

J. E. BAUMBERGER.
ATTACHMENT FOR LOCOMOTIVE SANDING APPARATUS.
APPLICATION FILED OCT. 17, 1911.

1,037,106.

Patented Aug. 27, 1912.

Fig. 1.

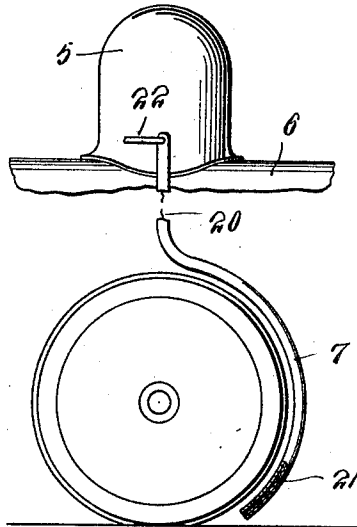


Fig. 2.

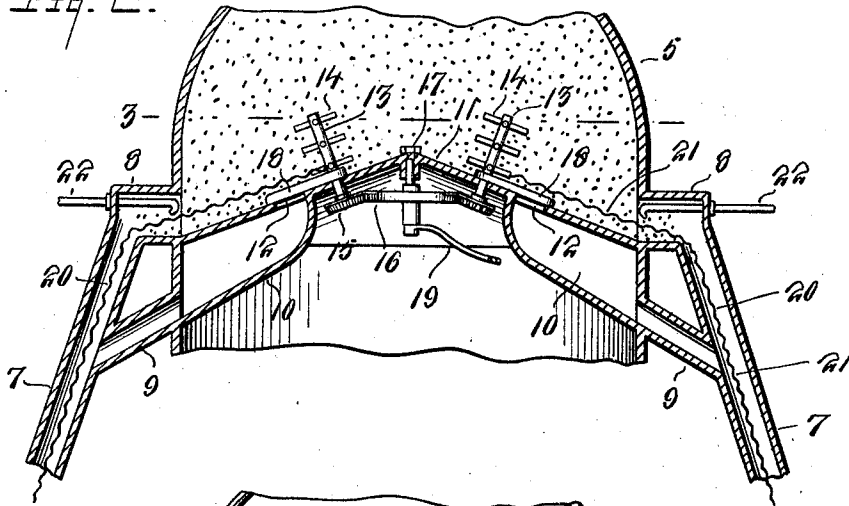
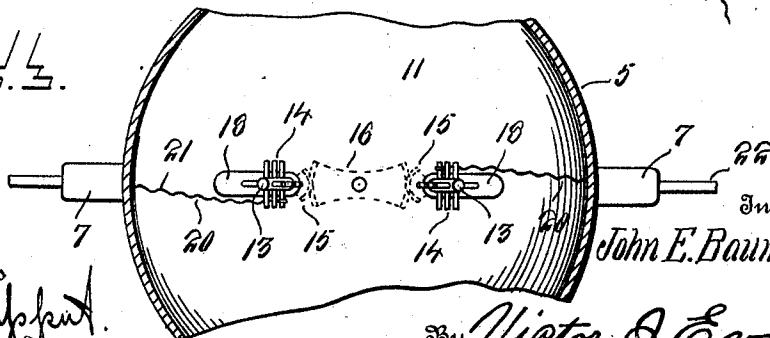


Fig. 3.



Witnesses
E. Q. Ruppert.
John A. Dwyer.

Inventor
John E. Baumberger
By Victor J. Evans
Attorney

UNITED STATES PATENT OFFICE.

JOHN E. BAUMBERGER, OF ASHEVILLE, NORTH CAROLINA.

ATTACHMENT FOR LOCOMOTIVE SANDING APPARATUS.

1,037,106.

Specification of Letters Patent.

Patented Aug. 27, 1912.

Application filed October 17, 1911. Serial No. 655,096.

To all whom it may concern:

Be it known that I, JOHN E. BAUMBERGER, a citizen of the United States, residing at Asheville, in the county of Buncombe and State of North Carolina, have invented new and useful Improvements in Attachments for Locomotive Sanding Apparatus, of which the following is a specification.

The general object of the invention is to prevent clogging of the sand traps or sand delivery tubes, of a locomotive with any material, such as caked sand. And to this end the invention consists in a bodily movable breaker partially located within the sand dome and sand delivery tube or sand trap on either side of the locomotive and adapted to dislodge hard obstructions passing from the dome into the traps or pipes, or cut the sand cakes which are formed invariably by the heated boiler when damp sand is placed into the sand dome.

Other objects will appear and be better understood from the following description taken in connection with the accompanying drawings, in which,

Figure 1 is a diagrammatic view of a portion of a locomotive showing one of the sand delivery tubes partly in section and with my device applied thereto. Fig. 2 is a vertical cross section showing fragments of the sand dome and delivery tubes and my improved device connected with the mechanism for agitating the sand. Fig. 3 is a fragmentary sectional plan view on the line 3—3 of Fig. 2.

The dome 5 for the sand is arranged as usual on the top of the boiler 6 and the delivery tubes 7—7 extend in the ordinary manner from the dome 5 to points adjacent the track rails.

8—8 indicate elbows which connect the upper ends of the delivery tubes 7—7 with the dome 5 and 9—9 indicate by-pass tubes which connect the delivery pipes 7—7 with the traps 10—10 arranged below the floor 11 of the dome 5. The sand dome 5 has its flooring 11 downwardly and outwardly inclined in opposite directions from its central point and communicating at opposite sides of the dome with delivery tubes 7.

12—12 indicate passages in the floor 11 and through which communication is established between the dome and traps.

13—13 indicate the agitator shafts which have the agitator arms 14—14 which, when oscillated through the agency of the friction

gears 15 and 16 connected respectively to the shafts 13 and 17, serve to agitate the sand and impart motion to the same, whereby, to enable it to pass through the elbows 8 and into the delivery tubes 9 and through the passages 12 when the slides 18—18 connected to the shafts 13—13, uncover the said passages 12—12.

19 indicates a crank for oscillating the shaft 17 and the crank is connected to suitable mechanism (not shown) which is operated either manually or mechanically usually in the cab of the engine (not shown).

The foregoing is descriptive of well-known forms of sand domes, delivery tubes, and sand agitating mechanism and is given simply to enable those skilled in the art to readily understand one application of my invention about to be described. Therefore, it will be understood that I do not intend to limit myself to the several structures shown in the drawings and herein described, for the reason that my device may be employed with any of the well-known forms of track sanding apparatus.

20—20 indicate the breakers which are preferably, though not necessarily, formed of stout steel wire and partially arranged in the dome 5 and delivery tubes 7—7. The breakers 20—20 are bent to follow the configuration of the tubes 7—7 and in the form shown in Fig. 3 are bent so as to extend through the elbows 8—8 and into the dome 5 where they are connected in any suitable manner with the sand agitating mechanism. In the form shown in the drawings the breakers 20—20 extend completely through the delivery tubes 7—7 as shown in Fig. 1. This arrangement, of course, is not essential and may not be adhered to in certain types of sanding apparatus for the reason that the disposition of the tubes 7—7 will not permit of the breakers extending completely therethrough. In all cases, however, the breakers will extend from the interior of the dome into at least a part of the delivery tubes. The breakers 20—20 are by preference, rendered sinuous and corrugated throughout, as indicated at 21 so that when they are moved endwise these corrugations will cut the cakes of sand with which they contact, either in the dome or delivery tubes 7—7.

The sanding apparatus shown in the drawings is known as the combined gravity and blast type. The gravity feed is con-

trolled by the elements 18—18 and the compressed air pipes 22—22 which extend horizontally through the elbows 8—8, direct the air outwardly through the elbows and into the pipes 7—7 and the blasted air thus creates a partial vacuum in the dome and forces the sand through the tubes 7—7. In this connection it will be observed that the air pipes 22—22 extend well into the elbows 7—7 so that whatever sand passes into the elbows will move into the path of the blast from the pipes, thus additionally insuring against clogging in the elbows.

What I claim as new is:

1. In a device of the class described, the combination with a sand dome having a bottom which inclines downwardly and outwardly in opposite directions from its central point and communicating with delivery pipes connected to the opposite sides of the said sand dome, of a movable breaker extending from the interior of the sand dome into the connection between the sand dome and delivery pipe, and means for actuating the breaker.

2. In a device of the class described, the combination with a sand dome having a bottom which inclines downwardly and outwardly in opposite directions from its central point and communicating with delivery pipes, and sand traps connected with opposite sides of the sand dome; of a reciprocating breaker extending from the interior of the sand dome into the sand traps and delivery pipes, and means for actuating the breaker.

3. In a device of the class described, the combination with a sand dome having a bot-

tom which inclines downwardly and outwardly in opposite directions from its central point and communicating with a delivery pipe, of a movable breaker comprising a corrugated body extending in opposite directions into the interior of the sand dome in a plane parallel with a portion of its bottom and into the delivery pipe, and means for actuating the breaker.

4. In a device of the class described, the combination with a sand dome having a bottom which inclines downwardly and outwardly in opposite directions from its central point, a sand agitator located in the said inclined bottom, and a delivery pipe communicating with opposite sides of the sand dome; of a breaker extending in opposite directions within the interior of the sand dome in a plane parallel with a portion of its bottom and connected with the agitator.

5. In a device of the class described, the combination with a sand dome having a bottom which inclines downwardly and outwardly in opposite directions from its central point and communicating with delivery pipes connected to the opposite sides of the said sand dome, of a movable, corrugated breaker extending from the interior of the sand dome into the connection between the sand dome and delivery pipe, and means for actuating the breaker.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN E. BAUMBERGER.

Witnesses:

JOHN A. DONEGAN,
BENNETT S. JONES.