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#### THE ELECTRIC TOWER.

(John Galen Howard, architect, with the Court of Fountains in the foreground, to the right a dome of the Agricultural Building, photographed from the Tower of the Ethnology Building.)

## ARTISTIC EFFECTS OF THE PAN-AMERICAN EXPOSITION.

BY ERNEST KNAUFFT.

**N**OCTURNAL architecture! Not in the text-books; no chair devoted to it in the universities, but it is a department of architecture that the twentieth century will see developed, and the Pan-American Exposition is responsible for it.

The promulgators of the exposition have builded better than they knew. While, of course, it was planned that the electrical power from Niagara be utilized, while electrical illumination was to be an adjunct to the general architectural scheme, we doubt if it was realized that the elec-

trical illumination would dominate the whole exposition. But it has done so, and he who would visit the exposition at the most opportune time would do well to behold it first at night, and his station point should be not at the Propylæa entrance, but at the southern end of the grounds, where, standing near French's "Washington," he may look northward over the Triumphal Causeway between the great pylons toward the Electrical Tower. Here he will see a unique and imposing sight, that outdoes Chicago, Nashville,

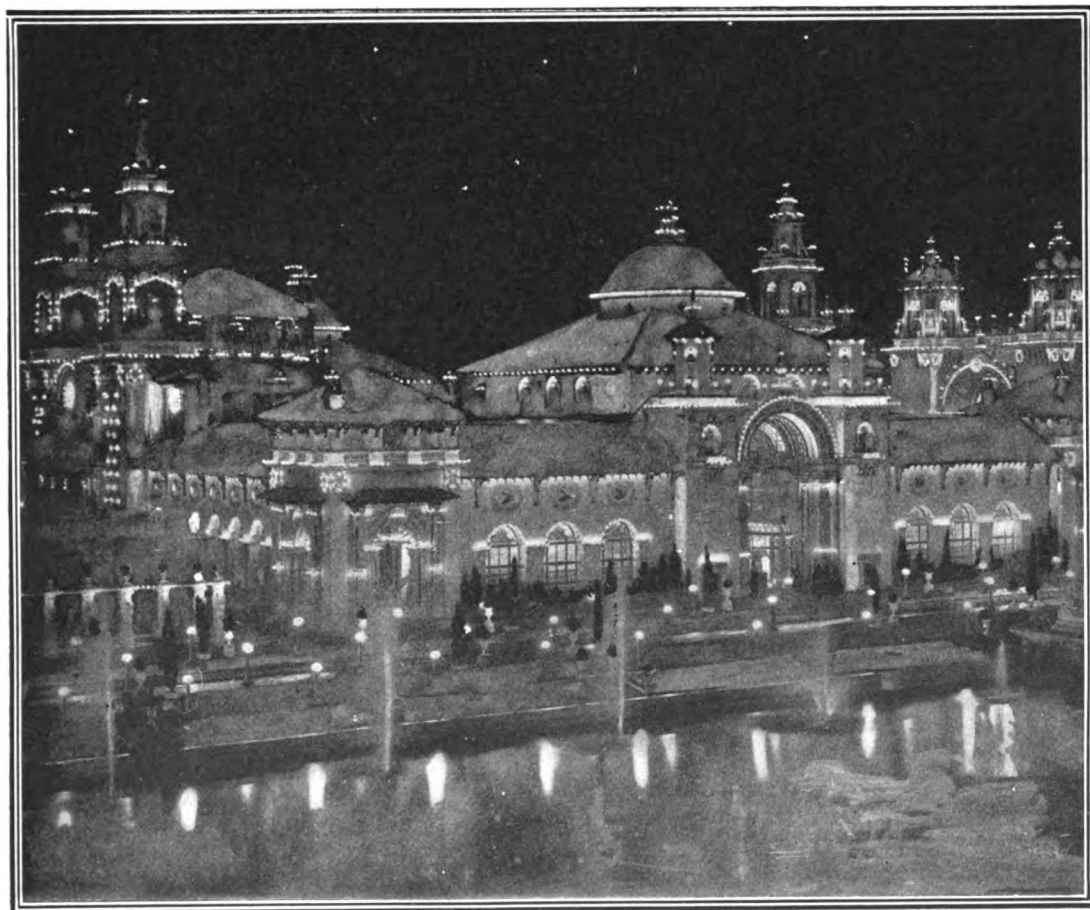
Atlanta, Omaha,—a sight the world has never seen before. At 8 o'clock the ivory city lies half-veiled in the dusk, when suddenly, but gradually, on every cornice, every column, every dome, break forth tiny pink buds of light as though some eastern magician were commanding a Sultan's garden to bloom. A moment more, and the pink lights grow larger and take on a saffron hue, and the whole exposition lies before us illumined by 500,000 electric flames (the eight-candle power incandescent light which Mr. Edison, who developed it, has proclaimed his pet)—and these delicate lights, some single, some bunched, bring out a thousand delicate tints, now playing hide and seek amid many cartouches, terminals, and arabesques, now Rembrandting the stucco reliefs, and delicately toning down the color, till the effect is strikingly *allegro*.

At one of the early nights of the exposition, a

small boy having evidently made a day's tour of the grounds till he was tired out and ready to go home, was suddenly surprised, at 8 o'clock, to witness the turning on of the lights, when, to the amusement of the spectators, he cried, "Gee whizz! I'm not going home to-night." This will be the verdict of more than the majority of the spectators, and doubtless many an early evening train will be missed from a desire to stay till the last moment under the magic spell of this vision of supreme beauty.

#### A CONSECUTIVE STORY IN SCULPTURE.

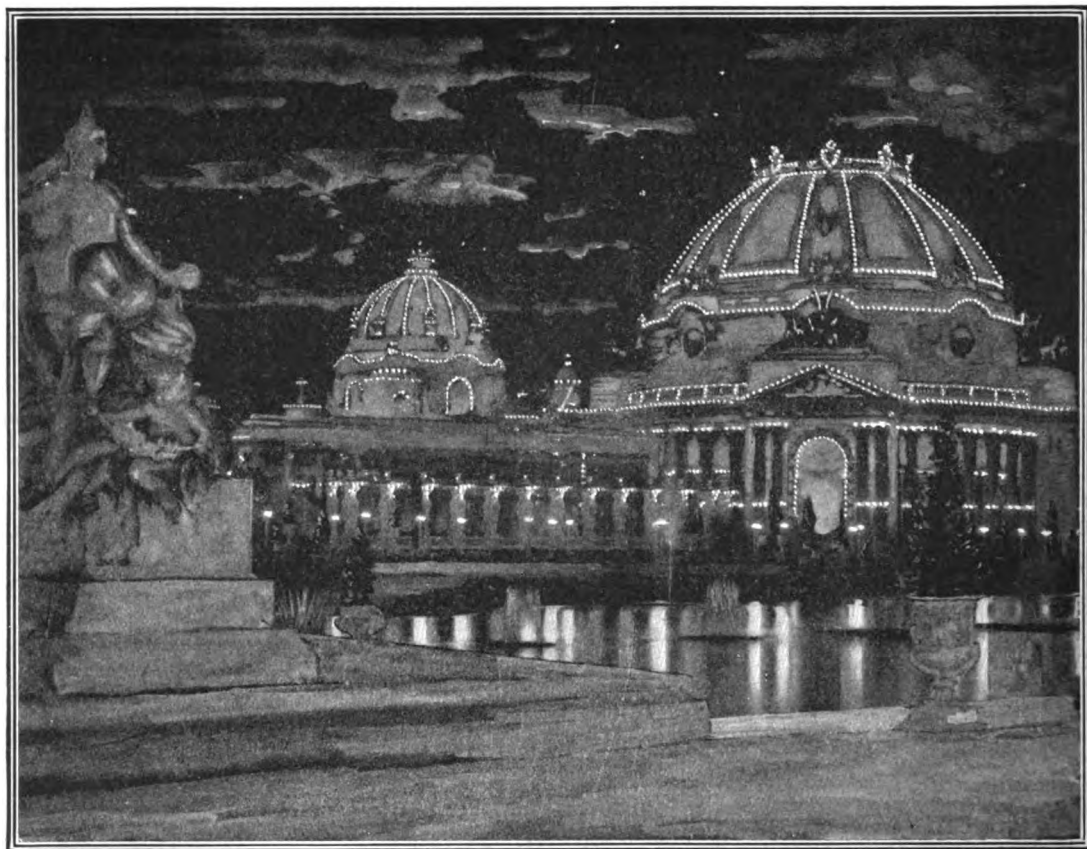
Not only should the visitor at night catch his first glimpse of the exposition from below the Grand Causeway, but the day visitor as well should begin his tour of inspection from that point, for it is here that the sculpture and the color schemes begin. It was Mr. Bitter's idea



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THE MACHINERY BUILDING, TO THE LEFT, AND THE ELECTRICITY BUILDING, TO THE RIGHT.

(Photographed from the towers of the Ethnology Building; with the Court of Fountains in the foreground. To the extreme right, in the Court of Fountains, is the group of "Science," by Lopez—see page 688. His pendant group, "The Arts," is on this side of the basin.)



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**VIEW OF THE ETHNOLOGY BUILDING, FROM ACROSS THE COURT OF FOUNTAINS.**

(The dome of the Government Building is seen to the left, and a fragment of Mr. Lopez' "Science" is in the left-hand foreground. To the left of the Ethnology Building is seen the southwest pergola, with its effective caryatids.)

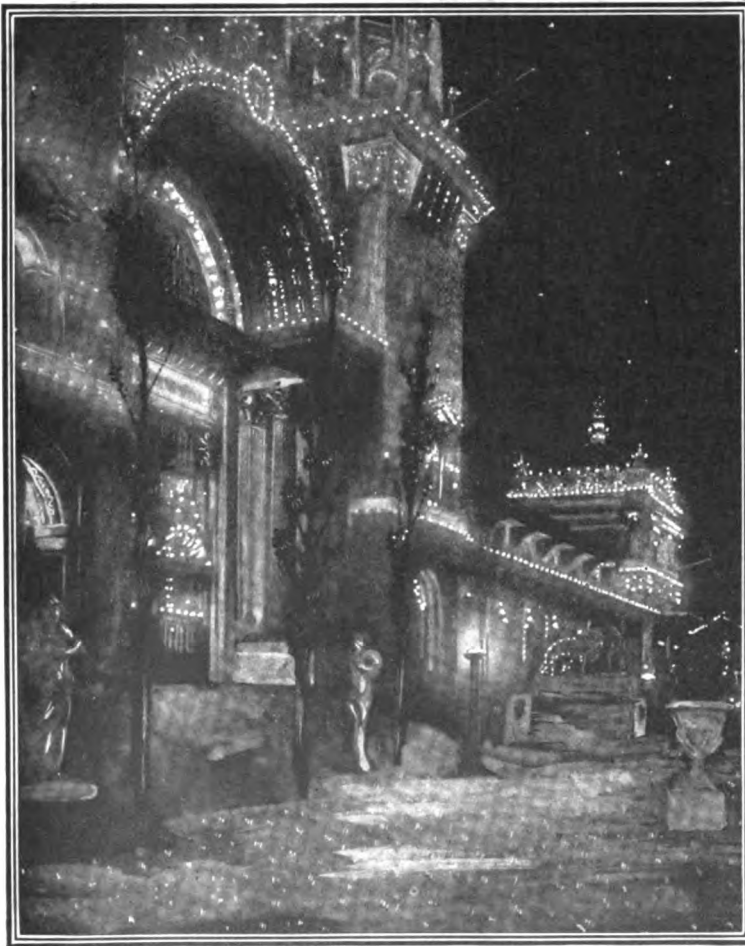
that the ornamental sculpture which was to be a special feature of the exposition should have close relation to the buildings it flanked, and that it should tell a consecutive story; this story is man's fight with, and conquering of, the elements, and on one side (the right, or east) of the spectator, the buildings devoted to man are erected, and on that side the sculptor celebrates his doings; while on the left side we find the elements; here are the Mines and Horticulture buildings, and groups representing man's conquering of the elements, while the culmination of the drama is found at the northern end of the grounds, where, at the Electrical Tower, we find the groups, by George Grey Barnard, "The Great Waters in the Days of the Indian" to the left, and to the right "The Great Waters in the Days of the White Man," and "The Human Emotions," by Paul Bartlett.

In an article in the REVIEW OF REVIEWS for last February were reproduced most of these

sculpture groups; but the public must be warned that they cannot be understood through photographic reproduction, nor in the plaster models which have been shown during the past season at our art exhibits; they must be seen in their environment. They form perhaps part of a fountain, and are white, seen through a rainbow mist of the mounting spray, or they are heavily gilded, and form the apex of a dome, or act as finials above a pediment, or they are ivory-colored in a golden-hued niche, or they are polychromatic; but, unlike any previous sculpture the world has ever seen, they are well illuminated by electric lights, and, like the architecture, present new effects at night. Indeed, all the sculpture, like the buildings, has a twofold beauty, of which the nocturnal effect is the most charming.

As a cornice height of forty-five feet was used as a unit of measurement (or module) in the buildings, which all the architects followed, so

in the sculpture groups harmony is obtained by demanding in every case a height of nine feet for all figures, and just as a certain amount of chance has entered into the nocturnal effect, so a certain element of the unpremeditated has favored the effect of the sculpture groups. For the most part the artists' original models, some three feet high, have been transmuted by the journeymen molders in Mr. Bitter's studio in Hoboken, under a certain tension of haste, into the colossal staff-groups; and while they lose thereby much delicacy of modeling and frequently their equilibrium of pose, there is a certain rough-and-ready style, a dash and vim which runs throughout them all, that excludes any clashing of styles, and feigns, at least, a virility of touch that hints at titanic tasks performed over night.



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DOORWAY OF THE ELECTRICITY BUILDING.

(As seen from the "Sunken Garden" of the mall. Flanking the garden are rows of poplars which the landscape architect has allowed to remain from the original landscape, and they form a most welcome note in the formal gardening.)

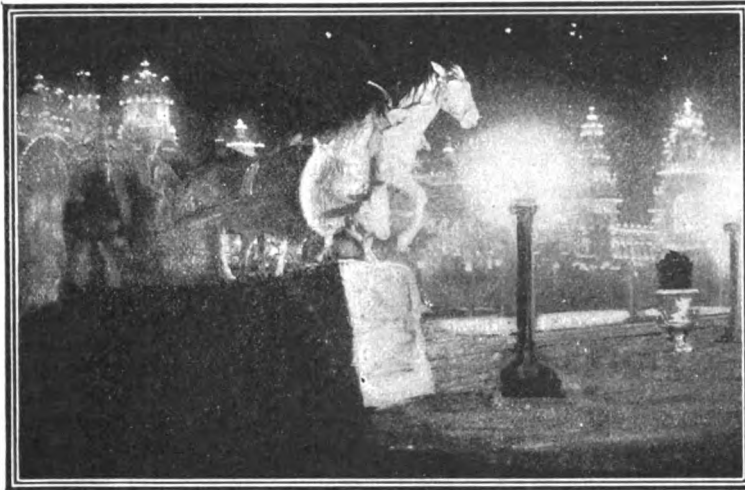
"THE MARBLE FAUN" IN PROPER PLACE.

It has ever been the task of the lecturer and writer upon Greek and Renaissance sculpture to emphasize the fact that the sculptors of the past designed their works for given positions, most frequently out-of-doors; but years of lecturing and volumes of writing could never convince the public of the beauty of out-of-door sculpture as will this single experiment at Buffalo. Even the plaster reproductions from the antique, "The Marble Faun," "The Praying Boy," "The Discobolus," and other familiar figures, set in the pergola of the Propylæa and in the different courts, have a new charm under the varying sunlight, relieved by cypress and bay, or under the delicate electric light, that they do not have in our museums and art schools. We realize, on seeing them here, with what forethought they were originally designed for the embellishment of formal gardens. Thus the architect has, bee-like, gathered his honey from many sources and filled the grounds as Napoleon filled the Louvre—with art treasures from many nations.

ARTISTIC EFFECTS WITH BRUSH AND PAINT-POT.

Mr. Turner, in mapping out his color scheme, adhered to Mr. Bitter's idea of the evolution of man, and one who takes his first glimpse from the south will notice that the coloring upon the buildings at that point begins with the cruder colors, the strong reds, yellows, greens, and blues which the barbarian selects, and it gradually melts into orange reds, gray blues, buffs, and violets, until it culminates at the Electric Tower in ivory yellow, with a setting of the delicate green which repeats the chromatic note of Niagara Falls.

The student of American architecture will find much suggestiveness in the chromatic treatment of these buildings, especially in the details, for it is not to be overlooked that Mr. Turner's success has been achieved en-



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"AGRICULTURE," BY A. PHIMISTER PROCTOR, IN THE COURT OF FOUNTAINS.

(Behind the group is the Machinery Building. To the right, the Electricity Building; beyond, the tower of the Propylæa; and last, one of the wings of the Electric Tower. It is probable that never before in the history of the world has open-air sculpture been seen so plainly at night.)

tirely through the use of house paint. The moral is that in our commercial life the ordinary materials at the disposal of the average citizen are capable of producing most artistic results if they are applied under the guidance of artistic experience.

One of the happiest effects, we think, is where, in the entrance to several of the buildings, the ceramic productions of the past—Luca della Robbia effects—are imitated in fruit and flower garlands, relieved against deep backgrounds of blue and orange. One regrets, of course, that these compositions were not actually executed in faience, so rich in clays is our country, and so rapid has been her ceramic development in recent years, but the faience worker will not be slow, we fancy, to take the hint, and we can expect in the St. Louis Exposition to see a more permanent development of chromatic embellishment.

Permanency must be the chief *desideratum* in architectural embellishment, and gesso, terra-cotta, and tile decorations will, of course, be the fruit of Mr. Turner's more transitory pigment decorations, some of which had already faded ere the exposition opened, and had to be renewed.

Walter Cook, writing of the exposition in *Scribner's* for this month, says, "The brush and palette are every-

where in evidence." The word palette is hardly descriptive. The mural paintings which were a feature of the Chicago Exposition, and literally the product of the palette, are nowhere present. Colored stucco takes its place. Mr. Turner has accomplished his task with the brush and paint-pot. He himself wishes it to be understood that the color he has employed is only meant to be suggestive of possible translation into permanent material, the roofs into tiles, the walls into bricks, buff or gray, the medallions into faience.

#### FREEDOM IN RESTRAINT.

Because we have emphasized the night effect of the exposition and asserted that the electrical effect was the paramount achievement, it

must not be surmised that the original plan of the architect is not responsible for the final beauty of the ensemble, for had not the plan of the exposition been in the hands of architects, who, like Mr. Carrère, and his trained assistant, Mr. Bosworth, have been vigilant in seeing that every detail was properly measured and became a harmonious part of the premeditated whole, the final structure would have been a *mélange*, in-

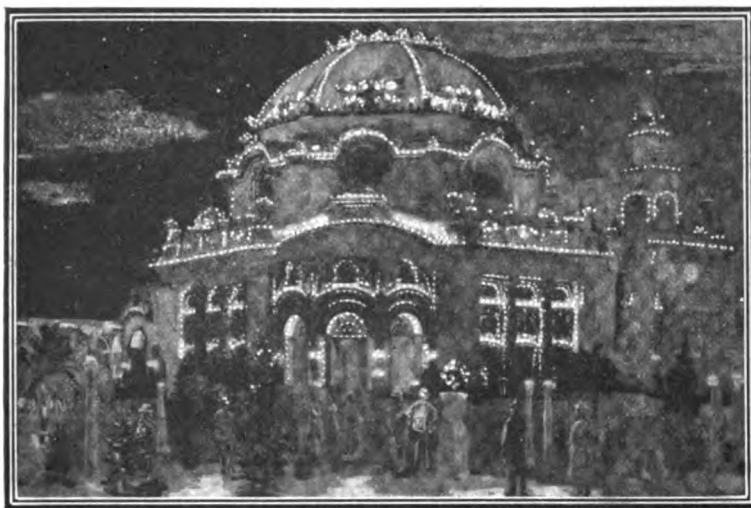


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#### THE ETHNOLOGY BUILDING AT NIGHT.

(The architect is George Cary, of Buffalo, whose portrait we publish because the New York State Building, which he also designed, will be a permanent embellishment of Delaware Park; it will be occupied by the Buffalo Historical Society. Its lines are more chaste than are those of its pendant, the Temple of Music.)





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**THE TEMPLE OF MUSIC. AUGUST C. ESENWEIN, OF BUFFALO, ARCHITECT.**

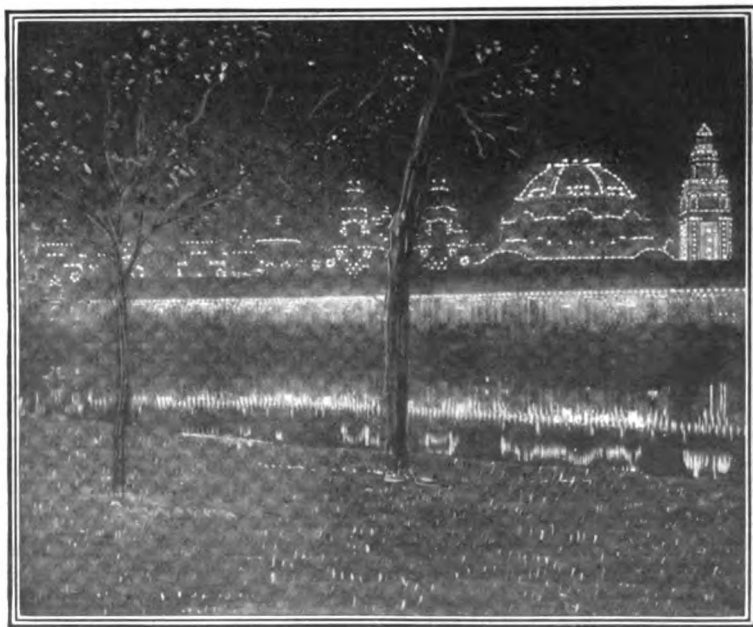
(The Temple of Music approaches very nearly the much-objected-to Baroque or Rococo form of architecture; but, however overloaded it may appear in the daytime, it must be confessed that at night the electric lamps' effulgence brings out many a fine form and brilliant hue.)

stead of an ensemble. We note this particularly in regard to the sky line, as it is marked against its azure background like an army of plumed knights. Though thousands of minarets are seen, and half-a-dozen domes, the work of a score of architects, there is nowhere a disturbing note or an aggravating hiatus. So, too, in so small a detail as the rows of electric lamp-posts (which, instead of being the tall electric pole of our large cities, is but a twelve-foot post); they have been so placed, and so designed, that they accentuate the longitudinal direction of the Court of Fountains, and introduce a rigid note into the midst of much Baroque, licensed ornament.

Spanish Renaissance is by no means a pure form of architecture, and many of the details are not above criticism. We do not think that the *bossage* (the horizontal members that project beyond the main plane of pillars or the side walls) in the foundation of the Gov-

ernment Building, nor the compressed form of its pierced openings in the frieze are satisfactory, nor are all the doorways as beautiful as it is possible to make them under the circumstances. The richness of the doorways of the Agricultural Building and the Temple of Music (though the latter is not too workmanlike in execution) show that in the plainer doorways of some of the other buildings a splendid chance for enrichment has been lost. But here and there are exquisite pieces of detail, as, for instance, the window-frames in the pylons on the Triumphal Causeway

The Propylæa, being at the northern end of the grounds, is more delicate in coloring than the more southern buildings. The arches, the gateways proper, are rich and or-



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**VIEW OF WESTERN PERGOLA.**

(On the bank of the Grand Canal, used as a restaurant. The pillars are a warm gray, with a band of scarlet, about one-third from the base, which gives a Pompeian effect, and makes a strong contrast with the vines which climb about the building and over the trellis, which is a dark brown. The roof is painted terra-cotta. The Esplanade is on the other side of the building. At the extreme right is the Electric Tower; next is the Temple of Music; next, the Machinery Building; next, the Graphic Arts and Mines Building.)



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#### ON THE PLAZA.

(To the left is the Electricity Building. The tower in the foreground is part of the restaurant, which forms the wing of the Propylæa. The building in the foreground is a kiosk used for the sale of exhibition mementos. The lion to the right is a copy of a European model (perhaps Barye's), which is used in many places about the grounds with happy effect. Like the electric lamp-post, it is painted to imitate greenish bronze.)

nate, and are not so satisfactory in their lines and proportions as the two wings (which serve as a restaurant) with their colonnades, but are more like the confection of German toy building-blocks. The wings, however, quite perfect in their proportions, are evidently very exact copies of some Spanish Renaissance cathedral (the ecclesiastical details have been preserved even to the extent of duplicating the crosses in the windows). Of all the façades, we like these wings the best. They are of a cool gray, picked out with a light green repeated from the Tower.

The architect is Walter Cook, of the firm of Babb, Cook & Willard, of New York, the architects of the Carnegie mansion in this city. The Stadium was also designed by Mr. Cook.

Next to the façade of the Propylæa, E. B. Green's Electricity Building seems to us to present some nice lines and proportions. The projecting eaves, the angles of the roofs of the towers, the ample pillars with their handsome green-bronzed capitals, make a structure that might be rebuilt for permanency without any considerable alterations.

#### HAPPY "LABEL" DECORATIONS.

The detail of the Manufactures Building (George F. Shepley, of Boston, architect) has much the same charm as that of R. S. Peabody's Horticultural Building, though color here is not used so lavishly. Under the eaves is rich particularized floral ornamentation, and a row of men's figures, like gargoyles, in a horizontal position, serve as rafters. On the walls are staff reliefs, forming the escutcheons of South American countries, picked out in orange and red on backgrounds of green and blue. They make wonderfully attractive external ornaments, being less familiar than the Renaissance arabesques on the other buildings. These inorganic decorations, called by architects "labels," were used extensively in Spanish Renaissance work, as at Valencia and Valladolid, and we are surprised that the exposition architects have not made greater use of them. Mr. Crowninshield has recommended exterior mural painting, and if it is to be employed at all, it is more satisfactory, we think, in flat, united with relief work, than when light and shade is employed.

#### JOHN GALEN HOWARD'S CHEF D'ŒUVRE.

The original plans of the Electric Tower designed by John Galen Howard did not call for such a broad structure, but in the exigencies of construction it was necessary to add two feet to the width. It is, therefore, not Mr. Howard's fault that the tower is not more elegant in its lines. Seen in the daytime, there is much, we think, to criticise in the details of the building. The conspicuous stairway in the circular colonnade on top is suggestive of utilitarian rather than ornamental architecture, as though the building were a lighthouse and the stairway were to protect the keeper from wind and storm. The finials everywhere are heavy. The detached stars upon the top seem commonplace, and the star patterns within the circle which forms the panel on the shaft are suggestive of the spent pin-wheel of the fifth of July. It must be acknowledged, however, that the night effect is remarkably imposing; that the heavy details we have spoken of vanish, and the whole tower is lightened a hundred-fold. The perpendicular lines of electric lights, which bring out a pilaster on each side, seem to narrow the building to a proper proportion, and our pin-wheels become veritable pyrotechnics of greatest elegance. It was intended to throw flash-lights from the *flambeau* of the "Goddess of Light." But it was later found that no one could be obtained who would undertake the venturesome task of wiring the figure at the dizzy height of some four hundred feet. We think



HENRY RUSTIN.



LUTHER STIERINGER.

(To the expert judgment and rare executive ability of Mr. Stieringer and Mr. Rustin the exposition owes its nocturnal charm. Mr. Stieringer began his career at the Chicago exposition, where he lighted the Court of Fountains; here, however, he merely outlined the buildings with electricity. Later, at the Omaha Exposition he made an important step toward painting his buildings in *chiaroscuro*, of which advance the lighting of the Pan-American Exposition is the climax. Never before has the world seen such delicate and adequate lighting of all, external, parts of a building, so that there is not a suggestion of skeleton structure, but a realization of projecting and receding planes.

Mr. Rustin took a graduate and post-graduate course at Yale. He made a study of the street railway, changing the Omaha system from cable to electricity, and later doing the same work in Portland, Ore. He was Mr. Stieringer's assistant at the Omaha Exposition; at the Buffalo Exposition he has carried the greater part of the burden of the executive responsibility, and has shown indomitable energy, as well as good taste in translating the architect's plans into the language of luminosity.

that, artistically, there is a gain in this change of plan, that the paramount beauty of the exhibition consists of the reticent way in which the lighting has been accomplished. The effect of the absence of the calcium, colored, and arc-lights, and the limitation to the delicate incandescent eight-candle power lamps, which shine like dew-drops upon some night-blooming exotic, is far more charming without the trombone-note of gigantic search-lights.

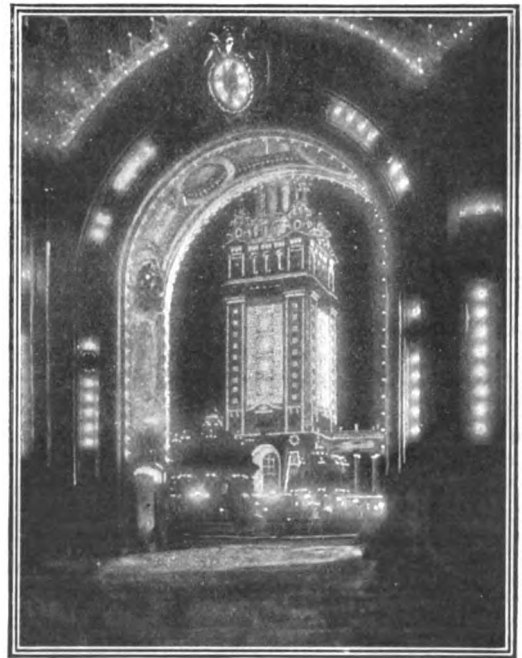
The tower is tinted an ivory yellow, picked out here and there with a light green, suggesting the color note of Niagara. Some of the panels, the top of the Corinthian columns, and the spandrel figures over the doorway at the back of the tower are gilded; while the two niches in front, behind the figures, to the left of "Lake Huron," by Louis A. Gudebrod, and to the right, "Lake St. Clair," by Henry Baerer, are colored yellow in imitation of gold, and make most satisfactory spots of color upon the two wings.

#### A VAST SKY-LINE AREA.

The exposition in the actual area covered is small, indeed, in comparison to the World's Fair, but optically, it covers leagues and leagues, for it is so well planned that at every angle a new vista meets the eye, and though always a part of the whole, presents a novel aspect. So, too, in the sky-line the sense of volume is very great, be-

cause "Mission" architecture is rich in receding planes. Here are circular surfaces, conical surfaces, pyramidal surfaces, and hexagonal surfaces; here are large domes, there small domes with lantern turrets, finials, corbels, and medallions, so that within a small area the electric lights encircling these give the appearance of covering a large city.

Not only has electricity assisted our architects, but Nature, too, will contribute her share of enhancement. There are no high mountains to offset the buildings, it is true, no blue lake vistas as in Chicago; but the night sky will contribute a background that will be ever changing. Now misty and opaline, now intense and ultramarine, now studded with pale stars that seem to form one constellation with the electric lights below, now broken with cumulus clouds that mirage the forms of the massive domes, now dark and threatening with an approaching storm—how effective and various this background will be! We can imagine that in the profound purples of a thunderstorm, with the lightning flashing in the gaps between the minarets, the whole "Rainbow City" will loom up before the spectators as a vast fête-adorned Walhalla.



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#### THE ELECTRIC TOWER, SEEN FROM THE BELT-LINE STATION THROUGH THE PROPYLÆA.

(Between the Electric Tower and the Propylæa are two kiosks; to the left (not shown in our photograph) is a band-stand, around which are seats and promenades which form the plaza.)