

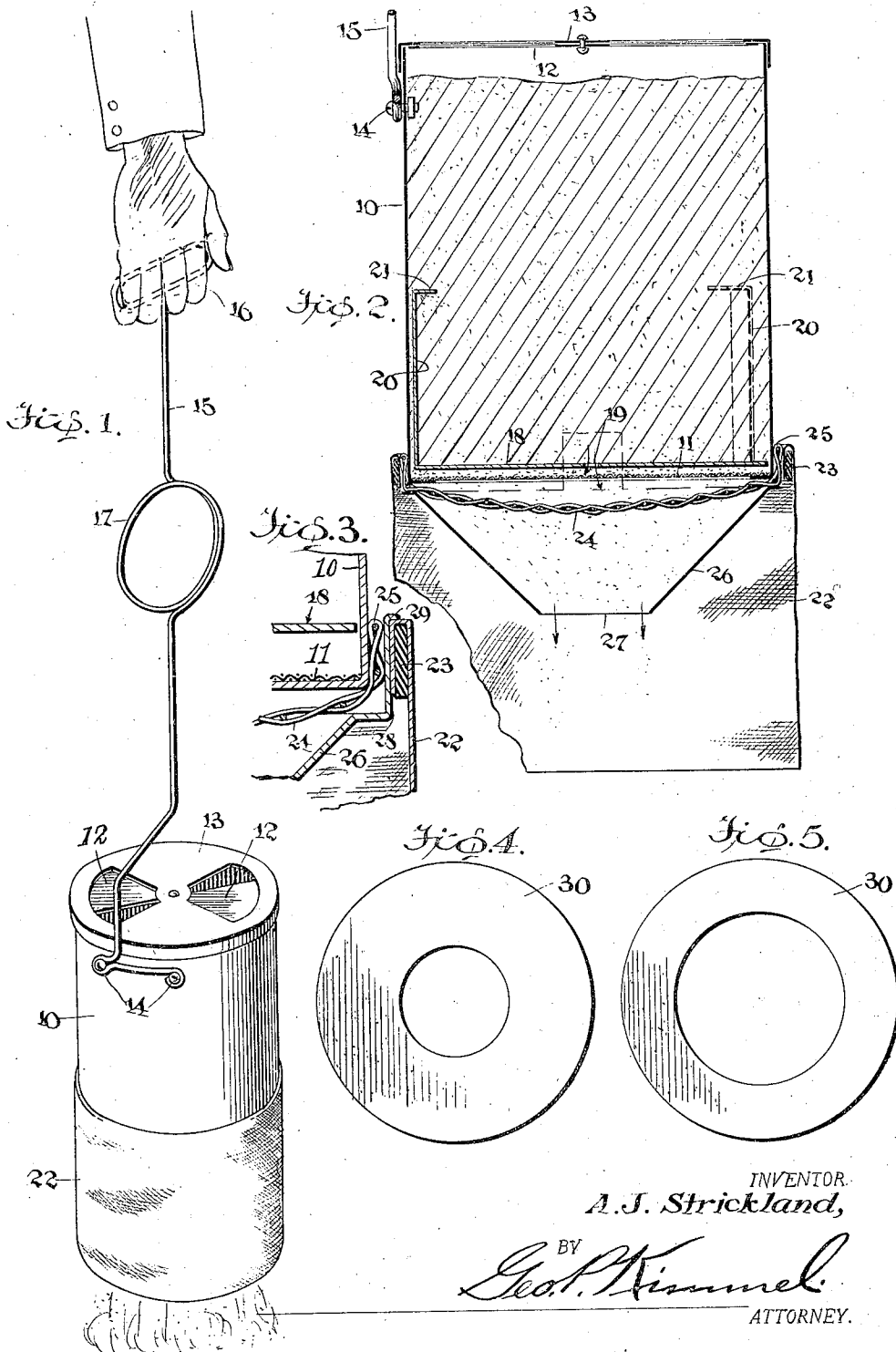
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INSECT DESTROYER

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INSECT DESTROYER.

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To all whom it may concern:

Be it known that I, ALLAN J. STRICKLAND, a citizen of the United States, residing at Valdosta, in the county of Lowndes and State of Georgia, have invented certain new and useful Improvements in Insect Destroyers, of which the following is a specification.

This invention relates to poison dust distributors, and has for one of its objects to increase the efficiency and improve the construction of devices of this character, and includes a container with means whereby the poison in dust or finely divided condition is disseminated by merely agitating the container, vertically.

Another object of the invention is to provide a device of this character having means for controlling the discharge from the container.

Another object of the invention is to provide a device of this character including a resilient holder or handle for the container whereby the efficiency of the agitation is increased, and the amount of fatigue to the operator is reduced.

With these and other objects in view, the invention consists in certain novel features of construction as hereinafter shown and described and then specifically pointed out in the claims, and in the drawings illustrative of the preferred embodiment of the invention.

Figure 1 is a perspective view of the improved implement.

Fig. 2 is an enlarged sectional elevation.

Fig. 3 is an enlarged sectional detail illustrating the construction of the coupling between the container and the protecting and guiding devices.

Figs. 4 and 5 are detached plan views of the discharge reducing members.

The improved device includes a container for the poison element, in powdered or otherwise finely divided condition, and represented as a whole at 10 and with a screen 11 forming its bottom. The top of the container is formed with an air inlet opening, for instance, radially arranged as represented at 12, and with a rotating closure 13. By this means, the sizes of the openings may be controlled to correspondingly control the amount of air admitted to the container.

Attached at 14 to the container is a handle 15 terminating at the upper end in a hand grip 16 and turned into one or more coils 17

intermediate the ends. The distributing is accomplished by rapidly moving the container vertically through the action of the handle, and the resilient coils 17 materially increases the efficiency of the agitation and also renders the action less fatiguing to the operator.

Loosely disposed within the container is an agitator plate 18 having a relatively small aperture 19, preferably at the center, and with a plurality of vertical guards or stops 20 intumed at their upper ends as at 21. The plate 18 is smaller than the interior of the container, and thus operates loosely within the powdered poison element, and agitates the same as the container is rapidly moved up and down by its handle 16, the bars 20—21 preventing the overturning of the plate during the operation. When the container is actuated by rapidly moving it upwardly and downwardly, the finely divided poison element is caused to pass in a relatively thin stream through the aperture 19 and also between plate 18 and container and upon the screen 11 and thereby evenly distributed.

Surrounding the container 10 at its lower end and depending below the same, is a flexible hood or guard 22 of rubber cloth or the like and held in place upon the container by a band 23 of rubber or the like.

The hood or guard effectually prevents the poison dust from being blown about by the wind, and insures its confinement to the plants being treated.

The band 23 enables the hood member to be easily attached or detached, or turned up around the container when not required.

Extending across the container beneath the screened portion, is a guard element 24, preferably of relatively coarse wire screen material, and with upturned portions 25 extending between the band 23 and the body of the container, and thus held in place on the container together with the hood 22.

The member 24 thus serves to protect the screen 11 from contact with the branches or leaves of the plants being treated.

When employed for "dusting" relatively large plants, the device thus far described is complete, but when used for dusting smaller plants, a concentrating device will be attached in addition to the hood 22 and guard 24 and consisting of a conical-shaped member represented as a whole at 26 and including converging sides and a reduced dis-

charge 27. The member 26 is formed with upturned portions 28 slightly outturned at the upper ends, as shown at 29, to be engaged by the band 23 together with the portions 25 of the guard 24 and the fold of the hood 22. The outturned portions 29 bear over the fold of the hood and are thus prevented from downward displacement.

A plurality of annular plates such as those shown at 30 in Figs. 4 and 5 with various sized openings, will be furnished with each device, the plates adapted to be disposed within the container and upon the screen bottom of the container, to cover a part of the screen 11, and reduce the discharge area of the same, when a reduced "dusting" is required.

The improved device may be employed in treating plants of various species, but is more particularly adapted to the treatment of the cotton plant to destroy boll weevils, but it is not desired to limit the use of the device to any particular plant.

The plants are treated or "dusted" several times during their growth. At the first treatment when the plants are small or in the budding period, the member 30 having the smallest opening, and the concentrator member 24 will be attached, so that the amount of the "dust" which is discharged will be limited and concentrated upon the relatively small buds. Then at the next "dusting" after the growth has increased, the member 30 having the larger opening will be substituted, to enable a greater area to be "dusted." Then as the growth increases the members 24 and 30 will be detached and the full dusting surface utilized.

The improved device is thus readily adaptable to all sizes and conditions of plants.

As the container is moved rapidly downward, the agitator 18 displaces the poison material and causes a portion to be forced through the small opening 19 and also between agitator 18 and container and upon the screen and thence upon the plants, and at the downward stroke the agitator causes a strong current to pass through the screen and effectually clears the same and prevents clogging. The upward stroke also causes an upward suction with the same beneficial results. Thus by rapidly moving the agitator member upwardly and downwardly through the material by the upward and downward movement of the container the material is set in rapid motion and also small particles pulverized and placed in condition to pass through the screen.

The rapid upward and downward motion of the container causes a free flow through the screen and pulverizes any small lumps in the "dust." The relatively small aperture 19 causes a strong flow through the center of the screen which is deposited directly on

the bud of the plant where it is most needed and in greater quantity than on the surrounding leaves.

The "dust" is deposited exactly on the plant and practically none between the plants; thus effecting a large saving in the quantity of the poison material.

The improved device is simple in construction, can be constructed of any suitable material and any size or capacity.

The preferred embodiment of the invention is disclosed in the drawings and set forth in the specification, but it will be understood that modifications within the scope of the claims may be made in the construction without departing from the principle of the invention or sacrificing any of its advantages.

Having thus described the invention, what is claimed as new is:—

1. In a poison dust distributor, a dust container having a screen bottom, an agitator member loosely disposed within said container and having an orifice for the passage of the dust when the container is agitated vertically, said agitator member having a plurality of arms directed upwardly therefrom and operating to prevent the agitator member from overturning within the container.

2. In a poison dust distributor, a dust container having a screen bottom, an agitator member loosely disposed within said container and having an orifice for the passage of the dust when the container is agitated vertically, a holding rod attached at one end to the said container and with a resilient element intermediate the ends.

3. In a poison dust distributor, a dust container having a screen bottom, an agitator member loosely disposed within said container and having an orifice for the passage of the dust when the container is agitated vertically, air inlet openings in the top of the container, and a movable closure for said opening operative to control the size of the same.

4. In a poison distributor, a dust container having a screen bottom, a foraminous protector having upturned portions engaging the sides of the container, a concentrating member having a plurality of upwardly directed portions engaging the sides of the container, and a holding band encompassing the container and the upturned portions of the protector, and the concentrator.

5. In a poison dust distributor, a dust container having a screen bottom, an agitator member loosely disposed within said container and having an orifice for the passage of the dust when the container is agitated vertically, and a hood of flexible material attached to the container and extending below the lower line of the same.

6. In a poison dust distributor, a dust con-

tainer having a screen bottom, and agitator member loosely disposed within said container and having an orifice for the passage of the dust when the container is agitated
5 vertically, a hood of flexible material embracing the container, and a resilient band bearing around the container and the hood member.

7. In a poison dust distributor, a dust container having a screen bottom, an agitator member loosely disposed within said container and having an orifice for the passage of the dust when the container is agitated
10 vertically, a hood of flexible material embracing the container, a resilient band bearing around the container and the hood mem-
15 ber.

ber, and a foraminous protector attached to said container below the screen.

8. In a poison dust distributor, a dust container having a screen bottom, an agitator member loosely disposed within said container and having an orifice for the passage of the dust when the container is agitated
20 vertically, a hood of flexible material embracing the container, a resilient band bearing around the container and the hood member, a foraminous protector attached to said container below the screen, and a concentrating member suspended from the container.
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In testimony whereof, I affix my signature
30 hereto.

ALLAN J. STRICKLAND.