No. 814,256. PATENTED MAR. 6, 1906.

B. D. WILLITS.

TRACK SANDING APPARATUS.

APPLICATION FILED MAY 25, 1905.

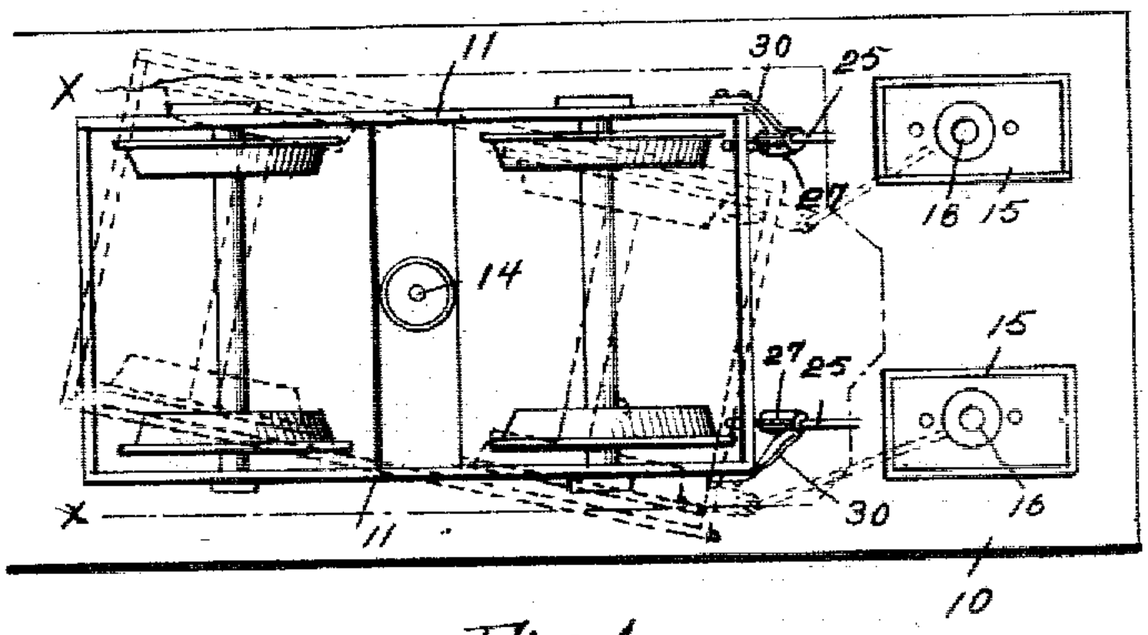


Fig. 1.

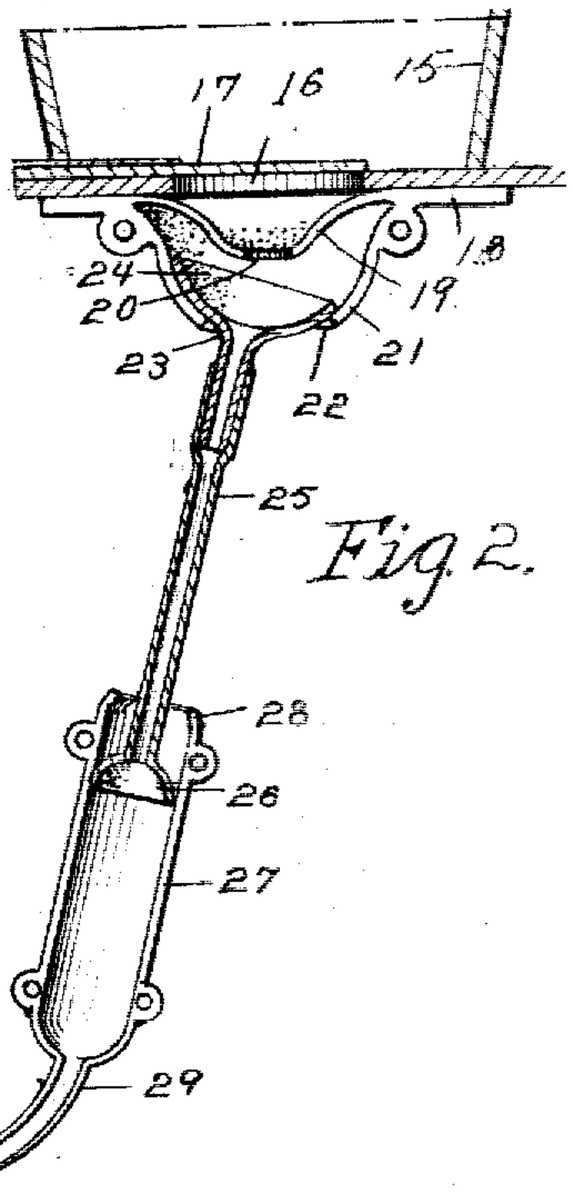
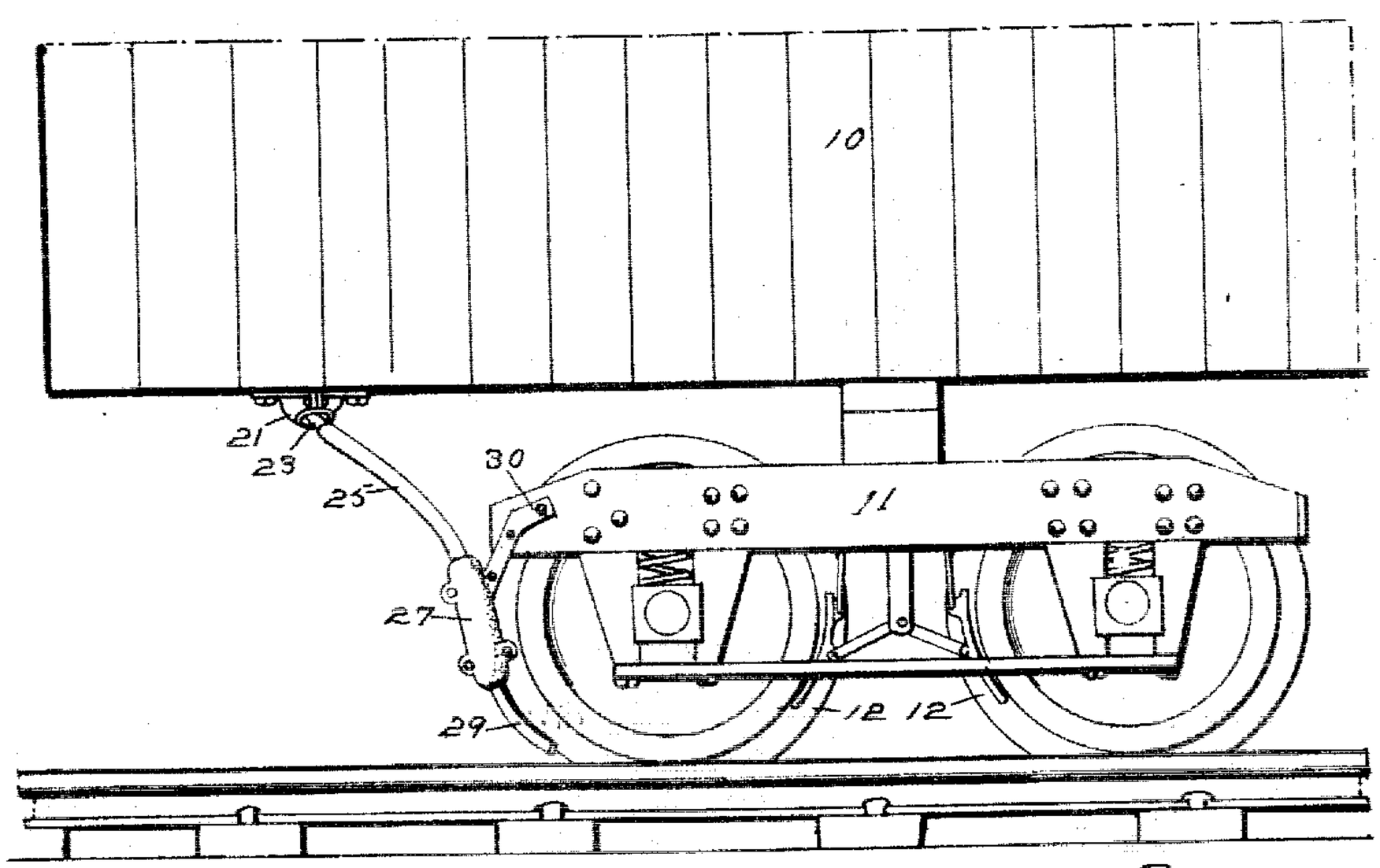


Fig. 2.

Fig. 3.



Witnesses

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TRACK-SANDING APPARATUS.

No. 814,256. Specification of Letters Patent. Patented March 6, 1906.

Application filed May 25, 1905. Serial No. 262,515.

To all whom it may concern:

Be it known that I, BRUTUS D. WILLITS, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented a certain new and useful Track-Sanding Apparatus, of which the following is a specification.

The objects of my invention are to provide a track-sanding attachment for railway-cars of simple, durable, and inexpensive construction designed to automatically move the discharge-spout to direct a current of sand upon the track-rails when the car is turning a curve in the track

My invention consists in certain details in the construction, arrangement, and combination of the apparatus with a car body and truck, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 shows a top or plan view of a part of a car-platform with sand-boxes thereon, said platform broken away on the indicated line *x x* to show the front trucks beneath it. The dotted lines in said view indicate the position of the truck and the sanding-tubes when the truck is moved relative to the car-platform. Fig. 2 shows an enlarged detail sectional view through one of the sand-boxes and my improved sand-delivering device connected therewith, and Fig. 3 shows a side elevation of a part of a car and truck provided with my improved sanding apparatus.

Referring to the accompanying drawings, I have used the reference-numeral 10 to indicate the car-body. 11 indicates the truck-frame, and 12 the car-wheels, said truck-frame being swiveled to the car-body at 14. Mounted upon the car-body is a sand-box 15 of the ordinary kind provided with an opening 16 at its bottom covered by a slide 17. Secured beneath the sand-box is a casting 18, formed with a cup-shaped partition 19 near its top, provided with an opening 20, and also formed with a cup-shaped partition 21 at its bottom spaced apart from the partition 19 and provided with a relatively large central opening 22 at its bottom. Mounted in the cup-shaped partition 21 is a funnel 23, having a cup-shaped top 24 fitted on top of the partition 21, the diameter of the funnel 23 being such that it may move a limited distance in any direction in the opening 22—that is to say, the cup-shaped top 24 forms with the cup-shaped partition 21 a universal joint. Secured to the lower end of the funnel 23 is a flexible hose or tube 25, having at its lower end an inverted-cup-shaped part 26.

The numeral 27 indicates a cylinder, the upper end of which is open, and the top margins of the upper end are inclined inwardly at 28. The cup-shaped device 26 is fitted accurately within the cylinder 27, and the upper margin 28 of the cylinder prevents the cup-shaped device 26 from moving forwardly through the open top of the cylinder. Formed on the bottom of the cylinder 27 is a curved discharge-spout 29.

The reference-numeral 30 indicates a bracket, one end of which is secured to and supports the cylinder 27, while the other end is secured to the adjacent portion of the car-truck 11, thus supporting the cylinder with the spout 29 directly under the adjacent portion of the front wheel of the truck, so that sand will be discharged directly in front of the wheel.

I preferably provide a complete sand-box and sanding apparatus for each side of the car, as shown in Fig. 1.

In practical use and assuming that a car is provided with my improved sanding apparatus and is standing on a straight track, then the truck is parallel with the car, and the cylinder 27 is held in position directly in line with the sand-box. Assuming that the car passes over a curved portion of the track, then the truck moves to an angle relative to the car. The cylinder 28 is of course carried with the truck and is held in an upright position, with the spout 29 in front of the wheel, by the bracket 30. This movement of the cylinder 27 not only inclines the hose 25 laterally, but it removes the cylinder 27 farther from the sand-box. When this movement occurs, the cup-shaped portion of the hose moves toward the top of the cylinder 27, and when it reaches the top the cup-shaped end 26 may rotate in the top of the cylinder, so that the hose will be on a straight line between the funnel 23 and the top of the cylinder 27. The said funnel also rocks in the cup-shaped partition 21, so that no sharp bends are made in the hose 25, which might tend to retard the progress of sand through the hose.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States therefor, is—

1. The combination with a car-body and a swiveled truck, of a sand-box, a funnel to receive discharge from the sand-box and hav-

ing a universal movement with relation to the sand-box, a hose connected with the funnel, a hose-guide fixed to the truck, said hose entering the guide and having a sliding connection therewith.

2. The combination with a car-body and a swiveled truck, of a sand-box, a cup-shaped device upon the sand-box and communicating therewith and having an opening at its lower end, a funnel having a cup-shaped top supported in said cup-shaped device and having a universal movement therein, a hose connected with the funnel and a discharge-spout connected with the car-truck and communicating with the hose.

3. The combination with a car-body and a swiveled truck, of a sand-box mounted on the car-body and a device secured beneath the sand-box and having a cup-shaped partition near its top provided with a central opening and a cup-shaped partition near its bottom provided with a central opening, a funnel with a cup-shaped top fitted on the top of the lower partition and projected through the opening therein, a hose connected with the funnel, and a spout supported on the car-truck and communicating with the said hose.

4. The combination with a car-body and a swiveled truck, of a sand-box supported on the car-body, a hose pivotally connected with the car-body and communicating with the sand-box, a cylinder supported on the car-truck and formed with a spout at its lower end, said cylinder slidingly and pivotally connected with the hose.

5. The combination with a car-body and swiveled truck, of a sand-box supported on the car-body, a device supported below the sand-box and formed with a cup-shaped partition at its top having a central opening and a cup-shaped partition at its bottom having an opening, a funnel having a cup-shaped top fitted on top of the lower cup-shaped partition and projecting through the opening therein, a hose secured to the funnel, a cylinder, and a bracket fixed to the cylinder and to the car-truck, said cylinder having an open top the margins of which are curved inwardly, said cylinder also formed with a spout at its lower end and an inverted-cup-shaped device on the lower end of the hose slidingly mounted in the cylinder and normally engaging the sides of the cylinder.

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Witnesses:
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