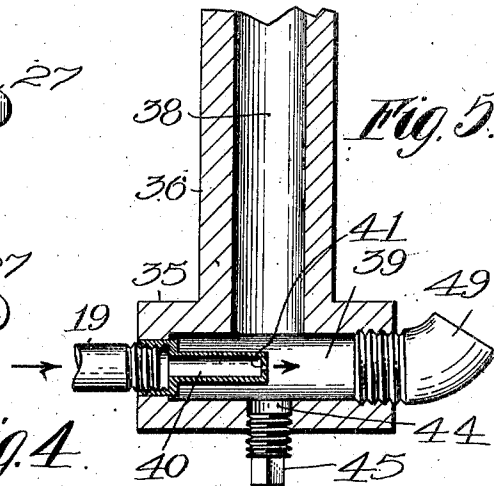
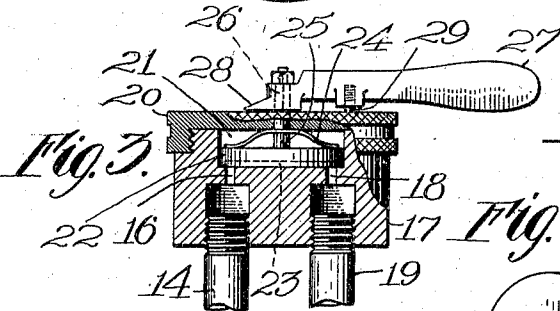
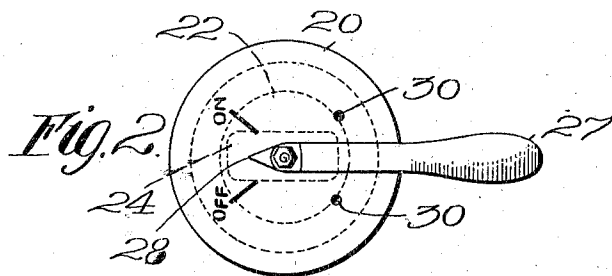
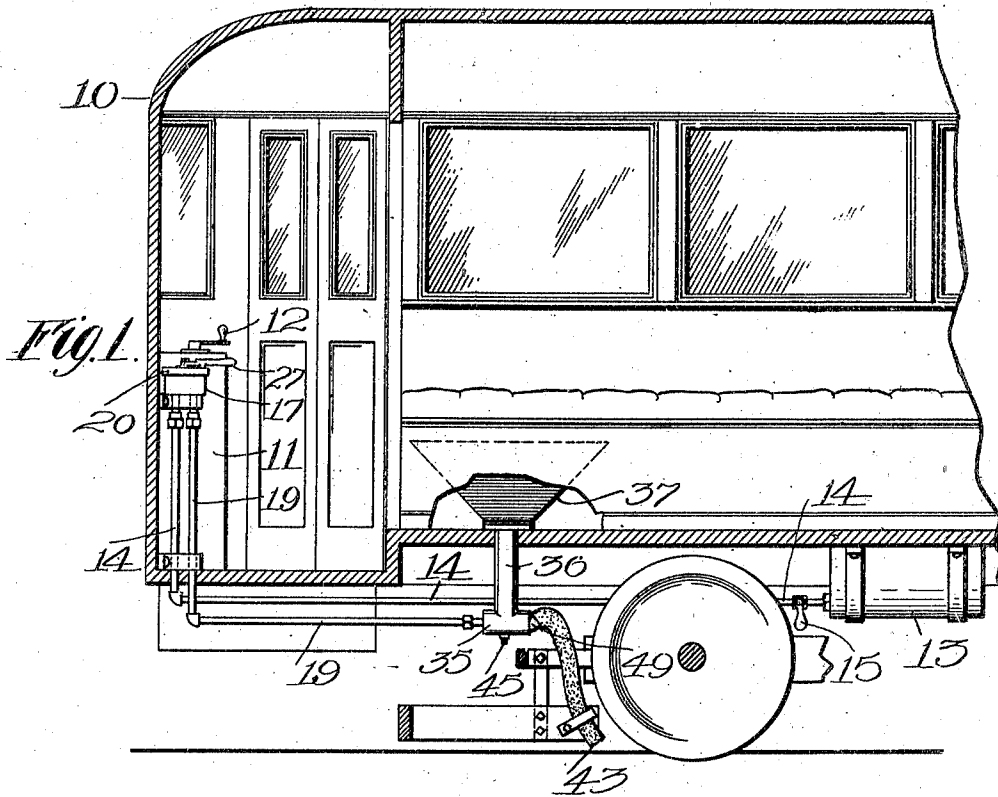


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TRACK SANDER.

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950,889.

Patented Mar. 1, 1910.



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UNITED STATES PATENT OFFICE.

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TRACK-SANDER.

950,889.

Specification of Letters Patent.

Patented Mar. 1, 1910.

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To all whom it may concern:

Be it known that we, WILLIAM J. BEATTIE, ERNEST W. BOYNTON, and EDWIN B. CHURCHILL, citizens of the United States, all residing at Fitchburg, in the county of Worcester and State of Massachusetts, have invented a new and useful Track-Sander, of which the following is a specification.

This invention relates to a sanding device adapted to be used on street and other cars, locomotives, and the like.

The principal objects of the invention are to provide means whereby sand can be distributed by the agency of compressed air in an effective and constant manner and especially to provide means whereby the operator of the car can control the supply of sand in a simple and convenient manner so that it will be absolutely certain that the sand will be discharged when it is wanted.

Further objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings in which—

Figure 1 is a longitudinal central sectional view of a portion of an electric street car showing one way in which this invention may be applied thereto; Fig. 2 is a plan on enlarged scale of the controlling valve box for the sand distributor; Fig. 3 is a central sectional view of the same; Fig. 4 is a bottom perspective view of the valve proper, and Fig. 5 is a central vertical section of certain features of the sand distributing device itself.

Although the invention is adapted for use on various kinds of locomotives, cars, or the like, it is particularly adapted for electric street cars, and is shown in that connection in the drawings which illustrate a street car 10 having a controller 11 provided with a handle 12 in the usual form. Mounted on the car also is a compressed air reservoir 13 having a pipe 14 controlled by a cut-off valve 15 and connected with an inlet port 16 in a valve casing 17. This casing is also provided with an outlet port 18 communicating with the other branch 19 of the compressed air pipe.

On the casing 17 is mounted a cap 20 adapted to be removably secured in place and in the casing is a circular recess 21 into the bottom of which the ports 16 and 18 enter preferably at points diametrically op-

posed. Within this recess is a circular valve 22 having a diametrical groove or passage 23 in its bottom surface so that when turned to a certain position it will open communication between the ports 16 and 18 but will close both of them in all other positions. A spring 24 is shown in the recess bearing on the valve and on the cap 20 to hold the valve to its seat. The valve is provided with a stem 25 which extends up through the cap and has a square portion 26 thereon on which fits a handle 27. This handle is provided with a pointer 28 to indicate by means of the words "On" and "Off" or the like on the top of the cap the condition of the compressed air valve. This handle also is provided with a spring-pressed plunger or catch 29 adapted to engage in depressions 30 on the face of the cap 20 to hold the handle normally in either one of its two extreme positions.

The portion 19 of the compressed air pipe enters an enlargement 35 on a vertical column 36 which is secured to the bottom of the sand hopper 37. This column has an unobstructed vertical passage 38 therethrough communicating with the interior of the hopper and with a horizontal passage 39 at the bottom of it. The pipe 19 enters this passage 39 and it preferably is provided with a nozzle 40 having a discharge opening 41 in the end located under the center of the passage 38. This nozzle is spaced from the walls of the passage 39 and from its position it is obvious that the sand will be discharged by the compressed air in a continuous stream into a discharge pipe 42 which extends from the opposite end of the passage 39. This pipe 42 is bent upwardly at its end 49 to prevent accidental leakage of sand and is connected with a hose 43 for discharging the sand on the track, this hose being held in any desired position at a point near the wheel. The bottom of the passage 39 is provided with a clean-out passage 44 adapted to be closed by a removable plug 45.

It will be understood, of course, that each car can be provided with two or more of these devices as desired, and that they can be located in many other positions than that shown. We are aware also that the invention can be adapted for use on many other kinds of cars, locomotives, and the like than that illustrated in the drawings, and that

many modifications can be made in the details of construction without departing from the scope of the invention as expressed in the claims. Therefore we do not wish to be limited to all the details of construction or the particular application shown and described, but

What we do claim is:—

1. In a sanding device for cars and the like, the combination of a hopper having a horizontal passage communicating with the bottom thereof, a pipe for discharging the sand connected at one end of the passage, a compressed air pipe connected with the other end and having a nozzle extending part way along the passage for discharging the air and sand into the pipe, a compressed air reservoir connected with said pipe, and a valve in said pipe comprising a rotatable disk having a slot across one face thereof adapted to communicate with the pipe.

2. In a device for cars and the like, the combination of a compressed air reservoir, a vertical passage for feeding sand, a pipe connected with the reservoir and having a nozzle projecting under said vertical passage, and a valve for controlling the passage of air to said nozzle, said valve comprising a casing having two ports, one connected with the reservoir and the other with the nozzle, a valve proper in said casing provided with a slot across the face thereof adapted to communicate with both of said ports in one position thereof and with neither of them in all other positions, and a

handle on the outside of the casing for turning the disk.

3. In a device of the character described, the combination of a casing having inlet and outlet ports for compressed air and provided with a circular recess therein into the bottom of which said ports open, said ports being diametrically opposed to each other with respect to said recess, and a circular valve disk rotatably mounted in said recess and having a diametrical passage thereacross for connecting said ports.

4. In a device of the character described, the combination of a casing having inlet and outlet ports for compressed air and provided with a circular recess therein into the bottom of which said ports open, and a circular valve rotatably mounted in said recess and having a passage thereacross for connecting said ports, a cap removably mounted on the top of the casing, a spring under the cap for holding the valve down on its seat, a valve-stem extending up through the cap, and a handle on the valve stem for turning the valve.

In testimony whereof we have hereunto set our hands, in the presence of two subscribing witnesses.

WILLIAM J. BEATTIE.
ERNEST W. BOYNTON.
EDWIN B. CHURCHILL.

Witnesses:

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