

No. 748,210.

PATENTED DEC. 29, 1903.

A. F. McCONNELL.  
SAND CAR.

APPLICATION FILED MAY 1, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

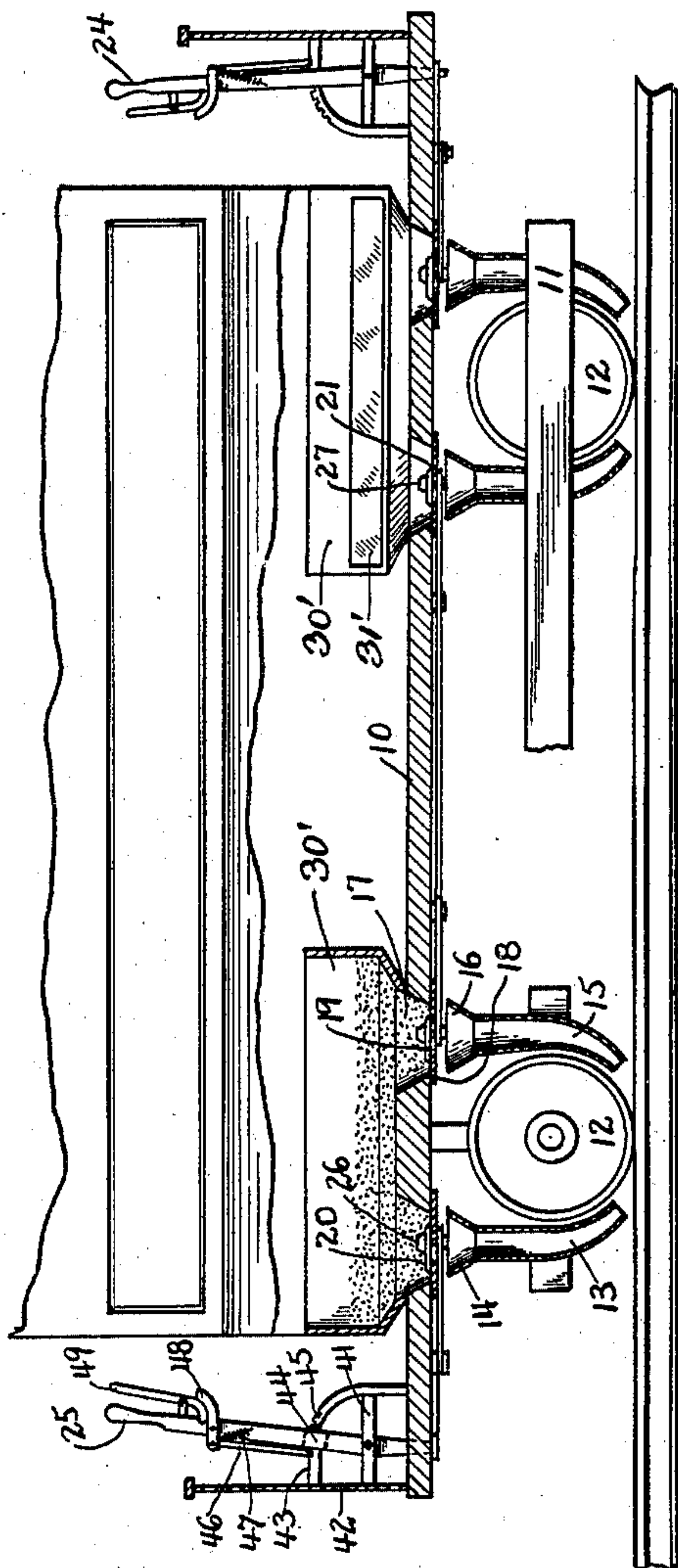
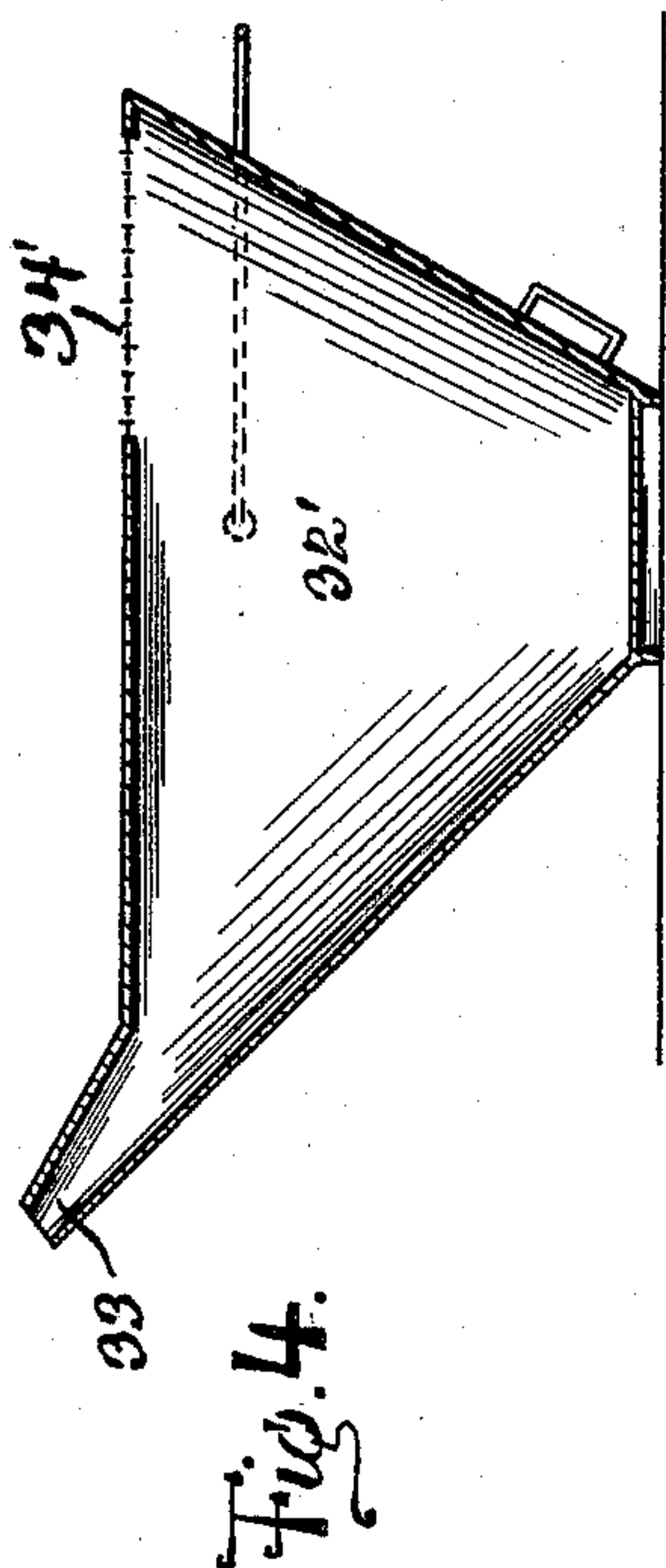


Fig. 1.

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2 SHEETS—SHEET 2.

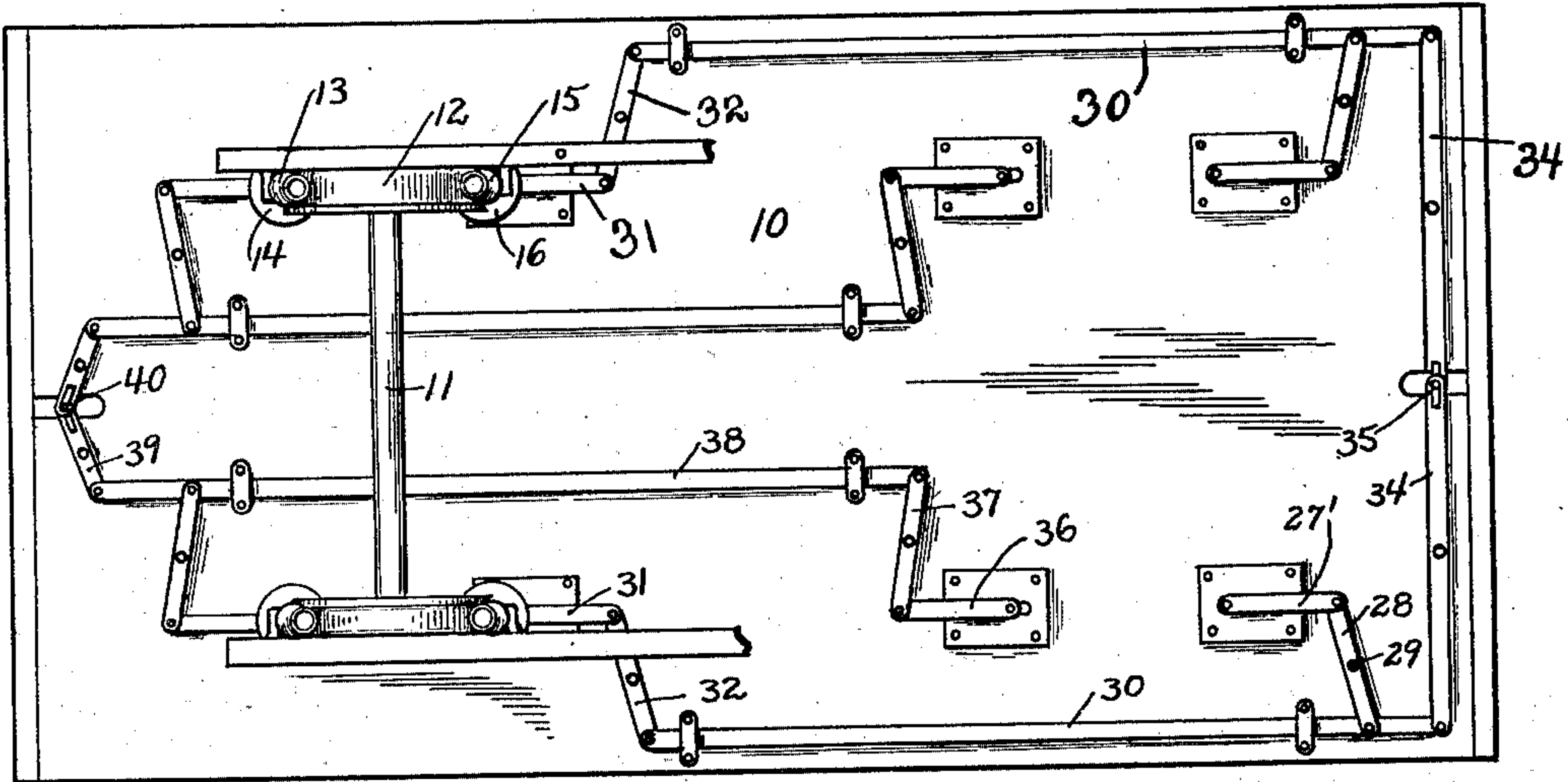


Fig. 2.

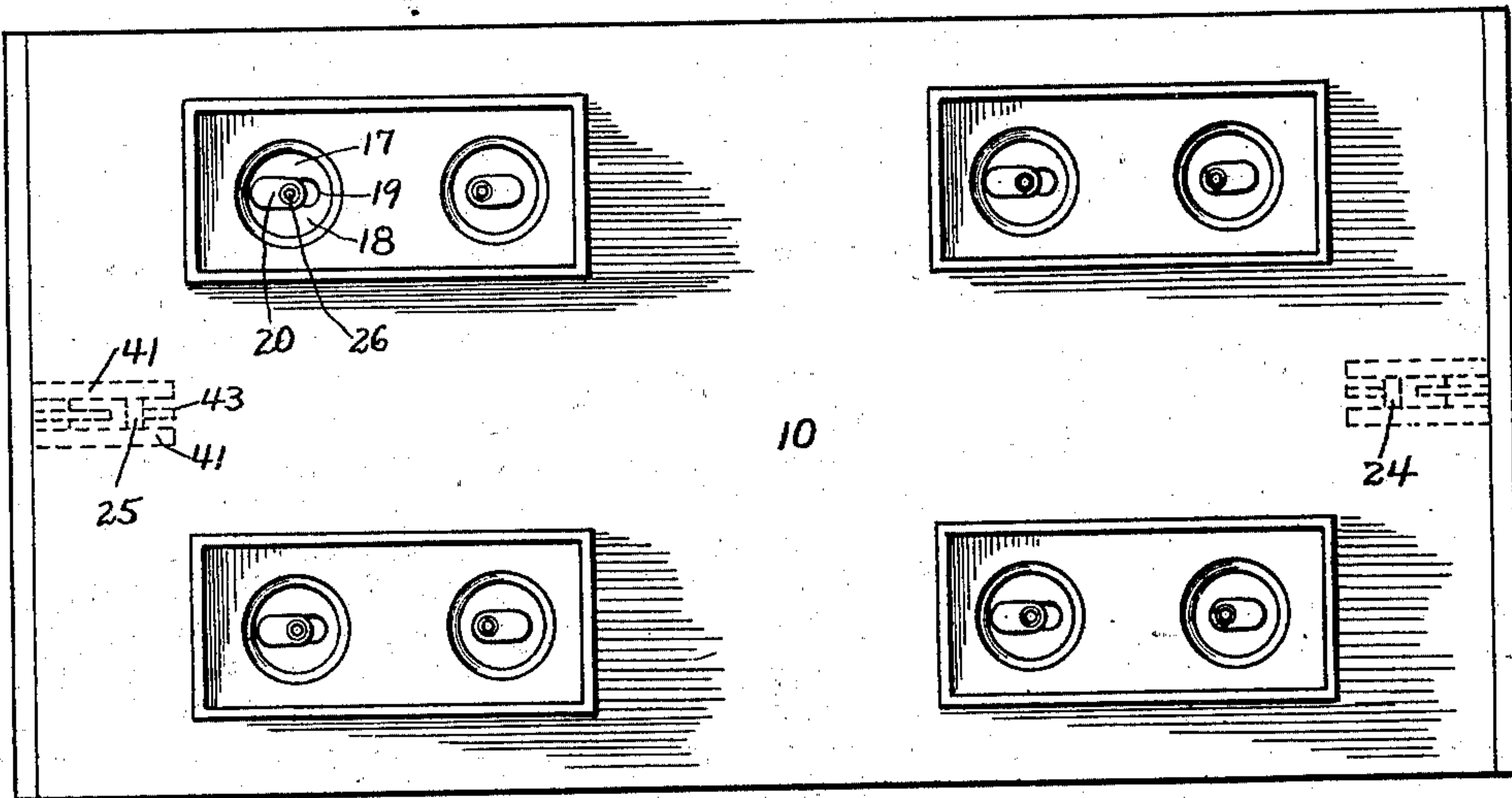


Fig. 3.

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# UNITED STATES PATENT OFFICE.

ATLAS F. McCONNELL, OF NASHVILLE, TENNESSEE.

## SAND-CAR.

SPECIFICATION forming part of Letters Patent No. 748,210, dated December 29, 1903.

Application filed May 1, 1903. Serial No. 155,180. (No model.)

*To all whom it may concern:*

Be it known that I, ATLAS F. McCONNELL, a citizen of the United States, residing at Nashville, in the county of Davidson, State of Tennessee, have invented certain new and useful Improvements in Sand-Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-  
 10 pertains to make and use the same.

This invention relates to means for sanding railway-tracks; and it has for its object to provide a car, including a body and a truck, the car having sand-discharge openings and  
 15 valves for controlling the discharge of sand, the arrangement of the boots or funnels through which the sand passes to the track-rails being such that the sand will be delivered to the centers of the rails whether the  
 20 latter be straight or curved.

Further objects and advantages of the invention will be understood from the following description and include the provision of a specific valve mechanism in the operation  
 25 of which the sand will be loosened, so as to feed readily.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several  
 30 views, Figure 1 is a section taken longitudinally through a car in a vertical plane, including the discharge-boots at one side of the car, the wheels being in elevation. Fig. 2 is a bottom plan view of the car. Fig. 3 is a  
 35 top plan view of the platform of the car, the elements of the shifting mechanism being indicated in dotted lines. Fig. 4 is an elevation showing the bucket that is employed in filling the sand-boxes.

Referring now to the drawings, there is shown a car, including a platform 10, to which is connected a truck 11 in the usual manner, and which truck includes the supporting-  
 40 wheels 12, the truck being connected to the platform of the car by the usual means, so that the body of the car will be supported upon springs and may rise and fall with respect to the truck.

Connected to the side beams of the truck, at one side of each of the wheels 12, is a boot or funnel 13, having a flared top 14, while at the opposite side of each wheel and connect-

ed also to the corresponding side bar of the truck is a boot or funnel 15, having a flared upper end 16, the lower ends of the boots or  
 55 funnels being held securely with their lower or discharged ends above and close to the rails, so that sand fed to the boots or funnels will pass therethrough and be deposited directly upon the treads of the rails. It will  
 60 be noted that the beams or bars to which the boots or funnels are attached are connected directly to the axles of the wheels, so that they have a constant elevation above the  
 65 tracks. The result is that the lower ends of the boots or funnels are held at constant elevations above the rails, so that as the car-body rises and falls on its springs there is no tendency to scatter the sand from the  
 70 boots or funnels.

Sand is fed from the car-body to the boots or funnels through openings 17 in the platform, each of these openings having a valve mechanism to regulate the passage of sand  
 75 therethrough. Against the undersides of the platform and over each of the openings 17 is secured a plate 18, having an elongated slot 19 therethrough, and an elliptical valve 20 is disposed upon the upper face of the plate and  
 80 is slidable thereover to cover and uncover the slot, the edge of the valve being beveled downwardly to form a sharp cutting edge 21, so that the valve may pass readily through the sand. To reciprocate the valves, two hand-  
 85 levers 24 and 25 are provided, fulcrumed at opposite ends of the platform of the car, and which hand-levers are adapted to shift the valves to open the slots at the corresponding  
 90 sides of the wheels, it being understood that there is an opening 17 corresponding to and arranged over each of the funnels or boots, so that by operating one of the hand-levers sand  
 95 will be deposited upon the rails at one side of the wheels and by operation of the other lever sand will be deposited upon the rails at the opposite sides of the wheels. Each of the  
 100 valves 20 has a bolt 26 passed therethrough, and through the slot of the plate 18 and upon the upper end of the bolt and impinging against the valve is a frusto-conical nut 27, which by reason of its shape serves to push the sand upwardly as it is moved laterally therethrough.

To the bolts of the valves at that end of the



platform at which is located the lever 24 are connected links 27, which are pivoted to levers 28, fulcrumed to bolts 29 on the bottom of the platform and connected at their opposite ends to shift-rods 30, which extend longitudinally of the under side of the platform and are slidably mounted. The valves at the corresponding side of the wheels at the other end of the platform have their bolts engaged through links 31, which are connected to levers 32, fulcrumed upon the bottom of the platform and connected at their opposite ends to the rod 30. It will be noted that the rods 30 are located at opposite sides of the platform, and by reciprocating these rods simultaneously all of the valves at one side of the wheels will be opened to permit of passage of sand to the corresponding boots or will be closed to cut off such passage of sand. To shift the rods 30, levers 34 are pivoted thereto and are fulcrumed upon the bottom of the platform, the opposite ends of the levers being crossed and slotted to receive the pin 35 at the lower end of the lever 24. With this construction the lever 24 may be oscillated to open and close one set of valves.

The valves of the openings above the boots 13 have their bolts engaged with links 36, which are pivoted to levers 37, fulcrumed upon the bottom of the platform and pivoted at their opposite ends to the shift-rods 38, it being noted that there are two of the rods 38 slidably mounted longitudinally of the under side of the platform and connected at their forward ends to the levers 39, which are fulcrumed upon the under side of the platform, their opposite ends being crossed and slotted to receive the pin 40 at the lower end of the lever 25. Thus when one of the hand-levers is operated one set of slots is opened and when the other hand-lever is operated the other set of slots is opened.

Each of the levers 24 and 25 is provided with a latch for holding it in adjusted positions, each of the levers being pivoted between the braces 41, secured to the platform and the adjacent dashboard 42. A bar 43 is secured to each dashboard and passes rearwardly through a slot 44 in the lever and then downwardly, where it is attached to the platform, the horizontal portion of the bar being provided with notches 45. In each lever is slidably mounted a vertical bolt 46, disposed to engage its lower end in either of the notches 45 when the lever is correspondingly positioned, the bolt-bar being held yieldably in engaging position by means of a helical spring 47. Pivoted to the bolt-bar is a lever 48, pivoted also to the main hand-lever, the free end of the

lever 48 projecting from the main or hand lever and extending upwardly in arc shape and in the path of the arc-shaped lower end of the finger-lever 49, so that when the latter is grasped and operated its arc-shaped end will press against the corresponding end of the lever 48 and force it downwardly to raise the bolt-bar from engaging position. By this means the hand-levers may be locked in position to hold their corresponding valves open or closed.

In practice modifications of the specific construction shown may be made and any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

The boots for each of the wheels receive sand from a common sand-box 30' within the body of the car, the sand-box having a transparent plate 31' in its side, which registers with the corresponding opening in the side of the car, so that the quantity of sand in the box may be determined from the outside of the car.

In Fig. 4 of the drawings there is shown a bucket 32', which is employed in filling the sand-boxes. This bucket has a funnel-spout 33 to direct the sand to the boxes and is open only at the rear portion of its top, and this open portion is provided with a screen 34', onto which the sand is poured and through which it passes into the body of the bucket. In this way the pouring of any large particles into the sand-boxes is prevented.

What is claimed is—

The combination with a truck and a platform supported thereon and having openings therethrough, of hoppers disposed above the openings and connecting therewith, slotted plates secured to the under side of the platform and covering the perforations, perforated slides lying upon the upper faces of the plates and slidably disposed thereon, bolts within the perforations of the slides and lying within the slots of the plates, hand-levers upon the platform, lever mechanisms between the hand-levers and the bolts to move the slides upon the plates and to alternately open and close the slots, and sand-directing boots mounted upon the truck at each side of the wheels and adapted to receive sand from the hoppers and direct same in the paths of the wheels.

In testimony whereof I affix my signature in presence of two witnesses.

ATLAS F. MCCONNELL.

Witnesses:

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JNO. F. ROSE.