

The Democratic Sentinel

RENSELAER, INDIANA.

J. W. McEwen, Publisher.

SCIENTIFIC MARVELS.

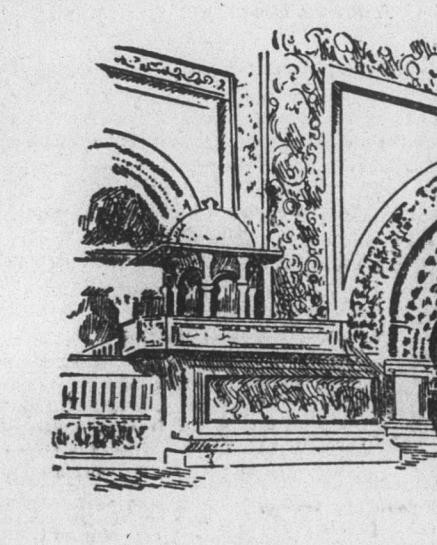
SIGHTS IN THE HUGE TRANSPORTATION BUILDING.

Bewildering in its variety—Exhibits representing marine and railway locomotion in all stages of evolution—Ship models from England.

Railway Exhibit.

The display inside the Transportation Building at the Columbian Exposition is bewildering in its range and variety. The whole history of transportation, from birch-bark canoes to steamships, and from pack horses to palace cars, is unfolded in a manner never to be forgotten. Looking down from the galleries upon the acres and acres of exhibits, one sees a monster black steam hammer for forging plates which towers above the second story, a row of famous locomotives facing out from the annex like a herd of elephants, a full section of a colossal ocean steamship, and scattered about here and there, thousands of objects that tell the story of how man has gradually annihilated space.

The invention and development of the locomotive and railway system is the nineteenth century wonder. Less than sixty-eight years since the first passenger railway ran its first crude train. Now the great civilization has penetrated every country. About ten acres of ground floor space are devoted exclusively to exhibits pertaining to railway construction, equipment, operation, management and development. Sixty-four modern locomotives of all types and sizes from the two one-hundred ton Decapod engines which stand on the pedestals between the Administration Building and the railway station to the five ton logging locomotives for use in the forests of Michigan. All the leading makers exhibit one or



GRAND ENTRANCE TO THE TRANSPORTATION BUILDING. The Golden Gate to the Fair.

more modern locomotives, some being raised from the rails and showing the machinery in operation by compressed air. Besides these there are a score or more of magnificently equipped coaches and thirty-five freight cars, embracing every variety, by the leading builders in the country. Among the other attractions are two Leslie rotary snow plows, a centrifugal snow excavator and a Russell snow plow, four steam shovels, and a locomotive traveling crane, a light and heat tender of the Chicago, Milwaukee and St. Paul Railroad, and the dynamometer of the Chicago, Burlington and Quincy road. All this represents



W. A. SMITH, CHIEF OF TRANSPORTATION.

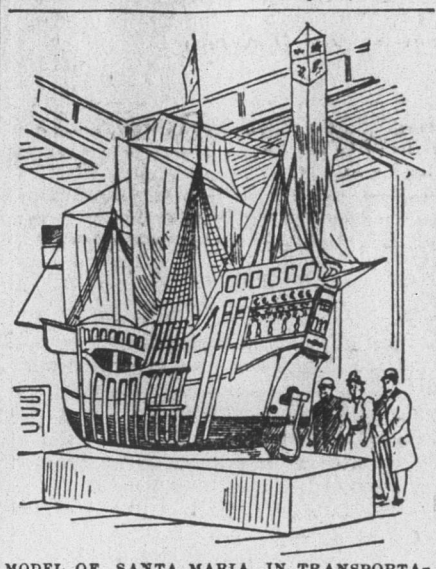
rements steam transportation as it is now, but the most fascinating part of the railway show—more so even than the mighty engines and the solid mahogany train from Canada—is the display of relics, models, old engines and cars and specimens of the quaint roadways of earlier days. It is the first time that such a work has been undertaken, and Mr. T. Hackworth, of the railway department, has gathered a complete historical collection. For instance, the Baltimore and Ohio Railroad has for more than a year past been making extensive preparations for its historical exhibits which include about thirty full size wooden models of the earliest locomotives built in this country and in England, with samples of original tracks. Three of the Grasshopper type of engine, the old locomotive "Samson" and "Alison," built in England and shipped to Nova Scotia in 1830, and other specimens of the very early locomotives are among the attractions. The models are all to be shown with machinery in operation. That is one of the delightful things about the section.

Now comes the Chicago and Northwestern Railway with the "Pioneer," built in 1835 by the Baldwin Locomotive Works, the fourth engine built by that firm. The Pioneer came to Chicago in 1845 and was the first locomotive to penetrate so far West. This engine ran on the old Galena Road, now a portion of the Chicago and Northwestern system, and it actually steamed into the Exposition grounds a few weeks ago. A little further on the Old Colony Railroad exhibit their first engine, the "Daniel Nason," and the first coach that ran between Boston and Providence, and these, by way of contrast, stand alongside of the latest Old Colony engine and coach. One of the most famous objects in the neighborhood is the seven-foot gauge locomotive "Lord of the Isles," belonging to the Great Western Railway of England, originally shown at the first great exposition in 1851 in London. It ran until 1882, when the change to the standard gauge laid her up. She was one of a class of engines designed by Brunel for high speed between London and Bristol, and has made seventy-five miles an hour. Engineers will look at this giant with affection. The London and Northwestern show Trevithick's engine of 1802 and the "Rocket" of 1825 in full-sized wooden models. An opportunity is here offered for comparison, as the Baltimore and Ohio exhibit models of the same engine. Here the New York Central Company

shows the original "De Witt Clinton" on the strap rails of 1833, and there the Illinois Central Company shows the "Mississippi," built in England in 1836 for the Natchez and Mississippi, now a portion of the Illinois Central Railroad. The Nashville, Chattanooga and St. Louis exhibit the historic engine, "General," captured by the Andrews raiders on the Western and Atlantic Railroad in 1862.

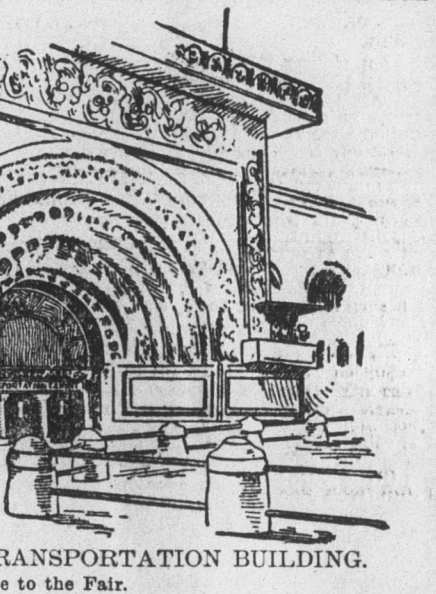
The Marine Exhibit.

In no previous marine exhibit has the question of transportation on water ever been treated as a subject, but in



MODEL OF SANTA MARIA IN TRANSPORTATION BUILDING.

this department is shown not only the triumphs of naval architecture, as illustrated by the modern ocean greyhound and battle ship, but also strange and curious craft from semi-civilized and barbarous tribes, showing how they solved problems of transportation by taking advantage of the materials on hand, whether of bark or logs of wood or skins of animals. There is a complete exhibit from Alaska and the Aleutian Islands, consisting of two hatch bydarks, with complete hunting outfits, and from the sea coast of Norway a hatch bydarks, with the full outfit used in both hunting and fishing; birch bark canoes from the



Upper Yukon River; sleds, dogs' harness and all that goes with them. The Hudson Bay country shows all the methods of water transportation known in that country. From Southwest Alaska or Queen Charlotte's Island are a tinging canoe and a large dugout and haida canoe. From Australia comes an interesting canoe made from a single sheet of what is commonly known as the gum-topped iron bark or mountain ash (Eucalyptus Siberiana), the ends being tied up. China is represented by models of every boat used on Chinese waters, both sea coast and inland. These boats, although the architecture seems to be grotesque, have peculiarly beautiful and a most notable rudder and the fashion of attaching the sheet to the sail, making it possible to draw the surface very flat. A catamaran is shown that has carried the mail between Ceylon for a number of years, as well as one of the celebrated outrigger canoes. Mediterranean craft are represented by the Turkish caique; dalgas, of Malta; gondolas, of Venice, and peculiar lateen boats, as well as the chizotto and the bragozzio of the Adriatic. And there are peculiar canoes from the west coast of Africa as well as the bimba, a curious development of the catamaran, which is used in the interior waters. From South America comes the Jangada, a large house shaped boat used in the vicinity of Pernambuco; a wet canoe from the Amazon; the caccara, made from a single piece of bark and entirely unlike all birch bark canoes, from the Orinoco. There are also slender and swift dugouts from the same locality; balsas from Lake Titicaca, made of straw and bound together by wisps

—the only method of water conveyance known to the people of that region. Here you find bingos, curious shaped canoes from the Lake of Panama, and many others quite as interesting. Of course the North American Indian and his birch bark canoe are features not only in this building, but also in the south pond, with the Indian birch bark canoe. Great Britain's principal ship building firms have sent a magnificent collection of models of all kinds. The period of iron ship building is well represented, both in the models of passenger and freight steamers as well as in the collection of British men-of-war. Unfortunately the period after the restoration of Charles II. and through the Napoleonic wars is not included, for with models of the great three-decked sailing battleships which were so many years England's bulwark

of strength, the history of the navy would be reasonably complete. At the same time Spain sends the treasures of the Royal Museum and the models of the Invincible Armada, so that the ships of the time of the famous battle will be shown. The Thames Iron Works & Ship Building Company trace the development of the ironclad in the British navy by means of models. The Warrior was the first war vessel built of iron. She was 380 feet long and was protected by a thickness of armor, which was sufficient in 1860 to resist a 68-pound solid shot, the maximum of that day. Her ends were unprotected



CHINESE TRANSPORTATION EXHIBIT.

and consequently her steering gear was much exposed. The Minotaur represented the next ship of the warrior size, fully rigged and armored. The Benbow, 10,900 tons displacement, 7,500 horse power, drew 28 feet of water, speed, 14 knots; 18 inches of armor; armed with 10-ton guns, 10 6-inch, 5-ton, 15 quick-firing guns. Then came the Grafton, a first-class steel cruiser, 7,350 tons, 12 horse power, 300 feet long, armed with nine 2-inch, 25-ton breech-loading rifles, ten 6-inch quick-firing guns, twelve 6-pounder quick-firing guns, four 3-pounder quick-firing guns, speed 19 knots; Sans Paroil, armored ship, 10,470 tons displacement, indicated horse power 14,000, draught of water 27 feet, speed 17 knots, armament largest guns, two 11-ton breech-loading rifles. And so on through the list.

In the merchant marine section the Cunard Steamship Company shows models of the Umbria, Errary (8,000 tons), and the new ships built and engaged in 1892, while the royal mail service between England and South Africa is shown by Donald, Currie & Co. The Laird Brothers, of Birkenhead, exhibit a collection of models and pictures illustrating the progress of iron shipbuilding from 1834 to the present time—paddle steamers, screw steamers, and a full line of models.

A striking feature has been furnished by the International Navigation Company, which built the main court a section of one of their new steamers. Imagine the longitudinal and transverse section of a ship about the smokestack 60 feet long and 38.6 in beam. The interior fittings, furnishings, and decoration will be the same as used on the magnificent steamers on that line. This is the most interesting exhibit, showing fully the facilities of these vessels for the comfort of ocean travel.

Wheeled Vehicles of Every Kind.

But if railways and ships are interesting, what is to be said of the wheeled vehicles? The floor space occupied by this division embraces 130,000 square feet, and it is all fitted up with wood carpet in white oak stripes, laid out in handsome patterns and finished in oil. Each space is surrounded with handsome ornamental brass railing and posts. This exhibit occupies the entire north end of the main building and the annex and about one-half of the north gallery in the main building. On the first floor are exhibited carriages, wagons, and vehicles of every description. In the gallery are displayed bicycles, carriage and wagon hardware and saddlery goods. There is a historical array of vehicles, saddlery goods, and bicycles. An effort has been made to show the evolution of these industries from the primitive origins down to the present time. For this purpose a large collection has been made by Chief Smith in foreign lands, from the ancient chariot that antedates Christ to the latest thing out.

In modern carriages there is everything from a baby carriage to the finest carriage that has been built. Some of these vehicles cost \$10,000 each, and are really works of art. Foreign countries contribute to this division, France having sent fifty carriages from her best builders. Austria sent eighteen carriages from six of her best manufacturers. England and Germany also make large exhibits, so that the industry of both continents is well represented. In the foreign collection of carriages, exhibits from London is a Lord Mayor's state coach, a drag belonging to the Prince of Wales, and an old chariot. A sedan chair from Colombia stands beside one from Turkey, and near by are a jirnikisha from Japan, a carriage once owned by President Polk, and a chaise longue from Webster, bought in 1808. In the saddlery department a display of saddles, bits, stirrups, and trappings of the sixteenth and seventeenth centuries, collected throughout Europe, including a pair of silver spurs taken from the feet

of Sir Thomas Picton when he was killed in the battle of Waterloo. In the bicycle division there is presented an extraordinary display of bicycles alone cost more than \$100,000, and some of the pavilions cost exhibitors from \$10,000 to \$12,000 each. There is displayed in this exhibit not only the latest bicycle that has ever been produced up to the present time but bicycles representing wheels that date back to the first machine built, showing the complete evolution of the industry.

ABOUT SOME OTHER WORLD'S FAIRS.

Comparisons That Show the Columbian Exposition Greatest of All.

That the nation and Chicago are proud, and with reason, of the World's Columbian Exposition, is naturally due to the patriotic vim which conceived and carried out the whole enterprise, the gigantic enterprise which brought the earth to a people who could not hope to go to it. In such connection, such statistics as follows are not dry facts, but pregnant sources of thought and contrast.

FAIR	YEAR	AREA	EXHIBITS	VISITORS	EXPENSES
London	1851	2,700,000	1,000,000	25,000,000	\$1,000,000
Philadelphia	1876	2,000,000	1,000,000	20,000,000	\$500,000
Chicago	1893	2,900,000	1,500,000	25,000,000	\$1,500,000
St. Louis	1904	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1906	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1910	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1915	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1916	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1917	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1918	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1919	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1920	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1921	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1922	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1923	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1924	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1925	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1926	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1927	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1928	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1929	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1930	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1931	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1932	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1933	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1934	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1935	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1936	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1937	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1938	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1939	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1940	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1941	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1942	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1943	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1944	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1945	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1946	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1947	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1948	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1949	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1950	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1951	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1952	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1953	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1954	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1955	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1956	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1957	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1958	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1959	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1960	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1961	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1962	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1963	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1964	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1965	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1966	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1967	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1968	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1969	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1970	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1971	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1972	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1973	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1974	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1975	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1976	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1977	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1978	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1979	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1980	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1981	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1982	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1983	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1984	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1985	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1986	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1987	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1988	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1989	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1990	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1991	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1992	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1993	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1994	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1995	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	1996	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	1997	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	1998	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	1999	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	2000	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	2001	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	2002	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	2003	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	2004	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	2005	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	2006	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	2007	2,000,000	1,000,000	20,000,000	\$1,000,000
San Jose	2008	2,000,000	1,000,000	20,000,000	\$1,000,000
San Francisco	2009	2,000,000	1,000,000	20,000,000	\$1,000,000
San Antonio	2010	2,000,000	1,000,000	20,000,000	\$1,000,000
San Diego	2011	2,000,000	1,000,000	20,000,000	\$1,000,000</