(No Model.)

A. S. HOTCHKISS.

INSECT POWDER DISTRIBUTER.

No. 493,587. Patented Mar. 14, 1893.

Fig. 1.

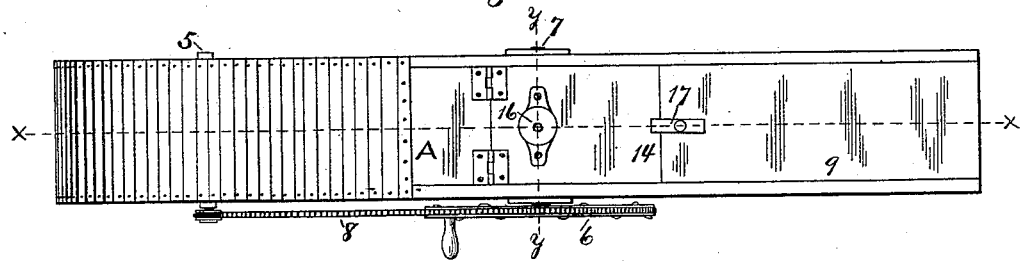


Fig. 2.

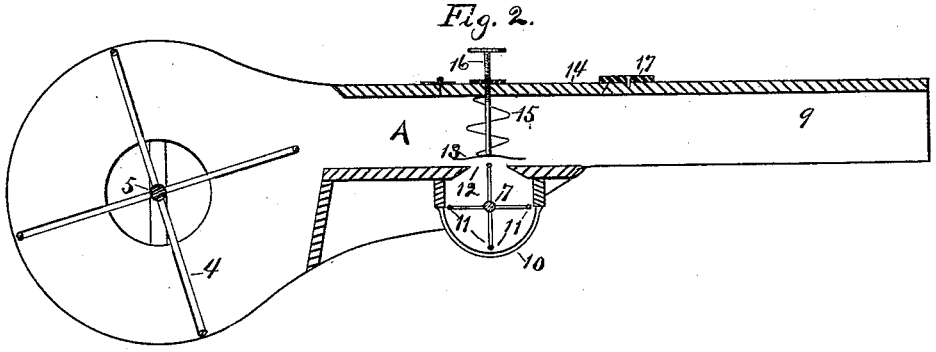


Fig. 3.

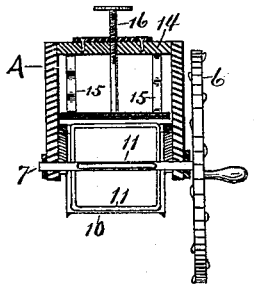
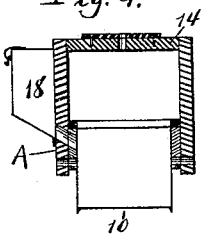


Fig. 4.



WITNESSES.

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INSECT-POWDER DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 493,587, dated March 14, 1893.

Application filed November 2, 1892. Serial No. 450,743. (No model.)

To all whom it may concern:

Be it known that I, ALBERT S. HOTCHKISS, a citizen of the United States, residing at Wallingford, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Insect-Powder Distributers, of which the following is a specification.

My invention relates to improvements in insect powder distributers; and the objects of my improvement are general convenience and efficiency, and in particular to provide a distributer that will operate efficiently with various kinds of powdered material.

In the accompanying drawings, Figure 1 is a plan view of my distributer. Fig. 2 is a sectional view of the same on the line *x x* of Fig. 1. Fig. 3 is a transverse section on the line *y y* of Fig. 1, the central parts being in elevation, and Fig. 4 is a like view of the frame or body with a reservoir attached.

My machine is of the class having a fan wheel, a powder receptacle and means for feeding the powder into the blast of the fan wheel. Machines of this general class are old and well known. The frame or body A is of a box like form with an enlargement or fan chamber at one end for the fan wheel 4 of any ordinary construction, the same being mounted on the shaft 5 and driven by any ordinary or suitable driving device, as for instance, the hand wheel 6 on the shaft 7 and a chain 8 or other known means of connection and communication with the shaft 5. The other end of the frame terminates in the form of a chute or discharge tube 9. Underneath the chute 9 is a powder receptacle 10 through which the shaft 7 of the hand wheel passes. Upon this shaft inside the receptacle 10, I arrange take up arms 11 which in their lowermost position extend nearly to the bottom of the receptacle and which as they revolve are brought up about level with the underside of the chute 9 in a suitable opening 12 provided for them as shown in Fig. 2. Immediately over the opening 12 in the bottom of the chute, I arrange a regulator plate and cover 13 and I provide means for bringing this down so as to cover the opening or to hold said cover at any desired elevation therefrom. The particular means for so doing are not essential to the main feature of my invention. I connect this cover or regulator plate 13 with the upper part of the chute, preferably on the door 14, by means of two springs 15 which have a constant tendency to draw this cover or plate away from the opening 12. I also provide said cover or plate with an adjusting screw rod 16, by the turning of which the plate or cover 13 may be depressed and held down at any desired point so as to fully close the opening 12 or leave it partially open, the adjusting screw rod serving to press the plate downwardly and the springs acting to move it in the reverse direction. The door 14 is hung on any ordinary hinges and provided with a button 17 or other fastening device to hold it in its closed position. When the door 14 is opened, the cover or regulator plate 13 is wholly removed from in front of the opening 12 in the receptacle so that the receptacle may be filled with the desired powder for distribution. The operator then points the chute in the desired direction and turning the hand wheel to impart motion to the fan creates an air blast through the chute. The take up arms 11, 11 are also driven while turning the fan wheel, thereby taking up small quantities of the powder and bringing it in reach of the air blast passing through the chute, whereby it is finely and evenly distributed and discharged therefrom. By setting the cover or regulator plate 13 a greater or less distance from the opening 12, the quantity of powder distributed may be regulated as desired. When not in use, the adjusting screw rod 16 may be turned to bring down the plate 13 and fully close the receptacle so as to prevent the powder from wasting, in case the distributer is turned over sidewise or bottom side up. The receptacle can be replenished from time to time as may be desired which can be done so conveniently that a reservoir is not essential. If desired, however, a reservoir 18 may be placed upon one side of the frame so as to discharge into the receptacle 10 as shown in Fig. 4, thereby enabling the machine to distribute a larger quantity of powder with once loading.

Suitable handles or attachments or carrying straps of any ordinary construction may

be applied to the machine, but the same are not essential to my improvement.

The cover or regulator plate may be omitted if desired, the machine being operative without it.

By my improvement various kinds of powdered material may be evenly and effectually distributed.

The machine is convenient to use, easily loaded and by arranging the powder in a receptacle underneath the chute and lifting it up to the air blast by the take up arms, the machine may be used and operated efficiently when the chute is pointed obliquely upward as well as when it is held horizontally.

I claim as my invention—

1. The combination of the frame or body having a fan chamber and chute; means for creating an air blast therethrough; the separate receptacle 10 opening into the underside of the chute but located outside and below of the air blast therethrough and the take up arms mounted to move from the lower part of the receptacle into the blast through the chute, substantially as described and for the purpose specified.

2. The combination of the frame or body having the fan chamber and chute, devices for forcing air therethrough; the separate receptacle underneath the chute having the connecting opening, the take up arms working therein, and the adjustable cover or regulator plate 13, over said connecting opening between said receptacle and chute substantially as described and for the purpose specified.

3. The combination of the frame or body having the chute 9 and receptacle 10 provided with the opening 12, devices for distributing or taking up the material, the door 14 arranged over said opening and having the adjustable plate or cover 13 mounted thereon, substantially as described and for the purpose specified.

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