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WONDERS *of the* NEW YORK FAIR



Top, "chemical station" at the Ford building. Bottom, General Motors' multi-voice speaker unit



By Julian Leggett

WITH the aid of science and masters of modern showmanship, industry is ready to put on its most spectacular show of all time at the New York World's Fair.

A 10,000,000-volt generator will hurl giant bolts of lightning with sufficient force to split tree trunks while wide-eyed fairgoers watch from a safe distance. A 130-foot locomotive, the largest in the world,



will run at full speed on a bed of masonry. Today's version of the fabled "magic carpet," chairs mounted on an escalator, will carry visitors on a thrilling ride during which they will seem to float hundreds of feet above the earth while watching a layout of highways of the future and listening to a 150-voiced, twenty-ton robot describe transportation facilities of tomorrow.



Slowly revolving on pontoons in a 20,000-gallon concealed moat, a turntable 100 feet in diameter will portray the automobile's cycle of production in moving displays mounted on its pyramid-like superstructure. With the aid of color and light, fluids will seem to circulate through giant vessels and retorts in a "chemical station" towering 100 feet. Mysteries of television will be unfolded in a building resembling a giant radio tube. Full-sized automobiles will race up spiral ramps and circle the top of another huge building to give visitors an exciting ride on an elevated highway. A machine with an electric voice will create human speech as its operator presses keys and turns knobs.

United States Steel Corporation, literally bringing the mountain to Mohammed, will present a miniature steel plant—blast furnace, open-hearth furnace and roll-



Top, casting flow of U. S. Steel's blast furnace, with man's hands illustrating same. Center, looking upward at expositors of General Electric's lightning auditor. Bottom, U. S. Steel's "inside-out" building



ing mill—to illustrate its operations. An ore-mining diorama also will be a part of the exhibit in an "inside-out" structure, the huge dome of which will be supported by external structural members. Visitors will be given a glimpse into the future by means of a large-scale cyclorama which will portray the possible evolution of the city, the farm, the factory, the highway and the home as built with steel. Anchored in concrete, ten steel trusses forming the "inside-out" supporting members curve upward, meeting at a point sixty-six



Top, left, statue of "Speed" by Joseph E. Rozier at the fair. Right, Ford's "Road of Tomorrow" runs over exhibit building. Center, steel figures used on Ford turntable. Bottom, the turntable, switched to show street and the small motor used to turn the giant exhibit



feet above the ground. This framework, weighing 350 tons, will conceal lighting fixtures to illuminate the polished stainless steel hemisphere covering the exhibit.

In addition to a giant lightning-maker, General Electric Company will present many recent spectacular developments in its "house of magic." The artificial lightning equipment consists of two generators, each with a capacity of five million volts. Each comprises six vertical stacks of capacitors piled up for thirty-four feet. Time for operating the unit is fifteen seconds, that is, for the voltage to reach its full value before discharging across a thirty-foot gap with a blinding flash.

In harmony with the "World of Tomorrow" keynote of the fair, the Ford Motor Company's exhibit will be climaxed by the "Road of Tomorrow," which circles the top of the building and over which visitors will ride in Ford and Lincoln-Zephyr cars to obtain an impression of the safety highways of the future. The Ford exhibit also includes the spectacular turntable on which is presented the "Cycle of

Production." Rising like a pyramid, the turntable will present eighty-seven individual displays, many of which will be in motion, and thirty-seven automobile parts. At its top will be three complete cars. Only a two-horsepower electric motor is required to rotate the 100-ton turntable and thirty-three tons of displays and automobiles. Manufacture of certain parts will be conducted on a platform near the turntable. On the platform will be a foundry, small steel rolling mill and other equipment for casting, stamping, drilling and machining the metal. An electric furnace will be used to melt the metal. The Ford exhibit was designed by Walter Dorwin Teague of New York.

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Top, part of Glass Center exhibit. Note the glass staircase. Center, loading coal into steamship, a part of "Railroads of Work" exhibit. Bottom, model of General Motors building showing highways of future.

Wonders of the New York Fair

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The giant locomotive operating at full speed is a part of the railroad exhibit, sponsored by twenty-seven eastern railroads. The engine, built especially for the fair, weighs 519 tons and develops 7,000 horsepower. Other features of the exhibit include "Railroads on Parade," a great stage presentation of the romance of transport development in America in the last hundred years; "Railroads at Work," a huge diorama showing for the first time the complete operation of a modern railroad



Huge photo-murals will draw attention of fair-goers to the Eastman Kodak building

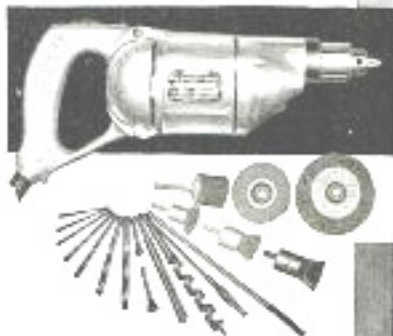
system, and "Railroads in Building," another large-scale diorama showing the actual construction of railroads and equipment. In addition, there will be track exhibits of modern foreign and American locomotives and trains.

A conception of motor traffic facilities of tomorrow will be projected in the General Motors exhibit. Designed by Norman Bel Geddes, it includes the "magic carpet," chairs mounted on an escalator. Visitors thus will be transported over what will appear to be future express and feeder highway systems. At times the spectator will have the sensation of seeing these things from an altitude of hundreds of feet above the earth. Sound effects and the voice of a narrator will be heard only within the shell of the visitor's chair. The tour will be climaxed when the visitor emerges from his traveling chair into a full-sized street intersection in the "World

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New 5/16" Utility Drill

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The new Black & Decker 5/16" Utility Drill is versatile in the "hole" degree. The added chuck capacity and correct spindle speed of this remarkable tool permit the use of many varieties of bits, including twist drills for wood, metal and concrete, carbon bits, reamers, countersinks, wire brushes, drum sanding attachments, grinding wheels and custom-made tools.

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of Tomorrow." Extending for more than a city block in four directions, the spectacular intersection will present a living picture of the architecture, motor-traffic regulations and pedestrian facilities of the future.

Sound for the traveling chairs will be supplied by a twenty-ton system capable of delivering 150 different descriptive talks at the same time. The giant speaker is constructed on a steel drum, eight feet in diameter. The drum, rising twelve feet into the air from a circular base, revolves, carrying ribbons of sound film in front of



Giant revolving cash register tape exhibit building of National Cash Register company

tiny needles of light, whose variation is no greater than one-thousandth of an inch. From that point the sound is carried to 150 speakers.

A spectacular tower symbolizing chemical research stands before the exhibit building of E. I. du Pont de Nemours and Company. Ten feet in diameter and 100 feet high, the tower incloses within steel framework a greatly enlarged representation of the complex apparatus found in chemical research laboratories. Fluids will appear to circulate within the tower, while from the top a long plume of vapor will seem to rise. The du Pont exhibit is called the "Wonder World of Chemistry," designed by Walter Dorwin Teague. Among its features will be a demonstration of the new synthetic textile, nylon; a model nitrogen fixation plant; development of synthetic aromatic bases, used in perfumes, synthetic methanol, used in anti-freeze,

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For Modern Shaving



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and "Nitramon," the explosive so safe to handle and use that it has removed all former transportation hazards. Another interesting display will be a pest-control laboratory, showing how fungicides and insecticides for the control of such pests as the housefly and the Japanese beetle are tested and developed.

One of the most brilliant spots at the fair will be the Glass Center, housing the combined exhibits of Corning Glass Works, Owens-Illinois Glass Company and Pittsburgh Plate Glass Company. Designed by Shreve, Lamb and Garmon, it will contain more than 20,000 square feet of plate glass, structural glass and glass block and will describe a huge semi-circle. Crowning the building will be a tower of glass blocks. A metal helix winding up the tower will be outlined in fluorescent tubing for illuminating the tower at night. Glass blowers in action, the spinning of glass filaments one twentieth the diameter of a human hair; into fabrics and a panorama depicting the 5,000-year history of glassmaking will be among the exhibit's features.

Television is the central theme of the exhibit of Radio Corporation of America. In special viewing rooms the public will be shown pictures which have been flashed through the air. Many other unusual radio and electronic devices also will be shown in the main building, which is shaped like a radio tube. Near by will be a slender radio mast marking the RCA Communications exhibit, at which visitors may see how radio messages are transmitted to all parts of the world.

Automobiles careening over a huge field, crashing head-on into one another, turning somersaults and doing other perilous stunts will thrill visitors to the exhibit of the B. F. Goodrich Company. The object of this death-defying exhibition is to afford dramatic testing of anti-skid and other characteristics of tires. Grandstands will be provided for spectators. At the main entrance of the exhibition building will be a ninety-foot tower housing a "tire guillotine." Through its glass sides visitors will see a heavily weighted blade plunge downward from varying heights directly upon automobile, truck and airplane tires.

Westinghouse Electric and Manufacturing Company's exhibit will portray many

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cular hall. Also in the building will be an astronomical observatory in which will be demonstrated the method of determining correct time from the stars.

Contrast between the modern electric gearless elevator and the old steam elevator of the 1860s will be drawn in the exhibit of the Otis Elevator Company. Cabs of the two elevators will be displayed.

"The City of Light," a spectacle designed by Walter Dorwin Teague, will be presented by the Consolidated Edison Company of New York. Its central figure is a three-dimensional, animated architectural model of the New York metropolitan area, about one city block long and over three stories high. More than 4,000 buildings, studded with 130,000 windows, will be shown in this giant diorama. A complete model subway system, with trains designed for a run of 35,000 miles, will be a part of the exhibit.

Removable Tray for Bird Cage Is Easy to Service

A removable tray for a bird cage can be serviced without putting the hands inside. Cups and feeding perches are bracketed to the tray, and all this equipment is slipped out easily by raising a section at one end of the cage. Two upper perches are taken out through the side, and the swing gate through the top. There is nothing to interfere with the removal of paper from the bottom of the tray.



Perches, swing and tray with feeding and water cups are easily removed from bird cage for cleaning.