No. 834,108. PATENTED OCT. 23, 1906.

F. B. COREY.

TRACK SANDER.

APPLICATION FILED FEB. 15, 1904.

Fig. 1.

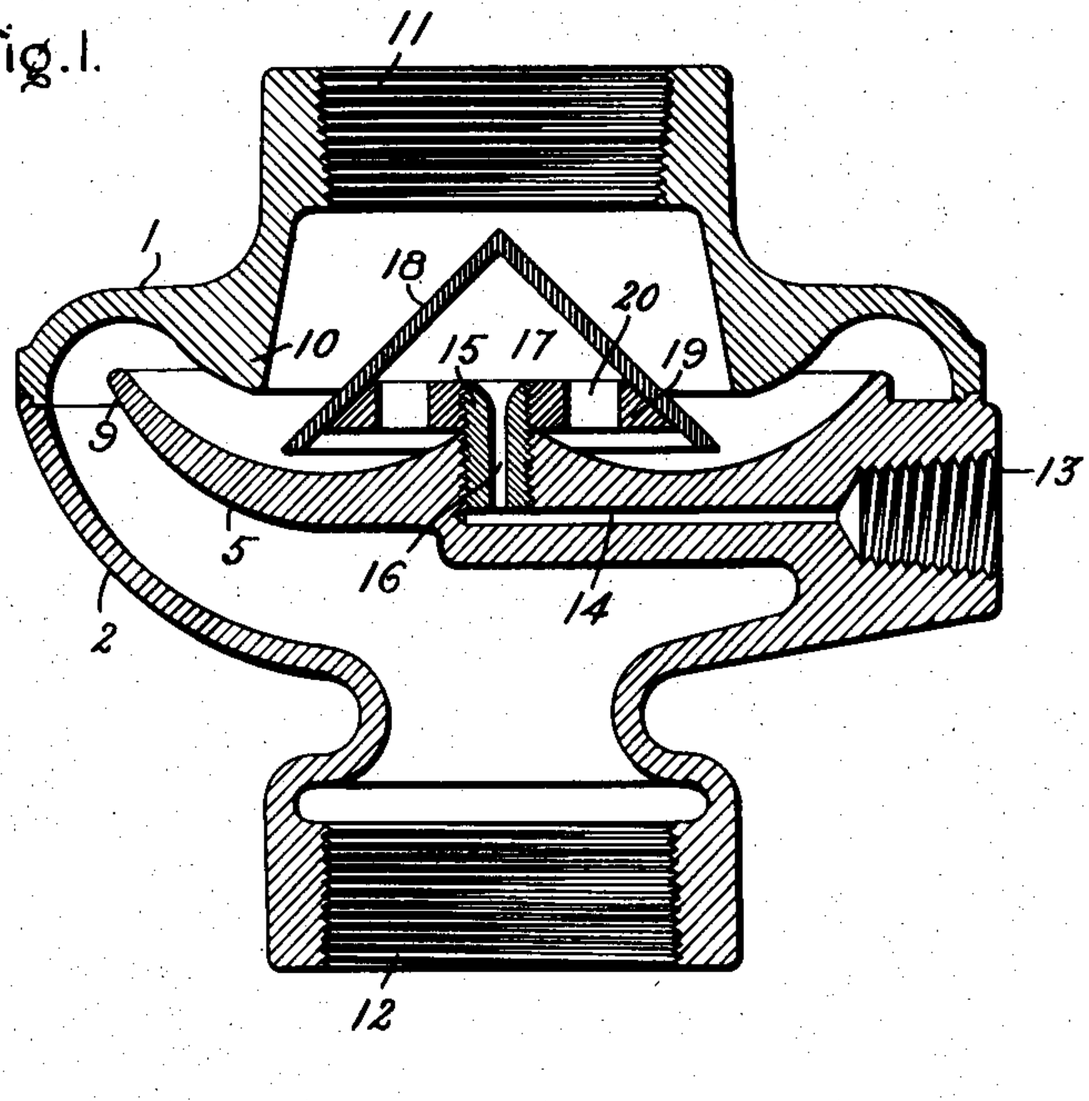
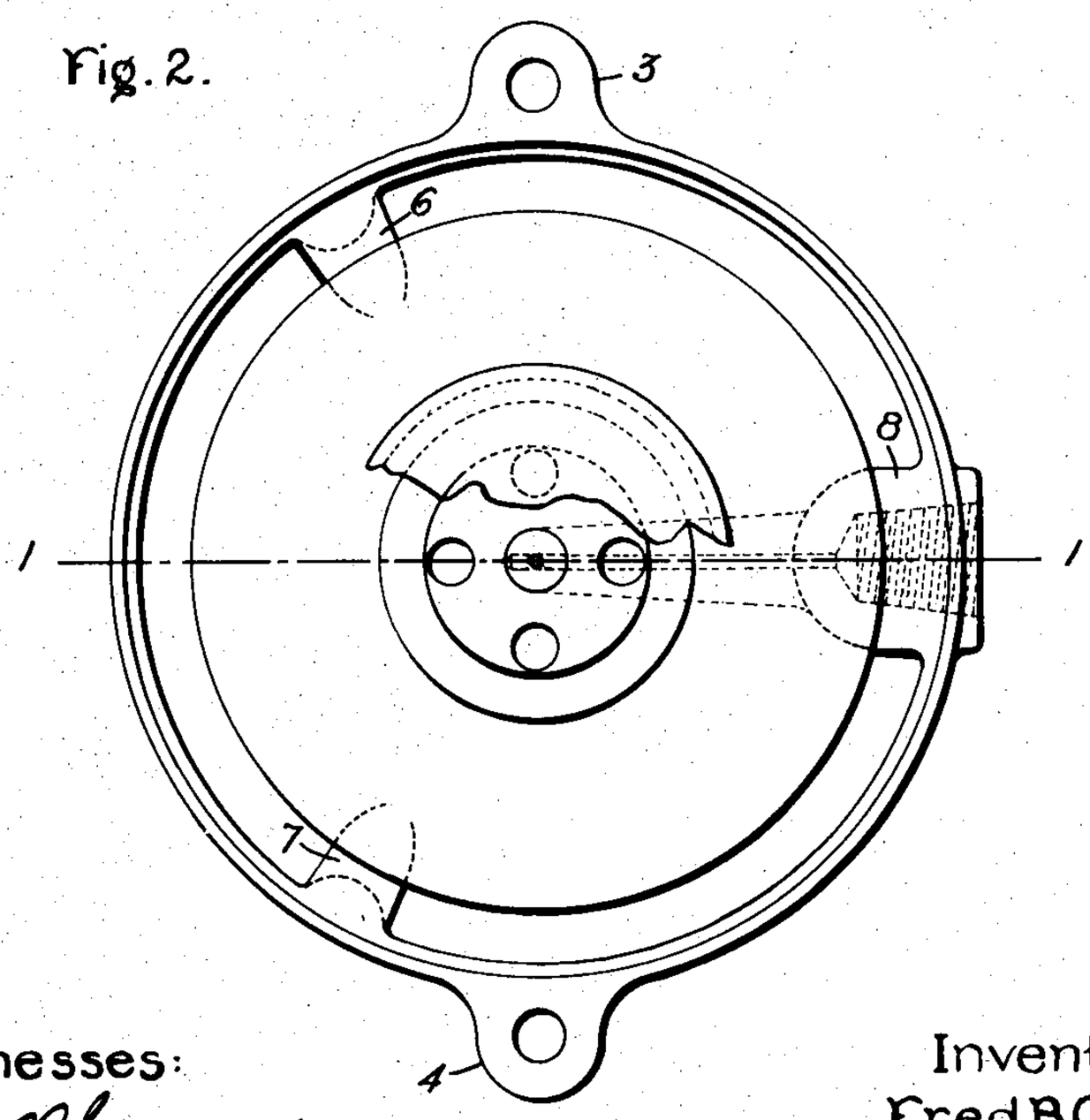


Fig. 2.



Witnesses:
Emily R. Kenney
Helen A. Ford

Inventor:
Fred B. Corey.
by Allen A. Lee & Son
Att'y

UNITED STATES PATENT OFFICE.

FRED B. COREY, OF SCHENECTADY, NEW YORK, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

TRACK-SANDER.

No. 834,108. Specification of Letters Patent. Patented Oct. 23, 1906.

Application filed February 15, 1904. Serial No. 193,571.

To all whom it may concern:

Be it known that I, FRED B. COREY, a citizen of the United States, residing at Schenectady, county of Schenectady, State of New York, have invented certain new and useful Improvements in Track-Sanders, of which the following is a specification.

The invention constituting the subject-matter of this application relates to track-sanders such as are commonly employed upon locomotives, electric cars, and other vehicles, in which compressed air is employed to remove the sand from the sand-trap to a delivery-pipe which conducts it to the track in front of the wheels of the vehicle, and it has particular reference to that type of sanders in which the sand is removed from the trap by a blast of air acting directly upon it.

One of the distinguishing features of the present invention consists in employing means for delivering this blast of air against the sand in a broad and thin stream.

My invention is also distinguishable over the prior art by reason of a novel arrangement of parts by which great simplicity and compactness of structure are obtained.

These and other features of my invention will be best understood by reference to the following detailed description, taken in connection with the accompanying drawings, which illustrate one embodiment of my invention.

In the drawings, Figure 1 is a central vertical section of a sander constructed in accordance with my invention, said section being taken on the line 1 1 of Fig. 2; and Fig. 2 is a plan view of the same with a portion of the casing removed.

In both views like characters refer to like parts.

The casing of the sander consists of upper and lower castings 1 and 2, which are suitably secured together at their outer edges, as by bolts passing through lugs, two of which, 3 and 4, are shown in Fig. 2. A sand-tray 5, having supporting-arms 6, 7, and 8 formed integral with the lower casting 2, is located within the casing. This tray is provided with an outer upturned edge 9, which coöperates with a downward projection 10 on the upper casting 1 to form a trap. Sand is supplied to the tray 5 through a threaded opening 11, located directly above it and adapted to receive the lower end of a sand-supply pipe leading from the sand-box. The casting 2 is provided with a similarly-threaded opening 12 in line with the opening 11 and threaded for connection to the upper end of the sand-delivery pipe. Compressed air is supplied to the sander through a suitable supply-pipe (not shown) which is adapted to engage the threaded opening 13, extending through the arm 8 into communication with the port 14 in the body of the tray 5. A blast-nozzle 15 is screwed into the center of the upper side of the tray 5 in line with the supply and delivery openings 11 12 of the casing and is provided with an opening 16, which communicates with the port 14 and through which air may be supplied to a chamber 17, formed above the tray by a conical cap 17, also in line with the openings 11 12. This cap is connected by solder or otherwise to a supporting-ring 19, which is screwed onto the outside of the nozzle 15. The ring 19 is provided with suitable openings 20, which lead from the chamber 17 to the upper side of the tray 5 and through which air is adapted to pass to force the sand in the tray over its outer edge 9 to its under side and thence to the delivery-pipe. By reason of the nearness of the outer edge of the cap 18 to the upper side of the tray 5 a very narrow but long opening is provided through which the compressed air is forced against the sand in the trap in a broad thin stream extending throughout the entire periphery of the tray 5. With this arrangement the sand delivered to the opening 12 in passing over the edge 9 of the tray is spread out to such an extent as not to produce any serious wearing action on the casting 1 of the casing. This of course materially increases the life of the sander. By this arrangement the full air-pressure is also applied, in case the sand is wet and tends to clog, at the weakest point, and thus acts most efficiently to force an opening and continue the delivery of the sand.

It is apparent that many modifications and alterations may be made in the sander illustrated without departing from the spirit of my invention, and I therefore do not wish to be limited to the specific device shown, but aim to cover by the terms of the appended claims all such modifications and alterations.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A track-sander comprising a sand-trap, a sand-supply opening for admitting sand to the trap, a sand-delivery opening for conducting sand from the trap, and means for directing a broad thin stream of air against the under side of the sand in the trap.

2. A track-sander comprising a sand-trap, a sand-supply opening for admitting sand to the trap, a sand-delivery opening for conducting sand from the trap, and a blast device for delivering a broad thin blast of air against the under side of the sand in the trap.

3. A track-sander comprising a sand-trap, a sand-supply opening for admitting sand to the trap, a sand-delivery opening for conducting sand from the trap, a blast-nozzle, and means for directing the air issuing from said nozzle against the under side of the sand in the trap in a broad thin stream.

4. A track-sander comprising a sand-trap, a sand-supply opening for admitting sand to the trap, a sand-delivery opening for conducting sand from the trap, a blast-nozzle, and means comprising a cap located over said nozzle for directing the air issuing from said nozzle against the sand in the trap in a thin stream at the outer edge of said cap.

5. A track-sander comprising a casing having sand supply and delivery openings, a sand-tray, a cap having its outer edge terminating in close proximity to said tray, and means for supplying compressed air to the space between said cap and tray.

6. A track-sander comprising a casing having sand supply and delivery openings, a sand-tray, a cap having its outer edge terminating in close proximity to said tray, and means located in said tray for supplying compressed air to the space between said cap and tray.

7. A track-sander comprising a casing having sand supply and delivery openings, a sand-tray, a deflecting-cap having its outer edge terminating in close proximity to said tray, and a blast-nozzle located in said tray and opening into the chamber between said cap and tray.

8. A track-sander comprising a casing having alined sand supply and delivery openings, a sand-tray, a cap located in line with said openings and having its outer edge terminating in close proximity to said tray, and a blast-nozzle opening into the chamber between said cap and tray and located in line with said openings.

9. In a track-sander, the combination of a casing provided with a sand-supply opening and a downward annular projection, a sand-tray located directly below said supply-opening and provided with an upturned edge which forms with said downward projection a trap, a cap located above said tray and below said opening, and means for supplying compressed air between said cap and tray.

10. In a track-sander, the combination of a casing, a sand-tray located within said casing, a plurality of arms connecting said tray and casing, an upwardly-projecting blast-nozzle on said tray, and an air-passage communicating therewith through one of said arms.

11. In a track-sander, the combination of a casing, a sand-tray located within the casing, a blast-nozzle projecting upwardly from the tray, and means for deflecting the air issuing therefrom against the upper side of said tray.

In witness whereof I have set my hand this 12th day of February, 1904.

FRED B. COREY.

Witnesses:
BENJAMIN B. HULL,
HELEN ORFORD.