

pounds. The diameter of the boiler is 68 3/4 inches, the total heating surface is 3,196 square feet, grate area 44.8 square feet, and the boiler pressure 200 pounds to the square inch. The maximum tractive power is 26,000 pounds. The tender weighs 140,000 pounds and has a capacity of 7,500 gallons of water and ten tons of coal.

The turntable, which is an excellent job of riveted plate steel work, consists of two plate-steel girders, one under each rail, 5 feet in maximum depth and 70 feet in length, which are heavily braced

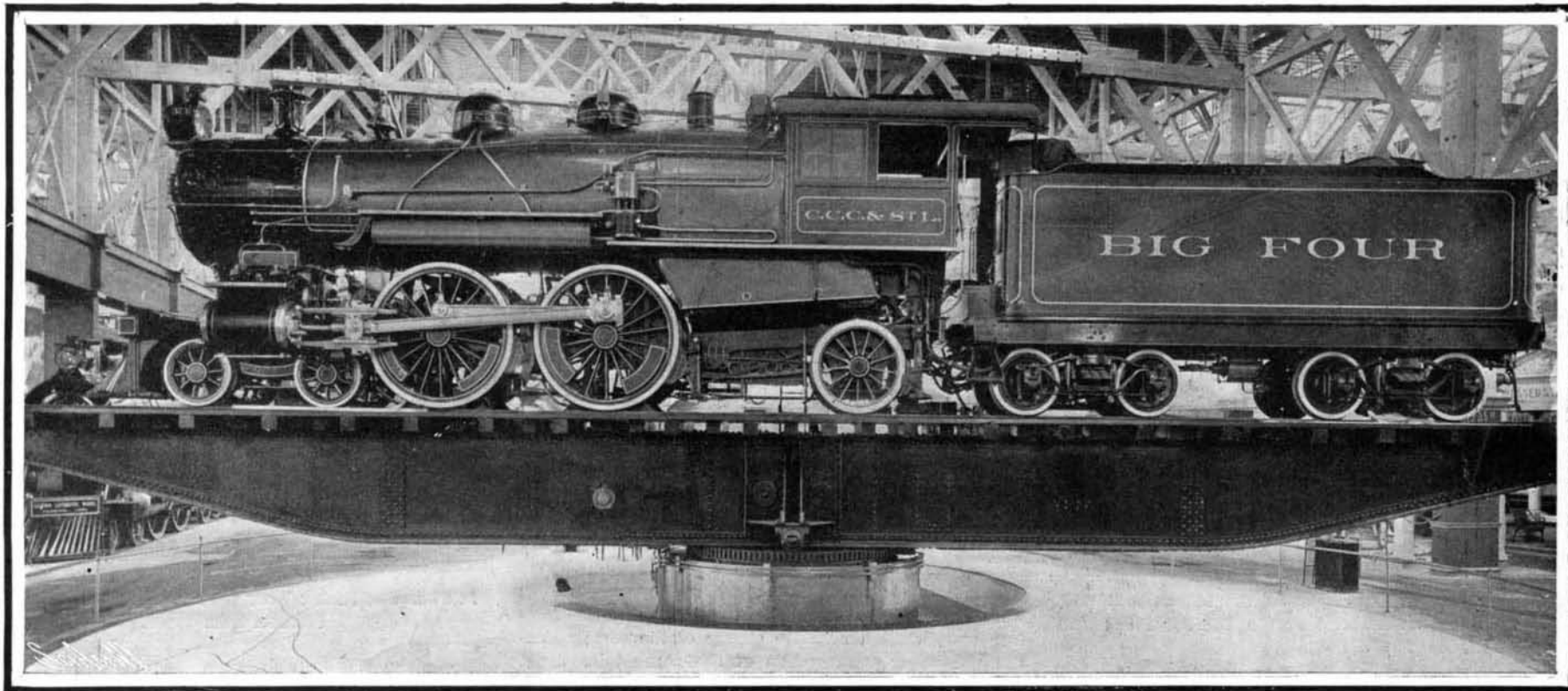
the other side the various lines with which the "Big Four" route has connections. Altogether this is one of the most imposing exhibits in the Transportation Building.

**FESTIVAL HALL AND THE COLONNADE OF STATES
—THE ARCHITECTURAL MASTERPIECE OF THE
LOUISIANA PURCHASE EXPOSITION.**

BY THE ST. LOUIS CORRESPONDENT OF THE SCIENTIFIC AMERICAN.
It is not often that the photographer is presented with such a fine opportunity to show what the camera can do in the reproduction of architectural and land-

Visitors to the fair who have seen the famous architectural panoramas of the Old World do not hesitate in pronouncing this scene the most beautiful and imposing of them all. It is an artist's dream, and like a dream it must soon vanish; for the wrecker and the junk man are already estimating what it will be worth to them as rubbish and old lumber.

To enable our readers to preserve a memento of this scene, we present the accompanying double-page insert of what is certainly the finest scenic effect in the whole of the St. Louis Exposition.



Engine and Tender weigh 163 tons. The turntable is 70 feet long by 5 feet deep.

EXPRESS ENGINE AND TURNTABLE IN OPERATION IN THE TRANSPORTATION BUILDING, ST. LOUIS WORLD'S FAIR.

together vertically and laterally. It runs upon a base which is 12 feet in diameter, and it stands 4 feet above a hemispherical mound, erected upon the floor of the building. The engine is raised sufficiently for the driving wheels to clear the track by 3-16 of an inch, the supports consisting of four heavy castings, which reach from the rail to the engine frames, to which they are bolted. The driving wheels of the engine are run by an 18-horse-power electric motor, the wheels being carried in Babbitt cellars in the driving boxes. The turntable is also rotated by an 18-horse-power motor, the current being taken by two bus-bars which extend around the base near its top. The mound upon which the turntable stands is painted to represent on one side the "Big Four" route, and on

scape effects as is provided by the prodigal wealth of architecture, statuary, cascades, and floral landscape that renders Festival Hill the chief glory of the Exposition at St. Louis. Festival Hall and the Cascades are beautiful at any hour of the day; but they are seen at their best when the sun has passed the meridian and the afternoon is well spent; for then it is that exquisite contrasts of light and shade serve to accentuate the rich profusion of detail in the buildings, and cause the statuary to stand out in all its pure white beauty against the rich green of the sloping lawns, and the brilliant coloring of the flower beds; while the shafts of sunlight that steal through the many-columned stretch of the Colonnade give a touch of rainbow beauty to the fountains and cascades.

Equally beautiful in its way is the night effect produced by the electric illumination of the Cascades and surrounding buildings; and that the crowds at the fair appreciate the illumination is proved by the fact that at the appointed hour for the display, which is set to take place in the last glow of twilight, vast throngs may be seen pouring through the many plazas to the great Court of Honor, from which the illumination may be seen to the best effect. The thousands of incandescent lamps are brought up gradually to their full brilliance, brightening from a dull red to an almost dazzling white. At intervals the lights on Festival Hall and the Colonnade are changed from white to pale green, and then to a ruby red. It is a picture that once seen will never be forgotten.

