

No. 881,452.

PATENTED MAR. 10, 1908.

E. J. ANDERSON.
TRACK SANDING DEVICE.
APPLICATION FILED AUG. 14, 1907.

Fig. 1.

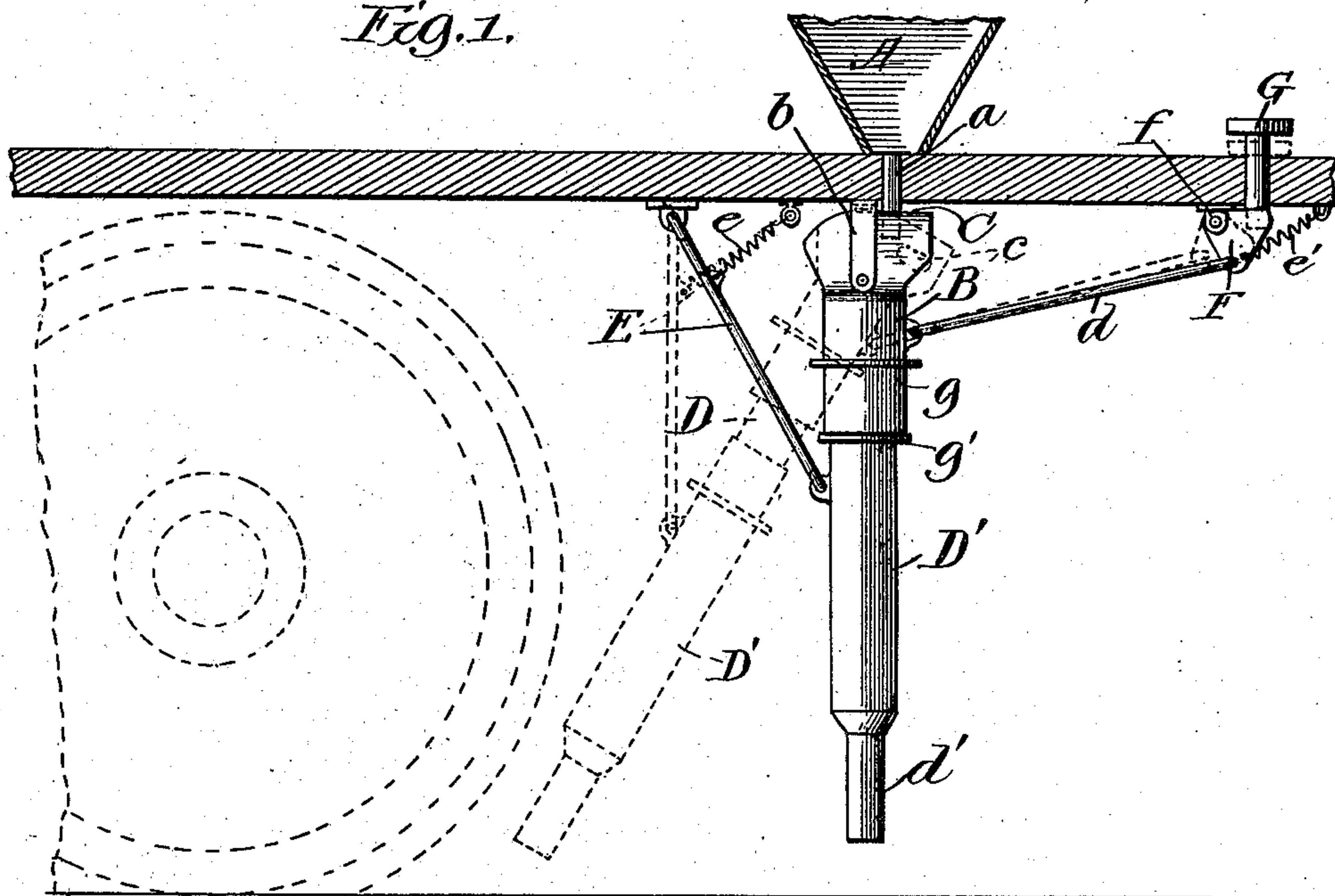


Fig. 2.

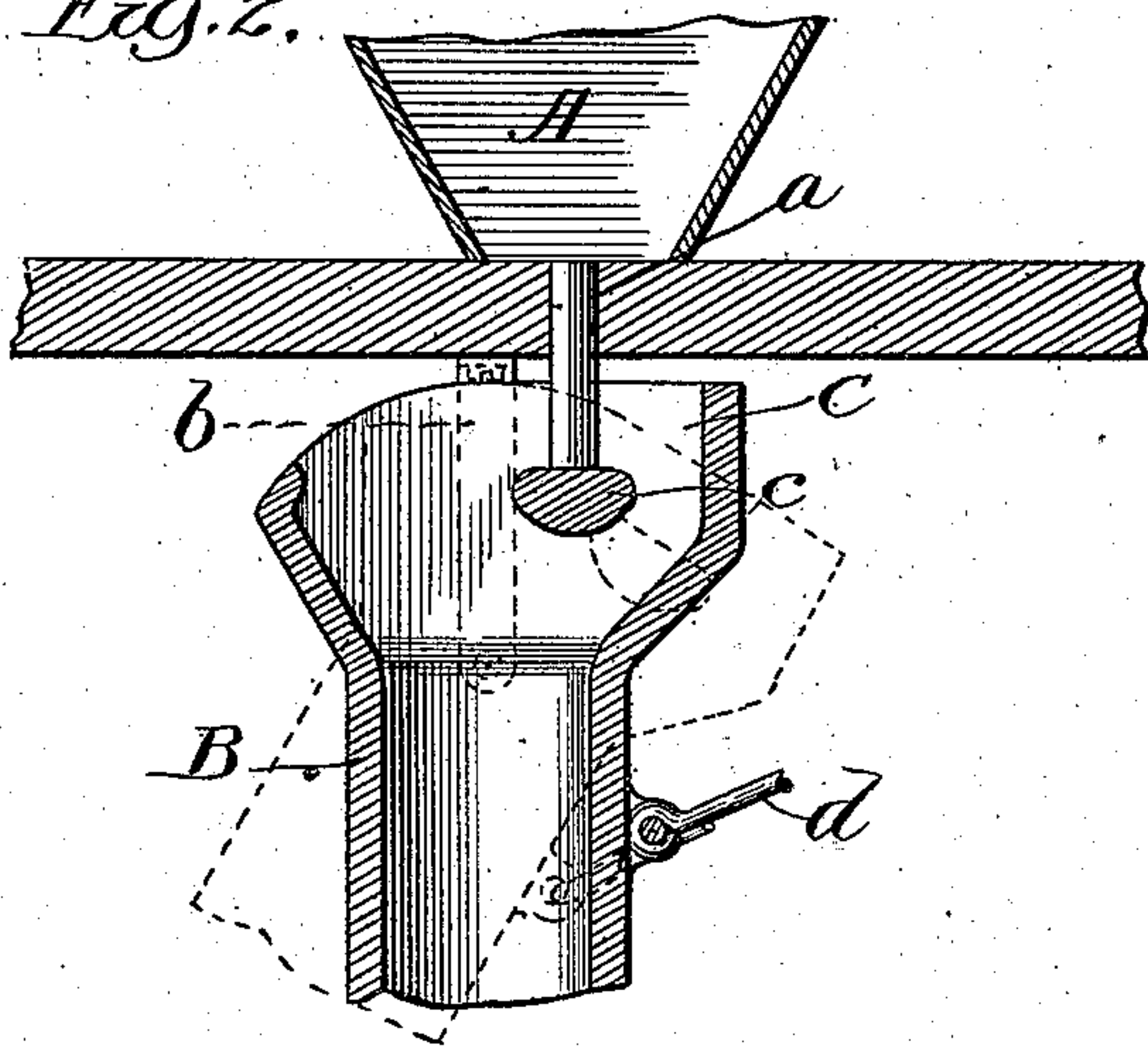
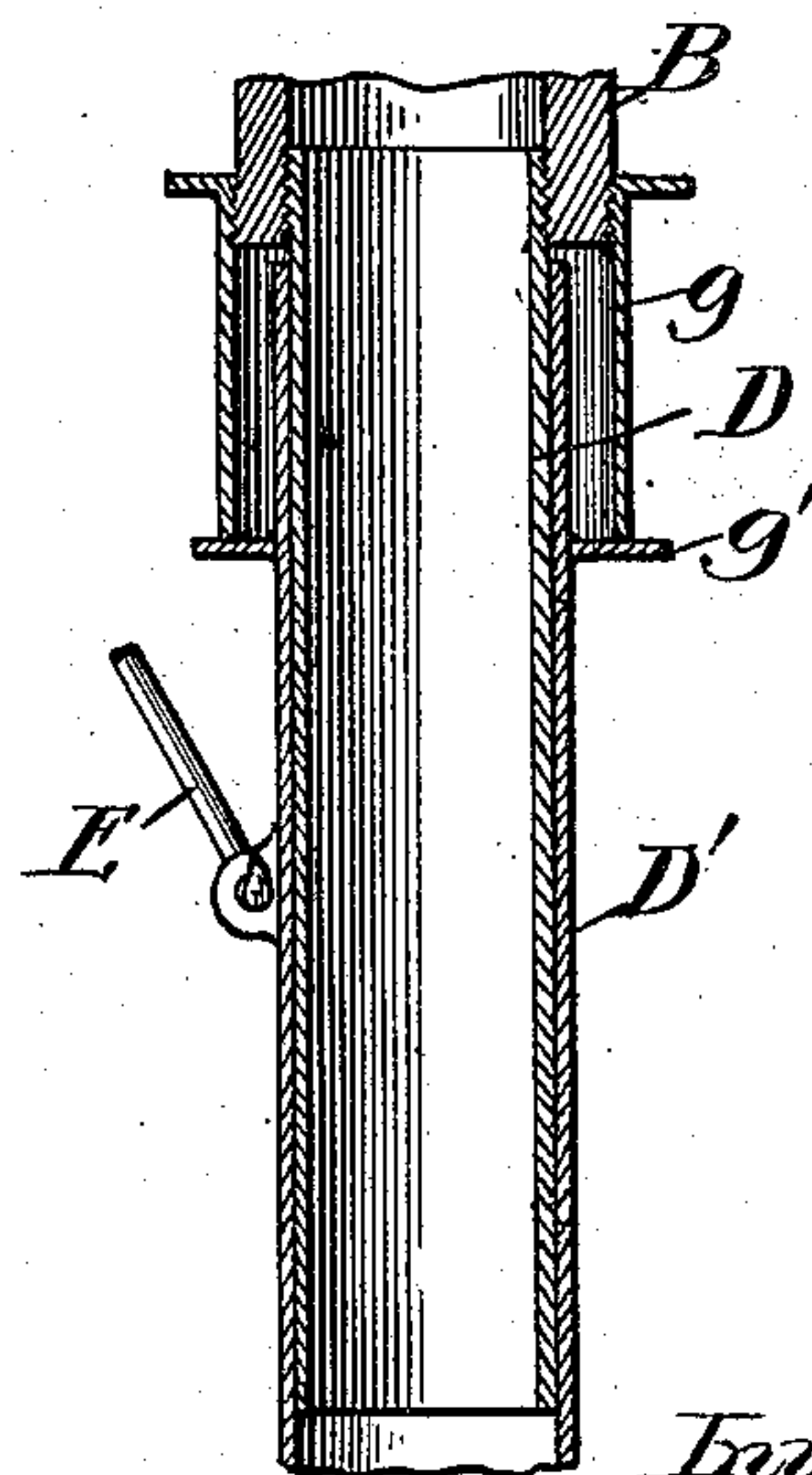



Fig. 3.



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UNITED STATES PATENT OFFICE.

EDGAR J. ANDERSON, OF DAVENPORT, IOWA.

TRACK-SANDING DEVICE.

No. 881,452.

Specification of Letters Patent.

Patented March 10, 1908.

Application filed August 14, 1907. Serial No. 388,532.

To all whom it may concern:

Be it known that I, EDGAR J. ANDERSON, a citizen of the United States, and a resident of Davenport, in the county of Scott and State of Iowa, have invented certain new and useful Improvements in Track-Sanding Devices, of which the following is a clear, full, and exact description.

My invention relates to devices for sanding the tracks of street-cars for preventing the wheels thereof from slipping.

The object of my invention is to provide a sanding device in which the sand from the hopper discharges onto the track, and the discharge pipe is telescopically elongated to discharge directly in front of the wheel when the presser-foot is depressed by the motor-man, and in which the said discharge-pipe telescopically shortens when the presser-foot is released and automatically closes the exit of the hopper.

A further object of my invention is to provide a very simple and economically constructed device that can be applied either to a new or old car, will not allow the presence of mud to interfere with its operation, and is very unlikely to get out of order. I accomplish this in the manner and by the means hereinafter fully described and as more particularly pointed out in the claims.

In the drawings:—Figure 1 is a vertical side elevation of my invention in normal position, when attached to the floor of the car, the dotted outline showing the position assumed by the parts when operated to sand the track. Fig. 2 is an enlarged sectional view of the head for the telescopic pipes, showing the construction and location of the valve bridge. Fig. 3 is a central vertical section of the telescopic pipes at their connection with the head.

Referring to the drawings, A represents a sand box of any suitable construction, that is mounted on the floor of the car in a convenient place, and is provided with a hopper-shaped bottom in the apex of which a suitable discharge pipe *a* is placed. This pipe extends down through the floor of the car and empties into a pivoted cast metal head B, which is swung in hangers *b*, *b*, that are bolted or otherwise secured to the underside of the flooring of the car. Above its pivot head B is flared in the direction of the length of the car to provide an enlarged mouth into which the sand from pipe *a* will fall regardless of whether the sander is in its normal po-

sition or in its operative position, and below its pivot said head is tubular. Within the enlarged mouth of the head and extending parallel to the axis of its pivot from side to side thereof, at a point about in the horizontal plane of the lower edge of pipe *a*, is a suitable valve *c* which is adapted, when the device is in its normal position, to close the end of said pipe and prevent the discharge of the sand therefrom. The lower end of the tubular portion of the head is, preferably, screw-threaded internally and has the stationary pipe of a telescopic extension screwed into the same. This telescopic extension comprises two pipes the stationary or inner pipe D being secured to the head as stated, while the movable or outer pipe D' is slidably mounted thereon, and has its reduced lower end *d'* terminate a short distance above the car-track, substantially as shown.

In order to prevent the outer pipe from sliding off the inner pipe, the outer or movable pipe of the telescopic extension is suspended from the floor of the car by means of a swinging link E, the lower end of which is pivotally secured to a lug projecting from the side of said pipe mediate its ends and the upper end of which is pivotally connected to lugs depending from the bottom of the floor. This telescopic extension is kept in a normal vertical position by a coil contraction spring *e*, secured at one end to the link E a short distance from its upper end, and at the other end secured to the body of the car by a suitable screw-eye. Secured to a lug projecting from the forward side of the head is an operating rod *d* that extends forwardly to a convenient point below the platform of the car where it is connected to the lower angle of a triangular-shaped bell-crank F. This crank is mounted in hangers *f* secured to the bottom of the car, and, in its normal position, one of its straight edges will be in a plane parallel with said bottom. It is retained normally in this position by a coil contraction spring *e'* connected at one end to the car-floor and at its other end to the bell-crank near its lower angle. The forward angle of the crank is adapted to be engaged by a presser-foot or headed bolt G the barrel of which passes through an opening in the platform. By pressing this bolt down the lower angle of the crank will be forced back causing the rod *d* to swing the head and the telescopic pipes in a rearward direction. Owing to the fact that the pivotal point of the link E is

nearer the wheel of the car than the pivot of head B and its telescopic extension when the sander is swung backward the tendency of said link is to cause the outer pipe to slide down on the inner pipe and bring the lower end of the extension close to and under the car-wheel, substantially in the manner shown in dotted lines on Fig. 1 of the drawings. During this movement the head will swing a predetermined distance and the valve *c* carried thereby will pass from under the end of the discharge pipe *a* of the hopper, and will allow the sand to gravitate through and flow from the same into the pipes of the telescopic extension and be distributed along the track in front of the wheel. When the pressure is released on the bolt *G*, the springs *e*, *e'* will automatically return the several parts to their normal position and the bridge will again pass under the end of the exit pipe and close the same.

In order to avoid as much as possible any mud, slush, or dirt from getting between the telescoping pipes and preventing or hindering their operation, I provide head B with an annular flange that, preferably, extends down below the lower end of the same, while providing the outer telescopic pipe *D'*, at a point about in the transverse plane of the lower end of said sleeve with a similar annular flange or collar *g'*. The lower end of the sleeve *g* is adapted to come in contact with this collar *g'* when the device is out of operation, and thus close the pipes where they fit over each other and exclude all foreign matter.

What I claim as new is:—

1. In a track sanding device the combination with a suitable hopper having a discharge opening therein, of a tubular extensible conveyer comprising a pivotally suspended head adapted to close the mouth of said opening when in its normal position and open the mouth thereof when moved out of its normal position.

2. In a track sanding device the combination with a suitable hopper having a discharge opening therein, of a tubular extensible conveyer comprising a pivotally suspended head having a flared mouth, adapted to close the mouth of said opening when in its normal position and open the mouth thereof when moved out of its normal position.

3. In a track sanding device the combination with a suitable hopper having a discharge opening therein, of a tubular extensible conveyer comprising a pivotally suspended head having a valve-chamber consisting of a transverse bar, adapted to close the mouth of said opening when in its normal position and open the mouth thereof when said head is moved out of its normal position.

4. In a track sanding device the combina-

tion with a suitable hopper having a discharge pipe therein, of a tubular conveyer comprising a pivotally suspended head having a telescopic extension, said head adapted to close the mouth of said pipe when in its normal position and open the mouth of said pipe when moved out of its normal position.

5. In a track-sanding device the combination with a suitable hopper having a discharge pipe therein, of a tubular conveyer comprising a pivotally suspended head adapted to close the mouth of said pipe when in its normal position and open the mouth of said pipe when moved out of its normal position, and a tubular extension the outer telescopic portion of which is suspended at a point nearer the wheel than said head.

6. In a track-sanding device the combination with a suitable hopper having a discharge pipe therein, of a tubular conveyer comprising a pivotally suspended head adapted to close the mouth of said pipe when in its normal position and open the mouth of said pipe when moved out of its normal position, and a tubular extension the inner stationary portion of which is secured to said head and the outer telescopic portion of which is suspended at a point nearer the wheel than said head.

7. In a track-sanding device the combination with a suitable hopper having a discharge pipe therein, of a tubular extensible conveyer comprising a pivoted automatically returnable head adapted to close the mouth of said pipe when in its normal position and open the mouth of said pipe when moved out of its normal position.

8. In a track-sanding device the combination with a suitable hopper having a discharge pipe therein, of a tubular extensible conveyer comprising a pivoted automatically returnable head having a valve-member consisting of a transverse bar, adapted to close the mouth of said pipe when in its normal position and open the mouth of said pipe when said head is moved out of its normal position.

9. In a track-sanding device the combination with a suitable hopper having a discharge pipe therein, of a tubular conveyer comprising a pivoted automatically returnable head adapted to close the mouth of said pipe when in its normal position and open the mouth of said pipe when moved out of its normal position, and a tubular extension the outer telescopic portion of which is suspended at a point nearer the wheel than said head.

10. In a track-sanding device the combination with a suitable hopper having a discharge pipe therein, of a tubular conveyer comprising a pivotally suspended head adapted to close the mouth of said pipe when in its normal position and open the mouth of said pipe when moved out of its normal

position, a tubular extension the outer telescopic portion of which is suspended at a point nearer the wheel than said head, and guards consisting of an annular flange secured to said outer telescopic member and a circumferential sleeve fitting the lower end of said head and extends down to and engages said flange.

11. In a track-sanding device the combination with a suitable hopper having a discharge pipe therein, of a tubular conveyer comprising a pivotally suspended head adapted to close the mouth of said pipe when in its normal position and open the mouth of said pipe when moved out of its normal position, a tubular extension the inner stationary portion of which is secured to said head and the outer telescopic portion of which is suspended at a point nearer the wheel than said head, and guards consisting of an annular flange secured to said outer telescopic member and a circumferential sleeve fitting the lower end of said head and extending down to and engaging said flange.

12. In a track-sanding device the combination with a suitable hopper having a discharge pipe therein, of a tubular conveyer comprising a pivotally suspended head having a flared mouth provided with a valve member that is adapted to close the mouth of said pipe when in its normal position and open the mouth of said pipe when moved out of its normal position, a tubular extension the outer telescopic portion of which is suspended at a point nearer the wheel than said head, and guards consisting of an annular flange secured to said outer telescopic member and a circumferential sleeve fitting the lower end of said head and extending down to and engaging said flange.

13. In a track-sanding device the com-

bination with a suitable hopper having a discharge pipe therein, of a tubular extensible conveyer comprising a pivotally suspended head adapted to close the mouth of said pipe when in its normal position and open the mouth of said pipe when moved out of its normal position, and a rod connected at one end to said head and having its opposite end secured to means for operating the same.

14. In a track-sanding device the combination with a suitable hopper having a discharge pipe therein, of a tubular extensible conveyer comprising a pivotally suspended head adapted to close the mouth of said pipe when in its normal position and open the mouth of said pipe when moved out of its normal position, a rod connected at one end to said head and having its opposite end secured to a bell-crank, and a depressible foot-pin operatively engaging one arm of said crank.

15. In a track-sanding device the combination with a suitable hopper having a discharge pipe therein, of a tubular extensible conveyer comprising a pivotally suspended head adapted to close the mouth of said pipe when in its normal position and open the mouth of said pipe when moved out of its normal position, a rod connected at one end to said head and having its opposite end secured to an automatically returnable bell-crank, and a depressible foot-pin operatively engaging one arm of said crank.

In testimony whereof I have hereunto set my hand and seal this 26th day of July, A. D., 1907.

EDGAR J. ANDERSON. [L. s.]

Witnesses:

FRANK T. HUNNIS,
JOHN GERIS.