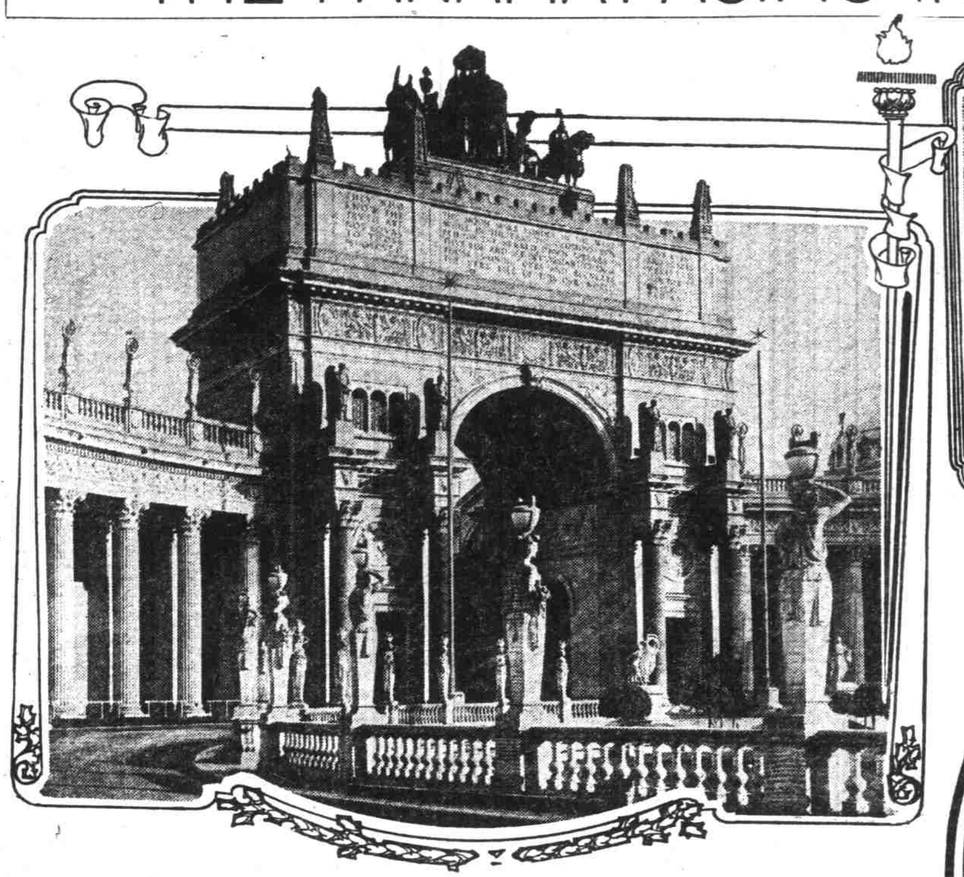
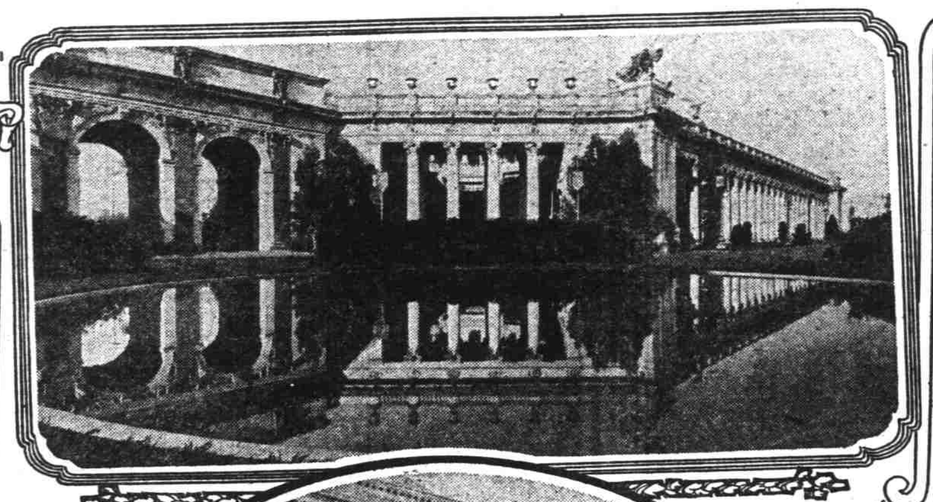
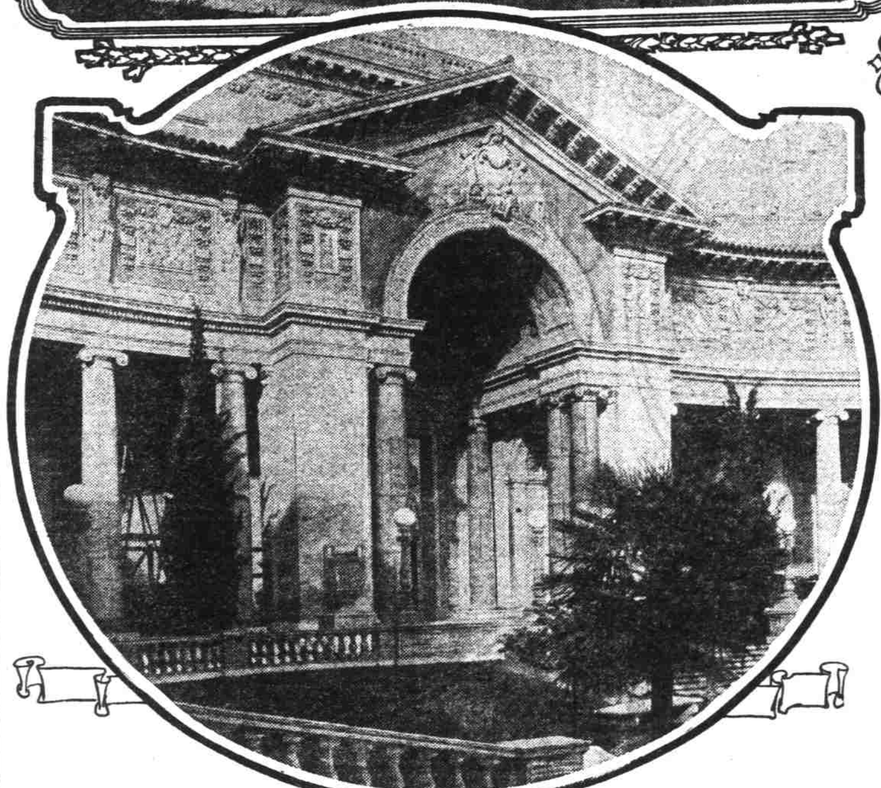
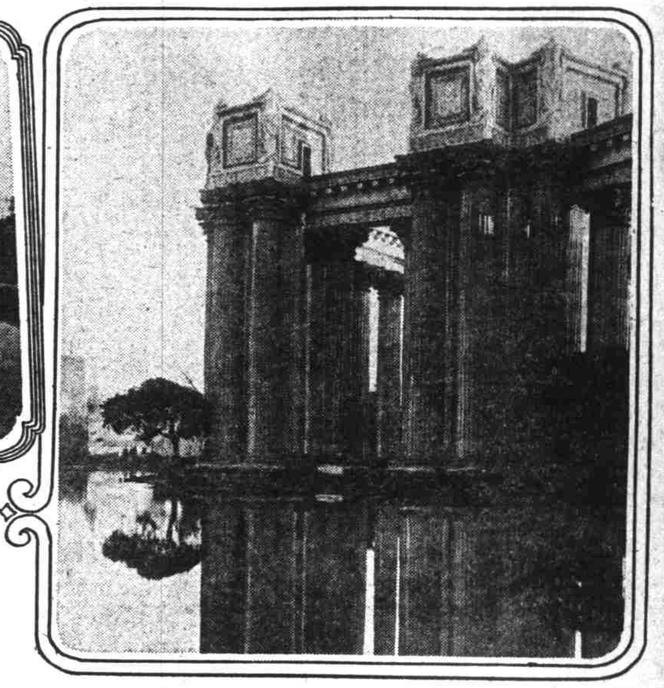
THE PANAMA-PACIFIC INTERNATIONAL EXPOSITION IS OPENED









Architectural and artistic triumphs at the Panama-Pacific International exposition, which was opened yesterday. Top, left to right—The Arch of the Rising Sun, 160 feet high and crowned by a sculptured group, "The Nations of the East"; Court of the Four Seasons; colossal colonnades before the Palace of Fine Arts, mirrored in the lagoon between the Palace of Fine Arts and the Palaces of Food Products and Education.
Bottom—Entry to the Court of the Four Seasons from the Court of Palms.

Great World's Fair Commemorative of the Completion of the Panama Canal Begins Its 288 Day Session With Everything in Readiness—Fifty Million Dollars Worth of Marvelous Attractions From All Over the World Claim Attention of Visitors.

Exposition Buildings Comprise Three Groups—In the Center Are Exhibit Palaces With Foreign and State Pavilions and Amusement Section on Either Side.

SAN FRANCISCO, Feb. 20.—Opening with a blaze of glory, with everything supremely ready and in operation, the world's greatest exposition today begins its 288-day session in San Francisco. In a word, the Panama-Pacific International Exposition is a whole section of land crowded with $50,000,000 worth of marvelous attractions grouped in artistic arrangement, and set forth for world exhibition in a wonderfully picturesque setting of sea, mountains and California sky. Just as the achievement of the Panama canal has been christened the "Thirteenth Labor of Hercules," so might this great festival in its honor be called the "Fourteenth Labor." For the great task of its preparation has indeed been one of stupendous magnitude, triumphantly accomplished, however, in the face of an adversity of which the European war is but one item.

That nothing has been allowed to lessen in any way the original scope and character of the great show is to be proved to the visiting multitudes today when the exhibits, more than 100,000 in number and chosen from all parts of the earth, were seen for the first time by the public throng.

Thousands of displays interesting because of their novelty, thousands of others of interest because of their romance, many more thousands interesting because of the clear light they shed on scientific, industrial and economic achievement and thousands of others that are rare objects of beauty were viewed in San Francisco today by a great host of visitors who roamed the eleven mammoth palaces of exhibition, visited the cosmopolitan group of state and foreign pavilions, strolled the outdoor areas of exhibition and took in the great concession street—the "Zone."

The most gigantic exhibition of all is that of the greatest steel corporation in America, whose total properties presented in the display aggregate 1500 tons in weight. The most minute exhibit in the whole infinite list consists of three grains of radium, one being but 1-160 of a troy ounce, valued at $10,000. Both these remarkable exhibits are in the Palace of Mines and Metallurgy. Their vast unlikeness to each other suggests by contrast the wonderful breadth of variety which is to be found in the multiform and many thousand exhibits which this great world's fair offers.

China's School Exhibit Interests.

Great interest will center on the educational display made by China. It is the first school exhibit ever made by newer China after the reorganization of her school system along American lines. Among the 6079 separate features of this display are 100 tons of carved woodwork and hand made wares—all objects of art and utility made by the pupils of schools and vocational institutions in the different provinces of China. Included are wooden reproductions of every important pagoda in that Asiatic country.

In the 10,000 foot area allotted to the exposition of textiles, in the Palace of Varied Industries, is a remarkable succession of displays relating to the silk industry, showing actual silk worms spinning the raw silk and every succeeding process leading to the final display of the finished silk gown when worn by lovely woman.

Dress, apart from its manufacture and distribution, is also represented by two fashion shows; one, historical, showing the clothing worn by women from earliest times to the present day; the other of a character revealing the originality of America and her fitness to become the leading creator of fashions.

Interesting animals come in for their ample share of representation both in the great livestock show and elsewhere. In the Canadian building beavers are exhibited busily building their domiciles of mud. Kangaroos are among the characteristic species included in the Australian zoo. Fish from Hawaii are exhibited swimming in sea water imported from Waikiki. The game birds and song birds of Oregon are housed in a large aviary supplementing the Oregon State building. A wonderful display of fancy Japanese fish in an aquarium is an embellishment for the Japanese horticultural display. The commercial fish of this country are shown in all stages of development, beginning with the egg period, in the Palace of Food Products. The Persian government has sent a flock of fat-tailed sheep and also of Caracal sheep whose wool is the raw material for astrakhan. Japan has sent valuable specimens of sacred Yokohama or Phoenix fowls, chickens whose males have tails attaining a length of 23 feet. Aside from being a novel sight or curiosity, this display is valuable in showing the possibilities of selective breeding, more than a century having been required to establish this fancy breed in its present exceptional character.

Wonderful horticultural achievements are presented both in the horticultural exhibits proper and in chosen garden spots variously located on the exposition grounds. The Japanese section has a most interesting Japanese garden transplanted—soil and all—from the Orient. The vegetation of the tropics is represented by banana trees, cocoanuts in bearing, gigantic tree ferns, hundreds of varieties of orchids and characteristic botanical specimens from most every tropical quarter. Magnificent new specimens of roses from England, Scotland, Ireland and all the famous rose growing parts of the United States and other countries are entered in competition for the $1000 trophy. Two acres in the horticultural garden are planted out in beautiful bulbs from Holland, the country bulb famous.

A Rubens masterpiece from the Munich art gallery is one of the gems from the old country displayed among other notable works in fine arts. Fine private ceramics too are shown. Japanese Satsuma, and antiques, and the private collection of Emperor Mutchuito are destined to center intense interest on the displays in the Japanese national pavilions.

The great advance the world has made in irrigation methods, making it possible to convert supposedly hopeless deserts into districts of agricultural wealth, independent of rainfall or of nearby streams, is the theme of extensive exhibits in the Palace of Agriculture.

Many unique displays, widely assorted, are found in every quarter of the great exposition. A feature of the Netherlands pavilion is a great clock with a 1500 pound bell sounding every 30 minutes loud enough to be heard for miles.

The Palace of Transportation has a typical train used in logging operations, demonstrating how the loading and unloading of the gigantic trees, the raw material of lumber, are managed. A seven-ton cheese is the display of the dairying industry of New York state. Missouri's mining displays include a mammoth lump of coal, weighing a full ton, distinguished as the largest perfect specimen of its kind ever exhibited. In this same building a model mine has been constructed underground, with stopes and lifts, which will be visited by thousands of sightseers who will learn thereby exactly what it is to be a subterranean miner. Airships, war balloons and the apparatus used by the United States government's weather bureau for registering atmospheric conditions overhead are among the exhibits which show the world's progress made in aerial activities. A huge temple of soap and from which bubbles issue forth in uninterrupted succession, is a novelty in the California state building. Diamond exhibits and the methods of extraction are made by the South African principalities. A wonderful collection of ostrich feathers and of eggs of all kinds of domestic fowl are among the displays made by the United States department of agriculture. Wonderfully spectacular and ingenious are the picturesque exhibits worked in red, white and yellow corn by two of the greatest growing corn states in the Union—Illinois and Missouri.

Display of Inventions Show Progress.

In the line of inventions great progress has been made in the past decade, and the point of development reached at the present day is graphically indicated by the many marvelous displays at this exposition.

Foremost, perhaps, are the exhibits demonstrating the achievements of wireless telephony and telegraphy. The Edison storage battery, one of the scientific marvels of the age, is demonstrated in reference to its usefulness in operating mediums of transportation and for furnishing electricity for isolated farm houses, enabling both the farm house and all outhouses to be electrically lighted throughout, as well as allowing the farmer to have his farm machinery run by power from the same source.

There is also the "Home Electrical," equipped throughout with conveniences that work themselves, thanks to the well developed intricacies of their electrical interiors; cook stoves, electrical fans, kitchen deodorizers, heating apparatus, mechanical musical instruments and a wonderful range of assorted articles even to electrical toys for the nursery.

For the first time to be publicly exhibited, illuminating fixtures of the indirect and semi-indirect types are shown at the world's fair. This patent is a very new device, based on a new curved type of reflecting surface and a dead white finish, produced by a secret chemical process. These fixtures also have the new high power nitrogen lamps.

A new system of interior illumination by indirect methods is seen also in Festival Hall. Here, in a pit beneath the center of the auditorium, are placed ten high power searchlights, set so as to throw their rays upward into a plate of heavy diffusing glass, sand blasted on the under side, and which spreads a soft glow of light over the entire interior, the dome assisting by reflection. This diffusing set rests in an aperture forming the collar of the pit. Special cooling devices are necessary for the lenses of the searchlights owing to the extreme heat. Streams of water are run over the surface.

Fun on "The Zone."

The aeroscope, a new type of amusement device among the 200 attractions in the "Zone," is also a scientific achievement. It is a lofty steel structure, resembling an inverted pendulum, and operates on the principle of the bascule bridge. Its "stunt" is to lift the passengers to a height of 250 feet above ground with thrilling effect. The intricacy of its invention is of great scientific interest, acroplane propellers being utilized among other parts.

Among various electrical inventions for registering purposes is a clever device in the way of an ampere or watt hour meter, equipped also with a printing attachment for use on streetcars. It has two sets of dials, one to show the amount of current consumed by the car on each trip, the other totaling the full current consumption.

The United States government is the heaviest of all single exhibitors in the prodigious exhibit list. Especially timely interest is the display in the Palace of Machinery, where the visitor can get an idea of the manufacture of arms and armament, and all of the technical and mechanical side of the army and navy in operation. Here also is an exhibit of the lighthouse department and a miniature model of a naval drydock.

Apart from their fundamental purpose of furnishing amusement the 200 concessions on the "Zone" present elements of great exhibitive interest. The "Maori Village," for instance, shows one of the celebrated Maori carved houses, borrowed from the New Zealand government. This is the first time on record that such an object has ever been permitted to leave that country. This exhibit is remarkable for its art value and for the sacred traditions attached. The carvings typify the great epoch in the development of the queer people of Maori, who practiced cannibalism up to about 50 years ago.

That the "Zone" is to be a carnival of delight, never equalled for its originality and diversity, is the statement pronounced by everyone who has seen it in course of development. Among the host of different attractions are new kinds of rides, quaint villages, a mechanical reproduction of the Dayton flood, an alligator farm, a brand new conception named "Toyland Grownup," presenting the characters and places of fairyland and toyland fame in gigantic successors; the '49 Camp and remarkable replicas of the Grand Canyon, Yellowstone National park and Panama canal.

SCOPE OF EXHIBITS

ASSEMBLED in eleven huge exhibit palaces—created at a cost of $4,627,916, and covering a total ground area of 107 acres—$0,000 exhibitors have arranged displays at the Panama-Pacific International exposition, which, in their entirety, represent the most comprehensive collection of the activities and industries of the world ever assembled at a universal exposition.

The exhibit palaces comprise the central and by far the most massive grouping of the three main architectural units of the exposition. The amusement section, the "Zone," comprices the eastern group, and the pavilions of the foreign nations and of the states comprise the third, or western group. The structures of all three units are related by the general ground plan of the exposition into a harmonious entity of color, plot and decorative detail in lighting, landscape gardening and boulevards.

Of the 11 main exhibit palaces, eight are massed in one superb group, with spacious courts of beauty and connected by wide galleries making access from one building to the other not only easy but a promenade of pleasurable vistas, with fountains of rare workmanship, pools, flowers in abundance, noble arches crowned with nobler sculptures, friezes of allegorical significance and mural paintings by world masters in color.

The north and south walls of this main group of eight palances are liberally treated in the Platieresque, so called from its likeness to the work of silversmiths, while the east and west walls of the group are Italian Renaissance. But upon both of these treatments, and unifying the entire, has been imposed a treatment in mission style, to give a distinctly Californian effect. The subtle shading of these architectural treatments has called for universal praise and it is predicted will result in a distinct western style of architecture being given recognition. The total length north and south is 1235 feet.

Facing south, and directly opposite the main entrance gates of the exposition the four buildings of the group are: Palace of Varied Industries, to the extreme east, Palace of Manufactures, Palace of Liberal Arts and Palace of Education and Social Economy. Between the Palaces of Manufactures and Liberal Arts is the mighty Tower of Jewels, beneath the wide arch of which one enters the Court of the Universe, the radiating center of the entire exposition scheme—a court 900 feet in length by 500 feet in width, where 7000 persons may be seated.

Facing north and overlooking the San Francisco bay, the fair buildings of this group are: Palace of Mines and Metallurgy, to the extreme east, Palace of Transportation, Palace of Food Products and Palace of Agriculture.

Flanking the central group on the east and across the Avenue of Progress is the Palace of Machinery, the largest frame building under one roof in the world today. Flanking the main group on the west and across the Avenue of Administration and the Fine Arts Lagoon, is the Palace of Fine Arts. To the southwest of the main group is the Palace of Horticulture and to the southeast Festival Hall, the latter not, strictly speaking, an exhibit palace.

Within the main exhibit palaces will be found in eptome the world's progress and knowledge in the applied sciences. The exposition is essentially contemporaneous and for that reason no exhibit will be considered for award by the International Jury of Award that has not been produced during the past decade, that does not, in other words, represent an advance in the particular field it covers since the St. Louis exposition in 1904.

Forty-two nations will be represented here by exhibits showing some phase of national industry, and 43 states of the United States. The total amount appropriated by nations and states for participation is $10,000,000. Many of the pavilions of the nations and states vie with the major exposition palaces in beauty.

In general the names of the exhibit palaces indicate with clearness the subject matter of the exhibits. Fine arts will include many world masterpieces, the exposition being particularly enriched by masterpieces shipped from art centers of Europe for safe keeping during the war. Horticulture embraces the horticultural life of the world, from rarest orchids to canned tomatoes. Machinery includes what the name implies, the electrical grouping being found here also. Liberal arts will embrace the sciences, the professions and trades, such as—medicine, surgery, photography, printing, engineering; mines and metalurgy the entire life of mining and the refinement of mined products; education and social welfare, the branches of elementary and higher training, the child welfare; transportation will include marine and land development; manufactures, the general commodities of industrial life; varied Industries, the finer manufactured products, as precious stones, ceramics, art glass and cutlery among many hundreds of other activities; agriculture, the soil in all its productive capabilities; food products, the utilization of agricultural and horticultural products for sustenance—chocolates, confections, liquore, etc.

Festival hall will center the musical, dramatic and intellectual life of the exposition, world congresses meeting here, concerts being heard by famous artists and recitals on the world's largest organ by masters such as Edwin H. Lemere of London.

In the Palace of Machinery, for instance, one will see such groups as steam generators and motors generating steam; tools for shaping wood and metals and all of the modern appliances that have made electrical history during the past decade. In the Palace of Transportation alongside a monster ten driving wheel steam locomotive will be found the newer electric locomotive and close by the aeroplane and war dirigible in its very latest development. This palace will contain the automobile exhibit.

Workings of a Modern Mine.

To those curious for the workings of a modern mine, it will be a cage in the Palace of Mines. Stepping into this cage the visitor is dropped swiftly underground and leaves the cage to wander through the entries, stopes and drifts of the Goldfield Consolidated properties of Nevada in faithful replica. It will be in every respect a model mine, operated with complete representation of the latest machinery employed, with ventilating systems and safeguards.

From these primary activities one traverses by pleasing stages the Palace of Fine Arts where the finest in man's artistic development is represented.

The list could go on endlessly by taking one exhibit palace after the other. Each palace has the department allotted to it in comprehensive and elaborate detail. Nothing of the subject matter is omitted. It is this phase of the exposition that gives to it its mighty educational value and that has brought to San Francisco for sessions 400 of the leading national and international societies representing all branches of human thought and endeavor.

The dominating purpose of any exposition, if that exposition is to be successful, must be education. That is what the builders of the Panama-Pacific International exposition have at all times held before them as a guiding star. Every line of thought, every field of endeavor that makes for human progress, science, art and literature, will be spread out here in the vast exhibit palaces. Just as there is no individual who may not take profit from the exposition, so there is no organization dealing with material welfare that may not. And it is the vast number of organizations that have established their convention dates for 1915 at the exposition that the highest tribute to the scope and character of the exposition itself, as represented by the 80,000 exhibitors from the countries of the world.

STATE BUILDINGS

FORTY-THREE states of the United States are participating at the exposition, all of them with extensive displays of industries and resources, the majority of them by the construction of handsome state buildings for entertainment purposes and to serve as headquarters for the people from "home."

Today these buildings are completed. The exhibits of the states are in place, distributed among the eleven great exhibit palaces and in the outdoor exhibit spaces of the horticultural gardens, where roses from Indiana and New Jersey will be entered for the $1000 competition for the best new variety of rose. All of the multiform activities and industries of the states of the nation will be shown, from cigars from Key West to shingles from Oregon, oranges from southern California and granite from Main.

About $7,000,000 has been appropriated by the participating states, California leading off with approximately $2,000,000, and New York second with $1,000,000 for the state and city. To California belongs the credit for the largest building aside from the main exhibit palaces, and New York is second in size among the states. Within the California building are exhibits from the 58 counties of California arranged individually and by groups. The California building, in old mission style of architecture, will be the "host building" of the expositon. It covers seven acres, including ocurts.

The New York building is four stories in height, with a frontage of 250 feet and 100 feet in depth. On the ground floor is a magnificent hall, room, writing and reception rooms. A suite of rooms for the governor of New York and for members of the state commission will be on the second floor while the third floor will be devoted to guest rooms. A dining room is a feature of the building, a complete cuisine being maintained. The ceiling of this dining room cost $15,000.

Pennsylvania, Illinois and the Philippines are represented by edifices in keeping with the $200,000 appropriations made by each. Massachusetts appropriated $250,000, New Jersey $200,000, Washington $175,000 and there were numerous other appropriations maintaining an average of from $50,000 to $150,000.

Historical Edifices Reproduced.

Among the state buildings are reproduced many edifices of large importance in American history. First among these comes the Virginia building, an exact replica of George Washington's home at Mt. Vernon. Included are the spinning room, the detached kitchen, the servants' quarters and the stable. The rooms of the building are ornamented by Washington's own furniture loaned from the collection of Miss Nannie Randolph Heath of Virginia. Miss Heath is to be Virginia's official hostess at the building during the exposition.

A fitting companion to Virginia's state building is Independence Hall, the state pavilion of Pennsylvania. The "birthplace of American liberty" is in the same degree of veri-similitude as is the reproduction of Mt. Vernon. Here, it is expected, will hang the famous Liberty Bell.

Another structure of revolutionary associations will be Trenton barracks which, for a time, were General Washington's headquarters. This is the model which New Jersey has taken for her exposition home. President Wilson will make this building his home at the exposition and history will thus repeat itself by making the structure for the second time the shelter of the directing head of the republic. The Trenton barracks are said by architects to represent one of the best examples extant of true pre-revolutionary architecture.

The home of one of the signers of the Declaration of Independence will serve as the model for Maryland's pavilion. This is the home of Charles G. Carroll of Carrollton. The blocks for the original were brought to this country from England.

Massachusetts and Ohio have built likenesses of their respective statehouses at Boston and Columbus. The Massachusetts building is famous architecturally as well as historically, its facade being known as the "Bulfinch front," from the architect who designed it.

Oregon Building Distinctive.

A departure from the American historic has been made by Oregon. Utilizing the native woods of that state, Oregon has rebuilt the Partheon, great logs being used for the marble columns of the original. So far as possible the pillars are each different wood, one for each state in the Union. The Washington and Indiana buildings have also been constructed of native woods.

Elaborate ceremonies have marked the various stages of the work in the state section. Governors of states have journeyed with their retinues to San Francisco; commissioners have established headquarters here, and there have been banquets and festal occasions without number, all serving to increase the bonds of interstate fellowship.

A feature of Idaho's building will be motion pictures showing the scenery and resources of that commonwealth.

Hawaii and the Philippines have made elaborate exhibits. The Hawaiian building is in form of a cross. Passing through a tropical garden the visitor comes to the rotunda, in the center of which is a faithful and realistic reproduction of one of the lakes of the burning crater of Kilauea. An acquarium will be an interesting feature, showing the rainbow colored fishes of the warm waters of the Hawaiian islands. The Philippines exhibit will be equally vivid and engrossing, one detail being a garden with 400 different varieties of orchids in bloom.

The following are the states and territories participating. Arizona, Alabama, Arkansas, California, Colorado, Florida, Delaware, Iowa, Kansas, Kentucky, Louisiana, Idaho, Maryland, Massachusetts, Michigan, Mississippi, Florida, Georgia, Hawaii, Illinois, Indiana, Ohio, Oklahoma, Oregon, Pennsylvania, Philippines, Rhode Island, South Carolina, Tennessee, Missouri, Montana, Nebraska, Nevada, New Jersey, New York, North Carolina, North Dakota, Texas, Utah, West Virginia, Wisconsin, Washington and Wyoming.

FOREIGN NATIONS

QUALITY, not quantity, is the dominant note in the displays by Germany at the Panama-Pacific International exposition. In four of the great exhibit palaces 40,000 feet of space has been taken by the German government and by individual entrants, and these exhibits will reflect in their scope and detail the industries that have elevated Germany to a high place among the producing nations. Particularly is this true of chemicals, in the extensive application of which this nation has long led the world.

The use of dye stuffs, for instance, which are a principal export of Germany, will be exhaustively shown, with a woman's gown in the various stages of manufacture, from the raw material to the finished silk, with particular reference to the part dyes play as the medium of display. This will be in the Palace of Liberal Arts and in the same palace will be an elaborate display showing the evolution of the graphic arts such as printing and the various processes of photography, in which Germany again excels the world.

The government exhibit will be about equally divided between the palaces of Education, Liberal Arts, Varied Industries and Machinery. In addition to displays in these palaces by individuals there will be individual displays in the Palace of Fine Arts and elsewhere. In the Palace of Fine Arts, for example, will be a display representing the best 40 paintings by the modern school of German artists. Altogether the part that Germany will play in the exposition will be increased rather than decreased by the war, the same thing being true with Germany that is true with other warring nations; there is a strong feeling that the arts of peace should be prominently displayed in contrast to the business of war in which the nations are now engaged.

The child welfare work for which Germany is noted will be displayed with thoroughness under the direct supervision of Dr. Philip Rauer, the eminent German sociologist. Dr. Rauer had charge of a similar exhibit at Dresden, which attracted a great deal of attention.

Included in the 1000 different articles on display and submitted for award will be German wines, the famous Rosenthal china, gold worked and beautiful examples of glassware from Theresienthal; a splendid exhibit by Henkell, Solingen, Twin Steel works, known over the world for the quality of their steel and cutlery and the largest reproducing organ in the world from Frieberg. This latter will be installed in the Palace of Liberal Arts.

Bavarian vases will be shown, valued at $5000 each, and porcelains, together with toys, for which German manufacturers are world famous.

Great Britain's Display Elaborate.

Great Britain will have a splendid and comprehensive exhibit of arts and industries. The shipment of Great Britain's exhibits was made possible by the United States government, which placed the collier Jason at the service of the warring nations seeking participation.

When the Jason discharged its mammoth cargo at the docks of the exposition, Great Britain's exhibits were among the first of the tonnage to be hauled away and distributed among the various exhibit palaces. From the work of its famous artists to the work of the weavers of its spinning mills, every phase of British industry and art is compactly represented.

Chief among the art features will be a magnificent collection of Whistler's best work, hanging in a gallery exclusively devoted to him. Other famous British artists will be represented in the pick of the noblest paintings and art works that could be selected from the National gallery.

In the Manufacturers' palace 18,000 square feet of space has been taken by Great Britain alone and in this area will be displayed the products of industrial Britain. The cutlery and plate industry of Sheffield will be graphically illustrated and elaborate exhibits made of the finished products. Pottery will be a special feature, while the diverse output of the great textile factories of all, of course, have adequate representation. Refinements of manufacturing processes which produce the finer works of the arts and crafts will be another dominating feature of the extensive array of exhibit booths and display cases.

Great Britain's merchant marine will find its presentation throughout the international merchant marine, with the White Star line making one of the chief feature exhibits. With all of Great Britain's participation the idea has been to example the arts and industries by individual exhibitors of world repute rather than by a great scattering of minor exhibits. This has resulted in a series of exhibits in the various palaces of particular dignity and worth which will completely illustrate the manifold activities not only of the mother countries of England, Scotland and Ireland, but of the numberless colonies and dependencies that are not otherwise represented. Among the British dependencies contributing the greatest display at the exposition is Canada which, with an outlay of $600,000, has constructed the largest pavilion on the grounds of any foreign nation.

France's participation is an epic of dynamic activity. When the war broke over Europe, France, as other nations now battling, had made an appropriation for a national pavilion and exhibit installation. Naturally, for a time, the grim business of preparing for war and engaging in war, occupied the time and the energy and the brains of the French government. Then came a time, late in December, when the executives of France judged it opportune to begin the work already outlined.

(Continued on Page Eight.)