No. 704,784. Patented July 15, 1902.

J. J. DOLAN, Jr.

TRACK SANDING APPARATUS.

(Application filed Apr. 26, 1902.)

(No Model.)

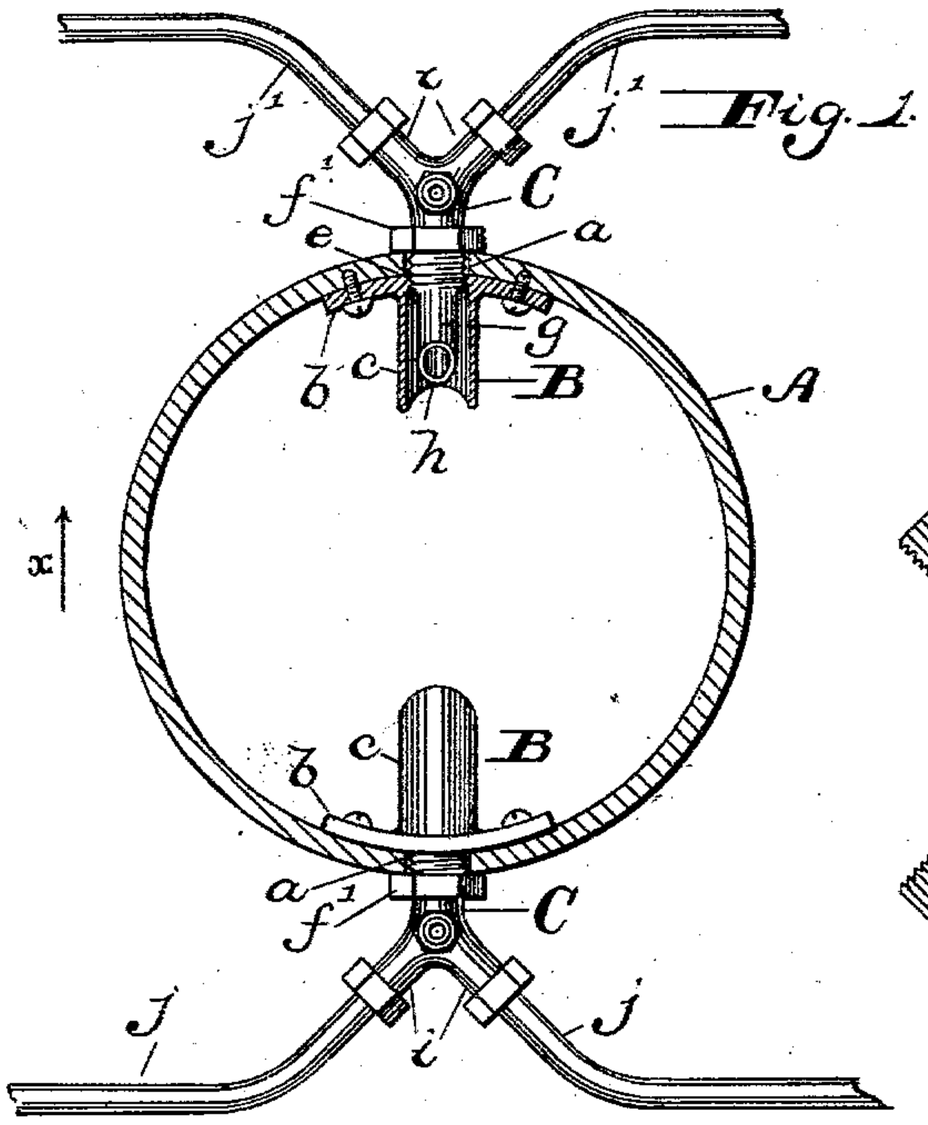

Fig. 1.

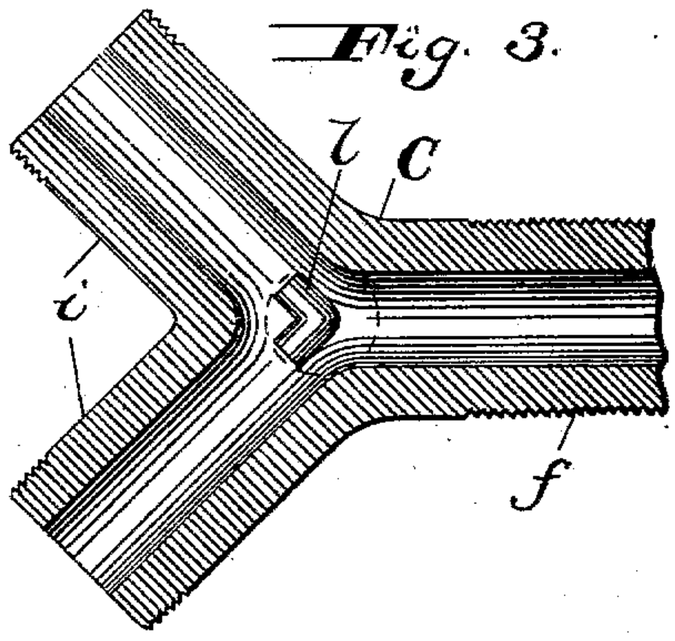

Fig. 3.

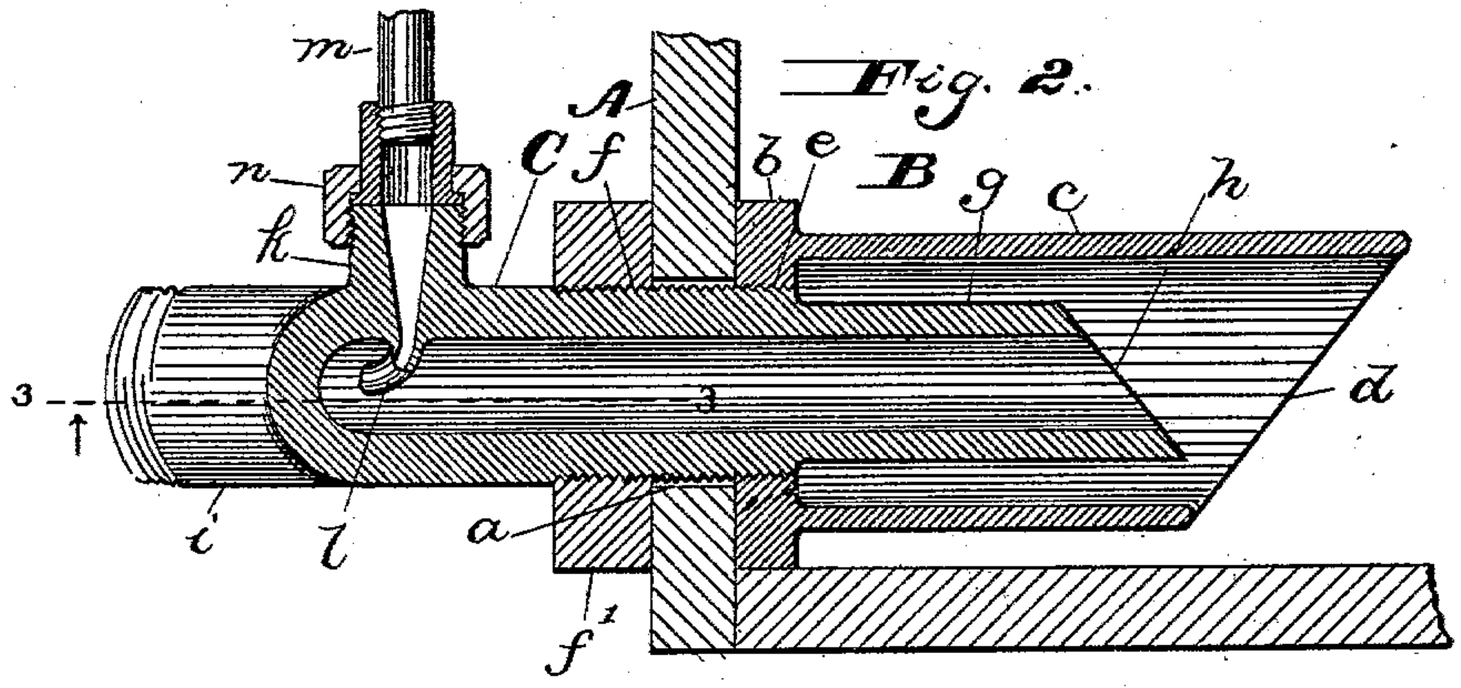

Fig. 2.

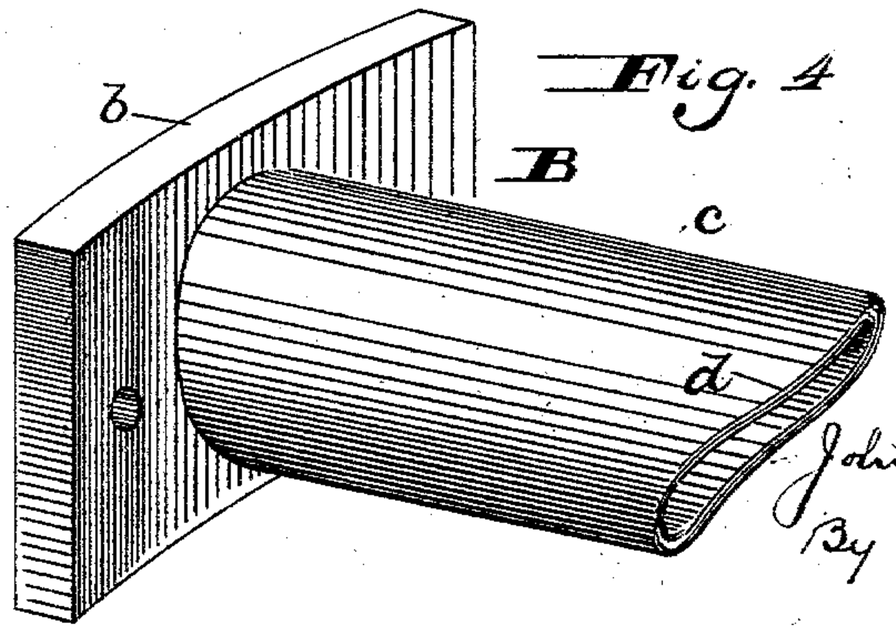

Fig. 4

Witnesses.
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UNITED STATES PATENT OFFICE.

JOHN J. DOLAN, JR., OF BALTIMORE, MARYLAND.

TRACK-SANDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 704,784, dated July 15, 1902.

Application filed April 26, 1902. Serial No. 104,768. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. DOLAN, JR., a citizen of the United States, residing at Baltimore, State of Maryland, have invented certain new and useful Improvements in Track-Sanding Apparatus, of which the following is a specification.

This invention relates to track-sanding apparatus of that class in which the discharge of sand from the sand-box is effected by fluid-pressure, such as air or steam.

The object of the invention is to provide a construction of sanding apparatus whereby the casing containing the air-nozzle may be readily disconnected and withdrawn from the sand-box for the purpose of repairs or the like without danger of wasting the sand.

The invention consists of certain constructions, arrangements, and combinations of parts hereinafter fully described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a horizontal sectional view of a locomotive sand-box provided with the improved track-sanding apparatus of my invention, the direction of the front of the locomotive being indicated by the arrow *x*. Fig. 2 is an enlarged vertical longitudinal section illustrating one of the sanders. Fig. 3 is a horizontal sectional view of a sander-casing, taken on the line 3 3 of Fig. 2 and looking in the direction of the arrow in said figure. Fig. 4 is a detail perspective view of a shield hereinafter described.

Referring to the drawings, the letter A designates a locomotive sand-box provided at its front and back (considered with respect to the locomotive) with two diametrically opposite discharge-openings *a*. To the inside wall of said sand-box A and surrounding each of the discharge-openings *a* are secured two shields B, each of which comprises a plate *b*, rigidly secured to the sand-box, and an inwardly-extending sleeve *c*, whose inner edge is formed with a downwardly-facing bevel *d*, as indicated in Figs. 2 and 4, and each plate *b* is provided with an interiorly-threaded opening *e*, as indicated in Figs. 1 and 2. In the said threaded opening *e* of each plate *b* (see Figs. 1 and 2) is secured a horizontally-extending casing C, provided with an exteriorly-screw-threaded portion *f*, engaging the screw-thread of the said plate-opening and prevented from accidentally unscrewing by means of a lock-nut *f'*, and said casing is also provided with an arm *g*, projecting into the sleeve *c* of the shield B and having an upwardly-facing beveled inner end *h*. Both the said casing and its projecting arm are tubular. The said two casings C extend in a horizontal direction out from the front and back of the sand-box, and each casing is further provided at its outer end with two diverging branches *i*, forming a Y construction and connected to laterally and oppositely extending pipes *j j'*, intended to convey the sand to both sides of the track-rails. The two rear pipes *j* lead down to the rails just behind the rear driving-wheels of the locomotive, and the two front pipes *j'* lead down to the rail in front of the foremost driving-wheels.

Each casing C is provided on its upper side at the point where the two branches *i* commence to diverge with a nipple *k*, provided at its lower end with two nozzles *l*, deflected outwardly from the sand-box, as shown in Fig. 3, in a direction in alinement with the bore of the two branches, respectively, and a pipe *m* (leading from the source of fluid-pressure supply, which is controlled by the engineer in the cab) is connected by a swivel-nut *n* to said nipple, so that a blast of air or steam blown through said outwardly-deflected nozzles *l* will suck or draw out the sand in the box A through the tubular arm *g* and casing C, whence the sand will be conveyed by the branches *i* and pipes *j* or *j'* to the track-rails.

It is often necessary to unscrew the casings C and draw the tubular arms *g* out of the sand-box in order to remove any obstructions that might have found their way into the sand-passage or for other reasons, and for this contingency, so that the sand may not flow out and be wasted when the casings are disconnected from the box, I have provided the two shields B, whose sleeves *c* surround the tubular arms *g* of the casings. By this construction and arrangement when the tubular arms are drawn out of the sleeve in the operation of disconnecting the casings from the sand-box the said sleeves will effectually prevent any wasting of sand from the box. The downwardly-facing bevel of the inner end of

the said sleeves provides that the sand sucked out will be drawn from the bottom of the box and at the same time causes the sleeve to present to the sand a longer surface on its upper side than it would if its entrant-opening for the sand were not so beveled, thereby more effectually preventing the sand from falling into said opening, whence it might waste out of the discharge-opening of the box.

The casings C, as is evident, may be readily withdrawn from time to time and inspected to see whether or not they are becoming worn.

While the accompanying drawings illustrate the casings C with two branches *i*, it is to be understood that the invention is not limited to such construction, but that each casing may have one straight-away passage from end to end, and it is also to be understood that other changes may be made in the construction and arrangement of parts without departing from the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a track-sanding apparatus, the combination with a sand-box having a discharge-opening, of a tubular casing detachably secured to the sand-box at said discharge-opening and provided with a fluid-pressure nozzle; and a shield provided with a sleeve extending inwardly from said discharge-opening, whereby said casing may be detached from the sand-box without danger of wasting the sand from the same, as set forth.

2. In a track-sanding apparatus, the combination with a sand-box having a discharge-opening, of a tubular casing secured in said opening and extending outwardly therefrom and provided with a tubular arm projecting into the sand-box; a nozzle for fluid-pressure adapted to discharge the sand through said arm and casing; and a sleeve surrounding said arm on the inside of the sand-box, as and for the purpose set forth.

3. The combination of a sand-box provided with a discharge-opening; a shield secured on the inside of the sand-box at said discharge-opening and comprising an inwardly-extending sleeve provided with a downwardly-facing beveled end; and a sand-discharging apparatus provided with a tubular arm mounted in said sleeve, as and for the purpose set forth.

4. In a track-sanding apparatus, a sand-box provided with a discharge-opening, and a shield secured on its inside at said opening and having an inwardly-extending sleeve adapted to receive a sand-discharging tube, as set forth.

5. A track-sanding apparatus, comprising a sand-box provided with a discharge-opening; a tubular casing in said discharge-opening and projecting outwardly therefrom and provided at its outer end with two diverging branches adapted for attachment to sand-tubes intended to lead to the track-rails; and air or steam nozzles extending into said casing and pointing outwardly in the direction of said two branches, as and for the purpose set forth.

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

JOHN J. DOLAN, JR.

Witnesses:
CHARLES L. VIETSCH,
FREDERICK S. STITT.