

J. GAPP.
 TRACK SANDING DEVICE.
 APPLICATION FILED JULY 16, 1909.

950,531.

Patented Mar. 1, 1910.

Fig. 1.

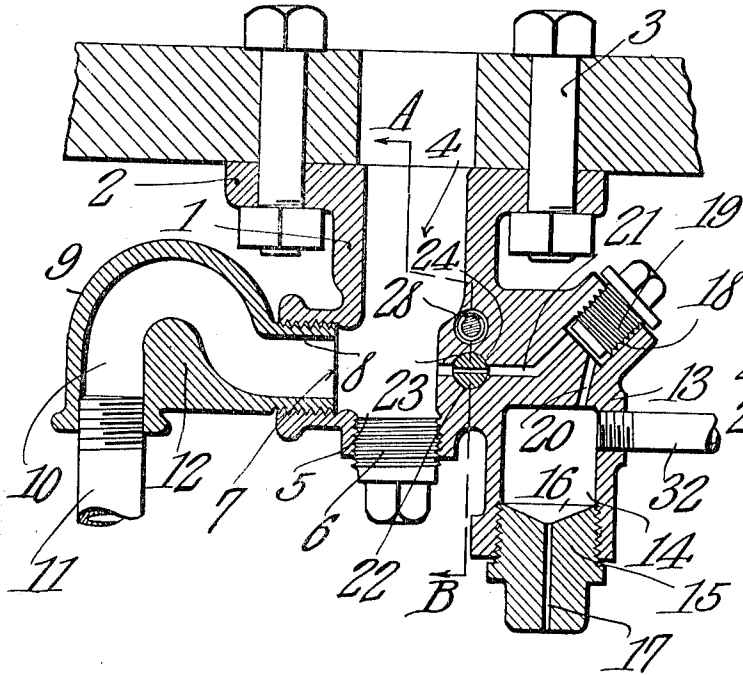


Fig. 3.

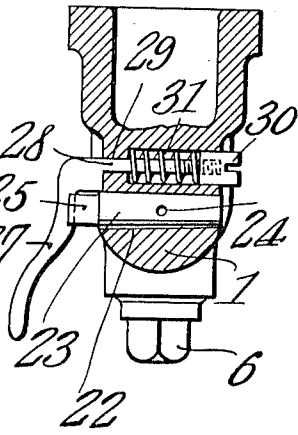
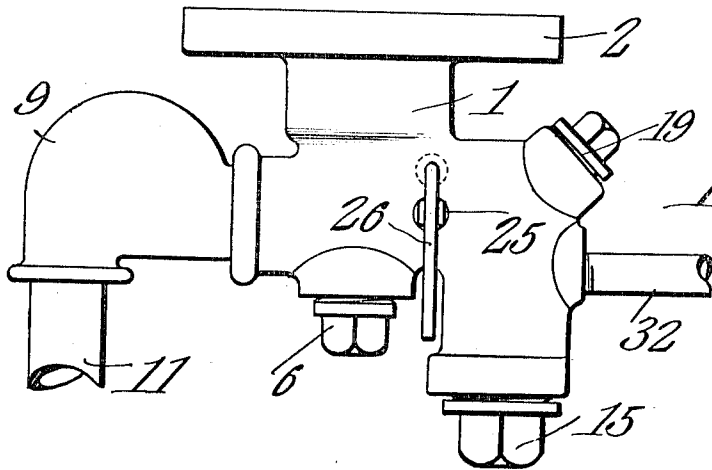


Fig. 2.



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UNITED STATES PATENT OFFICE.

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TRACK-SANDING DEVICE.

950,531.

Specification of Letters Patent.

Patented Mar. 1, 1910.

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To all whom it may concern:

Be it known that I, JOHN GAPP, a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented a new and useful Track-Sanding Device, of which the following is a specification.

This invention relates to track sanding devices of that type which utilizes fluid under pressure for the purpose of discharging the sand into the paths of car wheels.

The device is more particularly designed as an improvement upon the structure shown in Patent No. 695,300, granted to me March 11, 1902.

When nozzles have been employed in devices of this character, such as heretofore devised, it has been impossible to remove and replace them without removing the sand from the sand chambers of the devices. Moreover, nozzles have heretofore been so located as to be subjected to the constant action of the sand and have thus soon become worn out.

One of the objects of the present invention is to provide a nozzle which can be placed in or removed from position without in any wise interfering with the sand contained in the sand chamber, said nozzle being disposed at the side of the device where it can be conveniently reached.

Another object is to provide a means of simple construction whereby the nozzle can be securely locked after once being placed in operative position.

A further object is to provide improved means whereby any moisture or foreign particles contained in the air blast can be separated therefrom prior to the discharge of the air through the nozzle.

A further object is to provide a sand checking device of novel form designed to prevent the sand from discharging except when subjected to a blast of fluid under pressure.

With these and other objects in view, the invention consists of such novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims.

In the accompanying drawing, the preferred form of the invention has been shown.

In the drawing:—Figure 1 is a central, vertical, longitudinal section through the device constituting the present invention. Fig. 2 is a front elevation thereof. Fig. 3 is a sectional line A--B, Fig. 1.

Referring to the figures by characters of reference, 1 designates a casting having a flange 2 extending around the upper portion thereof and designed to be engaged by fastening means, such as indicated at 3, whereby the said casting can be securely fastened to a supporting structure. Sand chamber 4 extends into the casting from the upper end thereof, the lower portion of said chamber being slightly off center as indicated at 5, the bottom of said chamber being formed of a screw plug 6, the lower end of which is angular so as to be readily engaged and rotated by means of an ordinary wrench. An interiorly screw-threaded outlet 7 extends from the wall of the sand chamber and is engaged by an exteriorly screw-threaded tubular member extending from a casting having an inverted substantially U-shaped passage 10 therein opening into the tubular member 8 and also opening into a downwardly extending discharge pipe 11 which can be of the usual or any preferred type employed for conveying the discharged sand to the rail. That portion of the casting between the ends of the passage 10 is preferably solid, as indicated at 12, so as to constitute an efficient partition for receiving the direct force of the sand blast and, at the same time, prevent the sand from overflowing into the pipe 11 when the same is not subjected to the action of air or other fluid under pressure.

The casting 1 has a downwardly projecting extension 13, in which is formed an air chamber 14, the bottom of which is made up of a screw plug 15 having its projecting end angular so as to be readily engaged and actuated by an ordinary wrench. The upper or inner end of this plug is recessed as indicated at 16 and has an outlet 17 extending therefrom and longitudinally through the plug for the escape of any liquid which may be deposited within the chamber 14. A socket 18 is formed in the casting 1 at a point above the chamber 14 and is normally closed by a screw plug 19 constituting means for regulating or controlling the flow of air from the chamber 14 to the chamber 5. A port 20 connects the recess 18 with the air chamber 14 and a passage 21 extends from said recess to the offset portion of the sand chamber 5. The longitudinal axis of the discharge end portion of the passage 21 aligns with the center of the tubular member 8, it being understood, of course, that

this passage and the member 8 are in diametrically opposed portions of the sand chamber 5.

A tapered bore 22 extends transversely through the casting and intersects the passage 21, there being a correspondingly tapered plug which rotates within this bore, as indicated at 23. This plug has a passage 24 extending diametrically therethrough and designed to normally register with the passage 21, there being a head 25 upon the outer projecting end of the plug and in which a transverse groove 26 is formed. This groove is designed to receive a locking arm 27 extending from a stem 28 which is slidably and revolubly mounted within a bore 29 extending transversely through the casting 1, adjacent to the tapered bore 22. A head 30 is screwed or otherwise secured upon one end of the stem 28 and is designed to slide within the bore 29, there being a spring 31 within said bore and bearing at its ends upon the head 30 and one end of the bore respectively, this spring thus serving to hold arm 27 normally seated within the groove 26. A fluid supply pipe 32 opens into the air chamber 14 and is designed to conduct air or steam under pressure to the chamber 14 where any condensed moisture will become separated and will be discharged through the vent 17. The fluid will then pass through the port 20 to the recess 18 and thence through the passage 21 to the nozzle 23. If this nozzle is disposed in active position, the fluid will be discharged under pressure through the passage 24 therein and will be projected in the form of a jet into the sand chamber 5, it obviously expelling a portion of the sand into the tubular member 8 and against the partition 12. By adjusting the plug 19, the passage of fluids from the port 20 to the passage 21 can be controlled.

It will be seen that, by providing a nozzle such as indicated at 23, the same is at no time subjected to the action of the sand, and, should it become warm or injured in any manner, the same can be readily removed from the side of the casting without the necessity of disturbing any of the contents of the chamber 5. By utilizing the improved locking means described, it becomes impossible for the nozzle to become displaced, but, by pressing on the head 30 or pulling outwardly on the arm 27 and then rotating said arm and its stem, the nozzle can be readily withdrawn from bore 22.

It is, of course, to be understood that various changes may be made in the construction and arrangement of the parts without departing from the spirit or sacrificing any of the advantages of the invention.

What is claimed is:—

1. A track sanding device including a casting having an air chamber and a sand

chamber, an inlet and outlet in each chamber, means for establishing communication between said chambers, said means including a passage, there being a transverse bore within the casting and intersecting the passage, a plug removably mounted within the bore and having a diametrical opening disposed to aline with the passage, and means for locking said plug against movement.

2. A track sanding device including a casting having a sand chamber and an air chamber, means for establishing communication between said chambers, said means including a passage, there being a tapered bore intersecting the passage, a plug revolubly and removably mounted within said bore and having a diametrical opening disposed to register with the passage, said plug constituting a nozzle for directing a jet longitudinally within the passage and into the sand chamber, a spring-controlled stem slidably and revolubly mounted within the casting and a locking arm upon the stem and normally engaging the plug to hold it against displacement.

3. A track sanding device including a casting having a sand chamber and an air chamber, means for directing fluid under pressure into the air chamber, said sand chamber having a sand inlet and a sand outlet, a port extending from the air chamber, a recess within the casting and communicating with the port, said casting having a passage therein extending from the recess to the sand chamber, a controlling plug adjustably mounted within the recess, and a nozzle extending through and detachably and revolubly mounted within the casting, said nozzle having a diametrical opening normally disposed to register with the passage to direct a jet of fluid longitudinally of the passage.

4. A track sanding device including a casting having air and sand chambers therein, means for establishing communication between said chambers, said means including a passage, means for directing fluid under pressure into the air chamber, adjustable means for controlling the flow of fluid through the passage to the sand chamber, and a nozzle extending transversely through the casting and intersecting the passage, said nozzle having a transverse opening normally registering with the passage.

5. A track sanding device including a casting having a sand chamber therein, said chamber being provided with an outlet, means for directing a jet of air under pressure into the sand chamber at a point opposite the outlet, and a sand checking device extending from and detachably mounted in the outlet and located beyond one side of the casting, said device including an inverted U-shaped passage, there being a partition within said device and disposed in

the path of the jet discharged into the sand chamber and beyond one side of the said chamber, said partition constituting means for preventing the sand from sifting by gravity through the outlet.

6. A track sanding device including a body having a sand chamber and an air chamber, there being a passage for establishing communication between said chambers, a revoluble tapered plug intersecting the passage and having a transverse bore therein normally registering with the passage, and spring controlled means extending outside of the body for engaging the plug to hold the same against rotation.

7. A track sanding device including a body having a sand chamber and an air

chamber and a passage connecting said chambers, means adjustably mounted within the body for controlling the passage of fluid through said passage, a revoluble plug intersecting the passage and having a diametrical bore normally registering with the passage, and means extending outside of the body for engaging the plug to hold the same against rotation.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN GAPP.

Witnesses:

H. R. FRANK,
LOUIS SCHUMACHER.