

APPLICATION FILED AUG. 26, 1910.

Patented Mar. 5, 1912.

2 SHEETS—SHEET 1.

FIG. 2-

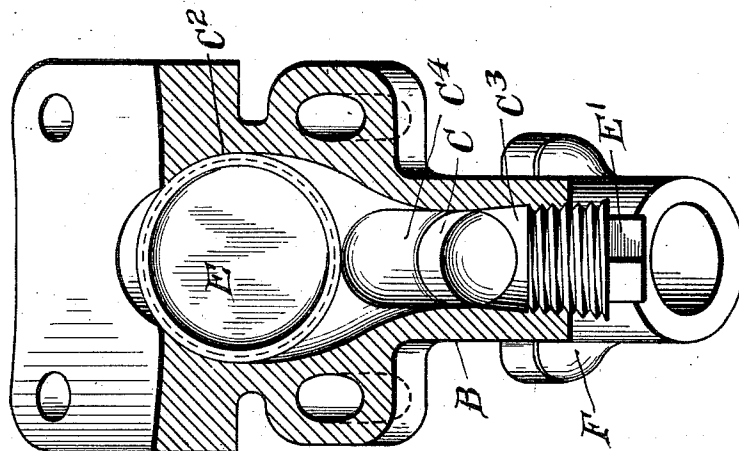
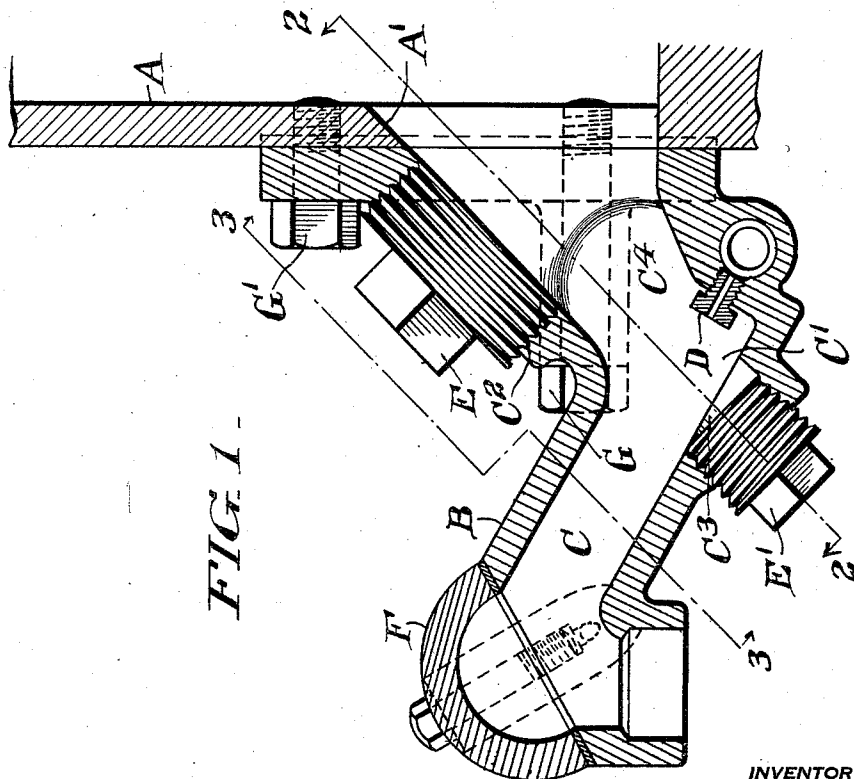


FIG. 1.

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 TRACK SANDER.
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1,019,258.

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2 SHEETS—SHEET 2.

FIG. 4—

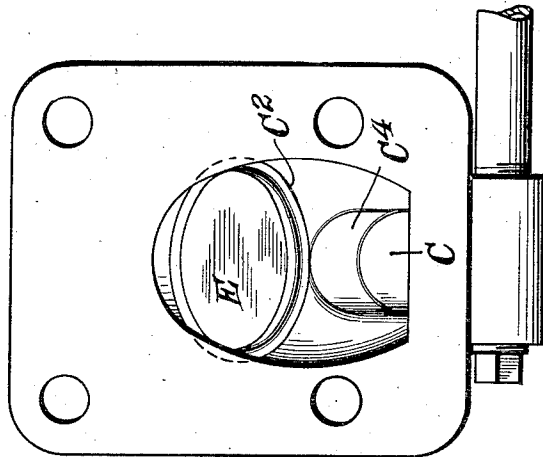
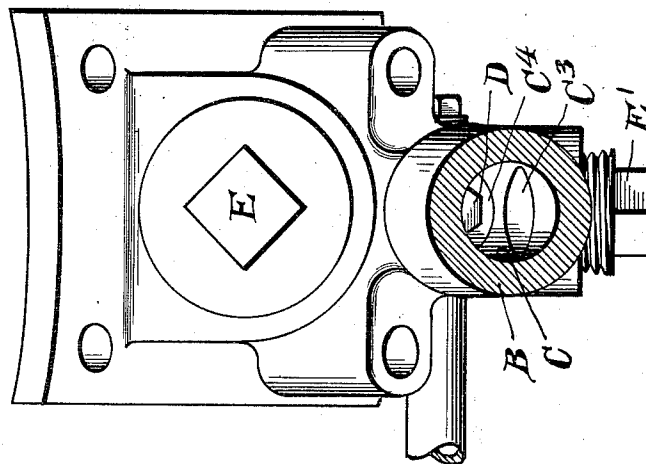


FIG. 3—



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UNITED STATES PATENT OFFICE.

CHARLES W. G. KING, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO UNITED STATES METALLIC PACKING COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

TRACK-SANDER.

1,019,258.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES W. G. KING, a citizen of the United States of America, residing in the city and county of Philadelphia, in the State of Pennsylvania, have invented a certain new and useful Improvement in Track-Sanders, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part thereof.

My present invention relates to track sanders, such as are used on locomotives and particularly to that type of track sander, long well known and in common use, in which the sander is provided with a sand discharge passage through which the sand passes from a sand dome or reservoir to the rails, the passage being dipped between its ends to provide a sand trap from which the sand is blown out when needed, by a jet of air or steam from a nozzle projecting into the passage adjacent the bottom of the sand trap portion.

The object of the invention is to provide a simple and satisfactory construction less liable to become clogged by lumpy material mixed with the sand, than is the case with the arrangements heretofore in use, and from which, in case of clogging, the objectionable material may be removed more quickly and easily than has been possible with the sanders heretofore in use. This I accomplish by enlarging the sand passage of the sanding mechanism between the reservoir sand trap portion thereof to form a chamber substantially larger in cross section than the remainder of said passage and by also providing a clean out opening from said chamber larger in cross section than the portion of said sand passage beyond the trap.

The various features of novelty that characterize my invention are pointed out particularly in the claims annexed to and forming a part of this specification.

For a better understanding of the invention and the advantages possessed by it, however, reference may be had to the accompanying drawings and descriptive matter, in which I have described one of the forms in which the invention may be embodied.

Of the drawings, Figure 1 is a sectional elevation of a portion of a locomotive sand

dome or reservoir and attached sander mechanism; Figs. 2 and 3 are sections taken on the lines 2—2 and 3—3 of Fig. 1, respectively, and Fig. 4 is a rear end elevation of the sander mechanism.

In the construction shown in the drawings, A represents a sand reservoir, as the dome of a locomotive, and A¹ the sand discharge port or passage in the wall thereof.

B represents the sand trap containing a blast nozzle supporting member. The member B is formed with a channel or sand passage C which registers at one end with the discharge port A¹ and is adapted to be connected at the opposite end to the usual pipe, not shown, for conducting the sand to the track rails. Within the member B the channel C is given a dip, to provide a sand trap at C¹.

D represents a blast nozzle extending into the passage C adjacent the bottom of the dip thereof; C² and C³ represent clean out openings formed in the member B and E and E¹ represent screw plugs normally closing these openings.

F represents the usual removable and renewable cap against which sand from the trap is blown by the nozzle D.

G represents bolts passing through an apertured flange portion of the member B for securing the latter against sand dome A.

The construction hereinbefore described differs from others heretofore known, mainly in the fact that the passage C at the end adjacent the reservoir, is enlarged to form a chamber C⁴, the cross section of which is substantially greater than that of the remainder of the passage C, and in the fact that the discharge port A¹ from the reservoir and the clean out opening C² and plugs E, are enlarged to correspond with the enlarged cross section of the chamber C⁴. These differences result, however, in substantial and highly beneficial differences in operation between my improved sander and those before known. Heretofore, the sand passage or channel, in a sander of the type illustrated, has been, in practice relatively small in cross section throughout its length. The reduced cross section of this passage has been due in part, to the desire to keep the apparatus of relatively small bulk, but principally to the fact that if this passage is made too large the sand is less effectively

discharged through it by the blast. I have found, however, that I may enlarge the cross section of the passage back of the blast nozzle without reducing the efficiency of the nozzle as a sand ejecting device, and that by enlarging the passage back of the sand trap, the trouble caused by lumps and foreign objects in the sand, is greatly diminished. With the passage portion C² enlarged and port A¹, foreign objects or lumps in the sand which would otherwise tend to collect in the reservoir at A¹ and clog the latter discharge orifice, pass into the channel enlargement or chamber C⁴. On account of the immediate proximity of the chamber C⁴ to the nozzle D, such lumpy or foreign matter, passing into the chamber C⁴, is less apt to clog the apparatus than is the case where they collect at the inlet end of the discharge orifice from the sand reservoir, and furthermore, these lumps or foreign matter may be much more readily removed from the chamber C⁴ through the clean out openings C² and C³ and particularly through the enlarged clean out opening C³, than is possible where the lumpy or foreign material collects within the sand reservoir or even in a sand channel portion in the sander proper of the cross section of the passage C in front of the blast nozzle D. At the same time, the improved sander is but little more bulky than those heretofore used.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is:

1. In a track sander a member formed with a sand passage which dips between its ends to form a sand trap, and a blast nozzle projecting into said passage adjacent the bottom of the sand trap portion thereof, said member having a portion of said passage at and leading away from its inlet end enlarged to provide a chamber which is substantially larger in cross section than the portion of said passage at the outlet side of the blast nozzle, and in which material tending to clog the sander may collect, and being provided with a normally closed clean out open-

ing through which such material may be removed.

2. In a track sander a member formed with a sand passage which dips between its ends to form a sand trap, and a blast nozzle projecting into said passage adjacent the bottom of the sand trap portion thereof, said member having a portion of said passage at and leading away from its inlet enlarged to provide a chamber, which is substantially larger in cross section than the portion of said passage at the outlet side of the blast nozzle, and in which material tending to clog the apparatus may collect, and being provided with a normally closed clean out opening through which such material may be removed, said opening being also substantially greater in cross section than said portion of the sand passage at the outlet end of the blast nozzle.

3. Track sanding mechanism comprising in combination a sand reservoir provided with a discharge port A¹, a member B, formed with a sand passage C, which dips between its ends to provide a sand trap portion C¹, and a blast nozzle projecting into said passage adjacent the bottom of the sand trap portion C¹, said member B being secured against said sand reservoir with one end of said passage C in register with said discharge port A¹, the portion of said passage C between the sand trap portion C¹ and the reservoir port A¹ as well as the latter, being substantially larger in cross section than the portion of the passage C beyond the blast nozzle, whereby lumps or foreign objects in the sand tending to clog the apparatus collect in the chamber C⁴, formed by the enlarged portion of the passage C, said member being provided with a normally closed clean out opening C², leading from said chamber C⁴ and also substantially larger in cross section than the portion of the channel C in front of the blast nozzle.

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