THE PAN-AMERICAN EXPOSITION OF 1901.

By ROY CRANDALL.

EVEN the leading optimists of the Pan-American Exposition, which will be held at Buffalo in the year 1901, did not dare to hope at the outset that the countries of South and Central America would warm to the project and with great cordiality volunteer representation at this early stage. They expected, and rightly too, that the government of the United States, the Empire State, and a very fair percentage of the States of the Union would make appropriations; they hoped that the Dominion of Canada would cross the border and enter into friendly trade rivalry, and some hopes were even entertained that Mexico might see the wisdom of appropriating a sufficient sum of money to show her products. But that was practically all.

It was not realized at that time what a vast interest the

for it takes time to erect State buildings; scour the commonwealth for all that is best and most interesting for a display, make the journey and install the exhibits.

It will all be a revelation to the visitors when they reach Buffalo in 1901, for the men at the head of the coming fair have made radical departures in the construction of the buildings and the laying out of the grounds, and the results will be startling in their beauty. The selected tract of land on which the buildings will stand embraces about 335 acres of the finest section of the city; 180 acres being the show portion of Delaware Park, the handsomest subdivision of Buffalo's very complete and handsome park system. To reach this ideal spot it is necessary to traverse the finest residential section of a city that is noted far and wide for the beauty of its homes and the magnificence of its avenues and boulevards, and the visitors will be spared the sight of the municipal back yard.

At the outset it was the intention of the management of

that time its history has been a panegyric. With a rush over 12,000 of the men and women of the Niagara frontier signed for stock in amounts ranging from \$10 to \$25,000, and when the first financial rush was lulled, the company was standing upon a firm financial footing with nearly \$1,500,000 available for the preliminary work and the construction of the buildings. Then the government and the Empire State appropriated respectively \$500,000 and \$300,000, and the New York State Legislature passed a bill increasing the capital stock from \$1,000,000 to \$2,500,000 and empowering the Board of Directors to float bonds in a similar amount.

Without delay the organization was completed by the election of Hon. John G. Milburn as president, John N. Scatcherd as chairman of the executive committee, Hon. John B. Weber as commissioner-general, George L. Williams as treasurer, and Edwin Fleming as secretary.

Following the selection of those gentlemen came the per-

pools for the numerous lagoons, water courts and lakes which will contribute so much to the artistic ensemble which is being sought and which will be attained. Within thirty days the magnificent Service Building was constructed, decorated and furnished, and Director Carlton with his Bureau chiefs and their army of assistants are now social recluses, for they are living in that building and are working like beavers to get the foundations down and have the work started on five of the other great buildings.

It is hoped and confidently expected that the Machinery and Transportation Buildings, the Electric Building, the Horticulture Building and the Graphic Arts Building will be under roof before the spring arrives, and during the summer these buildings will be finished and the work will be forwarded on the magnificent structures planned by the Supervising Architect of the Treasury Department of the Government, on the Roman Stadium and the Electric

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MACHINERY AND TRANSPORTATION.

policy of Pan-Americanism was to create within the few months following the organization of the Exposition Company. It is now assured that the countries of South and Central America will make large appropriations and erect splendid buildings, and the countries of North America will of course see to it that she is not overshadowed by the continent of the South. Already the Government of the United States, the Empire State, the Dominion of Canada, the Republic of Mexico, nearly a dozen of the Latin-American republics, the French colony of Guadeloupe, and a number of the States of the Union have officially accepted the invitations sent out some time ago, and some of the republics have made their appropriations and started the preliminary work.

It is true that still eighteen months must elapse before the gates of the great Exposition will be swung open to the oncoming throng of visitors, but there is no time to waste,

the fair to expend an even million dollars in the construction of an exposition that would fit comfortably on Cayuga Island, a beautiful bit of land in Niagara River, a short four miles above the Cataract. This was the plan early in the year 1897, when the original Pan-American Exposition Company was organized. It was going along famously on those small lines, and the Federal Government and the government of the Empire State had been approached and had made promises for Legislative and Congressional aid. Then the Spanish-American war broke out, and it was decided that it would be unwise to ask the nation to aid any enterprise, be it ever so great, when the men of the nation were battling with a foreign power. Matters were held in abeyance for a time, and it was decided that the exposition should be postponed from the year 1899, when it was originally intended that it take place.

It was started again as a popular movement, and since

fection of the bureau organization, and then Newcomb Carlton was appointed to the very important position of Director of Works and an Advisory Board of Architects was selected; the board being eight in number and made up of three of the famous architects of New York, two of Boston and three of Buffalo. Following came the selection of Hon. William J. Buchanan to the position of Director-General.

All have worked well since those earlier days, and at the present time the magnificent tract of land on which the fair will stand is undergoing an almost fairylike transformation. Day by day the great stretch of rolling meadow and grassy plain is being torn up, and where streets and paths and golf links formerly were, there is now a wonderful canal two miles in length being cut, and hundreds of men and teams with steam plows and loading machines are taking out acres of earth and forming the artistic hollows and

Tower, which will be the architectural chef d'oeuvre of the entire fair.

This grand structure, which will have the position of honor at the head of the Grand Court of Honor, will be the highest structure on the grounds and the most expensive and ornate. It will be about three hundred feet in height and will be a mass of fountains and electrical effects never before attempted.

It is but fitting that Buffalo and the Pan-American Exposition should do this on account of their proximity and close commercial relationship with the Niagara Cataract and Niagara's electric power. It is now assured that the energy of the great cataract will dominate the Exposition. Already the streets of the city in which the Exposition is located are lighted, the street cars of the International traction are propelled by the same power. In 1901 many of the leading industries of the city will be operated by

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HORTICULTURE, GRAPHIC ARTS, AND FORESTRY.

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THE PLAZA.

this power, and the entire Exposition machinery will be quickened by its influence.

A glance at the accompanying pictures of the first three buildings planned is convincing evidence of the fact that the management intends to invite the world to an exposition that shall be worthy of the occasion and of the city and country in which it is held.

THE BUILDINGS OF THE PAN-AMERICAN EXPOSITION OF 1901.

THE northern part of the exhibition ground is occupied by a square about 500 feet from east to west and 350 feet from north to south. The buildings bounding three sides of this square and the arrangement of the square itself have been given to Messrs. Babb, Cook & Willard, of New York, and the style adopted—a very free version of Spanish architecture—has suggested the name of the Plaza, which has been given it. The central portion of this square is occupied by a terrace only very slightly raised above the surface of the square, and surrounding a sunken garden, in the middle of which is a bandstand. The terrace as well as the garden itself will afford a large space for listeners who attend the concerts which it is proposed to give.

Outside, and at the north of the Plaza, is the railway and trolley station, from which it is supposed the greater number of visitors will enter the exhibition grounds. The railway station itself is masked by a colonnade flanked at either end by two colossal arches, one for those entering the Exposition and the other for those leaving it. This colonnade bounds the Plaza on the north. It is surrounded by a trellis, which it is proposed to cover with vines of various sorts.

The west side of the Plaza is bounded by a building which is to serve as a large restaurant. The public pass through the lower arches of this building, which

The three buildings for horticulture, graphic arts, and forestry, of which Messrs. Peabody & Stearns are the architects, form a picturesque group at the end of the west garden.

The largest of these, the Horticultural Building, stands between the other two on an axis with the garden. The Forestry Building is on the north side; the Graphic Arts on the south, adjoining the lake. Arcades connect the three buildings, forming in front a semicircular court. Between the arcades the ground rises slightly to the level of the Fountain of the Seasons.

The area of the Horticultural Building is 45,000 square feet. The Graphic Arts and Forestry buildings each cover 30,000 square feet and are similar in design. In plan, the Horticultural Building is square, with central lantern, rising to a height of 240 feet at the intersection of the four arms of a Greek cross, which includes in its angles four small domes. On the center of each facade is a deeply recessed arched entrance.

The Graphic Arts and Forestry buildings have four corner towers, and on the east facade a vaulted loggia of three arches forms the main entrance. Above the red roofs of Spanish tile numerous lantern, pinnacles, and Venetian flagpoles, from which float gayly colored banners, add a festive picturesqueness to the skyline.

The broad white wall surfaces are ornamented with colored bass-reliefs. Arabesques of twining vines of fruit and flowers, among the branches of which are children and birds, decorate the numerous pilasters of the facades and arcades. Above the eastern entrance of the Horticultural Building are two colored compositions representing Ceres, the goddess of the harvest, bearing in her arms a sheaf of golden wheat. Her chariot is drawn by three lions led by Flora and Primavera.

The decoration of the Graphic Arts and Forestry

THE NATIVES OF AUSTRALIA AND THEIR ORIGIN.

By R. LYDEKKER.

IF the visitor to the Natural History Museum at South Kensington direct his attention to a case in the upper Mammalian Gallery bearing the superscription "Comparison of Man and Apes: Craniometry," he will scarcely fail to be struck by the remarkable difference presented between the palates of three skulls placed side by side, and respectively labeled Mongolian, Australian, and Chimpanzee. In the first the teeth, which are of comparatively small size, form a regular, unbroken horseshoe-like curve, as they likewise do in a European; while the bony palate of the skull is so short that its transverse diameter considerably exceeds the longitudinal. On the other hand, in the Australian skull the individual teeth themselves are larger, and instead of the whole series forming a regular horseshoe, the line of grinders on each side, together with the eye-tooth, or canine, forms a distinct angle with the incisor line in front. Moreover, the palate is longer and narrower than in the Mongolian skull; the length of its longitudinal diameter exceeding the transverse. Turning to the Chimpanzee skull, the observer will notice that the features indicated in that of the Australian are intensified; the palate itself being much longer than broad, while the teeth are proportionately very large, and those on each side are arranged in a straight line, curving slightly inward, and forming a marked angle with the incisors in front, from which they are separated by a distinct gap.

Looking at the three palates, the impartial observer can scarcely fail to see that although the Australian is nearer to the Mongolian than it is to the Chimpanzee, yet it forms a very marked step in the direction of the latter, and that if we had but one more link, the gap between the Mongolian and Simian palates would be practically bridged. Indeed, although, judging from the skull alone, the European should have no hesitation in claiming the Australian as a fellow man, yet to say that he is a "brother" would be stretching that somewhat elastic term very hard indeed—an extremely distant cousin would more adequately express the relationship!

Had we only Australians on the one hand and Europeans and Mongolians on the other to deal with, it appears highly probable that we should be perfectly justified in regarding the former as a distinct species of mankind. For not only is there the above mentioned striking difference in the structure of the palate, but (not to mention other points of distinction) the spinal column of the Australian lacks the full development of the exquisite curves of that of the European, and thus approximates to the Chimpanzee and Gorilla. As a matter of fact, however, the frizzly-haired Melanesians of Oceania, as well as the true Negroes of Africa, stand in some degree intermediate between the Australian and the European in respect to the structure of the skeleton, and thus forbid us regarding the former as a species apart.

One of the greatest puzzles in the science of anthropology is indeed to understand the relationship of the Australians to other races of mankind. In their skeletal structure they undoubtedly come nearest to the Melanesians and the African Negroes, although presenting a still more primitive type. Their black complexion, thick and pouting lips, projecting jaws, large teeth, and long skulls are indeed essentially Negro characters. Their eyes, too, are deeply set in the skull, and their legs show little or no calf. In the prominent ridges over the eyes, they frequently exhibit a resemblance to the Melanesian rather than to the African Negro type, in which these brow-ridges are undeveloped. Australians likewise resemble Negroes in that the color of the skin of the infants is light yellow or brown instead of black; the adult sable tint not being acquired till between eighteen months and two years of age.

But (and this is a very large "but" indeed) here the resemblance ceases; for all Australians are broadly distinguished from Negroes and Melanesians—even their near neighbors the Tasmanians—by the character of their hair, which, in place of being "woolly," or frizzly as it may be better termed, is at most bushy, curly, or wavy; being generally coarse in texture and black in color. The beard and mustache are likewise well developed; and in fact, Australians cannot be distinguished by their hair from the wild tribes of India, who are generally regarded as having no near relationship with Negroes, and who display no markedly low type in the form of the palate.

Before attempting to consider the meaning of this marked difference between Australians on the one side and Negroes and Melanesians on the other, it may be well to devote a few lines to the essential distinction between frizzly and other types of hair. If sections be taken from the hair of a horse's tail or mane, and then be examined under a microscope or lens, it will be found that they are perfectly circular; and the entire hair being thus cylindrical, it naturally hangs straight down. The lank black hair of a Japanese, a Chinese or an American Indian is of the same cylindrical type. On the other hand, the hair of an average European when seen in section presents an oval ellipse, and thus causes the waviness so frequently noticeable. When, however, the hair of a Negro or Melanesian is sectioned, it is found to present a flat ellipse; and it is owing to this peculiar structure that the hair of these peoples assumes its characteristic frizziness. Now it is very noticeable that in crossbred races, such as the Brazilian Capesos (Negro and Native half-breeds, who are mop-headed like the Papuans), this frizziness of the hair tends to persist; and a hybrid described as half Negro, a quarter Cherokee, and a quarter English, is stated to have retained the Negro "wool." Hence it has been suggested that frizzly hair represents the primitive human type of capillary adornment.

But if we examine the hair of a Chimpanzee, Gorilla, Orang-utan, or indeed any other Old World Ape or Monkey, it will be found to be of the straight type, and to show not the slightest tendency to frizziness. Clearly then, from the evolutionary point of view, the straight-haired type ought to be the original one; and we find the late Sir W. H. Flower saying that the frizzly type "of hair is probably a specialization, for it seems very unlikely that it was the attribute of the common ancestors of the human race."

If this hypothesis be true, it would point to the con-

THE COURT
MACHINERY AND TRANSPORTATION BUILDING
PAN-AMERICAN EXPOSITION BUFFALO, N. Y.

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are open, in order to reach that portion of the Exposition which corresponds with the Midway Plaisance at Chicago. The restaurant building itself is two stories high, and is about 350 feet long.

On the east side of the Plaza is a building closely resembling the restaurant, which serves principally as the entrance to the Stadium or athletic field, although portions are also used for exhibition purposes. This also has two stories, the upper story being a large open gallery, from which views of the Plaza on the one side and the Stadium on the other are afforded.

Finally, the south side of the Plaza is bounded by the Electrical Tower, the designing of which has been given to Mr. Howard.

The Stadium or athletic field has been in all its details a subject of careful study. It resembles in a general way that erected at Athens a few years ago, although this one can be, of course, only a temporary structure. It will contain easily 25,000 spectators, and is intended as a model of what it is hoped may be executed some day in permanent form. It has a quarter mile running track and a sufficiently large space in the inside of this for any of the athletic games. Great attention has been paid to having a large number of aisles to reach the seats, and in addition to the principal entrance on the west, there are provided seven large exits. These exits are made of sufficient breadth and height to admit in case of need the largest vehicles or floats, as it is proposed to use the Stadium for certain pageants, exhibits of automobiles in operation, judging of horses, live stock, agricultural machinery, road machinery, etc. No exhibitor has ever had such a splendid arena in which such exhibits can be displayed, and the athletic carnival to which the Stadium is particularly devoted is expected to be one of the most interesting features of the exhibition. The space under the seats is to be used for exhibition purposes, and is in itself the equivalent of a very large building.

The total length of the Stadium, including the building which forms the entrance, is about 870 feet, and the breadth about 500 feet.

buildings is chiefly confined to the vaulted ceilings of their loggias, where the brilliantly colored decorations remind one of the famous example of the Villa Madama.

The Court of the Machinery and Transportation Building.—The Machinery and Transportation Building itself forms a hollow square, with this Court in its center. It is 200 feet long and 100 feet wide, the east and west ends opening respectively to the great entrances from the Grand Canal and the Court of the Fountains, while the great exhibiting rooms of the Mall side of the building, and the two exhibition rooms and great entrance court from the Court of the Fountains side of the building, lie on either side. Along each side of this Court, and extending the entire length, are roof-covered arcades under which the visitors may find rest on the comfortable benches.

The pool itself is 175 feet long and 27 feet wide. It is placed in the center of the Court. The bank is sodded and planted on all sides, forming a pleasing frame or border effect; the water is low, so as to receive the reflection of the growth around the pool.

The fountain is an important feature, placed in the center of the pool, and giving life to the scene and freshness to the atmosphere. Throughout the Court are pleasant walks and paths, bordered with low-growing shrubbery and plants, and at intervals at axis-points with the arcades, rare plants are placed in great vases, making a truly architectural landscape effect. The entire scheme gives the effect of an admirable inclosure of a mission cloister, and is planned as one of the many little cases for the refreshment of the weary sightseer. This building and Court have been designed by Green & Wicks, of Buffalo.

Change in Venezuelan Mining Laws.—Consul Plummer transmits from Maracaibo, under date of November 27, 1899, translation of a decree abolishing the resolution of October 20, 1898, as not in accordance with the mining code, which prescribes the exemption of duties on machinery and articles imported for the exploitation of mines.