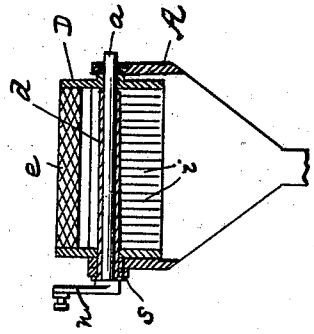
(No Model.)

J. H. HOLLEN.

SANDING APPARATUS FOR CARS.

No. 546,099. Patented Sept. 10, 1895.

FIG. 3.



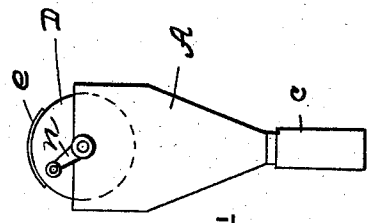


FIG. 2.

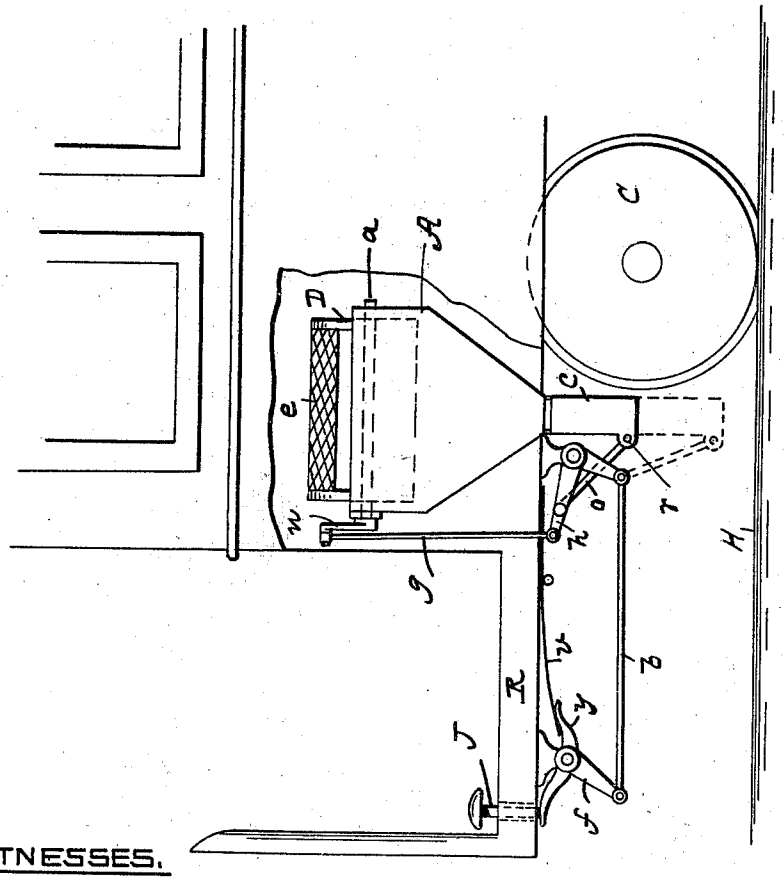


FIG. 1.

WITNESSES.

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UNITED STATES PATENT OFFICE.

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SANDING APPARATUS FOR CARS.

SPECIFICATION forming part of Letters Patent No. 546,099, dated September 10, 1895.

Application filed July 26, 1895. Serial No. 557,220. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. HOLLEN, of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Sanding Apparatus for Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to that class of devices provided for putting sand on car-tracks to give the wheels a better hold on the rails and prevent them from slipping. It is fully explained and illustrated in this specification and the accompanying drawings.

Figure 1 represents a part of a street-car with a portion of one side removed to show the position of the sand-cylinder and its operating connections. Fig. 2 is an end view of the sand-cylinder and its hopper. Fig. 3 is a vertical section of the sand-cylinder, taken lengthwise through the center of its shaft, showing its internal construction.

The construction is as follows: A cylinder D to hold the sand is arranged to turn partly around in the top of a hopper A and is intended to be placed under the seat at the end of the car, so as to be a short distance in front of the car-wheels C. This cylinder D has an opening on one side for about one-fourth of its circumference, which opening has a removable cover of coarse wire-netting *e*, that can be opened to put the sand in the cylinder. One head of the cylinder D is made fast to its shaft *a* at one end, and a tube *d*, held fast from turning by a pin through a flanged collar *s*, fast on one end of the tube, extends in through one of the bearings in the hopper and covers the shaft *a* to the other head of the cylinder, so that one head of the cylinder turns on the tube *d*. Small bars *i i* are made fast on the under side of the tube *d*, which extend nearly down to the lower side of the cylinder. (See Fig. 3.) The tube *d* and bars *i* being held rigidly when the cylinder is turned, the sand in it will pass between the bars *i* and be thoroughly broken up and free to run out into the hopper when the opening in the cylinder is turned down. The turning of the cylinder in its bearings is effected by means of an arm *n*, fast on one end of its shaft *a*, that is connected by a rod *g* to one end of a knee-lever *h*, pivoted to a stand attached to the car. The other end of this knee-lever *h* is connected by a rod *b* to one end of a knee-lever *f*, pivoted to a stand attached to the car. The knee-lever *f* is located under the car-platform R, so that a loose vertical pin J, held in a hole in the platform where it can be easily reached by the brakeman's foot, will rest its lower end on one arm of the knee-lever *f*. A tube *c* is attached to the bottom of the hopper A to conduct the sand to the rail. This tube is made in two parts, and the lower part slides up over the upper half of the tube. This telescoping of the tube is provided for the reason that it is desirable to conduct the sand to a point as near the rail H as possible to prevent the wind from blowing it away, and at the same time it is very desirable to keep the tube up out of the way of snow or of being accidentally hit when not in use. The sliding portion of the tube *c* has an ear *r* on its lower end, which is connected by a rod *o* to the upper arm of the knee-lever *h*, so that when that arm of the lever moves down to turn the cylinder D it will push down the sliding portion of the tube *c*, as shown by dotted lines in Fig. 1, nearly to the rail H, and when the arm *h* rises again the tube *c* will be drawn up and will be out of the way at all times when not delivering sand.

The mode of operation will be readily understood from the above description. When the brakeman wishes to sand the rail, he presses down the pin J with his foot. This, by means of the knee-levers *f* and *h* and the connecting-rods *b* and *g*, turns the cylinder D over far enough to throw a portion of the sand in it out through the wire-netting *e* into the hopper A, whence it runs down through the tube *c* to the rail H. The sliding part of the tube *c*, as before stated, being pushed down at the same time by the rod *o*, the sand is delivered by it close to the rails. A third arm *y* on the knee-lever *f* has a flat spring *v*, attached to the car, bearing on it, that returns all the parts to place when the brakeman removes his foot from the pin J.

Having thus described my improvement, I

claim as my invention and desire to secure by Letters Patent—

1. In a sanding apparatus for cars the combination of a cylinder to hold the sand having an opening to discharge the sand a stationary rack inside to stir the sand with means for moving said cylinder, substantially as described.

2. In a sanding apparatus for cars, the combination of a cylinder held in bearings in a hopper and having a stationary rack on its inside to stir the sand and a telescoping tube for delivering the sand to the rails with means for operating said cylinder and tube substantially as described.

3. In a sanding apparatus for cars, the combination of a cylinder held in bearings in a hopper, said cylinder having a stationary rack inside, a telescoping delivery tube to said hopper, an arm fast on the shaft of said cylinder and connected by a rod with one arm of a knee-lever connected by a rod from its other arm with another knee-lever in position to be operated by the brakeman on the car, substantially as described.

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Witnesses:
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