

THE CENTENNIAL.

The Great Anniversary Exhibition
in Philadelphia.

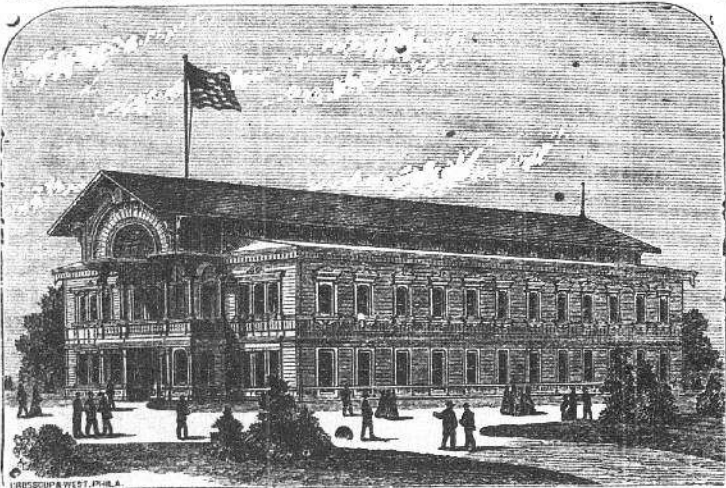
Views of the Exhibition Buildings and Full Descriptions
of the Various Departments.

Arrangements for the Centennial.

The act of congress which provides for "celebrating the one hundredth anniversary of American independence, by holding an international exhibition of arts, manufactures, and products of the soil and mine," authorized the creation of the United States centennial commission, and entrusted to it the management of the exhibition. This body is composed of two commissioners from each state and territory, nominated by the respective governors, and commissioned by the president of the United States. The enterprise, therefore, is distinctly a national one, and not as has sometimes been stated, the work of a private corporation.

The exhibition will be opened on May 10th, 1876, and remain open until November 10th. There will be a fixed price of fifty cents for admission to all the buildings and grounds.

The centennial grounds are situated on the western bank of the Schuylkill river, and within Fairmount Park, the largest public park in proximity to a great city in the world, and one of the most beautiful in the country. The park contains



NEWSPAPER BUILDING.

three thousand one hundred and sixty acres, four hundred and fifty of which have been enclosed for the exhibition. Besides this tract, there are large tracts near by for the exhibition of stock, and a farm of forty-two acres is already suitably planted for the tests of plows, mowers, reapers, and other agricultural machinery.

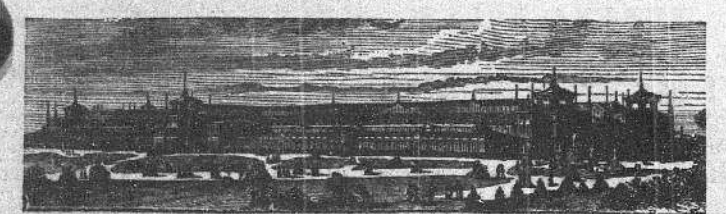
The exhibition buildings are approached by eight lines of street cars which connect with all the other lines in the city, and by the Pennsylvania and Reading railroads, over the tracks of which trains also run from the North Pennsylvania and Philadelphia, Wilmington, and Baltimore railroads. Thus the exhibition is in immediate connection with the entire railroad system of the country, and any one within ninety miles of Philadelphia can visit it at no greater cost than that of carriage hire at the Paris or Vienna exhibition.

An important special exhibition is made by the United States government, and is prepared under the supervision of a board of officers representing the several executive departments of the government. A fine building of four and a half acres is provided for the purpose, space in which is occupied by the war, treasury, navy, interior, post-office, and agricultural departments and the Smithsonian institution.

The women's centennial executive committee have raised \$30,000 for the erection of a pavilion in which to exhibit every kind of woman's work. To this collection, women of all nations have contributed.

The list of special buildings is constantly increasing, and the present indications are that their total number will be from two hundred to two hundred and fifty. Most of the important foreign nations—England, Germany, Austria, France, Sweden, Egypt, Japan and others—are putting up one or more structures each, for exhibition purposes, or for the use of the commissioners, exhibitors and visitors. Offices and headquarters of this kind, usually of considerable architectural beauty, are provided by the states of Pennsylvania, Ohio, Indiana, Illinois, Michigan, New Jersey, New York, Connecticut, Massachusetts, New Hampshire, Missouri, Kansas, Virginia, West Virginia, Nevada, Wisconsin, Iowa and Delaware; and it is likely that others will follow the example.

A number of trade and industrial associations, which require large amounts of space, are provided for in special buildings. Among these are the photographers, the carriage builders, the glass makers, the cracker bakers, the boot and shoe manufacturers, besides quite a number of individual exhibitors. The great demand for space renders this course necessary to a considerable extent, especially for exhibitors who have been tardy



MACHINERY HALL.

In making their applications. In the main exhibition building, for example, three hundred and thirty-three thousand three hundred square feet of space had been applied for by the beginning of October by American exhibitors only; whereas, the aggregate space which it has been possible to reserve for the United States department is only one hundred and sixty thousand square feet. About one-third is consumed by passage ways.

The machinery building, like the others, is already fully covered by appli-

cations. There are about one thousand American exhibitors in this department, one hundred and fifty English, and one hundred and fifty from other European countries—which is about two hundred and fifty more than entered the Vienna machinery exhibition. Extra provision has been made for annexes to accommodate the hydraulic machinery, the steam hammers, forges, hoisting engines, boilers, plumbers, carpenters, etc.

Power in the machinery hall is chiefly supplied by a pair of monster Corliss engines. Each cylinder is forty inches in diameter, with a stroke of ten feet; the fly-wheel is thirty-one feet in diameter, and weighs fifty-five tons; the horse power is fourteen; and the number of boilers is twenty. This engine drives about a mile of shafting.

For the art exhibition, the most eminent American artists have sent specimens, and it may be confidently stated that, especially in the department of landscape painting, the United States presents a finer display than the public has been led to expect. Quite aside from the contributions of American artists, applications from abroad call for more than four times the exhibiting space afforded by the great Memorial Hall. Provision for the surplus has been made in temporary fire-proof buildings, though all exhibiting nations will be represented in the central art gallery.

The secretary of the navy has arranged that a United States vessel shall call at convenient European ports, to collect and transport hither to the exhibition the works of American artists resident in Europe. Among the ports thus far designated, are Southampton for England, Havre for France, Bremen for Germany, and Leghorn for Italy. The arrival of this vessel is expected daily.

Mr. Bell, the eminent English sculptor, who designed the groups for the plinth for the great Albert memorial in Hyde Park, London, has reproduced in terra cotta, at the celebrated works in Lambeth, the one which symbolizes America. The figures in this group are colossal, covering a ground space of fifteen feet square. It is placed in the great central art gallery, opposite the principal entrance.

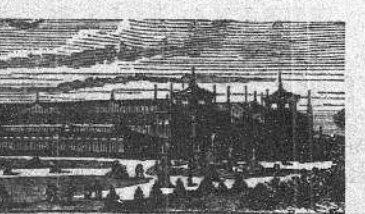
The art exhibition includes, in addition to the works of contemporary artists,

representative productions of the past century of American art—those, for instance, of Stuart, Conrey, Trumbull, West, Alston, Sully, Neagle, Elliot, Kensett, Cole. These, as well as the works offered by living artists, have been passed upon by the committee of selection, who visited for the purpose, New York, Boston, Chicago, and other leading cities, in order to prevent the needless transportation to Philadelphia of works of art not up to the standard of admission.

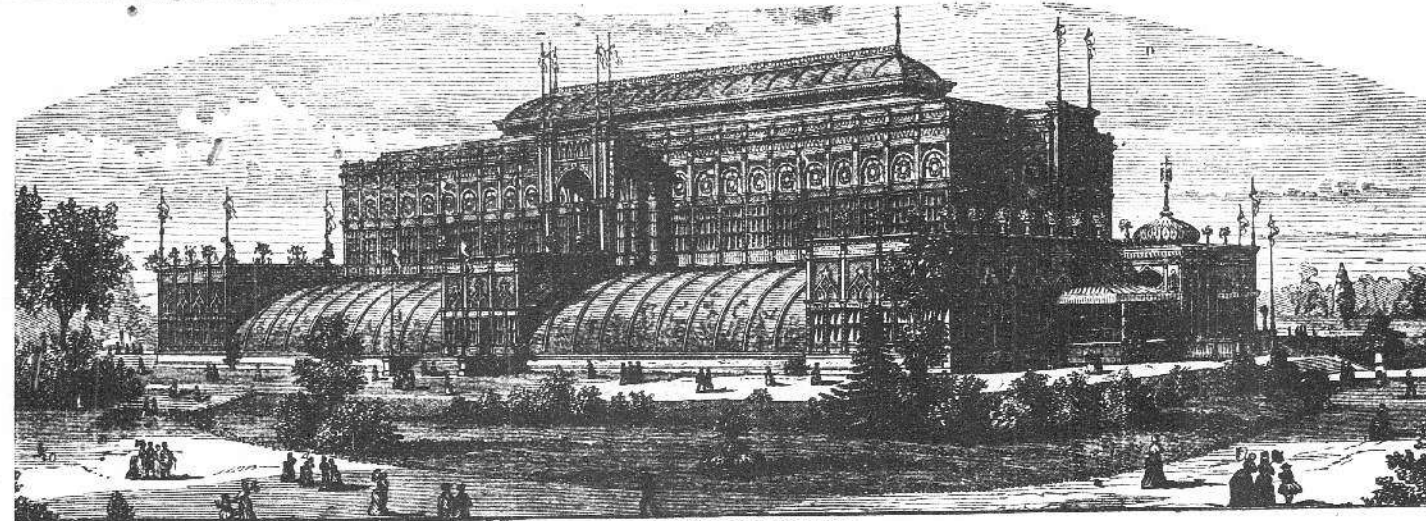
A large number of orders and fraternities have signified their intention to hold gatherings at Philadelphia during the period of the exhibition. Among these which may now be enumerated, are the Grand Lodge of Pennsylvania, Independent Order of Odd Fellows; the Grand Encampment, Independent Order of Odd Fellows; Grand Lodge, United States, Independent Order of Odd Fellows; Grand Commandery Knights Templar; Grand Army of the Republic; Presbyterian Synod; Caledonian Club; Portland Mechanic Blues; Welsh National Eisteddfod; Patriotic Order Sons of America; California Zouaves of San Francisco; an International Regatta; the Life Insurance Companies; National Board of Underwriters; State Agricultural Society; Second Infantry, N. G. of California; Philadelphia Conference Methodist Episcopal Church; Cincinnati Society; California Pioneer Society; American Dental Convention; Catholic Total Abstinence Union of America; Independent Order of B'nai B'rith; National Alumni Association; Salesmen's Association; Fifth Maryland Regiment; Seventh New York Regiment; American Pomological Society; Malster's Association of the United States; Army of the Cumberland; Humboldt Monument Association; Christopher Columbus Monument Association; Board of Trade Convention; International Typographical Congress; Rifle Association of the United States; National Legion; Philadelphia County Medical Society; International Medical Congress; Old Volunteer Fire Department of Philadelphia; German Rifle Club; Army of the Potomac, etc.

Main Building.

This is a parallelogram, running east and west one thousand eight hundred and seventy-six feet long, and north and south four hundred and sixty-four feet wide. The larger portion is one story high, the interior height being seventy feet, and the cornice on the outside forty-eight feet from the ground. At the center of the longer sides are projections four hundred and six feet in length, and on the ends of the building projections two hundred and sixteen feet in length. In these, which are in the center of the four sides, are located the main en-



trances, which are provided with arcades upon the ground floor, and central facades ninety feet high. The east entrance forms the principal approach for carriages, visitors alighting at the doors of the building under cover of the arcade. The south entrance is the principal approach from railway cars. The west entrance opens upon the main passage-way to two principal buildings, the machinery and agricultural hall, and the north entrance memorial hall (art gallery). Towers seventy-five feet in height rise at each corner of the building.



THE HORTICULTURAL HALL.

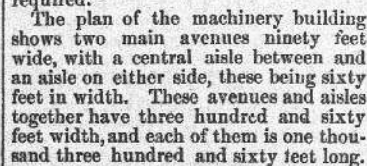
In order to obtain a central feature, the roof for one hundred and eighty-four feet square at the center has been raised above the surrounding portion, and four hundred and twenty feet high, are introduced into the corners of this elevated roof. This gives ventilation as well as ornament. The main building has nine hundred and thirty-six thousand and eight square feet of surface, or nearly twenty-one and a half acres. Its ground plan shows a central avenue one hundred and twenty feet in width, and one thousand eight hundred and thirty-two feet in length, which is the longest avenue of that width ever introduced into an exhibition building. On either side of this is another avenue of equal length, and one hundred feet wide. Between the central and side avenues are aisles forty-eight feet wide, and on the outer sides of the building smaller aisles of twenty-four feet width. To break the great length of the roof-line three transepts have been introduced at the extreme ends of the building in relative positions to each other as the longitudinal avenues. These cross the building, and are four hundred and sixteen feet in length. The intersections of these various avenues make at the center of the building nine spaces, free from supports, which are from one hundred to one hundred and twenty feet square, and which aggregate four hundred and sixteen feet square. The general elevation of the roof of all these avenues varies from forty-five feet to twenty feet.

The building rests upon the ground, the land having been thoroughly graded and prepared. The foundations consist of piers of masonry, the superstructure being composed of wrought iron columns placed twenty-four feet apart, which support wrought iron roof trusses. There are six hundred and twenty-two of these columns in the entire structure, the shortest being twenty-three feet and the longest one hundred and twenty-five feet long. Their aggregate weight is two million two hundred thousand pounds. The roof trusses and girders weigh five million pounds. The sides of the building, to seven feet above the ground, are finished with brickwork in panels between the columns. Above this there are glazed eaves. The roof covering is of tin, that being the best roofing known in this climate to resist leakage. The flooring is of plank, upon sills resting upon the ground, with no open space beneath. Towers surmount the building at all the corners and angles, and the national standard, with appropriate emblems, is placed over each of the main entrances. There are numerous side entrances, each being surmounted with a trophy, showing the national colors of the country occupying that portion of the building. In the vestibules variegated brick and tile are introduced. Louvre ventilators surmount all the avenues, and sky-lights the central aisles. Light, of which there is ample supply, comes from the north and south sides almost entirely. There underlie the building two miles of drainage pipe, the water supply and drainage system being complete. Offices for the foreign commissions are placed along the sides of the building, in close proximity to the products exhibited. Offices for the administration are at the ends. The design of the building is such that all exhibitors will have an equally fair opportunity of exhibiting their goods to advantage. There is comparatively little choice of location, as the light is uniformly distributed, and each of the spaces devoted to products is located upon one of the main thoroughfares.

Machinery Building.

This structure is located about five hundred and fifty feet west of the main exhibition building, and as its north front stands upon the same line, it is practically a continuation of that edifice, the two presenting a frontage of three thousand eight hundred and twenty-four feet from their eastern to their western ends, upon the principal avenue within the grounds. This building consists of a main hall, one thousand four hundred and sixty feet long, with an annex on the southern side two hundred and eighty feet by two hundred and ten feet. The entire area covered is five hundred and fifty-eight thousand four hundred and forty square feet, or nearly thirteen acres, and the floor space afforded is about fourteen acres. The chief portion of the building is one story in height, the main cornice upon the outside being forty feet from the ground, and the interior height to the top of the ventilators in the avenues seventy feet, and in the aisles forty feet. To break the long lines of the exterior, projections have been introduced upon the four sides, and the main entrances are furnished with arcades extending to seventy-eight feet in height. The eastern entrance is the principal approach from railways and from the main exhibition building. Along the southern side are placed the boiler houses, and such other buildings for special kinds of machinery as may be required.

The plan of the machinery building shows two main avenues ninety feet wide, with a central aisle between and an aisle on either side, these being sixty feet in width. These avenues and aisles together have three hundred and sixty feet width, and each of them is one thousand three hundred and sixty feet long. At the center of the building there is a transept ninety feet in width, which at the south end is prolonged beyond the building. This extended transept, beginning at thirty feet from the building and extending to two hundred and eight feet, is flanked on either side by aisles sixty feet wide, and forms an annex for hydraulic machines. The promenades are: In the avenue fifteen feet wide, in the aisles ten feet, and in the transept twenty-five feet. The walks extending across the building are all ten feet wide, and lead at either end to exit doors. The foundations of this building are piers of masonry, the superstructure consisting of solid timber columns supporting



roof trusses, constructed of straight wooden principal beams and wrought iron ties and struts. The columns are placed in longitudinal lines, and in these rows stand sixteen feet apart. The columns are forty feet high, and support respectively the ninety-foot roof-spans over the avenues at a height of forty feet, and the sixty feet roof-spans over the aisles at a height of twenty feet. The outer walls are built of masonry to a height of five feet, and above that are composed of glazed sashes. Portions of these sashes are movable for ventilation, and Louvre ventilators are introduced in continuous lengths over both the avenues and the aisles. The building is entirely lighted by side light from the north and south. Space in machinery hall has been allotted as follows:

| | Square feet. |
|--------------------|--------------|
| Great Britain..... | 35,725 |
| Germany..... | 1,098 |
| France..... | 11,219 |
| Belgium..... | 9,379 |
| Brazil..... | 4,000 |
| Austria..... | 1,558 |
| Serbia..... | 1,558 |
| Canada..... | 4,300 |
| Spain..... | 2,448 |
| Russia..... | 1,500 |
| Denmark..... | 585 |
| Chile..... | 408 |
| Norway..... | 360 |

The United States occupies three hundred thousand square feet.

This machinery building has very superior facilities for shafting and double lines are introduced into each avenue and aisle at a height of about twenty feet. A Corliss steam engine of one thousand four hundred horse-power drives the main shafting. There are also to be counter-lines of shafting in the aisles and special steam power furnished where necessary. Steam power is to be furnished free to exhibitors. In the annex for hydraulic machines there is a tank sixty feet by one hundred and sixty feet, with ten feet depth of water. It is intended to exhibit all sorts of hydraulic machinery in full operation, and at the southern end of the tank there is a waterfall thirty-five feet high by forty feet wide, supplied from the tank by the pumps on exhibition. There will probably be a large exhibition at Philadelphia of processes of manufacture than at any previous exhibition.

The applications for space have been so numerous as to require the addition of three annexes, covering two and one-half acres, while numerous private exhibitors have put up buildings for their



ARKANSAS.

own use. The machinery hall proper contains above one thousand two hundred American exhibitors, having an average space of two hundred and seventy square feet each—a more compact arrangement than has been accomplished previously, since at Vienna there were nine hundred and fifty-nine exhibitors of machinery, with an average floor space of three hundred and three square feet.

The Art Gallery.

The most imposing and ornate of all the structures is memorial hall, built at a cost of \$1,500,000, by the state of Pennsylvania and the city of Philadelphia. This is placed at the disposal of the centennial commission, to be used during the exhibition as an art gallery, after which it is designed to make it the receptacle of an industrial and art collection similar to the famous south Kensington museum, at London. It stands on a line parallel with, and a short distance northward of, the main building, and is in a commanding position, looking southward across the Schuylkill over Philadelphia. It stands upon a terrace one hundred and twenty-two feet above the level of the Schuylkill. Being designed for an absolutely fireproof structure, nothing combustible has been used. The design is modern Renaissance. It covers an acre and a half, and is three hundred and sixty-five feet long, two hundred and ten feet wide, and fifty-nine feet high, over a spacious basement twelve feet high. A dome, rising one hundred feet above the ground, surmounts the center, capped by a colossal ball, from which rises the figure of Columbia. The main front of this building looks southward, displaying a main entrance in the center consisting of three enormous arched doorways a pavilion on each end, and two arcades connecting the pavilions with the center. The entrance is seventy feet wide, to which there is a rise of thirteen steps. Each of the huge doorways is forty feet high and fifteen feet wide, opening into a hall. Between the arches of the door-

ways are clusters of columns, terminating in emblematic designs illustrative of science and art. The doors are of iron, relieved by bronze panels, displaying the coats of arms of all the states and territories. The United States coat of arms is in the center of the main frieze. The dome is of glass and iron, of unique design. While Columbia rises at the top, a colossal figure stands at each corner of the base of the dome, typifying the four quarters of the globe.

In each pavilion there is a large window, twelve and one-half feet by thirty-four feet. There are altogether eight of these windows, used for the display of stained glass paintings, etc. The arcades designed to screen the long walls of the galleries each consist of five groined arches, and form promenades looking outward over the grounds and inward over gardens extending back to the main wall of the building. These garden plots are each ninety feet by thirty-six feet, ornamented in the center with fountains, and intended to display statuary. The arcades are highly ornamented, and the balustrades of them and of the stairways are also designed for statuary. The walls of the east and west sides of the structure display the pavilions and the walls of the picture galleries, and are relieved by niches designed for statues. The frieze is richly ornamented, and above it the central dome shows to great advantage. The rear or north front of the building is of the same general character as the main front, but, in place of the arcade, has a series of arched windows, twelve in number, with the entrance in the center. Between the pavilions is the grand balcony, a promenade two hundred and seventy-five feet long and forty-five feet wide, elevated forty feet above the ground, and overlooking to the northward the beautiful grounds of the park. On each front of the building the entrances open into halls eighty-two feet long, sixty feet wide and fifty-three feet high, decorated in modern renaissance. These, in turn, open into the center hall, eighty-three feet square, the ceiling rising over eighty feet in height. From the east and west sides of this center hall extend the galleries, each ninety-eight feet long, forty-eight feet wide and thirty-five feet high.

These galleries admit of temporary divisions for the better display of paintings, and with the center hall form a grand hall two hundred and eighty-seven feet long and eighty-three feet wide, capable of comfortably accommodating

Declaration of Independence was signed in the chamber on the left of the principal entrance. Some years since the antique architectural decorations and furniture of this room were removed, and their places supplied with new furniture and tapestry in modern style. This error has since been repaired, as far as possible, by restoring the hall to its ancient appearance. The portraits of nearly every one of the signers now adorn the walls. Open daily.

The Agricultural Building.

stands north of the horticultural building, being separated from it by a romantic ravine, and has a commanding view of the Schuylkill river and the northwestern suburbs of Philadelphia beyond. This building illustrates a novel combination of materials, mainly wood and glass, and consists of a long nave crossed by three transepts, each being composed of truss-arches of Gothic form. The nave is eight hundred and twenty feet long by one hundred and twenty-five feet in width, with a height of seventy-five feet from the floor to the point of the arch, the central transept one hundred feet wide and seventy-five feet high, and the two end transepts eighty feet wide and seventy feet high. Its interior appearance resembles that of a great cathedral, and in looking from transept to transept, the vista is extremely imposing. A portion of this building is supplied with steam power for the use of agricultural machinery. The four courts inclosed by the nave and transepts, and also the four spaces at the corners of the building, having the nave and end transepts for two of their sides, are roofed, and form valuable space for exhibition. The general plan of the building is parallelogram five hundred and forty feet by eight hundred and twenty feet, covering about ten and one-quarter acres. Sixteen foreign nations have space in this building, and in the one hundred and forty-seven thousand five hundred and seventy-two square feet which remain, more than one thousand American exhibitors are accommodated. This necessitates special buildings for the collective exhibits of their natural resources provided by the different states.

In addition to the grounds within the inclosure, an eligibly located stockyard, twenty-two acres in extent, has been provided for the display of live stock, which will be exhibited in a series of shows during the months of September, October, and November. Two farms, moreover, of about fifty acres each, have been suitably planted for the trials of agricultural machinery.

Horticultural Building.

The city of Philadelphia made a liberal grant of money to provide for the horti-



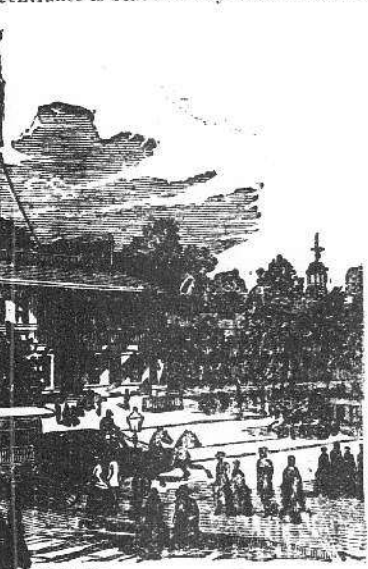
MAIN EXHIBITION BUILDING.

cultural department of the exhibition an extremely ornate and commodious building, which is designed to remain in permanence as an ornament of Fairmount Park. This structure is located on a terrace bordering on the Schuylkill river, a short distance north of memorial hall, and has a commanding view of the Schuylkill river valley and the northwestern portions of Philadelphia. Romantic ravines running down to the river are on either side, separating it from the south from memorial hall and on the

north from agricultural building. These ravines are spanned by ornamental bridges five hundred feet long and sixty feet wide, for convenience of access. Carriage roads, a railway, and foot walks, pass over them. The horticultural building is designed in the Moresque style of architecture of the twelfth century, the chief materials externally being iron and glass, supported by fine marble and brick work. The building is three hundred and eighty-three feet long, one hundred and ninety-three feet wide, and seventy-two feet high to the top of the lantern. The main floor is occupied by the central conservatory, two hundred and thirty feet by eighty feet, and fifty-five feet high, surmounted by a lantern one hundred and seventy feet long, twenty feet wide, and fourteen feet high. Running entirely around this conservatory, at a height of twenty feet from the floor, is a gallery five feet wide.

On the north and south sides of this principal room are four forcing houses for the propagation of young plants, each of them one hundred feet by thirty feet, and covered by curved roofs of iron and glass, which, appearing upon the exterior of the building, present a very fine feature. A vestibule thirty feet square separates the two forcing houses on each side, and there are similar vestibules at the center of the east and west ends, on either side of which are apartments for reception rooms, offices, etc. Ornamental stairways lead from these vestibules to the internal galleries of the conservatory, as well as four external galleries, each one hundred feet long and ten feet wide, which surmount the roofs of the forcing houses. These external galleries are connected with a grand promenade, formed by the roofs of the rooms on the lower floor, giving a superficial area of about seventeen thousand square feet.

The east and west entrances to the horticultural building are approached by flights of blue marble steps, from terraces eighty feet by twenty feet, in the center of each of which stands an open kiosque twenty feet in diameter. Each entrance is beautified by ornamental the



INDEPENDENCE HALL.

and marble work, and the angles of the main conservatory are adorned with eight attractive fountains. The corridors connecting the conservatory with the surrounding apartments open fine vistas in every direction, and the beauties of the surrounding park, with the river flowing in front and more than one hundred feet beneath the building, are to the attractions. Extensive heating arrangements are provided in the basement, which is of fireproof construction.

Surrounding this building there are thirty-five acres of ground, which are devoted to horticultural purposes, and have been suitably planted. In this plot there is an extensive series of sunken gardens.

Who Shall Take the Palm.

It is hard to tell what nation makes the best show at the exhibition. Egypt displays her antiquities of the Pharaohs, her wonderful collection from among the savage tribes of interior Soudan, and her artistic furniture of rare wood, inlaid with ebony, ivory and silver, executed in the ancient Arabic style, and people think that nothing in the main building excels that. Little Holland sets up her far-bronze and perfect models of her far-famed, which are of all the noted public works within her territory, displays great squares of carpet, rivaling that of Brussels in quality and erects the prettiest commission office in the main building. Brazil puts up a dazzling \$30,000 pavilion, suggesting the Alhambra style of architecture. The United States makes the grandest display of granite work, in the shape of half a dozen immense sarcophagi, one of them surmounted by a female statue, finely chiseled out of a solid mass of granite. Chili builds the most picturesque pagoda and Spain, the most imposing and tasteful pavilion. China and Japan contend with each other in striving to present the best specimen of bamboo architecture, and to paint on their commissioners' offices, of the tea-caddy style, the ugliest old grannies with bald pates, expressionless almond eyes and queues that many a cabby jibes at as he looks at his worn-out whip.

England carries off the palm in pottery; Germany flaunts her toys and fancy articles; France stands alone in the matter of wines, fine groceries and notions in the clothing line; Sweden defies competition in exhibiting the perfection attainable by the carpenter's art, and Belgium takes pride in the representation, in carved wood, of Scriptural and other religious subjects, one of its cabinets having a series of niches extending around it and containing groups of wooden statuary representing the marriage of Joseph and Mary, the annunciation, Mary's visit to her cousin, St. Elizabeth, the flight into Egypt, etc.

A Norway iron firm instead of heaping up their plates and bars of wrought iron



in an unattractive pile, have constructed of it a complete model of a Norwegian fishing boat; even the rattles are of wrought iron, the metal composing the cross-ribs or foot-holds being knotted as neatly as though the latter were made of hemp. In the display of iron manufactures both Norway and Sweden stand very high. The section of the former is enlivened by well executed paintings of picturesque scenery in that romantic country. Among these are representations of Christiansa, Oskarsdal and Bergen.