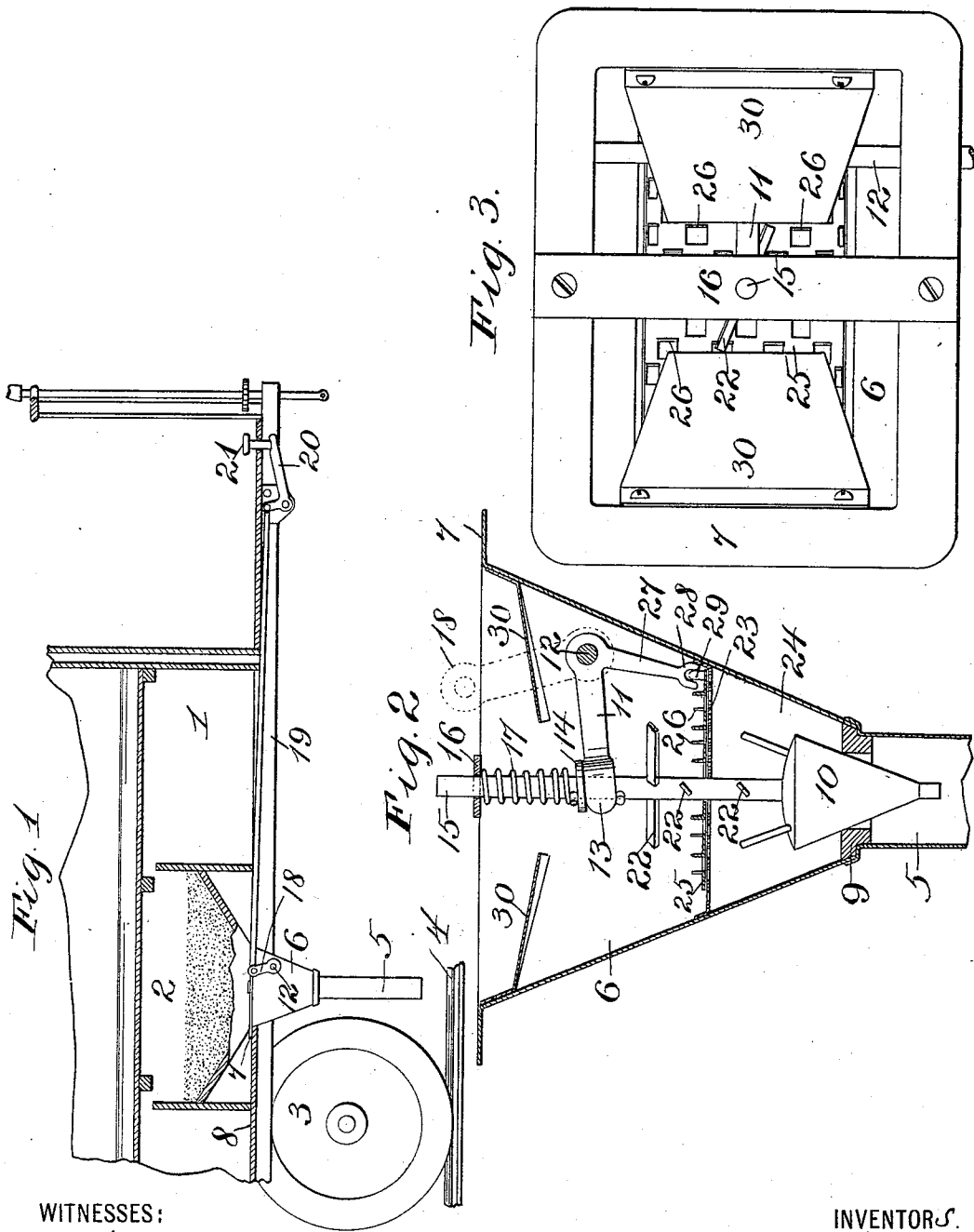


(No Model.)

J. U. SCHIESS & J. DUESTER.
TRACK SANDING DEVICE.

No. 539,395.

Patented May 14, 1895.



WITNESSES:

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JOHN U. SCHIESS, OF BROOKLYN, AND JOSEF DUESTER, OF NEW YORK, N. Y.

TRACK-SANDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 539,395, dated May 14, 1895.

Application filed September 19, 1894. Serial No. 523,496. (No model.)

To all whom it may concern:

Be it known that we, JOHN U. SCHIESS, residing in Brooklyn, Kings county, and JOSEF DUESTER, residing in New York city and county, State of New York, citizens of the United States of America, have invented certain new and useful Improvements in Track-Sanding Devices, of which the following is a specification.

Our invention relates to that class of sanding devices employed on vehicles for the purpose of delivering beneath the tread of the wheel a quantity of sand to increase the friction and hold of the wheel on the track. While not confined to use on street cars our improvement is especially designed and adapted for such employment and will be hereinafter described in such connection.

The improvement has for its objects to keep the sand in a loose condition, free from lumps, and to deliver it quickly, evenly and with certainty whenever needed.

With such objects in view the invention consists in the parts and combinations thereof of hereinafter more particularly set forth and claimed.

In order to make our invention more clearly understood we have shown in the accompanying drawings means for carrying the same into practical effect, without limiting our improvements, in their useful applications, to the particular construction which, for the sake of illustration, we have delineated.

In said drawings, Figure 1 is a vertical longitudinal sectional view of a portion of a street-car provided with a sanding device embodying our invention. Fig. 2 is a vertical sectional view, on a larger scale, of the agitating and delivery portion of the sanding device. Fig. 3 is a plan view of the same.

Referring to the drawings, 1 indicates a portion of a street car, carrying at a convenient place, such as beneath the seat, a sand bin or hopper 2. This hopper is situated in front of and near the wheel 3 to which the sand is to be supplied, and the latter is delivered to the track, a portion of which is shown at 4, by a pipe or nozzle 5.

The agitating and delivery portion of the sanding device in which our invention resides, is best seen in Fig. 2. It is contained within a funnel or hopper shaped casing 6

which is attached to or communicates with the bin 2 and at its lower end carries or communicates with the pipe 5. The casing is supported by a flange 7 at its upper end which rests upon the floor 8 of the car. At its lower end the casing is provided with a valve seat 9, by closing the opening of which communication between the sand receptacle and pipe 5 is cut off. The valve for said seat is indicated at 10, and is movable up and down to open and close the seat by a rocking arm 11 carried by a rock-shaft 12 and having a forked end 13 which engages beneath a collar 14 on the valve stem 15. The valve is guided by a bearing 16 in which said stem plays, and is normally held down on its seat by a spring 17 between said bearing and the collar 14. It will be observed that this construction permits the free rotation of the valve and stem. The shaft 12 is mounted in the casing 6 transversely thereof and carries an exterior arm 18. The latter may be operated by the driver through any convenient form of mechanism. As illustrated it is connected by a rod 19 with an angle lever 20 mounted beneath the front platform of the car, the lever being operated by a treadle 21, so that at the will of the driver the valve 10 may be raised and sand discharged from the pipe 5 upon the track.

The movement and jolting of the vehicle tends to pack the sand within the casing 6. We, therefore, provide the valve, or valve-stem, or both, with projections or arms 22. These arms serve not only to agitate the sand when the valve is operated, but are so disposed as to cause a slight rotation of the valve at each upward movement, thereby stirring and loosening up the sand in different parts of its body.

23 is a perforated diaphragm situated across the interior of the casing 6 and adapted to act as a sifter to prevent stones or other hard lumps from entering the delivery chamber 24 which is thus formed in the bottom of said casing. The diaphragm 23 also serves to relieve the sand in said chamber 24, which has been sifted and loosened up, from the weight of the material in the upper part of the casing and in the bin 2.

25 is a reciprocating plate mounted in the casing parallel with and preferably in contact

with the diaphragm 23 and also perforated as shown. Said plate is armed with upward projections 26, which may conveniently be formed by partly cut out and bent up portions of the plate, and which act as stirrers upon the bottom of the body of sand above the diaphragm. The plate 25 is reciprocated by an arm 27 fixed on the rock-shaft 12 and engaging by a forked end 28 a projection 29 on the plate. Each opening of the valve is thus accompanied by a stirring movement of the plate 25 and an efficient sifting action through the diaphragm 23.

In order to relieve the sand in the casing 6, which has been loosened up by the action of the arms 22, from the compacting pressure of the sand in the bin 2, we provide guard plates 30 in the upper part of the casing which sustain the weight of the superincumbent sand and much reduce the space through which the sand may pass down to the agitating devices.

We claim—

1. In a sanding device the combination with the sand supplying means, of a valve adapted to reciprocate and free to rotate, means for reciprocating the valve, and stirring arms connected with the valve for causing its rotation, substantially as set forth.

2. In a sanding device the combination with the sand bin, a discharge valve, and agitating devices, a sifter, a sliding plate above the latter, and actuating mechanism for said plate and devices of a guard plate or plates above said agitating devices, and mechanism substantially as set forth.

3. In a sanding device the combination with a sand receptacle and a reciprocating valve, of a reciprocating plate in said receptacle, arms connected with said valve and plate, and means for oscillating said arms, substantially as set forth.

4. The combination with a sand receptacle, of a closing valve, a transverse sifting plate, a reciprocating plate in contact therewith, a transverse rock-shaft, arms on said shaft connected with the valve and plate, and means for operating said shaft, substantially as set forth.

In witness whereof we have hereunto signed our names in the presence of two witnesses.

JOHN U. SCHIESS.
JOSEF DUESTER.

Witnesses:

ADOLF FINK,
LOUIS G. WEBER.