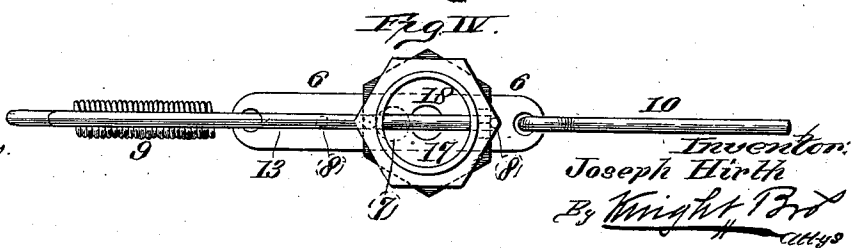
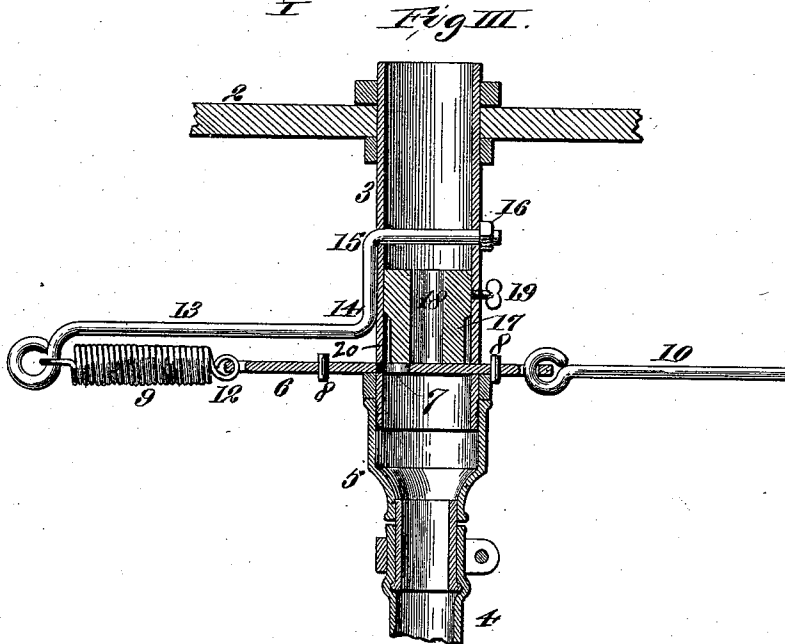
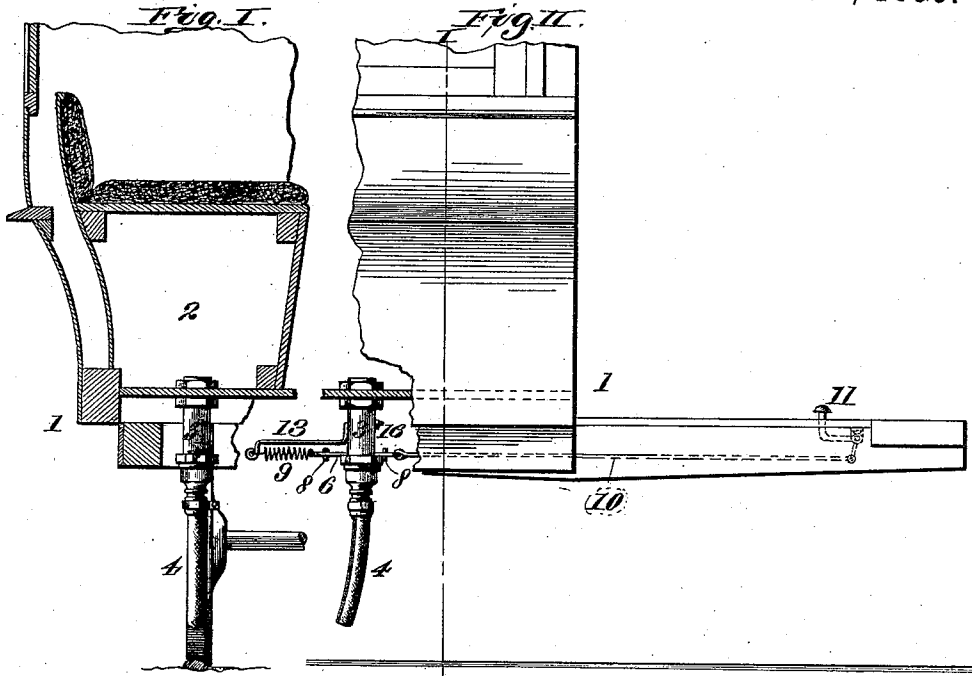


(No Model.)

J. HIRTH.
SAND BOX SPOUT.

No. 532,420.

Patented Jan. 8, 1895.



Attest:
A. W. Edwards
C. G. Edwards.

Inventor:
Joseph Hirth
By Wright & Bro
attys

UNITED STATES PATENT OFFICE.

JOSEPH HIRTH, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO
JOSEPH RUFF, OF SAME PLACE.

SAND-BOX SPOUT.

SPECIFICATION forming part of Letters Patent No. 532,420, dated January 8, 1895.

Application filed March 5, 1894. Serial No. 502,343. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH HIRTH, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Sand-Box Spouts, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to certain improvements in the discharge spouts or pipes of sand boxes, for use on railway cars; and my invention consists in features of novelty hereinafter fully described and pointed out in the claims.

Figure I is a vertical, transverse section of part of a car body, showing my improvement in elevation. Fig. II is a detail, side view of the car body, with my invention in elevation. Fig. III is an enlarged, vertical section, illustrative of my invention. Fig. IV is a top view.

Referring to the drawings, 1 represents part of a car body, having the usual sand box 2. Extending from the bottom of the box is a pipe or spout 3, from the lower end of which extends a section 4 of hose, or other suitable tube, which discharges the sand onto the track rails in front of the wheels. The hose is preferably connected to the tube 3 by means of a coupling 5, as shown in Fig. III.

6 represents a valve consisting of a flat plate having a perforation or hole 7 within the tube 3, and having stop pins 8 which limit the movement of the valve in each direction.

The valve is pulled in one direction by a spring 9, and in the other direction by a rod 10, connecting with a foot lever 11, or with other suitable means for pulling the valve against the pressure of the spring 9. One end of the spring 9 is connected to the valve 6, as shown at 12, and the other end is connected to the outer end of a rod 13, the inner portion of which is bent at 14 to fit against one side of the tube 3, and is bent at 15 to extend through the tube, as shown in Fig. III, there being a nut 16 on the end of the rod to hold it in place. By traversing the tube 3, the rod serves to loosen up the sand as it passes through the tube. Within the tube 3 is a plug 17, having an opening 18 with which

the perforation 7 in the valve 6 registers when the valve is drawn forward against the pressure of the spring 9; and when this pressure is removed, the spring draws the valve back to the position shown in Fig. III, to shut off the passage of the sand, through the opening 18 of the plug. The plug is held in the tube 3 by means of a set screw 19 passing through the tube, and jamming at its inner end against the plug. The plug takes the wear of the sand, as the latter passes through, and by making the opening 7 in the valve 6 slightly larger in diameter than the diameter of the opening 18 of the plug, there is practically no wear on the valve. Should the opening in the plug become worn too much, a new plug can be inserted at a very small cost. As the lower end of the plug, or the upper face of the valve wears, the plug can be set down to compensate for this wear by loosening the set screw, and then by tightening the screw again, the plug is held to its adjustment. A close fit between the plug and the valve, to prevent leakage of the sand, is thus afforded.

The lower part of the plug is reduced, as shown at 20, so as to make the lower end of the plug smaller than the interior diameter of the tube 3. The purpose of this is to permit any sand that may possibly get between the plug and the valve 6 to be discharged at the periphery of the plug and not clog between the plug and the valve.

I claim as my invention—

1. In a discharge spout for sand boxes, a tube, a valve traversing the tube, and having a perforation, and a perforated plug located within the tube, and having a reduced lower end so as to leave a space between it and the interior of the tube; substantially as set forth.
2. In a discharge spout for sand boxes, the combination of a tube, a perforated plug located within the tube, a valve consisting of a plate traversing the tube beneath the plug, stop pins for limiting the movement of the valve, a spring for moving the valve in one direction, and a rod to which said spring is secured; said rod traversing the tube above the plug; substantially as set forth.
3. In a discharge tube for sand boxes, the

combination of a tube, a perforated plug located within the tube, a valve consisting of a perforated plate traversing the tube, stop pins for limiting the movement of the valve, a
5 spring for drawing the valve in one direction, and a rod to which the spring is secured; said rod having bends 14 and 15, and traversing the tube above the plug; substantially as and for the purpose set forth.

JOSEPH HIRTH.

In presence of—

CLARA G. EDWARDS,
A. M. EBERSOLE.