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EXPOSITION OPENS MAY 1, 1893. EXPOSITION CLOSES OCT. 30, 1893.

BUILDING TO BE COMPLETED AND DEDICATED OCT. 12, 1892.

EXHIBITS RECEIVED FOR INSTALLATION NOV. 1, 1892.

WORLD'S COLUMBIAN EXPOSITION

CHICAGO, U. S. A.

1893.

CLASSIFICATION AND RULES

DEPARTMENT OF

LIBERAL ARTS.

With other information for intending Exhibitors.

OFFICE:—RAND-McNALLY BUILDING,

160-174 ADAMS STREET, CHICAGO

GEO. R. DAVIS,
Director-General.

SELIM H. PEABODY,
Chief of Department.

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IN EXCHANGE
Gallaudet College

NOTICE.

The Chief of the Department of Liberal Arts has endeavored to present in this pamphlet in addition to the classification such general information relating to the department and the World's Columbian Exposition as he hopes will prove of interest to all who intend to exhibit and serve them as a guide in presenting their applications for space promptly and intelligently.

A careful perusal of the Rules and Regulations will save delay and much needless correspondence.

All applications for space should be addressed to the Director-General World's Columbian Exposition, Chicago, Ill., U. S. A.

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THE DEPARTMENT OF LIBERAL ARTS.

World's Columbian Exposition.

The Department of Liberal Arts will occupy about 400,000 square feet of space in the south end of the Main Building in Jackson Park. The most important of the groups thus provided for are Education, Music, Hygiene, Medicine and Surgery, Books and Literature, Physical Research, Engineering and Architecture, Religious and Social Associations.

AMOUNT OF SPACE.

The groups which are now included in this Department occupied at Philadelphia in 1876 35,782 square feet; at Paris, in 1878, 111,000 square feet. At Paris, in 1889, a distinct building was assigned to Liberal Arts, having dimensions of 738x275 feet, or an area, including galleries and Music Hall, of 304,300 square feet. One entire section of the building was given to cafes, and one-half of another section was occupied by miscellaneous exhibits of foreign countries. Deducting for these, the area for the Liberal Arts was, in fact, about 244,300 square feet. But the groups of Archæology and Ethnology, now provided for in a separate department, were also housed in this building, so that the 400,000 feet now given to the Liberal Arts is more than double the space provided for the same subjects at the Exposition of 1889. It is nearly four times that of the Exposition of 1878, and more than ten times that furnished at the Centennial of 1876.

Two hundred thousand feet of the space will be upon the ground floor, the remainder on the second floor. Two hundred thousand of the space will be given to education, and most of this will be upon the ground floor.

The mass of the visitors to the Fair will come by rail and will alight at the central point of the grounds in front of the grand Administration Building. Thence moving toward the lake, they will pass along the broad esplanade, having on their right, first, Machinery Hall, then the Hall of Agriculture; on their left the Hall of Mines, the Hall of Electricity; then they will come to the splendid facade of the Main Building, nearly 800 feet in length, upon which will appear the inscription "To the Liberal Arts." This position is in the finest of all the buildings erected for exhibition purposes, and in the central and culminating point of arrangement. Entering the lofty portal, the visitor will find himself at once confronted by the Educational Exhibit, systematically and symmetrically arranged by states, and by gradations, passing from the most elementary to the most advanced. In all former exhibits, including that at Paris in 1889, the Educational Exhibits have been placed in a gallery. In this case the bulk of these exhibits will be on the ground floor; the remainder will find provision better adapted to their wants, on the second floor.

THE MAIN BUILDING,

devoted to Manufactures and the Liberal Arts, is 1,688 feet long, and 788 feet wide. It covers more than 31 acres of ground, and will contain on its two floors about 42 acres of floor space. Its central dome will be nearly 1,300 feet long, and 400 feet wide, and its central height will be nearly 30 feet greater than that of the monument upon Bunker Hill. This building will contain in its south end Liberal Arts; in its north ends, Archæology and Ethnology; in its center the manufactured products of all nations. It will not contain any motive power, or processes of manufacture, these being all referred to the buildings for Machinery, Electricity, or Mining. Each of the departments in this building will occupy a distinct and well defined space.

Very earnest expressions of demand for a separate building for the Liberal Arts, or for Education alone, have been presented from all sections of the country, and no one has felt this desire more intensely than has the Chief of the Department. But a careful consideration of all the conditions

has led him to believe that the present solution of the question should be accepted as satisfactory. If placed out of Jackson Park, either south or west, this department would be removed from the great center of interest, and would seem to be thrust out of its home, its own rightful abode. The Exposition authorities long since determined that the Exposition should not be divided, but that all its departments should be united upon Jackson Park.

The Chief of the Department begs to present to those interested in the Liberal Arts, and especially to his co-laborers in the field of education, the following conclusions as the result of careful reflection and a thorough analysis of the situation.

1. The amount of space provided is fairly adequate, as compared with that given to other departments.
2. Its position is central, convenient, dignified, and worthy.
3. Its position is much to be preferred above any which would place the department outside of Jackson Park, and away from the immediate association with the remainder of the Exposition.

SELIM H. PEABODY,
Chief, Department Liberal Arts.

Information Important to Exhibitors

IN THE

DEPARTMENT OF LIBERAL ARTS.

WORLD'S COLUMBIAN EXPOSITION.

CHICAGO, U. S. A.

Exposition opens May 1, 1893. Closes October 30, 1893.

Dedication of the buildings of the World's Columbian Exposition to be held in the City of Chicago, U. S. A., October 11, 12, and 13, 1892. The general reception of articles at the Exposition buildings will commence November 1, 1892, and no article will be admitted after April 10, 1893. Space not taken possession of April 1, 1893, will revert to the Director-General for re-assignment.

Exhibitors must be the Manufacturers or Producers of the goods or materials intended for exhibition.

Applications for space and negotiations relative thereto for all articles of foreign production intended for exhibition must be conducted with the Commission of the Country where the article is produced.

All applications must be accompanied by a diagram to the scale of one-quarter inch to the foot of the plan and distribution of the articles to be exhibited.

If exhibits are intended for competition, it must be so stated by the exhibitor, or they will be excluded from examination for award.

Articles that are in any way dangerous or offensive, also patent medicines, nostrums and empirical preparations whose ingredients are concealed, will not be admitted to the Exposition.

No fire, inflammable oils nor other combustible material will be permitted in the building.

Before filling out the application for space, your attention is especially directed to the General Rules and Regulations for the government of the Exposition, promulgated by the Director-General and printed upon each blank form of application.

Be prompt in making application for space. The sooner the mass of applications is in our hands, the sooner can we determine the assignments to be made. Fill out the application in exact accordance with the Regulations accompanying the blank furnished. This will save delay, annoyance, and needless correspondence.

The flooring must not be altered or removed except by the sanction of the Chief of the Department.

All designs for structures, platforms, cases, partitions, and height of same must receive the approval of the Chief of the Department, and must conform to the general rules adopted by the Director-General.

It is not intended that machinery shall be installed in the Manufactures Department, but shall take its place in Machinery Hall. In order to encourage pleasing and attractive effects and add life to the various exhibits, where required to keep them moving, a limited amount of noiseless motor power may be applied, subject to the approval of the Chief of the Department.

The following limits must not be exceeded—Platforms: seven inches above the floor. Railings: two feet six inches above platforms (they must be included within the space assigned to the exhibitor). Counters: two feet ten inches above the floor, on side next passage way.

The material to be used for covering counters, screens, or partitions, will be subject to the approval of the Chief of the Department.

Unless otherwise ordered, all signs must be of a uniform design, which will be prescribed by the Department. They must not be made of muslin, linen, canvas or paper. They must be placed parallel with the frontage or passage ways of the respective stands or exhibits, and must in no case interfere with the light or view.

The Chief of the Department hopes to secure such perfection of detail, in the presentation of each separate exhibit, and such logical, consistent and harmonious combination in the arrangement of the several classes and groups, as will secure a display which will be both instructive and artistic, appealing to the intelligent and æsthetic sense of each observer. To this end he desires to aid exhibitors, and to secure their hearty co-operation and assistance. Regulations are intended, not to annoy the individual exhibitor, but to develop that success which can be secured only by the most careful and elaborate organization.

SELIM H. PEABODY,

Chief, Department of Liberal Arts.

Approved,

GEORGE R. DAVIS,

Director-General.

RULES AND REGULATIONS

WORLD'S COLUMBIAN EXPOSITION.

- RULE 1.** Exhibitors will not be charged for space. A limited amount of power will be supplied gratuitously. This amount will be settled definitely at the time space is allotted. Power in excess of that allotted gratuitously will be furnished by the Exposition at a fixed price. Demands for such excess must be made before the allotment of space.
- RULE 2.** Any single piece or section of any exhibit of greater weight than 30 000 pounds will not be accepted if machinery is required for its installation.
- RULE 3.** Exhibitors must provide, at their own expense, all show cases, cabinets, shelving, counters, fittings, etc., which they may require, and all counter-shafts, pulleys, belting, etc., for the transmission of power from the main shafts.
- RULE 4.** Exhibitors will be confined to such exhibits as are specified in their applications. When the allotment of space is definitely made, exhibitors will be notified of their allotment of space and its location, and will be furnished with a permit to occupy the same, subject to the general rules and regulations adopted for the government of the Exposition and the special rules governing the Department in which their exhibits will be made. Permits for space will not be transferable.
- RULE 5.** Special rules will be issued governing each Department and the sale of articles within the buildings or on the grounds, but no articles shall be

sold for removal previous to the close of the Exposition, unless a concession or privilege for the same has been granted by the Committee on Ways and Means. "Privileges" refer to the sale of such goods as are manufactured in order to illustrate a machine or process exhibited. "Concessions" refer to the sale of all goods and operation of attractions from which the securing of revenue is the sole object of the lessees. The removal of exhibits will not be permitted prior to the close of the Exposition.

RULE 6. Decorations, signs, dimensions of cabinets, shelving, counters, etc., and the arrangement of exhibits must conform to the general plan adopted by the Director-General.

RULE 7. Reasonable precautions will be taken for the preservation of exhibits, but the World's Columbian Exposition will not be responsible for any damage to, or for the loss or destruction of an exhibit resulting from any cause.

RULE 8. All packages containing exhibits intended for the several Departments must be addressed to the "Director-General, World's Columbian Exposition, Chicago, Illinois, U. S. A." In addition, the following information must be written on the outside of each package:

(a) Department in which exhibit is to be installed.

(b) The State or Territory from which the package comes.

(c) The name and address of the exhibitor.

(d) The number of the permit for space.

(e) Total number of packages sent by the same exhibitor. The serial number must be marked on each package and a list of the contents enclosed in each package. Freight must be prepaid.

- RULE 9. Favorable terms will be arranged by which exhibitors may insure their own goods. Exhibitors may employ watchmen of their own choice to guard their goods during the hours the Exposition is open to the public. Such watchmen will be subject to the rules and regulations governing the employés of the Exposition; but no exhibitor will be permitted to employ attendants or assistants for service in any building, except upon written consent of the Chief of the Department.
- RULE 10. The expense of transporting, receiving, unpacking and arranging exhibits, as well as their removal at the close of the Exposition, shall be paid by the exhibitor.
- RULE 11. If no authorized person is at hand to take charge of exhibits within a reasonable time after arrival at the Exposition buildings, they will be removed and stored at the cost and risk of whomsoever it may concern.
- RULE 12. The installation of heavy articles requiring foundations should, by special arrangement with the Chief of Construction, begin as soon as the progress of the work on the buildings will permit. The general reception of articles at the Exposition buildings will commence November 1st, 1892, and no article will be admitted after April 10th, 1893. Space not taken possession of April 1st, 1893, will revert to the Director-General for re-assignment.
- RULE 13. If exhibits are intended for competition it must be so stated by the exhibitor, or they will be excluded from examination for award.
- RULE 14. The Chief of each Department will provide cards of uniform size and character, which may be affixed to exhibits, and on which will be stated only the exhibitor's name and address, the name of the object or article exhibited, and its catalogue number.

- RULE 15.** Articles that are in any way dangerous or offensive, also patent medicines, nostrums and empirical preparations whose ingredients are concealed, will not be admitted to the Exposition.
- RULE 16.** Exhibitors' business cards and brief descriptive circulars, only, may be placed within such exhibitor's space for distribution. The right is reserved to restrict or discontinue this privilege whenever it is carried to excess, or becomes an annoyance to visitors.
- RULE 17.** The chief of each Department, with the approval of the Director-General, has the power to order the removal of any article he may consider dangerous, detrimental to, or incompatible with the object or decorum of the Exposition, or the comfort and safety of the public.
- RULE 18.** Exhibitors will be held responsible for the cleanliness of their exhibits and the space surrounding the same. All exhibits must be in complete order each day, at least thirty minutes before the hour of opening. No work of this character will be permitted during the hours the building is open to the public. In case of failure on the part of any exhibitor to observe this rule, the Chief of the Department may adopt such means to enforce the same as circumstances may suggest.
- RULE 19.** Sketches, Drawings, Photographs or other reproductions of articles exhibited will only be allowed on the joint assent of the exhibitor and the Director-General; but general views of portions of the interiors of the buildings may be made on the approval of the Committee on Ways and Means.

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- RULE 20. Immediately after the close of the Exposition, exhibitors must remove their effects, and complete such removal before January 1st, 1894. Goods then remaining will be removed and disposed of under the direction of the World's Columbian Exposition.
- RULE 21. An official catalogue will be published in English, French, German and Spanish. The sale of catalogues is reserved exclusively by the Exposition Company.
- RULE 22. Each person who becomes an exhibitor thereby agrees to conform strictly to the rules and regulations established for the government of the Exposition.
- RULE 23. Communications concerning applications for space, and negotiations relative thereto, should be addressed to the "Director-General, World's Columbian Exposition, Chicago, Illinois, U. S. A."
- RULE 24. The management reserves the right to construe, amend or add to all rules and regulations whenever it may be deemed necessary for the interests of the Exposition.

(Signed) GEORGE R. DAVIS,
Director-General.

PRIVILEGES AND CONCESSIONS.

APPLICATION FOR CONCESSION.

REMARK.—“Privileges” refer to the sale of such goods as are manufactured in order to illustrate a machine or process exhibited. “Concessions” refer to the sale of all goods and operation of attractions from which the securing of revenue is the sole object of the lessees.

Application to sell goods of any kind, not manufactured on the grounds as the products of a machine or process exhibited, or lessees of concessions for Restaurants, Soda Water, Cigars and Tobacco, Photographs, Guide Books, Rolling Chairs, Cut Flowers, Confectionery, Bakery, Lemonade, Messenger Service, Telegraph Service, Perfumery and all other concessions not named in above list, must apply to the Committee on *Ways and Means*, setting forth the size of building, if special building is required, in the column headed “Size of Building,” or length and breadth of space required, if located in any of the Exposition buildings, under the head of “Space Desired.” The Exposition Management reserves the right to accept or reject any or all applications for concessions.

Blanks for these applications will be furnished on request addressed to the Chief of the Department.

DEPARTMENT L.

LIBERAL ARTS — EDUCATION, LITERATURE, ENGINEERING,
PUBLIC WORKS; MUSIC AND THE DRAMA.

GROUP 147.

PHYSICAL DEVELOPMENT, TRAINING AND CONDITION—HYGIENE.

Class 824. The nursery and its accessories.

Class 825. Athletic training and exercise gymnasiums; apparatus for physical development and of gymnastic exercises and amusement; skating, walking, climbing, ball-playing, wrestling, acrobatic exercises; rowing, hunting, etc. Special apparatus for training in schools, gymnasia; apparatus for exercise, drill, etc.

Class 826. Alimentation.—Food supply and its distribution; adulteration of food, markets, preparation of food, cooking and serving, school kitchens and arrangements for school canteens, methods of warming children's meals, etc. Dinner-pails, or receptacles for carrying meals for school children, working men, and others. Restaurants, dining halls, refectories, etc.

Class 827. Dwellings and buildings characterized by the conditions best adapted to health and comfort, including dwellings for working men and factory operatives, houses and villages for operatives in connection with large manufacturing establishments, tenement houses, "flats," and suites of apartments, city and country residences, club-houses, school-houses; designs and models of improved buildings for elementary schools, infant schools and *crèches*, court-rooms, theatres, churches, etc.

Class 828. Hotels, lodging-houses.

Class 829. Public baths, lavatories; public and domestic hygiene. Sanitation.—Sanitary appliances and methods for dwelling-houses, buildings and cities. Direct renewal of air. Heating, ventilating, lighting, in their relation to health. Conduits of water and sewage. Drains and sewers. Sinks, night-soil apparatus, sanitary plumbing, walls, bricks, roofs, flooring, etc. Sanitary house decoration.—Non-poisonous paints and wall-papers, floor coverings, washables, decorations, etc.

Apparatus for carrying off, receiving and treating sewage. Slaughter-house refuse, city garbage.

Apparatus and methods for filtering water and cleansing water-courses.

Apparatus intended for the prevention of infectious diseases. Methods, materials and instruments for purifying and destroying germs; disinfectors.

Apparatus and fittings for warming, ventilating, and lighting schools; school latrines, closets, etc.

Special school fittings for storing and drying clothing.

Precaution in schools for preventing the spread of infectious diseases; school sanitarium, infirmaries, etc.

Class 830. Hygiene of the workshop and factory.—(Classification modified from that of the London health exhibition.)

Designs and models for improvement in the arrangement and construction of workshops, especially those in which dangerous or unwholesome processes are conducted.

Apparatus and fittings for preventing or minimizing the danger to health or life from carrying on certain trades. Guards, screens, air-jets, preservative solutions, washes, etc.

Objects of personal use.—Mouth-pieces, spectacles, dresses, hoods, etc., for use in certain unhealthy and poisonous trades.

Illustrations of diseases and deformities caused by unwholesome trades and professions; methods of combating these diseases; preservative measures, etc.

Sanitary construction and inspection of workshops, factories, and mines; new inventions or improvements for ameliorating the condition of life of those engaged in unhealthy occupations; means for economizing human labor in various industrial operations.

Class 831. Asylums and homes.—Asylums for infants and children; foundling and orphan asylums; children's aid societies. Homes for aged men and women; for the maimed and deformed; for soldiers and for sailors.

Treatment of paupers; alms-houses.

Treatment of aborigines; Indian reservations and homes.

Class 832. Hospitals, dispensaries, etc.; plans, models, statistics. Shed hospitals for infectious fevers and epidemic diseases; tent hospitals; hospital ships; furniture and fittings for sick rooms.

Class 833. Protective supervision.—Sanitary supervision; vaccination and its enforcement; isolation of contagious diseases; quarantine; prevention and elimination of animal epidemics.

Food inspection.—Treatment of adulterated foods; inspection and analysis; treatment of stale food substances; regulation of abattoirs, mills, etc.; regulation of sale of horses; protective devices.

Building inspection, etc.—Building regulations and inspection; building drainage and plumbing; fire regulations, fire escapes, etc.

- Personal inspection.—Color tests, etc.; professional examination for licenses.
- Immigration.—Reception, care and protection of immigrants.

GROUP 148.

INSTRUMENTS AND APPARATUS OF MEDICINE, SURGERY AND PROSTHESIS.

- Class 834. Pharmacology, drugs, pharmacy, etc.—Medicines, officinal (in any authoritative pharmacopœia) articles of the materia medica, preparations unofficinal. (See Group 87.)
- Class 835. Dietetic preparations intended especially for the sick. (For beef extracts, see Class 38.)
- Class 836. Instruments for physical diagnosis, clinical thermometers, stethoscopes, ophthalmoscopes, etc.
- Class 837. Surgical instruments, appliances and apparatus, with dressings, anæsthetics, antiseptics; obstetrical instruments, etc.
- Class 838. Prosthesis.—Apparatus for correcting deformities; artificial limbs.
- Class 839. Instruments and apparatus of dental surgery and prosthesis.
- Class 840. Vehicles and appliances for the transportation and relief of the sick and wounded, during peace or war, on shore or at sea. (See also Department G.)

GROUP 149.

PRIMARY, SECONDARY AND SUPERIOR EDUCATION.

- Class 841. Elementary instruction.—Infant schools and kindergartens. Descriptions of the methods of instruction, with statistics,

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- Class 842. Primary schools, city and country.—School-houses and furniture. Apparatus and fittings. Models and appliances for teaching, text-books, diagrams, examples. Specimens of work in elementary schools.
- Class 843. Domestic and industrial training for girls.—Models and apparatus for the teaching of cookery, housework, washing and ironing, needle-work and embroidery, dress-making, artificial flower-making, painting on silk, crockery, etc. Specimens of school work.
- Class 844. Handicraft teaching in schools for boys.—Apparatus and fittings for elementary trade teaching in schools. Specimens of school work.
- Class 845. Science teaching.—Apparatus and models for elementary science instruction in schools. Apparatus for chemistry, physics, mechanics, etc.; diagrams, copies, text-books, etc.; specimens of the school work in these subjects.
- Class 846. Art teaching.—Apparatus, models and fittings for elementary art instruction in schools; diagrams, copies, text-books, etc., specimens of art work, modeling, etc., in schools.
- Class 847. Technical and apprenticeship schools.—Apparatus and examples used in primary and secondary schools for teaching handicraft; models, plans and designs for the fitting up of workshop and industrial schools; results of industrial work done in such schools.
- Class 848. Special schools for the elementary instruction of Indians.
- Class 849. Education of defective classes.—Schools for the deaf, dumb, blind, and feeble-minded; adult schools for the illiterate.
- Class 850. Public schools.—Descriptions, illustrations, statistics, methods of instruction, etc.

- Class 851. Higher education.—Academies and high schools. Descriptions and statistics.
Colleges and universities. — Descriptions, illustrations of the buildings, libraries, museums, collections, courses of study, catalogues, statistics, etc.
- Class 852. Professional schools.—Theology, law, medicine and surgery, dentistry, pharmacy; mining, engineering, agriculture, mechanic arts; art and design; military, naval, normal, commercial; music.
- Class 853. Government aid to education.—National Bureau of Education.—Reports and statistics.

GROUP 150.

LITERATURE, BOOKS, LIBRARIES, JOURNALISM.

- Class 854. Books and literature, with special examples of typography, paper, and binding. General works.—Philosophy, religion, sociology, philology, natural sciences, useful arts, fine arts, literature, history, and geography; cyclopedias, magazines, and newspapers; bindings, specimens of typography.
- Class 855. School books.
- Class 856. Technical industrial journals.
- Class 857. Illustrated papers
- Class 858. Newspapers and statistics of their multiplication, growth, and circulation.
- Class 859. Journalism, statistics of: with illustrations of methods, organization and results.
- Class 860. Trade catalogues and price-lists.
- Class 861. Library apparatus; systems of cataloguing and appliances of placing and delivering books.
- Class 862. Directories of cities and towns.
- Class 863. Publications by governments.

Class 864. Topographical maps. Marine and coast charts; geological maps and sections; botanical, agromonomical, and other maps, showing the extent and distribution of men, animals and terrestrial products; physical maps; meteorological maps and bulletins; telegraphic routes and stations; railway and route maps; terrestrial and celestial globes, relief maps and models of portions of the earth's surface, profiles of ocean beds and routes of submarine cables.

GROUP 151.

INSTRUMENTS OF PRECISION, EXPERIMENT, RESEARCH, AND PHOTOGRAPHY. PHOTOGRAPHS.

Class 865. Weights, measures; weighing and metrological apparatus.—Balances of precision, instruments for mechanical calculation, adding machines, pedometers, cash registers, water and gas meters, etc.; measures of length, graduated scales, etc.

(For ordinary commercial forms, see also Group 112.)

(For testing machines, see Class 490.)

Class 866. Astronomical instruments and accessories.—Transits, transit circles, mural circles, zenith sectors, altazimeters, equatorials, collimators, comet seekers.

Class 867. Geodetic and surveying instruments.—Transits, theodolites, artificial horizons, surveyor's compasses, goniometers; instruments for surveying underground in mines, tunnels, and excavations; pocket sextants, planē tables, and instruments used with them; ship's compasses, sextants, quadrants, repeating circles, dip-sectors, etc.

- Class 868. Leveling instruments and apparatus—hand-levels, water-levels, engineers' levels, of all patterns and varieties; cathetometers, leveling staves, targets, and accessory apparatus.
- Class 869. Hydrographic surveying; deep sea sounding.
- Class 870. Photometric apparatus and methods.
- Class 871. Photographic apparatus and accessories. Photographs.
- Class 872. Meteorological instruments and apparatus, with methods of recording, reducing and reporting observations. Thermometers—mercurial, spirit, air; ordinary or self-registering, maximum and minimum. Barometers—mercurial, aneroid; anemometers, rain gauges, etc.
- Class 873. Chronometric apparatus.—Chronometers, watches of precision, astronomical clocks, church and metropolitan clocks, clepsydras, hour-glasses, sun-dials, chronographs, electrical clocks, metronomes. (For commercial clocks and watches, see also Group 99.)
- Class 874. Optical and thermometric instruments and apparatus.
- Class 875. Electric and magnetic apparatus. (See also Department J.)
- Class 876. Acoustic apparatus.

GROUP 152.

CIVIL ENGINEERING, PUBLIC WORKS, CONSTRUCTIVE ARCHITECTURE.

- Class 877. Land surveying, topographical surveying.—Surveys and locations of towns and cities, with systems of water supply and drainage.
- Class 878. Surveys of coasts, rivers, and harbors.
- Class 879. Construction and maintenance of roads, streets, pavements, etc.

- Class 880. Bridge engineering (illustrated by drawings and models.)
Bridge designing.—Drawings and charts, showing methods of calculating stresses.
Foundations, piers, abutments and approaches of stone, wood, etc.
Arch bridges of stone, wood or iron.
Suspension bridges of fiber, iron chain, and cable.
Truss bridges of wood, iron and steel.—Pony, bow-string and plate girders, lattice girders, Fink, Bollman, Howe, Pratt, Warren, Post, Long, Whipple and other trusses of special design.
Cantilever bridges, draw-bridges, rolling and swinging machinery.
Tubular bridges.
Railway, aqueduct, and other bridges of special design not elsewhere classed.
(A chart showing date of completion, span, rise, weight, and cost of the great bridges of the world, would be of interest.)
- Class 881. Subaqueous constructions.—Foundations, piers, harbors, break-waters, building of dams, water-works and canals.
- Class 882. Irrigation.—Irrigating canals and systems.
- Class 883. Railway engineering.—Surveying, locating and constructing railways.
- Class 884. Dynamic and industrial engineering.—The construction and working of machines; examples of planning and construction of manufacturing and metallurgical establishments.
- Class 885. Mine engineering.—Surveying underground, construction of tunnels, subaqueous tunnels, etc.; locating and sinking shafts, inclines, and winzes; driving levels, draining, ventilating, and lighting. (See also Department E.)

- Class 886. Military engineering.—Construction of earth-works, breast-works and temporary fortifications.
- Class 887. Permanent works.—Fortifications, magazines, arsenals, mines.
- Class 888. Roads, bridges, pontoons, etc.; movement of troops and supplies.
- Class 889. Constructive architecture.—Plans of public buildings for special purposes; large and small dwelling houses.
- Drawings and specifications for foundations, walls, partitions, floors, roofs, and stairways.
- Estimates of amount and cost of material.
- Designs and models of special contrivances for safety, comfort and convenience in the manipulation of elevators doors, windows, etc.
- Working plans for the mason, carpenter and painter; designs and models of bonds, arches, coping, vaulting, etc.; plastering and construction of partitions; painting and glazing.
- Plans of appliance: for hoisting, handling and delivering building materials to artisans.—Scaffolding and ladders, special scaffolding for handling great weights; portable cranes and power elevators.
- Illustrations of the strength of materials.
- Plans and sections of special architectural forms.
Metallic floor beams and girders; hollow bricks and other architectural pottery for heating and ventilation; metallic cornice and conduits, shingles and sheathing, glass roofs, floors and accessories, architectural hardware.
- Methods of combining materials.
- Protection of foundations, areas and walls against water.
- Working plans for paving and draining.

GROUP 153.

GOVERNMENT AND LAW.

- Class 890. Various systems of government illustrated.—Government departments, legislative, executive, and judicial.
- Class 891. International law and relations.—Fac-similes of treaties, etc.
- Class 892. Protection of property in inventions. Patent offices and their functions, statistics of inventions and patents.
- Class 893. Postal systems and the appliances of the postal service. Letter-boxes, pouches, mail-bags, postage stamps, etc.
- Class 894. Punishment of crime.—Prisons and reformatories, prison management and discipline, transportation of criminals, penal colonies, houses of correction, reform schools, naval or marine discipline, punishment at sea, police stations, night lock-ups, etc; dress and equipment of prisoners, examples of convict workmanship.

GROUP 154.

COMMERCE, TRADE, AND BANKING.

- Class 895. History and statistics of trade and commerce.
- Class 896. Railway and transportation companies.
- Class 897. Methods and media of exchange.—Money, coins paper money, etc.
- Class 898. Counting houses, stores, and shops.—Arrangement, furniture, fittings; methods of management, book-keeping, devices for distributing change and goods to customers.
- Class 899. Warehouse and storage systems.—Grain elevators.
- Class 900. Boards of Trade and their functions illustrated.

- Class 901. Exchanges for produce, metals, stocks, etc.
- Class 902. Insurance companies.
- Class 903. Banks and banking.—Illustrations of buildings, interiors, methods, and statistical information; clearing-houses, etc.; savings and trust institutions.
- Class 904. Safes and vaults for storage of treasure and valuables; safe deposit companies.
- Class 905. Book-keeping.—Books and systems of book-keeping and accounting, commercial blank forms, etc.
- Class 906. Express companies, freighting, etc.

GROUP 155.

INSTITUTIONS AND ORGANIZATIONS FOR THE INCREASE AND DIFFUSION OF KNOWLEDGE.

- Class 907. Institutions founded for the increase and diffusion of knowledge, such as the Smithsonian Institution, the Royal Institution, the Institute of France, British Association for the Advancement of Science, and the American Association, etc.; their organization, history and results.
- Class 908. Academies of science and letters.—Learned and scientific associations, geological and mineralogical societies, etc.; engineering, technical, and professional associations; artistic, biological, zoological, medical, astronomical societies and organizations.
- Class 909. Museums, collections, art galleries, exhibitions of works of art and industry; agricultural fairs, state and county exhibitions, national exhibitions, international exhibitions, international congresses.
- Class 910. Publication societies.
- Class 911. Libraries—Public and private; statistics of operations.

GROUP 156.

SOCIAL, INDUSTRIAL, AND CO-OPERATIVE ASSOCIATIONS.

- Class 912. Social organizations.—Clubs—political, military, university, travelers'; press clubs, science clubs, and others.
- Class 913. Political societies and organizations.
- Class 914. Workingmen's unions and associations.—Their organization, statistics, and results.
- Class 915. Industrial organizations.
- Class 916. Co-operative trading associations.
- Class 917. Secret societies.
- Class 918. Miscellaneous organizations for promoting the material and moral well-being of the industrial classes.

GROUP 157.

RELIGIOUS ORGANIZATIONS AND SYSTEMS—STATISTICS AND PUBLICATIONS.

- Class 919. Religious organizations and systems.—Origin, nature, growth, and extent of various religious systems and faiths. Statistical, historical and other illustrations; pictures of buildings; plans and views of interiors.
- Class 920. Religious music, choirs, hymnology
- Class 921. Missionary societies, missions, and missionary work; maps, reports, statistics.
- Class 922. Spreading the knowledge of religious systems by publications; Bible societies, tract societies, and their publications.
- Class 923. Systems and methods of religious instruction and training for the young; Sunday-schools, furniture, apparatus, and books.
- Class 924. Associations for religious or moral improvement.
- Class 925. Charities and charitable associations connected with ecclesiastical societies.

GROUP 158.

MUSIC AND MUSICAL INSTRUMENTS—THE THEATRE.

- Class 926. History and theory of music.—Music of primitive people. Crude and curious instruments. Combinations of instruments, bands and orchestras. Music books and scores. Musical notation.
History and literature of music. Portraits of great musicians.
- Class 927. Self-vibrating instruments.—Drums and tambourines; cymbals, triangles, gongs, castanets, "bones."
Bells, chimes and peals.
Bell-ringers' instruments. Musical glasses.
Glockenspiels, zylophones, marimbas.
Music boxes.
- Class 928. Stringed instruments played with the fingers or plectrum.
Lutes, guitars, banjos and mandolins.
Harps and lyres.
Zithers, dulcimers.
- Class 929. Stringed instruments played with the bow.
The violin.
The viol, viola, viola da gamba, viola di amore.
The violincello and the bass viol.
Mechanical instruments.—Hurdy-gurdy and violin piano.
- Class 930. Stringed instruments with key-board.—The piano-forte square, upright and grand.
Actions and parts of a piano.
The predecessors of the piano.—Clavicytherium, clavicymbal, clavichord, manichord, virginal, spinet, harpsichord, and hammer harpsichord.
Instruments and methods of manufacture.
Street pianos.
- Class 931. Wind instruments, with simple aperture or plug mouthpiece. The flute, flute-a-bec. Syrinx.
Organ-pipes. Flageolet.

- Class 932. Wind instruments, with mouthpiece regulated by the lips. The clarinet, oboe and saxophone.
- Class 933. Wind instruments with bell mouthpiece, without keys. The trumpet (simple) and the bugle. Oliphant. Alpenhorn. The trombone (with slide and with finger-holes). The serpent, bassoon and bagpipe.
- Class 934. Wind instruments with bell mouthpiece, with keys. Key bugles, cornets, French horns. Cornepeans, orphicleides.
- Class 935. Wind instruments with complicated systems. The pipe organ.
Reed organs, melodeons and harmonicas.
Accordions, concertinas and mouth organs.
Hand organs and organettes. Automatic organs, orchestrions, etc.
- Class 936. Accessories of musical instruments — strings, reeds, bridges.
Conductor's batons, drum-majors' staves. Mechanical devices for the orchestra.
Tuning forks, pitch-pipes, metronomes, music stands, etc.
- Class 937. Music in relation to human life.—Musical composers. Great performers. Great singers. Portraits. Biographies.
Concerts and the concert stage.
The opera. The oratorio. Masses.
Church music and sacred music of all periods.
Hymnology, ballads, folk-song, and folk-music of all lands. National airs.
- Class 938. The theatre and the drama. The stage. Plans and models of stages and theatres.
History of the drama, so far as can be shown by literary record. Portraits of actors. Relics of actors.
Playbills, etc. Costumes, masks, armor. Scenery. Appliances of illusion, etc. Plays of all ages and peoples.

THE MANUFACTURES AND LIBERAL ARTS BUILDING.

Notable for its symmetrical proportions, the Manufactures and Liberal Arts Building is the mammoth structure of the Exposition.

In the center of the building an enormous hall, without columns 386 feet 10 inches wide, by 1,275 feet 10 inches long, covered with a roof formed by great iron arches springing from all sides and rising to a height of 210 feet above the floor. This magnificent space will be lighted by continuous clerestory windows and by an enormous spread of glass in the roof covering. Around this enormous hall is run a system of continuous naves 107 feet 9 inches wide and 115 feet high, which are also lighted by clerestory windows and glazed roofs, and aisles on either side of these naves 23 and 46 feet wide respectively, covered by galleries of the same dimensions.

The building, including its galleries, has about forty acres of floor space.

The Manufactures and Liberal Arts Building is in the Corinthian style of architecture, and in point of being severely classic excels nearly all of the other edifices. The long array of columns and arches, which its facades present, is relieved from monotony by very elaborate ornamentation. In this ornamentation female figures, symbolical of the various arts and sciences, play a conspicuous and very attractive part.

Designs showing in relief the seals of the different States of the Union and of foreign nations also appear in the ornamentation. These, of course, are gigantic in their proportions.

The exterior of the building is covered with "staff," which is treated to represent marble. The huge fluted columns and the immense arches are apparently of this beautiful material.

There are four great entrances, one in the centre of each facade. These are designed in the manner of triumphal arches, the central archway of each being 40 feet wide and

80 feet high. Surmounting these portals is the great attic story ornamented with sculptured eagles 18 feet high, and on each side above the side arches are great panels with inscriptions, and the spandrils are filled with sculptured figures in bas-relief. At each corner of the main building are pavilions forming great arched entrances, which are designed in harmony with the great portals. The interiors of these pavilions are richly decorated with sculpture and mural paintings. The long facades of the great hall surrounding the building are composed of a series of arches filled with immense glass windows. The lower portion of those arches up to the level of the gallery floor and 25 feet in depth, is open to the outside, thus forming a covered loggia, which forms an open promenade for the public, and will provide a very interesting feature, particularly on the east side where it faces the lake. It is intended to locate here a number of cafés, where the great crowds can loiter at their ease and enjoy the breezes and cool shadows of the afternoon.

The architect of this great building, George B. Post, of New York, has been remarkably successful in giving architectural symmetry and effectiveness to the immense proportions with which he had to deal, and his work stands as one of the marvels of the Exposition.

The building occupies a most conspicuous place in the grounds. It faces the lake, with only lawns and promenades between. North of it the United States Government Building, south the Harbor and in-jutting Lagoon, and west the Electrical Building and the lagoon separating it from the great island which in part is wooded and in part resplendent with acres of bright flowers of varied hues.

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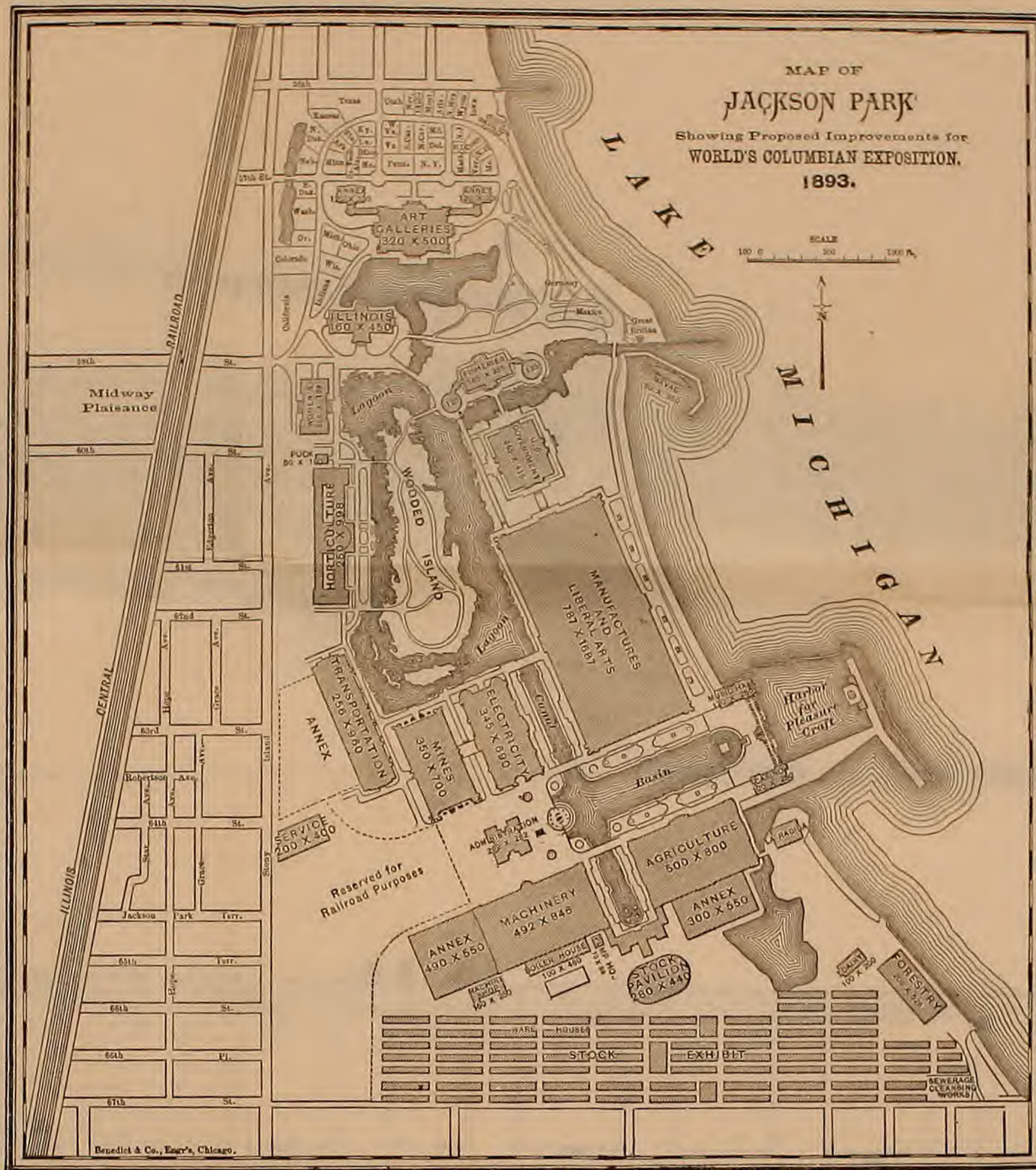
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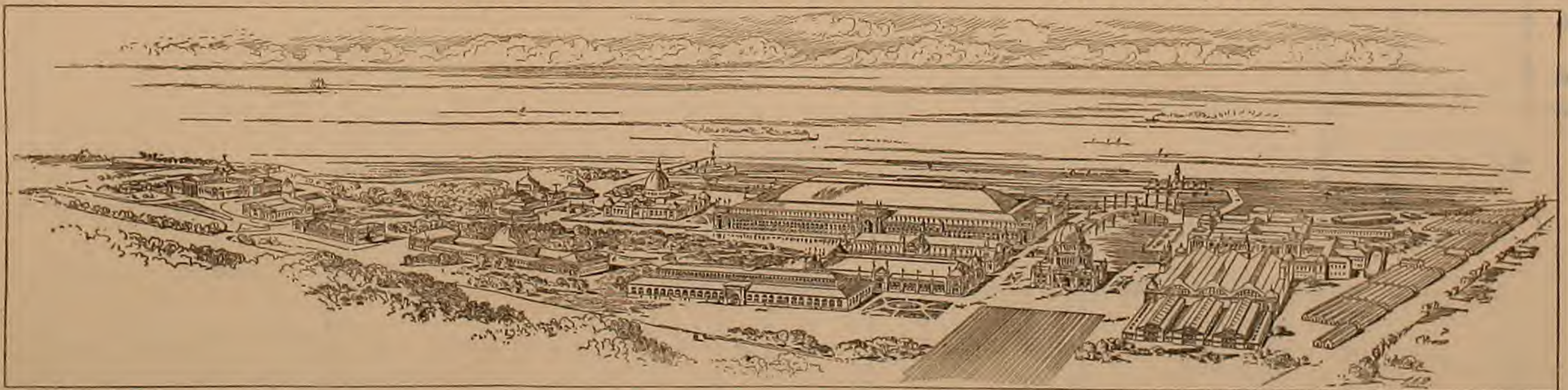
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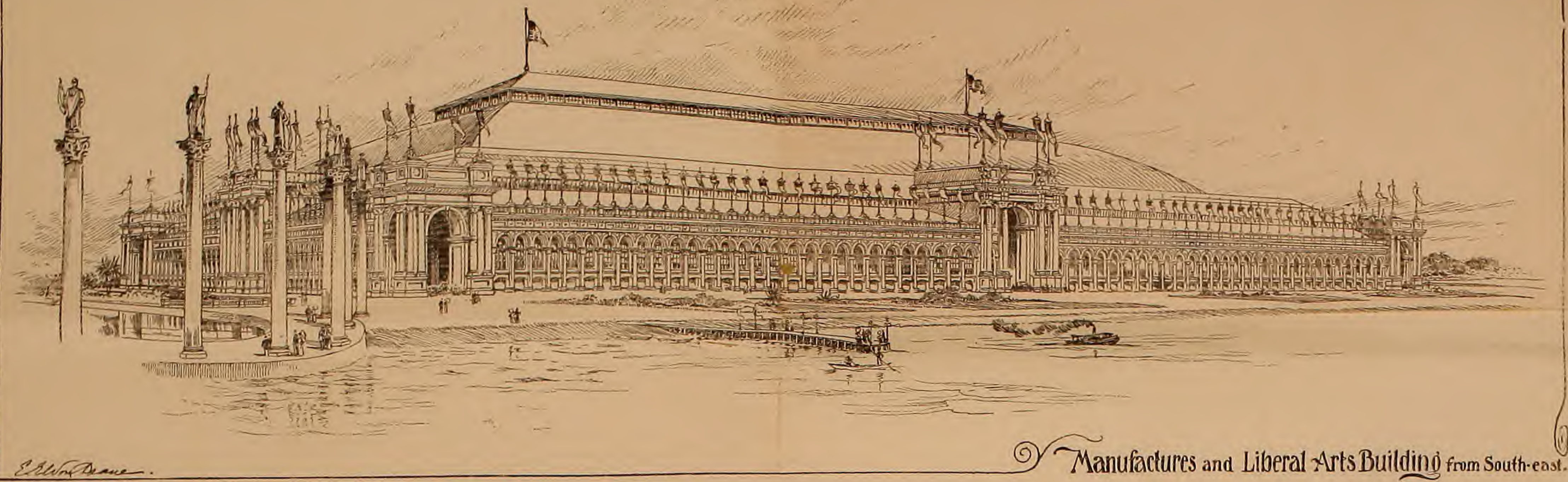
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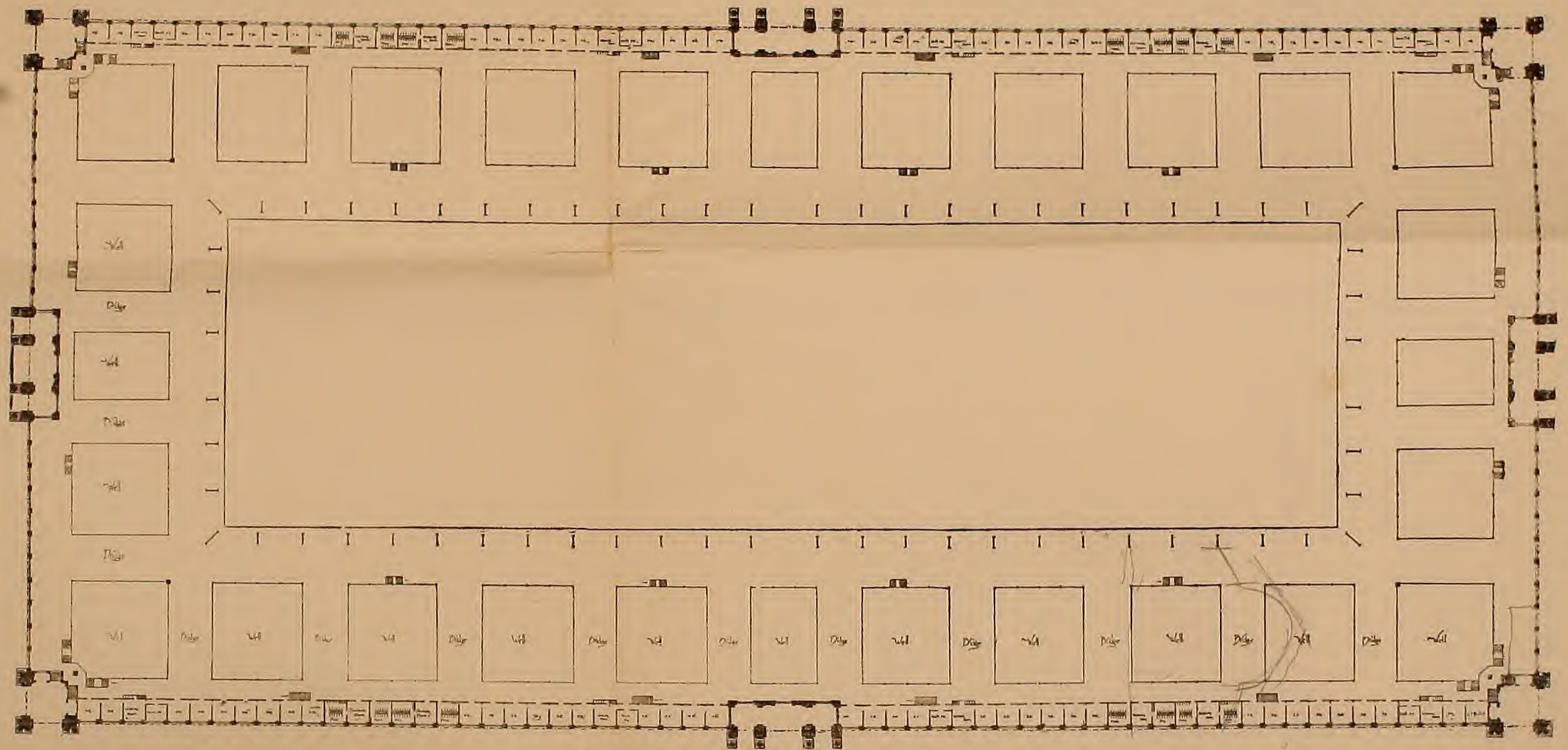
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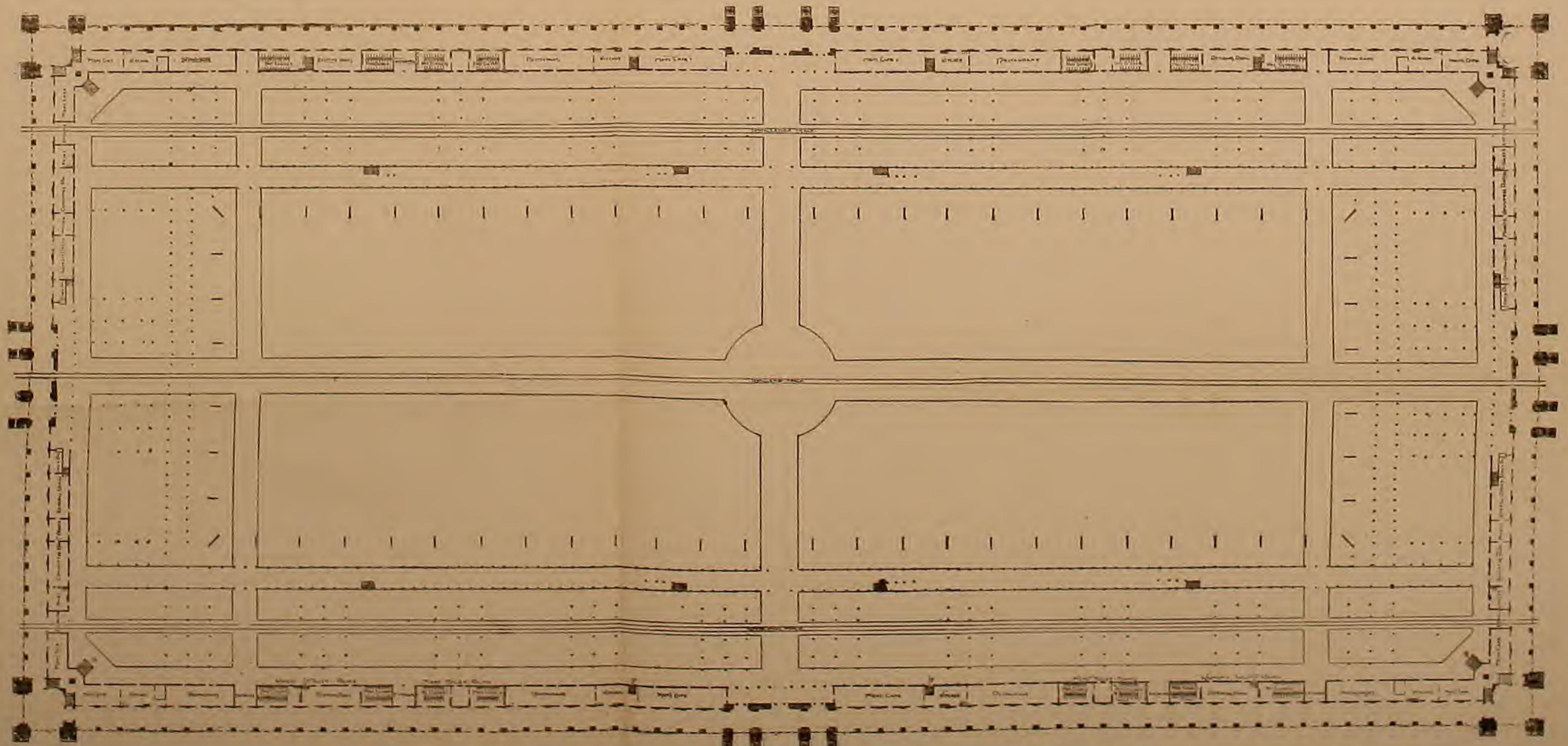
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Manufactures and Liberal Arts Building from South-east.



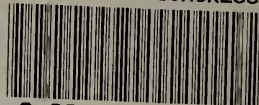
GALLERY PLAN, MANUFACTURES AND LIBERAL ARTS BUILDING.



GROUND FLOOR PLAN, MANUFACTURES AND LIBERAL ARTS BUILDING, WORLD'S COLUMBIAN EXPOSITION.



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