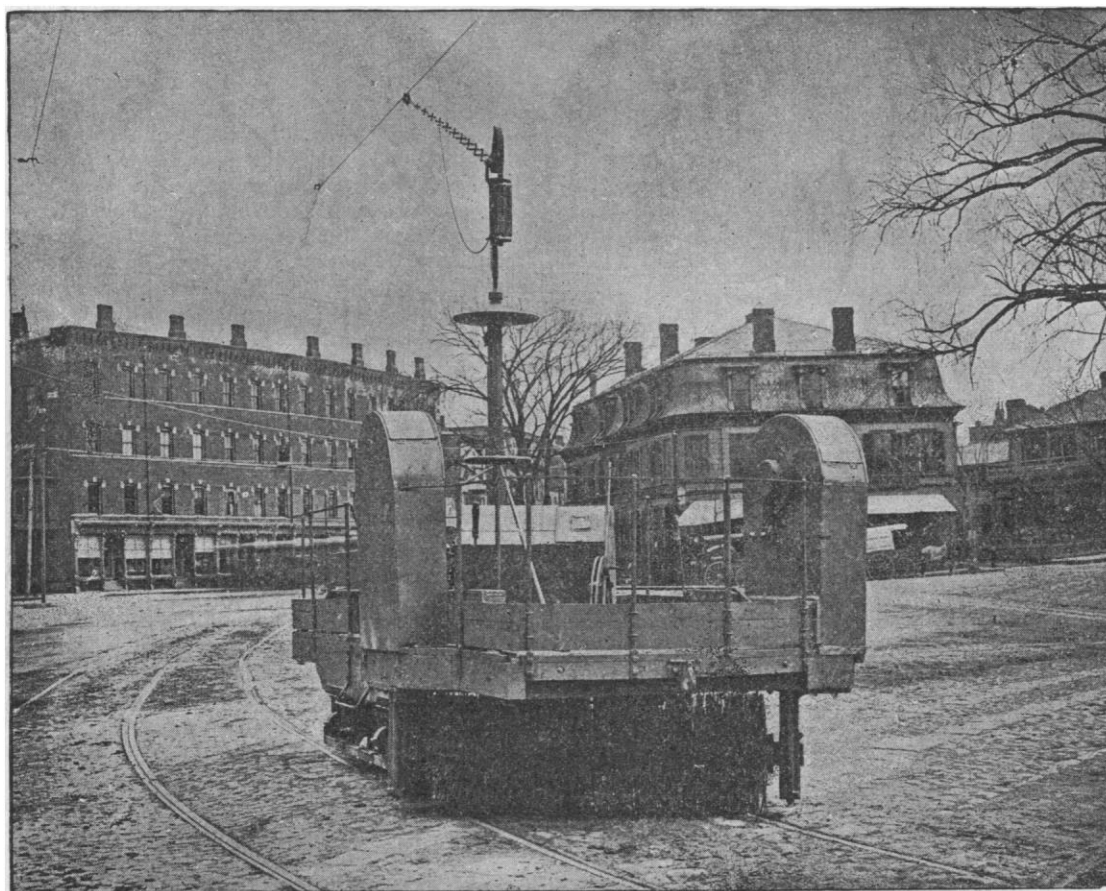


SNOW-BROOM FOR USE ON ELECTRIC RAILWAYS.

ANTICIPATING the usual New England winter, the Thomson-Houston Company designed a snow-broom (shown in the accompanying cut) for use on the Cambridge division of the West End Street Railway. The truck, which is of the Brill type, and has a five-foot wheel-base, is equipped with a thirty-horse-power motor geared to drive the truck at a speed of twelve miles per hour. The snow-broom is thirty inches in diameter, and set at an angle of forty-five degrees. It is driven by a stationary motor of twenty horse-power, at a speed of one hundred revolutions per minute. But two men are required to operate the broom, the brakes and controlling mechanism being placed in such a position as to render it an easy matter. The broom was used for the first time during

comprised 96,900,000 inhabitants, — an increase of 19,000,000 since 1877; and the states where the metric system was legally admitted in principle, or partially applied, as in the customs (Russia, Turkey, British India), comprised a population of 395,000,000, — an increase of 54,000,000 since 1877.

The metric system is thus legally recognized throughout the civilized world by 794,000,000 people, — an increase of 126,000,000 since 1877. These 794,000,000 represent 60.6 per cent of the population of the civilized world; that is to say, of countries which have a census or an official enumeration of the population. These latter contain 1,311,000,000. China, Japan, and Mexico have different systems, decimal but not metric. They represent a population of 474,000,000. The other civilized nations not comprised in the figures given above have neither the decimal nor the metric system.



THE THOMSON-HOUSTON SNOW-SWEEPER.

the snow-storm of March 31, and performed admirably; and it was also tested by placing bricks and boards in front of it, and the way these were brushed aside to a distance of four or five feet from the track leaves no doubt of the ability of this appliance to cope successfully with heavy storms. The company has also built a much larger machine, with thirty-six-inch wheels, and fitted with two brooms and a scraper, which will be able to deal with the severest storms.

THE EXTENSION OF THE METRIC SYSTEM.

THE question whether the employment of the metric system is growing or not, was recently discussed in a note presented to the Académie des Sciences by M. de Malarce. An abstract of this appears in "Publications of the American Statistical Association," New Series, No. 4.

M. de Malarce begins by stating that in 1887 the states where the decimal metric system was obligatory comprised a population of 302,000,000 inhabitants, — an increase of 53,000,000 since 1877; the states where the metric system was authorized by law as optional (England, certain British colonies, Canada, the United States)

They represent but a slight fraction of the civilized world, — less than 43,000,000.

If we pass to the examination of monetary systems, it will be noticed that the five states that formed the monetary union of 1865 — France and her colonies, Belgium, Italy, Switzerland, and Greece — comprise a population of 111,000,000. Four states — Austro-Hungary (since 1870), Monaco (1879), Finland (1878), Russia (1887) — coined certain pieces in conformity with the French system, which are receivable, according to a decision of the French Government, at her public banks, and in consequence are legal tender in France. These states represent a population of 144,000,000.

Four states in Europe, — Roumania (1867), Spain (1868), Servia (1873), and Bulgaria (1877), — one state in Africa, — Kongo (1877), — one state in Asia, — Persia, — and nine states in America, — the Argentine Republic, Bolivia, Chili, Columbia, Hayti, Nicaragua, Peru, Uruguay, and Venezuela, — have also coined money according to the French system; and these represent a population of 56,000,000. The total population, therefore, of the states which have coined money similar to the French system, comprise 311,-