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Death of Herbert C. Burdett, of Buffalo.

On April 10, at 11 o'clock A.M., there died at Buffalo a young architect of exceptional ability and great promise—Mr. Herbert C. Burdett, junior member of the firm of Marling & Burdett. He was born in Boston in 1855, and after graduation at Harvard his business career opened with the architects Hartwell & Richardson, of Boston, after which he was engaged with H. H. Richardson for a number of years, after which he came to Buffalo in 1887 and entered into a partnership with J. Herbert Marling, that continued up to the time of his death. His illness was brief, death resulting from heart disease and pneumonia. Mr. Burdett never was a robust man, suffering much ill health. He had a keen appreciation for art, and was fond of music, and was a good pianist. In this as in all the habits of his life he was methodical, painstaking, proceeding with care to a knowledge of the principles and groundwork of his subject. His characteristics were perseverance, enthusiasm, generosity and modesty, and such a man cannot fail to leave on dying a wide circle of sorrowing friends. At a special meeting of the Buffalo Architectural Sketch Club, of which Mr. Burdett was a member, the following resolution was drawn:

WHEREAS, We, the members of the B. A. S. C., being informed of the sudden death of our friend, Herbert C. Burdett, be it

Resolved, That we express our sincere regrets and condolence to his family in this great bereavement, in the loss of our friend and adviser.

Among the buildings in Buffalo designed by the firm are the Saturn Club House, the Hammond house, the William Hamlin and the Jewett M. Richmond residences, and others among the finest buildings in the city.

Lightning-rod Protection from Lightning.

In the minds of many laymen there has long been a suspicion that the lightning rods in common use do not protect the buildings to which they are attached; and in the minds of many electrical experts this shrewd suspicion has amounted to a certainty. Mr. M. D. C. Hodges, the editor of *Science*, convinced of the inutility if not of the absolute harmfulness of the ordinary rods, has devised a new method of protecting buildings from damage by lightning. In an article in the issue of *Science* for March 6, Mr. Hodges sets forth his argument which in brief is as follows: The electrical energy which is converted into what is called a discharge of lightning exists prior to the discharge, not in the earth, nor in the cloud, but in a column of air extending from the earth to the cloud. When a discharge takes place, electricity does not pass, as the common phrase puts it, from earth to cloud nor from cloud to earth; but electrical energy stored up in the atmosphere flows in from all sides to a point, or better, to a line of air, at which such energy is converted into heat. This display of energy is greatest upon the surface of a conductor which chances to lie within this column of dielectric. Now if this conducting material, for example the ordinary form of lightning rod, is of such mass that it is not consumed easily by the discharge, damage is done to the building to which it is attached; whereas, if the conductor can be consumed by the discharge, the heat into which the energy is converted is expended in the consumption of the conducting material and no damage is done to the building, just as insignificant damage is done by the

discharge of unconfined powder. Franklin cites an instance in which the energy, which destroyed the spire and shattered the lower portion of a church, spent itself harmlessly in the upper part of the church in the destruction of a single slender wire. It will be noted that the argument of Mr. Hodges takes issue with the current theory in several particulars. It is commonly held that, just as a point will draw a store of electric energy without a discharge whereas a blunt surface in the same circumstances will cause a discharge, so the pointed common lightning rod will draw this store of energy from the atmosphere, or permit it to pass to the atmosphere, by gradual conduction along the line of least resistance, provided the ground connection of the lightning rod be perfect. This theory finds the defect of the common rod in the large mass of metal with a comparatively small surface and deficient ground connections, and asserts that an iron tower with ample earth connections at its base will not be "struck by lightning." In case of practical application of Mr. Hodges' method, the wire must be replaced after being consumed and no protection is afforded in the interim ; and secondly is it not conceivable that the amount of energy in a particular column of dielectric may be sufficient to consume a slender wire or group of wires and leave a residuum unexpended to do damage to the building? Doubtless Mr. Hodges has taken account of these objections. Experiment under the actual conditions of ordinary building will be required to demonstrate that a practical application can be made on the line that is thus indicated.

Professional Interest in the World's Fair.

The publication of the bird's-eye views of the Columbian Exposition grounds and buildings, the latter drawn from the approved designs, has given to the world some conception of the magnitude of the enterprise and its probable scope. To no other profession is this exposition so interesting as to the architectural, and from it can no other tradesman learn so much as the builder. Like architecture, this exposition takes within its scope all the necessities, and the luxuries as well, of mankind. To an architect it will show to what development the most ancient of all professions has been brought in this the latest inhabited country, and the methods employed in the construction of the buildings will teach more than years of investigation. To the builder or artificer the lines of instruction are endless, for here will material be used as never before, or like the designs of the buildings, it will show old materials and methods put to new uses. From the buildings, that only protect the valuable collection of samples of the ingenuity and industry of man, he will turn to these types of the highest development of labor-saving or labor conserving forms. Everything will be at its best and exhibit its latest improved aspect. In the arts industrial each workman or artist, no matter how perfect may be his ability to produce, will gather something from this collection of the world's progressive thought, and find that others have thought, in some things at least, to better purpose than he. Perhaps one of the greatest advantages will be the facility for comparison of materials or methods. Side by side will stand the best of each country, each in its own way demonstrating the ability of a people, and each striving for superiority. Through this comparison will the combination be made that shall perchance eclipse them all. In the effort of the Illinois Chapter of the American Institute of Architects to secure a special building or department for the exhibition of drawings or models of the world's architecture and the world's building materials and methods, the architects and builders of the world are deeply interested. The foreign societies will be asked to collect and send drawings and to aid in making the exhibit of professional advancement of the greatest value and interest, and place the time-tried methods and forms of an old world side by side with the fresh and vigorous efforts of a new century of progress.

A New Supervising Architect Appointed.

Willoughby J. Edbrooke, supervising architect of the treasury department vice Windrim resigned, is a paragraph of Washington news that has created considerable comment, not only in architectural circles but in the daily press of the country. Mr. Windrim came into the office through the earnest solicitation of the secretary of the treasury, strongly recommended by the postmaster-general at the beginning of the last administration, and has filled this difficult position with credit. We could have said distinction, if it were possible for a supervising architect to win such in the present status of our nation's architectural affairs. After three years of labor he retires without the adjunct of a scandal attached to his name, for which he should consider himself fortunate, and leaving the department in much better condition than that in which he found it. Mr. Edbrooke is as well qualified as his predecessor and will take up the work with energy, and, through his long experience as an architect, much of it gained through years spent upon public work and as administrator of the architectural affairs of the second city in the United States, with intelligence. We wish Mr. Edbrooke every success. He is wise enough to see that his safety from adverse criticism lies in seeing that his designs are creditable and the affairs of his office are governed by himself and not by politicians, and if when he retires he has added the weight of his influence to that of his predecessors toward the reorganization of the office, and given to his native city a new and commodious public building in place of the ruin in which it now attempts to do business he will have done well and his administration will meet the approval of the people and of his architectural confrères.

Joint Committee Meeting to Formulate Building Laws.

The recommendations passed by the joint committee from the Fire Underwriters' and Engineers', Building Inspectors', the Architects' and the Builders' associations, which met at New York, April 2, has occasioned considerable comment throughout this country and Canada. At the meeting it was at first proposed to enter into a discussion looking toward the formulation of a uniform building law, but after four hours spent in informal discussion it was shown that a satisfactory conclusion could not be arrived at, and, even if formulated, such a law could hardly be enforced if adopted. It was finally decided to formulate a general recommendation which should be placed before the legislators of the various states. The committee after discussing the recommendations, which are printed in full on another page in this issue, decided to meet yearly hereafter for the purpose of making suggestions and generally reviewing the building business together. It is certain that great good will be accomplished through the future meetings of this committee, the next meeting of which will take place at Cleveland in February next, at the time of the annual convention of the National Association of Builders.

Architectural Design.*

BY NORMAND S. PATTON, ARCHITECT.

HAVING thus briefly considered some of the principles that should govern architectural design, let us trace rapidly the leading styles of architecture and notice how these principles are illustrated, and also how some of them have been disregarded ever in the styles called classic.†

The history of modern architecture follows the same course as that of modern history. The foundation is in Greece, then for centuries the whole interest centers in Rome. When the barbarian hordes invaded the imperial city, architecture along with other arts of civilization took refuge in Constantinople. Here it came again under Greek influence and finally issued forth, this time spreading over all western Europe.

When we think of Greek architecture there arises before us the vision of the Temple as almost the only building which they considered worthy of architectural treatment. To the ordinary spectator one Greek temple will stand for the whole set. A slight examination will show, however, a considerable difference in the detail of the columns and entablature, and we recognize the Doric and Ionic styles. The general type of the building is the same in both styles, and its chief characteristic is simplicity; a one-story rectangular structure surrounded by columns, the whole covered by a gable roof. The space from one column to another is covered by stone lintels or beams. The noticeable point in all Greek work is the extreme refinement to which all the proportions and form of the building and its details were carried. The student soon discovers that even Doric temples are not all alike, but that there is steady progress from the older and crude forms to the refinement of the Parthenon, the culmination of Greek art.

The Greek preferred simplicity and his favorite style was the Doric. The Ionic was employed when he wished to show greater delicacy and lightness. The Corinthian order was invented by the Greeks, but only a few examples remain, it seemed to them too luxurious or too frivolous for important works.

In the Greek Doric temple we find marvelous unity and simplicity in the design, the massive tapered columns are suggestive of strength; the proportions were studied with greatest care so that the various dimensions should bear the most pleasing relation to each other. The greatest refinement and delicacy was attained in the outline of the moldings, so that the Greek temple is perhaps as near faultless in its design as any structure erected by the hands of man. But we must bear in mind the simplicity of the problem the Greek had to solve. It was a much easier task than to devise suitable decorative forms for the complicated buildings demanded by the civilization of the Romans, of the Middle Ages or of our own day.

When we consider the Roman buildings we are struck immediately by the fact that architecture covers a much wider field than with the Greeks.

The Roman temples were among the least important of their buildings. The Roman mind ran to the execution of justice and to popular amusements rather than to religion. When a Roman erected a temple he based it upon the Greek idea, but the Doric style was altogether too plain for his notions, and the delicacy and refinement of the Ionic seemed hardly proper to express the Roman idea of magnificence; but the Corinthian column, with its sculptured capital, pleased the Roman's fancy and he developed it and employed it more frequently than any other form.

The Maison Carrèe at Nîmes, France, supposed to be a temple of Diana, is the most complete Roman temple that remains to us and is sufficient to illustrate this type of a building.

The great feature of Roman buildings is the development of the arch and the vault. When no means were known of spanning an opening in masonry except by a lintel or beam, architects were obliged to confine themselves to forms with narrow spaces between columns and there was no method of constructing a roof or ceiling except by the use of wood. The arch was invented by the Etruscans and developed in a wonderful manner by the Romans. By means of the arch they could cover vast areas and do this with the use of small material, which required no derricks or costly machinery to raise in place. The arches used by the Romans were semicircular in shape. Their vaults were in three forms: the continuous semicircular arch, or barrel vault, such as we use in the top of a tunnel; the intersecting arch, formed by two tunnels crossing each other at right angles, and the circular dome.

The Romans, although great builders, were poor artists. We must admire the variety and size of their constructions but when it comes to the treatment of the ornamental forms they fell into error. It is always easier to borrow an article ready made than to design and manufacture a new one; therefore, the Romans borrowed their decorations from the Greeks and frequently employed Greek artists and architects to design their buildings. To be sure, the Romans modified, in many respects, the Greek forms, so that the Roman orders are distinctly different from the Greek, but they overlooked the important fact that in the Greek architecture the order, consisting of the column with its appropriate entablature, formed the whole building, and if you take away this order the building vanishes with it; whereas, the Romans employed columns with their bases and entablatures as mere decorative forms applied to their arched construction. This is shown very clearly in the triumphal arch of Constantine at Rome. Here we have a central arch for the roadway with smaller arches on each side for foot travelers. Each arch springs from a molded course called an impost. The whole forms a very pleasing group, but in front of these arches are placed four columns resting on high pedestals which are quite independent of the arch construction. It is evident that we can take away these four columns and a complete system of construction and ornament remains. The impost at the springing line of the central arch cuts into the fluted pilaster at the back of each column in a very awkward manner. The column, in fact, is entirely out of place and does not fit the arches and has no duty to perform except to hold a statue which could have been held by a much less pretentious support.

The arch of Trajan is of similar design, and illustrates the one great failing of Roman architecture, which has been copied in modern times in the so-called renaissance or revival of classic architecture. They used columns and cornices, not because the structure suggested a column in a certain place, but because a column is a handsome thing in itself, and so they put one on wherever decoration seemed to be called for.

We hear so much said about the wonderful progress of the nineteenth century, that few people who have not seen the ruins of ancient Rome have any conception of the advance made in the arts at time of the Roman Empire, whereas, many of the Roman buildings surpass in extent and massiveness any structures that have been erected in the Middle Ages or modern times.

The baths of Caracalla illustrates the extent and complexity of Roman buildings as compared with any that preceded. The main building covered an area of 730 feet by 380 feet, which is 50 feet longer and 100 feet wider than the capitol at Washington. It contained many large halls with hot, cold and tepid baths sufficient to accommodate 1,600 bathers at a time.

There is no class of Roman buildings which is more interesting to us from a historical point of view than the basilicas. These were the places where courts of justice were held and popular assemblies gathered. There were two types of basilica, one with the roof and ceilings of wood, the other in which masonry vaults were used. The basilica of Trajan is the best type of the first. It consists of five aisles separated by rows of columns, or as we should describe it when compared with medieval cathedrals, it has a central nave with two narrow aisles each side. The basilica of Maxentius is the most magnificent specimen of the vaulted basilica and indicates immense progress in the art of building over the wooden roofed style. The whole building was 195 feet by 250 feet inside and consisted of a central aisle 85 feet in width and 120 feet in height. About the same width as that of Saint Peter's at Rome and much wider than any of the medieval cathedrals. The ceiling of this central nave was composed of three intersecting vaults. At each side of the center aisle in the place of the double aisles of the Trajan basilica, we have three large barrel vaults set at right angles to the central vault. Three of the vaults that remain standing, although of much less size than the central vault which has fallen, are of greater span than was ever attempted by the medieval builders.

When we endeavor to trace the beginning of Christian architecture we find that no exact line of demarkation can be drawn between it and the pagan buildings which preceded it. Under the Mosaic dispensation exact instructions were given for the building of the Tabernacle and the Temple of Solomon, but it is in accordance with the principles of Christianity that no rules were laid down by our Savior or his apostles for the arrangement of Christian temples or places of worship. During the first three centuries of the Christian era a gradual change had been taking place from paganism to Christianity.

Long before Christianity became recognized by the state, paganism had lost its hold until there was a gradual transition until the time of Constantine, about 300 A. D. Then when the Christians were permitted to come out of their hiding places in the catacombs and worship God publicly, the buildings which they found best adapted to their use were the Roman basilicas, and many of these buildings were made use of by Christian churches. It was, therefore, natural that the churches erected should follow the type of the basilica.

The basilica of Saint Paul's, outside of the walls of Rome, burned in 1822 and rebuilt of the same size and in the same general style as the original basilica, may be taken as a representative of the Christian basilica at its best. The floors are polished marble, columns of polished granite with white marble capitals, the walls decorated with mosaics, the ceiling ornamented with gold. This interior illustrates the progress that had already been made by the Romans in the use of columns, which are no longer placed in front of a pier which sustains the arch, but the column itself is made to carry the arches. The unpleasant features of this design are the square form of the room and the small size of the arches which seem dwarfed by the vast extent of wall above.

Rome itself never submitted to foreign influence, and we find only the three styles, Roman, Romanesque and Renaissance, which is but a return to the errors from which they once escaped. But in other Italian cities the effect of outside influence was felt. Saint Mark's, at Venice, with its five domes, its wealth of mosaic and ornamentation, shows clearly the Byzantine influence. The architecture of Byzantium, or Constantinople, was the result of Roman forms modified by the Greeks and Arabs, so that when the reflex influence of this eastern architecture was felt in Italy the Greek and Arabic forms were added to those already familiar on Italian soil.

The leaning tower at Pisa is an example also of Byzantine Romanesque architecture.

About the year 1000 the star of architectural empire moved westward into France, and thither we must follow. The frequent burning of the wooden ceilings and roofs of the basilica churches led them to adopt a masonry vault such as we have already seen in the basilica of Maxentius at Rome. Most of the learning of this time was in the

* Lecture delivered at the Art Institute, Chicago, and revised by the author for publication in THE INLAND ARCHITECT.

† NOTE.—The remaining portion of the lecture as delivered was illustrated by stereopticon views. The omission of the illustrations in this article has necessitated modification and abridgement, so that the reader must consider the examples as fragmentary rather than a connected history of design.

monasteries of the Clusinian order. And to this order we are largely indebted for the development of Romanesque architecture. The Roman vaults contained immense masses of masonry, as if the whole building had been made solid and then scooped out, but this did not suit the Christian builders. They could not afford to use such an extravagant amount of material, especially when they built of stone instead of the cheaper brick and concrete used by the Romans. The doctrines of Christianity led them to avoid all deceits and shams and make every part of the building serve an honest purpose, and their scientific attainments contribute to the same result in the adapting each support to the weight to be carried, and in concentrating the thrusts of the vault in certain definite points and there meeting them by a resistance calculated to balance without superfluous material.

The Romanesque architecture spread to England, where it is known as the Norman style. The interior of the noble cathedral of Durham is a good type of the style, and shows how the column has become an essential part of the construction and now supports the arch instead of being placed in front of it.

St. Stephen's at Caen illustrates the French Romanesque. You will notice pointed arches in several of these buildings indicating portions built at a later date. The transition from the Romanesque to the Gothic is much less marked than that from the Roman to the Romanesque.

The greatest difficulty met by the Romanesque builders was in constructing the intersecting vaults. The central nave of their cathedrals was usually about twice the width of the aisles. If the vaults over the aisles were made square, then the spacing of the columns must be the same as the width of the aisle. This would divide the ceiling of the nave into rectangles twice as long as they were wide. It is manifestly impossible to make two semicircular arches of the same height, one of which is twice the span of the other. The Romanesque builders adopted various expedients to overcome this difficulty, but none of them were entirely successful, but when the pointed arch was invented it offered a ready solution. If you consider the two arcs forming a pointed arch as hinged at the top you can increase or decrease the span of the arch by moving the bottoms of each arc outward or inward as you open or close a pair of scissors.

The crypt of the old Abbey of St. Denis, near Paris, is Romanesque in style as the abbey was founded in the third century and rebuilt in the seventh or eighth century. About the year 1121 the celebrated Abbot Suger determined to erect a new church in the place of the old one. The façade is also apparently a Romanesque design, for round arches are used, although the pointed form appears in some places. But as soon as we enter the interior of the church we find that we have left behind the Romanesque style and have a new style with the pointed arch or Gothic. The nave, as it now stands, is not the one built by Suger but one that was rebuilt at a later date and has since been restored. But the abbey church as left by Suger was a Gothic and not a Romanesque design, and it marked the beginning of a new style.

The Gothic architecture of France reached its highest development in the Sainte Chapelle at Paris and the church of St. Ouen at Rouen. Here we see Gothic architecture in great perfection, the flying buttersses on the sides take the thrust of the vaulted ceiling and convey it to the ground. Pinnacles on the buttresses are to give added weight at a point where it is needed. Notice how the ornament is all connected to the construction in such a manner that we can scarcely say, this is construction and this is ornament.

The Gothic architecture thus born on the soil of France spread to England and other countries of Europe. Westminster Abbey at London illustrates the principle of unity by its absence. The towers were completed by Sir Christopher Wren, who knew little of Gothic architecture, which fact is very apparent in the design. In the interior, however, we find a magnificent example of English Gothic design.

Even in ruins, Gothic architecture is beautiful. Every fragment seems to be filled with life. Such ruins as those of Melrose Abbey gives an insight into the construction of Gothic vaults even better than the finished building. One great difference between Gothic vaulting and that which preceded it is the introduction of ribs. The Roman vaults consisted of enormously thick masses of masonry, which meant great weight and required correspondingly large supports. The Gothic architects made deep ribs of stone intersecting each other and then filled in between these ribs with a comparatively thin mass, which may perhaps be likened to the cloth of an umbrella stretched over the ribs.

One example will suffice for German Gothic, the magnificent cathedral at Cologne, whose double spires are the highest in the world with the exception of the Washington monument. But when we think of the designs of the two we can hardly mention the Washington monument the same day with the cathedral. German work is thought to lack the artistic feeling displayed by the French, but the workmanship is marvelous.

It seems like presumption to criticise such a building as the cathedral of Cologne, but if something must be said it is that the height of the interior is too great for the other dimensions and has the effect of dwarfing the people who occupy the building.

Even Italy was invaded by the Gothic, especially the northern cities, but the style never took a deep hold as in the more northern countries. The Italians appeared to have adopted Gothic because it was fashionable and they used its forms in a decorative manner but often with a disregard for the construction which was not manifested in France or England.

In the façade of the Sienna cathedral the center gable evidently represents the end of the roof and the two side gables the ends of the smaller roofs. But having seen this building and peeked around the side I can assure you that there is no roof behind these side gables. This illustrates the fact to which I have alluded, that the Italians are not so much governed by the construction, but erect a gable if they think it will look well from the front even though there be no roof behind. This façade is a wonderful combination of sculptured marble with colored mosaics, and I feel less inclined to criticise Italian architects than I do to envy them the sunny sky that will permit the use of such materials.

With the Gothic architecture we have completed all possible forms of construction in mason-work. We have used lintels and arches, round, elliptical and pointed, and vaults of all descriptions; and any other forms must be some modifications of these. We have found that the Greeks used the lintel in a rational manner, that the Romans developed the round arch, but failed in the artistic treatment of it. The Romanesque builders worked out successfully the problem of the round arch style and the Gothic completes the list by showing us the wonderful possibilities of the pointed arch. When we adopt an entirely new material, such as iron or wood, then we must invent new forms appropriate to these materials and should not copy forms adapted only for stone.

The corner of the courtyard of the Chateau of Blois, built by Louis XII, is a charming illustration of the domestic Gothic of that period. When his successor Francis I came on the throne, the people began to tire of Gothic and to imitate the Roman forms.

The effect of these classic forms is seen in the great spiral staircase, but the whole spirit of design is Gothic. Near this staircase has been built at some later period an arcade in the true renaissance style which brings us back to the starting point of Roman architecture as if no progress had been made in twelve or thirteen centuries.

Before taking up American architecture, I wish to call your attention to a style which does not receive much attention in the books on art. But of all buildings in Europe none are to me of greater interest, as illustrating the methods by which true architectural style is developed from the conditions of the problem and the material to be used, than the Swiss cottages. We all admire them — think them very picturesque; but probably you have never stopped to think why it was that these particular forms were adopted by the Swiss. A genuine Swiss cottage is a log house built of solid logs; these are squared and laid horizontally and halved together at the corners exactly as log cabins were built in the early days of this country. A Swiss cottage is an artistic log cabin in which almost every detail of arrangement can be traced to some structural necessity. I will imagine that you ask the following questions and will answer them: Why do they make the roof with such an enormous projection? Because they found that wood, when kept dry, will last for centuries; but if the water is allowed to penetrate it soon decays. The roof is to keep the rain from the walls. Why the flat slope of the roof? Because the split shingles are not nailed but laid on the rafters and would slide off if steeper. Why are the windows grouped together? Is it because they think this the most beautiful form? Suppose we should make five or six separate windows in the front of this cottage; the logs would all be sawed into short lengths, greatly increasing the labor and weakening the construction. The Swiss avoid this by making the logs in as long lengths as possible and grouping the windows together with vertical timbers separating them. What is that curious projection in the center of the front, terminating in a bracket in the top? This building is not a single house but a double one; this projection is the end of the party wall; the timbers forming this wall being halved into the timbers of the front wall, the ends project through on the outside. At the top of this middle wall the timbers overlap each other so as to form a bracket for the support of the overhanging roof. In the same way the side brackets are formed of the side wall timbers projected out. We see some carving on the front. Is this sawed out of a thin board and nailed on? Where you see a string course above the windows, this marks the line of the floor. The log forming this string course is thicker than the others, projecting both inside and outside. The inside projection forms the base, the outside projection the string course, the ornamentation being carved in the solid wood.

American architecture began by copying whatever was the fashionable style of architecture in the old world. The old Colonial was a reflection of the prevailing type of Renaissance in England. Then came the discovery of the Greek ruins at Athens and immediately Greek temples became the fashionable architecture of the day. In the sub-treasury at New York, we have a Greek Doric temple as if it had been imported.

In the Treasury Department at Washington is an Ionic portico attached to a building with Ionic pilaster between which are three stories of windows. The absurdity of this arrangement was soon seen, and hence our government changed its style of design and piled one set of columns and cornices upon another as in the postoffice at New York.

In this building we have gone back again to the days of Rome — columns put in front of arches with which they have no connection whatever, but the faults of this building are too numerous to mention.

Some architects thought that the Norman style was worth copying, and hence we have the Smithsonian Institution at Washington. A picturesque group of buildings, but I imagine not specially adapted for their purpose. Some architects thought that Gothic would do for churches, and Grace Church in New York and others were erected in this style. Finally in England they became tired of the classic forms and attention was called to the beauty of medieval architecture. Then came the Gothic revival which spread to this country. In England they fell into the error of copying the forms of the Gothic architecture instead of the principles. Forms go out of date, but principles are eternal. We should design on the same principles as the builders of the Gothic cathedrals. But the true applications of these principles will lead us to change the form to suit our changed

conditions. The Gothic revival was preached in this country as a reform in architecture morals, and you undoubtedly remember how Eastlake would have us believe that a building or at least its furniture must not only be honest but uncomfortable, awkward and crude.

Pointed arches are remarkably adapted to stone vaults, but they were found to be inconvenient when applied to domestic or business buildings. The round arch is better for such purposes and has decided advantages when we use brick; for the pointed arch cannot be made of brick alone without an unsightly joint at the top.

This practical difficulty in the management of pointed arches caused architects to turn their attention to the Romanesque as a style in which the semicircular arch was treated in the same rational manner in which the Gothic deals with the pointed arch. In fact Romanesque and Gothic are the same in principle but differ only in form. Perhaps it is fortunate for us that the examples of Romanesque work are mostly fragmentary, for this has prevented us from copying them outright. The beginning of Romanesque in this country as a distinct architectural movement may be said to date from the building of Trinity Church, Boston. This made the reputation of the architect, H. H. Richardson, who confined himself entirely to this style. There were other architects working in the same direction but Richardson held the foremost place. Notice in the tower of Trinity, which is the most successful part of the design, the wonderful grouping of the windows. The tower has the character, so common in Gothic, of impressing us as if it grew naturally from the soil as a tree grows.

Richardson is dead, but the style has taken a deep hold upon the younger members of the profession and is destined to live. It will live because it is founded on true principles of design. In the so-called "Classic architecture" we have furnished us simply certain definite architectural forms of columns, cornices, arches and bases and we can erect only such structures as can be made by combination of these forms. Designing in Classic style is like building with children's building blocks. There are five different boxes of blocks manufactured, called Tuscan, Doric, Ionic, Corinthian and Composite. These boxes of blocks differ only slightly from each other and each contains one kind of column, pedestal, base, arch and entablature. There are, to be sure, several sizes of these blocks in each box, but the entablatures and columns are always in the same proportion. Some very pretty things can be made by piling up these blocks, but they are utterly useless in meeting the requirements of modern buildings. Our American schools of architecture make a great mistake when they endeavor to teach by means of this building-block style rather than by principles of design that are applicable to any style. In the Romanesque as in the Gothic, columns and arches may be made of any proportion to suit each particular case. There is the greatest flexibility in the use of arches and lintels in the same design. Designing in such a style is like the work of the sculptor modeling in clay which may be wrought into any form or proportion, as compared with the piling up of the ready made and unchangeable forms of classic architecture.

The Romanesque of today is truly of American growth. It is not a revival of the ancient Romanesque nor is it a copy of European work; it is rather a continuation and development of Romanesque. The art critics have for years been calling for the invention of an American style of architecture. Now that we have a style that is rational and which we may fairly claim as our own it is time that our schools of architecture ceased to copy the false methods of the French "École des Beaux Arts" and become the exponent of a living style.

Extracts from Our French Exchanges.

TRANSLATED AND ARRANGED BY W. A. OTIS, ARCHITECT.

THE destruction of theaters by fire is becoming more and more frequent, still but few appreciate the fact that from December, 1889, to 1890 the total number of these buildings so destroyed reached twenty-three. The list, as appearing in *La Semaine des Constructeurs*, is as follows:

1889.	December 20.	The German Theater at Pesth.
	December 22.	The Liceo at Salamanca.
	December 22.	The King Humbert Theater at Florence.
1890.	January 1.	The Theater of Zurich.
	January 3.	Theater at Porth, Wales.
	January 7.	Exchange Theater at Brussels.
	January 7.	Theater of the Alcazar at Havre.
	January 13.	Sebastian Theater at Montauban.
	February 20.	The Municipal Theater at Amsterdam.
	March 16.	The Thoff Theater at Stettin.
	March 24.	The City Theater at Bromberg.
	June 9.	French Theater at Constantinople.
	June 11.	Variety Theater at Brooklyn.
	July 1.	Theater at Troy, Alabama.
	July 17.	Queen's Theater at Manchester.
	August 26.	McVicker's Theater, Chicago.
	September 2.	The Tivoli at Bremen.
	September 5.	Calypso Theater at Catania.
	September 18.	Theater at Lourches.
	October 1.	Hippodrome at Bordeaux.
	November 15.	Municipal Theater at Irkoutsk.
	November 15.	Summer Theater at Dublin.
	December 7.	Theater at Clermont-Ferrand.

THE FRENCH EXPOSITION AT MOSCOW.

So completely are we interested in our own Columbian fair of 1893 that the expositions in other quarters of the globe have been of secondary interest to this community. Nevertheless, on May 1 of this year a national French exposition is to be opened at Moscow under the direct patronage of the imperial government, from which the manufacturers and artists of Paris are expecting far more important results to themselves than from the Chicago fair. According to *La Semaine des Constructeurs*, the Russian government has graciously granted to the organizers of this exposition the temporary use of a palace. This building, which forms a part of the crown property and belongs personally to the czar, was built in 1872 after the model of the famous rotunda of the Champs-de-Mars, which in 1867 served for the housing of the exposition to which Napoleon III invited all the reigning sovereigns of Europe. That building architecturally was certainly not a great success, one writer comparing it to an immense sausage upon a colossal plate with a portico all around it. However, it pleased the Russians to copy it, but since 1872 it has remained vacant, and now the restoration has been placed in the hands of French engineers at Moscow. The main palace is composed of two grand circular galleries surrounding a central garden where are fountains which will be lighted by electricity. These two concentric galleries are traversed by eight aisles. Beds of plants separate these aisles which are reserved for the different exhibits, so that there is light and air in abundance.

All around the building is an extremely large park where are located other features of the exposition; a theater, a captive baloon, a beautiful artificial waterfall with grottoes, etc., an imperial pavilion for receptions of officers of the court, and a panorama and cottages occupy a portion of the space. At the right the finishing touches are just being put to an immense machinery hall, which promises to be as fine as that of the Paris exposition of 1889, so that, taken all in all, a magnificent location and numerous well-chosen novelties and attractions are giving promise of a most wonderfully successful exposition, which will undoubtedly strengthen the bonds already joining the two hereditary enemies of Germany.

THE NEW MUNICIPAL ESTABLISHMENT FOR DISINFECTION AT PARIS. FROM "LA SEMAINE DES CONSTRUCTEURS," JAN. 10, 1891.

In the rue Récollets, near the quai Valmy, the attention is attracted to a low and squatty construction in the midst of high surrounding buildings. Its appearance is most simple, but its evident careful construction indicates it to have been built for some unusual and particular purpose. It is, in fact, in this building, or rather group of buildings, that is installed the municipal disinfection service, and is the only one of its kind in our capital.

The importance of this service cannot be disputed, and the authorities are to be congratulated upon having successfully inaugurated this establishment. A dozen years since the board of health, upon the report of Messrs. Pasteur and Leon Collin, demanded the erection of disinfecting establishments at Paris. Proposals for the construction and material, as well as the choice of suitable ground in each arrondissement, were obtained, but it was only in 1887 the sanitary board submitted to the municipal council a proposition for the erection of two disinfecting establishments, but only one of them has as yet been constructed. It is to be remarked that the Refuges, rue du Chateau des Rentiers, already was provided with a disinfecting furnace, but the one just built is much more important and similar to one in Berlin, with important modifications.

The arrangement of plan is very ingenious; the different branches of the service are there very comfortably installed, and the whole forms a model for the others which the city desires, or we should say ought, to build.

The programme given the architect was in conformity with the latest hygienic ideas, and contained the following general conditions: The separation must be complete between the articles to be disinfected and those already cleansed. The disinfecting furnace must have two doors, one for putting in the infected articles, this door to open upon the side of the courtyard denominated arrival; the other for taking out the disinfected articles, to open upon the side denominated departure. The wagon used for transporting these articles must itself be disinfected after each trip. Finally the workmen employed in the manipulation of these articles should not have any contact with the workmen on the other side without having first changed their clothes and taken special baths; for this reason, they must not be able to go out from the part where they are working except by passing through two rooms — a vestibule and lavatory — each one with two doors, one of which can only open when the other has been first closed by automatic means.

M. Bouvard, the architect, carried out the programme as follows: The general plan divides the structure into two distinct parts by means of a continuous wall; at the left is the receiving portion, to which the objects to be cleansed are brought; at the right is the disinfected portion, while at the end of the division wall, upon the street front, is a special pavilion for the administration, having sight and access to both portions. Wagons arriving enter the court, unload, and then passing on to the back of the yard are, together with the horses, disinfected by the means of atomizers which sprinkle them with a thousandth solution of corrosive sublimate. The horses unharnessed and disinfected are placed in the stable at the end of the court, while the wagons are placed in a carriage house.

The infected objects, especially linen, are subjected to a rinsing in a special vat, and then are placed in furnaces filled with superheated steam. Other objects than cloths are placed in little wagons, and while passing through to the other side subjected to a fumigation by some disinfecting material. Objects of no value are burned in the furnaces used for generating the steam for the cleansing furnaces.

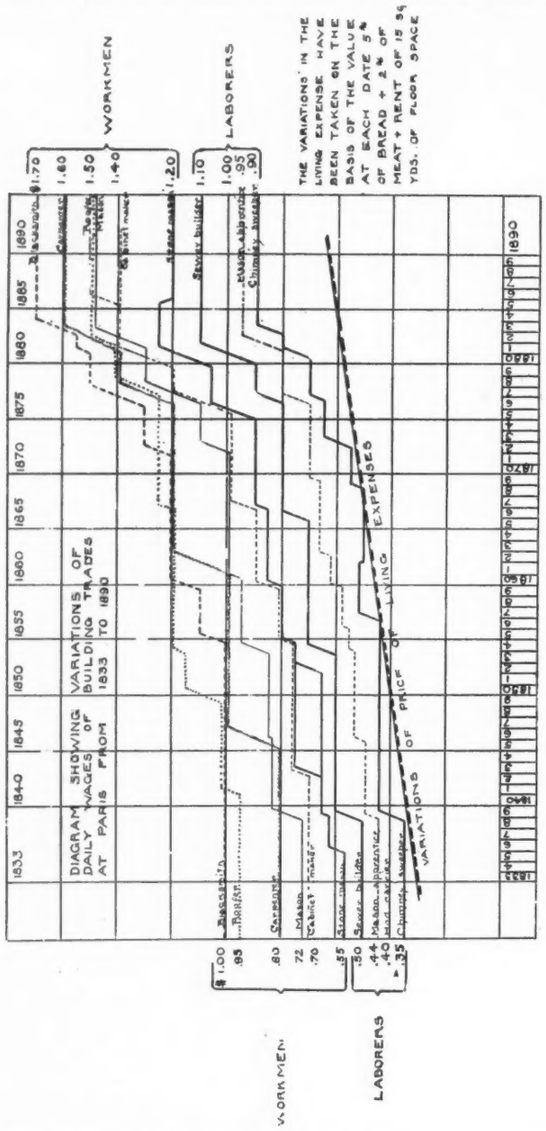
The wagons used in delivering the purified objects have in the right-hand courtyard a special barn. Thus, then, the arrangement of the plan establishes a complete separation between the two services, leaving only one communication for the inspector. The construction

of this building was commenced September 5, 1889, and the formal opening took place July 21, 1890. The total cost was about $21,000, exclusive of ground.

CHANGES IN WAGES OF FRENCH WORKMEN IN FIFTY YEARS.

Some time since the Minister of Public Instruction and Fine Arts addressed a communication to the Central Society of French Architects asking for information as to the changes during the last fifty years in the wages of workmen connected with the building trades.

A committee appointed by this society has just made a most lengthy and exhaustive report upon the subject, all of which has been published in *L'Architecture* of February 14 and 21, together with the numerous tables accompanying this document. One of the most interesting of the diagrams (which is here reproduced), figured in



American money, shows at a glance the variations in both wages and cost of living during the past fifty-three years at Paris, and in a pictorial manner gives one the substance of the report. It appears that the wages of workmen in these trades have nearly doubled, while the expense of actual necessities of life have increased but comparatively little. However, the committee find that the total of the workingman's expenditures have followed about the same advance as their wages, and although with the increase of the necessities of life is calculated better lodging, better clothing and better food, it appears that the excess now earned goes almost exclusively to luxuries, tobacco and drink. As a result the committee deplore the lack of economy and foresight on the part of this group of the laboring classes, and call upon all persons interested in social questions to aid in the preaching of a crusade for economy and savings.

ADMISSION TO THE ÉCOLE DES BEAUX ARTS AT PARIS.

American students investigating the question of the architectural department of the École des Beaux Arts have so great difficulty in obtaining exact information as to the requirements of admission that the following from *L'Architecture* may be of assistance: For the enrollment for admission to the examination at the school, the applicants must furnish, if Frenchmen, an official copy of their certificate of birth; if foreigners, they must present at the office of the secretary of the school a letter (of introduction) from the resident minister, ambassador or consul-general of their nation.

Every applicant must also present a letter from the professor of the atelier he wishes to enter, stating that the bearer is sufficiently advanced to enter the examination. These examinations take place twice a year, in February and in June, and consist of two series of examinations. The first series, entirely of design, is composed —

First: Of a free-hand drawing (in pencil, crayon, charcoal or ink as preferred) of either a head or some ornamental cast. It must be executed in eight hours (ordinarily four sessions of two hours each).

Second: Of an architectural drawing and composition, according to some given data. This work must be executed in one single session of twelve hours, the pupils being separated from each other in small alcoves ("en loges").

Third: The modeling in clay of some bas-relief ornament after a plaster cast, to be finished in eight hours.

Only the applicants who successfully pass these first three examinations are then permitted to enter for the second series, which is composed —

First: Of an examination, both oral and written, in the history of art.

Second: Of an examination in arithmetic, plain geometry and rudiments of algebra, as follows:

(*a*) Problems and examples, written and executed, "in loges."

(*b*) Oral examination and blackboard illustrations.

Third: Of a rigid examination in descriptive geometry.

Applicants passing these examinations become "élèves à l'école," and members of the second or lowest class.

In order to satisfactorily prepare for these examinations it is only desirable that a pupil spend six months previous to that time in certain preparatory courses, which are partially carried on in connection with school, and partially by paid tutors.

A Code Governing Reception of Bids, Etc.

THE Buffalo Builders' Association Exchange have adopted and issued a code for the government of the reception of bids and other matters in connection therewith, taking into consideration the proposition of plans and specifications, the proper province of the sub-contractor, etc. It has been approved by the Buffalo Chapter American Institute of Architects and is as follows:

CODE.

WHEREAS, The manner of receiving bids on work prepared by architects and others has varied, and to make a uniform and fair method of the practice, now, therefore, be it resolved, that on and after this date we, the members of the Builders' Association Exchange, decline to submit bids for work unless the following code is used and adopted:

RELATING TO PROPOSALS AND AWARDS.

Just and proper methods which should prevail when estimates are solicited from *contractors* in the building trades.

PLANS.

1. Drawings prepared for final or competitive estimates must be sufficient in number and character to represent the proposed works clearly, and shall be to a scale of not less than one-eighth of an inch to the foot (except block plans), and be rendered in ink, or some permanent process, colored, figured, and otherwise marked in such a manner as to clearly show all kinds of material to be used, thickness of walls, etc., in the construction.

DETAILS.

2. Proper details must be furnished for work that is not otherwise sufficiently shown.

SPECIFICATIONS.

3. Specifications must be in ink. They shall be definite, where the work is not clearly shown by drawings. Every distinctive class of work to be included in the contract must be mentioned and placed under its appropriate heading.

RESTRICTIONS AS TO SUB-CONTRACTORS.

4. Contractors must be notified at time of estimate, if they are to be restricted in the employment of sub-contractors.

NOTICE FOR OPENING BIDS.

5. Before opening bids, the bidders shall be notified of the time when and the place where the bids will be opened, and in the presence of the attending bidders.

PERCENTAGE ON SUB-CONTRACTS.

6. Contractors shall be allowed a compensation of 5 per cent on all subcontracts, which at the time of estimating are "reserved," or not called for in their portion of the specification, but which may be assumed by them by request of the owner or architect, after the bids have been received and opened.

Contractors shall not be denied contracts upon the work covered in their original estimate, on account of declining to assume the aforesaid reserved subestimates.

SUB-CONTRACTS.

7. A contractor who may refuse to become a sub-contractor shall not thereby forfeit his right to the award.

AWARD.

8. When work is to be let for which estimates have been solicited, unless previous notification to the contrary has been given, the lowest invited bidder shall be entitled to the contract, and all minor changes shall be agreed upon with him, provided his prices are equitable. Should the prices for changes made by the lowest bidder not be deemed equitable, it shall be settled by arbitrators, one of whom shall be appointed by the owner and the other by the bidder, they to appoint a third if necessary, and the majority decision shall be final.

If radical changes are made, the whole competition may be reopened.

Bidders must not be allowed to amend their estimates after the bids have been opened and before the award.

9. Bids shall be binding upon the bidders for not more than sixty days.

10. No payments on contracts shall be less than 90 per cent of the value of work done; the remaining 10 per cent to be paid within thirty days after the completion of the contract. Sureties will be furnished by the contractors, if so required by the owner; and in such case the payments shall be 100 per cent of the value of work done.

11. The uniform contract adopted by the American Institute of Architects, the Western Association of Architects and the National Association of Builders is recommended.

COMPENSATION FOR ESTIMATING.

13. Should all solicited bids be rejected, or the owner refuse to contract with the lowest invited bidder within sixty days from the date on which the bids

are submitted, or refuse to abide by a decision of a majority of the arbitrators, then the said owner shall compensate the lowest invited bidder as follows:

For all cases where the bid does not exceed $1,000, $10.

For all cases where the bid exceeds $1,000, and does not exceed $5,000, one-half of 1 per cent upon the excess over $1,000, and $10 added.

For all cases where the bid exceeds $5,000, and does not exceed $20,000, three-eighths of 1 per cent on the excess over $5,000, and $30 added.

For all cases where the bid exceeds $20,000, and does not exceed $40,000, one-fourth of 1 per cent on the excess over $20,000, and $86.25 added.

For all cases where the bid exceeds $40,000, one-eighth of 1 per cent on the excess over $40,000, and $136.25 added.

FAILURE TO CONTRACT.

13. Should the lowest invited bidder, at any time within sixty days from the date on which bids are submitted, refuse to contract at his bid, or to abide by the decision of a majority of the arbitrators, the said bidder shall pay the owner liquidated damages (not a penalty) in the same amounts and ratio stated above for "compensation for estimating."

WILLIAM D. COLLINGWOOD, President.
EDWARD L. COOK, Secretary.

Dated March 21, 1891.

This code has been approved by resolution of the Buffalo Chapter of the American Institute of Architects.

The Joint Committee on Building Ordinances.

THE Joint Committee on Building Ordinances, called by the National Association of Fire Engineers, met at the National Board of Underwriters, 156 Broadway, New York, on Thursday and Friday, April 2 and 3. The delegates were composed of seven members from the American Institute of Architects, National Association of Builders, National Board of Underwriters, National Association of Building Inspectors and National Association of Fire Engineers. Mr. L. P. Webber, chief of fire department, Boston, chairman, called the meeting to order; Henry A Hill, Cincinnati, secretary. At the roll call the following members were present:

From the American Institute of Architects: Napoleon Le Brun, New York; W. W. Carlin, Buffalo; George C. Mason, Jr., Philadelphia, Pennsylvania; Alfred Stone, Providence, Rhode Island; T. M. Clark, Boston, Massachusetts.

From the National Association of Builders: William H. Sayward, Boston; Stacy Reeves, Philadelphia, Pennyslvania; Warren E. Conover, New York, and W. H. Gorsline, of Rochester, New York.

From the National Board of Underwriters: E. A. Walton, New York; George P. Sheldon, Brooklyn.

From the National Building Inspectors: John S. Damrell, Boston, Massachusetts.

From the National Association of Fire Engineers: D. J. Swenie, Chicago, Illinois; William R. Joyner, Atlanta, Georgia; A. C. Hendrick, New Haven, Connecticut; G. W. Taylor, Richmond, Virginia; Henry A. Goetz, New Albany, Indiana; Hugh Bonner, New York; A. P. Leshure, Springfield, Massachusetts, and H. A. Hills, Cincinnati, Ohio.

After roll call an essay on the "Desirability of Uniform Building Ordinances, and the loss of life they would prevent if buildings were properly constructed," was read by John S. Damrell. Following this there was general discussion by various members, which finally resulted in the appointing of a committee by the chairman, consisting of Messrs. Stone, Swenie, Walton, Reeves and Clark, to draft a set of resolutions in order to expedite the business of the convention. After this the meeting adjourned until the following morning, when the committee presented a report which was amended and adopted in sections, each section being discussed and considered separately.

REPORT OF COMMITTEE AS ADOPTED.

The committee appointed to prepare suggestions for consideration believe that it would be impracticable at present to draw up a detailed building law, which would be applicable to all cities without local modifications, and that more good could now be accomplished by presenting the points which are agreed to be of the greatest importance and of universal application, and which should form the basis of all codes of building regulations. In reporting, however, only such suggestions of special importance as they think it best to adopt at present, the committee recommends that a standing sub-committee be appointed to receive and consider such observations as may be made from time to time in regard to improvements and additions to the code proposed, and to endeavor to promote its adoption throughout the country; and that the various bodies uniting in this effort to improve the construction of buildings be requested to continue their delegates so that the combined committee may be a permanent one, with at least annual meetings.

The committee advises that the legislatures of the various states should establish state building laws for the general control of the construction of buildings throughout the state, and that in all incorporated cities there should be a separate and distinct department for the inspection of buildings, whose officers should be appointed for long terms by the chief executive of the city, and should be removed only for inefficiency or maladministration; and that reasonable opportunity should be provided for appeal from the decisions of the department.

That fire departments, where such exist in any city or town, should be consulted by the building inspection department on all matters pertaining to fire risks, and the building department should furnish the fire department with records of the methods of construction of any buildings.

GENERAL REGULATIONS.

1. That all buildings over 70 feet in height be constructed throughout of incombustible materials, protected in the most approved manner of resisting fire.

2. That interior structural ironwork in all buildings be covered and protected by fireproof material.

3. That all buildings over 50 feet in height be furnished with permanent standpipes and ladders for the assistance of the fire department.

4. That the height of buildings to be erected should not be more than two-and-a-half times the width of the principal street on which they are located, and that no building or portion of a building, except church spires, should be more than 125 feet high in any case, except under a special permit.

5. That the open floor space, not divided by walls of brick or other incombustible material, in all buildings hereafter erected for mercantile or manufacturing purposes, should not exceed 6,000 square feet without special permission based upon unusual and satisfactory precautions.

6. That every building to be erected which shall be three stories high or more, except dwelling houses for one family, and which shall cover an area of more than 2,500 square feet, should be provided with incombustible staircases, inclosed in brick walls, at the rate of one such staircase for every 2,500 square feet high in area of ground covered.

7. That wooden buildings erected within 18 inches of the boundary line between the lot on which they stand and the adjoining property, should have the wall next the adjoining property of brick, or when built within 3 feet of each other shall have walls next to each built of brick.

8. That if damage occurs to property by fire or by any other cause, which can be proven to result from failure to comply with provisions of the law, then the owner of the property where the fire or defect originated shall be responsible therefor. A certificate from the inspector of buildings or other proper official to be considered sufficient evidence that the law has been complied with.

SPECIFIC REGULATIONS.

This committee also suggests the following, for specific regulations of the highest importance:

A. In all buildings, of every kind, the space between the stringers of wooden stairs, if plastered or boarded underneath, should be stopped by filling with incombustible material at three places at least in every flight of stairs.

B. All hearths in buildings with wooden floor beams should be supported by trimmer arches of brick or stone.

C. In every building, the space between all studding and furrings, both of inside partitions and outside walls, in the thickness of the floor, and for 6 inches above, should be filled with incombustible material. Also that the continuous space between the joist of every floor, ceiling and roof shall be effectually cut off at every point where the joists are supported.

D. All brick party walls, and brick outside walls adjoining neighboring property, should be carried up above the adjoining building.

E. At least 4 inches of brick should intervene between the ends of wooden floor beams entering a brick party wall from opposite sides.

F. The walls of brick buildings should be tied at intervals by the floor beams, which, if of wood, should be so anchored to the walls that, in case they are burned off, they will not, in falling, overthrow the walls.

The meeting, after passing the following resolution, adjourned to meet at the same time and place as should be fixed upon by the National Association of Builders for their next annual convention.

RESOLUTION.

Resolved, That this committee, having examined with some care the preliminary suggestions made to the combined committee by the National Association of Fire Engineers, wish to make this minute: That while time has not permitted the committee to go over section by section the various requirements proposed, they have been very favorably impressed with the general character of the regulations, and do not hesitate to say that their leading features might with advantage be incorporated in any building law for the larger cities.

ALFRED STONE,
D. J. SWENIE,
JOHN S. DAMRELL,
STACY REEVES,
E. A. WALTON,
T. M. CLARK,
} Sub-Committee.

Texas State Association of Architects.

THE sixth annual meeting of the Texas State Association of Architects was held in the Chamber of Commerce, Fort Worth, January 20, 1891, the members present being: G. E. Dickey, second vice-president; J. Riley Gordon, S. B. Haggart, S. P. Herbert, J. J. Kane, P. S. Rabitt, M. R. Sanguinet, G. W. Stewart, secretary; Albert Ullrich, treasurer; James Wahrenberger, president.

The secretary announced that the following architects had been admitted to membership: C. C. Diboll, Dallas; C. A. Gill, Dallas; J. S. Moad, Dallas; A. A. Messer, Fort Worth; Paul Hellwig, Austin. Oscar Lynch, of Fort Worth, was elected honorary member.

The following is a list of members in good standing: A. B. Bristol, Denison; Albert F. Beckman, San Antonio; George E. Dickey, Houston; C. C. Diboll, Dallas; C. A. Gill, Dallas; J. Riley Gordon, San Antonio; Alfred Giles, San Antonio; S. B. Haggart, Fort Worth; Eugene T. Heiner, Houston; Paul Hellwig, Austin; Samuel P. Herbert, Waco; Frank W. Kane, Fort Worth; George S. Kane, Fort Worth; J. J. Kane, Fort Worth; J. Larmour, Austin; W. W. Larmour, Waco; Arthur A. Messer, Fort Worth; J. S. Moad, Dallas; Burt McDonald, Austin; M. McQuirk, Dallas; Alfred Muller, Galveston; P. S. Rabitt, Galveston; M. R. Sanguinet, Fort Worth; George W. Stewart, Dallas; Nathaniel Tobey, Galveston; Albert Ullrich, Dallas; James Wahrenberger, San Antonio; A. O. Watson, Austin. Honorary members: E. F. Redfield, Galveston, and Oscar Lynch, Fort Worth.

Competitions and the lien law were discussed, and also the bill now before the legislature regulating the practice of architecture. Mr. Wahrenberger being appointed to look after the latter measure.

The following resolution was passed as the sense of the association regarding competitions:

Resolved, That the Texas State Association of Architects hereby recommend to all committees contemplating the erection of public buildings the advisability of having one or more professional architects to assist them in the selection of designs therefor.

Mr. Gordon, seconded by Mr. Ullrich, presented a resolution as follows:

That, for the advancement of professional intercourse and instruction, be it resolved, that each member bring or send to the next and subsequent conventions any drawings, sketches, molds or other matters of interest to the profession, and place same on exhibition in some suitable place allotted therefor by the local committee, who will take charge of them and return them to their rightful owners in good condition and free of cost.

The resolution was adopted.

The announcement of the sudden death of Mr. John W. Root, secretary of the American Institute of Architects, having been made, the following resolution was presented:

Resolved, That the Texas State Association of Architects extend to the American Institute of Architects its heartfelt sympathy in the loss of so valuable a secretary, so true a man and so valuable an architect as was John W. Root, deceased.

Resolved, That a copy of this resolution be sent President R. M. Hunt, the bereaved family and the professional press.

The resolution was adopted by a unanimous vote, all the members standing.

The committee on nominations presented the following names, and upon motion the secretary was instructed to cast one ballot for the entire ticket:

President, George W. Stewart; first vice-president, George E. Dickey; second vice-president, S. B. Haggart; secretary, A. O. Watson; treasurer, S. P. Herbert; executive committee, Burt

McDonald, chairman, M. R. Sanguinet, Albert Ullrich, P. S. Rabitt, Eugene T. Heiner.

On motion of Mr. Dickey, seconded by Mr. Rabitt, Galveston was selected as the place for the holding of the next annual meeting. On motion, a vote of thanks was extended to the president and members of the Commercial Club for their kind attentions, and also to the president and members of the board of trade for the use of the Chamber of Commerce hall and the committee rooms, also to the press of the city of Fort Worth.

The next annual meeting will take place in Galveston on the third Tuesday of January, 1892.

Meeting of the Executive Committee American Institute of Architects

A MEETING of the Executive Committee of the American Institute of Architects was held April 3 at 18 Broadway, New York.

There were present architects Richard M. Hunt, E. H. Kendall, R. W. Gibson, of New York; W. W. Carlin, of Buffalo, and George C. Nimmons, of Chicago, secretary pro tem.

The minutes of the last meeting, held January 3, which were the last taken by John W. Root, late secretary of the Institute, were read and approved.

Letter ballots for the admission of candidates to membership were opened, but it was found that there was only one, Mr. Marling, who was fully qualified for membership. The others were not members of any Chapter, and therefore not eligible to membership in the Institute, according to the late amendment to Article I, Section II of the by-laws. They were therefore declared elected on the condition that they comply with this by-law.

The question was discussed as to how members, living in districts where there were no Chapters, were to be admitted to the Institute, and it was the sense of the committee that since the territory of Chapters was undefined, such candidates should be required to join the Chapter nearest to them, and that the amendment therefore was applicable to all cases. Six applications for membership were also received, and of these only one, Mr. J. M. Carrére, of New York, is a member of a Chapter. The others were provisionally elected.

A communication from Messrs. Pratt & Lambert, of New York, was read in which they requested the indorsement of the Institute in a prize competition for draftsmen in designing. The prizes to be $100, $75 and $50 for the first, second and third prizes. The competition to be known as the "Pratt & Lambert Prize Competition." The matter was referred to a committee.

The resignations of Messrs. John W. Hammond, of Frankfort, Indiana, and J. W. Griffin, of Watertown, New York, were read and accepted.

This meeting being the first held since the death of Mr. Root, a committee of one was appointed to draw up suitable resolutions. Mr. Adler was appointed as such committee.

A vote of thanks was tendered Mr. Nimmons for his valuable services as secretary pro tem in carrying on the work of the late Mr. John W. Root, and in publishing the annual proceedings in such a complete and satisfactory manner. The treasurer was also instructed to pay him the secretary's regular salary for the time of his services.

Mr. D. Adler was elected secretary for the remainder of the year.

The matter of new charters to Chapters was also discussed, and they will be forwarded to the Chapters entitled to them, it being held that all Chapters recognized as such at the date of consolidation are entitled to new charters.

Architects' Commissions in Spain.

IN the annual proceedings of the Italian Society of Engineers and Architects is the following schedule of commissions (*honoraria*) adopted by the Royal Academy of San Fernando, Madrid, Spain, a reference to which appeared in the March number.

Local work is arranged in thirteen classes, according to cost; and a sliding scale of commissions is devised in the form of percentages on the cost of each class:

Class	1.	Buildings	to	cost	within	$ 5,000	
"	2.	"	"	"	between	5,000	and $ 7,500
"	3.	"	"	"	"	7,500	" 10,000
"	4.	"	"	"	"	10,000	" 15,000
"	5.	"	"	"	"	15,000	" 20,000
"	6.	"	"	"	"	20,000	" 25,000
"	7.	"	"	"	"	25,000	" 30,000
"	8.	"	"	"	"	30,000	" 35,000
"	9.	"	"	"	"	35,000	" 40,000
"	10.	"	"	"	"	40,000	" 45,000
"	11.	"	"	"	"	45,000	" 50,000
"	12.	"	"	"	"	50,000	" 75,000
"	13.	"	"	"	"	75,000	" 100,000

Table showing charges in percentage on cost of building.

Class....	1	2	3	4	5	6	7	8	9	10	11	12	13
A.....	5	4.75	4.5	4.25	4	3.75	3.5	3.25	3	2.75	2.5	2.25	2
B.....	2.5	2.375	2.25	2.125	2	1.875	1.75	1.625	1.5	1.375	1.25	1.125	1
C.....	2	1.9	1.8	1.7	1 6	1.5	1.4	1.3	1.2	1.1	1.0	0.9	0.8
D.....	0.5	0.475	0.45	0.425	0.4	0.375	0.35	0.325	0.3	0.275	0.25	0.225	0.2
E.....	0.5	0.475	0.45	0.425	0.4	0.375	0.35	0.325	0.3	0 275	0.25	0.225	0.2

A—Full architectural services. B—Drawings and estimate. C—Drawings only. D—Estimate. E—Copies of drawings.

When the cost exceeds $100,000, the architect is to receive an annual stipend of $600 to $800 in addition to the one per cent for drawings and estimate. If required by the owner, the architect must always render an estimate of cost. On this estimate his commission will be calculated in case the work should not proceed; likewise in case it should be executed according to plans and the total cost should exceed the estimate. If the actual cost on the same condition falls within the estimate, the architect's commission will be based on the cost instead of the estimate. When preliminary sketches only are furnished deduct ten per cent from the above schedule.

For buildings at a distance not exceeding sixteen miles from the architect's office, the charge for superintendence will be increased by twenty-five per cent in addition to traveling expenses. When the distance is between sixteen and forty miles add fifty per cent plus traveling expenses to the schedule charge for superintendence. If the distance be from forty to eighty miles add seventy-five per cent, and for each additional eighty miles add one hundred per cent, all with due regard to the conditions and exceptions previously noted.

For superintending public buildings a suitable salary is to be allowed. For designing public buildings the commission will be double the amount charged for private work. The charge for valuations of public buildings will be the same as for private ones. For verifications of considerable importance, also for monumental restorations a special agreement will be made as to compensation.

For ordinary restorations, repairs, etc., requiring the aid of architectural drawings, the commission will be the same as for new work. Where no drawings are required the architect should receive a salary not less than $30 per month for work lasting six months or longer, and for work of less duration a percentage as follows for valuations:

Valuations	of	work	within $	2,500, commission	5 per cent.
"	"	"	5,000,	"	4.7 "
"	"	"	10,000,	"	4.4 "
"	"	"	15,000,	"	4.2 "
"	"	"	20,000,	"	4.1 "
"	"	"	25,000,	"	4.0 "
"	"	"	50,000,	"	3.0 "
"	"	"	100,000,	"	2.7 "
"	"	"	200,000,	"	2.4 "
"	"	"	400,000,	"	2.0 "

Where valuations are for the division of property among heirs, etc., add fifty per cent to the architect's commission. In case the architect should also be required to furnish separate plans of the various allotments of property among its claimants his commission will be doubled.

Chicago Carpenters' Working Agreement.

THE working rules adopted by the joint committee of Carpenters' and Builders' Association and United Carpenters' Council of Chicago, in effect April 13, 1891, to April 1, 1893, are as follows, to be enforced during the continuance of the contract, unless otherwise ordered by the joint committees:

1. That the working-day shall be eight hours, commencing at 8 A.M., and ending at 5 P.M., but the noon hour may be curtailed by special agreement between the contractor, or his representative, and a majority of the employés, but not in such a manner as to permit more than eight hours work. But if two or more shifts of men are worked in one day, the same men shall not work on more than one shift, and such shifts will not be considered overtime.
2. That the pay shall be by the hour.
3. That the minimum rate of wages shall be thirty-five (35) cents per hour from April 13, 1891, to April 1, 1893, inclusive.
4. That overtime shall be rated as time and one-half, and Sunday time shall be rated as double time.
5. That all journeymen carpenters shall receive their pay as often as once in two weeks; but when a journeyman is discharged, he shall be paid on the day of his discharge or on demand at the office.
6. That the apprentice system shall be governed by the state law.
7. No member of the Carpenters' and Builders' Association shall during the term of this contract make a reduction in the rate of wages of a carpenter without giving him due notice previous to making said reduction. This article shall in no way be construed as conflicting with Article No. 3.
8. No member of the Carpenters' and Builders' Association shall sublet or piece out their carpenter-work. Neither shall any journeyman who is a member of any association represented in the United Carpenters' Council be permitted to take piecework in any shape or manner from any owner or contractor, whether he be a member of the Carpenters' and Builders' Association or not.
9. Any journeyman carpenter, being a member of any organization represented in the United Carpenters' Council, may work for any person who does not pay less than the minimum rate of wages.
10. Any member of the Carpenters' and Builders' Association may at his discretion employ one helper to every five carpenters on each job, who shall be at liberty to use a saw, hammer and hatchet at any work on the job, and the rate of wages shall be as agreed between the employer and employé.
11. All apprentices now in the employ of any member of this association shall complete their apprenticeship with such member.
12. Any infraction of the provisions of this agreement by a member of either association parties to this contract shall be reported to the chairman of the respective arbitration committees, and to be by them investigated, and upon sufficient proof of the violation of any of the provisions of this contract, he or they shall be fined. The amount of fine to be determined by the joint committee. Upon non-payment of the fine, he or they shall be suspended from the association of which he or they are members; and it is further agreed that no employer shall again employ said journeyman carpenter while such fine remains unpaid. And no journeyman carpenter shall work for any employer who has been fined, and the same remains unpaid.

WILBUR F. BEHEL,
FRANCISCO BLAIR,
W. IRVING CLARK,
WILLIAM MAVOR,
JOHN RAMCKE,
Committee Carpenters' and Builders' Association.

J. GILBERT OGDEN,
GEORGE W. BLACKFORD,
J. B. COGSWELL,
J. H. MCCUNE,
ROBERT WHIMSETT,
Committee United Carpenters' Council.

Personal.

ARCHITECT JAMES R. KIMBALL, of Buffalo, has opened an office at 42 Morgan building, Buffalo, New York.

ARCHITECT CLARENCE L. STILES, of Chicago, has gone into partnership with Mr. John L. Stone under the firm name of C. L. Stiles & Co.

ARCHITECT F. D. HYDE, of Dubuque, has associated with him in copartnership Architect W. H. Castner, of St. Paul, under the style of Hyde & Castner. Mr. Castner is a gentleman of exceptional ability as a designer and will aid Mr. Hyde in continuing the high grade of service to which his clients in the past have been accustomed.

Association Notes.

BUFFALO CHAPTER AMERICAN INSTITUTE OF ARCHITECTS.

The Buffalo Chapter of the American Institute of Architects have formulated and adopted the following schedule of charges, covering some points which they deem not sufficiently explicit in the regular schedule of the Institute. The purpose seems to be to take the Institute scale as a foundation and from it present a document to clients that will be more clearly explanatory of what the architect expects to do, and how he expects to be paid for his work, with the idea that this will more fully meet the requirements, coming, as it does, from the local chapter, than if it emanated from some foreign corporation. It is as follows:

STATEMENT OF ARCHITECTS' DUTIES AND CHARGES — FOR THE INFORMATION OF CLIENTS.

1. The charge for preliminary studies or sketches is 1 per cent.
2. For preliminary studies, general drawings and specifications, sufficient for contractors to estimate upon, 2½ per cent.
3. For preliminary studies, general drawings, specifications and details, sufficient for the proper execution of the works, 3½ per cent.
4. For preliminary studies, general drawings, specifications, details and general supervision of the works, except as hereinafter specified, 5 per cent.
5. The above charges apply to buildings or works costing $5,000 or more; for buildings or works costing from $2,500 to $5,000 a fixed charge of $250 will be made.
6. For services as mentioned in section 4, in making alterations and additions to buildings, 7 to 10 per cent.
7. For monumental and interior work, and where special designs and drawings are made for cabinet work, such as mantels, wainscoting, stairs, etc., an additional charge of 5 to 15 per cent.
8. An additional charge to be made for alterations and additions in contracts and plans, which will be valued in proportion to the additional time and service employed.
9. For advice in selection of carpets, furniture, light fixtures, tile, marble, stained glass, hangings, decoration, etc., 5 to 10 per cent.
10. The supervision or superintendence of an architect means such inspection by the architect or his deputy, of a building or other work in process of erection, completion, or alteration, as may be necessary to ascertain whether it is being executed in conformity with his designs and specifications or directions, and to enable him to decide when the successive installments or payments are due.
11. Special arrangements should be made for work not regularly supervised and for work out of town. If no such arrangement is made, visits will be charged for at the rate of $25 per day, or fraction thereof, and expenses.
12. On buildings where it is deemed necessary to employ a clerk of the works, the remuneration of said clerk is to be paid by the owner or owners, in addition to any commission or fees paid the architect. The selection or dismissal of the clerk of the works to be subject to the approval of the architect.
13. The above charges are payable as the successive steps are taken, and are based on the entire cost of the building or works ready for occupation, whether set forth in the plans and specifications, or ordered directly by the owner. New or old material used for the construction of the works and furnished by the owner is included in the cost, and is to be reckoned at its market value. The said cost of the building or works includes the heating, plumbing, gas piping, electric work, hardware, etc.
14. For the above compensation the architect will furnish two sets of plans and specifications and one set of details for the client. He will make and retain in his office in addition one set each of tracings, specifications and details, from which he will make, at any time, copies at actual cost. All drawings and specifications, as instruments of service, are and remain the property of the architect.
15. The above schedule has been adopted by the Buffalo Chapter of the American Institute of Architects.

H. L. CAMPBELL, Secretary. G. J. METZGER, President B. C. A. I. A.

BUFFALO, March 10, 1891.

These charges are in conformity with those adopted by the Royal Institute of British Architects and the American Institute of Architects.

THE SKETCH CLUB OF NEW YORK.

At the annual meeting of the Sketch Club of New York, held at the Hotel Hungaria, Saturday, April 4, the following executive committee was elected: Charles H. Israels, A. L. C. Marsh, Emil Ginsburger, J. Nat. Hutchins and Danford N. B. Sturgis.

At a subsequent meeting, this committee organized by electing Charles H. Israels, president; J. Nat. Hutchins, vice-president; Emil Ginsburger, secretary; Danford N. B. Sturgis, assistant-secretary, and A. L. C. Marsh, treasurer.

The club feels that the prospects on the threshold of its third year are very bright, and that its success and its continued and increasing usefulness, both in a social as well as in a professional and educational sense, are assured.

The club has now a membership of fifty-seven and is steadily increasing.

THE ATLANTA ARCHITECTURAL SKETCH CLUB.

In response to a general invitation sent out to the draftsmen of Atlanta, to assemble for the purpose of organizing an architectural sketch club, a number of them met, March 9, in the office of Bruce & Morgan.

W. Claude Frederic was made president and C. U. Trowbridge, secretary pro tem.

After a discussion regarding plans of organization, etc., the election of regular officers took place, the following gentlemen being elected for one year: C. O. Sheridan, president; W. L. Stoddard, vice-president; C. R. Ward, secretary and treasurer.

It was decided to have the first competition handed in on March 23, the subject being, "A Front Door for a Residence." Size 36 inches by 76 inches.

The club has the approval and good will of the many architects of the city, some of whom were present at the meeting.

The next meeting will be held March 16, at the office of Bruce & Morgan, who have kindly tendered the use of their rooms until the club has arranged for permanent quarters.

CORPUS CHRISTI, TEXAS, ASSOCIATION OF ARCHITECTS.

A local association of architects was organized February 17, 1891, at Corpus Christi, Texas, and the following officers elected: J. R. Gordon, of San Antonio, president; F. M. Hodges, of Corpus Christi, vice-president; Earl Silvan, of Corpus Christi, secretary; James Hull, of Corpus Christi, treasurer. Executive committee, J. R. Gordon, F. M. Hodges, N. J. Glover, James Hull and Earl Silvan. All practicing architects in Southwest Texas were invited to join. The by-laws of the Texas State Association of Architects were adopted. The association is purely local, and will coöperate with the state association.

EDINBURGH ARCHITECTURAL ASSOCIATION.

At the ordinary meeting of the Edinburgh Architectural Association, April 9, a paper was read by Mr. A. H. Millar, of Dundee, on "Curiosities of Architecture in Dundee."

In giving a sketch of Dundee in stone and lime, Mr. Millar exhibited views of the Old Steeple, with ground plan and section; Lady Wark stairs, the Wishart Arch, Dudhope Castle, the Old Custom House in the Green Market, known as Drummond Castle; interiors of some of the chambers in the Franciscan Nunnery, and several of the old sculptured stones taken from the Vault and from Whitehall Close. These buildings in date ranged from the fifteenth till the close of the seventeenth century. Passing to the examination of more modern buildings, Mr. Millar alluded to the great change introduced by Mr. William Adam, the famous architect, by his design for the Town House, erected in 1734, and showed that many buildings of last century — St. Andrew's Church, the Trades Hall, the Episcopal Chapel, afterward known as Union Hall, and Trinity House — had been suggested by it. The next branch of the subject led him to the consideration of the street architecture of the olden time, and in a series of views chronologically arranged he showed the development of the modern streets from the wynds and closes of former times. The inner architecture of the closes — the courts and back tenements — were next illustrated by a number of views and descriptions of public buildings erected in Dundee during the last fifty years, which showed the great variety in styles of architecture now visible in the city. Mr. Millar acknowledged his obligations to Mr. A. C. Lamb, who had kindly placed at his disposal a selection from his extensive collection of sketches of Dundee in the olden time.

On the motion of Mr. W. W. Robertson, of Her Majesty's Board of Works, seconded by Mr. Ross, a cordial vote of thanks was awarded to Mr. Millar for his paper.

New Publications.

THE FIVE ORDERS OF ARCHITECTURE ACCORDING TO GIACOMO BAROZZIO, OF VIGNOLA, to which are added the Greek orders; edited by A. L. Tuckerman; published by W. T. Comstock, New York.

The editor in his preface assumes a demand in this country for this work of Vignola; and we hear that still another edition is in prospect. We hope that the assumption of these editors is true; for, whatever be the prevailing fad in architectural practice, the five orders in one form or another are destined continually to appear and reappear in much American work. Entirely aside, then, from any question as to the fitness of the Classic style for modern use or modern sentiment, if it is to be employed let it by all means be employed at its best, and not botched through presumptuous ignorance. In the ages when the Classic alone engaged the attention of architects, and when they were more content to study the perfection of a bit of detail than we to study an entire building, many variations of the Greek originals were proposed, weighed carefully, considered well, and rejected as lacking at some point. Out of the three Greek orders grew the five Roman orders, easily reducible to the Greek. The greatest of the Italian architects tried their hands at varying the proportions, and have left record of their success or failure. We are loth to say that further improvement is impossible, for to our taste Vignola improved on Palladio, as Palladio on Vitruvius; and the American draftsman may now be making tracings who shall yet improve on Vignola. All we can ask in reason, and this we must ask for the sake of the trusting public, is that, before the aspiring draftsman sets out to eclipse Vignola and to exhibit the five orders renascent, he should be familiar with the five orders in question. In fact, eclipses and renascences aside, the American habit is to serve too brief apprenticeships. This may not stand in the way of money-getting; but when it comes to art, however short life is, it is long enough to do well what we undertake, and this means, in the present instance, to study the five orders before using the five orders

As to this Giacoma Barozzi, he was born at Vignola, October 1, 1507, and, as all good architects have done and always will do, he made the town of his birth famous from the fact that it was his birthplace. In the second place, as always has been and always will be true of all good architects, he was of a family in reduced financial circumstances. And in the third place, as always must be true of architects who really deserve to be called good, he was a hard student and was somewhat familiar with kindred arts, being a student of sculpture and a painter of note. He built the famous Caprarola palace for Alexander Farnese, and designed numerous churches, portals and tombs, described by his Italian biographers with such words as "bellisima," "graziosissima," "maestrevole" and "magnificentissima," and still bigger words which I would quote if it were necessary, but which are not new to you, because they are what always have and will be said about the works of good architects. On the death of Michael Angelo he succeeded him as architect of St. Peter's, at Rome, which under the circumstances can be said of only one architect. And in spite of all these commendable things, he wrote several books, a thing which we trust will not have to be charged up against many good architects.

One of these books deals with the five orders, and has been edited, and edited, and edited, and is now edited again by Mr. Tuckerman. This latest edition is very complete, containing not only the five orders proper, but plates illustrating Greek work and kindred matter. Working details, measurements and other data are quite full,

and the size is convenient. In an edition published in Rome in 1770, by Spampani and Antonini, occur in connection with each order a comparative exhibit, showing how the order was treated by Vitruvius, Palladio, Serlio, Scamozzi and Vignola. We wish that something of this sort had been embodied in this edition. Mr. Tuckerman offers a scant text, and no index, this latter, perhaps, because he thinks that the student should know the book from cover to cover. On the whole, it is a good working edition, and we believe it to be timely.

Our Illustrations.

Mines and Mining building, World's Columbian Exposition, east elevation; S. S. Beman, architect, Chicago; 350 by 700 feet, height to cornice 64 feet.

Electricity building, World's Columbian Exposition, east and south elevations; Van Brunt & Howe, architects, Kansas City; 350 by 700 feet, height to cornice 70 feet.

Agricultural building, World's Columbian Exposition; elevation and plan of principal façade, McKim, Mead & White, architects, New York; 500 by 800 feet, height to cornice 70 feet.

Administration building, World's Columbian Exposition; east elevation, ground and colonnade plans, Richard M. Hunt, architect, New York; 240 by 240 feet; height to cornice, below colonnade, 140 feet; height from base to top of dome 260 feet.

Perspective view, World's Columbian Exposition, looking south, showing Manufactures and Decorative Arts building on the left, Electricity building on the right, the lagoon and bridge in the foreground, and the Agricultural and Machinery buildings beyond.

The following illustrations were issued with the March number and not recorded:

First, second and third prize drawings for Woman's building, Columbian Exposition. First prize, Miss Sophia G. Hayden, of Boston; second prize, Miss Lois L. Howe, Jr., of Boston; third prize, Miss Laura Hayes, of Chicago. Dimensions of accepted design, 200 by 400 feet; height to cornice, 50 feet.

Two bird's-eye views of the World's Columbian Exposition buildings and grounds as approved by the construction department, April 1, 1891. The area covered by the buildings and grounds shown in the views is about one mile square or 5,000 feet each way, the east and west dimensions commencing with the casino and reaching to the rear of the Horticultural building, and the north and south dimensions being from the north façade of the Illinois State building to the south façade of the Agricultural building. United States Government building, J. H. Windrim, supervising architect of the treasury department at Washington, architect; Illinois State building, W. W. Boyington & Co., architects, Chicago; Administration building, Richard M. Hunt, architect, New York; Agricultural building, McKim, Mead & White, architects, New York; Manufactures and Decorative Arts, George B. Post, architect, New York; Fisheries, Henry Ives Cobb, architect, Chicago; Machinery Hall, Peabody & Stearns, architects, Boston; Electricity building, Van Brunt & Howe, architects, Kansas City; Mines and Mining, S. S. Beman, architect, Chicago; Woman's building, Miss Sophia G. Hayden, architect, Boston; Horticulture, W. L. B. Jenney, architect, Chicago; Transportation building, Adler & Sullivan, architects, Chicago; Casino and Pier, Burling & Whitehouse, architects, Chicago.

NOTE.—In Columbian Exposition buildings approximate dimensions are given.

PHOTOGRAVURE PLATES.

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

Residence of William Pretyman, Edgewater, Illinois; Burnham & Root, architects, Chicago.

Residence of W. H. Bradley, Brookline, Massachusetts; Loring & Phipps, architects, Boston.

House for Mrs. Charlotte G. Listman, Kenwood, Illinois; H. H. Sprague, architect, Hyde Park, Illinois.

The Kimball building, Wabash avenue, near Jackson street, Chicago; Frederick Baumann and J. K. Cady, architects.

Buildings for the Leland Stanford Junior University, Palo Alto, California; Shepley Rutan & Coolidge, architects, Boston, Massachusetts. Three full-page views are given.

Legal Notes.

EVIDENCE IN MECHANIC'S LIEN CASE.

In order to make out a case for the enforcement of a mechanic's lien, the plaintiffs must prove the contract and then performance of it. The contents of a lost waiver of a lien, the loss of which is insufficiently accounted for, is inadmissible in evidence. Gunther *vs.* Bennett, Court of Appeals of Maryland, 19 At. Rep., 1048.

SUB-CONTRACTOR'S LIEN.

The Iowa code requires that statements of material furnished by a sub-contractor shall be filed within thirty days in order to give a lien. The owner of property on which improvements are being made cannot defeat a sub-contractor's lien for materials furnished by paying the principal contractor, if he knew of the sub-contractor's claim at the time of payment. Hugg *vs.* Hintrager, Supreme Court of Iowa, 45 N. W. Rep., 1035.

CONSTRUCTION OF BUILDING CONTRACT.

The clause in a building contract, to furnish "all stock and material * * * mentioned in the specifications," taken in connection with the specifications and the other parts of the contract, must be construed to include not only the crude materials, but the labor involved in finishing them and putting them in position, so as to make such a house as contemplated in the specifications. The measure of damages for failure to make a roof that would remain tight for two years, as called for by contract, is the difference of value as constructed, from what it would have been if it had been constructed according to contract, together with loss of rent caused by such failure. White *vs.* McLaren, Supreme Judicial Court of Massachusetts, 24 N. E. Rep., 911.

CONFLICT OF EXPERT EVIDENCE AS TO BUILDING.

Where experts are employed to estimate and testify as to the cost of a building, or the value of work therein, they are presumed to act with a natural leaning toward the interests of their craft, and when the estimates differ widely a court is justified in accepting, as the measure, the lowest estimate made in good faith by a fair expert. Hart *vs.* Dreyfous, Supreme Court of Louisiana, 7 South. Rep., 731.

DESCRIPTION OF LAND IN MECHANIC'S LIEN.

The Texas statute, which requires that a contract filed to secure a mechanic's lien shall be accompanied by a description of the lands, lots, houses and improvements made, against which the lien is claimed, is satisfied with the following description: "The brick city hall building to be erected in the city of Hillsboro." Scholes *vs.* Hughes, Supreme Court of Texas, 14 S. W. Rep., 148.

BREACH OF BUILDING CONTRACT.

In an action for breach of a building contract, it is proper, in order to aid in arriving at a correct measure of damage, for the complainant to show the cost of removal of defective material, and of replacing the same in accordance with the contract. Healy *vs.* Bulkley, City Court of Brooklyn, 10 N. Y. Supp., 702.

IMPLIED CONTRACT FOR BUILDING MATERIALS.

A firm of contractors bought some materials of complainants, agreeing to pay for them out of the contract price of the work; afterwards the owner of the property said he would pay for the materials. The materials having been used on his house, an implied contract arises, binding him to pay for all the materials. Carney *vs.* Cook, Supreme Court of Iowa, 45 N. W. Rep., 919.

GOODS SATISFACTORY TO BUYER.

When one party agrees to do a thing to the satisfaction of another, and the excellence of the work is a matter of taste, as a design for a draft, a piece of furniture or a suit of clothes, the employer may reject it without assigning any reason for his dissatisfaction. Gray *vs.* Alabama National Bank, City Court of New York, 10 N. Y. Supp., 5.

PLUMBERS' CERTIFICATE—POLICE POWER.

The Maryland statute requiring the plumbers to get a certificate of competency from the state board of commissioners of practical plumbing, is a reasonable exercise of the police power of the state, and not in conflict with the fourteenth amendment to the United States Constitution. Singer *vs.* State, Court of Appeals of Maryland, 19 At. Rep.

DENIAL OF LIABILITY BY CONTRACTOR.

A number of individuals assumed to act as a corporation for the purpose of carrying on the business of contractors and builders. They will not be permitted to avoid a liability arising by the terms of a bond they had entered into as a corporation, under the cover of a claim and allegation that they had no existence as a corporation. By assuming corporate powers they estop themselves to deny that they are incorporated. Jefferson *vs.* McCarthy, Supreme Court of Minnesota, 46 N. W. Rep., 140.

SUBROGATION OF PARTIES.

The defendant corporation entered into a contract with a county to furnish the iron work for a county jail and to become responsible to the other contractor for all delays caused by failure to put the iron work in in time. In an action against it for damages caused by delays, the following rule governs: "When one person, for a valuable consideration, engages with another to do some act for the benefit of a third person, the latter may maintain an action against the former for breach of such engagement." Grant *vs.* Diebold Safe & Lock Co., Supreme Court of Wisconsin, 45 N. W. Rep., 951.

MEASURE OF DAMAGES FOR TERMINATING UNPERFORMED CONTRACT WITHOUT CAUSE.

A contract was entered into by which the plaintiff was to erect in the building of defendant, a complete heating apparatus. Before work in the building was commenced, but after plaintiff had got the furnace and fixtures ready to put in place, the defendant, without cause, terminated the contract. Either party to a contract which has not been performed may terminate it without cause, thereby becoming liable to the other party in damages. In the case of a contract for a specific article or work, which, as in this case, is partially performed when the contract is rescinded, the contractor may recover compensation for what he has done, and the profits he would have earned had he been allowed to complete the contract terminated without fault on his part. Hale *vs.* Hess, Supreme Court of Nebraska, 46 N. W. Rep., 260.

LIABILITY FOR ACCIDENTS DURING CONSTRUCTION OF BUILDING.

A contractor was to do the carpenter, mason and iron work upon a building and also to flag the sidewalk; he was also to be responsible for accidents happening to individuals through his acts. The complainant was injured by stepping on some loose planks put down in the place of the sidewalk. The contractor did not begin work on the sikewalk until after the accident and denied liability on that ground. If the other contractors had performed their different contracts, and left the premises necessarily in his hands, the responsibility for the safety of the public devolved upon him, and though the planks were

in the first place put down by other contractors, and though he had not commenced work on the sidewalk, he will be liable to the complainant for the injuries received. Peard *vs.* Karst, Supreme Court of New York, 10 N. Y. Supp., 463.

STATEMENT REQUIRED IN MECHANIC'S LIEN.

Where the lumber used in the construction of a building was bought in gross, a statement of lien for materials is sufficient if it give the amount paid for such lumber, without specifying the price of each lot in detail, as it gives reasonable notice to purchasers and creditors of the existence and extent of the lien. School District No. 3 *vs.* Howell, Supreme Court of Kansas, 24 Pac. Rep., 365.

LIEN OF MATERIAL-MAN.

The Rhode Island statute provides that there shall be nolien for materials furnished, unless the material-man shall, within sixty days, give written notice to the land owners, if they be not the purchasers of the material, that he intends to claim his lien. Though the materialis furnished under an entire contract, to which the land owner is a stranger, the lien will attach only for that material furnished within sixty days of the giving of the notice. Newell *vs.* Campbell Machine Company, Supreme Court of Rhode Island, 20 At. Rep., 158.

CONSTRUCTION OF "SEASON."

Where a written contract of employment is expressed to be for "the season," no more specific limitation of the time being given, it is competent, in an action for wrongful discharge, to explain by verbal testimony what the term "season" meant, according to usage and custom of the particular trade or business with reference to which the contract was made. Wachtershauer *vs.* Smith, Common Pleas of New York City and County, 10 N. Y. Supp., 535.

Building Outlook.

OFFICE OF THE INLAND ARCHITECT,
CHICAGO, Ill., April 15, 1891.

Among the unfavorable influences which are to be noted in the business horizon at this time are the unsettled condition of the public mind on account of an actual or supposed insufficient supply of money; second, a downward tendency in prices, due to what in many quarters is regarded as an excess of produc ing capacity, and, third, the possibility of a wide-spread labor disturbance. On the other hand, some of the favorable influences may be enumerated as follows: First, the steady expansion of trade and commerce. Second, the liquidation of indebtedness throughout the country. Third, a more settled railway policy. Fourth, the equalization of production to consumption through trade and various other organizations. Business men of all kinds are especially anxious at this time to know whether this year will bring as much business as last. Upon this point there are some doubts in well-informed minds. While in certain sections of the country prosperity will be greater than last year, certain other sections may suffer somewhat. From all indications there will be an improvement in the condition of the agricultural interests. Manufacturers are, as a rule, doing well, although obliged to restrict production in many branches, among which are makers of iron and steel. The lumber interests, both north and south, are looking forward to a year of great activity. Prices are low and profits are reasonable. There are of course exceptional cases where extraordinary profits are realized, but there is a general leveling down tendency at work, and it will doubtless continue until unusual profits are exceptional. In the building trades there is still some uncertainty as to the volume of work that will be undertaken and accomplished. The laborers are, as usual, discussing the question of hours of labor and rates of wages. There will be no general strike in the building trades, and probably no very serious difficulties, taking the country at large. The miners are to be made the black sheep of the labor agitation this year, and should the strike be made as general as the leaders desire, it will no doubt cause a good deal of inconvenience which might be more far reaching than at present apparent. It will, however, be a dangerous experiment for the miners to make. The financial situation is satisfactory to eastern money lenders, but unsatisfactory to borrowers throughout the country. There is a determination spirit among the people to effect certain requirements, and the agitation will continue until the requirements are effected. Trade organization continues, and will not be impeded until the advantages of coöperative action among manufacturers will be generally effected. Abundant crops will go far to harmonize apparently conflicting interests between manufacturers and cultivators of the soil. Our export trade is growing steadily, not only in cereals and breadstuffs, but in manufacturing products, and the attention of buyers in foreign countries is being systematically attracted to the advantage of cultivating more intimate relations with the manufacturers and exporters of the United States.

Synopsis of Building News.

Baltimore, Md.—The Arundel Building Company will build a large apartment house, five stories, brick, to cost about $65,000.

Chattanooga, Tenn.—Architects Townsend & Stone have prepared plans for the two new buildings to be erected for Sullin's College, Bristol, Tennessee. One of them will be the main college building; it will be 70 feet square, three stories high, brick with stone trimmings and topped with a tower in which will be a clock so large that the time of day can be seen from any part of the city; to cost $25,000. For King's College, a four-story brick building, slate roof, steam, size 42 by 84 feet; cost $26,000. Also preparing plans for the Chattanooga exposition, several frame buildings; to cost about $60,000. For the East Tennessee Land Company, a three-story office building, size 58 by 68 feet, pressed brick and stone, hot air; to cost $20,000. For the City of Bristol, Tennessee, a market house, size 60 by 150 feet; cost $13,000. For J. H. Warner, a two-story residence, size 50 by 70 feet, pressed brick and stone, slate roof, hot water; cost $26,000. For A. B. Whiteaker, a five-story office building, size 33 by 64 feet, brick and stone, steam, hydraulic elevators; cost $25,000. For the Temple Court Building Company, a six-story office building, size 65½ by 100 feet, two stories stone and four stories pressed brick, steam elevators; cost $46,000. Also have in hand quite a number of moderate size residences, both in brick and frame, ranging from $3,000 to $10,000.

Chicago, Ill.—Architects Treat & Foltz: For Henry Schroeder, a four-story basement and attic store, office and flat building, to be erected on Milwaukee avenue, Chicago avenue and May street; it will have three fronts and cost $25,000. They are now tearing down old buildings. For C. W. Seneco, a three-story flat building, at 356 Belden avenue, pressed brick and stone, hot water heating, etc. For W. J. Goudy, on the northeast corner of Cleveland and Fullerton avenues, a four-story and basement apartment building, 99 by 133 feet in size; to cost $50,000. The front will be of red pressed brick and brownstone, with copper bay windows, interior finished in hard woods, and have steam heat and all improvements. For L. P. Friestedt, a two-story and basement flat building, with stone front and copper bay, to be erected on Park avenue. For W. J. Goudy, on Goethe street, a two-story stable, of granite fronts and slate roof, and inside finish in natural wood. The plans are about completed for the five-story factory, 250 by 170 feet in size, to be erected on Randolph street between Carpenter and Morgan streets, for the New York Biscuit Company. It will be constructed of pressed brick, granite and blue Bedford stone, with terra-cotta trimmings; the cost will be $350,000.

Architects Patton & Fisher are working on plans for the Kalamazoo, Michigan, public library; it will be a two-story and basement building of very handsome design, 70 by 100 feet in size, and cost $60,000. It will be constructed of Amherst stone all round, with a tile roof. They are also getting out drawings for the Kenwood Evangelical Church enlargement of 315 additional sittings. The same architects are working on drawings for Grace Episcopal Church, to be erected at Grand Rapids. It will be 80 by 90 feet in size, of pressed brick and stone, with slate roof, have hardwood interior, stained glass windows, steam heat, etc.

Architect Thomas Wing: For George Brauckmann, on George avenue, west of Vincennes avenue, two two-story basement and attic residences, of pressed brick and stone fronts, oak and cypress inside finish, slate roofs, steam heat; cost $15,000. For William Page he is working on plans for a block of three four-story dwellings; to cost $20,000. They will be erected on Prairie avenue near Twenty-fourth street, and have cut stone fronts, hardwood and pine finish, stained, plate and beveled glass windows, gravel roofs, steam heat, etc.

Architects Ostling Brothers: For C. F. Johnson, five two-story cellar and attic residences, 117 feet front by 60 feet deep, to be of rockfaced stone fronts, in Ashland variegated brownstone and buff Bedford stone, with slate mansard and gravel roof. The interiors will be finished in hard wood and pine, have stained, plate and beveled glass windows, furnaces and the best of sanitary arrangements, location Sidney Court, near Diversey avenue; cost $40,000. For P. L. Mooney, they are planning a three-story and cellar flat building of pressed brick and stone front, hardwood finish, sanitary plumbing, three furnaces, etc., to be erected at 444 Jackson Boulevard. For Hans Johnson, making plans for three-story and basement flat building, to be built at 27 Abbott street. For Mrs. Schulz, on Halsted street, near School street, a two-story cellar and attic frame residence.

Architect L. G. Hallberg: For John Mountain, on Dearborn avenue, near Burton place, a double three-story and basement residence, of Bedford stone front, oak and pine finish, steam heat and all the improvements; to cost $20,000. For John C. Murphy, corner of Elm and Townsend streets, a three-story store and flat building, of pressed brick and stone front, gravel roof and the sanitary improvements. For himself, on Dearborn avenue, near Burton place, a three-story residence, 25 by 70 feet in size, to have a Bedford stone front, oak and pine finish, slate mansard and gravel roof, plate and beveled glass, furnace, etc.

Architect J. C. Brompton: For Dr. L. W. Beck, at Normal Park, a block of frame two-story basement and attic flats, with a frontage of 611 feet and a depth of only 14 feet. They will have brick and stone basement, hardwood and common pine finish, mantels, bathrooms, closets, stained shingle roof, etc. The peculiar size of this ground necessitated a very skillful management of the plans, which result the architect seems to have achieved. For Charles Clark et al, a three-story and basement apartment house, 100 by 60 feet in size; to cost about $40,000; to be erected on Commercial avenue, northwest corner of Wilson avenue. It will have a handsome front of Tiffany pressed brick and stone, hardwood finish throughout, stained and plate glass windows, steam heat, and all the best of sanitary and modern improvements.

Architect Robert Rae: For G. A. Otis, five three-story and basement residences, on Oakenwald avenue near Forty-sixth street; they will have stone fronts, hardwood and pine finish, stained, plate and beveled glass, steam heat, and the best of sanitary improvements; cost $35,000; the mason-work is being done by H. C. Stacey, of 5436 Monroe avenue. He is also taking bids on an Episcopal church, 50 by 85 feet in size, to be erected in Englewood; it will be constructed of stone with slate roof, have handsome stained glass windows, pews to accommodate a congregation of 450, steam heat and hardwood finish. For T. G. Otis he is taking estimates for two three-story residences, to be erected on Sidney Court between Forty-fourth and Forty-fifth streets; the fronts will be of Roman pressed brick and stone, interior finished in hardwood, with furnaces, etc. For James Ingram he will take bids for a three-story apartment house, 50 by 105 feet in size; to cost about $40,000; the first story will be of rockfaced stone, and above of dark brown Roman pressed brick and Bedford stone; he will put in steam heat, hardwood and pine finish, the best of sanitary and modern conveniences.

Architect George Grussing: For Messrs. L. & O. Kolb, at 1373 and 1375 Madison street, a three-story and basement store and flat building, 50 by 67 feet in size; cost $16,000; the front will be of St. Louis pressed brick and Connecticut brownstone, interior finished in quarter-sawed oak, and all improvements. He is also making drawings for a two-story and basement school, 60 by 48 feet in size; to be built of common brick and Bedford stone, with slate roof, two furnaces, etc. For A. Pierce, at 1377 Madison street, a three-story and basement store and flat building, of St. Louis pressed brick and Connecticut brownstone, stained, plate and beveled glass, oak finish, tile floors, etc. For A. P. Mueller, at 609 North Halsted street, a two-story and basement store and flat building, of Tiffany pressed brick and Bedford stone.

Architect H. P. Harned: For A. A. Turner, a four-story and basement store and apartment building, 117 by 120 feet in size; to cost $100,000; to be erected corner of Forty-seventh street and Vincennes avenue. It will have two fronts of red Portage stone for the first story, and above will be of fine Tiffany pressed brick and stone, with handsome copper bay windows. The interior will be finished in hard woods throughout, and have marble wainscoting, tiled floors and marble stairs in all public halls, hot water will be supplied throughout the building; modern open plumbing, elevators, steam heat, etc., will be put in.

Architects Beers, Clay & Dutton: For Montgomery Ward & Co., on Michigan avenue, a six-story addition, 48 by 160 feet in size; to cost $75,000. It will be constructed of pressed brick and stone to correspond with the present building. It will be of mill construction and have two new freight and two passenger elevators; steam heat, electric light, etc. For John Gary they have planned a three-story and cellar residence, on South Park avenue near Thirtieth street. The front will be of buff Bedford stone, interior finished in hard woods, steam heat, etc. For David Quigg, at Kenwood, a three-story residence, frame, stone basement, hardwood finish, furnace, etc. For Dr. Benson, at South Chicago, a two-story frame flat building, 75 by 60 feet in size; to cost $12,000. For. R. P. Smith, corner of Fifty-third street and Lexington avenue, a three-story brick-veneered residence, steam heat and all improvements; to cost $12,000. For W. A. Giles, at Austin, a three-story hotel and flat building; to cost $20,000. Pressed brick and stone front, steam heat and all improvements.

Architect Thomas Hawkes: For Vincent C. Price, on Division street near Penn, a three-story flat building, 42 by 55 feet in size; to cost $12,000; blue Bedford stone and Indiana pressed brick front. For Dr. Price, on Illinois street, fifty feet west of Cass, a six-story and basement manufacturing building, 50 by 100 feet in size; to cost $40,000. It will have a front of steel, steam heat, elevator, etc. Thomas Hawkes will remove to the Northern building, southwest corner of La Salle and Lake streets, in consequence of the Unity Building coming down.

Architects Burling & Whitehouse will remove to the Illinois Bank building, 115 Dearborn street; they are now working on drawings for the Young Mens' Christian Association building, to be erected on La Salle street; it will be of steel construction, and contain all the improvements. For J. T. Bowen, on Astor street, they planned a three-story residence of buff Bedford stone and pressed brick. For Colonel Loomis, on the Lake Shore drive, a beautiful residence in the Colonial style of architecture; to cost $150,000. For Father Henneberry, on Ashland avenue near Nineteenth street, St. John's Catholic Church; to cost $50,000; it will be built of buff Bedford stone and pressed brick, in the Romanesque type, with a high tower and slate roof, interior to be finished in red oak, and have pews to seat 1,500 people. For Dr. Hooper, on Astor street, a four-story residence of tile, brick and buff stone; to cost $30,000. For George Bullen, at

Nashota, Wisconsin, a handsome residence in the Tudor style of architecture, with flat roof and crenulated walls; to be built on the hillside, commanding a beautiful view of the lake; the cost will be $50,000. The nine-story office and bank building at Kansas City, they report as progressing rapidly; it will be a magnificent structure, 180 by 140 feet in size, and cost $1,000,000; it will have three fronts of pressed brick and granite, and will be elaborately finished.

Architect Otto H. Matz reports: Preparing plans for St. John's Boarding School, Hominy Creek, Osage Agency, Indian Territory, for Catholic Bureau of Indian Missions. This structure has a front of 150 feet, and consists of main building (68 by 50 feet) and three wings (each 26 by 40 feet), substantially built of local stone, three stories high, with chapel, mansard roof and belfry; cost $50,000.

Cincinnati, Ohio.—Reported by Lawrence Mendenhall:

If "April showers bring forth May flowers," the crop will be simply enormous this year, for the month of March and April, at the time this effusion is given to the world (for the low price of subscription to THE INLAND ARCHITECT) has been in a constant state of drip.

Builders are not flowery in their nature as a rule, hence do not look upon showers as blessings when they want to make time in constructing buildings.

The "grippe" has tackled the builders here in a mild way, and their favorite lines are, as a wag expresses it:

"Oh, I've got the grippe,
With the sneeze and the drip."

Our Builder's Exchange is in an active state of eruption as far as progress goes. The pertinent circulars of the National Association are doing efficient missionary work, and before the year closes many exchanges now occupying rented quarters will hold receptions in their own "spacious parlors." Our Exchange has opened a stock subscription list to raise funds to erect a structure devoted to trade purposes. This is a step in the right direction. Cincinnati is also pushing forward, and I might also say *upward* in the direction of high buildings, and I sincerely hope that in a very few years to see all the prominent corners, some of which are now occupied by — well, I wont call names, by elegant structures.

The building trade lost by death last month a most valuable and highly esteemed member, Mr. L. H. McCammon, a man active in good works, and the words of Tennyson,

"But oh, for a touch of a vanished hand,
And the sound of a voice that is still,"

will find a response from his many friends.

The plasterers have gone on a strike for eight hours time and forty-five cents an hour, and they stubbornly refuse to arbitrate. Poor deluded mortals.

Architect Henry E. Siter reports: For the Protestant Episcopal Church, Pine Hill, Rev. A. B. Howard, rector, a chapel, known as the Chapel of the Nativity; materials: limestone, slate roof, hard and soft wood finish, pews, stained glass, etc.; cost $15,000.

Architect George W. Rapp has prepared plans for a beautiful office building for Frederick Eckstein, Esq., to be seven stories high; materials: stone, iron, pressed brick, asphalt roof, elevators, plate glass, etc.; size 47 by 100 feet; cost $100,000.

Architect M. Rumbaugh reports: For Mr. Harry Hulbert, a stone building; materials: iron, pressed brick, asphalt roof, hydraulic elevators, skylights, etc.; size 23 by 96 feet, five-stories high; cost $15,000. For Mr. A. C. Campbell, Ashland, Kentucky, a bank and office building; materials: brick, stone, tin roof, office fittings, vaults, etc.; cost $15,000.

Architect Gustave W. Drach reports: For Mr. Robert J. Morgan, a row of five houses; materials: stock brick, stone trimmings, tin roof, pine finish, blinds, mantels, gas, plumbing, glass, etc.; cost $40,000. For Mrs. D. Brown, Clifton, Ohio, a residence; materials: brick, furnace, plate and stained glass, slate roof, grates, mantels, plumbing, gas, etc.; cost $10,000.

Architects Crapsey & Brown report: For Mr. A. R. Burham, Richmond, Kentucky, alterations and additions to his residence; materials: brick, slate roof, pine finish, blinds, etc.; cost $8,000. For Waynesville, Ohio, a school house; size 68 by 68 feet, two stories; materials: brick, tin roof, furnace, furniture, blackboards, etc.; cost $20,000.

Architect A. O. Elzner reports: For Winchester, Kentucky, an opera house; materials: pressed brick, tin roof, chairs, frescoing, scenery, architectural iron, etc.; cost $30,000.

Architect George W. Vogel reports: For Church of Immaculate Conception, Newport, Kentucky, a school building, three stories high; materials: brick, furnace, slate roof, furniture, iron stairs, etc.; cost $20,000. For M. R. Smith, Corryville, a brick house, ordinary materials; cost $4,500.

Architect Jacob Rueckert reports: For F. Vogeler, Esq., Fifth and Walnut, a factory building; materials: brick, tin roof, elevators, ironwork, gas, plumbing, etc.; cost $40,000.

Architects Samuel Hannaford & Sons have drawn plans for a residence for J. H. Foss, Esq., of the Foss-Schneider Brewing Company; materials: stone, slate roof, furnace, stained glass, dumb waiters, tile floors, mantels, gas, plumbing, etc.

Architects G. & A. Brink report a house for Dr. T. M. Wittkamp; materials: brick, plate glass, ironwork, grates, gas, plumbing, tin roof, blinds, etc.; cost $16,000.

Architect Lucian F. Plympton reports: For Mr. J. J. Foley, a residence; materials: frame, slate roof, galvanized iron, stained glass, furnace, gas, plumbing, grates, blinds, etc.; cost $4,500.

Architects Des Jardins & Hayward report: For Mr. Dwight W. Huntington, two houses; materials: frame, slate roof, furnace, stained glass, grates, pine finish, gas, plumbing, etc.; cost $9,000.

Architects Aiken & Ketchum report: For Mr. E. B. Sargent (Walnut Hills), a residence: materials: frame, slate roof, plumbing, gas, stained glass, mantels, hardwood finish, etc.; cost $9,000.

Denver, Colo.—Architect J. J. Huddart has prepared plans for the new school building, to be of brick, and two stories high; cost $15,000.

Architect J. Hodgson, Jr.: For Messrs. Ittleson & Rose, a row of small houses; size 193 by 73 feet; stone and pressed brick; cost $50,000.

Detroit, Mich.—Architects Mortimer L. Smith & Son: For the Third Avenue Presbyterian Church Society, a new brick church, on the corner of Second and Forrest avenue, stone trimmings, slate roof, to seat 900; cost $16,000. For William Barclay, a brick and stone residence, on North side, Ferry avenue; to cost $12,000. For Ira Topping, a double brick residence, on Lincoln avenue, near Kirby; cost $8,000. For J. R. Whiting, a frame summer residence, on the St. Clair river; to cost $15,000.

Architects Van Leyen & Hackett: For George W. Chase, a three-story double brick residence, size 40 by 64 feet, stone trimmings and slate roof; cost $9,000. For the Psi Upsilon Society, Ann Arbor, Michigan, additions and alterations; cost $5,500. For Mrs. C. J. Watkins, a two-story frame dwelling, on Warren avenue and Hastings street, size 28 and 46 feet; cost $4,800. Contractor, Guy W. Vintor.

Architects Spier & Rohns: For Dr. Carl Bowning, a two and one-half story brick residence, pressed brick, cut stone trimmings and slate roof; cost $12,000. For Charles Wesch, a three-story store, size 47 by 70 feet, brick and stone trimmings; cost $10,000. For August Knorr, a two-story store and flat block, on Meldrum and Gratiot avenues, brick and stone trimmings; cost $10,000.

Architects Donaldson & Meier are preparing plans for Dr. Cleland, to remodel his building for office, on State and Griswold streets.

Architects Hess & Raseman: For Sigmund Rothchild, Harstens Island, Michigan, a frame summer residence; cost $6,000. For Charles E. Swales, St. Clair, Michigan, a two-story summer residence; cost $6,000.

Architects Malcombson & Higginbotham: For C. H. Habercorn & Co., a six-story brick manufacturing building, on Orchard and Seventh streets, size 55 by 150 feet.

Architects John Scott & Co.: For the Protestant Orphan Asylum, a three-story brick building, on Jefferson avenue and Adair street, size 97 by 115 feet, stone trimmings and slate roof; cost $30,000.

Architect Gordon W. Lloyd: For J. B. Ford & Co., Wyandotte, Michigan, preparing plans for several buildings for the manufacture of soda ash; to cost about $30,000. Also is preparing plans for the D. M. Ferry Seed Company, for an eight-story brick warehouse, on Croghan street, size 138 by 85 feet, stone trimmings and tin roof.

Architect A. E. French: For Charles C. Charbonneau, a two-story brick residence, on Commonwealth avenue; cost $12,000.

Architects A. C. Varney & Co.: For R. H. Brown, a two-story double brick residence, size 40 by 60 feet, stone trimmings; cost $8,500. For J. H. Brown, a two-story brick residence, stone trimmings and slate roof; cost $11,000. For Wagner Fakingle, two three-story brick stores and dwellings; to cost $11,000.

Mr. S. F. Falsma is erecting a three-story store on State and Washington avenues; cost $5,000.

Fort Wayne, Ind.—Architect F. B. Kendrick: For Messrs. Fisher Brothers, a four-story building; stone front, brick walls, asphalt roof; size 25 by 105 feet; cost $14,000. For the St. Joseph Catholic School, at Logansport, Indiana, a three-story brick school building; size 78 by 58 feet; stone trimmings, slate roof, iron cornice; cost $15,000. For Louis Mohr, two-story brick and stone store; size 30 by 70 feet; cost $6,000; contractor Fred Miller. For St. Marie's school, a two-story brick school building; size 70 by 129 feet; slate roof, stone trimmings; cost $18,000. For the St Patrick's Catholic School and sisters' residence, a two-story brick building; slate roof; size 80 by 56 feet; cost $12,000. Contractor, Fred Miller.

Kansas City, Mo.—Architects Schoper & Lussi: For Mrs. Annie Sobbe, a two-story brick business block, size 29 by 66 feet; cost $4,500.

Architect J. W. Pugh: For Chas. W. Moore, a two-story brick residence, size 30 by 48 feet, on Cherry street; cost $6,000.

Architect H. J. Simons: For Dr. Flanders, a four-story flat building on Pacific and Charlotte streets, size 142 by 68 feet; cost $40,000.

Architects James & James are preparing plans for the Grand Central Depot to occupy the whole of the block bounded by Third and Fourth and Locust and Cherry streets. This will be the biggest contract that will probably be let in Kansas City this year. This building will have a frontage of 300 feet on three streets, and will be U-shape, the trains backing into the court. It will be four stories in height and will be constructed of brick, stone, granite and terra-cotta. The cost of preparing the building and grounds will be $1,000,000, and of the building alone about $750,000.

The Winner Investment Company, builders, will be ready in a very short time to negotiate with contractors.

The Whitcomb, Bomlie Cabinet Company will erect a three-story brick cabinet factory at Twelfth and Porter streets, size 60 by 90 feet; cost $5,000.

Minneapolis, Minn.—Architects Long & Kees: For the Northwestern Fireproof Warehouse Company, a seven-story cold storage building; size 240 by 100 feet; pressed brick, stone trimmings; cost $300,000. Also for the Farmers' and Mechanics' Bank, a two-story bank building; 44 by 167 feet; brick, with stone front; cost $100,000.

Architect Warren H. Hayes: For Messrs. Thorpe Brothers, a five-story warehouse; size 35 by 80 feet; pressed brick, stone trimmings; cost $12,000. Also for the congregation of the Presbyterian church at Madison, Wisconsin, a two-story church building; size 110 by 75 feet; brick, slate roof; cost $40,000.

Architect C. F. Struck has prepared plans for William Wood, additions and alterations to store; cost $15,000.

Omaha, Neb.—Architects Bell & Berlinghoff, of Council Bluffs, Iowa; plans for new school building has been accepted. It will cost about $37,000.

Architect Sidney Smith: For E. J. Engelman, at Coin, Iowa, a two-story hall and store building; size 50 by 100 feet; cost $10,000.

Pittsburgh, Pa.—Architects Lindemans & Sauer: For the St. Stanislaus' congregation, a two-story brick church; stone trimmings; cost $100,000.

The Builders' Exchange are making arrangements for their new building which they intend to have second to none in the country. A. Peebles has been appointed architect.

Architect F. Sauer: For the South Side Turnverein Company, a three-story hall; brick and stone; size 60 by 121 feet; cost about $38,000.

Architects Alston & Heckert: For Thomas Carlin's Sons, three-story foundry and machine shop; size 100 by 200 feet; cost $20,000. For W. S. Guffey, a brick residence; size 40 by 60 feet; cost $12,000. For W. J. Prentice, a frame residence; size 40 by 58 feet; cost $11,500. For F. E. Moore, two two-story dwellings; brick, stone fronts; size 20 by 72 feet each; cost $20,000; contractors, Clark, Richmond & Co. For the M. E. Church Committee, a brick parsonage, 35 by 50 feet; cost $5,000.

Pueblo, Colo.—Architect G. W. Roe: For the Pueblo University, a three-story college building; size 153 by 118 feet; pressed brick with stone trimmings, metal roof; cost $75,000. Wallace & Davis, builders. For the high school building committee, a three-story school building; size 122 by 110 feet; pressed brick, stone trimmings, metal roofing; cost $80,000. For Messrs. A. T. Stewart & Co, a brick warehouse; size 50 by 140 feet; stone trimmings; cost $12,000.

Rochester, N. Y.—Architects Nolan, Nolan & Stern are designing for Mr. A. Adler a residence, to be built on University avenue. First story of brick and stone, second of shingles; steam heat and first-class plumbing and lighting; cost $15,000. Also for Mr. S. Adler, a similar residence. For Mr. T. S. Newell, a frame residence; shingled second story; to cost $8,000. For Mr. E. L. Adams, a colonial frame residence.

Architects Otto Block & W. H. Barnes have made designs for a three-story brick block for Mr. H. P. Langie, to contain stores and flats, fitted up in first-class style, with best plumbing, electric work, etc.; the exterior material will be wash brick and terra-cotta; to cost $13,000. For L. P. Squire, a $10,000 residence to be built on Park avenue; first story of stone, second of shingles; interior in hard woods, cabinet finish; all plumbing exposed and nickel-plated; heated by steam, indirect radiation; contracts partly let. For Mr. G. L. Reed, at Hornellsville, New York, a $6,000 residence; first story of wash brick, above that shingles. For Mr. E. S. Copeland, also of Hornellsville, a residence; first story of stone and brick, frame above; to cost $5,500. For F. G. Ranney, a residence; to cost $8,000; stone to first story windows, frame above; heated by furnace.

Architects Jay Fay & O. W. Dryer have prepared plans for a frame residence for Elbert S. Green; to cost $3,000. For C. E. Weidner, Esq., a frame residence; to cost $5,000. For J. W. Pressey, a stone and frame residence; cost $6,000. For Mrs. M. E. Fellman, a $3,000 residence. For Mr. George E. Ross, a Colonial frame residence, to be built at Holley, New York; to cost $7,000.

Mr. Frank Croston will erect, on the corner of Chestnut and Court streets, an apartment house; to cost $50,000. It will be 60 by 100 feet, five stories high, and contain thirty-two apartments; will be thoroughly fitted up and have all modern conveniencies, heated by steam and supplied with passenger and freight elevator.

Mr. Schuyler Moses will erect a block on the corner of North avenue and Hamilton place, to contain stores and apartments.

Excavations have commenced for the erection of a six-story annex to the Whitcomb House, which will be a commodious building, all built fireproof. J. Foster Warner is the architect.

J. W. Outhout will erect a six-story brick block at the corner of East Main and Stilkon streets, to be used as dwelling apartments.

Supervisor Ashton will erect a three-story brick block at the corner of Lake and Glenwood avenues; to cost $15,000.

St. Louis, Mo.—Architect P. F. Meagher: For R. J. Wilkinson, a two-story residence; size 20 by 71 feet; brick, slate roof and all modern improvements; cost $10,000.

The J. B. Legg Architectural Company: For C. H. Tyler, a three-story dwelling; size 30 by 72 feet; brick, granite and stone, slate roof; cost $12,000.

Architect John A. Quinn: For John Mullally, a two-story residence; size 50 by 54 feet; brick, stone trimmings, composition roof; cost $10,000.

Mr. P. Nolan will build a two-story brick dwelling; cost $5,000.

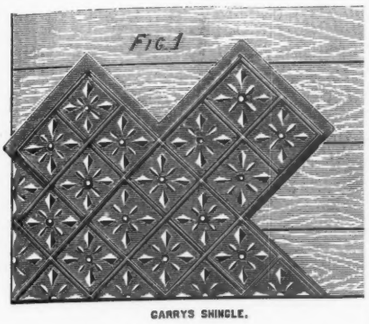
St. Paul, Minn.—Architect E. Strasburger: For John Christensen, a two-story frame residence; size 35 by 48 feet; cost $5,000.

Springfield, Illinois.—Architect George H. Helmle: For T. W. Currier, three-story and basement brick and stone store building, 35 by 157 feet; plate glass front; cost, $8,000. For D. A. Devares, two-story, eight-room frame dwelling house; cost $2,800. For Charles D. Roberts, remodeling store building, also addition, 24 by 50 feet; cost $3,000. For Baptist Society, Delhi, Illinois, frame church, stone foundation; cost $2,800.

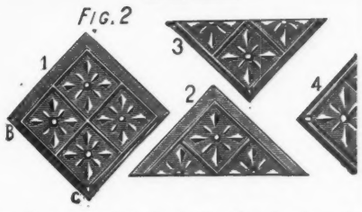
THE INLAND ARCHITECT AND NEWS RECORD.
Vol. XVII. ADVERTISERS' TRADE DEPARTMENT. No. 3

Metallic Siding and Roofing.

The accompanying cuts are in illustration of what are termed by the Garry Iron and Steel Roofing Company, of Cleveland, Ohio, "Swiss Cottage Metallic Siding and Roofing," and are a part of the product of the company's extensive plant. It is notable that at the pres-



GARRYS SHINGLE.



ent time a great deal of attention is given to the matter of metallic roofing, other than tin, and especially to iron and steel, since experience has shown that a good, non-leakable, durable and comparatively inexpensive house cover can be made of them, while they possess, at the same time, through their ductility, other attractive qualities, such as adaptability to place and possibility of ornamentation without detracting from their utility in any respect. That iron and steel, as has been remarked on other occasions in this journal, are looming up formidably as building material is beyond questioning. Possibly with brick and terra-cotta they will run an even race as to quantity, and in a thousand places, now not dreamed of, will substitute articles that have grown venerable in usage. If there is occasion to doubt this statement the doubter has only to send for an illustrated catalogue of the Garry Iron and Steel Roofing Company, and have the doubt dispelled by looking its contents over, as therein they will find ceiling devices, siding devices, finials, crestings, cappings and other interesting house-forming products of iron and steel that are suggestive of this assumption.

Fireclay and Terra-Cotta Tiling.

The introduction of fireclay and terra-cotta tiling in building construction marked an important departure from old-time methods, and may be said to be the most noteworthy that has occurred in the domain of architecture within the last decade. Undoubtedly it has given an impetus to steel and iron construction that could not have existed without its joint co-partnership, since it comes to the rescue as a protector of those materials at their only vulnerable point as building materials—their defenselessness against the action of fire, and thus makes possible what architects before had been hopelessly striving for—a fireproof building. That the use of this invaluable material is only at the incipient stage is obvious. The fact that it affords the opportunity to make the homes of the people more wholesome by insuring dry walls, not to speak of its non-combustible nature, is sure to extend the area of its adoption, so that ere long it will be an odd sight to see any building under process of erection where hollow tiling does not have a respectable representation among the materials for its construction. There are already a number of extensive manufactories of these tilings, each doing a large business, which shows how rapidly this era is approaching. To what extent progress in the manufacture has reached, one has only to take up a descriptive catalogue of a company like, for instance, the Empire Fireproofing Company, Pittsburgh. Reference to such a source will show these hollow tilings are now made for flat and segmental arches of different lengths, partitions of various thicknesses, wall furrings, girder coverings, column coverings, ceilings, roofs, chimney linings, etc., while among other concomitant fire-proof material is listed fireclay stovepiping, including elbows, chimney tops, ventilators and similar wares. That these may be added to as experience discloses the necessity for them, note is made that the facilities are of a character to meet whatever the architect may send his designs for.

This all goes to show the stay of this important discovery is not ephemeral but permanent.

Composite Colors.

The effects obtained by these colors, or rather by this method of staining, are much like the effect of watered silk, looking perhaps green in some positions, and then changing to red or brown in another light. One of the oldest of the eastern architects declared that no advance in exterior coloring equal to the introduction of exterior staining, over a decade ago on the discovery of the creosote stains, has been made in the last fifty years. This new discovery, made by the creosote people, bids fair to make as great a revolution as the original one.

Trade Notes.

WE have received a sample of a stain said to be manufactured in Buffalo which, on applying a match to a small portion, ignited immediately and burned with much freedom.

THE Garry Iron & Steel Roofing Company, located at 152-168 Morwin street, Cleveland, Ohio, report an exceedingly fine trade for this season of the year and that they have a large number of orders ahead, some of which are for May and June deliveries. They are exporting their goods very largely to Mexico, South America and other foreign ports, and recently received an order from St. Petersburg, Russia, for their celebrated Continental Metallic Shingle, also from South America for a large quantity of their corrugated galvanized iron.

THE life of an ordinary roof or outside paint runs all the way from two to five years, and it should be of personal interest to many to know of a paint that will resist acids or alkalies and withstand the wear and tear of the elements for ten or fifteen years. This seems to be a remarkable length of time, but the statement is vouched for by well-known people who have used Dixon's Graphite Paint, made by the Joseph Dixon Crucible Company, of Jersey City, New Jersey. They claim that graphite paint is not only durable but handsome, and equally useful for all outside wood or metal work where a dark paint can be used.

THE Babcock & Wilcox Company has just issued from the press a twenty-third edition of "Steam," a fact that in itself is sufficient evidence of the general appreciation of the treatise as a standard authority on steam generation. The present edition has been made more valuable than its invaluable predecessors by the addition of, among other new important matter, a lecture on circulation of water and a table and formula on equation of pipes. The table on properties of steam, too, has been made entirely new to conform to the latest investigations of Professor Peabody. So complete in all that pertains to the important mechanical force of which it treats is the present edition, that it would seem as if there could be no occasion to add to the contents of any future editions, that undoubtedly will follow, since it cannot be otherwise than the book will remain a standard authority. As a matter of course, emanating from such a source, a reasonable portion of the book is devoted to an exposition of the various steam-generating apparatus that has given the company a world-wide fame, and the superiority of which was attested by carrying off the grand prize at the Paris Exposition in 1889. This latest edition comprises over one hundred and fifty pages, appropriately illustrated and indexed and handsomely bound in beveled muslin boards with title and monogram embossed on them in gold.

THE Cincinnati Corrugating Company, long and prominently known as manufacturers of high grades of corrugated and other forms of iron and steel sheets for roofing purposes, last year added a galvanizing plant to their other interests. It is a matter of congratulation to the trade that they have succeeded in establishing for their galvanized sheets the same degree of excellence so long characteristic of their corrugated and other roofing plates. The location of the company is such as gives them superior advantages for shipping, and their stock is large and varied and the company are in the front rank for promptness and excellence in executing orders. Their "Piqua" brand of galvanized iron compares favorably with the best there is in the market.

THE basis of success in most all lines of business is unquestionably obtained through a judicious investment of capital in newspaper advertising, and in this line Messrs. Parvin's Sons, Cincinnati, have had exceptional success in serving their customers, and placing them upon that safe plane of money making. With a business reputation of forty years the firm of S. H. Parvin's Sons stands preëminently high and second to none in this country, and have gained an enviable reputation for clean methods, just dealings and upright conduct. Many advertisers have intrusted their business with this firm uninterruptedly for twenty-five years. This is strong evidence of the good reputation of their advertising agency, which has become a recognized institution in Cincinnati's growth and development.—*Cincinnati Commercial Gazette, March 27, 1891.*

MR. W. R. LYLE, of Ripon, Wisconsin, has brought out a novelty in screen doors that looks as if it could not fail to meet with a very general appreciation. It is constructed after the manner of the ordinary screen door, with this difference: By the provision of grooves, panels can be inserted to cover completely the wire netting, thus permitting every door to be changed, at a minimum amount of trouble, into a storm door. Anyone can see this happy thought puts an end to the heretofore nuisance of putting up and taking down screen and storm doors and storing them away when out of their season and, in fact, of the need of having the two sets of doors at all in a mild climate. A feature of Mr. Lyle's invention is that it can be applied to the old-style screen doors at little expense. No doubt the Lyle screen door will be much used in the future. Its merits are too apparent to question that result.

DURING the past year Vaile & Young have erected a four-story warehouse at No. 216 North Calvert street, Baltimore, which they are now occupying, and is another addition to the improvements lately made in that locality. The building covers a lot 30 by 100 feet, and is a handsome and substantial structure of brick and stone, with copper cornice and balustrade, the treatment of architecture being romanesque. Messrs. Baldwin & Pennington were the architects, and Messrs. S. H. & J. F. Adams, the builders. The steadily increasing demand for their patent metallic skylight, which is a system of glazing without putty, has necessitated new and larger quarters, with improved machinery and facilities. Theirs is distinctly a home invention and manufacture, and the demand for it, coming from all parts of the country, is creditable to the enterprise and skill of Baltimore manufacturers. Among the shipments they have lately made is one for a large order to Nebraska, for the Chicago, Burlington & Quincy railroad.

ADVERTISERS' TRADE DEPARTMENT—Continued.

To Whom it May Concern.

The property and business of the Ruttan Warming & Ventilating Company and the Ruttan Manufacturing Company, including all patents, patterns, trade marks, good-will, accounts, contracts and other property of said companies having been purchased by *The Smead* Warming & Ventilating Company, all correspondence in relation to the business of all said companies should be addressed to *The Smead* Warming & Ventilating Company, 324 Dearborn street, Chicago.

THE SMEAD WARMING & VENTILATING COMPANY,
STERLING L. BAILEY, President,
JAMES G. BAILEY, Vice-President,
FRED M. BAILEY, Secretary and Treasurer.

Trade Notes.

CHICAGO ANDERSON PRESSED BRICK COMPANY will remove from their present quarters in the Calumet building to better appointed and more commodious offices, Nos. 1015 to 1021 in the "Rookery," before May 1.

MERCHANT & CO., whose fame as extensive dealers in metals and roofing tins is world-wide, seemingly want to "out-Herod Herod" their notoriety in this department of builders' materials. Every now and then they send out some artistic reminder that they are vigorously in the field of competition. Their latest, which has just reached THE INLAND ARCHITECT table, is a large, handsomely printed chromo-lithograph, showing the greatest engineering achievements of the present century, namely, Forth Bridge, Eiffel Tower, Brooklyn Bridge, Bartholdi's Statue of Liberty, Washington Monument, Washington Bridge and the Poughkeepsie Bridge. As an artistic advertisement it is a credit to the firm, the designer and printer.

THE rapidly increasing business of the Chicago branch house of the B. F. Sturtevant Company, of Boston, has necessitated its removal to new and much larger quarters at 16 South Canal street, Chicago, where an entire new building now furnishes ample accommodations for the large stock of blowers, exhausters, heating and drying apparatus, portable forges and steam engines. This branch will remain under the energetic control of Foss & Noble, and will form the headquarters for the trade of the middle and western states. This stock will be greatly increased in order to provide for immediate shipment in all cases, and a corps of experienced engineers will be maintained to estimate upon and install plants for heating, ventilating, drying, etc.

MR. W. A. BASS, manager of the Streator (Ill.) Art Glass Company, has been spending a week in Chicago, with specimens of mounted ornamental glass in metallic frames manufactured by his company, for the purpose of giving the architects and glass men of the city a full opportunity to examine the merits of a recent invention of which the company is the sole owner. The invention or device consists, in lieu of the olden time leaden matrix method of setting ornamental architectural glass, in forming them of either copper, brass, nickel or aluminum and by soldering them together composing a firm framework so stable as to require no rods or staywires to maintain its unity. These matrices are made by bending strips of the above named metals to a rabbet with base and sides of equal dimensions, said dimensions being governed by the settings they are to receive. The ductility of the metals suggests the almost infinite variety of forms of matrices they may be bent into. The specimens Mr. Bass had on exposition showed every variety of modern art glass mounting for windows, doorlights, transoms, etc., even to compositions of heavy beveled glass and jewels, in which no support other than the framed matrices themselves afforded, and which were as solid as though they were one solid plate. It would seem this method must come into common acceptance. Certain it is, a number of leading architects have given it their unqualified praise.

Railroad Notes.

SAVE $36.50 TO CALIFORNIA.—J. C. Judson & Co's personally conducted California excursions in broad gauge Pullman tourist sleeping cars, via Denver & Rio Grande Railroad, (the scenic line of the world) leave Chicago via Chicago & Alton Railroad, 12:00 noon Saturday of every week, each excursion in charge of an efficient and gentlemanly excursion manager. Pullman tourist sleeping cars through from Boston and Chicago to San Francisco and Los Angeles. For rates, reservation of berths, etc., call on or address J. C. Judson & Co., 195 Clark street, Chicago.

TRAVELERS and tourists contemplating a visit to the Pacific coast should bear in mind the Lake Superior, St. Paul & Union Pacific, a new passenger and freight line formed by the Chicago, St. Paul, Minneapolis & Omaha and Union Pacific railways. This line strikes about all the important far western towns and cities, i. e., of Nebraska, Montana, Idaho, Utah, Wyoming, Washington, Oregon and California, and reaches the coast several hours sooner than any other route. The accommodations are first-class in every respect and the fare as low as the lowest. Special excursion trains are run, leaving St. Paul and Minneapolis every Thursday morning. For fuller particulars address T. W. Teasdale, general passenger agent, St. Paul.

WILL you join the colony now organizing to locate in Maryland, between the cities of Baltimore and Washington? Here are fine farming lands, low in price, adapted to *every* branch in agriculture; an abundance of pure soft water; delightful and healthful climate; near to the best markets in the world; unsurpassed railroad facilities, with low freight and passenger rates, with quick time; educational advantages second to none; churches representing almost all denominations; refined and cultured society, etc. Only a few more wanted to complete the colony, and if you want to join in one of the best opportunities of a lifetime, *now* is the time; farmers, business men, mechanics and laborers—there is a chance for all. One hundred per cent profit easily assured in three years. Full information free of charge furnished by M. V. Richards, land and immigration agent, Baltimore & Ohio railroad, Baltimore, Maryland.

ARTISTIC CALENDARS.—The Chicago & Grand Trunk railway's series of illustrated calendars for 1891, if possible, excel their issue of previous seasons, and which have become generally well known. Each calendar is a reproduction from nature in the highest quality of photogravure art. Many thousands have been mailed gratuitously to personal addresses. Additional copies of any of the set will be sent free on receipt of 10 cents each, in stamps, by addressing W. E. Davis, general passenger and ticket agent, Chicago & Grand Trunk railway, Chicago, Illinois. The full set contains the following: Suspension Bridge, Niagara Falls; City and Harbor, Kingston, Ontario; On the Rideau River; Descending the Lachine Rapids; Among the Thousand Islands; Gateway to the White Mountains; City and Fortifications of Quebec; Giant of the Valley, Adirondacks; Storm off White Head; Old Fort Chambly.—*Chicago Herald.*

DISTANCES TO WASHINGTON.—From St. Louis to Washington the distance is 894 miles; from Cincinnati to Washington 553 miles; from Chicago to Washington 813 miles. This is via the bee line followed by the Baltimore & Ohio Railroad, the most picturesque as well as the most direct route from the Mississippi river to the Atlantic seaboard, stretching across level and fertile prairies, amid hills and valleys, over mountain crests, along banks of historic rivers, through teeming cities and bustling towns. The through Baltimore & Ohio trains, with full Pullman equipment of sleeping, parlor and buffet cars, run from St. Louis to Washington in 29 hours; from Cincinnati to Washington in 18 hours; from Chicago to Washington in 25 hours. Sleepers from all points run through to New York from the West without change. At Washington connection is made with the Baltimore & Ohio's matchless Royal Blue Line for Baltimore, Philadelphia and New York. These Royal Blue trains consist of the stanchest and finest coaches, parlor and sleeping cars ever built by the Pullman Company.

PROPOSALS.

SUPERVISING ARCHITECT'S OFFICE,
WASHINGTON, D. C., April 3, 1891.

SEALED PROPOSALS WILL BE RECEIVED AT the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P.M., on May 1, 1891, for furnishing all the labor and materials required to put in place complete the system of plumbing for the United States Court House, Postoffice, etc., building at Clarksburgh, West Virginia, including the finishing of the four rooms in attic, in accordance with the drawing and specification, copies of which may be had on application at this office, or the office of the Custodian, of Clarksburgh, West Virginia. Each bid must be accompanied by a certified check for $100. The department will reject all bids received after the time herein stated for opening the same; also, bids which do not comply strictly with all the requirements of this invitation. Bids must be inclosed in envelopes, sealed and marked, "Proposal for the completion of plumbing, attic, rooms, etc., for the United States Court House and Postoffice, etc., building at Clarksburgh, West Virginia," and addressed to JAMES H. WINDRIM,
Supervising Architect.

SUPERVISING ARCHITECT'S OFFICE,
WASHINGTON, D. C., April 4, 1891.

SEALED PROPOSALS WILL BE RECEIVED at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P.M., on April 28, 1891, for all the labor and materials and putting in place complete one hydraulic passenger and two hydraulic freight elevators, including cylinders, pumps, pressure and discharge tanks, piping, cars, platforms, etc., in the United States Appraiser's Stores building at Chicago, Illinois, in accordance with the drawings and specification, copies of which may be had on application at this office or the office of the superintendent, at Chicago, Illinois. Each bid must be accompanied by a certified check for $200. The department will reject all bids received after the time herein stated for opening the same; also, bids which do not comply strictly with all the requirements of this invitation. Proposals must be inclosed in envelopes, sealed and marked, "Proposal for one hydraulic passenger and two hydraulic freight elevators for the United States Appraiser's Stores building at Chicago, Illinois," and addressed to
JAMES H. WINDRIM, Supervising Architect.

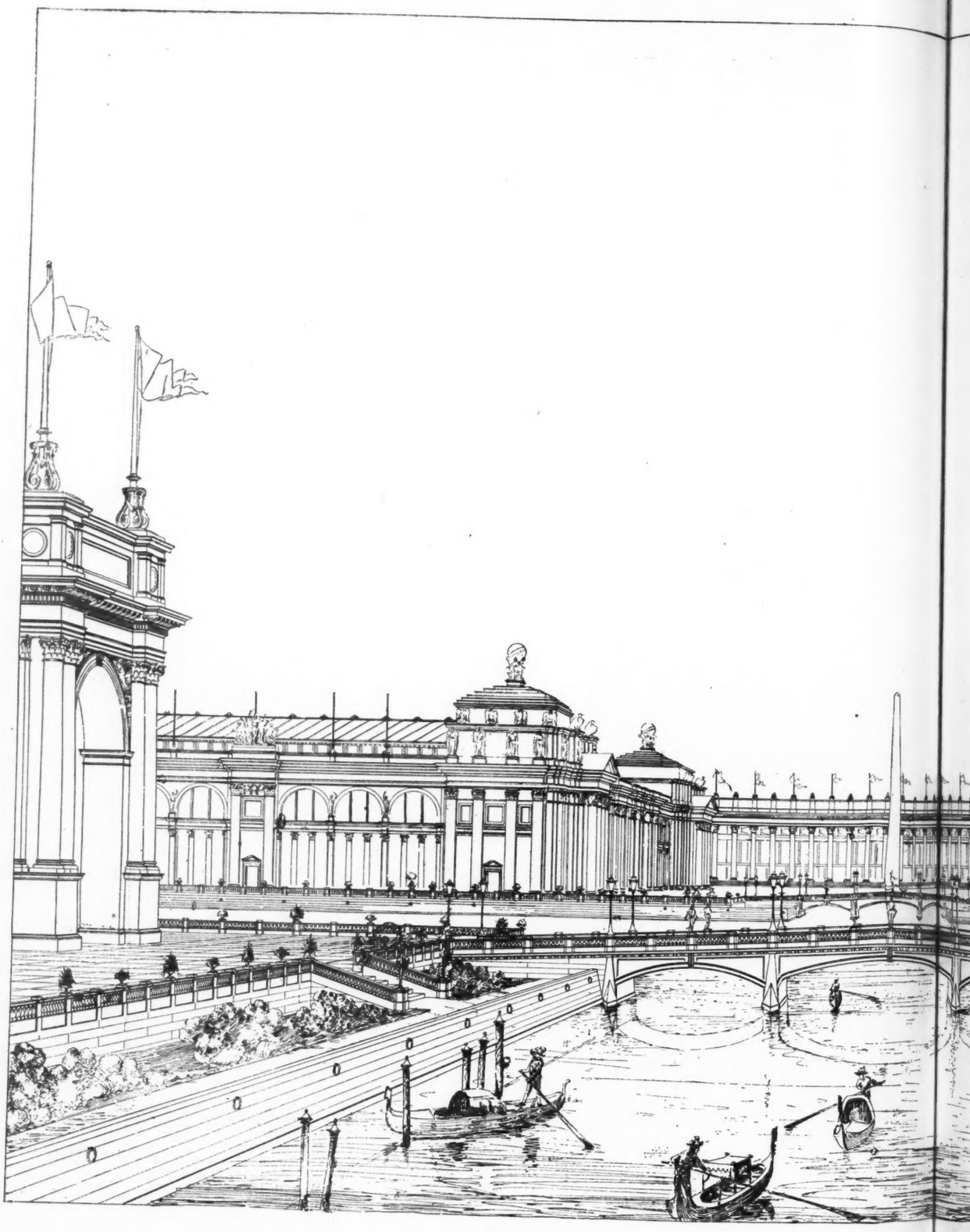
FIRST PRIZE OF $2,500, SECOND PRIZE OF $500, will be paid by the Board of Commissioners of the Orleans Levee District for the best plans, with specifications, for protecting the districts within the boundaries defined by the board against overflow from river, lake or rainfall.

The award will be made on June 1, 1891.

The successful plans to become the property of the Board.

The Board reserves the right to reject any and all plans.

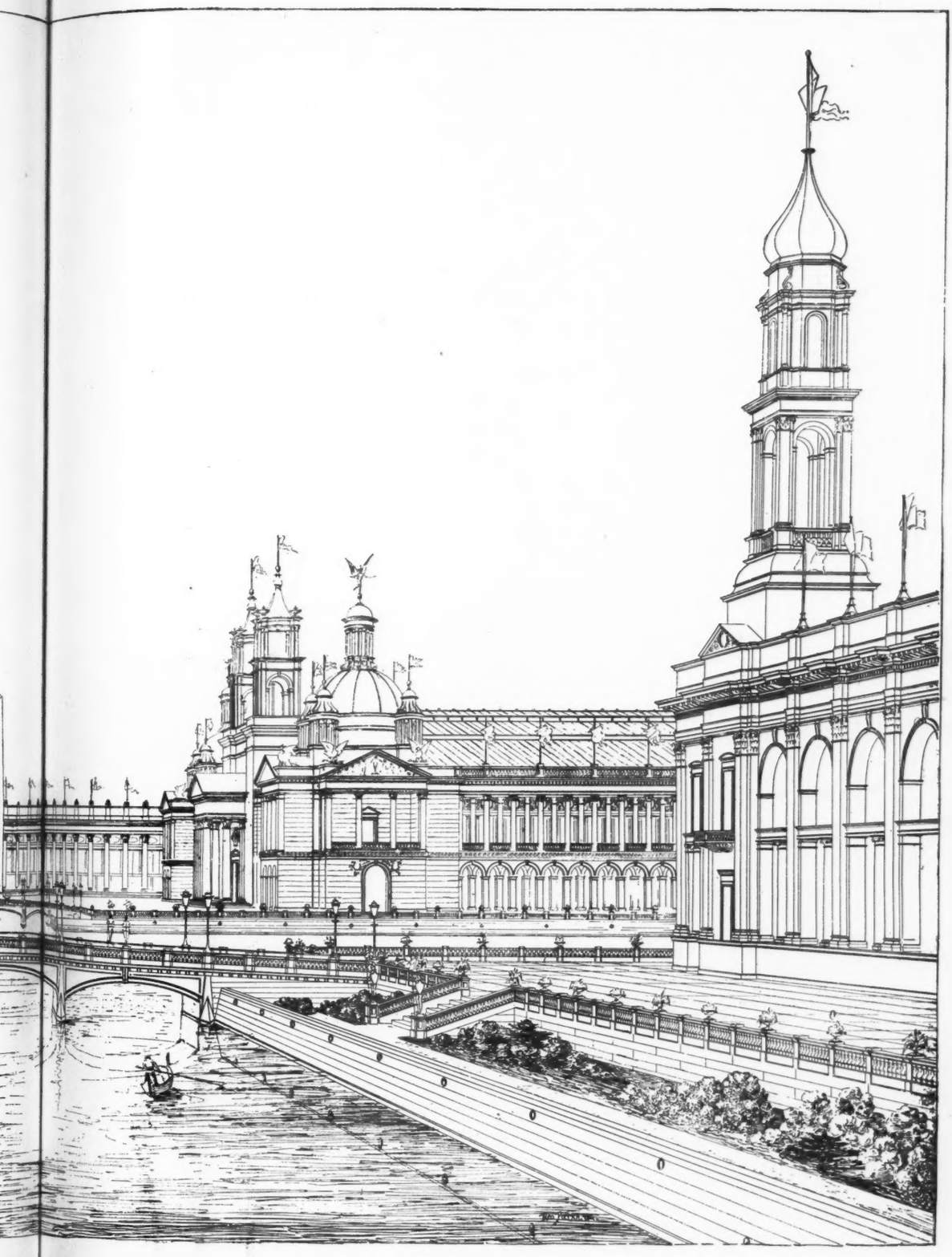
For further particulars apply to
F. J. DREYFOUS, President,
No. 5 Commercial Place, New Orleans.



PERSPECTIVE VIEW, LOOKING SOUTH, SHOWING SOUTHERN END OF WORLD'S COLUMBIAN EXPOSIT

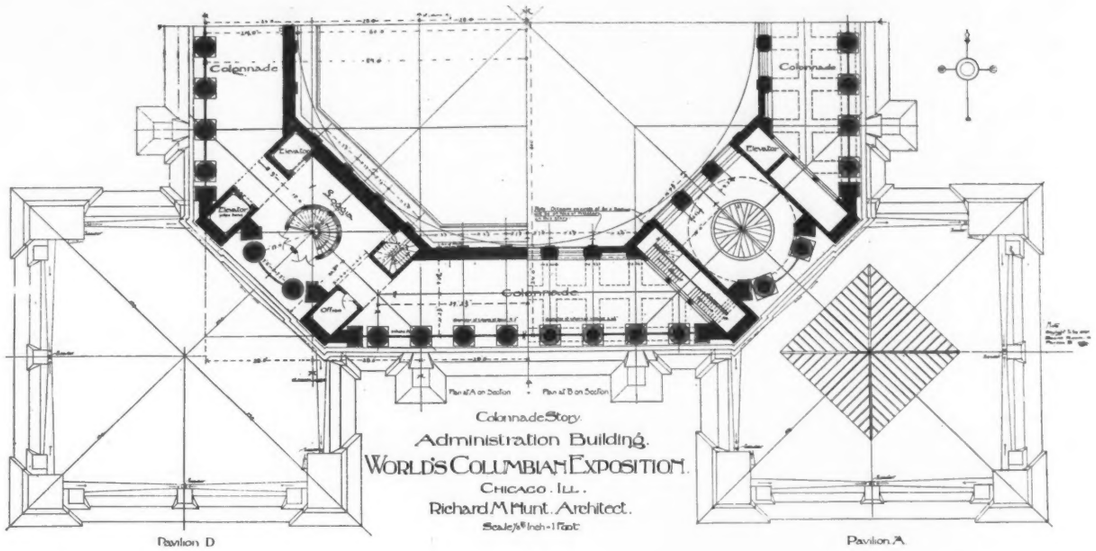
Manufactures and Decorative Arts. Agricultural Building. Colonnade connecting Agricultural Bui and Ma

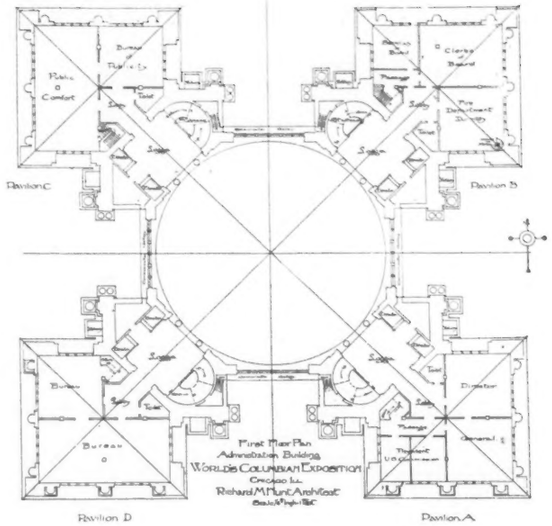
Lagoon and Bridge.

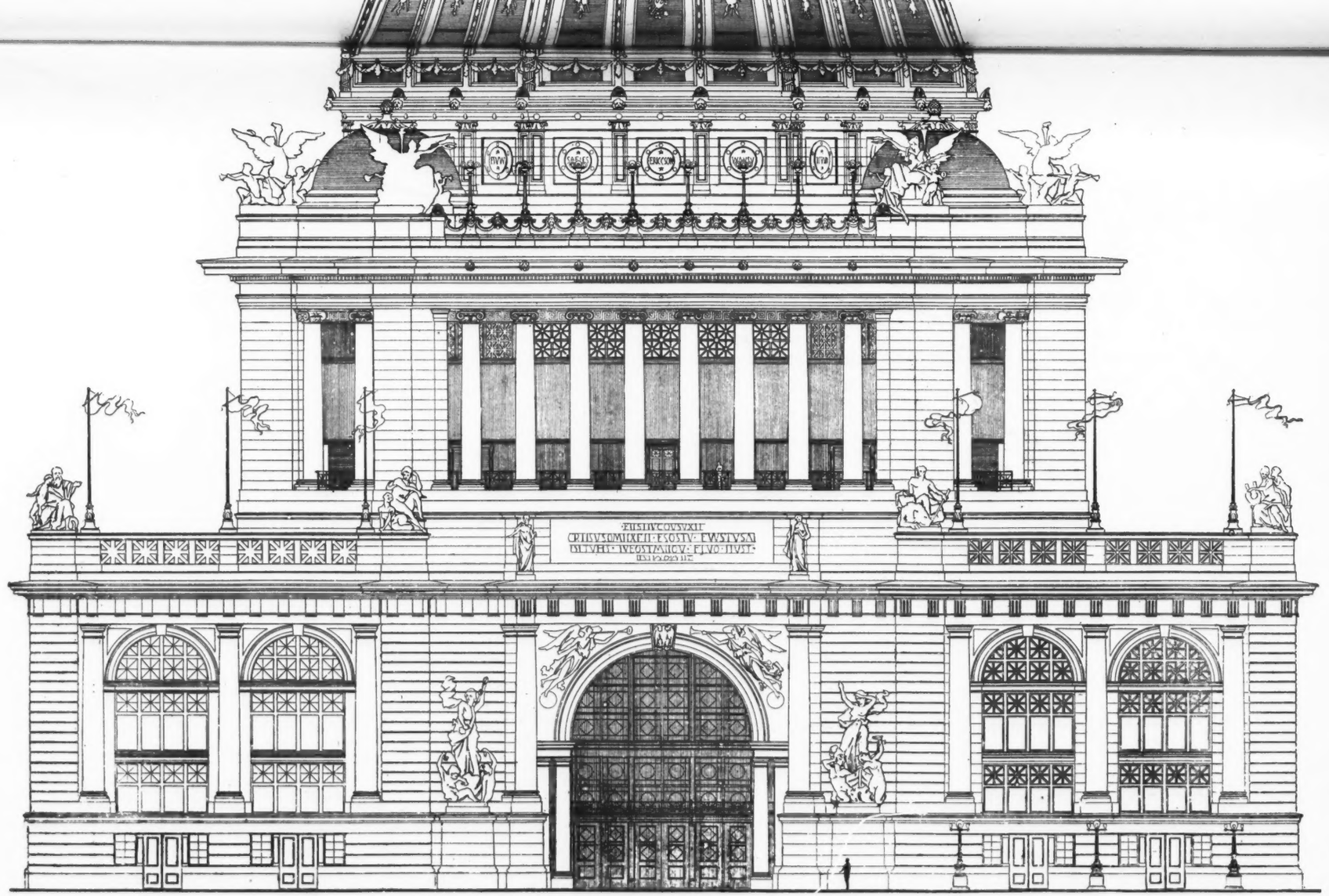


UMBIAN EXPOSITION BUILDINGS AND GROUNDS. DEPARTMENT OF CONSTRUCTION, APRIL, 1891.

ural Building and Machinery Hall. Machinery Hall. Electricity Building.
nd Bridge.


Colonnade
Colonnade
Elevator
Elevator
Colonnade
Plan of A on Section
Plan of B on Section
Colonnade Story.
Administration Building.
WORLD'S COLUMBIAN EXPOSITION.
CHICAGO. ILL.
Richard M. Hunt. Architect.
Pavilion D
Pavilion A


Pavilion C
Pavilion B
First Floor Plan
Administration Building
WORLD'S COLUMBIAN EXPOSITION
Chicago Ill.
Richard M. Hunt Architect
Pavilion D
Pavilion A



DESIGN OF ADMINISTRATION BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO—EAST ELEVATION.
DEPARTMENT OF CONSTRUCTION, APRIL, 1891.

RICHARD M. HUNT, ARCHITECT, NEW YORK.

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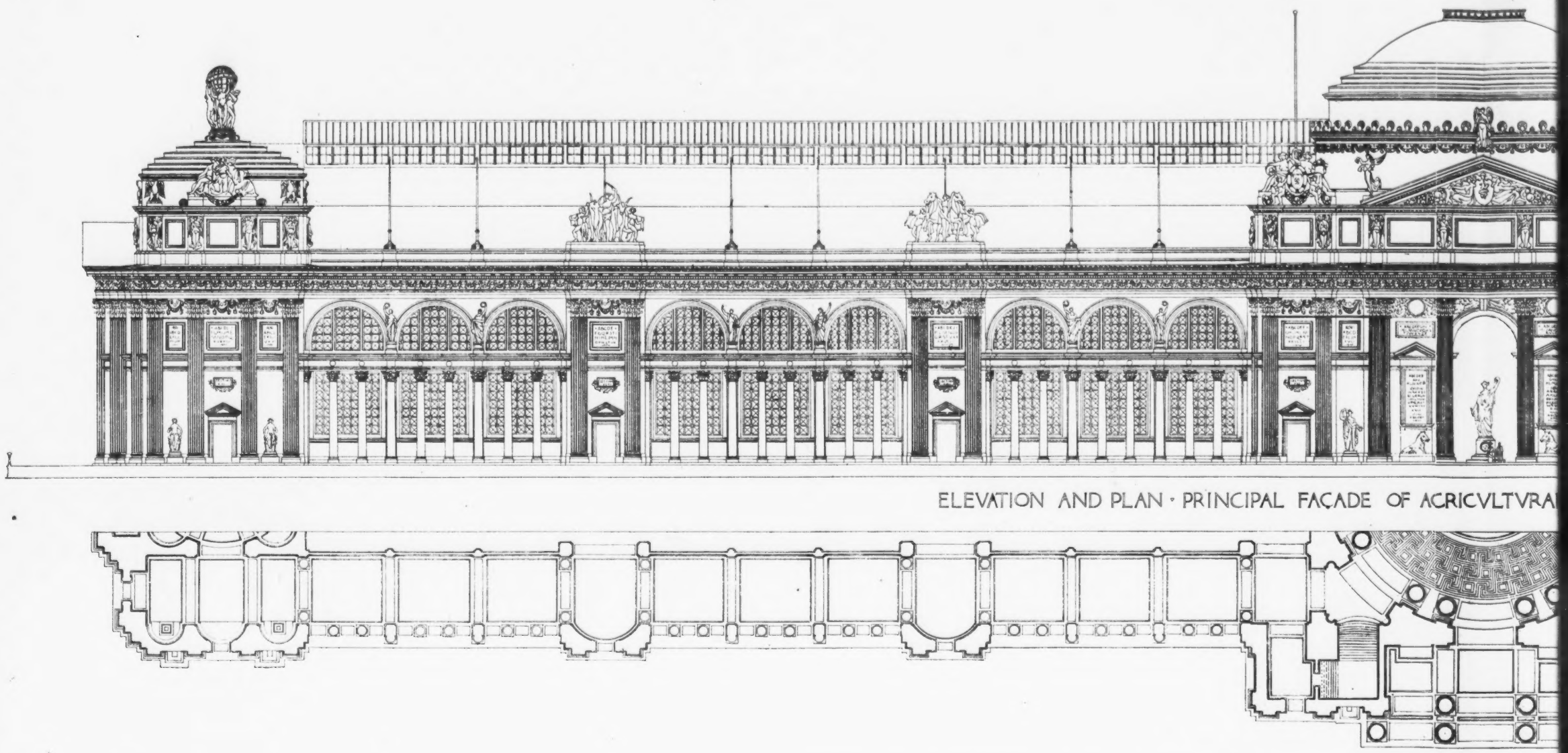
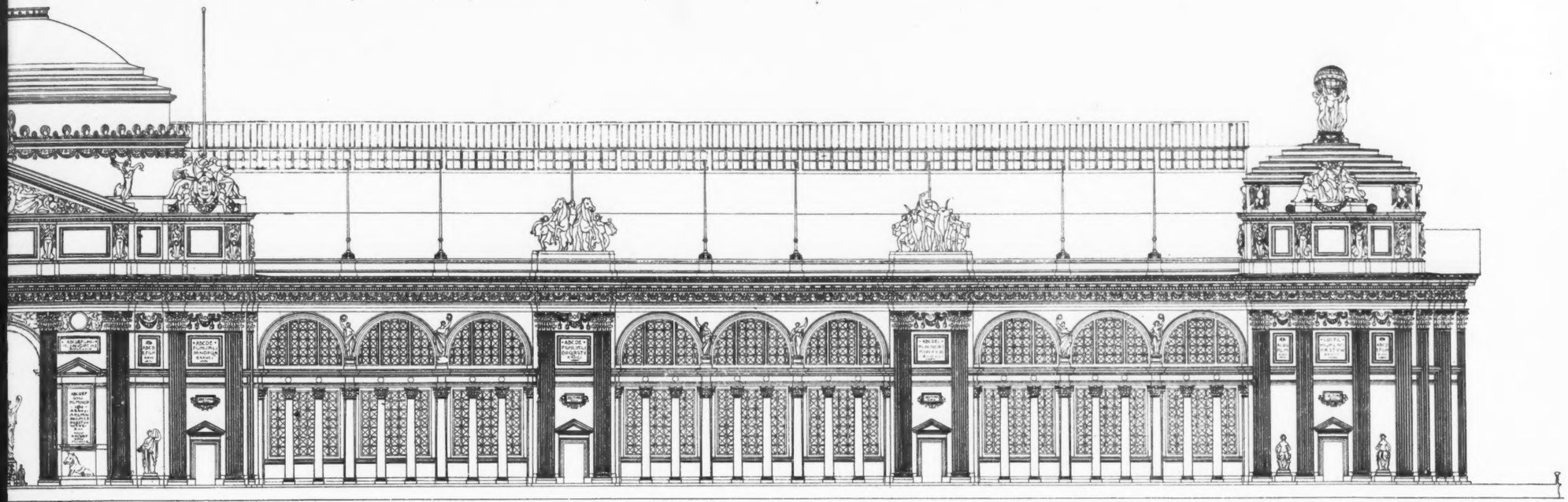


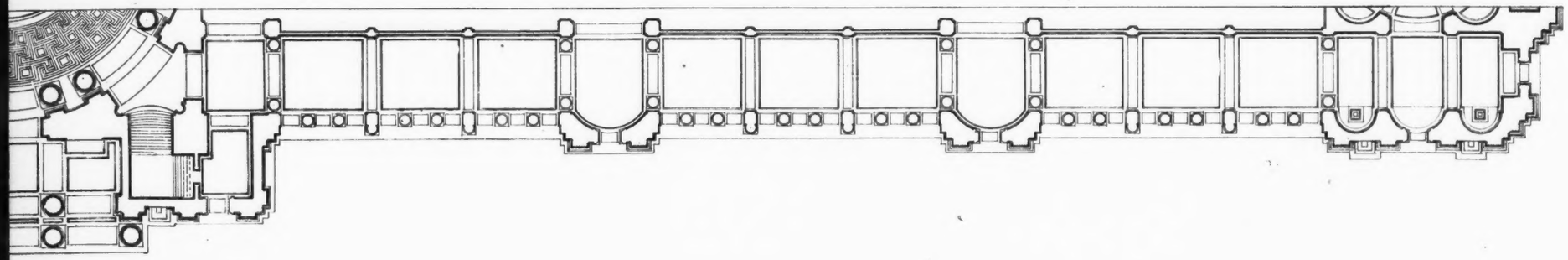
ELEVATION AND PLAN · PRINCIPAL FAÇADE OF AGRICVLTVRA

DESIGN OF AGRICULTURAL BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO

McKIM, MEAD & WHITE, ARCHITECT



VLTVRAL BVILDING · WORLD'S COLVMBIAN EXPOSITION

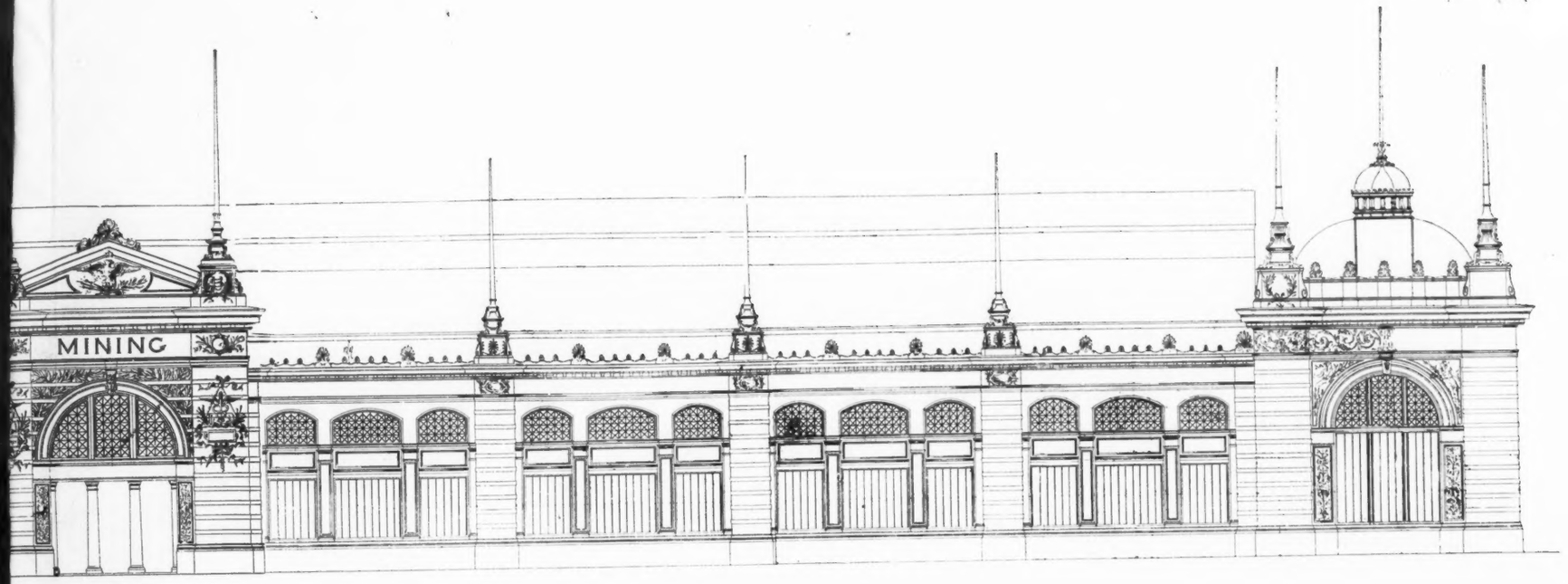


CHICAGO — MAIN ELEVATION. DEPARTMENT OF CONSTRUCTION, APRIL, 1891.

ARCHITECTS, NEW YORK.

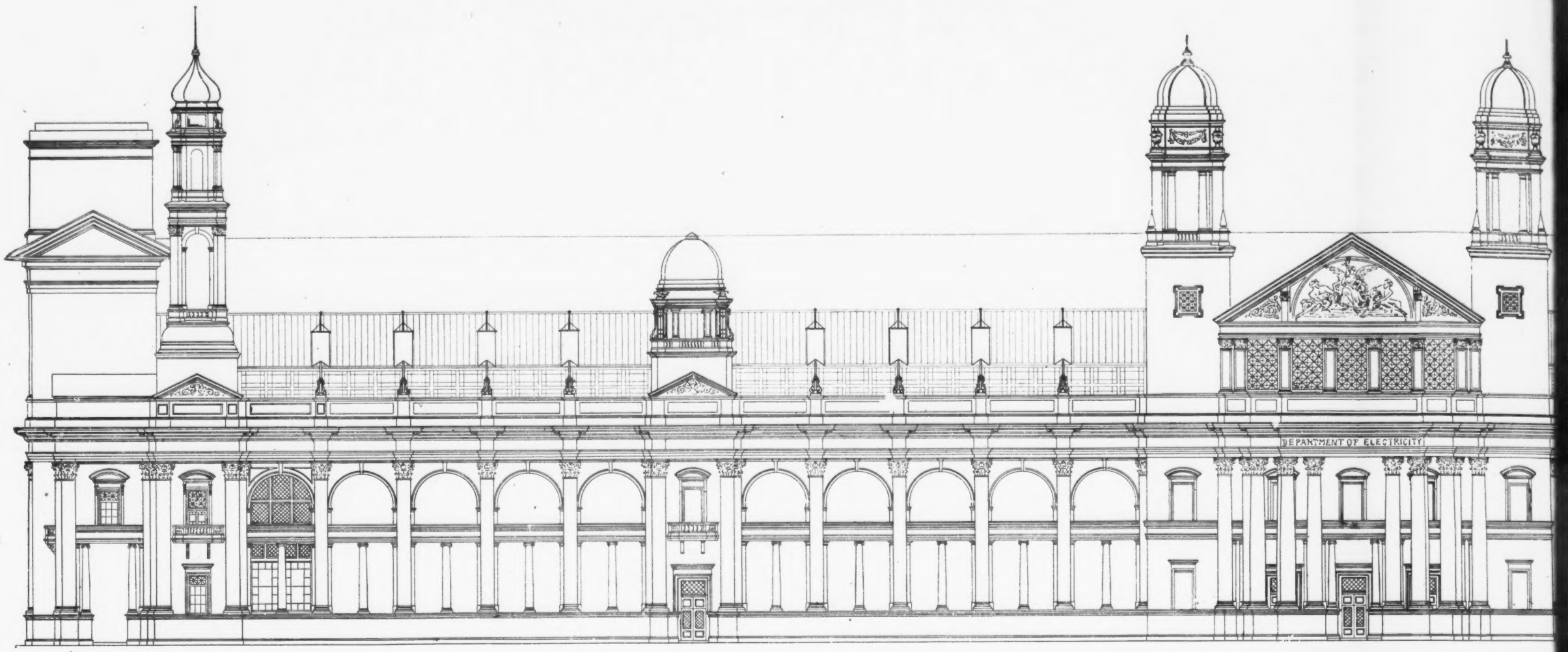
DESIGN OF MINES AND MINING BUILDING, WORLD'S COLUMBIAN EXPOSITION,

S. S. BEMAN, ARCHI



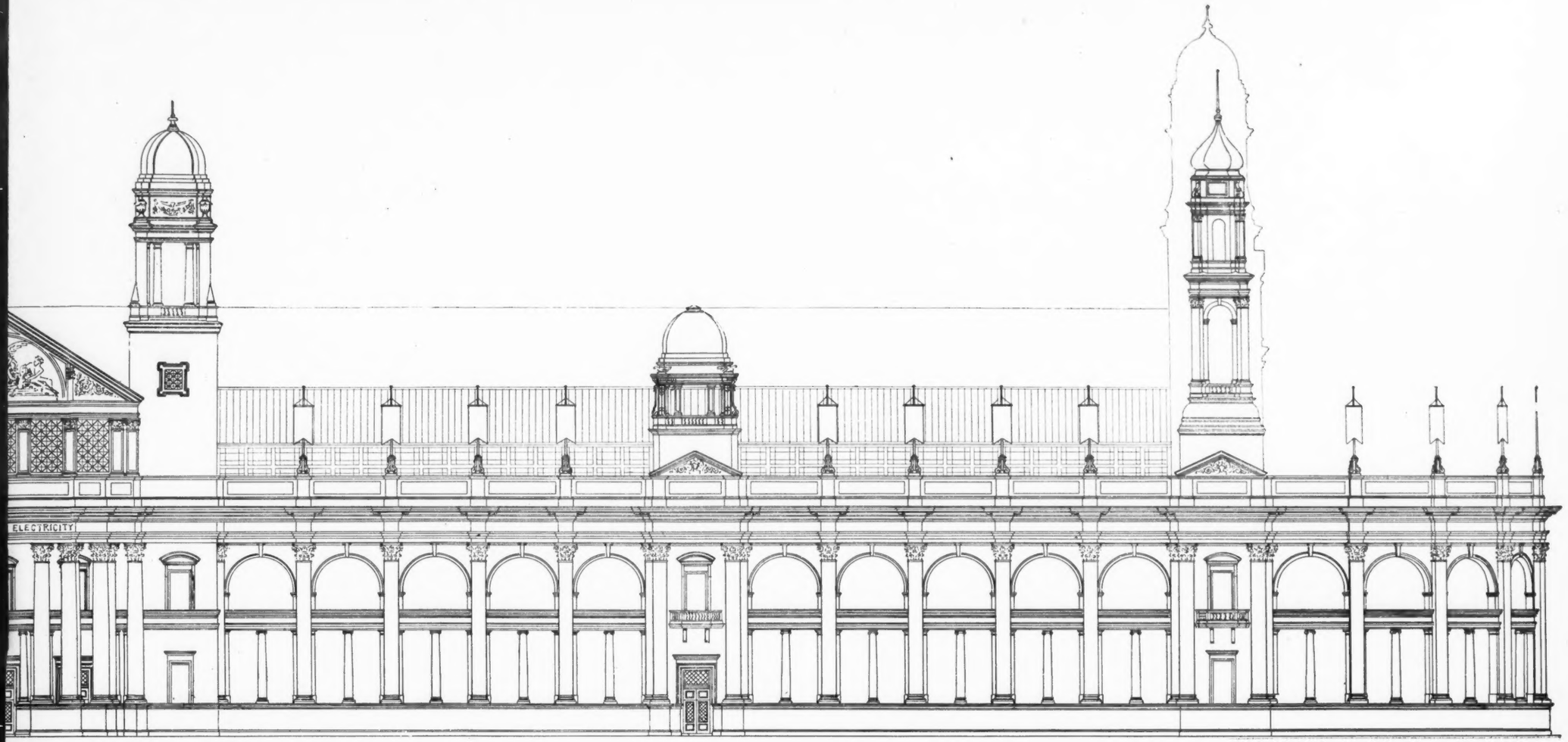
EXPOSITION, CHICAGO — EAST ELEVATION. DEPARTMENT OF CONSTRUCTION, APRIL, 1891.

BEMAN, ARCHITECT, CHICAGO.



DESIGN OF DEPARTMENT OF ELECTRICITY, WORLD'S COLUMBIAN EXPOSITION, CHICAGO—EA

VAN BRUNT & HOWE, ARCHITECTS, KANSAS CITY,



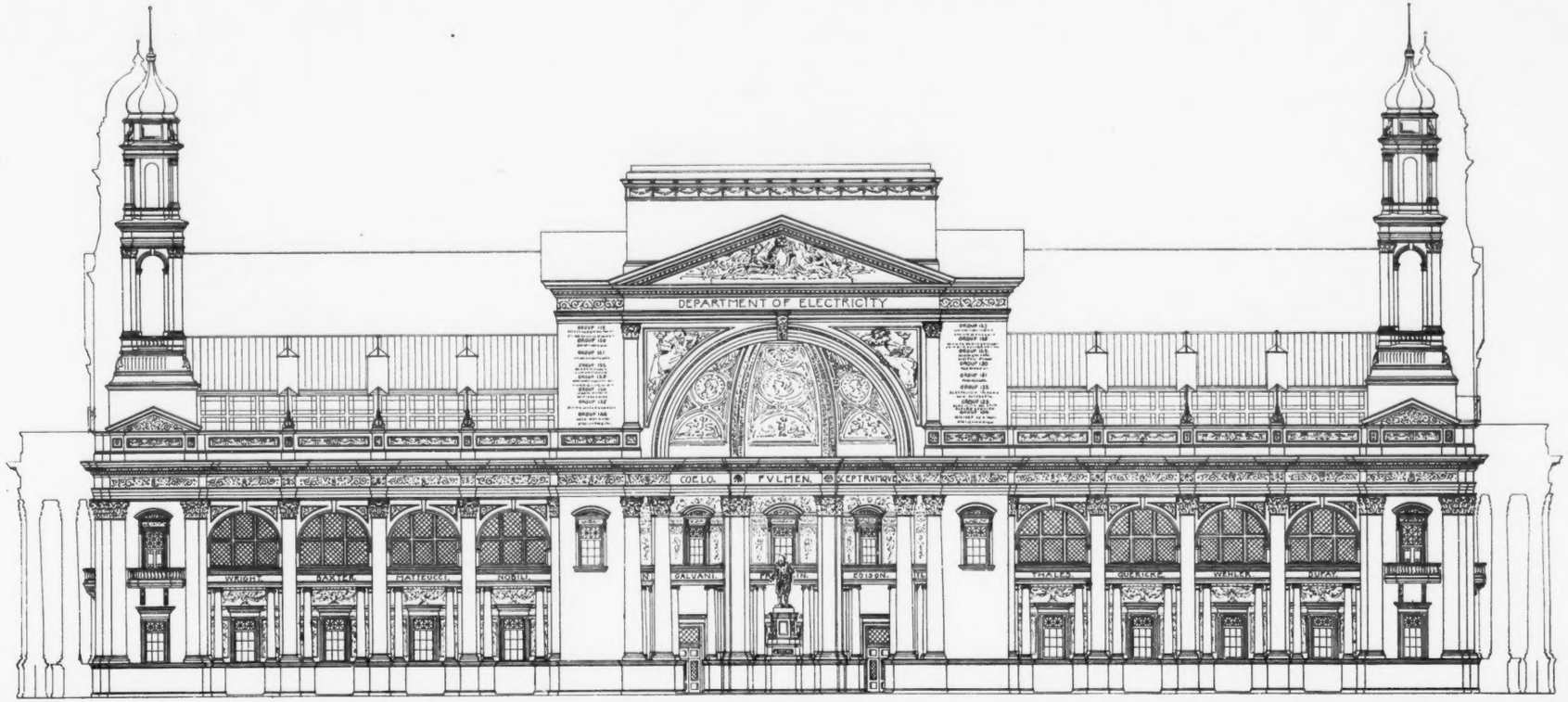
OSITION, CHICAGO—EAST ELEVATION. DEPARTMENT OF CONSTRUCTION, APRIL, 1891.

, ARCHITECTS, KANSAS CITY, MISSOURI.

Worlds Columbian Exposition · Chicago · Ill ·

Electricity Building.

Van Brunt & Howe · Architects · Boston & Kansas City



South Elevation