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Location Selected for Joint Convention.

Cincinnati has been agreed upon by the trustees of the American Institute and the board of directors of the Western Association of Architects for the place of meeting of the first convention of the consolidated societies. To make arrangements for the convention there will be a joint meeting of the trustees and directors in New York on September 19. From the first we have advocated Cincinnati as the place for the joint convention, because of its general availability, and we have no doubt the results will show the wisdom of its selection by the executive boards. There is sure to be a large attendance representing all sections, and the hospitality of the Cincinnati architects is well known.

The Architectural Course at the Art Institute.

Elsewhere in our columns is outlined an architectural course which it is proposed to establish at the Art Institute, Chicago, in connection with the present courses in decoration and design. We have nothing but praise for this new venture and shall have more to say on the subject hereafter. It has long been a cause for regret that our draftsmen and students of architecture have had such poor facilities for anything like a suitable training; and we welcome this modest start with the expectation that it will in due time develop into a course where as thorough training may be had as is now given at Columbia or at the Boston Institute of Technology. We hope that Chicago architects will individually take the earliest opportunity to assure the managers of the Art Institute of their hearty appreciation of and coöperation with this timely step.

Art at the Exposition Building.

The artist and general visitor at the Interstate Exposition in Chicago will be well repaid by a visit to the galleries. The room heretofore occupied by casts has been transformed into a picture gallery materially increasing the hanging space. Many prominent American and foreign names appear in the catalogue, and the walls hold much that is attractive in the way of *genre* pictures, landscape and portraits. Ambitious canvases are fewer in number than usual, so that there is a greater number of smaller works of high average quality. Among the water colors are several Whistlers. The architectural visitor will highly appreciate the few canvases which show subjects in which he is most deeply interested, but he will regret that the number is so limited. We have often wondered if the managers of the art department of the exposition could not contrive to bring together a collection of fine architectural drawings. Such a collection is an important feature of the French Salon and of the Royal Academy exhibits, and however meritorious may be the display at the exposition galleries, it will never be complete till such a feature is included. And, too, we regret the total absence of black and whites.

National Exhibition of Architectural Drawings.

With commendable enterprise, and an appreciation of the interest and value of such an exhibit, the Cincinnati Architectural Club has undertaken an exhibition of architectural drawings and sketches. We publish in another column the circular of information issued by the club. The exhibition is to open in Pike's Opera House, Cincinnati, November 19, and continue one week. It is expected the exhibit will

include the work of all sketch clubs and prominent draftsmen of the United States and Canada. The Hinkle gold medal will be given for best exhibit of club work, the Anderson silver medal for best individual work of club members, and the Builders' Exchange medal for best water-color perspective. This is an unusual opportunity for architectural draftsmen to display their capabilities, and we earnestly hope that as individuals and as clubs they will heartily coöperate with their Cincinnati brethren to make the exhibition the largest and best display of architectural drawings ever made in America. Great additional interest would center in the exhibition if it and the joint convention of architects could be held at the same time. Might not this be accomplished?

Architects and their Relation to the Fair of 1892.

It is a foregone conclusion that a world's fair is to be held in the United States in 1892, and it behooves the architects of the country to take all possible steps to insure the representation thereat of the very best work that American architects have done in recent years. This will be partially accomplished by the presence of a collection of pen and ink drawings, water-colors and photographs, together with such an exhibition of building material and inventions and appliances as shall give a full idea of the newer methods and recent achievements of the profession. To this end it may be desirable that the coming convention of the joint association should appoint a standing committee from among its most influential members whose duty it shall be to look after all architectural interests in connection with the fair. It may not be presumptuous for this committee to use all proper influence with the exhibition committee on buildings to the end that the architects of the buildings may be chosen from among the very best men in the profession, and the buildings shall speak for themselves as to the highest attainments of American architects, and not be, as heretofore in American exhibitions, merely ugly and unsightly weather screens for their contents.

Style of Buildings for the World's Fair.

Since it is certain that a world's fair is to be held in the United States in the near future, it will not be out of place to set forth at this early day such general principles as should govern the erection of the buildings, whatever location may be chosen. It is probable that some few of the buildings will be permanent, and hence, in material and style of construction, should be in every way substantial, and all such permanent structures may be properly given an amount of elaboration in finish not otherwise necessary. Such dwellings as are to be merely temporary should not for this reason be sham or shoddy, but should rather receive an amount of study and care in the disposition of masses that shall render them not less artistic, even though less elaborate than structures intended to be permanent. And in general each building should have, so far as its uses permit, a real architectural value, being, as may be required by circumstances, characterized by straightforward simplicity or complex harmony, dignified or graceful, and always beautiful to the full extent allowed by its purpose, site and materials. The architecture of the buildings should be American in that the materials, so far as they have any distinctive and individual quality, should be American; and in that the planning and mode of construction should follow the best and most distinctively American model in so far as they are appropriate to the purpose. As to the matter of style in architecture, no attempt is worth making to show to the world the typical American architectural style, inasmuch as no such style has yet been evolved. The question of what general historic style or styles may be employed fittingly, need not be discussed here. It would certainly be a gross mistake to allow a confused jumble of heterogeneous types in any closely compacted group; but where a sufficient space of open ground or park about any single building, or group of buildings, isolates it from other buildings or groups, it may well be that the style of the isolated building, or group, should be determined, when possible, by the uses which it is to serve, and that no special reference should be had to other remote buildings or groups. It is almost superfluous to say that each single building should be treated as a unit, and should form, not an ingenious compilation of unrelated features, but a harmonious whole, only so far modified as to bring it into harmony with buildings of similar design in the closely allied group of which it may form a part.

As to High Towers for the World's Fair.

While on the subject of the architecture of the exposition, a word as to lofty towers may not be amiss. We have no need to demonstrate to the world that a tower fifteen hundred feet or two thousand feet in height can be raised. It is a much more difficult feat to span those distances horizontally than to reach them vertically, and the former we have done. In spanning these distances we have achieved the great aim of engineering—utility, but never yet have we touched the high end of architecture—beauty. In striving to reach these highly elevated planes we can achieve neither utility nor beauty, hence we ask, what is the desirability of structures of this sort? Certainly not for astronomers' purposes, the mountains afford a firmer base and far more lofty altitudes; nor for scientific research of any sort, our low, solidly built laboratories are better; nor for beauty, such flimsy structures can add nothing of grace or dignity to the landscape. For what, then, are they desirable? So that one may say "I have been up fifteen hundred feet?" Along comes a tourist from Switzerland and modestly exhibits a paper which indicates that he has breathed the air at an altitude of sixteen thousand feet. For what, then, are they desirable? Clearly to coin dollars for the builders. In fact, that sort of structure can only be considered a lightning rod to admit of discharge from our overcharged commercial spirits. We speak now and as we do on the subject of towers, knowing that it is being discussed in connection with the exposition of 1892, and we hope to aid in creating a sentiment which will induce capital to turn from these and kindred undertakings and interest itself in more beautiful and useful channels. It is not necessary to outdo Paris. She may have reason for her towers; we certainly have none; and, too, it may be well to remember that when we have outdone Paris the lowest mountain still overhangs us.

Selection of Architects for the World's Fair.

As to the choice of architects for buildings for the world's fair, we take it that, inasmuch as the exhibition is to be a national affair, it should be representative of the nation's best in its architecture as in all else; and that to this end the best architects in the country should be summoned and to each should be given the designing of a particular building or group, subject to the general plan devised by the committee on arrangement of grounds and buildings.

While this would not debar the representatives of the architectural profession in the place where the fair is held from having their full share in the work, it would give to all visitors a far better idea of the real merits and resources of the architectural profession in the country at large. We are of the opinion that a competition for the selection of these architects would be quite superfluous. It should not be a matter of great difficulty to select a half dozen architects, more or less, who would be acknowledged by the profession as a whole to be either its best men or equal to any and fully representative of the best attainments of the profession. Certainly, each architect, however eager for a share in the work, will concede that this method is not only the simplest and most practicable method, but the one which, as committees go, will be the most likely to yield results creditable to the profession. The mere fact that it avoids the waste of energy and time inseparable from a competition on any large scale, should sufficiently commend the plan here proposed. If it be asked how the committee on buildings and grounds, whose members are like enough not to be particularly versed in architecture as an art, is to set to work to make such a selection, we should suggest that the committee request each member of the American Institute of Architects (or the joint association, by whatever name called) to make and send to it a list of the dozen American architects from among whom he thinks such a selection should be made, and that from the dozen having the highest number of votes the committee should make their selection, exercising within the limits thus set their discretion as to geographical distribution. A committee acting on the line thus indicated would be assured from the outset that a selection so made could not go wide of the mark, and must fairly represent the consensus of those who from training and experience are best fitted to express a judgment.

Probable Location of the World's Fair.

Whatever city shall be chosen as the location of the world's fair, all our cities will lay aside all rivalry and do all in their power to make the fair really representative of the whole country. While any one of several cities that could be named would serve the purpose well, it would be useless for us not to admit that we should like to see Chicago selected. There appear to be some reasons why, other things being equal, a city in the interior would be better than a seaboard city. We wish not merely to hold a successful world's fair, but to have visitors from the Old World see as much as possible of the character, perhaps better characters, and resources of the United States; and to this end it is desirable that all visitors should penetrate a considerable distance from the seaboard. As for the advantages offered by Chicago, we propose simply to call attention to certain of its conveniences and facilities, without making any comparison with other cities. In the first place, while Chicago is not a finished city, being still in a state of rapid transition and evolution, it is for this very reason a representative American city. It is, moreover, characterized to the fullest extent by that aggressive and untiring energy which has made the United States a wonder to the Old World. Its railway facilities are adequate to the demands of the occasion, and the waterway communication with the East is speedy. Owing to the influence of the great lakes the summer climate is noteworthy for its coolness. It has an abundant supply of pure, cool water, ample hotel accommodations, and ample ground for buildings, easily accessible from the center of the city. Within its limits are carried on many varieties of the great industrial enterprises that have made America a factor in the daily life of Europe. By virtue of its location it offers an opportunity for a commanding display of the resources of the great Northwest in agriculture, fruits, stock, minerals and timber. And, finally, so far as the burden of the national enterprise must fall on the city where the fair is located, Chicago can be counted upon to do its full share and to conduct its part with its wonted push, precision and skill.

Death of Mr. Henry Shaw, of St. Louis.

The death on Sunday, August 25, of Mr. Henry Shaw, of St. Louis, will be learned with profound regret by a very wide circle of refined people at home and abroad. For many years, even before the war of secession, the fame of Shaw's Gardens in St. Louis had spread far and wide; they were among the first objects of inquiry by visiting strangers, and are prominently mentioned in books of western travel. A native of England, born in 1800, Mr. Shaw came to St. Louis in 1819, and rapidly acquired a competence in mercantile business. He withdrew from trade in early life and devoted himself to the creation of a private park and garden, to embrace every important species of vegetation, and to illustrate to Americans the possibilities of landscape architecture on a scale and with a perfection till then undreamed of on this continent. Once established these spacious and elegant grounds, with all their appointments, were opened to the enjoyment of the public without entrance fee or other charge whatever. Later Mr. Shaw increased his princely benefactions by the donation to the city of Tower Grove Park, an exquisite bit of landscape of several hundred acres, solely on condition that the city would maintain it in a manner commensurate with its beauty; and every year since then he has himself added new gifts to its adornments. Mr. Shaw was also a liberal patron of all the fine arts, and his acts of unostentatious private beneficence are too numerous to be mentioned or even to be ascertained. His wealth is estimated at $2,500,000. The project of erecting a statue to him, which he repeatedly declined during his life, is now revived by the grateful citizens of St. Louis, and it may become the subject of an architectural competition.

Prospects of St. Louis City Hall Competition.

The prospects for a successful issue to the St. Louis city hall competition are very encouraging. The favorable terms offered to architects, and the high standing of the commission in charge of the competition, have elicited an unusual interest among the best men of the profession quite generally in the United States. It is almost certain that Professor Ware, of New York, will be the expert chosen to examine the plans and advise the committee. While one or two other eminent names have been considered, it is believed that Professor Ware, being most widely known among architects east and west, and having already acted in this capacity several times with entire satisfaction, would be the most acceptable to all parties interested. Some inquiries having been made as to the prospect that the building will be erected, Mr. Bell states officially that the city has now in hand $200,000, which at the end of the year will be increased to $600,000, and that $400,000 a year will be added thereafter until the building is done and paid for. It is expected that its erection will occupy two or three years.

Romanesque Architecture.*

CHAPTER XVII.

INFLUENCE OF BYZANTINE ART ON ARCHITECTURE IN THE EAST AND WEST — ARCHITECTURE FROM THE SEVENTH TO THE ELEVENTH CENTURY.

BYZANTINE art, which was so gloriously manifested by the superb works of Justinian, exercised from its very beginning a considerable influence, which extended later over the entire West, but which was general in the East, especially during the prosperity of the Greek Empire. That empire expired with the seventh century, exhausted by its victories as well as by the attacks of the Persians.

One can easily trace the Byzantine traditions from the earliest times of the Arabian Empire. From the commencement of the Hegira in 622 to the time when they gave to their art its particular character, the Mussulmans, the most implacable enemies of the Christians and the Greek Empire, borrowed characteristics that are easily traced from the art of their enemies, or Byzantine art. When the Arabians extended by their conquests the Moorish dominions from Asia Minor to the Pyrenees, art with them only existed under the most rudimentary forms.

As the Christians established their first altars in the civil basilicas of Rome, so the Mussulmans preserved in the country they conquered the religious monuments. They modified them, then constructed new edifices, arranged according to their religious requirements, but this architecture preserved traits of its original character, from the influence of which they were not able to free themselves.

"In Syria the Arabians did not construct mosques. They took possession of the churches of Christ and dedicated them to Allah. Often, for several years, the two worships lived side by side in the same edifice." It was the same in Spain, and the historians of Arabian art distinguished in this country the first Byzantine period, which extends to the end of the tenth century. Between the caliphs of Cordova and the emperors of Constantinople connection was kept up; learned men and Greek artists hastened to Spain. Moreover the ancient edifices of Cordova show the mark of that influence so very evident in the celebrated mosque of Cordova built by Abderaman toward the end of the seventh century.

In the middle ages, under the kings of the first dynasty, and consequently much before Charlemagne and the pilgrimages in the year 1000, relations existed between the West and the East, while Byzantium exerciesd such powerful attractions that the princes of France, Germany and Italy sent embassadors there continually.

A great number of pilgrims from all the western countries visited the Holy Land, and going or coming by way of Constantinople, they spread throughout Europe, by the recital of the splendors of the Byzantine civilization, and the description of its admirable monuments, an enthusiastic desire to equal the people of the East. Greek monks, who had established themselves in the South of Italy, Rome, France and Germany, contributed largely to the spread and development of these ideas.

In the Merovingian epoch, Syrian colonies existed in the center of France, and it is not to be doubted that they carried with them the monumental traditions of Central Syria, which developed so well, and can be so easily discerned in the ancient province of Aquitania.

Byzantine influence was certainly felt in Italy; it was felt less to the north of this country, because of the division into a great number of states and towns, as different from each other in a political as in an artistic point of view.

In the South of Italy, the rule of Byzantium is evident. For several centuries an entire part of this country was attached by religion, administration and language, to the empire of Constantinople. The ancient Magna Grecia always merited that name. Even the quarrel of the Iconoclasts, that separated the East from the rest of Italy, strengthened Hellenism in the south; the partisans of images took refuge in great numbers in the south, and the Greek emperors did not disturb them.

Venice, at the other extremity of Italy, is a Greek city. Its prosperity increased in proportion as that of Ravenna declined. "Venice maintained her independence between the Lombards and the Franks, and the nominal suzerainty of the Greek emperors that she affected to recognize, was really the means of her fortune. The Venetian monuments, among others Santa Fosca at Torcello, and St. Mark's, at Venice, recall those of Constantinople.

The churches built in Greece from the ninth to the tenth century, in their general arrangement, as well as in the details of their construction, bear traces of Byzantine architects.

The church of St. Nicodemus, and that of the monastery of Delphi, built at Athens or near that city in the tenth century, resemble in plan and style of architecture, the church of the Mother of God Agia Theotocos built about the ninth century in Constantinople, and that of Sts. Sergius and Bacchus, erected in the sixth century.

In Russia the Byzantine art movement commences with Greek Christianity. Until the tenth century the Russians knew only of wooden constructions. It was the Byzantine architects who built the first stone churches, and Byzantine painters who decorated them. But Russian art rapidly assumed peculiar characteristics, and the Greek element mingled with others of eastern, western and Asiatic origin. The cupola no longer reposed on spherical pendentives, but on a series of arches or superimposed corbels, passing from the square form to the circular. Its exterior form assumed a bulbous shape, and the architecture, while still showing traces of Persia and India, soon assumed an original character that it has happily preserved.

The Byzantine influence is manifest in Germany from the eighth century, and it seems probable that Charlemagne contributed largely to it "The Carlovingians had continual relations with the emperors of Constantinople." We know that objects of art came from Constantinople to the West. A bishop of Cambrai, Halitcharius, sent as embassador to Constantinople, brought back from there carved ivories. Oriental stuffs were in great demand and from fragments found in the tombs and shrines of the times, laic and clerics must have loved to wear them.

It is also known that the Palatine chapel of Charlemagne at Aix-la-Chapelle, commenced at the end of the eighth century and finished in the early part of the ninth, was inspired by the church of St. Vitale at Ravenna, built at the commencement of the seventh century in imitation of the Temple of Gold, erected at Antioch by Constantine and which is acknowledged to be the most perfect example of Byzantine art.

A great number of churches were built in the valley of the Rhine. The Byzantine traditions of the architecture of Aix-la-Chapelle can be easily traced, more by the exact reproduction of plans and forms than by the mode of construction.

In France Byzantine art preserved for a less time than in Italy its original characteristics; but its influence is visible in both countries and the grand churches of Venice and Périgueux, nearly contemporary, both show their oriental affiliation. The same idea is only interpreted differently in the two countries. In Italy St. Mark's is a copy of Byzantine work, constructed according to Roman methods. It has remained an alien, a unique work, though it has had very little influence on all around it.

While in France St. Front was a reproduction in its arrangement of its oriental model, its construction is very different and manifests much greater skill in the art of building.

The architects of Aquitania, familiar with the traditions of antique Rome, had been acquainted for a long time with Syrian traditions, and assimilated the process with Byzantine art. These different elements perfected by them and appropriated according to their mode of construction, in which the stone was shown in the simple beauty of its combination, appropriately cut, soon formed a style of building new in Europe after the year 1000.

This new style, having an original individual character, exercised in its turn a considerable influence on Romanesque architecture, and was certainly one of the principal causes of the extraordinary development that took place in the first half of the eleventh century.

PART II.

HISTORY AND CHARACTER OF ROMANESQUE ARCHITECTURE — BAPTISTERIES — RURAL OR MORTUARY CHAPELS — CHURCHES HAVING THE FORMS OF BASILICAS — ROUND OR POLYGONAL CHURCHES — VAULTED CHURCHES.

CHAPTER I.

DEFINITION AND CHARACTER OF ROMANESQUE ARCHITECTURE.

Romanesque architecture proceeded directly and surely from Roman and Byzantine art. According to Quicherat, "Romanesque architecture is that which has ceased to be Roman, although it contains much that is Roman, and though not yet Gothic, contains much that is Gothic." According to Viollet-Leduc, "In Occidental Romanesque architecture, by the side of the persistent Latin traditions, there is to be found everywhere a Byzantine influence shown by the introduction of the cupola"; and in another place he says again: "Up to the eleventh century the religious establishments — great centers of

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

art—did nothing but follow the Roman traditions." Therefore it was necessary to first know Roman art, or at least the epoch which might be called the time of its point of departure. After this it was necessary to study Byzantine art, when took place such a brilliant transformation. In short, to define Romanesque architecture, it was indispensable to study Roman and Byzantine art, which gave birth to it. We can then follow its affiliations, which themselves establish the proof. It was necessary to show this, and it was for this reason that the first part of this work is so important.

The Romanesque builders imitated the Roman and Byzantine, as these followed more or less faithfully the monumental traditions that their predecessors had transmitted to them.

There is no demarkation as clearly cut, within a classification as radically narrow, as that which has been invented by certain archæologists trying to prove that the character of Romanesque architecture is definitely determined by the character of the stonework and ornamentation. They measure the monuments minutely, stopping especially over the details from whence they draw erroneous conclusions, describe the cutting of the stones, or analyze the mortars which cement them. They dissect, so to speak, the moldings of the cornices and corbels, the carving of the string courses, of the friezes and capitals; but all these features so painfully studied and so laboriously combined do not give the exact physiognomy of the whole.

Indeed, Romanesque buildings, whether they were made with the greatest possible perfection or executed in the rudest manner, always bear the visible marks of the Roman manner of treating the stone, a certain proof of the power of traditions so strong that they induced the Romanesque architects to imitate the Roman practices, even in those things which they did with the most picturesque naïveté, for in the eleventh century they still made wall facings in the Roman manner in ornamental patterns called herring-bone and beads. Romanesque ornamentation is equally an imitation of the antique; the moldings and carvings accentuate or decorate the architectural members at the same points where the Romans were accustomed to apply these ornaments. The difference often only existed in the execution of the work, rudely and unskillfully imitated in the countries of the North, or in the South executed so perfectly that they at last succeeded in perfectly imitating the buildings erected by the Romans.

"All this does not constitute Romanesque architecture, which is only a particular method of construction, the character of which could only come from the fundamental arrangement of the edifice, and from laws, following which the solid parts and spaces are combined."

The principal characteristic of Romanesque architecture is the vault.

The Romans knew of the vault, and three of the forms which they used were applied by the Romanesque architects, the barreled vault, the ribbed vault and the cupola.

The Roman basilicas were covered by an open timber roof, forming at the same time the ceiling and the outer covering. The first Christian basilicas, built in the Roman style, were an imitation of this arrangement, but the contrast between the two styles of architecture and the point of departure, in all the differences that separate them, is manifest in the application of the vault.

"The Romanesque churches are vaulted, covered beneath the roof by constructions of different forms, where the stones are held fixed in space."

The vault exerting a strong continued thrust on the side walls or piers, which it tended to overthrow, rendered it necessary to build the wall thick enough to neutralize the weight, diminishing the size and height to resist the thrust of the forces. It consequently made the architecture more heavy, admitting less light and making the central nave more obscure. On the contrary, the Roman basilica, with its timber roof covering the central nave and side aisles did not have any tendency to throw out the piers and was generously open and lighted. Lateral walls, formed of colonnades and arcades, only having to support vertically the upper part, where were many windows, could be constructed with more lightness and elegance.

It was necessary to choose between two alternatives, either to keep the complete basilica form, or to modify it as to the plan or at least the details of its construction, by the adoption of the systematic vaulting of the edifice.

If the Romans had recoiled before such a radical solution, the Romanesque architects had less scruples, because of the need there was for them to preserve the Christian altars and holy relics from those oft-recurring disasters occasioned by the burning of the roofs.

"They sacrificed all the classic proportions of the vault, making the walls thicker, grouping the piers more, reducing the bays; in a word, in every way lessening the openings and increasing the walls."

But in these experiments, where lack of taste was not able to place limitations on the Romanesque architects, a time came when common sense warned them to stop. This happened when the encroachments by the walls on the spaces became such that the acoustic properties of the edifice were destroyed, when light no longer penetrated into it, and circulation was nearly impossible. They remedied these inconveniences by new arrangements, applying themselves to the construction of vaults, and to making openings in the walls and piers.

Byzantine art had an equally strong influence, which was felt nearly all over Europe, on the construction of religious edifices. In the time of Charlemagne, the Palatine chapel at Aix in Germany, and Germiny-des-Pres in France, are certain proofs of this; but in the eleventh century its effects are not generally manifest in the vaulting of the churches, except in St. Front at Périgueux and St. Mark's at Venice.

Up to this epoch, even during the brilliant period of the Carlovingians, nearly all the churches (with the exception of some chapels and vaulted baptisteries, or some churches which we shall mention), on the borders of the Rhine, in Aquitania, in Burgundy and in France, were built of stone and covered with wooden roofs.

History furnishes us proof of it. "The Normans always made their bonfires in the temples built at great expense by the Frank emperors, and the result of these fires was the total ruin of the edifices. If the Normans had had to do with vaulted edifices, they could have even placed their fires inside and out, and the edifice would have experienced only partial and not total destruction. They could scarcely have made the walls fall; but, on the contrary, applying themselves to the ceiled building, it was sufficient to set fire to the woodwork of the interior, so that the flames could gain the roof. This giving way, the columns were not long in breaking into fragments, and in their ruin, dragging down the walls."

The lesson given by the Normans did not bear immediate fruit, and we see many churches rebuilt on the basilica plan after the Norman invasion. Chronicles of the time filled with recitals relative to fire caused by lightning, with the destruction of churches as their result, prove that these edifices were yet covered with wood.

The vaulting of the churches and its system was adopted about the year 1000, with enthusiasm by a people in love with everything novel, and who saw in it a picture of durability fitting the new birth of the world.

The advent of Romanesque architecture is thus established at the commencement of the eleventh century.

However, the new system of construction was not applied everywhere from the year 1000, for in 1008, according to the account of Raoul Glaber, a legate was sent from Rome to dedicate the church of Beaulieu, near Loches, which had just been built, through the liberality of Foulque Nerra, count of Anjou. The very day of the ceremony a hurricane swept over the church, tore off the paneling of the roof, which, with the entire covering, was thrown onto the ground over and beyond the western gable. This proves quite well that the church of Beaulieu was covered with wood, after the manner of the ancient basilicas.

In other places the new system was not applied immediately to its full extent. Its execution commenced by timid attempts that we can recognize in different countries, notably in Brittany and Normandy in the edifices built in the first part of the eleventh century. The extremely rich church of Jumieges, which was commenced in 1040 and whose ruins are one of the wonders of Normandy, never had in its Romanesque parts anything but a wooden ceiling over its grand nave.

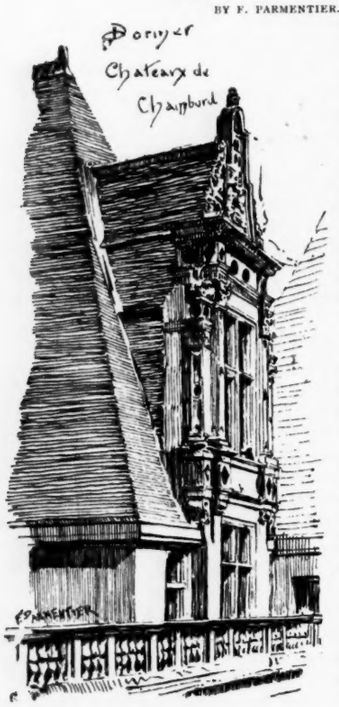
It is necessary to take the climate into account. At the same time that in the northern countries they were only making timid essays in the new system, in the southern countries they were more advanced, and already completely covered their edifices with vaults. There was built in Périgueux, in the first part of the eleventh century, a vast church of five cupolas, built in imitation of the Holy Apostles at Constantinople. It is a complete example of an admirable style in which Byzantine and Syrian influences were united—a union which was life-giving, and whose influence was so fruitfully manifest through the following centuries.

To facilitate the study of Romanesque architecture, it may be useful to establish the following order in the buildings mentioned: Baptisteries, or rural or mortuary chapels; churches of the basilica form; round or polygonal churches; and vaulted churches. In these we shall dwell only on the grand divisions and on the principal architectural characteristics.

(*To be continued.*)

Style of Francis I.*

BY F. PARMENTIER.



THE reign of Francis I and the splendid epoch of the Renaissance are inseparable in the minds of artists, as well as in the researches of the historian. The art of painting has more than once reproduced the noble spectacle of the King of France holding the dying hands of Leonardo da Vinci, and Pope Leo X closing the eyes of Raphael in that solemn chamber, where people, pontiff and cardinals pressed themselves around the great artist. There existed indeed at that time an enthusiasm hard to describe, an inclination toward the arts that no historical work could mention.

In speaking of the revival of arts, it is not my intention to go into the details of a history, but to confine myself to architecture only, with perhaps a few accessory remarks about her sister arts.

Before speaking of the style of architecture prevalent during the reign of Francis I, let us glance back to the period called the Middle Ages, and to the events that led to our style. By the Middle Ages, we understand that period beginning with the downfall of the Roman Empire, and ending with the discovery of America.

We cannot fail to notice the religious ardor which manifested itself after the year 1,000. Roman basilicas were transformed into Christian churches. There was indeed a peculiar spirit which reigned during the Middle Ages and governed the minds of the people all over Central and Western Europe. Every one knows of the feudal laws which prevailed in the then civilized European countries — the arts and sciences being entirely influenced by the spirit of the age, as I should call it. The architecture of the Middle Ages was, in the early part, the Byzantine and the Romanesque, the latter developing into pointed or so-called Gothic architecture, which reached its most refined development in France.

Glancing over Europe, when the period called the Middle Ages is about to vanish, we will have to notice the following situation : The importance of Italy, Venice, Florence, Milan, Genoa and Naples — republics and powerful commercial centers. We will also see the importance of the German Empire, of England and of Spain ; all this about the period between the years 1450 and 1510. Gunpowder had been invented, also the art of printing, and the great Italian diplomat, Machiavelli, was creating considerable excitement. Such was the general outlook in Europe about the time the Renaissance made its appearance.

In speaking of the Renaissance, we mean a general revival of all the arts of ancient Greece and Rome, and to Francis I we owe the first impulse of that revival in France ; therefore, in speaking of that epoch, I would here and there say a few words about the monarch himself.

In the chateau of Cognac, in Angoumois, was born Francis I, September 12, 1494 ; he was then Count of Angouleme, and his childhood was passed in the chateau of Amboise. He was educated in all the arts of chivalry which were prevalent in feudal times, and he was made to read those beautiful romances, characteristic of the times — the literature of the Middle Ages. The young count grew up with an intrepid, strong character. His tutor, Artus de Gouffier Boissy, a savant in all things and a good talker, was greatly responsible for the taste that Francis afterwards developed for sciences and arts.

If the spirit of the Middle Ages still lived in its chivalrous customs or in the habits of castle life, it was evident though that society underwent a transformation. Such changes do not come all at once, they prepare themselves far back ; and the childhood of Francis I was entirely influenced by these motives. At the age of eighteen, at that time Duke of Valois, he was married to Claude, the deformed daughter of his uncle, Louis XII, which alliance made him an heir to the crown of France.

Eventually, after the death of Louis XII, Francis I ascended the throne of France, on January 1, 1515, barely twenty years of age. His first campaign with Italy took place shortly after his ascension to the throne, when he appointed his mother, Louise of Savoie, regent. It is to this rapid transit to Italy, to this lightning conquest (too well known by all those familiar with the history of France) that we associate the epoch called the Revival of the Arts.

Let us now look back to Italy, at a time before this campaign took place, in order to gain a better comprehension of the situation. The Renaissance in Italy was but an imitation of the antique ; the progress of science against the legends of medieval Europe. The unanimous judgment of all men of intelligence places into the hands of Dante, Petrarch and Boccaccio the palm of literature of the Middle Ages. Compare this literature with the paintings of that epoch. Every nation has its characteristics, and certainly the nations of the Middle Ages rivaled themselves in this production. The Renaissance created for national literature the same evil that the romances of Cervantes did for the customs of chivalry ; the same, we must say, for architecture.

What characterizes the Renaissance, is precisely the almost total neutralization of this national type. One forgets instinct, the creations of the people, and that, for the plastic imitations of the ancients. The fall of the Greek or Byzantine Empire was a yet recent event, and that nation, like other degenerated races, swarmed with orators, scientists and philosophers ; these last named now come to seek refuge in Rome, in Venice, in Florence and wherever else they could find a place to gain their livelihood. They taught Greek and the antique arts ; they pretended to teach the Hellenic arts as they were practiced in Greece before that country fell under the Roman sword. It is to these men that is probably due that fiery passion for all that was antique and which revolutionized the public spirit of that period. Greek architecture (or at least what was then understood as such), literature, laws, etc., were now predominating the public mind. The century, full of modesty, produced nothing of itself. One imitates and explains, and one stands amazed by the magnificence of the ancient world. The new generation is afraid to go into originality for fear of showing its inferiority. Archæology makes its appearance now in the shape of a science.

The magnificence of Francis I, this chivalrous spirit who always went to seek the beautiful and the grand, was now after the Italian campaign thoroughly saturated with this enthusiasm for the Renaissance. He very soon scattered gold right and left to induce the best artists of Italy to come with him to France and introduce the revival of arts in his country.

At the return from this campaign, the first steps taken by Francis I were to remodel the system of all the schools and colleges. Aside from the then renowned University of Paris, the king also established the College of France. The origin of degrees is also ascribed to that epoch. The studies of Greek, Latin, Hebrew, philosophy, law and medicine reached now their highest development. France, indeed, was also to see its last days of medieval life. Society was no more what it was in feudal times. Instead of only the nobility and the peasantry, there had now developed a new individual ; this individual was the burgher or citizen. To the feudal laws had succeeded the Roman laws, and this new individual was to be the adequate representative of the period. It was he that furnished the scholars and scientists ; the nobility furnished the knights and men of the sword ; while the yoemanry tilled the soil and also furnished the material for the infantry of the army. Finances were also controlled by the burgher or citizen, because the nobles were, as a rule, at that time squanderers, and knew not the value of money.

The Renaissance was now making rapid strides in France ; all the fine arts underwent a complete transformation ; but, as it is my intention to deal only with architecture, I will say but little of the remaining arts and sciences. The artists that Francis I had brought with him from Italy were now commissioned to remodel the principal chateaux that had been the property of the past sovereigns of France. Such was the state of affairs in France at the time usually called the First Period of the reign of Francis I, and which ends with the defeat of Francis at the battle of Pavia, which was the last battle of a long war between Francis I, Italy, Henry VIII and Charles V, which latter three were allied against France. This was about the year 1525.

Everyone knows of the long imprisonment the king suffered in Madrid, Spain, from which he was released by Charles V on condition of a very one-sided and unfair treaty. In the year 1526 the king is again in France, and here begins the so-called Second Period of the reign of Francis I, which is really the most important for us to consider.

The state of affairs in general was very near the same as it was during the first period, but the king, advancing now toward old age, did not care so much for war as he did during the early part of his reign ; while, on the other hand, his love for arts and sciences had been greatly enhanced. Aside from having been in Italy, he had now been in Spain, and had while there been deeply impressed with some of the existing buildings and monuments. He had come back to France with a new spirit and enthusiasm for the arts in general, and especially so for architecture.

A good deal of the work now being done in France was by native French artists. Although Francis was greatly impressed by the magnificent monuments he had seen in Italy, yet they were not his ideal. He had his own ideas about the beautiful, which he imparted to all the artists that worked under his auspices.

Let us now glance over some of the work that was accomplished during that reign, and which resulted in what we call today in architecture, "The Style of Francis I." As a monument of sculpture the tomb of Louis XII and Anne of Brittanny, at St. Dennis, is, perhaps, the most noteworthy — a classical portico, surmounted by a large stone, on top of which lie the two statues, that of Louis and Anne. On every side of the monument are grouped admirable figures borrowed from the celebrated "School of Athens," by Raphael ; heads of philosophers and apostles that seem to meditate about the vanity of human thoughts. This monument is the work of Jehan Juste. It is remarkable to see the degree of perfection the study of anatomy is brought to in this work.

Perhaps the best works in painting of that period were the following subjects, made at the Salle du Vatican, by Raphael, under the

* Paper read before the Chicago Architectural Sketch Club, August 12, 1889.

auspices of Francis I: "Della Segnatura," "Parnassus" and "Jurisprudence" and "The School of Athens" above mentioned, and, to complete all, the best of his "Holy Families." Francis was indeed the mighty hand that realized the thoughts of his epoch. He kept from the Middle Ages nothing but the adventurous impulse of chivalry.

In the early part of his reign I have said that Francis brought over with him artists from Italy to remodel the chateaux he was then inhabiting, but now there were quite a number of French artists at work upon these buildings, for the king believed in uniting the grandeur of the antique art with the national spirit in France, and thereby create a style of architecture different from what he had already seen in Italy. But this work did not confine itself to the chateaux alone. The Tuilleries and the Louvre were both remodeled to suit the tastes of the king. Among the chateaux occupied by the sovereigns of France, Pierrefond, Maintenon, Montigny, Amboise and Meillant remained examples of medieval architecture of France. Probably on account of their beautiful proportions and their fine Gothic details, Francis did not deem it necessary to alter them. The chateau of Blois sustained some extensive alterations in its interior, but the exterior still remains as a beautiful example of the best of French Gothic architecture, with exception of the interior court and the celebrated grand staircase, which latter are entirely of the Italian school. This chateau has recently been restored by M. Felix Duban.

The chateaux that underwent a complete change were Fontainebleau, Chambord, St. Germain en Laye, Viller Cotterets, Chenonceaux, Azay le Rideaux and a few smaller ones. The reason these chateaux underwent a complete change will be explained by the following statement: The castle architecture of the Middle Ages in general, and especially these last named, consisted in heavy walls

with battlements, a good many elevated towers with narrow loopholes for defensive purposes; large doorways with pointed arches, and supplied with a drawbridge thrown over a ditch. Such buildings were more adapted for warfare than for habitations of pleasure and distraction, and were especially illfitted to the gay court life of Francis I. Therefore such buildings would not do, so he soon brought into their place the Italian construction and especially the Florentine and Milanese. Large square pavilions, long galleries, supplied with statues thrown into niches after the antique manner, were now predominant features with those remodeled buildings; everything up to the terraces and fountains seemed designed from the same model.

The chateau of Fontainebleau was already being worked upon during the early reign of Francis I. Situated in a most romantic locality, among large prehistoric rocks, Francis undertook to make it a spot of enchantment. Large water-basins were executed, around which wound themselves sandy paths, laid out after the style of Florence and Milan, and yet in such a way so as not to lose that wild romantic effect which pleased the king so much. The buildings composing this chateau are patterned after the Florentine and Roman school. Speaking of Fontainebleau, there is another structure which deserves mention. Situated about two leagues from Fontainebleau, at the little town of Moret, was built the House of the Cooper which, perhaps, is better known by the name of the house of Francis I, of which some time ago the *American Architect* published a photogravure. As forests abounded on all sides, Francis I had an idea of establishing there a rendezvous place for hunting, a pastime of which he was very fond, and he therefore caused to be erected the edifice I speak of. This house, by the way, has quite a little history. In 1826, it was sold by the government to a lover of the arts—I do not recollect his name—who caused it to be transferred stone by stone to Paris, where, in the Champs Elysees, it was rebuilt, uninjured, with its own debris. The sculpture on it is attributed to Jean Goujon; the date, 1828, carved in the frieze, refers to the installation of the rebuilt structure. This house is a very elegant example of the style of Francis I.

Chambord is a confusion of buildings. Large towers predominate; imposing chimneys and elaborate dormers are some of the principal features. It is a mixture of the feudal and Florentine construction. Chenonceaux is Chambord over again, a little smaller. Statuary everywhere, the carving and sculpture conforming to the art of the Middle Ages.

To give any further description of the various buildings and monuments would only be tiresome to my hearers; I will therefore briefly review the style. It is evident that the architecture that was being developed now in France was in many respects superior to the Italian Renaissance, but more so in details than in general proportions; perhaps the high roofs traditional of the Gothic period were in a great measure responsible for what superiority it had in proportions. These facts are plausible when one considers the relative causes. The revival of classic architecture in Italy first manifested itself in the early part of the fifteenth century, through an architect named Phillippo Brunellen; and was afterward developed by such men as Bramante, Palladio, Michael Angelo, Vignola, Raphael and others. Now these artists instead of studying the remains of Greek architecture were more or less guided by the teaching of a Latin architect, Vitruvius. Vitruvius himself, instead of having carefully studied remaining examples of Greek architecture, took up the examples of the then existing Roman monuments, of which many missed the first principles set forth by the Greeks, and classified them into four orders, which he called Greek architecture, and to which orders he applied the most absurd rules of proportions, pretending them to be the secret of Greek art.

To these four orders Vignola added a fifth, which was an alleged mixture of the Ionic and Corinthian orders of Vitruvius. This fifth order was called the Composite, and was subjected to new rules of proportion, to distinguish it thoroughly from the others.

Such was and still is the so-called Italian school of architecture. It is evident that several of the above named artists were highly qualified by nature as architects, and therefore produced some remarkable works, even though their talents were more or less impeded by the education they received. As only the best works of the Italian school served as models for the introduction of the revival in France, the new style was evidently to be superior to the old one. French artists very soon promoted the style by refining the details and by combining some of the forms of the Renaissance with their own medieval forms.

The result was that they developed a style of architecture eminent in principle, elegance and refinement. The early French Renaissance was indeed well begun, but how soon it was to fall to such coarse and vulgar styles as those of Louis XIII and XIV, to be once more brought to a higher standard, with new theories and new principles, under the first empire. As I have said before, the style of Francis I, being the first manifestation of the Classic revival in France, was, nevertheless, like the medieval styles, the representative style of an epoch, harmonizing with all the customs and modes of living associated with those times. Can we say the same of European architecture of today? It is unnecessary for me to point out the evils of modern architecture, as the subject has already been discussed and demonstrated by many of our nineteenth-century architects. The great question lies before us: What shall be done, what more can we do than to study the works of our predecessors, try and follow their footsteps, using forms of design that they have used, and that have become perfect through the persistent labor and combined efforts of nations and generations? But, in reviewing this question, do we find that we are pursuing the proper methods? I will not attempt to answer this, but leave it to your own solution. However, I will take the liberty to outline a few facts.

For the past few years there has been considerable enthusiasm in the United States to develop a national style of architecture, and such a style that would entirely correspond with our customs and modes of living. To do this we are compelled to carefully study the architecture of the past in order to gain knowledge and train ourselves to appreciate true art.

Whether we should pick out any particular existing style as a model to guide ourselves by is a rather difficult question to answer. Nevertheless we all know that the architectural monuments and buildings executed by the Greeks at the time their arts were flourishing were of an order superior to anything that was done before or since. We know more today about Greek architecture than did the artists of the period of Francis I. Had they been guided by better sources than the books of Vitruvius, who knows what the result would have been?

To copy the forms of Greek architecture bodily, and apply them without reason to our buildings, should be considered out of the question. It is the underlying principles that we should carefully study, and apply them to suit our convenience. Perhaps no one in this country has set a better example in this than the late H. H. Richardson. I do not favor the style of architecture chosen by him as a *modus operandi*, but cannot help being strongly impressed with the great principle that seems to guide all his designs. How little was Richardson really understood by most of the American architects is shown in the too numerous weak imitations and copies of his works. Instead of copying his works without understanding his motives, why not try to follow him in his principles? By doing so we would most assuredly make better progress toward the development of a national style. That we are in many respects ahead of the present European architecture is a fact only too well known. And what

facilities we have here compared with our brethren on the other side. A Richardson could not have existed in France, Germany or England. But unfortunately the freedom that we enjoy here to practice our art and demonstrate what we know without reference to preceding styles and their book rules, has also its dark sides. It leads to absurdities as well as to brilliant conceptions and advancements. This fact shows itself only too well in the depraved school of design practiced by some of our northwestern contemporaries, whose works are constantly perpetrated upon us through the medium of some of our prominent architectural publications. Why should not said publications draw the line between good and bad work; why should they not discriminate for the benefit of the student and subscriber?

Within the past few years such things as sketch clubs have been organized by draftsmen in various cities of the United States, object of said clubs being mutual instruction. The oldest and best equipped of these is the C. A. S. C. The efforts and results of this club have by no means been small since its organization, and the work produced by some of its members is indeed worthy of earnest consideration. The monthly competitions have at all times shown more study of architecture than those of similar clubs in the country. The C. A. S. C. is very near to the right road, but could be brought a little nearer by means of more conscientious decisions on the part of the judges for the monthly competitions.

Architectural Students.*

BY R. A. DENELL.

MR. PRESIDENT and Gentlemen: Josh Billings says, "There is many a man who can set a mousetrap to perfection, but not satisfied with such small game undertake to trap for bears and get ketched by the bears." These are my sentiments and I apprehend the bears find them always an easy prey.

"Art is a mistress who is won by no partial service," is another old saying of which, no doubt, you have all felt the pungency. Such art I struck when I undertook this paper. The different routes of thought that presented themselves to me became more numerous the more I gave the subject consideration, until they became bewildering in their multiplicity. Finally, I concluded to take the essence, so to speak, of their several suggestions for my theme and to change the title of my paper to "hints to architectural students." I hold that a student himself can come nearer home in giving pertinent advice to students than the elders of the profession, who have either forgotten the feelings that animated them in their student days or look back upon them as so many adolescent follies. Somehow, notwithstanding this, it seems to be necessary that great and mediocre mortals alike have to pass through the same general experience.

At this point I would like to make two quotations from Viollet-Leduc, in regard to the origin of the architect and the necessity for work. They are as follows:

"The master workman laid aside his functions and the architect was born."

"He built better than he knew,
The conscious stone to beauty grew."

The real work as far as true architectural art is concerned.

For the architect or student, art is the visible expression of a satisfied desire; the embodiment of the beautiful and the useful; thus it befalls to the architectural student to learn how to combine these two stubborn qualities. To do this requires reasoning power, artistic taste and feelings, constructional ability and knowledge of man's life and its needs.

The first ten years of student life is to learn the artistic and constructional parts of the profession. The remainder can be deferred until forced upon us by actual practice, as it surely will be, as is proven by our prominent architects who rarely find time to touch the pen and pencil, yet the knowledge of which, gained in their student days, like a sixth sense, makes them masters of the business situation. The business part of an architect's work is of so much less scope than the strictly professional and is so easily attained by the emergencies of practice that it may be safely laid aside in student days to take care of itself as, if the business ability is inherent it will assert itself without effort when the time comes for its activity.

Now I come to some of the hints I desire to offer. Man and his desire hold sway, and at this point lies the position he will assume. At this point began the divergence from the forgotten and the great names of men and their works which are handed down in history. They were no smarter than many others at the outset of their career, but through their indomitable energy succeeded in acquiring an education and knowledge often under adverse conditions, so that it gave them their preëminence not only in a business sense, but an educational one as well.

You often hear younger students say, "What shall I draw or study?" and you or somebody else replies in a free and know-all way, "Some of the most difficult branches of the work." The result is that the student does not gain anything, because the information, though perhaps good, is so far ahead of him that he cannot grasp it. It might have been said to him, "learn how to draw." But to him a thousand and one questions would arise. How, what and with what, and, besides, for what? Right here allow me to say that I have been there, and that if someone had told me of a certain and fixed object for every separate study, besides the reason, I would have known more today and taken more interest in my studies as I went along.

Now, I would like to lay a course of study from four to eight years in architecture that even more advanced students might benefit by. The course of studies that are generally laid down for college courses are so technical that it is almost impossible for a draftsman who has not had the advantage of a high-school education to acquire them without the aid of highly paid tutors. Besides the disadvantage of doing all this work after, perhaps, a hard day's work at a similar line of study. As a help to foster courage for work hear what H. W. Longfellow says:

"The heights by *great* men reached and kept
Were not attained by a single flight;
But they, while their companions slept,
Were toiling upward in the night."

The architectural student should mingle with artists, students, people of culture and education as much as possible, especially of artistic tastes and pursuits akin to his own. This is a strong point. Ideas are like families, they must be crossed or else they degenerate. Besides, all of you know the great amount of help and knowledge you can get by intercourse with other draftsmen; learning of their methods, styles, systems and mannerisms of working, which you can compare, criticise, deduce and adopt. It also helps to keep your mind on your work. It is a source of great encouragement even to observe the failings, faults and successes of fellow students, and one never really knows another's abilities until he works with him. They are generally so much exaggerated by ignorant persons that if one gets beyond a certain line he is jumped about twenty places at once. By coming in contact with the actual person, one, nine times out of ten, receives encouragement, and that of the best kind. One may see certain faults which will help to raise his own abilities in his own estimation, and this is a help, because of the encouragement it affords the person who had a case of big head before.

I would like also to offer a few miscellaneous thoughts which suggested themselves to me while rummaging for data which I think are all good to enthuse and encourage the student. To acquire taste is to become habituated to the good and beautiful, but to become habituated, we must learn to choose it, and this requires reason and education.

"The primitive artist was an observer but not a student." You will see by this, to be a genuine student itself is a task.

"The philosopher observes to compare, to know, while the artist does this and more, he endeavors to improve after knowing."

Art only is true and good which is in harmony with the manners, institutions and geniuses of the nations wherein it exists; and as notions differ, art should differ. This is the essence for that hackneyed problem, an American style.

Every man who is born an artist possesses his art by intuition, but this intuition can only be successfully developed by calculation and experience. We owe more to induction and knowledge gained by study than to intuition.

Architecture requires two operations of the mind, study and application of precedent.

COURSE OF STUDY.

The more you study the more you want to study, and if really interested there is no such genuine pleasure as study. It is, alas, too true, that the less you study the less you want to study. So all that have fallen out of the habit and who have tried again and again to re-start can, I think, if they first arrange some exceedingly attractive studies and set stated times for them, gradually at first; then, before they know it, they will have joined the other side. What it requires is determination and enthusiasm. What was at first a necessity becomes almost a craze.

For a start I would advise everybody to lay out a scheme of study, so as to have system and method. Put down the different studies: why, when and what for shall I study these more than others? In that way the greatest ground can be covered to the best advantage. The young man who intends to succeed must first have the faculties of the artist, and, beside this, must submit himself to a deliberate training, and those who would hold their own cannot afford to miss any opportunity.

The main idea of the earlier studies is to train the student in the knowledge and representation of form, and to develop his powers of designing. For these things not only is time required but undisturbed, concentrated study.

To do this, draw continually, mostly freehand, from photographs, sculpture, life, nature, casts; in fact, everything. For training in design, entering the C. A. S. C. competitions is fine practice. The scope is so wide and you see so many different studies of the same thing. I hope the competitions will grow in quality and favor. There is one great advantage in teaching yourself, and that is, what is self-taught is rarely forgotten.

Another of these earlier studies is the rudiments of algebra, and plain and descriptive geometry, as they are great cultivators of the imagination and clearness of conception which are absolutely essential, and which, also, too many designers lack. Drawing from memory is another great help. He who has this knowledge has perspective at his finger ends and also the correct representation of shadows and shades.

For line and line only, draw from the round, such things as vases, especially Greek ones. Draw them from photos if you cannot get the vases themselves, or casts of them.

Drawing from the round is the only thing that will give real command of form, and for this nothing is better than the figure pure and simple. A draftsman who can draw it easily has the power to draw anything.

This refinement of line drawing is wanting in the majority of architects' work. It is extremely offensive to one who appreciates it to see it butchered. Our best architectural works show this value of form in a greater or less degree, depending on the standing of the architect as an artist.

Draw also from photos, in line only, ornamental details on a large and small scale, so that all the refinements of line and detail can be clearly felt and shown, especially the Greek and Tuscan ornaments.

* Paper read before the Chicago Architectural Sketch Club, July 1, 1889.

If a student does this conscientiously I feel sure that he will have an art feeling which will not be taken by any coarse or rude forms, and in which, besides, he will find an honest pleasure afterward in criticising the work of others from his plane of true feeling.

For educational purposes, the study of the five orders is indispensable. Some say that the orders are never used in the present day and therefore are of no use. To this I reply that there are certain musical exercises that form part of the training of all fine musicians which are never played for listeners. It is the training they give. They have been readjusted and criticised by some of the greatest men of knowledge of proportion and composition, and therefore are the most nearly perfect for studies. The study of them also develops the powers of dignity and elegance. One can see their influence in the best foreign and American works.

Learn how to draw, is the first, last and every study. To design it is necessary to draw, and examination will show that persons who design well draw well. In that I do not mean a picture maker or an artistic draftsman in that sense, but simply freehand work.

It is necessary to do away with the idea that artistic drawing is only an ornamental acquisition. A designer's drawing is not only his manner of speaking but also of thinking. As for the power of invention and proportion on which design depends they cannot be developed without the drawing. To acquire this one must do a great amount of drawing from nature. Draw from flowers and plants while fresh, so as to get the feeling of life the plants have. You should have them look as if they were growing, and with as few lines as possible.

The student should also store his mind with a great variety of ornamental details of all kinds. He should be able to draw them from memory, so that when he is designing he can call on them for suggestions and ideas, and on this depends a good deal of the freedom of the designer.

The student of drawing must not confine himself or work to one method, but go out to all, as some are best for one thing and some for others. I refer to pencil, pen, brush, color and charcoal. Of course, the pencil is the one that is to be worked with the most and, besides, it is a combination of brush and pen, owing to its powers of tinting or shading. If the pen or pencil only are used, the wielder thereof has a tendency to harden his work and sometimes to give it a lack of refinement of form, not to speak about color, light and shade. When drawing, by all means use a soft pencil. A hard pencil leads to stiffness and stops the freedom, owing to the rut in the paper and the pressure the pencil requires.

Charcoal is excellent for full-size details and large ornamental work, owing to its ease of erasing and power to cover paper. In the skillful hand it gives beautiful effects, but it takes a skillful hand to take advantage of its possibilities.

The pen is the most popular of all methods, owing to the ease of publishing pen drawings. It is too brilliant and full of character not to be popular; but, alas, it does not depict light and shade, nor the colors of surfaces. It is the hardest instrument to handle, and exposes a slovenly hand in a pitiful manner. A pen drawing is not true to nature, yet it can be used to great advantage in hoodwinking unsophisticated clients. To make a finished pen drawing is one of the very hardest things in a student's category of possibilities. Very few architectural draftsmen can cope with it, and it is the first thing amateurs usually tackle. They try to follow a pen drawing through all the intricacies of color, materials, picturesqueness, surroundings, light and shade, and what is the result? Jumble! It is a great pleasure to look upon such finished drawings as those of Meeker and Pennel, but then they are artists.

The brush is the only means of studying color, and now is becoming exceedingly popular, and not without good cause. I can see for it a great future, and I hope it will stay with us permanently. It will stop a student's too close study of line, and besides it is a great help for studying from nature. It fixes one's attention on masses before details and is alive to contrast and graduations; but above all is the breadth and repose of its work. There is a great charm in coloring, and, therefore, it becomes, instead of a study, a source of pleasure, and finally a craze to the enthusiastic student. From an educational point of view the brush is above all other methods.

The student must sketch from nature. Why? As a means of acquirement and expression, to store his mind with ideas, and to work out his ideas with freedom in designing; and besides that, to see the relation between actual work and drawings.

A sketch is a selection. To sketch one need not draw the object exactly as he sees it, but is to take what he wants and reject the rest, and therefore the better the sketcher the more valuable become his sketches, and the more benefit he receives from them. Of course, a sketcher is not to be dead to the picturesque, but, as a source of study, he is to retain the subject architecturally. By sketching in this way (more) knowledge, power of rendering and picturesqueness all blend together.

A sketch must have some idea in view to portray; without this it is empty. If draftsmen would sketch more I think a certain amount of that crudeness and stiffness in their work would be eliminated, and that it would also improve their designing. A student should try and study out of the office the reverse of what he studies in the office. Study of constructed drawing, though it correct many of the gross errors into which draftsmen fall, and while it cannot be neglected, still it will never put a group of curves in perspective and suggest a bit of ornament. It needs the sensitive and skilled hand to do this, just as all machinery needs the skilled hand of man to guide it.

Out of door drawing will give one the memory by which he can draw well whatever his office work requires.

The best designer is not always the best draftsman, not because he has neglected to learn to draw, but because he has more designing talent; yet if he developed his capacity in the same way the expert draftsman does his, the result of his work would be correspondingly greater.

The draftsman must not forget the design and yield to the picture when drawing, although the temptation be great. Design first, and let the rest be to brighten the effect and improve it. Picture-making when done in this way is fine training, as it cultivates the artistic sense on all sides. In picture-making one can make certain features prominent to suit his will.

It is a good thing for younger draftsmen to copy the work of our best draftsmen, and to do so until they have thoroughly mastered and made themselves familiar with several styles and methods of rendering. Yet the student must know what to choose so as not to copy bad drawings nor bad features. A brilliant design requires a brilliant treatment, and a simple design a simple one. A Spanish figure in a Gothic design would seem out of place. Drawing from photograph in sepia and pencil is an excellent study for everything.

A student can vary his work by spending certain evenings in reading. It is not necessary that he should read strictly architectural books, either. There are a great many of the finest novels which are of great architectural value to students, and, besides, in themselves a constant source of pleasure to read.

Take, for instance, "Marble Faun" or George Eliot's "Romola," etc. Then, again, some of Ruskin's works are very nice reading from a pleasure point of view. Reading is a great producer of enthusiasm, and a draftsman is nothing without it. I honestly think that nothing great artistically was ever done without enthusiasm and admiration as prime factors.

By reading one also can learn more about heating, acoustics, ventilation, drainage, engineering, than they could have in ten years' actual practice.

In all the aims of man, architecture is the one which suffers the most from imperfections, and which is criticised the most.

Now is our time, boys, and no one knows better than I that "procrastination is the thief of time."

Perhaps, gentlemen, this article is too much for one of my experience and ability to put before the Club, especially while there are members before me who are head and shoulders above me, architecturally. I hope, however, that you all will find some benefit from it, and forget from whom it came. I will give as an excuse, that the best workman is not always the best instructor.

Instruction in Architecture.

THE Art Institute of Chicago announces that with the beginning of the new school year, Monday, September 23, classes in architecture will be opened as a part of the regular course of the art school. The prosperity and popularity of the Art Institute go far to insure the success of this important step, which all architects, designers and architectural students must heartily support.

In order that the classes may be available to draftsmen and other persons engaged in actual practice, they will be held three evenings a week, Monday, Wednesday and Thursday, and at the same time a drafting room or architect's studio will be provided, kept open at all times, day and evening, and visited, from time to time, by the teachers, like an architect's office. Instruction in elementary matters will be given by regular teachers, while lectures adapted to more advanced students will be given by distinguished architects. As regular teachers Mr. Louis J. Millet and Mr. William A. Otis are named, both men of careful theoretical training, and both in the actual practice of their profession. Mr. Millet is of the firm of Healy & Millet, decorators, and during a residence of six years in Paris he accomplished, with great credit, the whole course of architecture in the *École des Beaux Arts*, a thing which a very small number of American students have ever done.

The instruction in mathematics and construction will be chiefly in the evening, with incidental practice in drawing. The ground intended to be covered in a course of two or three years is in general as follows: In mathematics, elementary geometry, elements of conic sections, descriptive geometry, shades and shadows, perspective; in construction, principles of construction, strength of materials, use of tabulated data, problems of construction.

Of course, these studies naturally involve a certain amount of practice in drawing. Under the head of "Drawing and Architecture," instruction will be given in such subjects as linear drawing and the use of instruments, the study of orders, ornamental designing, and drawing from ornamental casts, while the regular classes of the art school will be thrown open to the architectural student in water colors, antique drawing, pen and ink and modeling. Access to the library and collections of the Art Institute constitute another valuable privilege. The friendly attitude of the architectural societies and of the sketch club toward such a serious effort to found an art school is assured. Among the well-known architects who have promised to lecture are John W. Root, W. L. B. Jenney, D. H. Burnham, I. K. Pond, John M. Ewen, and it is confidently expected that others equally competent will be added to the list.

It may be proper to add that the tuition fees will be held at the very moderate rates already established in the academic departments of the art school, and that all particulars may be obtained by applying to the secretary of the Art Institute.

The management of the Institute, with Mr. C. L. Hutchinson, the president, at the head, is warmly interested in this movement; but, since the institution is young, and has no endowment as yet from which to defray extra expenses, it is not without hesitation that so important a step has been ventured upon. It is earnestly hoped that it will receive the warm support of all its natural allies among architects, designers and educators.

National Exhibition of Architectural Drawings.

THE praiseworthy project of the Cincinnati Architectural Club to hold a national exhibition of architectural drawings and sketches at Cincinnati for one week, commencing November 19, should interest every draftsman in the United States and Canada. The following circular has been issued:

The Cincinnati Architectural Club respectfully makes the following announcement:

Recognizing the great benefit arising from an exhibition of the above character to the craft, and desirous of creating a healthy improvement in the public taste as regards architecture, this collecting of architectural studies is undertaken.

This exhibition will embrace the work of all sketch clubs and prominent draftsmen in America and Canada.

Ample wall space and an excellently lighted hall have been secured; two most important factors for success.

As the exhibition is to be national, and consequently far-reaching in its character, the kindly coöperation of all architectural clubs is cordially solicited. In the sincere hope that this necessary assistance will not be withheld, the following statement is made:

WORKS EXHIBITED—Water-color studies, India ink, pen and ink sketches, perspectives.

WHEN TO SEND—*All* exhibits must be in Cincinnati by not later than November 10.

TRANSPORTATION—The cost of transporting, hanging and returning will be borne by the Cincinnati Architectural Club.

HOW TO SEND—All sketches must be properly packed and sent by express.

PRIZES—Hinkle gold medal (A. Howard Hinkle, Esq.), for best exhibit of club work. Anderson silver medal (Larz Anderson, Esq.), for best individual work among club members. The Builders' Exchange will offer a medal for best water-color perspective.

JURY—Three prominent architects will act in this capacity.

CATALOGUE—There will be an illustrated catalogue issued, with selected prize club designs, these designs to be in pen and ink.

TIME AND PLACE—The exhibition opens November 19, continuing one week, and will be held in Pike's Opera House.

Further information will be cheerfully given, and all letters of inquiry are to be addressed to John Zettel, secretary, Room 81, 227 Main street, Cincinnati. The schedule inclosed is to be filled up as promptly as possible and returned as directed.

Again inviting your valued assistance, I am respectfully,
G. W. E. FIELD, *President C. A. C.*

Patrons—A. T. Goshorn, A. Howard Hinkle, Larz Anderson, M. Louise McLaughlin, Clara C. Newton.

COMMITTEES.

Finance—John Zettel, A. Stedman, G. W. E. Field.
Advertising and Catalogue—L. Mendenhall, D. Davis, L. G. Dittoe, A. Stedman.
Decoration and Hanging—A. O. Elzner, E. Moorman, F. Winkleman, M. Heister, H. C. Chaney.
Correspondence and Soliciting—John Zettel, G. W. E. Field, L. Plympton.
Music and Reception—L. G. Dittoe, Thornton Fitzhugh, A. Stedman, H. C. Carrel, John Zettel, J. P. Striker.

Association Notes.

MONTCLAIR, NEW JERSEY.

There is a movement to organize a sketch club of draftsmen at Montclair.

WESTERN ASSOCIATION OF ARCHITECTS—BOARD OF DIRECTORS' MEETING.

There will be a meeting of the Board of Directors of the Western Association of Architects, on Tuesday, September 17, at the office of the secretary, Chicago, Ill., for the consideration of applications of membership and the transaction of other business.

CHICAGO ARCHITECTURAL SKETCH CLUB.

A regular meeting of the club was held Monday evening, August 26. President Williamson opened the meeting, and called on Second Vice-President Christian to preside. Owing to absence from the city Mr. Wagner was unable to present his lantern views. The evening was filled in pleasantly by discussion of the value to architecture of water-color sketching from nature. It was decided to postpone the competition for a house doorway, and the rendering in pen and ink from photograph furnished, to allow members time for the Clark, Phimister, and other monetary competitions.

DENVER SOCIETY OF CIVIL ENGINEERS AND ARCHITECTS.

The regular monthly meeting was held August 13, at the room of the society, President Nettleton in the chair. Twenty members were present. Joseph Philips Maxwell, of Boulder, now state engineer, and John Wellington Nesmith, president of Colorado Iron Works, were elected members. Communication from the chairman of committee of the American Society of Civil Engineers, asking that a committee be appointed from the society to confer with them to see if arrangements could be made for an affiliation between the societies, was received. Committee was appointed, consisting of Professor P. H. Van Diest, chairman, with Messrs. H. S. Aulls and Robert S. Rochlamb.

A committee of five, consisting of James R. Maxwell, chairman, and J. S. Green, Walter H. Graves, R. D. Hobart, J. C. Ulrich, were appointed to act with other committees of the state in collecting statistics, and waiting upon the United States senate committee on irrigation of the arid districts, which will meet in Denver about September 15, 1889. Professor P. H. Van Diest read a paper on mining in the Island of Sumatra by the Dutch two hundred and fifty years ago. The mining was done in the same manner as at present. The maps were quite ingenious, and illustrated all the country, showing sections and elevations together. The stockholders manipulated the stock a good deal as at present. The mines were very rich, as only $600 ore was allowed to be shipped. A new company has recently been started and will reopen the mines which have not been worked for over one hundred years. The society adjourned to meet in two weeks.

Our Illustrations.

Residence for Mr. Thomas A. Wright, Chicago; W. L. B. Jenney, architect.

Competitive design for city hall for Omaha, Neb.; Sidney Smith, architect.

Residence for Mr. A. V. S. Lindsley, Nashville, Tenn.; Charles K. Ramsey, architect, St. Louis, Mo.

Residence for Mrs. Mary Wilke, Wrightwood avenue and Sydney court, Lake View, Ill.; M. E. Bell, architect, Chicago.

The Chicago Home for Incurables, Burling & Whitehouse, architects. Located on the prairie south of Fifty-fifth street, near Drexel boulevard.

The handsome "Church at Philadelphia," published in August number is the Tabernacle Presbyterian Church, Thirty-seventh and Chestnut streets. T. P. Chandler, architect.

Cincinnati Architectural Club competition for a French Renaissance panel; first place, A. Stedman; second place, L. G. Dittoe; third place, G. W. E. Field; design by John Zettel.

Sketches in France; Thomas Mullay, del. Mr. Mullay, who left Chicago in June, for a bicycle sketching tour in Europe, writes: "The corner house in sketch is of light buff sandstone, the next one brick and sandstone with plastered cement. There is another stone largely used here which resembles frothy slag that comes from a smelting furnace; this stone is plastered over, the mason working in the moldings. The Exposition buildings seem to have absorbed most of the architectural originality this year. The other new buildings are in the academical style, the most apparent deviation being in the carvings. In regard to planning, Chicagoans know their wants and are well supplied with ideas, but there are many little and tasteful things which an American architect can pick up in Europe and use with profit. Iron and glass construction are much used here, not as heavy as ours, probably from the lesser snow and wind pressure. France is full of picturesque objects, much more so than England. I expect to get a permit to sketch in the Exposition, also in and around Paris at the different galleries. There was an American artist here who was arrested for sketching without a permit, and all his notes, diary, etc., were destroyed. There are many restorations of old churches, hotel de villes, etc., in contemplation of which there are drawings and perspectives at the Exposition. There are at the Exposition full size architectural casts of several cathedral doorways and any amount of photographs and fine architectural drawings, enough to study for weeks. The fine ornamental work at the Exposition is all plaster cement. I beg your pardon for sending a wind mill, but many hundreds of your readers may recognize it, as it is on the celebrated race course and review ground of Longchamps. The tower of Sir William Wallace is just across the way. The casts, painted bronze color, are by the sculptor, A. Cain. There are many others which are just as good artistically, but I do not want to run the risk of drawing them, as they arrest strangers without much ado."

PHOTOGRAVURE PLATES.

(*Issued only to subscribers for the Photogravure edition.*)

First National Bank Building, Ashland, Wis.

Germania Hall, Cleveland, Ohio; Cudell & Richardson, architects.

Masonic Temple, Philadelphia, Pa.; James H. Windrim, architect.

Roman Catholic Cathedral, corner Cathedral and Mulberry streets, Baltimore, Md.; Benjamin Latrobe, architect.

Residence of M. A. Hanna, Lake View avenue, Lake Shore, just west of city limits, Cleveland, Ohio; C. F. Schweinfurth, architect. Two plates; in one the front is shown, in the other the rear.

Calvary Baptist Church, Baltimore, Md.; J. A. & W. T. Wilson, architects. The church is of hammer dressed gneiss, laid in courses with black mortar. The dressing at angles; quoins around doors and windows, arches over openings, belt courses, water table, etc., of dark brownish red brick. The tablet in front gable is of molded terra-cotta. Roofs are of black slate. The interior has an open timbered roof of hard pine in natural color. The irregular shape of the lot has been taken advantage of in giving a picturesque outline to the building. The audience room measures 49 by 77 feet. The pastor's study is the quarter of a circle having a diameter of 21 feet. The dressing rooms are each 9 feet wide and can be used as bible class rooms also.

New Publications.

ARCHITECTURAL STUDIES, Part IX, City Houses. Price $1. William T. Comstock, publisher, New York.

The drawings are all, with one exception, the result of a competition given by *Building*. The designs are the best of those submitted, including two prize designs and two honorable mentions. The conditions of the competition required the house to be planned on a lot 20 by 100 feet, and to be used as the home of a professional littérateur.

PRACTICAL BLACKSMITHING. A collection of articles contributed at different times by skilled workmen to the columns of *The Blacksmith and Wheelwright*, and covering nearly the whole range of blacksmithing, from the simplest to some of the most complex forgings. Compiled and edited by M. T. Richardson, editor of *The Blacksmith and Wheelwright*. Illustrated. Vol. I. Price $1.00. M. T. Richardson, Publisher, New York.

Notwithstanding the fact that every village and hamlet in the civilized world contains a blacksmith, and has ever since mankind learned the various uses of iron and steel, nobody has ever written a book on the art of blacksmithing.

A chapter has now and then appeared in works on mechanics, but these comprise the extent of the world's printed knowledge of an art without which mankind would relapse into barbarism. The present work is a compilation of practical articles which have appeared during the last ten years in the columns of *The Blacksmith*

and Wheelwright. Ancient blacksmithing and primitive tools are considered briefly, and then plans of shops, chimney building, forges, and descriptions of a great variety of tools are given. The illustrations are numerous, and the book would appear to be of great value to all workers of iron.

LOG CABINS; HOW TO BUILD AND FURNISH THEM. By William S. Wicks. Forest and Stream Publishing Company, New York.

This is a quaint book and beautifully gotten up in its presswork and typography, and, striking out in a new field of architectural instruction as it does, will undoubtedly find many gratified readers. It is nicely bound in muslin and board covers, and illustrated with seventy engravings, fifty-two of them giving details of construction, the others presenting views of log houses (summer residences, hunting and fishing layouts, etc.) at various places throughout the country, and belonging to prominent gentlemen and clubmen.

HINTS ON BUILDING. By Robert Grimshaw, author of "Steam Engine Catechism," "Boiler Catechism," "Plumbing Catechism," "Practical Training," etc. Second edition; published by the New York Practical Publishing Company, 21 Park Row.

This is a very readable little book of seventy-seven pages, by a layman who understands that a house for people to live in means something more than four walls and a roof. It is written for the "million," rich and poor alike, and, treating the subject of home building in detail in so clear and concise a manner that he who runs may read how easy it is to make a house a home where comfort and convenience is emphasized within and without. It is a plea as well for home ownership. Unpretentious as this little book is, and its aim being the education of the masses rather than to instruct the professional house planner, yet architects will not find it wasted time to give its pages a careful perusal, as it is the result of a common sense observation by a man who has "been there."

FROM MATERIAL DEALERS.

H. W. JOHNS MANUFACTURING COMPANY, producers of asbestos materials for mechanical, structural and household purposes, has put out a descriptive price list, which will be a convenient book of reference to architects and builders who are or may become interested in this line of goods, which include paints, varnishes, roof coating, pipe covering, etc.

"POSITIVE PROOF" is the title of a 224-page book in paper covers issued by N. G. Taylor & Co., of Philadelphia, giving a list with localities of 5,000 buildings on which the Taylor "Old Style" brand of roofing tin has been used. They are distributed throughout the entire length and breadth of the Union, and include many public and governmental buildings. A number of engravings accompany the long roster.

MR. G. W. MURPHY, dealer in sanitary specialties, 76 Dearborn street, Chicago, has just issued a handsomely printed 68-page catalogue, which must attract the attention of all interested in plumbers' supplies. The catalogue contains eighty odd finely engraved illustrations of the various specialties he trades in, such as syphon closets, washout closets, direct pressure closets, automatic tanks, drip traps, backwater valves and clean-outs, patent basins, patent traps, self-closing work, etc., many of the devices being novelties in this market, but of established reputation elsewhere. It is a useful book for architects, to say nothing of its value to master plumbers.

"A VISIT," is the title of a very artistically gotten up brochure in quaint muslin covers, by the Sherwin, Williams Co., giving a complete exposé of their celebrated paint works at Cleveland, Ohio, showing how their goods are made in every detail, and their special characteristics. The information is given in the form of a colloquy, and made the more interesting by thirty-four superb engravings illustrating the subject matter as it follows. It is a remarkably good specimen of printing and presswork, and is a credit to all who have had a hand in its appearance. It is 50 pages in volume.

MR. HENRY WORTHINGTON, of New York, has just issued a 76-page publication, entitled "The Worthington High Duty Pumping Engine at the L'Exposition Universelle de 1889." The text is in French and English on alternate pages, and is a full digest of all the merits and claims of this special engine. To every one, private individuals and corporations, at all interested in water supply, whether in large or small amounts, this book will prove interesting reading. It is amply illustrated, and contains tables, charts and maps that will prove valuable as references. Mr. Worthington has several of his pumps in operation at the present Paris Exposition, placed there under contract to furnish the necessary large water supply of that great world's fair.

Mosaics.

ARCHITECT CHARLES K. RAMSEY has been appointed United States government local superintendent for St. Louis. He succeeds Architect J. H. McNamara, resigned, and entered on his duties September 1. The appointment is a most excellent one.

THE UNPROFESSIONAL WAY TO GET BUSINESS.—The following advertisement appeared recently in the daily press: "Wanted—Live man to solicit business for a first-class architectural, western firm; to the right man an interest will be given; good connection indispensable."

JOHN CALVIN STEVENS and Albert Winslow Cobb, two energetic young architects of Portland, whose work may be seen in some of the most tasteful buildings of recent construction in and about the Forest City, have prepared a work which is now in the hands of a New York publisher, on what may be called common sense architecture; in other words, architecture based on sound principles of art. It is intended to meet the needs of those who wish for tasteful, comfortable and convenient homes. The volume will appear in October. In addition to the text it will contain a large number of full page diagrams.

GEORGE W. MAHER and C. H. Corwin have formed a partnership as Maher & Corwin, with office in the Insurance Exchange Building, Chicago. Mr. Maher's attractive designs have frequently appeared in this journal, and Mr. Corwin leaves an important position in the office of Architect J. L. Silsbee. The skill and experience of the new firm entitle them to win success.

THE galleries in the Louvre assigned to the exhibition of Renaissance work have been opened after a closure of three months. The contents have been rearranged. The most important addition is the tomb of Philippe Pot, who was seneschal of Burgundy. It had fallen into the hands of a private collector, who sold it to the French government for 1,000*l*. The tomb is placed in the Salle André Beauneveu, and is one of the most interesting works of a period that was fertile in architectural sculpture.

THE awards of the great prizes in the section of painting of the Ecole des Beaux Arts were this year marked by peculiar circumstances. Last year the grand prix was held back, as none of the competitors' works was supposed to merit it. The Academy of Fine Arts had therefore at disposal two prizes, if adequate works were forthcoming. It so happened that the ten competitors produced pictures of unusual importance. The subject assigned was "Christ Healing the Paralytic." M. Gaston Thys, of Lille, and M. Ernest Joseph Laurent, of Gentilly, were each awarded a grand prix. The "premier second" was gained by M. Daugny, of Gagny, and the "deuxième second," by M. Lenoir, of Angoulême. It will be seen that the successful artists come from provincial towns.

DR. C. L. GOEHRING, of Allegheny City, Pennsylvania, has succeeded in perfecting a wonderful machine, one that does geometrical wood carving in over two thousand patterns, for outdoing the handiwork of the most skillful hand-carver, and with a capacity up to 10,000 lineal feet per day. The beauty of this machine carving is that the patterns may be combined or "massed" in a way to produce most intricate, and at the same time, beautiful, results. The adaptation of the product of this unique machine to ceilings, wainscotings, panels and kindred interior finish of buildings opens up an area of wood decoration in architecture beyond indication, as it may be of any of the soft or hard woods, while the cost is merely nominal. Samples of this machine carving have been shown to leading architects in this city and all were favorably impressed with its beauty and adaptability. None of this work has yet been put on the market, but a company is now organizing to go into the manufacture, and no doubt it will soon be familiarly known among building materials.

AS THE cradle of the American Kindergarten and the Manual Training School, and for its many other excellent public and private day and evening schools, St. Louis has long been known as one of the most progressive of American cities. It now offers another innovation in the shape of a drawing school, which a Mr. Henry Maack has conducted for some years, for the purpose of teaching mechanics enough of descriptive geometry and drawing to enable them to work intelligently from the plans of architects or engineers, to take off quantities correctly, and to get out the working details which architects do not furnish usually, such as the various lengths, bevels and miters in hip roof framing, etc. Mr. Maack, himself a practicing architect, and a recent graduate of the German technical schools, is introducing the same methods here, with encouraging success, which are employed there. Possibly, some of his willful pupils may insist on hanging out their shingles as architects on the basis of what they have learned at his school, but it is his purpose to discourage this, and to instil into them an ambition to excel as foremen in the direction of constructive operations. His enterprise merits success and imitation in other cities. More intelligent mechanics are needed in every trade, men who can understand drawings and lay out work.

AN event of great importance and interest to architects and engineers is the exhibition of electricity in all its most recent phases and applications, which is to form a prominent feature of the St. Louis Exposition this year, from September 4 to October 20. It may be remembered that two or three years ago there was held in Philadelphia an exposition solely devoted to electricity. Since then many improvements have been made, and all these will appear with new wonders in the St. Louis exhibition, occupying nearly the whole of the north nave. There will be all sorts of street car electric motors, also an electric road carriage, electric lighting in every form and color, electric stoves that will cook without fire, smoke, ashes or soot—nothing but a push-button—electric heating stoves, the welding of metals by electricity, surgical electric appliances, and last and perhaps greatest of all, the phonograph. This is the sixth consecutive year of the St. Louis Exposition, which is unique among all similar institutions in this country for its continuous and ever growing success. The admissions are uniformly 25 cents a head. In 1884 (the first year), the receipts were $92,231.35; in 1885 they were $106,786.32; in 1886, $124,344.85; and in 1887, $126,913.91. No other city in America has held an exposition on such a scale for more than one year at a time.

THE prospectus of the term of 1889-90 of the Art Schools of the Metropolitan Museum of Art, Central Park, Fifth avenue and Eighty-Second street, New York, is now being distributed from the press. The term begins October 2 next, and ends April 30, 1890. Mr. Arthur Lyman Tuckerman, manager, has just returned from an extended tour of inspection of the art schools of Europe, with a view of perfecting the system of this school, and there is but little question, under

his intelligent management, and being in immediate connection with the museum collections, that it will continue to grow in public favor. Last year the attendance numbered upward of three hundred students. It may be of interest to draftsmen, those who aspire to become architects in the future, to state that the class in architecture is conducted by Manager Tuckerman. The course includes the history and principles of architecture, especial attention being given to theory of design. This class is conducted on the system adopted by the great schools of Europe, and the instruction is daily. The price for the school year is $25.

Building Outlook.

OFFICE OF THE INLAND ARCHITECT,
CHICAGO, September 10, 1889.

Our advices from a large number of manufacturing and commercial centers for the past sixty days, confirm all that was said earlier in the season, relative to commercial, manufacturing and building activities. It is to be regretted that the facilities for gathering news of building operations, and the manufacturing of building supplies, are so meager; but it is evident that the past season has been one of exceptional activity, and that very little, if any, disappointment has been experienced in any branch of the building trade. Not only in the larger cities, but in towns and villages, and throughout the rural sections, has the building of small houses been actively pushed, and work is still being prosecuted. Labor is well employed and paid. The building and loan associations are all prospering. There is a heavy demand for money for building purposes; rates of interest are fair and rents are satisfactory; houses, singly and in blocks, sell with greater promptitude than usual; real estate can be had almost everywhere at reasonable rates, and capital is finding inducements for investment in houses of moderate cost. This statement applies particularly to the West and Northwest, and especially to those sections which new railroads have recently brought within reach of markets. Throughout the South, the same condition of things exists, though in a somewhat less degree. Manufacturing establishments are multiplying, and as a consequence, the demand is growing for small houses for workmen. All through the Ohio Valley a great deal of building has been done this season. In the Middle and New England States there has been no falling off. Boston statistics show a great outlay for all kinds of building purposes. In New York statistics are not yet available, but it is probable that the excess in building, as compared to last year, will be shown to be from twenty to twenty-five per cent. In Philadelphia the increase is about as large. In Pittsburgh, Cleveland and several other cities throughout the interior, there has been quite a rush in building. All of the great industries are prosperous. The iron trade is the most active of all. Prices have advanced, and a further advance is likely to take place. The railroad companies are stiffening their rates, although there is as much harmony among them regarding the division of traffic as ever, particularly in the Northwest. In other sections the difficulties are not so serious. In the lumber trade great activity prevails, but the supply of lumber is just large enough to keep prices in favor of buyers. The inroads of southern lumber in northern markets continues. Sawmill building is still engaging a great deal of capital, especially through the South and in the far Northwest, particularly on the Northern Pacific coast. Coal mining operations have not been as profitable this year as last, but the production of coal in the aggregate will show an increase. The financial situation is regarded as strong. For some weeks past financiers have been apprehensive of a depression, or something akin to a panic; but the wiser heads have not anticipated such a result. The recent action of the secretary of the treasury in purchasing a large amount of bonds, shows that the policy of the government will be in harmony with the business interests, and that sufficient money will be thrown on the market, from time to time, to ward off any threatened stringency. Commercially, the country is strong and prosperous. A multitude of new enterprises are springing up, among them, ship yards, boat yards, tunnel building, railroad building and many others. Within the past thirty days four or five railroad lines have been projected, one 1,500 miles long, another 900 miles, and several others, varying from 100 to 300 miles each.

Synopsis of Building News.

Blair, Neb.—Architect O. H. Placey, of Lincoln, Neb., has made plans for a Court House, 70 by 100 feet, to be erected here next season; construction, brick and stone; hardwood finish, steam heat, electric lighting, tiling, etc.; cost $40,000.

Chicago, Ill.—There is scarcely any change or at least any noticeable change in the building situation. While comparatively few architects are fully engaged with work, most have something in hand present and prospective. The following have matured or are engaged in perfecting designs and plans:

Architect C. E. Lohmann: For T. D. Thompson, a three-story and basement flat building, 22 by 54 feet; the front will be constructed of St. Louis pressed brick, with Euclid stone trimmings; cost of building, $5,000.

Architect F. L. Lively: Sunday school room for Irving Park M. E. Church Society; will be one-story and basement, 35 by 65 feet; construction, frame, with stone foundation; cost $5,500.

Architect H. S. Jaffray: For Carrousal Co., Carrousal Building, to be erected on Lincoln avenue and Center street. The building will be pentagon shaped, owing to the formation of the lot. The design is for a quite handsome building. The walls will be of pressed brick with galvanized iron ornamentation; a large dome will rise in the center, and an office and a storeroom, besides boiler and engine rooms are provided for; cost of structure, $10,000.

Architect C. J. Warren: For J. T. Keeny, three-story and basement residence, 40 by 60 feet; construction, St. Lawrence granite, red tile roof, tile floors, hardwood finish throughout, electric bells and burglar alarm, etc.; cost $50,000. For same party, six-story flat building, 90 by 85 feet; brownstone front, with galvanized iron trimmings. For Mr. Raymond, house at Lake Forest, Ill.; cost $10,000.

Architect Henry Sierks: For Chas. Fuhrman, of Watertown, Wis., handsome residence, to cost $10,000. Taking figures on manufacturing plant to be erected on Schiller street by the Western Wheel Works Co. There will be three separate four-story buildings, the main building will be 187 by 93 feet, the others 25 by 93 and 36 by 37 feet, respectively.

Architect Thos. W. Wing: For R. E. Moss, three-story and basement store and flat building, 28 by 70 feet; Bedford stone front; steam heat and modern conveniences; cost $10,000.

Architect W. D. Cowles: For Mrs. D. S. Mugridge, two-story and basement residence, 25 by 50 feet; front, stone, slate and copper; sides, pressed brick; hard and whitewood finish, mantels, etc.; cost $6,000.

Architect Clarence Stiles: Club House, at La Grange, Ill.; frame construction on stone foundation; hardwood interior; furnace heat; cost $10,000. For J. J. Brown, of Momence, Ill., two-story stone building; 30 by 80 feet; brick and stone exterior; cost $9,000. For J. W. Fernald, two-story and basement and attic residence; pressed brick and stone, ornamental glass, wood mantels, furnace heat, etc.; cost $8,000.

Architect J. Wagner: Remodeling Section C of Union Warehouse, making it cold storage; cost of alterations, $30,000. For Houghtaling & Caruthers, two buildings to be erected on Clark street, between Harrison and Polk streets. The foundations will be laid for a seven-story building, but only two stories and basements will complete present construction; pressed brick fronts, iron columns, steel beams and girders; cost for present construction, $25,000.

Architect W. Henri Adams: For F. M. Talbot, three-story and cellar residence, 23 by 74 feet; rock-faced Bedford stone front; stone gable, hardwood finish, hot water heat, electric lighting, electric bells, wood mantels, gas fires, etc.; cost $14,000.

Architect W. W. Wheelock: For F. Crumbaugh, three-story and basement store and flat building, 80 by 102 feet; brick and stone construction; cost $25,000. For Congregational Society, Decatur, Ill.; church edifice, 75 by 120 feet; pressed brick and field bowlders; cost $23,000. For M. B. Mooney, three-story store and flat building, 22 by 50 feet; pressed brick and stone; cost $7,000.

Architects Flanders & Zimmerman: For M. Dickenson, two two-story flats containing eight flats in all, 45 by 65 feet; pressed brick, with stone trimmings; cost $8,000.

Architects Treat & Foltz: For O. M. Powers, seven-story and basement, store, office and college building, 39 by 170 feet, to be erected on Michigan avenue and Monroe street; contracts let; first-story buff sandstone, balance pressed brick and terra-cotta; electric lighting, elevators, steam heat, etc.; cost $125,000. For James Bolton, three-story and basement residence, 45 by 60 feet; buff sandstone; hardwood finish in elaborate style; steam heat and modern improvements; cost $45,000. For M. B. Hull, three-story and basement residence, brownstone front; hardwood finish; hot water heat; cost $26,000; contracts let; also let contracts for a two-story and basement residence on Calumet avenue; stone front and hardwood interior finish; cost $10,000. For C. S. Dennis, three-story and basement residence; frame, with hardwood finish on first floor; cost $7,000. For W. P. Patterson, residence, frame; cost $6,500.

Architects Bauer & Hill: Pedestal for the Judge Lambert Tree's monument of Robert Cavelier de La Salle, presented to Lincoln Park; Wisconsin red granite, rock-faced, with bronze tablet. For Polish Publishing Co., three-story, basement and attic publishing house, 50 by 104 feet, to be erected on Milwaukee avenue near Division street; basement to be used for composition and press rooms, first story by editors' rooms and book stores, upper stories arranged in flats; St. Louis pressed brick, with brownstone trimmings; cost $40,000. For Benedictine Brothers, of Peoria, Ill., monastery and college, to be located near the Webster farm on a site 150 feet above the Illinois river. The structure will have a frontage of 500 feet and a depth of 400 feet, with two large court-yards; will be three and four stories and basement high; pressed brick, with stone trimmings; corridors and stairs fireproof; electric lighting; steam heat, etc.; style Romanesque; cost $400,000. For City Treasurer Roesing, summer residence at Lake Geneva; frame in picturesque style; cost $5,000. For G. W. Kaendall, two-story and basement flat building, 24 by 65 feet; Bedford stone front; cost $6,000.

Architect W. A. Otis: For W. Rimmer, residence, 25 by 60 feet; two stories and basement; pressed brick front, brownstone trimmings; oak and pine finish in natural colors; mantels, grates, etc.; cost $5,000. Alterations and addition to factory building for Dr. Sawyer; cost $8,000.

Architect Thomas Wing: For R. E. Moss, three-story store and flat building, 25 by 70 feet; Bedford stone front; cost $9,000.

Architects Geyes & Randak: For M. Ponic, four-story and cellar flat building, 25 by 86 feet; pressed brick, stone and iron front; cost $10,000.

Architect W. W. Clay: Carrousal Building, 100 by 116 feet, to be erected on W. Madison, between Leavitt and Oakley streets; cost $10,000. For W. A. Fuller, residence, 45 by 65 feet; Amherst buffstone and tile; interior elaborately finished; cost $75,000.

For W. A. Fuller, two-story residence, 45 by 65 feet, stone construction all round, hardwood cabinet finish, marble floors, plate glass, hot water heat, etc.; cost about $80,000.

Architects Almquist & Klebert: For Evangelical Lutheran Society, of St. Paul, Minn., church edifice, 36 by 60 feet; pressed brick front, with stone trimmings; Georgia pine finish; cost $5,000.

Architects Wallacott & Son have plans on the boards for a three-story store and flat building, and a row of six dwelling houses.

Architect Oscar Cobb: For Ambler & Sons, of Salem, Ohio, a two-tier opera house, with a seating capacity of one thousand; brick construction; cost $25,000.

Architect J. Sidney Villere: For J. C. F. Royer, three-story double flat, 30 by 32 feet; brownstone front; hardwood finish; wood mantels, bath, etc.; furnace heat and modern improvements; cost $8,000.

Architect Otto H. Matz: For Rudolph Weber, remodeling stone front building, 31 Washington street; cost $20,000. For Hanover College, Indiana, chapter house; frame, on stone foundation.

Architect A. Druiding: Catholic church, Green Bay, Wis., 56 by 143 feet; pressed brick, with stone trimmings; slate roof, electric gas lighting, hot water heat; cost $30,000. Catholic church, with basement; Birmingham, Ala., pressed brick, slate roof, two towers, clear stories, rich ornamental groined ceiling, ornamental tiled vestibule, electric lighting, steam heat, most approved ventilation, ornamental stained glass windows, with figure work, altars, pews, etc.; cost $95,000. Catholic church, Wheeling, W. Va., 40 by 90 feet, with tower 110 feet; pressed brick, slate roof, hardwood finish, electric lighting, furnace heat; cost $12,000. Catholic schoolhouse, Piqua, Ohio, 56 by 106 feet; two stories, with basement, arranged for four schoolrooms, with hall over head the entire space of the building; will be brick construction and provided with best systems for heating and ventilation; cost $22,000. Connected with this schoolhouse is to be built a small convent, two stories in height, 44 by 56 feet. The design provides for a French roof and basement; construction brick, interior hardwood finish; cost $9,500.

Architect Perley Hale: For L. A. McDonald, block of flats, four stories high, comprising twenty-four flats in all; 100 by 55 feet; brownstone first two stories, above pressed brick; have towers on the ends; hardwood finish, mantels, bath-rooms, and all modern conveniences; cost $50,000. For D. W. Miller, three-story residence, 30 by 40 feet; cost $10,000. For P. Achten, two-story flat building, 25 by 50 feet; cost $2,500. For C. E. Cruickshank, three two-story flat buildings; pressed brick; cost $18,000. Plans under way for a $15,000 flat building, to be built on North Clark street.

Architect L. G. Halberg: For Mrs. Porter, three-story and cellar residence, 26 by 40 feet; stone front; cost $5,000. For Mrs. Mary Dewey, two-story and basement residence, pressed brick front; cost $6,000. For W. M. Howland, three four-story stores, 60 by 50 feet each; stone fronts, plate glass; cost $20,000. Taking figures on Hospital Building to be erected at Bowmanville, Ill., by the Swedes, to be called "The Swedish Home of Mercy"; will be two stories, attic and cellar high by 110 by 43 feet; will have two wards, baths, dining-room, kitchen, offices, etc.; furnace heat; cost $20,000.

Architects Lutken & Thisslen: For E. Seaberry, three-story flat building; pressed brick and stone; cost $16,000.

Architects Griesser & Martizen: For Dan F. Burke, two-story and attic residence, 28 by 60 feet; stone front, balance of exterior pressed brick with stone trimmings; hardwood finish and modern conveniences; cost $12,000. Under way, plans for a handsome two-story residence.

Architect G. Grussing, Jr.: For Capt. J. Connelly, two-story and basement residence, 34 by 66 feet; Carbondale stone front; hardwood finish, electric lighting, improved plumbing and modern conveniences; cost $5,500. Under way, plans for a seven flat building, to be erected on the West Side.

Architect J. A. Thain: For M. Barbe, three three-story houses, 30 by 48 feet each; stone fronts, hardwood finish, wood mantels, bath, laundry, etc.; furnace heat; cost $25,000. For E. C. Huling, three-story and basement residence with pointed roof, 37 by 83 feet; stone and pressed brick front, slate roof; hardwood finish first and second floors; steam heat, etc.; cost $30,000. For J. L. Gatzert, three-story and basement residence, 28 by 78 feet; stone front, hardwood finish, mantels, furnace heat; cost $15,000.

Architects Ostling Bros.: For O. J. Nelson, four-story, basement and attic store and flat building, 82 by 100 feet; brick, stone and iron; Bedford stone front, marble vestibules, hardwood finish; cost about $65,000. For Dr. M. Schycker,

two-story and basement residence, 25 by 56 feet; pressed brick and stone, hardwood finish, wood mantels, electric lighting, electric bells, speaking tubes, etc.; cost $7,000. For A. Jerenberg, two-story and basement flat building, 22 by 88 feet; pressed brick, with stone trimmings; cost $8,000. For B. S. Theodorson, four-story and basement building, 24 by 40 feet; pressed brick with stone trimmings; cost $7,000. For William Conners, two-story, basement and attic addition, 22 by 47 feet; and alterations to building on Hudson avenue; cost $4,000.

Architect Theo. Karle: For H. Hagemann, two three-story and basement apartment houses, 60 by 75 feet; Connellsville pressed brick, with terra-cotta trimmings, steam heat and modern interior fitting; cost $18,000. For F. C. Long, two-story basement and attic residence, 32 by 72 feet; rock-faced stone basement, St. Louis pressed brick front with Bedford stone trimmings, slate and tin roofs, hardwood finish, mantels, grates, bath, steam heat, etc.; cost $15,000. For Mrs. M. Benedict, two-story, basement and attic residence, 31 by 74 feet; rock-faced basement, St. Louis pressed brick front, slate roof, hardwood finish, hot water heat, etc.; cost $15,000. Remodeling Chicago Journal Building, making partial new front and fitting upper portion to be used by Saratoga Hotel. Taking figures; estimated cost about $35,000.

Architect E. Gallanner: For F. G. Griffin, block of three-story flats, 28 by 75 feet; pressed brick and Bedford stone front; cost $16,000. Taking figures on three-story store and flat building, 26 by 85 feet; pressed brick with blue Bedford stone trimmings; estimated cost $13,000. For T. Cunningham, two-story residence, frame, hardwood finish, modern conveniences, furnace heat, also barn; cost $12,000.

Architect R. Dalgren: For Geo. Gunther, two-story and basement flat building, 24 by 80 feet; brick and stone; cost $6,000.

Architects Marble & Lamson: For Adams' Bros., three-story livery stable, 50 by 160 feet; pressed brick and stone; cost $12,000.

Architect F. E. Faber: For G. W. McLester, two-story and basement flat building, 22 by 50 feet; pressed brick front with Michigan green-buffstone trimmings, modern improvements; cost $3,500. Letting contracts for four-story and basement flat building, 37 by 117 feet; pressed brick, with stone trimmings, hardwood finish, etc.; cost about $25,000; G. D. Tomaso owner; foundations commenced.

Architect S. Linderoth: For C. P. Anderson, three-story and basement store building, 25 by 83 feet; pressed brick front with stone trimmings, hardwood finish, plate glass, cast-iron columns, slate and galvanized iron work, etc.; cost $10,500. For W. Williamson, two-story and basement residence, 27 by 50 feet; pressed brick and stone, hardwood and pine finish, etc.; cost $5,500. For Mrs. Margret A. C. Brown, two-story and basement residence, 35 by 52 feet; interior finish in brick, oak, sycamore and redwood, wood mantels, stained glass, baths, conservatory, etc. This is a novel and beautiful design and a new departure in interior construction; basement rock-faced stone, above frame; cost $6,000.

Architect A. Cudell: For J. H. Weiss, residence, Portage rock-faced front, steam heat and modern improvements; cost about $50,000. Making plans.

Architects Adler & Sullivan are making drawings for a Polish and Russian manual training school building for children. The site will be on the corner of Clinton and Judd streets. It will be four stories in height, with an area of 60 by 100 feet; construction will be of brick and stone, and will be provided for steam heat; estimated cost about $30,000. Also making plans for a front addition to the residence of Mr. Wirt Dexter, to be three stories in height, 50 by 20 feet area, rock-faced stone, elaborate interior work; cost $25,000.

Architects Thomas & Rapp have planned and are letting the contracts on a four-story factory, 50 by 220 feet, for the Tudor Buggy Co., brick and stone; cost $25,000. Also for C. Steinmetz, a four-story flat building, 48 by 58 feet, pressed brick and stone; cost $20,000. Also for Judge Garnett, three-story residence, 30 by 72 feet; also four-story flat building, 40 by 100 feet, to be built on the North Side, pressed brick and stone, hardwood finish, steam heat, etc.; cost $20,000.

Architects Furst & Rudolph: For the Board of Education, two additional three stories and basement schoolhouses, 87 by 133 and 120 by 87 feet, respectively, pressed brick and stone, steam heat, etc.; cost $63,000 and $65,000.

Architect A. F. Boos: For M. Sieben, four-story and basement addition to store and flat building, brick and stone, copper, galvanized iron and slate and ornamental glass; cost $10,000.

Architect Fred Wolf: For S. Donan, Tacoma, W. T., brewery plant, consisting of brew, malt and boiler houses, elevator, warehouse, etc., frame construction; cost, with machinery and boilers, $150,000. For C. S. Centline, Fort Wayne, Ind., brewery plant, stone and iron construction; cost, with fixtures and machinery, $50,000. For Schlitz Brewing Co., two six-story ice houses, 120 by 65 feet; cost $100,000. For C. F. Rankin & Co., brewing plant at Piqua, Ohio; cost $75,000. For the J. Houck Brewing Co., Cincinnati, Ohio, six-story malt house, 54 by 39 feet, five-story warehouse, 28 by 70 feet; cost $30,000. For Lake View Malleable Iron Works, three-story foundry, 80 by 80 feet; cost $20,000. For self, four-story and cellar manufacturing building, 124 by 122 feet, brick and stone; cost $20,000.

Architects Schaub & Berlin are making plans for a block of stores and flats to be built on North Halsted street, Bedford stone front; cost about $35,000. Also for a four-story flat building to be built on Franklin street, pressed brick and stone front; cost $10,000. Also a three-story flat building to be built on Ohio street; cost $10,000.

Architect M. L. Beers: Making plans for an Industrial School for boys to be erected at Glenwood, pressed brick with terra-cotta trimmings; cost about $40,000. For H. Harwood, residence, 25 by 58 feet; cost about $10,000. Four-story addition to Oakwood Retreat, Lake Geneva; cost $25,000.

Architect O. W. Marble: For W. A. Stanton, three-story residence, 24 by 73 feet, brownstone front, hardwood finish, wood mantels, stained and plate glass, hot water heat, etc.; cost about $10,000.

Architects Beeman & Parmentier: For F. Y. Bennett, ten houses, to be built at Kenwood; frame; two stories, 22 by 45 feet each; cost $40,000. For D. M. Fowler, two-story barn; 50 by 30 feet; cost $2,500. For E. F. Gordon, barn; cost $1,800. For V. R. Kerr, two-story and attic residence, 40 by 50 feet; stone front, hardwood interior; hot-water heat, etc.; cost $20,000. For Bernritten Manufacturing Company, frame building; cost $4,000. For W. I. Beeman, two-story and attic residence; stone front, modern improvements; cost $8,000.

Cincinnati, Ohio.—Reported by Lawrence Mendenhall.

Messrs. Crapsey & Brown report, among other plans, those for the Milford Town Hall, a building about 97 by 60 feet, three stories high, of pressed brick, and tin roof. There will be a hall with complete stage arrangements, while underneath will be a jail, council chamber, toilet rooms and engine house.

This firm has also prepared plans for a large factory building for the Pettibone Manufacturing Company. It is six stories high, brick, iron work, tin roof, elevators, fireproofing, fire escapes. The contractors are W. H. Stewart's Sons.

Mr. Henry E. Siter has drawn plans for the Mt. Auburn Presbyterian Church. It is a beautiful building for mission purposes, and is built of brick and stone, slate roof, stained glass, etc.; cost $9,000, and J. Griffith & Sons are the contractors.

This architect has also drawn plans for a schoolhouse; cost $40,000. Address, Board of Education.

Lucien F. Plympton has drawn plans for C. W. Morrison, Oberlin, Ohio. The house is of frame, two stories high, ten rooms, stained glass, laundry fixtures, plumbing, etc.; cost about $3,500.

At Milldale, Ohio, a frame church for the Methodist congregation is being built under plans by S. W. Rogers, of this city. There will be stained glass, pews, altar, furnace, etc.; cost $3,500.

Samuel Hannaford & Sons report plans for a pressed brick residence for Rev. J. M. Anderson, Cumminsville, city. It will be two-and-a-half stories high, have terra-cotta panels, hardwood finish, inside blinds, wood mantels, stained glass, etc.; cost $6,000.

William Stanton Robinson, architect, has drawn plans for a residence for H. M. Rulison, Esq., city, to be of frame and shingle, shingle roof, outside blinds, wood mantels, pine finish, and to contain eleven rooms; cost $5,000.

Also for M. W. Roberts (care architect) a three-story factory, 100 by 60 feet, of brick, stone trimmings, architectural iron, elevators, fire escapes, tin roof, etc.; cost $20,000.

Emil T. Bande has prepared plans for Mr. H. Goldenberg for a brick house, two-and-a-half stories, twelve rooms, furnaces, pine finish, laundry fixtures, tin roof, etc.; cost $3,500.

Detroit, Mich.—There is no observable change in the building situation from the past two months. Below will be found a list of the work among the several architects named during the month of August. There were 244 permits for new buildings issued during August at an aggregated estimated value of $520,755, and forty-eight permits for alterations and additions at an aggregated estimated value of $44,055, making a total of $564,810 for the month.

In the way of news I report the dissolution of the firm of Van Leyen & Preston, architects, which was dissolved by mutual consent. Mr. Van Leyen takes the firm office and Mr. Chas. A. Preston removes to the new Whitney Opera House Block on Griswold street.

Architect Jas. E. Mills: For self, two-story dwelling, 32 by 46 feet; frame, with shingle roof; cost $3,800. For J. C. Day, two-story dwelling, 35 by 55 feet; brick, with stone trimmings, slate roof; cost $8,500.

Architects Donaldson & Meyer: For Seely Manf. Co., four-story factory building, 50 by 130 feet; brick and stone, gravel roof; cost $17,000. For Mrs. Barnard, two-story dwelling, 40 by 46 feet; brick and stone, slate roof; cost $4,700. For Unitarian Society, church building, 74 by 138 feet; brick and stone, slate roof; cost $40,000.

Architect P. Dederick: For W. Brody, three two-story dwellings, 60 by 60 feet; brick and stone, gravel roof; cost $7,000. For A. Goble, three two-story dwellings, 60 by 60 feet; brick and stone, gravel roof; cost $7,000. For P. Gornelson, three two-story dwellings, 60 by 60 feet; brick and stone, gravel roof; cost $7,000.

Architect J. Schumann: For Polish R. C. Society, church and school building, 80 by 120 feet; brick and stone, slate roof; cost $19,000.

Architect G. W. Lloyd: For David Whitney et al., five-story double store building, 60 by 100 feet; brick and stone, gravel roof; cost $41,000. For R. C. House of Good Shepherd, three-story home, 39 by 80 feet; brick and stone, slate roof; cost $11,000. For R. C. Detroit College building, three stories, 206 by 130 feet; brick and stone, slate roof; cost $75,000.

Architects Mason & Rice: For Mrs. E. P. Nichols, two-story dwelling, 28 by 78 feet; brick and stone, slate roof; cost $10,000.

Architect G. W. Malcomson: For F. J. Hill, two-story dwelling, 30 by 50 feet; brick and stone, slate roof; cost $5,000.

Architects Spier & Rohns: For J. B. Norris, block of twelve three-story dwellings; brick and stone, gravel roof; cost $8,000.

Architects Hess & Roseman: For J. S. Jennings, two-story double dwelling, 43 by 60 feet; brick and stone, slate roof; cost $12,000.

Architects' names not reported: For A. Anderson, block of two-story stores, 53 by 55 feet; brick and stone, gravel roof; cost $7,000. For R. C. Parish, two-story school building, 78 by 80 feet; brick and stone, shingle roof; cost $17,000. For J. Kegel, two-story double dwelling, 48 by 50 feet; brick and stone, gravel roof; cost $4,000. For S. F. Hodge & Co., two-story factory building, 33 by 63 feet; brick and stone, gravel roof; cost $4,000. For Samuel Harrison, two two-story dwellings, 26 by 40 and 36 by 40 feet; frame, shingle roof; cost $4,000. For J. B. Morris, two-story school building, 52 by 63 feet; frame; shingle roof; cost $6,000. For City Street Railway Co., two-story barn, 43 by 60 feet; brick and stone; slate roof; cost $12,000.

Evanston, Ill.—There has been unusual activity in the building line in Evanston and vicinity this season, somewhere about one hundred new buildings including additions to buildings have been constructed, under way and to be constructed in the immediate future.

Architect I. A. Jennings reports the following: For Dr. O. H. Mann, four-story block, 106 by 100 feet; pressed brick with granite trimmings; iron fronts, plate glass; hardwood finish, hot water heat, and modern appliances and conveniences. The building contains the Evanston postoffice; the upper portion being designed for a Masonic temple. The fraternity occupy the entire third floor, which has been arranged to meet the wants of the order in lodge rooms, etc.; cost of structure, $38,000. For Mrs. C. A. Northup, two-story addition to present block, 26 by 80 feet; cost $6,000. For F. Wilson, two-story residence, 30 by 45 feet; all modern improvements; cost $4,500. For F. A. Warner, two-story residence; cost $4,500. For R. B. Hacker, two-story residence; cost $4,000. For Thomas Bates, alterations to residence; cost $3,500. For Stewart Clark, alterations to residence; cost $3,000. For W. A. Sickous, two-story residence; cost $2,800.

Helena, Mont.—Power & Keefe are erecting a six-story brick block at a cost of $120,000. Schaffer & Read have the contract.

T. C. Power is building a stone and granite residence at a cost of $40,000. Schaffer & Read are the contractors.

W. H. Hunt has commenced the erection of a $10,000 residence.

C. H. Wood is building a brick and stone block on Broadway, to cost $15,000.

David Morris is building a block opposite Grand Central Hotel. It will cost $17,000.

Mr. Paulsey will build a $10,000 residence on Hauser avenue.

The Turn-Verein hall being erected on Helena avenue will cost $9,000.

Hot Springs, Ark.—A $20,000 church will be erected by the South Methodist Society from plans made by Architect Wilson, of Louisville, Ky. Joseph Longinatti will erect a $40,000 business block.

Jackson, Mich.—Architects Johnson & Lovell have designs for a hotel building, to be erected at Hague's Landing; construction frame and brick; estimated cost $20,000.

Lansing, Mich.—Architect F. W. Hollister, of Saginaw, has prepared plans for a reform school building for the state, to be erected here. It will be three stories high, built of brick with stone trimmings; have steam heat and modern conveniences; cost of structure about $40,000.

Macon, Ga.—Architect D. B. Woodruff has prepared plans for the Macon Exchange Bank—a $35,000 bank and office building.

Omaha, Neb.—H. J. Pruyn will erect a $7,000 residence on Twenty-fourth and Spaulding streets, and C. K. Shaw will build seven cottages in Briggs Place near Harney and Dexter avenues, at a cost of $18,000.

Peoria, Ill.—Architect J. F. Alexander has prepared plans for the following buildings: For J. W. Gift, three-story residence, brick and stone, slate roof, encoustic tiling, hardwood finish, stained glass, wood mantels, marble floors, annunciators, electric bells, dumb waiters, interior decorations, furnace heat, etc.; cost $10,000. For J. W. Ballance, block of five-story stores, brick and stone, tin roof, architectural iron, iron doors and shutters, hardwood finish, steam passenger elevators, freight elevators, steam heat; cost $25,000. For Woolner Bros., six-story office and store building, stone and brick, tin roofing, fireproofing, architectural ironwork, iron doors and shutters, vaults, marble wainscoting, encoustic tiling, window gratings; hydraulic elevators, passenger and freight; fire escapes, electric bells, steam heat, hardwood finish, etc.; cost $100,000. For Young Men's Christian Association, five-story building, stone and brick; gravel roof, architectural iron, iron doors and shutters, marble floors, marble wainscoting, fireproofing, vaults, elevators, fire escapes, opera chairs, hardwood finish, stained glass, wood mantels, steam heat, etc.; cost $75,000.

Pittsburgh, Pa.—There is much activity in building, but the majority of structures going up are small dwellings and tenements.

Architect G. S. Orth has made plans for a two-story brick and frame dwelling, 34 by 44 feet, for H. C. Ayers; cost $8,500.

Architect J. S. George has made plans for a two-story and attic store and residence building, 20 by 30 feet, for J. F. Wunderlich; cost $2,800.

Architect F. C. Sauer has made plans for a two-story dwelling, 30 by 40 feet, for W. G. Banckerbrick; slate roof; cost $4,600.

Architect L. T. McClarren has made plans for a two-story and attic dwelling, for W. R. Armstrong; cost $3,500.

Architect C. W. Hogdon has made plans for six two-story dwellings, for J. P. Fleming; brick, gravel roof; cost $3,300 each.

Architects Obitz & Wahle are making plans for a double dwelling and store for Theo. Weiss.

Architect J. W. Burr is making plans for two six-room dwellings for Morris & Fleming; two residences for the Pittsburgh Iron Paint Co.; an eight-room residence for J. Garrison, and a brick block to be erected at Johnstown by J. P. Linton.

St. Joseph, Mo.—Architects Eckel & Mann have made plans for new bank, store and office building, to be erected by the German American Bank. It will be five stories; estimated cost $75,000.

THE INLAND ARCHITECT AND NEWS RECORD.
Vol. XIV. ADVERTISERS' TRADE DEPARTMENT. No. 2

Trap Siphonage.

On Friday afternoon, August 30, some fifty odd gentlemen, representing the architectural profession, the plumbing fraternity, and experts in sanitation, among the latter, Dr. Wayne Wickersham, commissioner of health, assembled, upon invitation of Dr. E. S. McClellan, at the Institute of Building Arts, to witness a series of tests in trap siphonage, and an exhibition of the working of the McClellan anti-siphon trap, conducted by the inventor himself, Dr. McClellan. Prior to the exhibition, the guests participated in an excellent collation, a part of which was a test surprise of the experimental and practical knowledge each participant had of the subject to come under discussion, "trap siphonage." In the hands of each, as an afterpart of the *menu*, the doctor had placed a small silver trap of the conventional form with its seal well set. In every instance this test of knowledge was a success, and although repeatedly made, the siphonage invariably occurred at the critical period, breaking, in every instance, the seal, leaving only a faint odor of Medford and lemons behind.

Immediately after the cigars, Dr. McClellan placed himself before a combination of piping, to which was connected a series of class traps and vents, and in companionship with them his own anti-siphon trap, a popular description of which has already appeared in THE INLAND ARCHITECT, and a good idea of which may be had by referring to the cut in his advertisement. That the experiments might be closely observed in their practical workings, the doctor had the several traps in the apparatus made of glass tubing, through which the situation of the seals could at all times be seen. His introductory was a brief dissertation on the philosophy of siphonage, and why class traps were subject to it, i.e., the flushing of the pipes conveying the waste water created that thing which nature is alleged to abhor—a vacuum—and the water in the trap being unable to resist the imperative call of nature for *filling* left the trap to get along without its services.

The first experiment was against a trap of ordinary form, 30 inches deep, made of glass. It was by a momentary discharge of water through a 3-inch waste pipe, with a fall of four feet. The result was a complete exhaustion of the trap, not more than a tablespoonful of water being left in the seal. The next experiment was made by the same fall of water through the same pipe with a 3-inch glass S trap, to which was connected one of the doctor's anti-siphon vents. The result was an unbroken seal, caused by this simple device, substituting air in lieu of the water in the trap, and thereby doing another good thing, while keeping the seal of the trap intact, i. e., introducing fresh air from the room into the piping, thus aiding to correct the fetid air within.

Subsequently the entire contents of the water tank was discharged through the piping without disturbing the seal. Quite a number of other interesting experiments were given with this anti-siphon trap vent, with equally successful results. All of the exhibitions of this peculiar fixture were made under much more severe tests than ever occur in ordinary practice. During the exhibition quite a number of questions were asked and possible objections raised which were clearly met by the doctor and to the apparent satisfaction of the questioners. Judging from expressions made during the experiments, and after, by the number who remained to examine the simple apparatus, it may be safely said that the doctor has succeeded in at least interesting those who availed themselves of his hospitality on the day and occasion above named.

MR. GEORGE WESTINGHOUSE is having his summer residence at Lennox, Massachusetts, plastered with King's Windsor Cement. Mr. H. Dodge, of Pittsfield, the contractor, reports that he never saw finer plastering.

Fireproofing Wood.

Another instance of the fireproof qualities of wood that had been treated with Creosote Stain occurred recently. A barn in Youngstown, Ohio, had been partly painted and partly stained with Creosote Stain. Shortly afterward a mill within a few feet of the barn burned to the ground. Where the barn was not covered at all it was scorched, and in some places burned through. Where paint had been used it was found peeled off, and the wood scorched beneath. The part covered with Creosote Stain was found entirely unburned, and the color as bright as ever. It would be interesting to hear from anyone who has had a similar experience with Creosote Stain or any other preparation.

The Henderson Heating Systems.

We present here the heating systems made by Messrs. J. C. Henderson & Co., of Troy, N. Y. The first, Fig. 1, for the use of hot air, made to be set either portable or in brick walls, shows the portable furnace incased. This furnace is what is known as the "Tubular Dome Furnace," is made in four forms, has large, strong, and durable fire pots. The domes and radiators are each cast in one piece without joints. The grates are large and easily cleaned. The ash-pits are deep, giving a large free space for ashes. The doors in the fronts are large. The grate shaft has a follower, so that when the grate is shaken the ashes will not flow out into the room.

The cast-iron radiator, which is connected with the dome by a collar, compels the smoke and burning gases to travel around its entire circumference before it reaches the smoke-pipe or chimney, and thus adds a large amount of extra heating surface. It also has wrought boiler tubes, which are made steam-tight and run through the dome from points on the

FIG. 1.

lower part to the top, which also adds very much more heating surface.

There are cases where hot-air furnaces cannot fill the bill, as in conditions in which heat cannot be properly distributed from a furnace. The Hendersons have therefore adopted a combined system of hot water and steam with the furnace, and have perfected a furnace with a water heating and circulating attachment adapted to heat conservatories. The attachment is added to the same furnace that heats the house with warm air, and is capable of heating in this manner rooms of almost any size desired by carrying water to such rooms in a radiator and open tank, that will not only heat the conservatory but produce by evaporation a soft and humid atmosphere which is most conducive to plant growth.

This improvement can be used also in combination with the hot-air system of heating, by conducting a steam or hot-water circulation to any room or rooms desired to be heated by radiation in this manner. This method is especially adapted to supply hot air and hot water to Turkish baths.

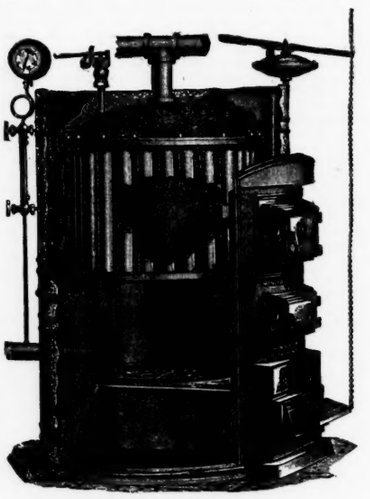


FIG. 3.

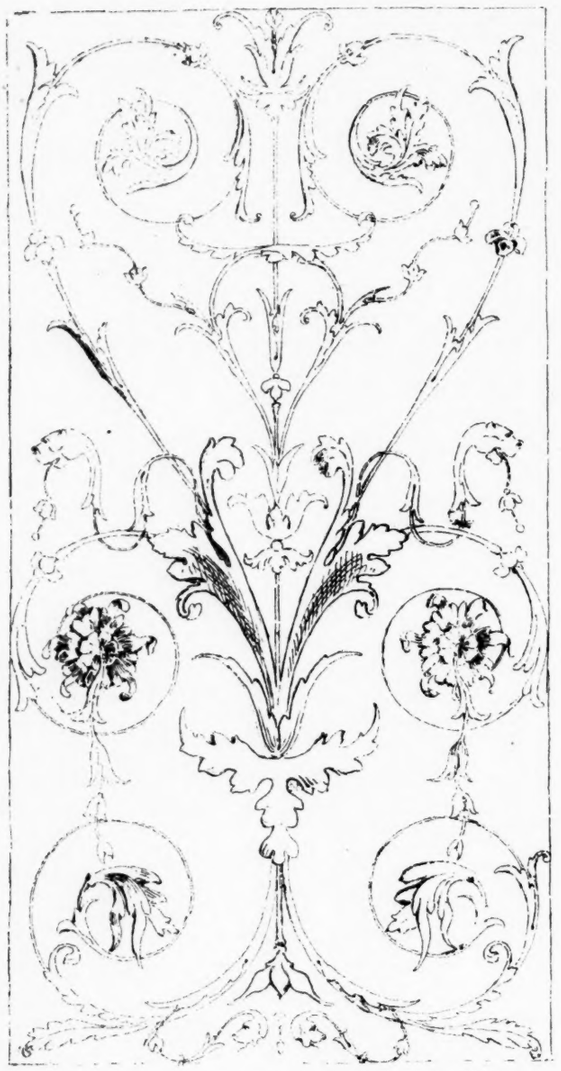
Fig. 3 represents Henderson's steam or hot water boiler for warming all kinds of buildings or conservatories in the manner above referred to, and will be found both effective and economical. It is made portable and brick set and in sizes ranging in capacity from 20,000 to 100,000 cubic feet of air space. Mr. Henderson has given much study to the subjects of ventilation and the methods of heating by warm-air circulation, hot water or steam, and in consequence the results of his experience, as set forth in his circulars and catalogues, will be found valuable and interesting to architects and builders. His methods of securing constant circulation of air, location of ventilators, etc., for private houses, public halls and other places are worthy of careful attention, and the system of heating adopted by him, embracing hot-air furnaces and boilers for circulating steam or hot water, are well adapted to secure good results both in ventilating and heating.

Wire Lathing Test.

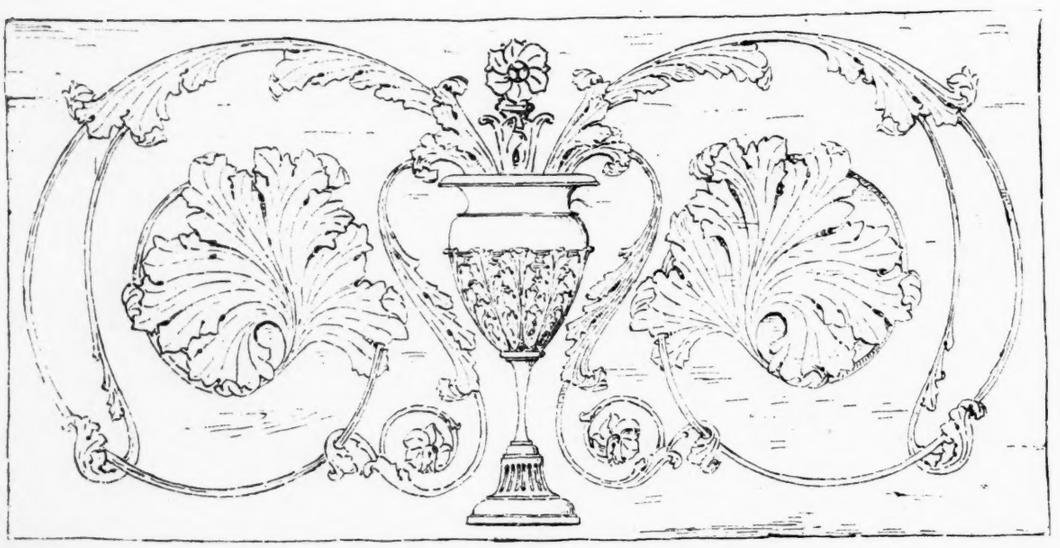
On July 25, the New Jersey Wire Cloth Company made an unusually severe test at Germantown Junction, which practically proved the perfect fireproof qualities of their patent Stiffened Wire Lathing, and demonstrated to the architects, builders and insurance men present, that if proper materials were used the immense yearly fire loss could be reduced to a minimum. While the cost of such materials may be somewhat more at first, the decrease in the rate of insurance on all buildings considered fireproof more than compensates, in the long run, for the original increase in cost. As another evidence that this subject will not down, we chronicle the fact that the committee having in charge the erection of the new building for the Convent of the Sacred Heart, at Manhattanville, New York, whose former building was destroyed by fire, not long since, has concluded to run little or no risk of a like calamity in the future, and to this end determined to use, as far as possible, every known fireproof material in the construction of the new building. When it came to the matter of lathing, the committee promptly sent an order to the New Jersey Wire Cloth Company for corrugated lathing, which order has just been filled by the firm, to the great satisfaction of all concerned.

RESIDENCE FOR MR. A.V.S. LINDSLEY NASHVILLE TENN:

Chas. K. Ramsey, Architect St. Louis Mo.

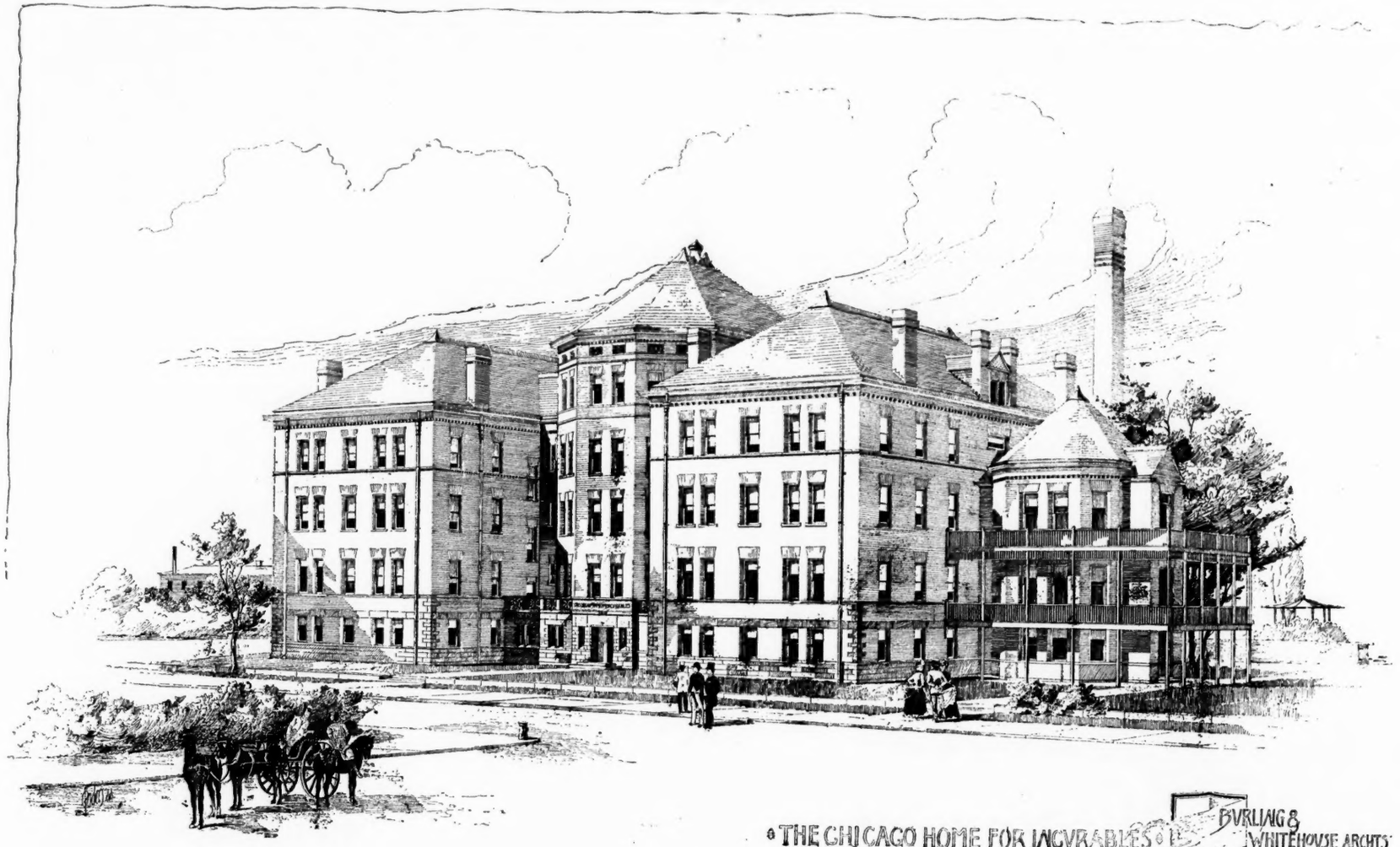


FIRST PLACE.—A. STEDMAN.



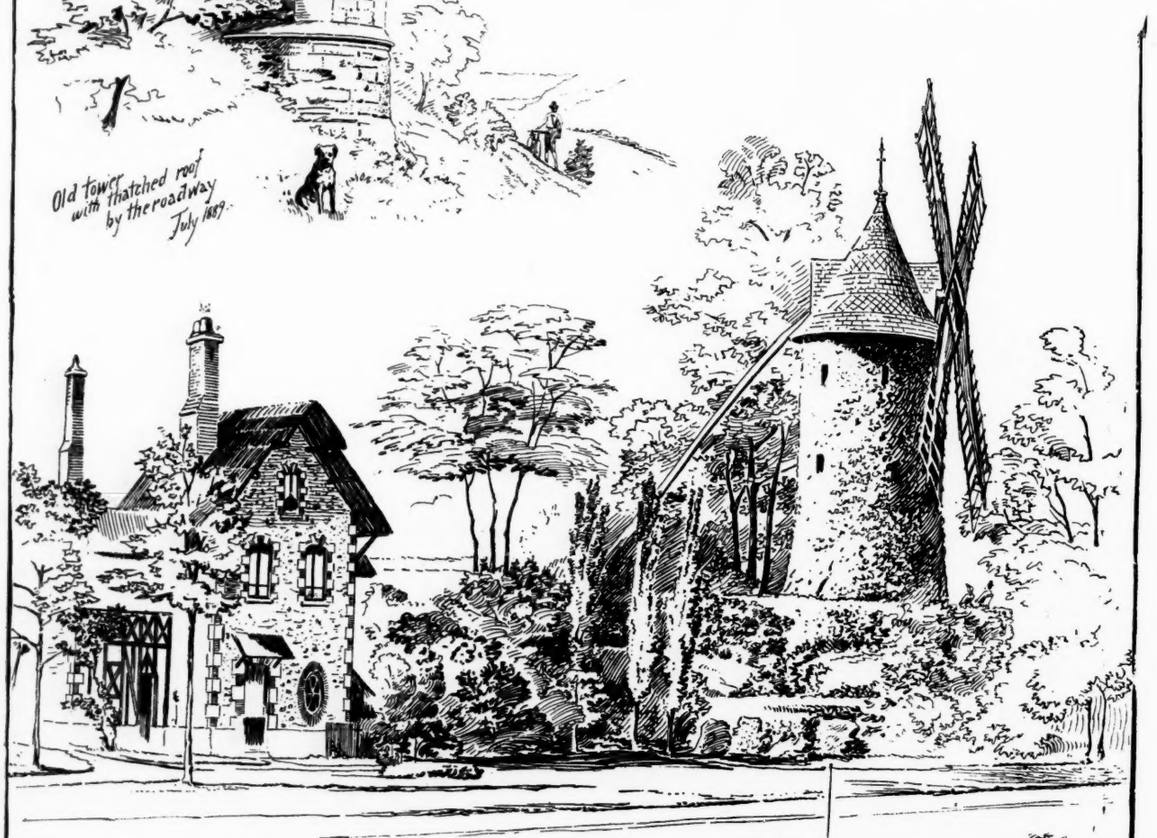
SECOND PLACE.—L. G. DITTOE.

CINCINNATI ARCHITECTURAL CLUB,
COMPETITION FOR A FRENCH RENAISSANCE PANEL.



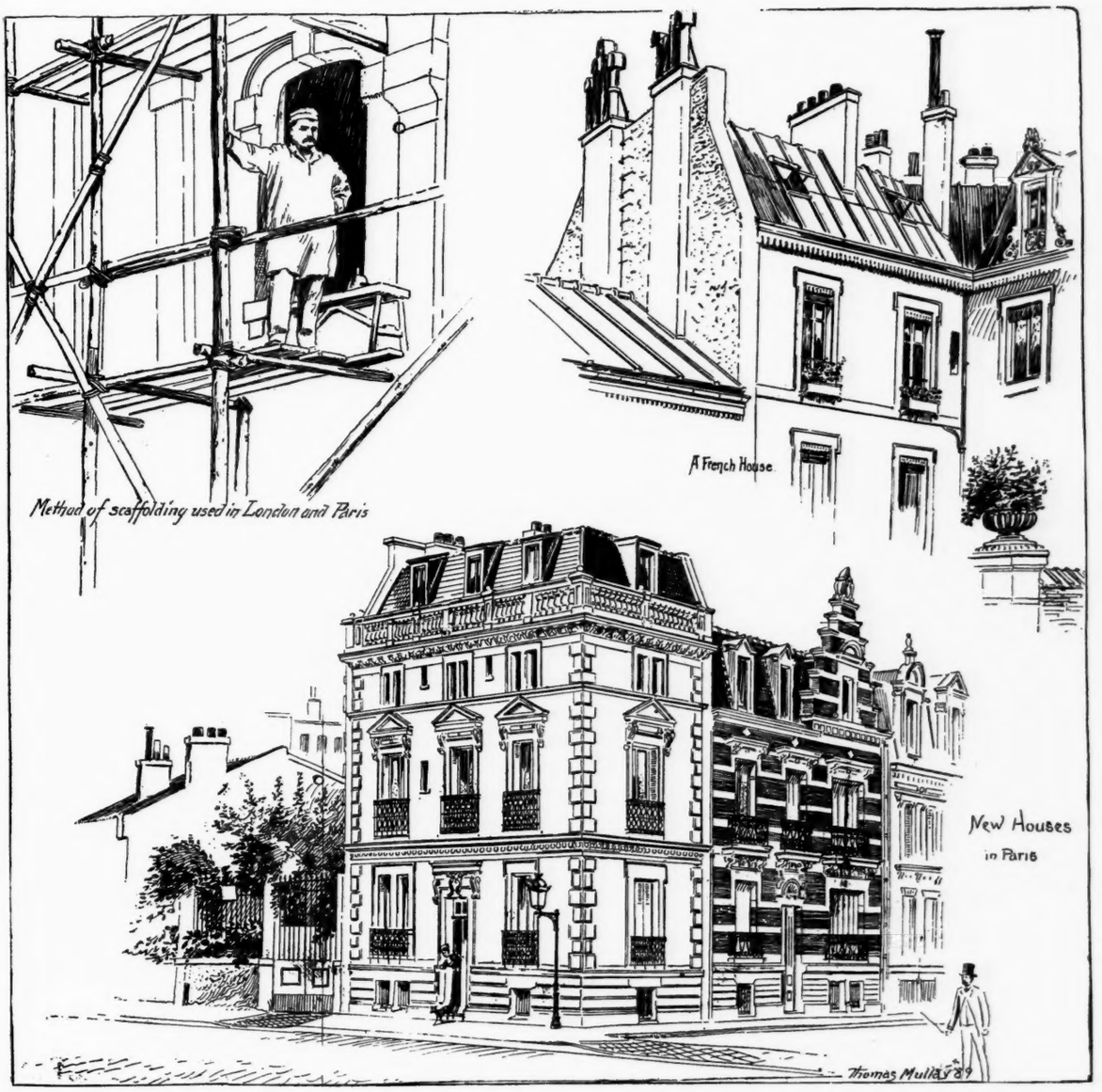
THE CHICAGO HOME FOR INCURABLES. BURLING & WHITEHOUSE ARCHTS.

In the JARDIN des TUILERIES



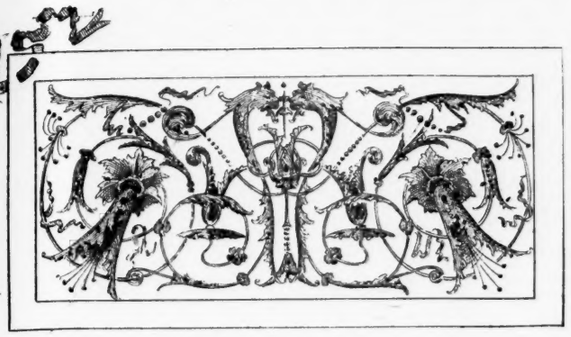
At Longchamps.

In the Jardin des Tuileries

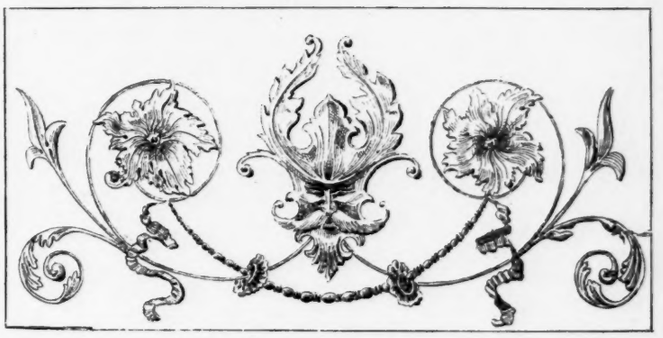

Method of scaffolding used in London and Paris
A French House
New Houses in Paris
Thomas Mullay '89

RESIDENCE ON MICHIGAN AVE
NVE CHICAGO FOR MR. THOS
A. WRIGHT.

W. L. B. JENNEY ARCHITECT



THIRD PLACE.— G. W. E. FIELD.



SUBMITTED BY JOHN ZETTEL.

COMPETITIVE DESIGN FOR CITY HALL FOR OMAHA, NEB.

SIDNEY SMITH, ARCHITECT.

RESIDENCE FOR MRS. MARY WILKE
WRIGHTWOOD AVE & SYDNEY COURT, LAKE VIEW, ILLS.