

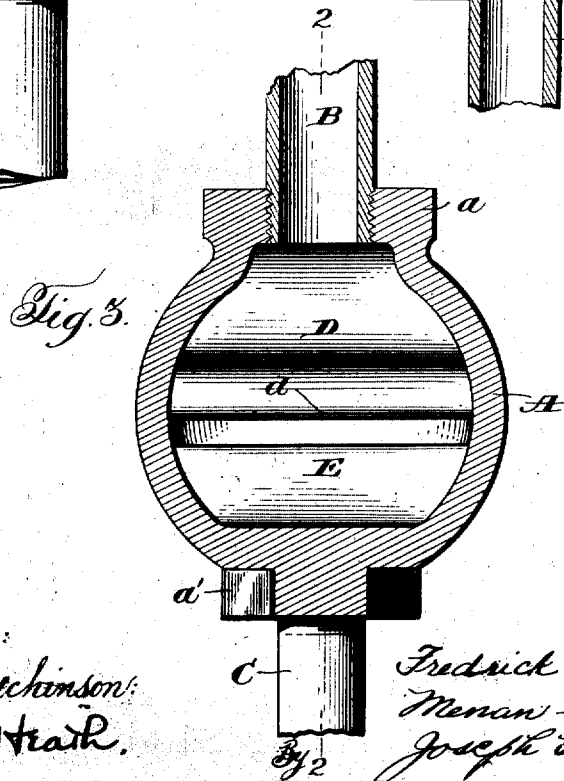
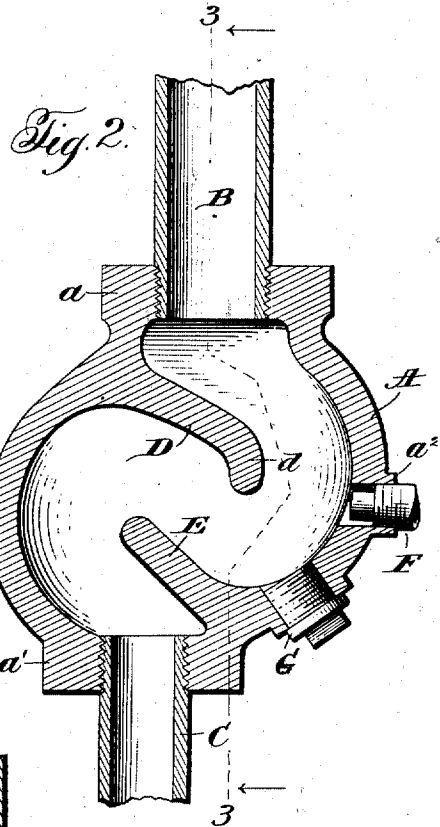
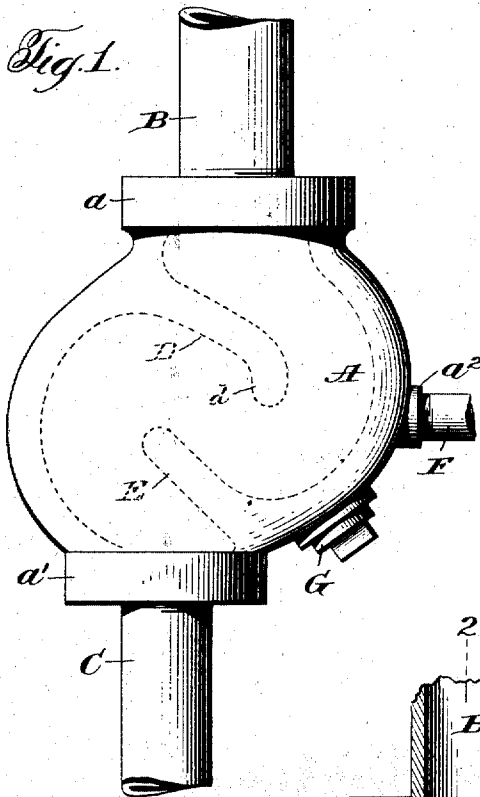
F. D. BOWEN & M. C. HAGLER.

TRACK SANDING DEVICE.

APPLICATION FILED NOV. 12, 1910.

985,972.

Patented Mar. 7, 1911.



Witnesses:

James Hutchinson
Thos. R. Strick

Inventors

Fredrick A. Bowen
Menan C. Hagler
Joseph H. Hunter Attorney.

UNITED STATES PATENT OFFICE.

FREDRICK D. BOWEN AND MENAN C. HAGLER, OF MONETT, MISSOURI.

TRACK-SANDING DEVICE.

985,972.

Specification of Letters Patent.

Patented Mar. 7, 1911.

Application filed November 12, 1910. Serial No. 592,040.

To all whom it may concern:

Be it known that we, FREDRICK D. BOWEN and MENAN C. HAGLER, citizens of the United States, residing at Monett, in the county of Barry and State of Missouri, have invented certain new and useful Improvements in Track-Sanding Devices, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to an improvement in track sanding devices for locomotives and more particularly to a device of this character which is designed to be operated by fluid under pressure.

The object of the present invention is the provision of a device of this character which will permit the sand to be fed to the tracks in large quantities and which is of such a construction that there are practically no parts which can get out of order and interfere with the efficiency of the device.

A further object of the device is the provision of a device of this character which is so constructed as to prevent likelihood of the same being clogged by gravel or other obstructions.

Further objects of the invention will be apparent from the detailed description hereinafter when read in connection with the accompanying drawings forming a part hereof, wherein a convenient embodiment of the invention is illustrated and wherein like characters of reference refer to similar parts in the several views.

In the drawings, Figure 1 is a side elevation of the device, Fig. 2 is a longitudinal section thereof on line 2-2 of Fig. 3, Fig. 3 is a transverse section thereof on line 3-3 of Fig. 2.

Referring now more particularly to the drawings, A designates the body of the sander which is conveniently cast in a single piece and is of bulbous shape, said body being provided at its upper and lower portions with horizontally disposed bosses *a* and *a'* which are offset laterally with respect to each other.

Threaded into the boss *a* at the top of the body of the sander and communicating with the interior of the said body is a sand inlet pipe B, the upper end of which is

adapted to communicate with a sand dome, which may be of any well known construction.

Threaded or otherwise secured in the boss *a'* formed on the lower portion of the body A and in communication with the interior of said body is a sand outlet pipe C, the lower end of which is adapted to extend into proximity to the track to deliver sand thereto in the well known manner.

Positioned within the interior of the body A of the sander and preferably cast integral with said body is a deflector plate D. The deflector plate D projects from the rear portion of the casing adjacent the top thereof forwardly and downwardly, said deflector plate partially overlying the discharge end of the sand inlet pipe B and the free edge thereof being provided with a downwardly curved lip *d*, the curvature of which is substantially the same as the curvature of the front portion of the body A. The lower edge of the downwardly turned lip of the deflector plate D is straight, and said deflector plate extends transversely across the bulbous casing A. The underside of the deflector plate D is gradually merged into the rear portion of said casing A, so that such deflector plate together with the rear portion of said casing forms a curved wall which extends to the upper portion of the sand outlet pipe C.

Positioned within the lower portion of the bulbous casing A is a second deflector plate E which extends upwardly and rearwardly from the forward portion of the casing adjacent its connection with the sand outlet pipe C and partially overlies the inlet end of said outlet pipe. The deflector plate E is substantially straight throughout its full length and the free edge thereof is straight and is positioned in a horizontal plane below the horizontal plane of the free edge of the downwardly extending lip of the deflector plate D. The deflector plate E is positioned intermediate the downwardly extending lip *d* of the deflector plate D and the rear portion of the wall of the casing so that a sand passage of substantially uniform width is provided from between the deflector plates to the sand outlet pipe C. The deflector plate E extends transversely

across the bulbous casing A and is connected to the forward portion of the wall of such casing at such an angle as to form therewith a shallow sand chamber extending transversely the full length of the casing.

The forward portion of the casing A is provided with a suitable nipple a^2 in which is threaded or otherwise removably secured a blast nozzle F which is adapted to be connected to any suitable source of fluid under pressure. The nozzle F is preferably secured to the casing at a point opposite the space between the upper edge of the deflector plate E and the lower edge of the deflector plate D.

G designates a cleanout plug which is removably secured in any suitable manner in the forward portion of the casing A to afford access to the sand chamber formed at the juncture of the deflector plate E and the casing wall.

In operation, sand is fed to the casing A through the pipe B, from thence it falls on the deflector plate D and is directed into the shallow sand chamber formed by the deflector plate E and the wall of the casing. Fluid under pressure being admitted to the nozzle F, the sand will be blown from said sand chamber through the passage between the deflector plates and into the sand outlet pipe in the manner heretofore described.

As the free edges of the deflector plates are straight and as such plates extend transversely across the entire width of the casing A, it will be seen that a horizontal passage the full width of the casing A is provided for the discharge of the sand between the deflector plates so that it is practically impossible for the interior of the casing to become clogged to an extent to impair the efficiency of the device. Even should gravel of sufficient size to clog the passage between the deflector plates find its way into the interior of the casing, it will be apparent that by reason of the width of the opening between the deflector plates ample room would be provided for the discharge of sand at each side of such gravel should the same be lodged in the space between the deflector plates. As the deflector plates are cast integral with the body A of the device, it will be seen that the entire device may be very economically manufactured and there are practically no parts which can get out of order and impair the efficiency of the device.

While a convenient embodiment of the invention is illustrated in the accompanying drawings, it will be apparent that many minor changes may be made to the form and construction herein shown without departing from the spirit and scope of the invention as defined in the appended claims.

We claim:—

1. In a track sanding device, a bulbous casing, enlarged intermediate its ends a sand inlet pipe leading into the upper portion of said casing, a sand outlet pipe leading from the lower portion of said casing, a downwardly inclined deflector plate projecting from the upper portion of the interior of the casing and underlying the sand inlet pipe, an upwardly inclined deflector plate extending from the lower portion of the interior of the casing and overlying the sand outlet pipe, said deflector plates extending transversely across the bulbous casing, and being provided with straight edges, the transverse width of the opening between the edges of said deflector plates being greater than the diameter of the sand inlet pipe, and means for admitting fluid under pressure to the casing.

2. In a track sanding device, a bulbous casing, a sand inlet pipe leading into the upper portion of said casing enlarged intermediate its ends; a sand outlet pipe leading from the lower portion of said casing, a downwardly inclined deflector plate extending from the rear portion of the wall of the casing adjacent to the top thereof and underlying the sand inlet pipe, an upwardly inclined deflector plate extending from the front portion of the wall of the casing adjacent the bottom thereof and overlying the sand outlet pipe, said deflector plates extending transversely across the interior of the bulbous casing and being provided with straight edges, the transverse width of the opening between the edges of said deflector plates being greater than the diameter of the sand inlet pipe, and the upper edge of the lower deflector plate being positioned in a horizontal plane below the horizontal plane of the lower edge of the upper deflector plate, and a fluid pressure nozzle positioned in the front portion of the casing in substantial alinement with the space between the edges of the deflector plates.

3. In a track sanding device, a casing enlarged between the top and bottom thereof, a vertically disposed sand inlet pipe leading into the top of the casing, a vertically disposed sand outlet pipe leading from the bottom of the casing, said outlet pipe being positioned in rear of said inlet pipe, a downwardly inclined deflector plate extending from the rear portion of the wall of the casing adjacent the top thereof, said deflector plate terminating short of the forward portion of the casing and provided with a downwardly turned lip having a straight edge, an upwardly inclined deflector plate extending from the front portion of the wall of the casing adjacent the bottom thereof, said deflector plate terminating short of the

rear portion of the wall of the casing and being provided with a straight edge, the transverse width of the space between the straight edges of said deflector plates being
5 greater than the diameter of the sand inlet pipe, and means for admitting fluid under pressure through the front portion of the wall of the casing.

In testimony whereof we affix our signatures in presence of two witnesses.

FREDRICK D. BOWEN.
MENAN C. HAGLER.

Witnesses:

F. P. SAYER,
TONY BROWNING.