

SUPREME IN ITS BEAUTY

PAN-AMERICAN EXPOSITION TO BE A MAGNIFICENT SURPRISE.

Birdseye View of the Great Group of Splendid Architectural Works—A Wonderful Setting of Fountains, Pools, Plants and Flowers.

It is promised for the Pan-American Exposition that it will surpass in beauty any previous exposition in the world's history. It is also expected that it will outrival its predecessors in many other ways, for at no time have such wondrous achievements in all arts, such perfection in the hundreds of trades, been attained. But the purpose of this article is to treat, in a general way, of the plan of the Exposition, the symmetry of arrangement and the exterior beauty that represents the careful expenditure of several millions of dollars. Accompanying this article is a birdseye view of the Exposition plot, showing the magnificent work in its complete state. The view is from the south and shows an area one mile and a quarter long and half a mile wide, there being 350 acres in the enclosure. In the immediate foreground is a portion of Delaware Park, one of the famous beauty spots of Buffalo. The view shows the Park Lake, with the North Bay at the left, and in the left foreground, south of the bay, may be seen a portion of the Albright Gallery of Art, a beautiful permanent building of white marble, the gift of John J. Albright of Buffalo, and costing over \$400,000. North of the Bay is the New York State Building, also a permanent structure of marble. These two buildings are in the style of Greek temples, one containing reminders of the Parthenon and the other resembling somewhat the Erechtheum upon the Acropolis at Athens.

Between the North Bay and the Lake the City of Buffalo has built at large expense a new and beautiful bridge of heavy masonry, known as the Bridge of the Three Americas. This bridge carries the broad thoroughfare which leads from the main southern entrance to the approaches of the Exposition, as seen in the foreground just north of the Lake. On the northern shore of the Lake is situated the life saving station erected by the Federal Government where daily exhibitions will be given by a crew of ten men showing the uses of modern life saving apparatus as employed upon our coasts. Hidden from view, upon the southern bank of the Lake, a beautiful casino and bathhouse has also been built by the City of Buffalo for Exposition uses.

The symmetrical grouping of buildings will be at once noted by the observer. Beginning at the formal approach, just north of the Lake, the eye follows northward between two rows of ornamental columns to what is known as the Forecourt. East of this are the State and Foreign buildings, forming in themselves a very interesting feature of the Exposition. Near these also are the buildings for the special ordnance displays representing the products of several hundred manufacturers in this line of work. West of the Forecourt will be the outdoor horticultural displays and the Women's building. We cross now the Triumphal Bridge, which will be remarkable for its tall piers, richly ornamented with statuary, the product of the genius of Carl Bitter, the director of sculpture, and other famous sculptors. On either side are the Mirror Lakes which form a part of the Grand Canal, more than a mile in length, which surrounds the main group of buildings.

We come next to the Esplanade, which is nearly two-fifths of a mile long and 450 feet wide. The western end of the Esplanade is inclosed by the horticulture, Graphic Arts and Mines buildings. The eastern end is shut in by the Government group of three large buildings. Sunken gardens with elaborate fountains and many groups of sculpture occupy the two arms of the Esplanade, and the decorative features throughout this broad space are very numerous and beautiful. North of the Esplanade is the Court of Fountains, with the Ethnology building on the right and the Music building on the left. Two subordinate courts also open into the Esplanade from the north, the one on the right being known as the Court of Cypress and the one on the left as the Court of Ailias. Next, north of the Ethnology building on the right and fronting upon the Court of Fountains, is the Manufactures and Liberal Arts building and on the opposite side the Machinery and Transportation building. In the Court of Fountains is a large pool, having an area of about two acres and containing many beautiful fountains. Proceeding again northward we come to the Mall, a broad avenue, half a mile long, extending from the eastern boundary to the western gate of the Exposition. Fronting upon the Mall on the right is the Agriculture building and on the left the Electricity building. We now arrive at the most conspicuous feature of the Exposition, the massive Electric Tower, 301 feet in height. This tower stands between the Court of Fountains and the Plaza, in a broad pool, about two acres in extent. This will be the most ornamental feature of the great Exposition and will be the centerpiece for special and elaborate electrical illumination. Immediately north of the Electric Tower is the Plaza, with its beautiful sunken garden and bandstand in the center, the Propylaea or monumental entrances at the north, the entrance to the Stadium on the east and the entrance to the Midway on the west.

It should be understood by every intending visitor that the Exposition will present the most beautiful spectacle that twentieth century genius can pro-

vide. By day there will be a most pleasing display of floral and fountain effects. The many buildings, with their elaborate and delicate tracery of ornamental plastic work and their radiance of color, the many groups of statuary in every part of the grounds, will constitute a picture never before paralleled. At night all the buildings will glow with the soft radiance of thousands of electric lights, making a scene of unrivaled brilliance and splendor. Half a million lamps will be used in the electrical illumination.

It should also be added that the Midway at the Exposition will be the most extensive and novel that has ever been prepared. It will be 3,000 feet long, having more than a mile of frontage. Over 30 very interesting features, many of them covering several acres, will make up this gigantic collection of wonders.

The athletic features of the Exposition will be shown in the Stadium, which covers about ten acres of ground and contains a seating capacity for more than 12,000 people. All of the exhibit buildings will be filled to completion with the very latest products of Pan-American genius and industry and will offer an opportunity for every inquiring mind to learn a most interesting lesson of New World progress and civilization.

The power for Exposition uses is furnished principally from Niagara Falls, which are situated only a few minutes ride from the Exposition grounds. Buffalo is a city of nearly 400,000 population and is preparing in every possible way for the reception of millions of visitors in 1901.

MARK BENNETT.

THE WORK OF WOMEN

EXTENSIVE EXHIBITS TO BE MADE AT THE EXPOSITION.

Achievements of Women Will Be Shown Side by Side With Those of Men at the Pan-American—Handsome Building For Headquarters.

With a view to having the scope of the Pan-American Exposition as broad as possible and to interest the thousands of women in the Americas in the enterprise a Board of Women Managers was appointed, consisting of 25 representative women of Buffalo.

In addition to this the governors of the states and territories were asked to nominate two women each to act as honorary members of the Women's Board, these nominations to be ratified by the Board of Directors of the Exposition. The same request was made of the other Pan-American countries.

As a result of this request from the Exposition more than 30 states have honorary members of the Women's Board, and several Pan-American countries are also represented. The work of the honorary members supplements that of the local Board, which has been divided into committees and is now doing effective work for the Exposition. A distinctive point in the plan of the Exposition is that the various industries conducted by women are to be represented by exhibits in the different buildings where they may properly be placed, so that the achievements of women will be shown side by side with those of men. This is the first Ex-

The committee on Education will arrange for a series of educational exhibits, and possibly educational congresses will be held in Buffalo during the Exposition. This committee is working in co-operation with the Superintendent of Liberal Arts and Education. As the chairman of the committee on Education of the Women's Board is president of the Women Teachers' Association, which owns its building, a commodious chapter house, she will doubtless do a great deal toward arranging for a series of educational congresses in Buffalo during the Exposition, although the work will not be taken up by the Exposition Board.

Women's clubs and organizations have made tremendous progress during the past few years, and the committee on Clubs and Organizations of the Women's Board will find ample opportunity for bringing into prominence the work of the women's clubs of the Americas, especially showing the tremendous advancement made since the World's Fair in Chicago in 1893.

In response to many requests from women's clubs the committee on Publicity and Promotion of the Women's Board has been doing a great deal of effective work in advertising the Exposition. At several women's conventions representatives of the Women's Board of the Pan-American Exposition have appeared upon the programme and have interested in this way hundreds of leading clubwomen in the country. Great enthusiasm is shown by the clubwomen of the United States and Canada in the coming Exposition, and in many towns Pan-American clubs have been formed by the women.

TRAVEL AND STUDY CLUBS.

Formed in the United States and Canada For a Visit to the Pan-American Exposition.

No one of experience needs to be told how much more pleasant traveling and sightseeing is with agreeable companions than all by oneself. There is truth in the saying that "a pleasure shared is a pleasure doubled." The fact that it is well to know beforehand something of the nature of what is to be seen and how to get about with the smallest loss of valuable time and inconvenience and get intelligent ideas is equally appreciated by those who have wandered from their own firesides in search of pleasure. It has been the experience of thousands of visitors to Expositions that loneliness, though in the midst of great crowds, robbed them of much of the enjoyment in store and that by reason of not acquainting themselves in advance with what was to be seen they missed the things which might have appealed to them strongest.

In view of all this, the plan of forming travel and study clubs by those who intend visiting the Pan-American Exposition at Buffalo next Summer which has been adopted in many cities and villages of the United States and Canada may be said to be an excellent one. The membership of these organizations is composed of people of both sexes and all ages practically. The objects are pleasant companionship, arrangements for transportation and accommodations and an intelligent and comprehensive view and knowledge of the Exposition. The course of study

WATER SPECTACLE.

BEAUTIFUL FOUNTAIN EFFECTS FOR THE PAN-AMERICAN.

Unexampled Sight to Be Provided For Visitors to the Exposition. Will Use 35,000 Gallons of Water Per Minute For This Feature.

When visitors to the Pan-American Exposition view the fountain displays, they will be inclined to wonder where all the water comes from, so plentiful will be the supply. It will be with these fountain displays the same as it will be with the electrical exhibit. There will be a point, a place, at which the display will increase in beauty and extent until the climax is attained in and about the Electric Tower and the basin thereof. So extensive will this be that all will recognize the beauty of the display and look in wondering admiration upon the spectacle, which is destined to be one of the most remarkable features of the Exposition.

The pumping plant that will supply the water effects will be located in the Court of the Machinery and Transportation building. It will consist of 12 pumps having a total capacity of 35,000 gallons of water per minute. The engines are all to be belted to their respective pump units, and they will be required to be in service from 10 o'clock in the morning until 11:15 o'clock at night, a period of 13 1/2 hours. Estimating their capacity at 35,000 gallons of water each minute, it is evident that each day during the time they are to be in service they could pump the enormous amount of 27,825,000 gallons of water. This water will be used to serve the fountain displays at the Electric Tower and basin and also the Court of Fountains, including the Fountain of Abundance. The water will be taken from an intake located at the north end of the Court of Fountains basin through a 48 inch suction pipe. It will be delivered by the pumps through 16 inch and 20 inch pipes at a pressure of 110 pounds per square inch to the fountain orifices. From these orifices the water will stream in all shapes from the finest spray jet to the solid stream inches thick that will rise high in the air.

At the Fountain of Abundance the sight will be all the name implies. There will be an abundance of water, and it will be in motion. Beyond the Fountain of Abundance will be the Court of Fountains, and this basin will be filled with large jets of water thrown vertically. They will be known as pillar jets. In this basin will also be located beautiful groups of water figures, all formed in the manner in which the water is projected. The water figures will resemble sheaves of wheat, lilies, etc., and they will average 12 feet high. On a line through the center of the main Court of Fountains there will be all of 20 of each of these figures of surpassing beauty.

Beyond this still, at the north end of the Court of Fountains, will be the Genius of Water. Here in a significant group of statuary the sculptor will portray his artistic conception of what the figure is designed to represent. Over in front of the statuary the water will ebulliate, carrying out in most perfect way the sculptor's idea.

In front of the Electric Tower, in the basin and in the niche of the Tower the climax of spectacular water effects will come with a gorgeousness that will exceed any display of the kind the world has seen. On each side of the center of the structure will be located two groups of water jets, with 26 large pillar jets, throwing water columns to a height of 50 feet. On the arc of a circle, whose center is the niche, will be located some 42 large jets, throwing water in parabola curve toward the cascades in front of the niche. These jets will be so arranged as to make a very ragged stream. This stream will not be solid, neither will it be so broken as in the spray jets. Then out from the niche itself there will come a flood of water of 13,000 gallons per minute, which, by means of a deflector, will take the form of an immense water screen or veil, the beauty of which will linger in the memory.

ORRIN E. DUNLAP.

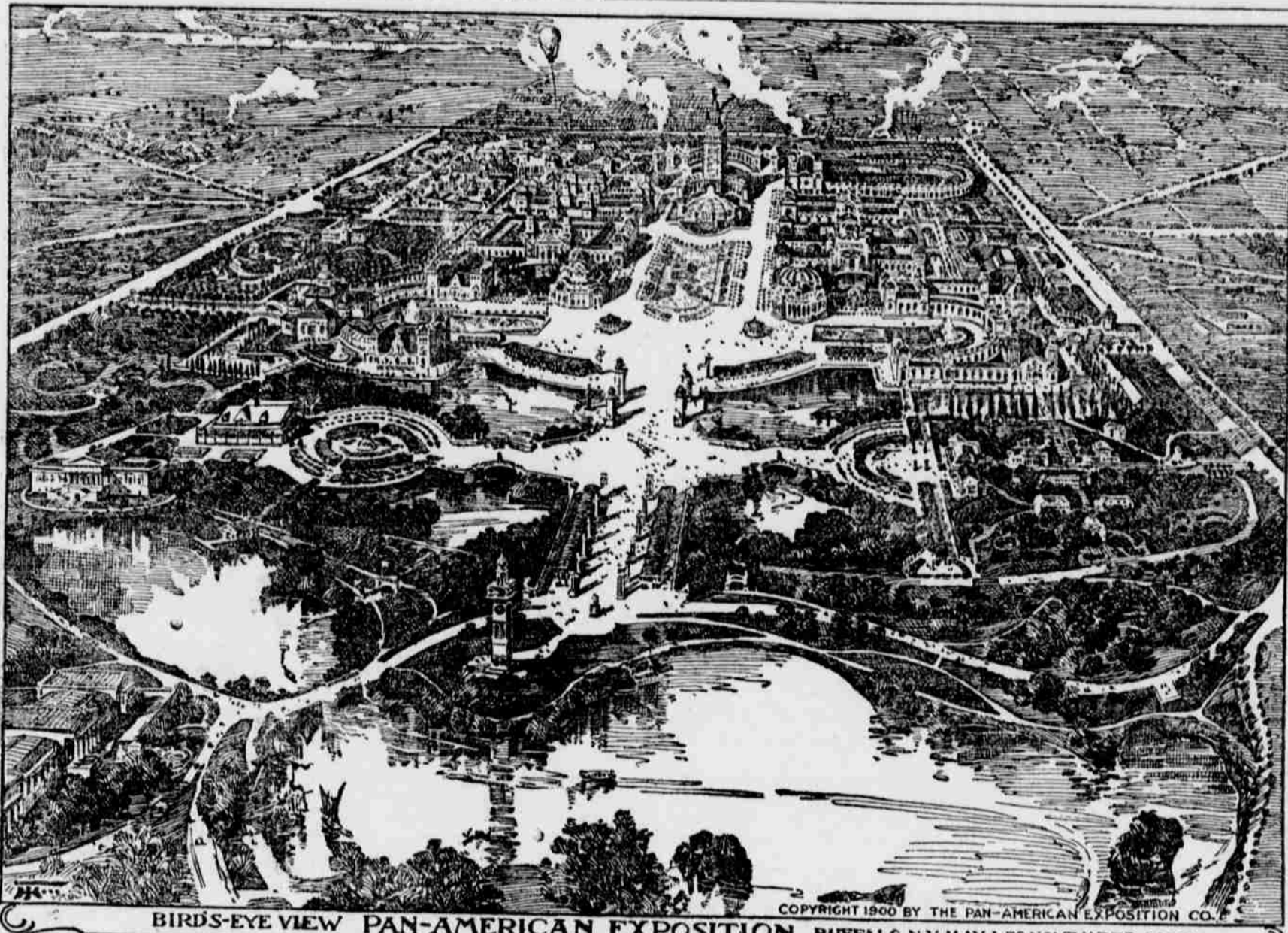
CYCLING ROUTES.

Will All Lead to Buffalo Next Summer.

For the accommodation of the large number of cyclists who contemplate touring a wheel to Buffalo and the Pan-American Exposition and Niagara Falls next summer a series of "trunk line" cycling routes is being compiled. They will probably be as follows:

1. New York and Albany to Buffalo (via the Hudson River, the valley of the Mohawk and the cycle paths of Central and Western New York).
2. New York to Buffalo (via the Delaware Water Gap, Scranton, Elmira, Corning and the cycle paths of the Southern tier of counties).
3. Boston and New England points to Buffalo (connecting with Route No. 1 at Albany).
4. Boston and New England points to Buffalo (via Providence, New London, steamboat to Greenport, Long Island; cycle paths of Suffolk County to Brooklyn, connecting with Route No. 1 or 2 at New York).
5. Washington, Baltimore and Philadelphia to Buffalo (connecting with Route No. 2 at the Delaware Water Gap or Scranton).
6. St. Louis and Chicago to Buffalo (via Toledo, Cleveland and Erie). The road from Erie to Buffalo along the south shore of Lake Erie, through the Grape belt, has been called the finest 100 mile straightaway in America.
7. Chicago and Milwaukee to Buffalo (via steamboat across Lake Michigan to Grand Haven, Detroit, through Canada, Niagara Falls).
8. Cincinnati to Buffalo (connecting with Route No. 6 at Cleveland).

W. SHELDON BULL.



WAMMOTH TURBINES.

Six New Ones For the Niagara Falls Power Company.

A new feature of much interest has been added to the delights Pan-American crowds will have when they visit Niagara Falls to view the scenic and industrial attractions there. In that favored spot there is already developed more power than is used in many of the large cities, but to this developed force must be added 30,000 horsepower that is to be developed by means of six new turbines and six new generators, the contracts for which have been awarded. These new turbines are to be installed in the new wheel pit now in course of construction. The design of the new turbines will differ materially from the design of those now in use in the present wheel pit. This change is significant of the fact that the Niagara Falls Power Company intends that the installation in its new plant shall be up to the highest state of perfection known in this opening year of the century. It is this knowledge that at Niagara the most modern, the most perfect working power development in the world, may be seen that will inspire visitors to the Exposition to go there and look upon the wonders that man has wrought.

Each of the six new turbines will have a capacity of 5,000 horsepower, and each will be connected to and drive a 5,000 horsepower generator. The turbines now in use were designed by Piccard, Pietet & Co. of Geneva, Switzerland, while the new turbines are to be built after designs prepared by Escher, Wyss & Co. of Zurich, Switzerland, the plans of which company were accepted in a competition. The turbines in the old pit each have two wheels, while the new turbines are each to have but a single wheel.

With these new turbines in place in the wheel pit, the output capacity of the Niagara Falls Power Company will be 80,000 horsepower. There will be space in the new pit for five additional turbines, each of 5,000 horsepower capacity, and with these in place the total output of the two pits will be 105,000 horsepower.

ORRIN E. DUNLAP.

tion in this country where such a plan has been followed and second, it is said, in the world. The same arrangement was followed most successfully at the Paris Exposition.

It is in co-operation with the various divisions of the Exposition and with the committees of the Men's Board of Directors that the Board of Women Managers of the Pan-American Exposition is, to a large extent, to work. The following committees have been appointed: Executive, Entertainments and Ceremonies, Fine Arts, Education, Clubs and Organizations, Publicity and Promotion and Applied Arts. The majority of the members of each committee belong to the Board of Women Managers, but in a few instances appointments have been made outside, taking in those especially adapted to carrying out the work of the Women's Board. To the committee on Entertainments and Ceremonies falls the pleasant task of looking after the social affairs of the Women's Board previous to and during the Pan-American Exposition, arranging entertainments of various kinds for the honorary members of the Board who visit Buffalo, and also entertaining many prominent women who are to be in the city during the Exposition months. A large number of conventions of women are to be held in Buffalo during the Exposition, but the Women's Board will not in any way be connected with the conventions, although the committee on Entertainments and Ceremonies will doubtless entertain many of the officers and other distinguished members of the various organizations meeting in the city Pan-American year. The women of Buffalo have in several instances extended invitations to leading women's organizations to hold their conventions in Buffalo during the Exposition, and, with the desire to offer every courtesy possible, the committee on Entertainments and Ceremonies will doubtless do a great deal to make it pleasant for the visiting women during their stay in Buffalo.

The committee on Fine Arts of the Women's Board, in co-operation with a similar committee from the Men's Board of Directors, will assist the Director of Fine Arts in arranging for a representative exhibit at Buffalo of the work of American artists.

The committee on Applied Arts of the Women's Board is trying to secure representative exhibits of women's work at the Pan-American Exposition and with this object in view hopes to arrange a series of collective exhibits in the Exposition buildings, principally in the division of Manufactures. Many leading industries conducted by women will probably be represented in these collective exhibits. Applications for space have been received in large numbers.

A great deal of effective work has been done through the honorary members of the Women's Board, with whom local members have been in constant correspondence, with the result that the women of the Americas are deeply interested in the Exposition and in many instances are arranging for bringing large parties to Buffalo. Some clubs have formed Pan-American Bureaus with a view to securing large numbers to go from their respective towns to Buffalo.

Although the women are to have no building for exhibits at the Exposition, a women's headquarters on the grounds is to be one of the most attractive structures there. It is well situated, facing one of the main entrances to the Exposition grounds on one side and the beautiful music gardens on the other. It is opposite the New York State building. The house was formerly the home of the Country Club of Buffalo and is a very artistic structure. It has been remodeled to meet the requirements of the Women's Board during the Exposition. Broad verandas surround the house. A large room on the main floor will be fitted up for a magazine and reading room, where clubwomen visiting the Exposition grounds will find a comfortable and quiet resting place. The offices of the Women's Board will also be on the main floor, and there will be a number of small rooms where luncheons may be served. For larger entertainments the magazine and reading room will be used and will therefore at times necessarily be closed to the public. Dressing rooms and other apartments necessary to the comfort and convenience of visitors at the Women's Building will be arranged for on the second floor of the clubhouse.

MAJIAN DE FOREST.

taken up comprehends everything in connection with the trip and the Exposition and side trips as well. Among the subjects are the following:

- Routes and Rates.
City of Buffalo.
Countries of the Western Hemisphere and the New Possessions of the United States, (a) Geography, (b) History, (c) Resources.
Pan-American Exposition, (a) Object, (b) Arrangement of Buildings and Courts, (c) Meaning of the harmonious architectural, sculptural, floral, horticultural, fountain and electrical effects, with reference to illustrating the progress of the race, (d) exhibits, (e) amusements.
Niagara Falls, (a) Natural Wonders, (b) Power Development.

Much of the information necessary to this course of study is furnished by the Bureau of Publicity of the Pan-American Exposition, Buffalo, while the remainder is procured by the clubs from Railway and Steamship offices, hotels, information bureaus, libraries and elsewhere.

This study at any time would be very interesting and valuable, but with the prospect of amplifying it with a visit to the Exposition, where the peoples of the different countries and the varied resources of the Western Hemisphere will be assembled, amid splendors such as were never before presented to the sight, the measure is largely increased.

ELBERT L. LEWIS.

American Forestry.

Indigenous trees are easily recognized by the observing inhabitants of any locality as belonging to certain general classifications. Pine, oak, elm, maple, chestnut and some others are so common in most temperate climates that they are familiar to every one. That these distinct divisions have been subdivided into hundreds of minor classifications is not so well known.

It will be in the province of the exhibit at the Pan-American Exposition to demonstrate in this connection some exceedingly interesting peculiarities or seeming mistakes in nature.

The biggest things in the way of guns ever built will be exhibited at the Pan-American Exposition.