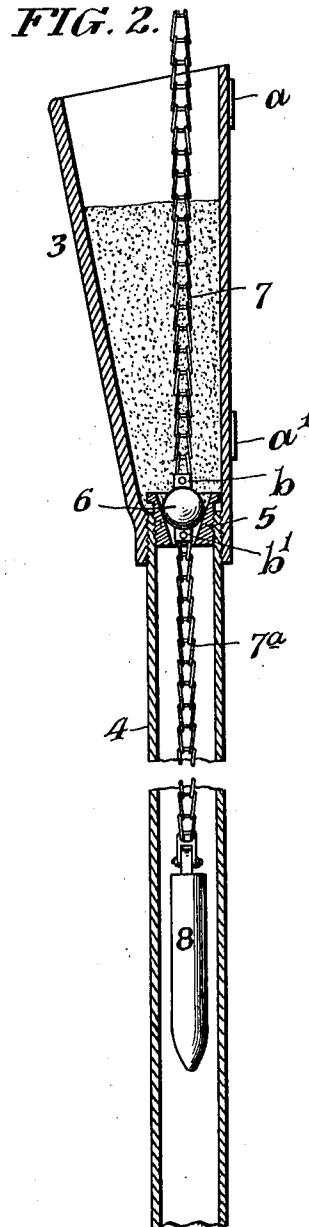
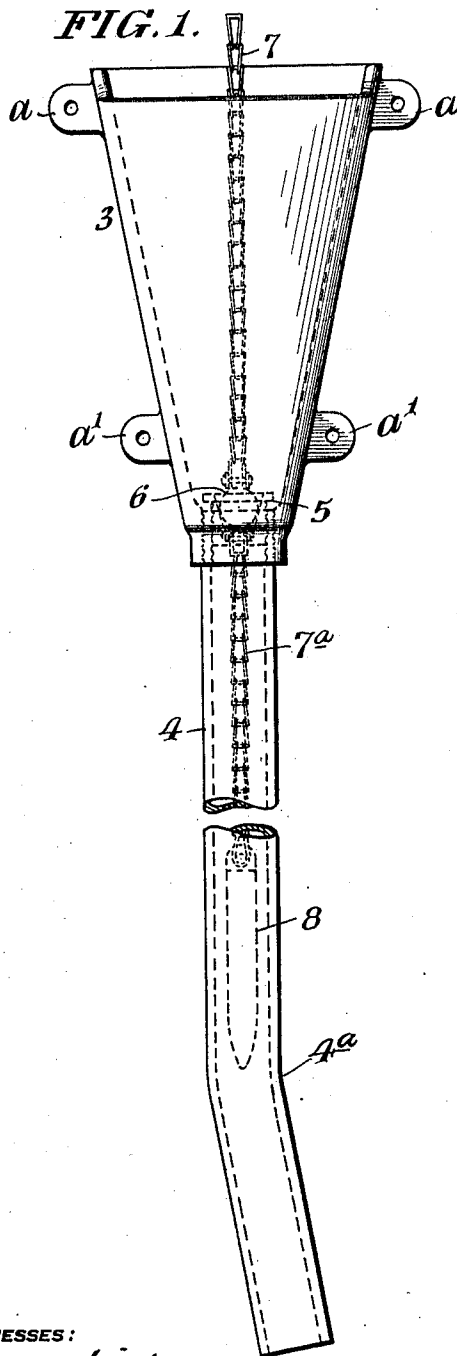


J. H. E. BRANSON, W. H. QUICK & T. F. MACKELL.
 TRACK SANDING DEVICE FOR TROLLEY CARS.
 APPLICATION FILED JAN. 13, 1911.

988,438.

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TRACK-SANDING DEVICE FOR TROLLEY-CARS.

988,438.

Specification of Letters Patent.

Patented Apr. 4, 1911.

Application filed January 13, 1911. Serial No. 602,415.

To all whom it may concern:

Be it known that we, JAMES H. E. BRANSON, WILLIAM H. QUICK, and THOMAS F. MACKELL, all citizens of the United States, and residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have jointly invented certain new and useful Improvements in Track-Sanding Devices for Trolley-Cars, of which the following is a specification.

Hitherto it has been the customary practice to arrange sand hoppers on the inner side of the dash-boards of the platforms of trolley cars and to place a bucket of sand along side with a scoop to manually discharge the same into the hopper which then passes through a piping onto the slippery rail to enable the wheels to grip the same for proper contact and safety of travel.

Our invention has been designed mainly, to economize in the use of sand for track sanding, by more uniformly discharging and in less quantity over a certain length of track and with lessened effort on the part of the motorman.

Our invention, consists of a track sanding device constructively arranged for use in substantially the manner hereinafter described and claimed.

The nature and scope of our present invention will be more fully understood from the following description taken in connection with the accompanying drawings forming part hereof, in which—

Figure 1, is a front elevational view of a track sanding device, embodying the particular features of our said invention; and Fig. 2, is a vertical sectional view through the device, showing the means for controlling proportioned discharges of the sand from the hopper through the piping for use.

Referring to the drawings, 3 is a funnel-hopper provided with securing means α and α^1 , for attaching to a structure, such as the dash-board of a trolley car, not shown. The hopper 3, is provided with a discharge pip-

ing 4, preferably curving inwardly at 4^a , to direct the discharging sand onto the face portion of a rail. The piping 4, as shown in Fig. 2, is threaded into the lower contracted portion of the hopper. In the upper portion of the piping 4, Fig. 2, on the interior it is threaded to receive a nipple 5, having a conical-shaped interior formation, for a ball 6, to enter and loosely lodge therein to close substantially the contracted lower portion of the nipple 5, by the weight of a plunger to be hereinafter more fully described. The ball has two vertical ears b and b^1 , with which chains 7 and 7^a , are suitably connected, the upper chain 7, extending beyond the wide mouth of the hopper and intended to be connected with the dash-board of a car, not shown, and the lower chain 7^a , carrying a plunger or finger 8, pivotally connected therewith so that when the hopper is filled with sand by a slight manual lifting of the chain is permitted a certain quantity of sand contained in the hopper to be instantly set free and while the ball is seeking its place again in the funnel-shaped nipple, through the weight of the plunger or finger 8, to travel down the piping 4, onto the track. The quantitative discharges of sand through the hopper and its piping being thereby regulated by manual shiftings of the ball and plunger to economically discharge the sand onto a rail and also in such manner as to spread in such discharges the sand more uniformly over a greater length of rail thus greatly economizing in the use of the sand for rail sanding to provide for slippery or greasy rails so as to insure greater safety in the operation of trolley cars.

Having thus described the nature and objects of our invention, what we claim as new and desire to secure by Letters Patent is:—

The combination with a sand hopper and a piping detachably connected with the throat thereof, of a nipple having a funnel-

shaped interior formation detachably threaded to the piping, a ball adapted to fit and close the opening of said nipple and a chain composed of two sections connected to said
5 ball on opposite surfaces thereof, and one section of the same carrying a plunger, substantially as and for the purposes described.
In witness whereof, we have hereunto set

our signatures in the presence of two subscribing witnesses.

JAMES H. E. BRANSON.
WILLIAM H. QUICK.
THOMAS F. MACKELL.

Witnesses:

THOMAS M. SMITH,
J. WALTER DOUGLASS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
