

No. 741,116.

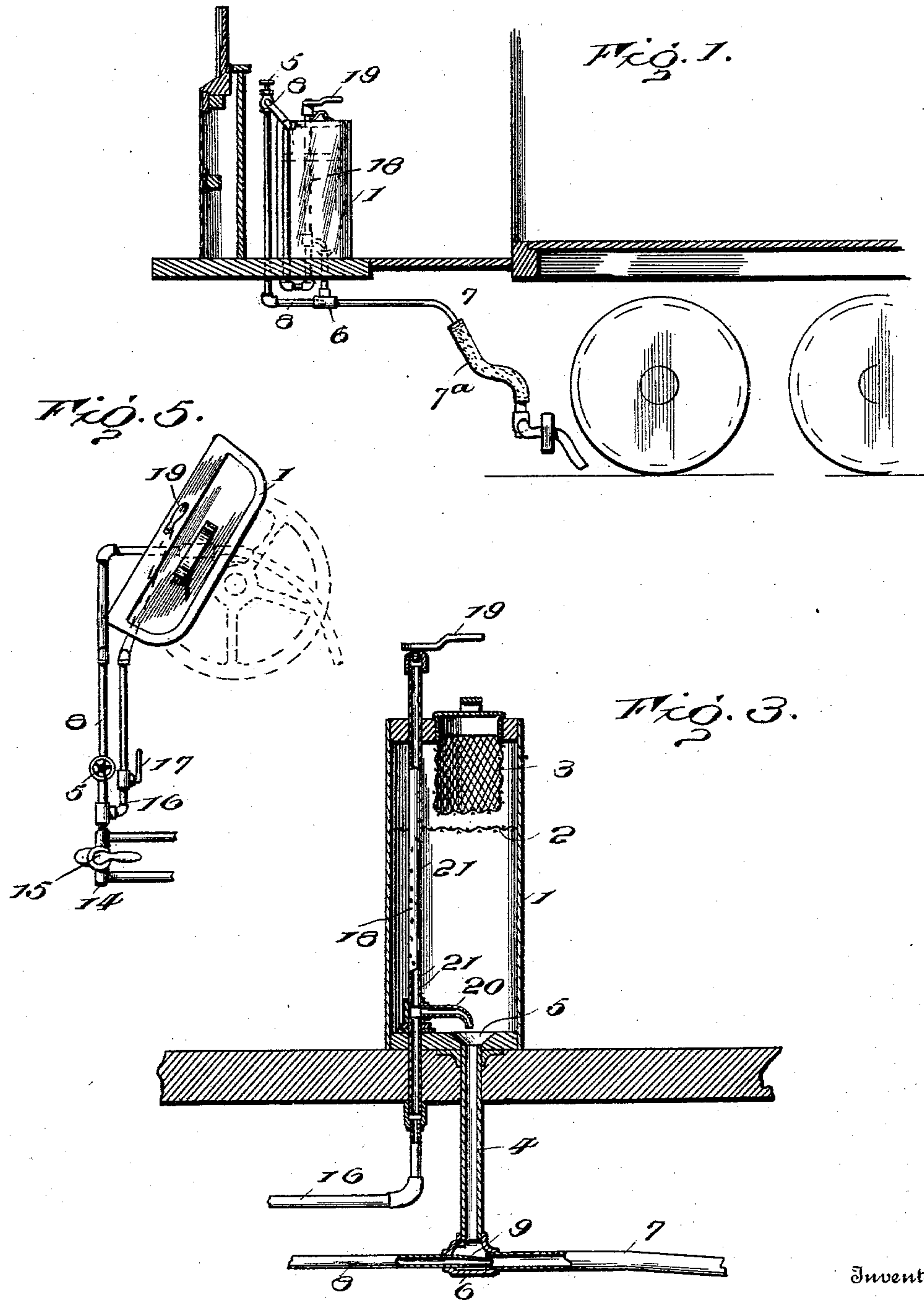
PATENTED OCT. 13, 1903.

M. A. DE FRANCE.  
TRACK SANDING DEVICE.

APPLICATION FILED APR. 22, 1903.

NO MODEL.

2 SHEETS—SHEET 2.



Inventor

M. A. De France

Witnesses

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By

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Fig. 2.

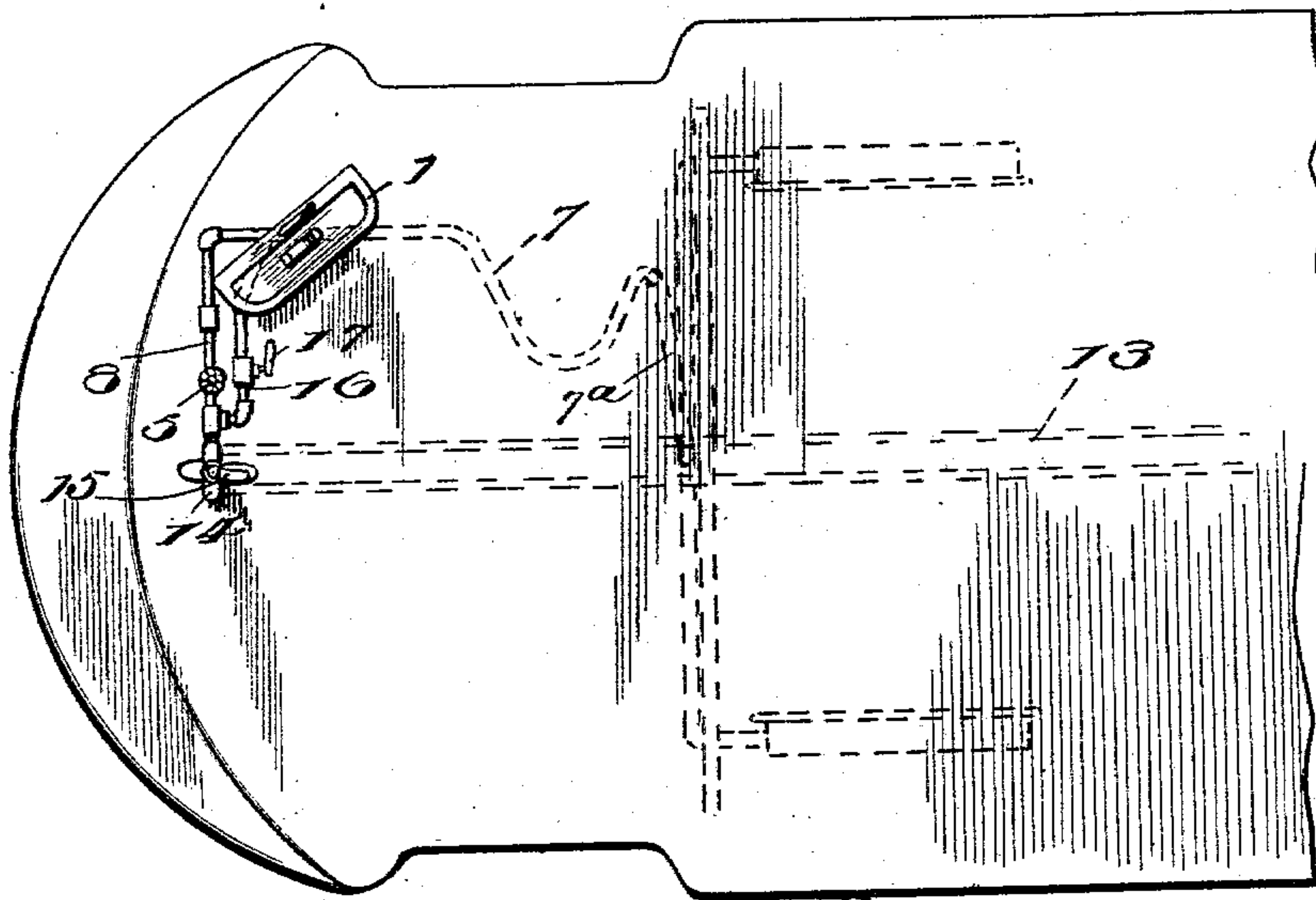
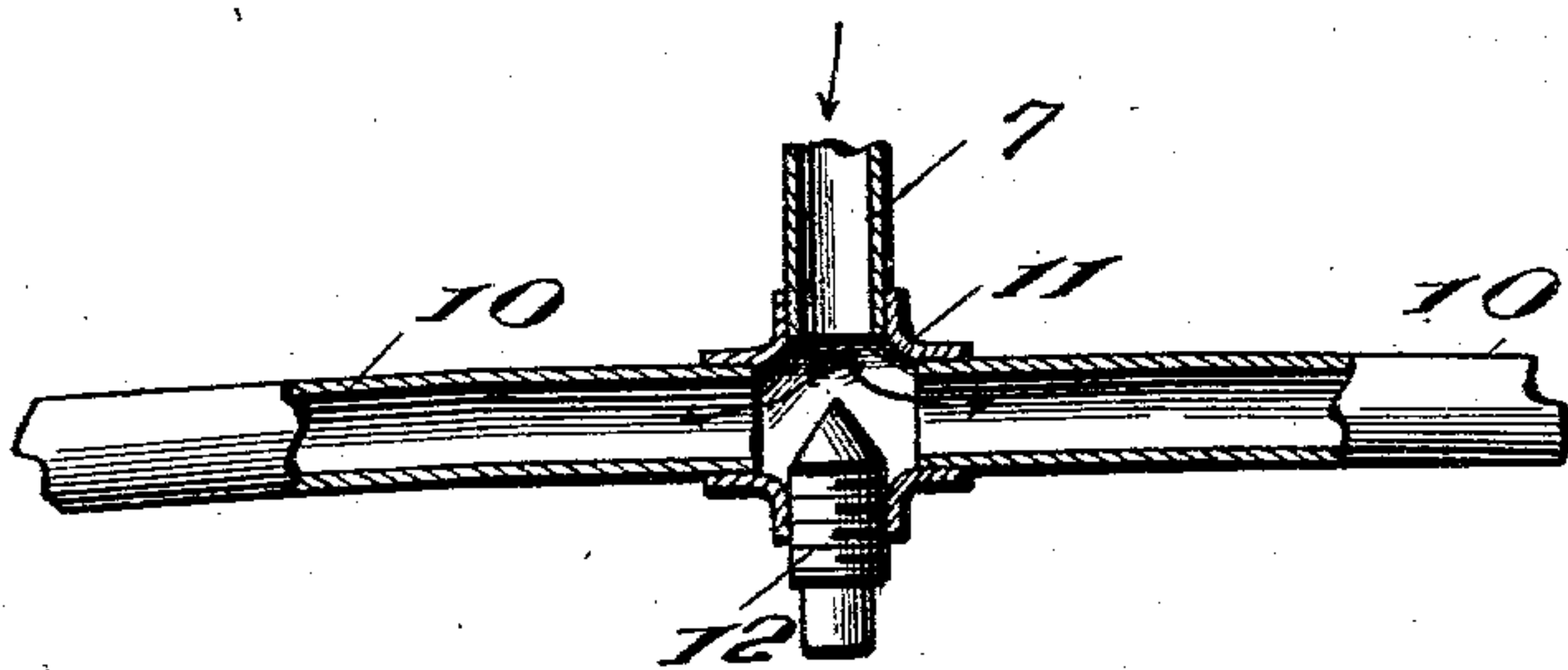


Fig. 4.



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# UNITED STATES PATENT OFFICE.

MURRY A. DE FRANCE, OF NEWARK, OHIO, ASSIGNOR OF TWO-THIRDS TO CHARLES E. KREBS AND NEIL PAULSON, OF NEWARK, OHIO.

## TRACK-SANDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 741,116, dated October 13, 1903.

Application filed April 22, 1903. Serial No. 153,861. (No model.)

*To all whom it may concern:*

Be it known that I, MURRY A. DE FRANCE, a citizen of the United States, residing at Newark, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Track-Sanding Devices, of which the following is a specification.

This invention relates to means for applying sand to the rails of car-tracks to increase the friction between said rails and car-wheels, whereby the slipping of the latter in starting or when the rails are wet or the car is ascending or descending a grade is reduced to the smallest degree possible.

The invention consists, essentially, of a box for containing the sand, a separating-screen for removing particles from the sand which would tend to obstruct the delivery-tubes, a screen-bucket for sifting the sand when first introduced into the box to eliminate gravel or matter too large to readily pass through the device to the rails, an air-blast for loosening the sand in the box and preventing its clogging, a branched pipe arranged to deliver the sand to the rails directly in the angle formed between the rails and the treads of the wheels, and means for delivering a blast of air through the branched pipe to draw the sand from the box and force it to the point of use.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a central longitudinal section of the front portion of a railway-car, showing the application of the invention. Fig. 2 is a top plan view thereof. Fig. 3 is a vertical section of the sand-box, showing the pipes cooperating therewith, a portion of the latter being broken away. Fig. 4 is a detail view of the branched pipe, showing the divider for separating the blast and directing same to

each branch. Fig. 5 is a top plan view of the sand-box and cooperating pipes on a larger scale.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The box 1 for containing the sand or like material for increasing the traction between the rails and car-wheels is conveniently located upon the car so as to be under control of the motorman or engineer. As shown, the sand-box is located upon the platform near one side thereof and is provided near its upper end with a screen 2 for sifting the sand, and its top is provided with an opening to receive a bucket 3, into which the sand is poured and through which and screen 2 it sifts, whereby gravel and large particles are removed. A discharge-pipe 4 communicates with the bottom of sand-box 1, the opening 5 being flared at its upper end. A T-coupling 6 is provided at the lower end of discharge-pipe 4, and a distributing-pipe 7 connects therewith, as well as blast-pipe 8, the latter terminating in nozzle 9, passing through coupling 6 and entering distributing-pipe 7. Distributing-pipe 7 connects with flexible tube 7<sup>a</sup>, which in turn connects at a central point with branched pipe 10, the delivery ends of which curve rearwardly and downwardly, so as to deliver the sand upon the rails close in the angle formed between the treads of the car-wheels and said rails. A four-way or cross fitting 11 is located at the juncture of distributing-pipe 7 and branched pipe 10 and receives divider 12, which is fitted into the branch directly opposite pipe 7, so as to deflect the blast of air and sand equally to each of the branches of the pipe 10. The inner end of the divider 12 is of wedge form, so as to offer a minimum amount of resistance to the blast while at the same time dividing and deflecting same.

The blast-pipe 8 connects with the reservoir-pipe 13 below the engineer's valve 14 and is provided with a controlling-valve 15, whereby the blast of air may be regulated or entirely shut off. Another pipe 16 communicates with pipe 8 at a point between con-



trolling-valve 5 and reservoir-pipe 13 and is provided with valve 17 and connects with the lower end of pipe 18, passed vertically through sand-box 1 and terminating at its upper end in handle 19, by means of which pipe 18 may be turned to bring nozzle 20, applied to the lower end thereof, in line with opening 5 and pipe 4 or out of line therewith. Pipe 18 is provided with a series of perforations 21 for the escape of jets of air into the sand-box 1 to loosen the sand and insure delivery thereof to pipe 4 when it is required to sand the track to increase the friction between the rails and the car-wheels to prevent slipping or for any desired purpose. The valve 17 admits of jets of air being supplied to the sand-box, whether controlling-valve 5 and engineer's valve is open or closed. When handle 19 is turned to bring nozzle 20 in line with opening 5 and pipe 4, a blast of air is caused to descend through pipe 4, which supplements the action of nozzle 9 and insures positive delivery of sand.

When particles too large to pass through the meshes of the screen material employed in the construction of bucket 3 have accumulated, said bucket may be removed and emptied. The screen 2 may have its meshes of the same size or slightly less than the meshes of sand-bucket 3, and this screen may be cleared at intervals of any material accumulated therein. Upon opening valve 5 a blast of air from the reservoir by way of pipe 13 is delivered into the distributing-pipe through nozzle 9, creating a suction through the pipe 4 and drawing sand from box 1. The action of nozzle 9 may be supplemented by opening valve 17 and turning pipe 18 to bring nozzle 20 in line with opening 5 and pipe 4.

Having thus described the invention, what is claimed as new is—

1. In track-sanding mechanism, the combination, of a sand-box, a distributing-pipe for connection with the sand-box, means for effecting the delivery of sand, and a perforated pipe passed through the sand-box and adapted to supply jets of air thereto for loosening the sand, substantially as described.

2. In sanding mechanism, for railway-tracks, a sand-box, a screen arranged within the sand-box, and a sand-bucket of screen material removably fitted to the upper portion of the sand-box to effect a preliminary screening of the sand when introduced into the sand-box, substantially as set forth.

3. In track-sanding mechanism, the combination, of a sand-box having a delivery-opening in its bottom, a discharge-pipe extended from said opening, a distributing-pipe connected with the discharge-pipe, a branched pipe connected with the distributing-pipe, a divider applied to the branched pipe at a point diametrically opposite the point of connection with the distributing-pipe therewith, a blast-pipe connected by means of a nozzle with the distributing-pipe, a perforated pipe passed through the sand-box and provided with an operating-handle, and a nozzle applied to the pipe to be brought into or out of registry with the discharge-opening of the sand-box, substantially as and for the purpose set forth.

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

MURRY A. DE FRANCE. [L. S.]

Witnesses:

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