C. F. KABISIUS.

PNEUMATIC SANDER.

APPLICATION FILED MAY 10, 1909.

933,991. Patented Sept. 14, 1909.

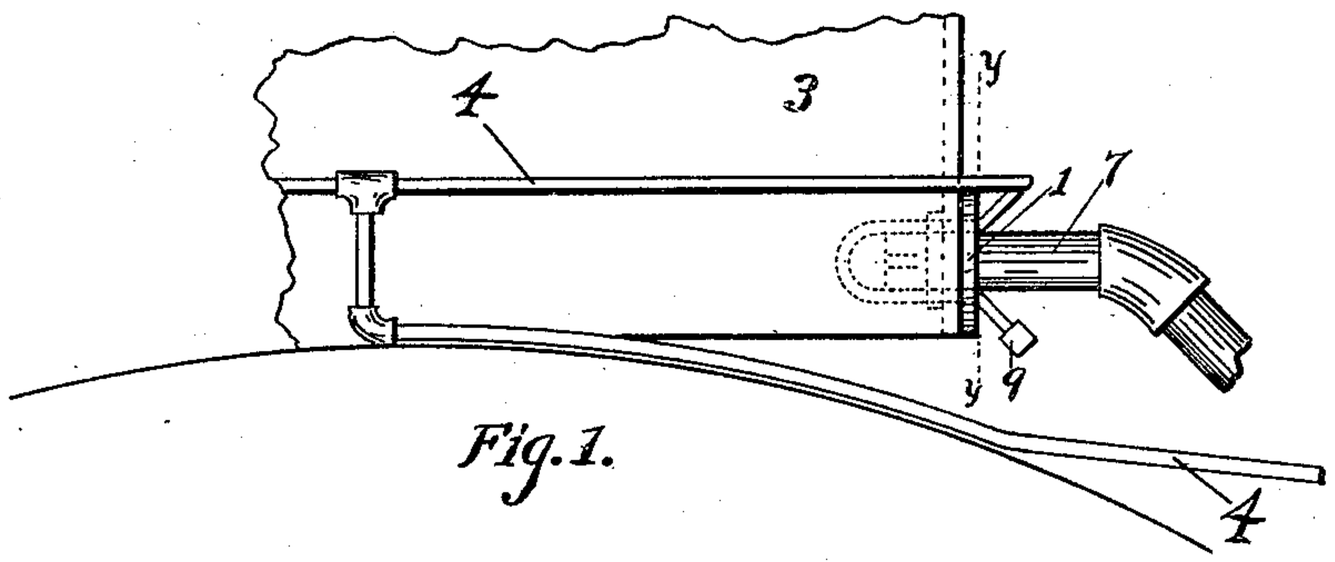

Fig. 1.

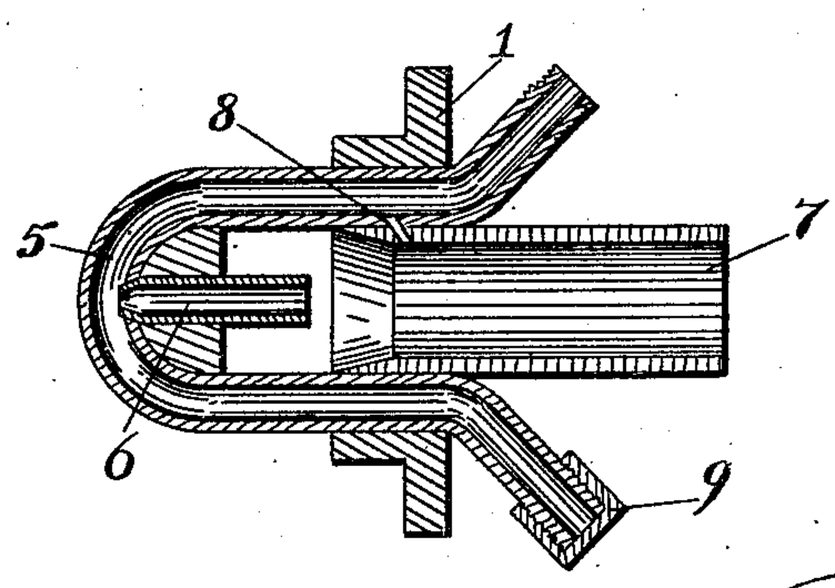

Fig. 2.

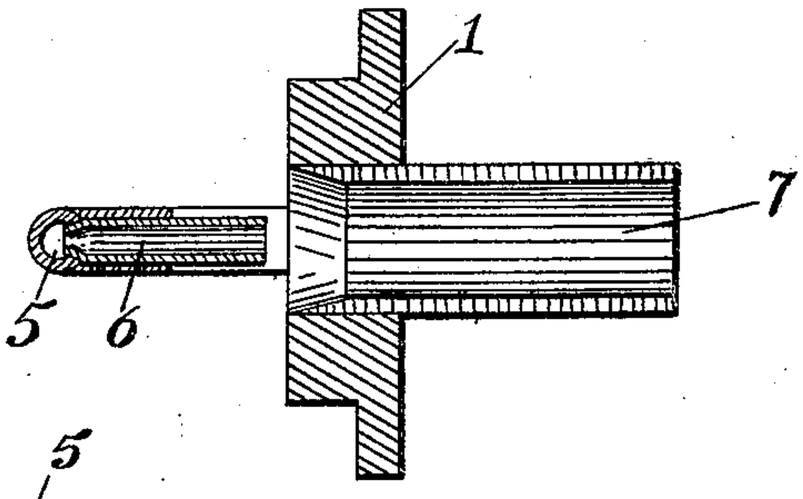

Fig. 3.

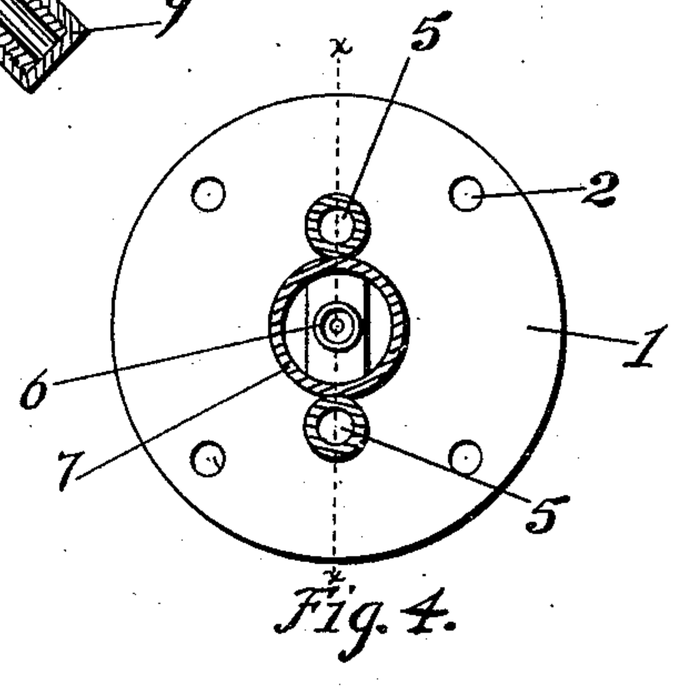

Fig. 4.

Witnesses
Jas. F. Simmons
J. J. Bowen

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UNITED STATES PATENT OFFICE.

CHARLES F. KABISIUS, OF SALT LAKE CITY, UTAH.

PNEUMATIC SANDER.

933,991. Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed May 10, 1909. Serial No. 495,180.

To all whom it may concern:

Be it known that I, CHARLES F. KABISIUS, a citizen of the United States, residing at Salt Lake City, in the county of Salt Lake and State of Utah, have invented certain new and useful Improvements in Pneumatic Sanders, of which the following is a specification.

The purpose of my invention is to provide a device for blowing the sand from a sand box into the sand pipe of a locomotive, that is compact in form, economical in construction, and that will not get out of order or clog. It is placed within the sand box on the boiler where all possibility of moisture is excluded, and sand cannot become packed, and is one that will use any grade or size of sand that will pass through a sand pipe. These objects I attain by the device illustrated in the accompanying drawing in which similar figures of reference indicate like parts.

Figure 1 is an elevation of the device as attached to the sand box, the parts within the box dotted in. Fig. 2 is a vertical section on line *x x* Fig. 4. Fig. 3 is a horizontal section. Fig. 4 is a front elevation on line *y y* Fig. 1.

A base 1, is fitted with holes 2, for convenience in attaching to the exterior of the sand box 3, on the boiler of the locomotive. This base insures stability. Screwed thereon or formed integral therewith is a vertically placed U-shaped pipe or chambered member 5, each arm of which is threaded, to one arm of which is screwed the air pipe 4, and the other is detachably plugged or capped by the cap 9. A portion of the inclosed space of said member 5 is preferably formed heavier than the arms of said member. This part is tapped by a passage way 6, parallel to the arms of the U-shaped member 5, which passage way connects by a cone-shaped orifice with the pipe or chamber of said member 5; the purpose being to allow the air to pass therethrough. This cone-shaped form of the connection with the air passage through the U-shaped member insures that nothing will lodge therein or obstruct the air. If desired this passage way 6 may be simply a pipe tapping the U-shaped member at said point with the interior of said pipe, cone-shaped at the connection. This will insure the same unobstructed air passage therethrough. In alinement with the said passage way 6, or pipe, if so constructed, and a short distance from the outer end thereof, and firmly attached to said base 1, is a sand pipe 7. The interior opening of said sand pipe 7 is larger than the passage way 6, and the entrance thereto is chambered funnel shaped.

From the upper arm of the member 5, and connected with the interior of said sand pipe 7 near the end of the chambering therein, is provided a smaller air passage or starting jet 8, which is formed slanting or at an angle in the direction of the air in said sand pipe 7. The purpose of this starting jet is that if the sand should, by settling, enter and close the entrance to the sand pipe, air would be forced through the starting jet and cut said sand away, so that the obstruction to the air entering the sand pipe 7, through the passage way 6, would be removed. Should any scale, rust or other matter lodge on the opening or in any way impede the air therethrough at the cone-shaped entrance of the passage way 6, the cap or closure 9 on the lower arm of the U-shaped member is removed, and the obstruction is easily blown out therethrough, and without losing or wasting sand. The amount of air supplied through the passage way 6 controls the amount of sand delivered into the sand pipe; a light charge of air would move but a small amount of sand, and a heavy charge of air would move a large amount of sand.

Having thus described my device, I desire to secure by Letters Patent, and claim

1. In a pneumatic sander the combination of a base, a vertically placed U-shaped member secured thereto, a passage way leading therefrom parallel to the arms of said member, with a sand pipe secured to said base in alinement with said passage way, and an angled connection between the upper arm of said U-shaped member and said sand pipe, as and for the purposes described.

2. The combination with a sand box of a locomotive, of an air pipe, a sand pipe, with a U-shaped member secured to said sand box, a passage way connected therewith by a cone shaped orifice between the arms of said U-shaped member and parallel thereto, and in alinement with the end of said sand pipe, and an angled connection from one arm of said U-shaped member into said sand pipe, as and for the purposes described.

3. The combination with the sand box of a locomotive, of a sand pipe, an air pipe with a U-shaped member secured thereto, a

passage way connected therewith by a cone shaped orifice and located between the arms of said U-shaped member and parallel thereto, and in alinement with the end of said sand pipe, and an angled connecting air passage from one arm of said U-shaped member to said sand pipe, as and for the purposes described.

4. In a pneumatic sander the combination of a U-shaped air pipe, a passage way leading therefrom parallel to the arms of said air pipe, with a sand pipe the end of which is in alinement with said passage way, and an angled air passage from one arm of said U-shaped air pipe to said sand pipe, as and for the purposes described.

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

CHARLES F. KABISIUS.

Witnesses:

Jos. F. Simmons,

J. J. Corum.