W. B. ROGERS.

SANDER.

APPLICATION FILED AUG. 16, 1912.

1,050,174. Patented Jan. 14, 1913.

Fig. 1.

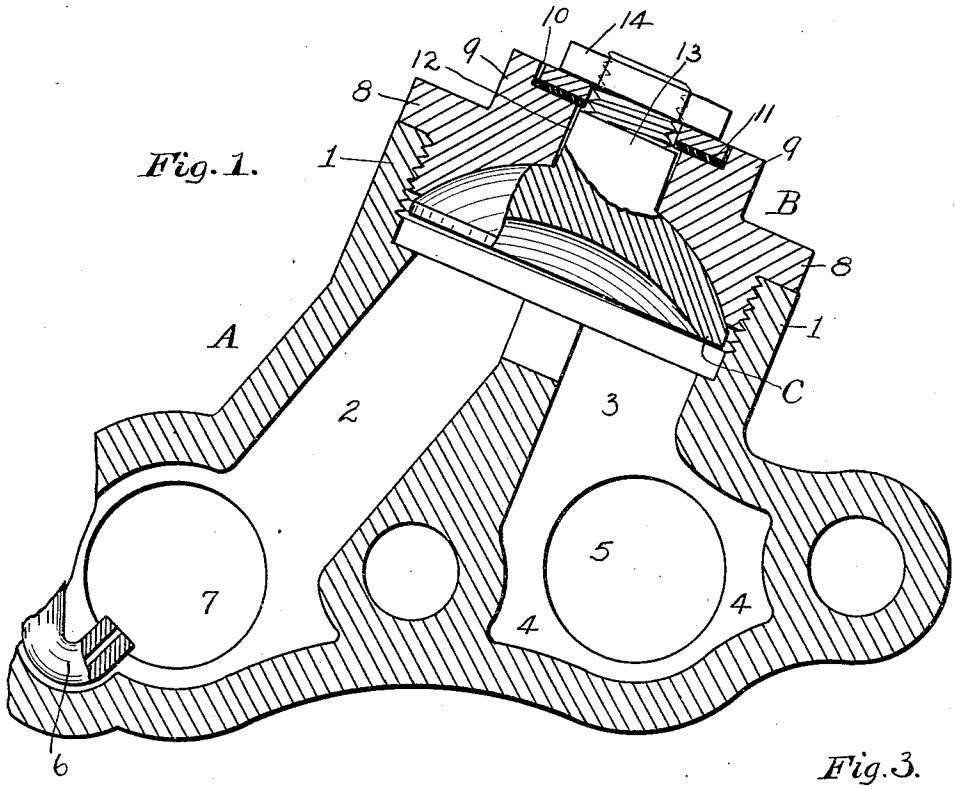


Fig. 3.

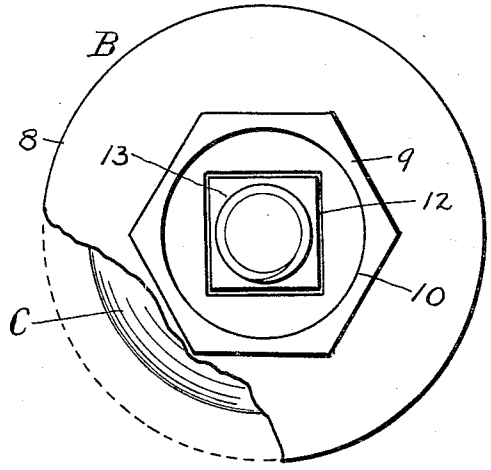
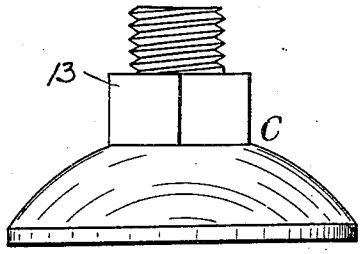


Fig. 2.



WITNESSES

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SANDER.

1,050,174. Specification of Letters Patent. Patented Jan. 14, 1913.

Application filed August 16, 1912. Serial No. 715,450.

To all whom it may concern:

Be it known that I, WALTER BASCOM ROGERS, a citizen of the United States, residing at Knoxville, in the county of Knox and State of Tennessee, have invented a new and useful Improvement in Sanders, of which the following is a specification, reference being had to the accompanying drawing.

My invention relates particularly to sand traps for locomotive sanders in which the sand is driven by an air blast through a part of its course from a sand box or dome into and through the delivery pipe which extends to or nearly to the adjacent track rail, sanders of this type usually comprising a trap having a body within which is a sand-receiving chamber or compartment from which an air blast issuing from a nozzle carries the sand in a small stream diagonally upward against a deflecting member, the sand then falling by gravity and downward air movement into a delivery compartment from which it passes by gravity and in part by air movement into the delivery pipe.

The object of the improvement is to provide a sander which is easily manufactured and in which the deflecting member and the parts associated therewith are constructed for changes in position relative to each other to adapt them to longer use after they have been cut by the rising stream of sand, and whereby the deflecting member and associated parts may, when cut by the sand, be removed and new pieces put into their places.

As an example of a type of sanders to which this improvement is applicable I refer to the sander described in my application Ser. No. 683,394, filed March 12, 1912.

In the accompanying drawings, Figure 1 is an upright section through a portion of a sander embodying my improvement; Fig. 2 is a detail view illustrating the deflecting member; Fig. 3 is a plan of the cap and deflecting member, the nut and washers having been removed.

Referring to said drawings, A is the body of the sander. This has at its upper portion a hollow and open, cylindrical, interiorly screw-threaded neck, 1. The space within said neck communicates with the oblique blast passage, 2, and the gravity passage, 3, which leads to the discharge chamber, 4, from which chamber sand and air may pass through a discharge port, 5, to which is connected the usual delivery pipe (not shown). At the lower portion of the blast passage, 2, and axially in line with said passage is a nozzle, 6, through which a blast of air enters said blast passage and moves lengthwise through the latter until it impinges upon the deflecting member. Near the nozzle is the usual receiving port, 7, through which sand enters the body, A, to be caught by the stream of air issuing from the nozzle and carried by said stream to and against the deflecting member and fall from the latter into the gravity pasage, 3.

The cap, B, is screw-threaded into the neck, 1, and has a lateral flange, 8, bearing downward against the neck, 1. The cap has a hexagonal neck, 9, to be grasped by a wrench for turning the cap. In the upper portion of said neck is a relatively large circular cavity, 10, of sufficient depth to receive one or a plurality of washers, 11. The drawings show two such washers, the inner of which is of india rubber and the outer of which is metal. From said cavity downward the cap has a non-cylindrical or four-sided opening, 12. The lower face of the cap is concave and receives the convex upper portion or face of the concave deflecting member, C, which has a stem, 13, the inner portion of which is four-sided and the outer portion of which is screw-threaded, the four-sided portion resting in the four-sided opening of the cap and screw-threaded portion extending through the two washers, 11, and into a nut, 14. By means of said nut, the deflecting member is drawn into and against the lower portion of the cap and the two washers are pressed downward against the cap and against the four-sided portion of the stem, 13, whereby the joint between the neck and said four-sided portion is covered and sealed to prevent the escape of air from the interior of the sander and to prevent the flow of water into the sander.

If during the use of the apparatus it is found that the sand has cut a cavity into the deflecting member at one side of the axis of the latter, said member may be released, by removing the nut E^2, and the member then moved away from the cap until the four-sided portion of the stem is out of the four-sided opening of the cap. Then said deflecting member is turned one-fourth or half-way around and then again moved back

against the cap and the nut replaced and made tight. Then said deflecting member is adapted to longer use. This change is specially valuable when repair or adjustment is to be made while the locomotive is away from the repair shop.

If an opening should be cut through the deflecting member and the cap and also the washers, the deflecting member and each of the washers may be turned, the latter so as to bring its opening out of register with the opening in the washer and also out of register with the opening cut through the cap. By this means communication between the interior and the exterior of the sander is effectively cut off so that the apparatus can be longer operated.

I claim as my invention,

1. In an apparatus of the nature described, the combination of a body having a blast passage, a sand port leading into said passage, a nozzle leading into said passage, and a neck, a cap secured upon said neck, and a deflecting member applied to the inner face of said cap and having a stem detachably secured to said cap, substantially as described.

2. In an apparatus of the nature described, the combination of a body having a blast passage, a sand port leading into said passage, a nozzle leading into said passage, and a neck, a cap secured upon said neck and having a central opening, a deflecting member applied to the inner face of said cap and having a stem extending through said opening, and removable means for securing said stem, substantially as described.

3. In an apparatus of the nature described, the combination of a body having a blast passage, a sand port leading into said passage, a nozzle leading into said passage, and a neck, a cap secured upon said neck and having a non-cylindrical, central opening, a deflecting member applied to the inner face of said cap and having a stem conforming to said opening, and removable means for securing said stem, substantially as described.

4. In an apparatus of the nature described, the combination of a body having a blast passage, a sand port leading into said passage, a nozzle leading into said passage, and a neck, a cap secured to said neck and having a central opening, a deflecting member applied to the inner face of said cap and having a stem extending through said opening, means for sealing the joint between said stem and the adjacent portion of the cap, and means for securing said stem, substantially as described.

5. In an apparatus of the nature described, the combination of a body having a blast passage, a sand port leading into said passage, a nozzle leading into said passage, and a neck, a cap secured upon said neck and having a non-cylindrical, central opening, a deflecting member applied to the inner face of said cap and having a stem conforming to said opening, means for sealing the joint between said stem and the adjacent portion of the cap, and means for securing said stem, substantially as described.

6. In an apparatus of the nature described, the combination of a body having a blast passage, a sand port leading into said passage, a nozzle leading into said passage, and a neck, a cap secured upon said neck and having a central opening, a deflecting member applied to the inner face of said cap and having a stem extending through said opening, and a nut applied to said stem, substantially as described.

7. In an apparatus of the nature described, the combination of a body having a blast passage, a sand port leading into said passage, a nozzle leading into said passage, and a neck, a cap secured upon said neck and having a central opening, a deflecting member applied to the inner face of said cap and having a stem extending through said opening, and a washer and a nut surrounding said stem, substantially as described.

8. In an apparatus of the nature described, the combination of a body having a blast passage, a sand port leading into said passage, a nozzle leading into said passage, and a neck, a cap secured upon said neck and having a central opening, a deflecting member applied to the inner face of said cap and having a stem extending through said opening, and a plurality of washers and a nut surrounding said stem, substantially as described.

9. In an apparatus of the nature described, the combination of a body having a blast passage, a sand port leading into said passage, a nozzle leading into said passage, and a neck, a cap secured upon said neck having a central opening and a cavity larger than said opening, a deflecting member applied to the inner face of said cap and having a stem extending through said opening and said cavity, a washer surrounding said stem within said cavity, and a nut surrounding said stem, substantially as described.

10. In an apparatus of the nature described, the combination of a body having a blast passage, a sand port leading into said passage, a nozzle leading into said passage, and a neck, a cap secured upon said neck and having a central opening and a cavity larger than said opening, a deflecting member applied to the inner face of said cap and having a stem extending through said opening and said cavity, a plurality of washers surrounding said stem within said cavity, and a nut surrounding said stem, substantially as described.

11. In an apparatus of the nature described, the combination of a body having

a blast passage, a sand port leading into said passage, a nozzle leading into said passage, and a neck, a cap secured upon said neck and having its inner portion concave, and a deflecting member having a convex outer face extending into said cap and having a stem detachably secured to said cap, substantially as described.

In testimony whereof I have signed my name, in presence of two witnesses, this 10th, day of August, in the year one thousand nine hundred and twelve.

WALTER BASCOM ROGERS.

Witnesses:

CYRUS KEHR,

ROY O. JOHNSTON.