

C. W. SHERBURNE.
TRACK SANDING APPARATUS.

No. 582,553.

Patented May 11, 1897.

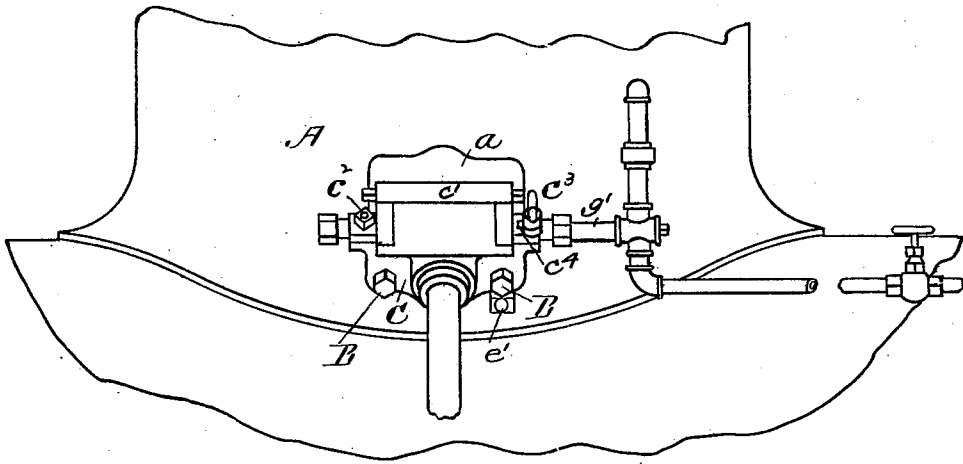


Fig. 1.

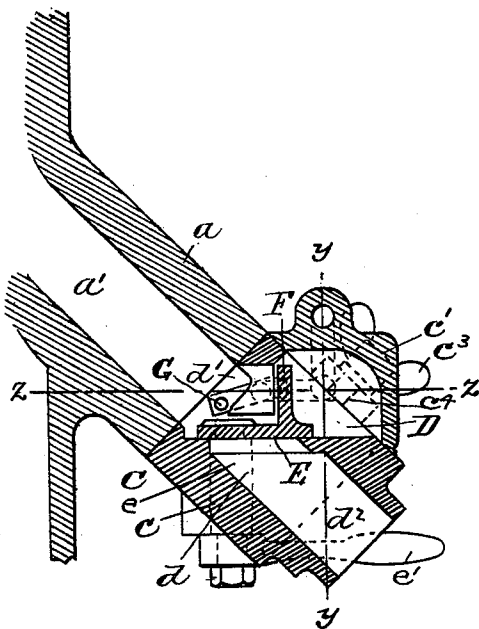


Fig. 2.

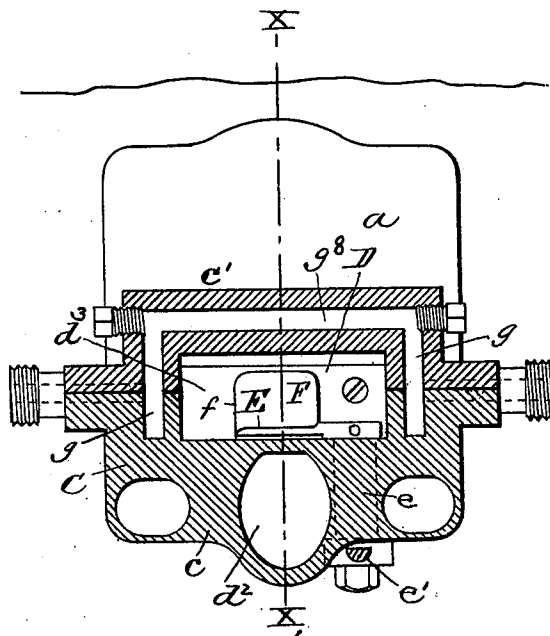


Fig. 3.

WITNESSES

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(No Model.)

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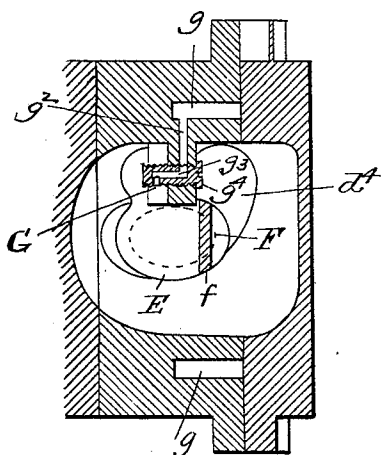


Fig. 4.

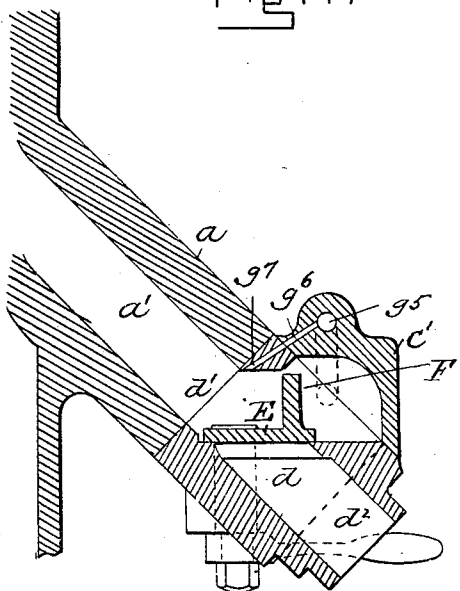


Fig. 5.

WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES W. SHERBURNE, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE
AUTOMATIC TRACK SANDING COMPANY, OF SAME PLACE AND PORT-
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TRACK-SANDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 582,553, dated May 11, 1897.

Application filed June 15, 1896. Serial No. 595,618. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. SHERBURNE, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Track-Sanding Apparatus, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The invention is in some respects an improvement upon that described in my application for Letters Patent of the United States for an improvement in track-sanding apparatus executed of even date herewith, Serial No. 595,617. In the said application I have described a track-sanding apparatus employing valves arranged in the sides of the sand-box below the bottom and so as to be accessible from the outside of the box.

The present invention relates to a structure in which the valve and air-inlet for each sand-passage are carried by a casting or block separate or apart from the sand-box and detachably connected therewith.

The invention will now be described in connection with the drawings, wherein—

Figure 1 is a view in side elevation of a part of a sand-box with my improvement attached thereto. Fig. 2 is a view in vertical section, enlarged, upon the dotted line xx of Fig. 3. Fig. 3 is a view in vertical section, enlarged, upon the dotted line yy of Fig. 2. Fig. 4 is a view in vertical section, enlarged, upon the dotted line zz of Fig. 2. Fig. 5 is a detail view in vertical section of a slight modification to which reference is hereinafter made.

A represents the exterior of the sand-box. From each side of the box there extends a boss a , in which is a sand-passage a' , by which the contents of the sand-box is discharged. To the lower edge of each boss there is attached by the bolts B a valve-box C. This box is preferably made in two parts, the main section c and the cover-section c' . In the box is the valve-chamber D, which is principally in the main section, but not entirely so. The sand-passage d is arranged to extend diagonally across the valve-chamber from the upper end of the box d' , where the passage is in line

with the passage a' . The valve E is contained in the said valve-chamber and is adapted to partially cover the opening from the valve-chamber into the lower part d^2 of the sand-passage through the box. It is attached to the upper end of a shaft or spindle e , carried by the valve-box, the lower end of which is outside the box and receives a lever e' , by which the valve may be turned, although I do not confine myself to this means of turning the valve, but may cause it to be operated in any of the well-known ways.

The valve has extending up from its forward edge a shield F, which preferably is integral with the valve and movable therewith, although it may be made separate from the valve and stationary, and it serves to prevent the sand from flowing into the part of the valve-chamber in which the valve is movable to open the passage d^2 to permit the feeding of sand by gravity, and it also, in connection with the air or other sand-feeding blast, serves to cause the sand to travel around its vertical edge f in the section d^3 of the valve-chamber to the part d^4 of the entrance to the section d^2 of the sand-passage, which is upon the outer side of the shield. (See Fig. 4.) The cover c' is attached to the main part by a bolt c^2 , passing through an ear upon one side and upon which it is free to turn as upon a pivot, and a hinged thumb-screw c^3 , which is hinged to one side of the main box and movable into and out of operative relation with the cover in the recesses formed in the ear c^4 . An air or other blast is introduced into the sand-passage of the box immediately above the valve-chamber through an inlet G. This inlet extends from a passage g in the valve-box, which is connected with an air or other supply pipe g' . In Fig. 4 this passage g is represented as connected with the inlet by a laterally-extending passage g^2 and a passage g^3 in a threaded sleeve g^4 , the sleeve being headed at both ends and having an opening connected with the lateral passage and also an opening which forms the air-inlet. Another way of forming the air-inlet is represented in Fig. 5, where the cap part is represented as having a passage g^5 extending lengthwise it and connected at its ends with the passage g , and

also connected by a passage g^6 with a passage g^7 , opening into the sand-passage.

I have represented the valve-box as adapted to be used as a right or a left box and as provided with two connections with the air-supply pipe, either one of which may be used, according as the valve-box is upon one or the other side of the sand-box, and the box, when thus provided, has the two passages g , one at each end, and which are connected together by the passage g^8 in the cap, the ends of which open into or connect with the passages g , so that at whichever end of the valve-box air is received it is conducted to the inlet into the sand-passage.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a track-sanding apparatus, the combination with a sand-box, of a valve-box having a valve-chamber, a sand-passage leading from the sand-box to said chamber, an outlet in said chamber, opening into an escape-passage, and a valve controlling part of said outlet, said valve-chamber having an extended bottom which forms a rest or support for the column of sand.

2. In a track-sanding apparatus the combination with a sand-box, of a valve-box having a valve-chamber, a sand-passage leading from said sand-box to said chamber, an elongated outlet in said chamber opening into an escape-passage, a valve controlling the inner end of said elongated outlet, and a vertical partition to prevent the sand from feeding by gravity through the said elongated outlet when the said valve is in closed position.

3. In an automatic track-sanding apparatus, the combination with a sand-box provided with a suitable sand-passage of a removable valve-box provided with a valve-chamber, said chamber having an elongated aperture in one of its walls which communicates with an escape-pipe, a valve to control the flow of sand through said elongated aperture, a flat surface at one side of said aperture to form a support for the sand column, and a vertical partition to prevent the flow of sand into the chamber and through said elongated aperture.

4. In an automatic track-sanding apparatus, the combination of a sand-box having an extension or boss a in which is the sand-passage a' , the valve-box C secured to the lower end thereof and having a sand-passage d , a valve-chamber D open at one side, across which the sand-passage extends, the valve E and the removable cover c' for the valve-

box, said removable cover c' being recessed on its inner side to form a part of the valve-chamber.

5. The combination of the sand-box having an extension provided with a sand-passage a' , a valve-box secured to the end of the said extension having the sand-passage d shaped substantially as specified, a valve-chamber through which the sand-passages extend, and a sand-shield F to prevent the flow of sand through the sand-passage in said chamber.

6. The combination in a track-sanding apparatus, of a sand-box having an extension in which is a sand-passage, a valve-box secured to the said extension having the sand-passage d , a valve-chamber through which the sand-passage extends, said chamber having an extended flat surface at one side of said sand-passage to form a rest or support for the sand, a movable valve in said chamber, a shield F, and an inlet to which an air or other blast is introduced into the sand-passage of the valve.

7. The combination, in a track-sanding apparatus, of a sand-box having a sand-passage a' , a separate valve-box, a sand-passage extending through the same and sand-controlling devices therein, an inlet to said valve-chamber for supplying air or other forcing medium through the sand-passage and a coupling or connection at each end of the valve-box, both connected with the said inlet whereby the said valve-box may be used as a right or left box.

8. The combination with a sand-box having a sand-passage, of a removable valve-box provided with a valve-chamber, sand-passages, and air-blast passages; sand-controlling devices in said chamber to control the flow of sand, and connections at either end of the valve-chamber with said air-blast passages whereby the said valve-box may be used as a right or left box, substantially as described.

9. The combination with a sand-box having a sand-passage, of a removable valve-box provided with a valve-chamber, and air and sand passages, sand-controlling devices mounted in said chamber, blast connections at either end of said removable valve-chamber whereby said valve-box may be used as a right or left box, and a removable cover whereby access may be had to the valve-chamber, substantially as described.

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Witnesses:

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