of construction this year, 1185 residences and 337 business buildings, the latter having a frontage of 8,150 feet, and a value of \$2,471,310, the residences footing up \$2,585,250, making a total up to the time of making the canvass of over \$5,000,000, and with late additions the figures run up to over \$7,000,000, with the probabilities, judging by the ratio of previous years, of the grand total being over \$15,000,000 worth of improvements for 1883. Last year's record ran up to \$10,000,000, but that was thought exceptionally large.

The new West Hotel, to cost \$1,000,000, is progressing handsomely, but much regret is expressed that above the first story it is to be mixed brick and stone, and Architect Buffington's taste in this particular is a subject of adverse criticism.

The Board of Trade have sought to influence Architect Hill, of the Treasury department, to combine with the proposed postoffice the new structures proposed for the city and county, so as to make of the joint affair an elegant building. The attempt will probably not succeed.

The proposed building by the government here is to cost \$200,000. Two stories in front with a turret or two, the rear part being only one story.

The *Tribune* company will commence the erection of a six-story and tall lined building this summer, the estimated cost being about \$150,000, and the edifice a very handsome one.

Preparations are going forward actively for the erection of the new Union depot by the Manitoba (St. P., M. & M.) Railway Company, the excavations being well under way. Their stone arch bridge now being built across the Mississippi, below the falls, is a handsome structure, and will be completed within a year.

DES MOINES.

DES MOINES, IOWA, July 3, 1883.

Editor Inland Architect and Builder:

The continuous rains throughout the entire months of May and almost all of June greatly retarded building operations, but the good and favorable weather of the last ten days, has furnished us a full supply of brick, and the boom anticipated in the early spring is now under full headway and even greater than was predicted. Most of the leading contractors have all they can attend to and many of them decline to even figure on the new work that is now ready for estimates.

The architects are all busy on new work, even more so than in the early season.

Six years ago, with a population of less than \$20,000, two architects more than supplied the demand for architectural skill, now with a population of 40,000, ten architects are kept busy. Among the more important buildings projected and placed under contract since my last report, are the following:

A block of eight stores and offices four stories in height, pressed brick fronts with stone trimmings, located corner East Locust and Fifth streets, owned by Messrs. Christy, Theachout, Stone, Garton and Robertson, to cost \$40,000.

Block of two stores and offices, southwest corner of East Locust and Sixth streets, of brick and stone. H. C. Hansen, owner; C. H. Lee, architect. Cost \$6,500.

Block of three stores and offices, southeast corner of Locust and Sixth streets; block of three stores of brick and stone. Baker Bros., owners; cost \$15,000; J. A. Garrety, contractor.

Block of two stores on Walnut street, between Fourth and Fifth streets, of Philadelphia pressed brick, terra cotta trimmings cost \$28,000; Rogg & Detshon, owners; Bell & Hackney, architects.

Double dwelling-house on Walnut street, between Eleventh and Twelfth, of wood; cost \$7,000; C. H. Gaylord, owner; Jasslyn & Taylor, architects.

Block of six residences located on East Walnut street, between Eighth and Ninth streets, of brick with stone trimmings; cost \$24,000; Messrs. Brown, Ayers, Clark and Flood, owners; B. J. Bartlett & Son, architects.

Two stores of pressed brick located on Fifth street, near Locust; cost \$15,000; G. W. Marquard, owner; J. S. Blake, architect.

Six stores on East Sycamore, of brick; cost \$30,000; owned by Messrs. Hass and DeVotie, and others.

Block of three houses on East Sycamore of brick; Messrs. Depue, Moore and Maur, owners; cost \$12,000.

Two stores on East Locust of brick, three stories high, owned by S. B. Garton, to cost \$8,000.

Foster and Liebbie, architects, are making the plans for the Episcopal church, to be built of stone, to cost about \$50,000.

B. J. Bartlett & Son, architects, have just completed the plans for a Presbyterian church at Higginville, Missouri, to be built of brick and native stone trimmings, to cost \$10,000.

C. H. Lee, architect, has just completed the plans for the Dakota State Agricultural College, to be built of brick, cost \$30,000.

A Masonic temple is about to be erected from plans by an eastern architect whose name I am unable to learn, estimated to cost \$50,000.

The Academy of Music, owned by Wm. Foster the architect, is nearing completion and promises to be one of the neatest opera houses in the West.

DE MOIN.

MILWAUKEE.

MILWAUKEE, WIS., July 6, 1883.

Editor Inland Architect and Builder:

The following building news from this city will give you some idea of the progress of building in Milwaukee:

Architect Frederic Velguth is building a brick store on West Water street, 20 feet front and 90 feet deep, three stories in height, cost of which is \$9,000; also a two-story brick-lined dwelling, for Mr. Wolloeger, 70 feet deep by 48 feet wide; estimated cost, \$8,000. A two-story frame building on Sixth street, between Vilore and Galiena streets, 24 by 72 feet, costing \$3,500. One brick store of three stories, 40 by 48 feet, situated on Fourth street, between Oppen and Chestnut streets—a frame cottage on Farewell avenue, of two stories and basement, cost \$3,200. Also has two churches under construction, one being in Jacksonville, about five miles

from here, and one at Burnet, and is building several houses at Kansas City, which are nearly completed.

Messrs. H. C. Koch & Co., of this city, are building a town hall and engine-house at Chippewa falls. It is a two-story brick building, and includes the city offices, council chamber, municipal court, etc.; also an engine-house in this city. They are also building a residence for F. W. Noies, situated on Eleventh street of red pressed brick, and will cost \$16,000. They also have a church in progress in Kanocia, which will cost \$8,000, and one in Brighton to cost \$10,000—a large store on West Water street, 40 by 110 feet. It is built of brick, and cost about \$12,000. Have also finished a store for O. D. Bjorkuist & Son, cost of which is about \$25,000. Have just finished building an oil warehouse for Mrs. J. E. Wright, located on Third street, near Clayborn, costing \$9,000. Also fourteen or fifteen dwellings, which will range in expense from \$3,500 to \$7,000—several schoolhouses, situated outside the city, and a number of churches, including an addition to the Catholic Notre Dame and St. Mary's institute at a cost of \$25,000.

Architect A. F. Mix is building the St. Paul church, situated on the corner of Marshall and Napp streets. The church, a brown stone edifice, is very massive, the style of architecture being late Roman. It contains a parsonage, with chapel, covering 120 by 180 feet. Its cost will be \$15,000.

The plans for the new club-house at Milwaukee, as prepared by Mr. Mix, have been accepted. The building will be 100 feet long on Jefferson street and 57 feet wide on Wisconsin street, presenting south and west fronts, broken by an octagonal bay and tower. The style is modern Queen Anne. The foundation walls will be of Milwaukee limestone, faced with Lake Superior sandstone. The entire cost, including furnishing, will be \$50,000.

Mr. Mix is also building a dwelling for Albert Conro, Esq., on Waverly place, modern Queen Anne in style. It is 40 by 65 feet, built of red brick, trimmed with red stone, and will cost about \$40,000. Also an addition to the Plankinton House, on Grand avenue. The size of the building is 70 by 200 feet, five stories in height, is built of brick, and finished with all modern hotel improvements at a cost of \$150,000. Also a large store on Broadway for Albert Conro, Esq. It is of red brick and terra-cotta and iron dressing. The dimensions are 80 by 120 feet, four stories, and will cost \$50,000.

This architect is also remodeling a house for Hon. John Plankinton, situated on the left hand side of Grand avenue, between Fourteenth and Fifteenth streets. It is finished in the latest style, and will cost about \$60,000.

Architect C. A. Gombert has four dwelling-houses under construction, the first being for John Kremer, situated on Marshall street. It is brick veneered, and will cost \$10,000. Also one for L. Meyers, situated on Grand avenue, brick veneering, costing \$8,000. One for L. Biersach, situated on Ninth street. It is brick veneered, of two stories and basement, and will cost \$6,000; and one for D. Luess, on Iland avenue, brick veneered, and will cost \$12,000. The remodeling of J. Goll's frame residence, situated on Jackson street, at an expense of about \$4,500, is in charge of this firm; also the building of a three-story store, 22 by 37 feet, for A. C. Zinn, on the corner of Chestnut and Fifth street, at a cost of about \$5,000. Also, for O. P. Pillsbury, a solid brick residence on Prospect avenue, Queen Anne in style, 60 by 120 feet; cost, \$60,000; and a similar one for Henry Stern, costing \$20,000, on Cass and Ogden streets. It is of Queen Anne style, and estimated expense is \$20,000.

Our Illustrations.

WE give in this number two perspectives of the club-house of the Washington Park Club, to be built at South Park by S. S. Beman, architect. This club represents the largest social society of Chicago, and the new club-house in architectural beauty and interior arrangement will equal, if not surpass, any building of the kind before projected in the West, if architectural talent aided by wealth can make it so. The plans of the interior are not fully completed and the construction cannot be at present accurately described, but for a future number full plans, details, and a view of the interior is promised.

The building boom is so great at Macon, Ga., that the various yards cannot supply builders with bricks enough to carry out their contracts.

Architectural and Building Notes.

ARCHITECT Sierks has planned a very pretty summer hotel, or clubhouse, at Cedar Lake, Ind.; cost, \$15,000.

MR. LEON H. PRENTICE, of the steam heating firm of Hay & Prentice, is building a residence for himself at Waukegan.

ARCHITECT Hallberg has planned a \$15,000 pressed brick residence in Hyde Park, Fortieth street and Love avenue, for J. H. Conrad.

JOSHUA SMITH is erecting a brick residence, 37 by 54 feet, on the corner of Wrightwood and Lake View avenues facing Lincoln Park, to cost \$15,000.

HUGHES & SONS, contractors, are building a large court-house at Pittsburgh. Spencer, of Philadelphia, is the architect. The cost will be about \$150,000.

THE *Inter Ocean* real-estate mathematician figures that thirty-three building permits were issued in June in the town of Lake View, and a total of 289 in the past six months.

P. B. WIGHT is in Washington, where, in addition to the fire-proofing on the government buildings he is also placing the fire-proof construction in the new Portland Flats. The company also have a large contract for the fire-proofing of the new St. Luke's Hospital in Chicago.

THE Committee on Public Buildings and Charities of the county board have agreed to authorize architect Cochran to prepare plans for rearranging the steam heating of the county insane asylum. He is to receive for his trouble ten per cent of the cost of the work, in the event of his plans being adopted.

SILSBEE & KENT have planned for Potter Palmer two houses to be built on Bank street. They will be three-story and basement, and will cost \$25,000; also for Mr. H. J. Tilford, of Louisville, Ky., a three-story brick house in the colonial style, with red tile roof, to cost \$18,000. It is to be built at the corner of Fourth and Wessinger avenues, Louisville.

THE citizens of Kewanee, Ill., have subscribed \$25,000 and purchased the ground for a company which proposes to erect, at once, a rolling-mill and pipe-mill, for the manufacture of bar iron and wrought iron, steam and gas pipe. The ground selected comprises five acres adjoining the well-known Haxtun Steam Heater Works, which will be operated in connection with the new plant.

ARCHITECT George S. Spohr has, during the week, let the contracts for the following work: Two houses for Dr. Case, two-story and basement, 44 by 56 feet, on Seminary avenue, near Webster avenue, to cost \$6,000; house for James Sullivan, at the northeast corner of Wells and Whiting, 30 by 50 feet, to cost \$7,000; three-story and basement store and flats above for Sullivan Bros., at the corner of Franklin and Superior streets, 22 by 52 feet, to cost \$6,000.

MR. M. L. BEERS, architect, is building an apartment house between Indiana and Michigan avenues, on Twenty-first street 34 by 50 feet, of pressed brick; cost, \$12,000. Also factory on Indiana street, near Kingsbury, four-story and basement, for H. A. Streeter, Globe Iron Works. It is built of pressed brick, 60 by 75 feet, and will cost \$10,000. Mr. Beers is also building a handsome residence at Woodlawn for F. W. Green, Esq. It is a frame building, to cost \$4,000.

ARCHITECT S. S. Beman has designed for Gen. Stager, John Doane, Sec. of War Lincoln and others, a club-house to be built on a beautiful Canadian lake as a fishing headquarters. The general design is Queen Anne. Mr. Beman is also constructing the Chicago Normal Training School, corner Twelfth street and Michigan avenue. It will be built of brick four stories high and will cost \$50,000, also making important changes in the construction of Gen. Stager's residence that will cost \$25,000; also a new freight house at Pullman is projected, costing \$150,000. It will be 800 by 180 feet.

AMONG the medals awarded to competitors at the Railway Exposition, the drawing materials, surveying instruments and engineers' instruments sent by Messrs. Keuffel & Esser, of New York, were distinguished; this house receiving, "for best display of surveyors' instruments, a gold medal; "for best drawing table, a bronze medal; for best set of engineers' railway curves, bronze medal; for best leveling-rod, bronze medal. This house, so popular with architectural draughtsmen and engineers, it is worthy to note, received the only gold medal awarded to any exhibitor of engineering, surveying or drawing materials, and their exhibit is to the drawing fraternity one of the most pleasant remembrances of the Exposition.

ARCHITECTS Burnham & Root are doing a large amount of work for the Chicago, Burlington & Quincy Railway Company this year. In addition to the completed office building in Chicago, they are constructing a depot at Galesburgh, Ill., 200 by 150 feet, a depot at Des Moines, 100 by 50 feet, and a building at Creston, Iowa, to be used as a general library and reading-room for the employees of the road, and to contain the library of the officers as well. These buildings will be of pressed brick with stone trimmings and terracotta ornamentation. An elegant residence for J. W. Brooks has been designed by this firm to be located on North State street. It will be of stone and tiles, 40 by 65 feet.

ARCHITECTS Adler & Sullivan are building for Richard Knisely a block of stores on West Lake street, near Hoyne. They are 35 by 75 feet, each three stories high. The contract for the entire carpentry is in the hands of T. C. Goudie, contractor. The cost will be \$15,000. Messrs. Adler & Sullivan also have underway, residence on Belden avenue, near Clark, for Mrs. Ann Halstead, to cost \$15,000; block of flats, corner Twenty-Second and Indiana avenue, for M. M. Rothchilds; cost, \$20,000; stores and flats on Lincoln, near Belden avenue, for F. Kaufmann; cost, \$10,000. The foundations of the linseed oil works of Messrs. Wright & Lauther are commenced at the corner of Polk street and the railroad track. The building will cost \$40,000.

ARCHITECT J. M. Van Osdel has designed two houses for S. D. Stanbro, on Ashland avenue, near Congress, 20 by 70 each. Dining-room and kitchen on the main floor. Anderson pressed brick front, trimmed with brown stone and terra-cotta. Cost of the two, \$18,000. House for John Spry, corner Monroe and Loomis; Anderson pressed brick, trimmed with brown stone; first floor fitted in hardwood, 31 by 76; cost, \$25,000. House for B. L. Crumb, corner of Leavitt and Adams streets, 25 by 46; two-story and basement; brown stone front; cost, \$7,000. Flat for E. H. Gammon, Monroe, near Morgan, 25 by 80; three-story and cellar; Bedford-stone front; cost, \$10,000. Manufacturing building for Jesse Holladay; runs through from Milwaukee avenue to Clinton street; cost, \$10,000.

MESSRS. BAUER & HILL let contracts for a new schoolhouse to be erected for the Rev. Thomas Burke at the corner of Rumsey, near Indiana street. The structure will be 85½ by 73 feet, and three stories and basement in height, and will be of pressed brick with stone trimmings. It will be connected with the vestry of St. Columbkil's church by a covered passage-way. Special attention will be paid to ventilation, the system used so successfully by Mr. Bauer in the public schools of the city having been adopted. Adjoining the school will be a boiler-house, from which will be supplied the heat for both the school and the church. When completed the structure will cost \$40,000. J. M. Dunphy is the contractor, T. Menard, carpenter.

ARCHITECT G. H. Edbrook has prepared plans for a large insane asylum, to be built in the State of Wisconsin by an association of which Dr. Henry Palmer, of Janesville, Wis., is president; Julius Schnering, of Chicago, is vice-president; Hugh Heron, of Chicago, treasurer, and Dr. Oscar A. King, of Chicago, is secretary. The buildings will cost \$125,000, and the work of construction will begin as soon as a suitable location can be obtained, which will probably be at Janesville, Wisconsin. Also a residence for C. H. Knight, of Englewood, at Harvard and Sixty-fourth streets. The design is quite elaborate and the building when finished will cost about \$10,000. Also residences for J. R. Putnam, on Harvard street, Englewood, \$5,000; J. H. DeLuce, at Ravenswood, \$3,500; Wm. H. Powell, on Powell avenue, Jefferson, brick, \$6,000.

A DRYGOODS firm on State street, who are making extensive improvements in their building, have in process of construction for their elevators some of the finest brasswork ever made in Chicago. The design is to inclose the shaft for two stories in polished brass. The doors are handsomely designed with the upper panel of square meshes of flat brass, while the lower is a succession of ornamented rods and a small panel in the center with the monogram of the firm or a spray and birds; all elegantly finished. The flat meshwork continues up the shaft. The elevators are two in number, and this brasswork gives an effect that is as beautiful as it is unique and original. The brasswork is in the hands of L. S. Baldwin & Co., and in its entirety is probably the most expensive as well as the best executed piece of brass manipulation that has been turned out in the West, not excepting the elegant brass accessories ordered for the Tabor Opera House at Denver.

MESSRS. BAUER & HILL have let contract for Panorama building, corner of Wabash avenue and Hubbard court, for Mr. Eugene Davids, of Brussels, Belgium. This building is to be similar to one constructed in London, Paris, Berlin, St. Petersburg, and also one which was erected in New York last year. In plan it is sixteen-sided and 130 feet in diameter. The walls are fifty feet ten inches high, roof dome-shaped. The constructive part of the building is entirely of wrought iron. Iron pillars being anchored to the foundations of the piers run to the roof and continue in arched ribs to a center ring-piece, which supports a ventilating cupola. The surrounding walls are to be entirely of brick, ornamented with galvanized belt courses and cornices. The entrance pavilion, which is one story in height, and contains the vestibule, ticket-office and general office, is directly on the corner, from which a double passage leads to the center of the building, terminating in a spiral stairway leading to a platform forty feet in diameter and elevated thirty feet above the grade. From this platform the spectator will view what is known in history as the battle of Gettysburg; it will be as true to life as it possibly can be made, and a spectator will not realize that he is inside of a building, but will think he is standing in the center of the battle-field, and see the fighting in all its horrible details and grandeur. This being accomplished by an immense painting on canvas 400 feet long and forty-five feet high. The cost of this building will be at least \$40,000. During the day light will be admitted by a ring of glass around the roof lines. At night it will be lighted throughout by electricity. In all other cities it has proved a great success, and cannot help being so in Chicago.

Lumber Notes.

FRENCH and German timber merchants are sending orders to this country for first-class walnut logs faster than they can be filled.

FLORIDA lumber is in good demand in England. A line of steamships has been established between Fernandino and Liverpool in this branch of trade.

A DESTRUCTIVE insect is killing the pine-trees in some sections of Arkansas, the larvæ eating the foliage. It is a false caterpillar, the progeny of a saw-fly.

PHILADELPHIA capitalists have organized a stock company entitled the Columbia River Lumbering Company, for the purpose of cutting fir timber in Washington Territory for the eastern markets.

SOME conception of where all the lumber and timber produced in the United States goes to is gained when it is learned there is 1,200,000,000 feet rolling around the country in the single item of railroad cars.

IN boring an artesian well in San Bernardino, California, a tree which stands perpendicularly was encountered at the depth of 280 feet. Great pieces of the wood, which appears to be sycamore, are brought up in the pipes.

A PARTY of Michigan land owners have purchased 56,000 acres, and Iowa parties 16,000 acres of land lying in Escambia, Conecuh and Crenshaw counties, Alabama. Sawmills will be erected and the lumber shipped north for sale.

IT is said that no forests in America compare with those of North Carolina in variety and luxuriance of growth. The state contains almost 40,000 miles of unbroken forests, containing all the best known species to be found in this country. Of the twenty-two species of oaks that grow east of the Rocky mountains, nineteen grow in North Carolina.

THE *Lumberman's Gazette*, Bay City, Michigan, says: Cedar is one of the woods that many pine operators are holding in reserve. On one stream in Michigan a large sawmill concern owns a large body of cedar, but they will not sell a stick of it, and at present have no occasion to cut it themselves. They think it is good property to hold on to, considering it cost them but little, and undoubtedly they are right. When the company's pine is exhausted the cedar will come in play. This is but one of many similar cases.

Art Notes.

A SPANISH grandee has an entire bedroom suite of furniture made of glass.

THE Museum of Fine Arts at Boston will hold an exhibition of paintings and sculpture by American artists, at home and abroad, from the 16th of October to the 27th of November.

THE Belgian Central Society of Architecture are organizing a national exhibition of architecture, comprising the works of past and contemporary architects. The exhibition will be opened on the 2d of September next in the Palace of the Fine Arts in Brussels.—*The Artist*.

C. J. JORGENSEN and Alex Kluge are credited with the artistic arrangement and placing of the Lincrusta-Walton decoration of the J. J. McGrath exhibit at the late exposition. The work displayed decided artistic talent, and a silver medal was awarded to Lincrusta-Walton as a decorative material, indicating the opinion of competent judges upon its decorative qualities.

A LIFELIKE picture, and one that possesses unusual artistic merit, has been recently finished of Chicago's veteran architect, John M. Van Osdel. The painter is the gentleman's niece, Miss Libbie Van Osdel, a lady but nineteen years of age. The painting, in its skillful drawing, correctness of outline and accuracy in effect of light and shade, as well as in the arrangement of color, is worthy of a place beside the best our artists have produced. We certainly hope to see it occupying an honored place in the art gallery at the fall exposition.

IN speaking of a small exhibition of water-color drawings by American artists, recently opened at the Egyptian Hall in London, *The Artist* gives a just and kindly criticism upon American water-colors. "These drawings, in number about a hundred, have been specially selected by Mr. H. S. Philpot during a residence in America, and have been brought by him to this country. Such a collection—supplemented, too, as this one is, by a number of etchings by leading American etchers—is of much interest, for it introduces us to a school of painting with which few people in this island are acquainted. The most prominent characteristic of all the work shown, and one which cannot fail to strike visitors to the exhibition, is the strong bias toward French technique and French color displayed by most of the artists represented. This tendency is very well shown in the productions of the Moran family. Such pictures as 'Apple Blossoms,' by Leon Moran, or 'The Pets' and 'Reflections,' by Percy Moran, owe, evidently, their entire inspiration, if not their very existence, to the careful study of French models, possibly to actual French tuition. With much of the cleverness and technical facility, the deftness and readiness of hand which give a charm to the work of the best aquarellists, they have at the same time the crude and metallic style of color which seems for some reason to characterise all water-colors produced under French influence. The same criticism applies to the 'Tête-à-Tête' of F. S. Church; a picture, how-

ever, not without a strong infusion of transatlantic spirit. Agreeable enough work is also here by R. W. Van Boskerck, M. F. de Haas, J. F. Murphy, R. M. Shurtleff and C. D. Weldon. The etchings are interesting and include specimens from studios of such artists as Stephen Parrish, Thomas Moran, M. N. Moran, A. F. Bellows and Charles Volkmar."

Hydraulic Pressed Brick.

OUR St. Louis correspondent sends the following interesting details regarding probably the largest manufactory of brick in the country, the works of the St. Louis Hydraulic Pressed Brick Company.

The company has four yards, employ 560 men and 250 mules—working ten hours per day and ten months of the year. The capacity of each yard is 45,000 brick each day, and the total output last year was 42,000,000. The company are also largely interested in the "Union Pressed Brick Works," which turned out 20,000,000 brick last year; the two concerns furnishing over one-half the consumption of brick in St. Louis, besides shipping largely to Canada, Texas, Salt Lake City and intermediate points.

The brick at the Hydraulic Company's yards are manufactured by the following process: The clay is first ploughed, rolled and pulverized at the clayfield, and then drawn to large sheds at the yard, 350 by 68 feet area, which afford storage-room sufficient to make 24,000,000 brick. The clay is delivered from these sheds by a tramway, in small cars, to the machines for grinding, where it is thrown into a large hopper and pulverized, and from thence conveyed by elevators, in the same manner grain is carried in a grist-mill, to the brick machine. If face brick are to be made, the clay is put through a "picker," from whence it passes to another hopper, and from that fed to the machine by a "charger." All the brick machines used by the company are the Ethen Rogers' dry clay patent, which the company controls in the United States.

When the clay leaves the charger, which works automatically and carries enough to make ten brick at a time, it passes into the moulding machine, where it undergoes a pressure of from 300 to 800 tons, depending on the moisture in and quality of the clay. Ten bricks are made at each revolution of the machine, which has a speed of eight revolutions per minute. All power is furnished by hydraulic pumps, driven by an engine of sixty-horse power, which runs two machines. A gauge shows just what pressure is being used, and the machine is under the complete control of the engineer, who can stop it in any position and at any instant. A register to each machine, similar to that on a printing-press, counts the brick as they are made. Fifteen men are required at each machine, and the brick are drawn by carts directly from the machine to the kilns, which are an invention of Mr. W. N. Graves, the superintendent, and known as the "New Patent Duplex Kiln." There are four of them. Each kiln is 37½ by 28 feet from out to out—interior height, 14 feet. They are fired in the same way as common kilns, but have flues running from each side to the center, both over top and bottom—the top heat running down and the bottom heat running up, meeting in the center, hence the name "duplex," or double. This affords an uniform temperature throughout the kiln, and gives a better grade of brick to the burning, as instanced by the product of two of the kilns a few days ago, viz: 91,000 each, of which 86,000 from the first were the highest grade, and the second 87,000, the balance being "common," and all fit for building. There were only about 300 "salmon" or soft brick to each kiln. While the common kiln lasts but five years, Mr. Graves alleges his kiln is good for twelve or fifteen years without repair. Illinois soft coal is used by the company with their kilns, and the daily consumption is about six carloads, or 2,400 bushels per day.

Superintendent Graves has made a successful attempt in enameled brick, but has only as yet perfected the work so far as to meet small orders. The fancy brick are made by a shaving process, and done by hand—one man making about 400 per day.

A Unique Fire Escape.

A UNIQUE and practical device is known as the "W.S. Patent Folding Fire Escape," which, when not in use, folds up so as to appear like a "leader" running up a building, or, in the case of new buildings fitted specially by "sinks" in the wall for it, out of noticeable sight; in both cases avoiding deformity to the building on which it is placed. Its most noticeable features, outside of its quality as a fire-escape, are, in case of fire, by electric bells on each floor, it sounds the alarm to the inmates, and at the same time sends instant signal of the locality to the fire department. Of course this is not the class of fire-escapes burglars appreciate, as it is sure to alarm both inmates and police. It is operated as easily as a bellpull from within and without the premises—from without by a policeman, fireman or any person who may have access to a key to a fire telegraph box, which guards the method of its simple operation.

THE Consumers' Gas-Light and Fuel Company of Chicago have their main works well under way and are rapidly laying their pipes. They are about to erect works in Lake View and promise to furnish gas to consumers by January 1.

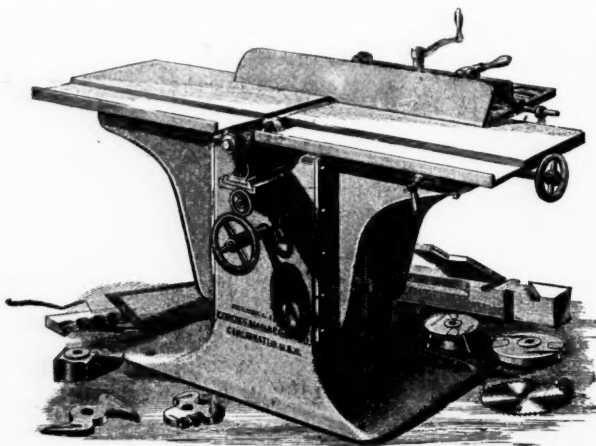
PUBLISHERS' DEPARTMENT.

Mahogany Imitation.

ON PINE AND ALL OTHER WOODS.

ONE of the most practical and beautiful pieces of work in artistic finish of wood has lately been called to our attention in the new residence of W. P. Rodgers, near the California avenue entrance to Douglas park, namely the finishing of the pine woodwork in old and new mahogany by an artificial process, which gives a perfect imitation of the natural wood itself. This process is a discovery of Mr. T. S. Prescott, late of New York city, and now of Chicago—236 East Lake street. These remarkable effects are produced by the application of water-colors, which act as a "filling" to the wood, and is completed by coatings of Berry Bros' oil finish, which the inventor claims to be better for the purpose than any other manufactured. This process is not graining, but is the application of two tints—one of the shade of old and the other the shade of new mahogany—by the means of a brush as paint is applied. These tints penetrate the surface of the wood like a stain, yet in such a manner that not only is the natural grain of the pine preserved intact, but is more fully brought out. The beauty of the work, which surpasses any graining, and is much more durable, commends itself to architects and builders especially, as it is said to be comparatively inexpensive.

We learn, in addition to Mr. Rodgers' residence, the store of Messrs. Tramel & Co., 198 East Lake street, has been finished in the same style.



Improved Universal Woodworker.

Our readers will find on this page a cut of a new and improved Universal Woodworker, manufactured by the Cordesman & Egan Company, of Cincinnati, Ohio, who took the first premium (a silver medal) on it at the last Cincinnati industrial exposition, over all competitors. The point on which the greatest stress is laid is the connected and movable bearings (patented by this company) by which the operator, after he has adjusted the angle of his fence, makes the exact lateral adjustment by setting the head and spindle over without again touching the fence. Practical men will see the advantage of this in the large amount of valuable time saved over the usual way of doing this work. The aim has been to make a strong, simple and reliable machine combining all the adjustments necessary for doing work economically, and it would seem, from what purchasers say, that they have succeeded admirably. For prices of this and any other woodworking machinery address the company at 226 to 246 West Front street, Cincinnati, Ohio.

Building Permits.

THE following permits for buildings to cost \$2,000 and over have been issued since June 20, 1883:

D. Weaver, two two-story dwellings, 37 by 64, on Adams near Oakley street.....	\$8,000
Decker & Hulbert, five two-story dwellings, 100 by 61, on Adams near Oakley street.....	20,000
W. E. Wiegler, one-story market building, 50 by 160, 191 and 193 Canal street.....	10,000
C. J. Vanzandt, two-story flats, 22 by 74, on Thirty-sixth street, near Wabash avenue.....	6,000
Matthew Franzen, three-story flats, 21 by 61, 41 Lincoln place.....	5,000
Mrs. E. C. Wright, three-story flats, 25 by 70, on Park place near Franklin street.....	9,000
Mrs. W. Wells, three-story store and flats, 30 by 70, corner Indiana avenue and Noble street.....	8,000
S. Westainicz, one-story addition, 20 by 74, 550 Noble street.....	2,000
D. A. Walsh, two-story flats, 40 by 52, 2632 Fifth avenue.....	10,000
J. H. Kedzie, basement, 40 by 36, 182 and 184 Park avenue.....	2,500
Mrs. E. J. Moore, four three-story flats, 100 by 70, 371 and 373 Indiana street.....	28,000
John Ehler, three-story store and flats, 23 by 66, 2131 Cottage Grove avenue.....	6,500
T. H. Curtis, three two-story dwellings, 60 by 31, 153 to 157 Twenty-fifth street.....	7,500
C. A. Lange, two-story dwelling, 22 by 50, 441 Congress street.....	4,000
W. F. Burbank, two-story dwelling, 24 by 50, 315 Flournoy street.....	3,000
Stegman & Spory, two-story dwelling, 21 by 56, 3440 Dearborn street.....	3,000
John Downey, three-story dwelling, 24 by 108, 322 Harrison street.....	11,000

Chas. Heineman, two-story dwelling, 23 by 61, Huribut street, north of Belden avenue.....	5,000
M. M. Rothchild, three two-story dwellings, 50 by 65, 3203 Indiana avenue.....	15,000
Thos. L. Grenier, nine one-story stores, 297 by 32, corner Throop and Madison streets.....	20,000
J. F. Erickson, two-story dwelling, 21 by 45, 210 Laughton street.....	2,200
M. Hagerty, two-story dwelling, 24 by 46, 198 Polk street.....	3,500
A. B. Johnson, four-story warehouse, 42 by 120, 551 to 555 North Green street.....	12,000
P. Abrahamson, two-story dwelling, 21 by 45, 208 Laughton street.....	2,000
M. F. Shurr, two-story dwelling, 21 by 48, 687 Erie street.....	2,500
John Bauer, two-story dwelling, 24 by 63, 401 Indiana street.....	3,500
Western Refrigerator Company, six-story refrigerator, 50 by 100, 231 and 233 Michigan street.....	20,000
George Auer, two-story dwelling, 22 by 48, 146 Johnson street.....	3,500
Eugene Davids, iron panorama building, circular radius 65 feet, height 50 feet, corner of Wabash avenue and Hubbard court.....	35,000
R. M. Eddy, four-story machine shop and foundry, 40 by 60, 45 to 53 Indiana street.....	16,000
Jacob Kaller, two-story dwelling, 21 by 50, 39 Heine street.....	3,000
Dr. Adelbert Taggart, two-story dwelling, 30 by 70, 805 Monroe street.....	8,000
John Irwin, two-story addition, 43 by 104, 640 and 642 Madison street.....	12,000
C. E. Dinehardt, five one-and-a-half-story cottages, 21 by 32 feet each, on Dudley near Augusta street.....	10,000
F. Pleur, two-story dwelling, 22 by 58, 211 Blackhawk street.....	3,000
M. Quinn, two-story dwelling, 22 by 44, 395 Maxwell street.....	2,500
James Johnston, one-story cottage, 22 by 34, 1182 West Adams street.....	1,000
Wm. Bishop, two-story dwelling, 22 by 40, 887 Washington street.....	4,500
Dr. Case, two-story flats, 44 by 56, on Seminary avenue near Webster avenue.....	5,500
P. M. Peterson, three-story flats, 23 by 51, 181 North May street.....	4,000
Blair & Raiton, two two-story barns, 50 by 35, corner Cass street and Chicago avenue.....	5,000
J. T. Dale, two three-story dwellings, 40 by 66, 3543 and 3545 Prairie avenue.....	11,000
Alexander Watson, two-story dwelling, 21 by 50, on Superior street near Paulina.....	3,000
Wm. Hughes, two-story dwelling, 20 by 52, corner Thirty-sixth street and Indian avenue.....	6,000
E. A. Otis, three-story store and dwelling, 60 by 38, 834 and 836 West Madison street.....	12,000
A. Barnett, two-story dwelling, 21 by 44, 261 Hoyne avenue.....	2,500
Bernard Roddeker, three-story store, 21 by 71, 535 Chicago avenue.....	4,300
Henry Hageman, two-story dwelling, 20 by 36, 424 North Lincoln street.....	2,000
Joseph Fleishmann, three-story dwelling, 28 by 73, 483 Dearborn avenue.....	10,000
D. Harry Hammer, three-story stores and flats, 50 by 64, 3718 and 3720 State street.....	15,000
A. E. Wood, two-story flats, 22 by 56, 287 Idaho street.....	3,000
Eich Bros., five two-story dwellings, 98 by 50, from 1059 to 1067 Wilcox avenue.....	15,000
John Kenney, two-story store and dwelling, 22 by 64, 687 Fourteenth street.....	4,000
John Cordano, three-story flats, 22 by 56, 104 South Center avenue.....	5,000
John Baus, two-story addition and brick basement, 20 by 15, 949 North Halsted street.....	2,000
C. Le Beau, three-story flats, 22 by 50, 12, 14 and 16 Gold street.....	6,000
O. J. Franchere, three-story store and dwelling, 24 by 51, 316 Blue Island avenue.....	10,000
John Ford, two-story store and dwelling, 23 by 60, 149 Fullerton avenue.....	3,200
George W. Bohanon, three-story factory, 40 by 80, 461 Wabash avenue.....	15,000
Peter Faust, two-story dwelling, 22 by 48, 12 Evans court.....	3,000
W. C. Ashton, two three-story dwellings, 30 by 60, Oak street near Lake Shore drive.....	3,000
Joseph Wahl, two three-story dwellings, 50 by 75, Chicago avenue, east of Rucker street.....	10,000
John Woelke, three-story store and flats, 27 by 66, 89 Wells street.....	9,000
B. and P. Mahon, three-story flats, 25 by 56, 2716 Dearborn street.....	5,500
S. Gregstein, three-story front addition, 40 by 16, to flats 1804 and 1806 Wabash avenue.....	4,000
George F. Whidden, two two-story flats, 42 by 55, 66 and 68 St. John's place.....	4,000
George F. Whidden, two-story flats, 42 by 58, 64 and 70 St. John's place.....	5,000
J. B. Barry, three-story dwelling, 24 by 64, 237 Park avenue.....	7,000
A. F. Ewing, six two-story dwellings, 120 by 34, on Thirteenth place between Oakley and Leavitt street.....	12,000
A. T. Ewing, six two-story dwellings, 120 by 34, on Thirteenth place, between Oakley and Leavitt street.....	12,000
Grace Episcopal Church, one-story church, 30 by 60, on Girard street near Wabash avenue.....	3,000
Charles Schumacher, three-story flats, 22 by 55, 367 South Morgan street.....	4,000
J. M. Allen, eleven one-story cottages, 20 by 28, on Armitage, between Elk Grove and Girard streets.....	8,000
Charles Wilkie, two-story dwelling, 21 by 44, 740 Dixon street.....	2,000
Thomas Olson, three-story flats, 45 by 55, 346 West Erie street.....	10,000
John Hubka, two-story flats, 22 by 70, 79 Wade street.....	4,500
Rev. S. Merretti, three-story rectory, 25 by 50, 64 Illinois street.....	6,600
C. H. Blair, two two-story dwellings, 46 by 74, 2909 and 2911 Prairie avenue.....	17,000
Dennis S. Sherman, two-story dwelling, 21 by 65, 48 Sloan street.....	4,500
O. Juul, two-story dwelling, 22 by 50, 219 West Erie street.....	4,000
Peter Smith, two-story dwelling and store, 24 by 60, 3637 Halsted street.....	4,300
Thomas Sweda, three-story store and flats, 88 by 44, 590 North Ashland avenue.....	6,500
S. F. Artingstall, two-story dwelling, 21 by 54, on Hamilton avenue near Monroe street.....	4,500
James Kincaid, two two-story dwellings, 46 by 51, rear of 594 and 596 South Halsted street.....	4,100
J. M. Stemben, four-story store and flats, 25 by 80, 56 West Indiana street.....	8,000
John Olouski, two-story flats, 22 by 62, 718 Noble street.....	3,600
T. P. and P. J. Sullivan, three-story stores and flats, 22 by 52, corner Franklin and Superior streets.....	4,500
Frank Newak, two one-story cottages, 20 by 30, 757 and 759 West Seventeenth street.....	2,000
W. Atkins, two two-story dwellings, 43 by 52, 180 and 182 Maxwell street.....	6,500
John Ryan, two-story dwelling, 25 by 39, 3150 Indiana avenue.....	5,000
Thomas Dunne, two-story dwelling, 23 by 50, 408 South Morgan street.....	3,400
John Ryan, two-story and basement brick dwelling, 25 by 39.....	5,000
Wm. Atkins, two-story and basement brick dwelling, 43 by 52.....	6,500
T. H. Gault, four two-story and basement brick dwellings, 20 by 47.....	12,000
Eich Bros., three two-story brick dwellings, 20 by 50.....	9,000
Eich Bros., three two-story brick dwellings, 20 by 55.....	9,000
Jas. Sullivan, three-story and basement brick dwelling, 30 by 50.....	4,100
Theo. Hoffmeier, two-story and basement brick dwelling, 25 by 30.....	2,900
U. P. Smith, two-story brick dwelling, 26 by 47.....	6,000
U. P. Smith, two-story brick dwelling, 20 by 47.....	6,000
U. P. Smith, two two-story brick dwellings, 26 by 47.....	12,000
L. K. Smith, two-story and basement brick dwelling, 50 by 70.....	30,000
Chas. Hottinger, four-story brick flats, 33 by 58.....	15,000
Fred Knul, two-story brick flats, 22 by 60.....	2,500
Wm. Schroder, two-story brick dwelling, 22 by 70.....	5,000
G. Thompson, two-story brick dwelling, 21 by 46.....	3,000
Wm. Moore, one-story and basement brick cottage, 20 by 30.....	2,000
Ellen Lynch, two-story brick dwelling, 22 by 44.....	2,600
W. A. Fuller, additional story, 80 by 85.....	18,000
C. DeLuce, two-story and basement brick dwelling, 24 by 60.....	5,000
Wm. Jackson, three three-story brick dwellings, 50 by 56.....	10,000
E. Saltsman, two-story brick dwelling, 23 by 60.....	6,000
D. A. Titcomb, two two-story brick dwellings, 48 by 57.....	6,000
Geo. Righimer, three-story and basement brick store and flats, 23 by 77.....	7,500

