C. H. LEGGETT.

INSECTICIDE DISTRIBUTER.

APPLICATION FILED JULY 22, 1907.

916,728.

Patented Mar. 30, 1909.

2 SHEETS—SHEET 1.

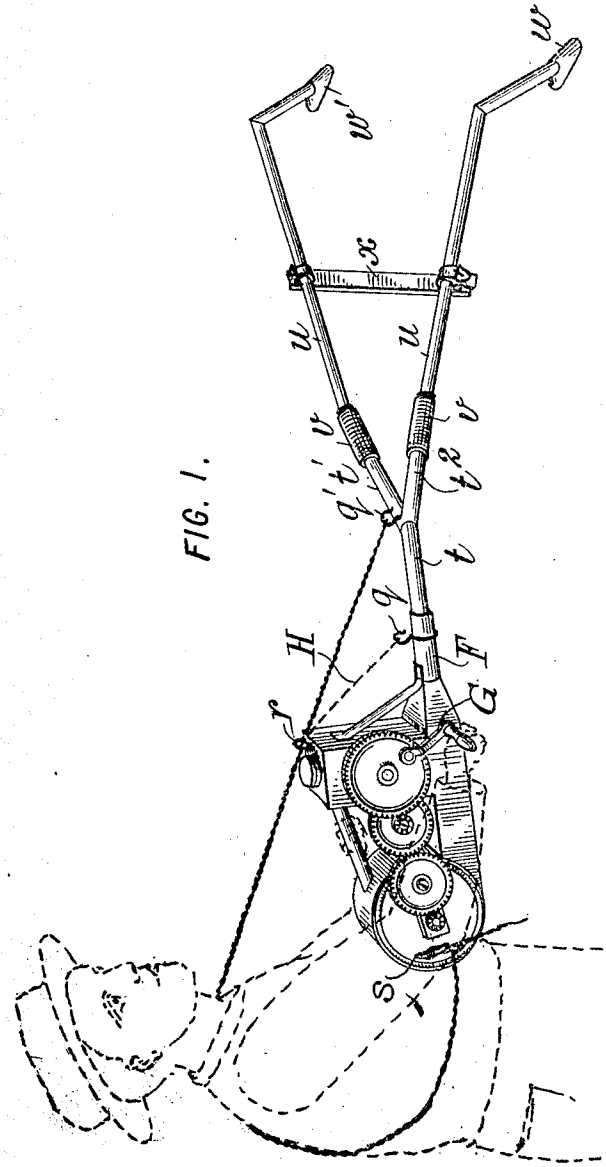


FIG. 1.

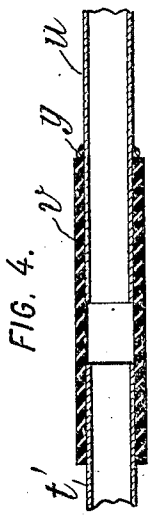


FIG. 4.

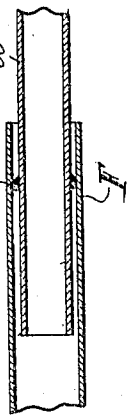


FIG. 5.

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2 SHEETS—SHEET 2.

FIG. 2.

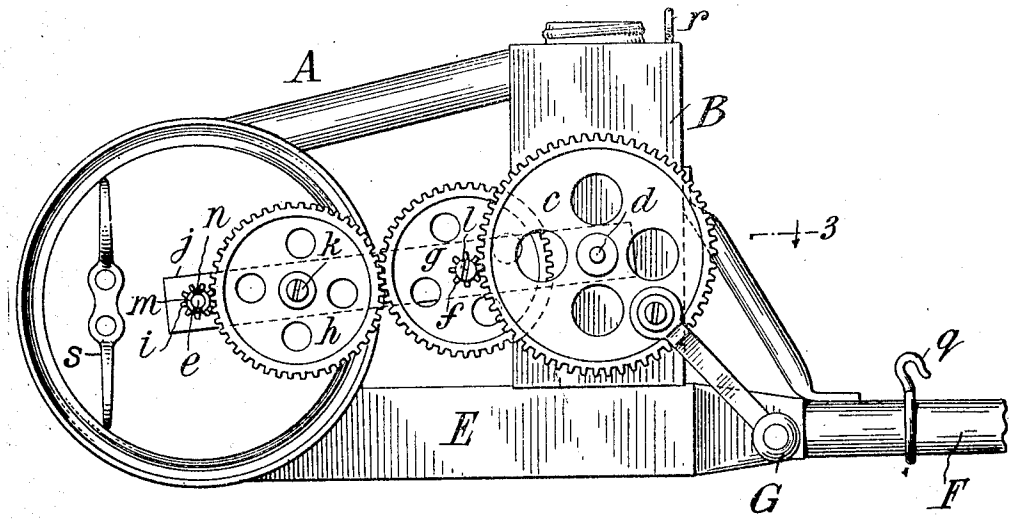


FIG. 3.

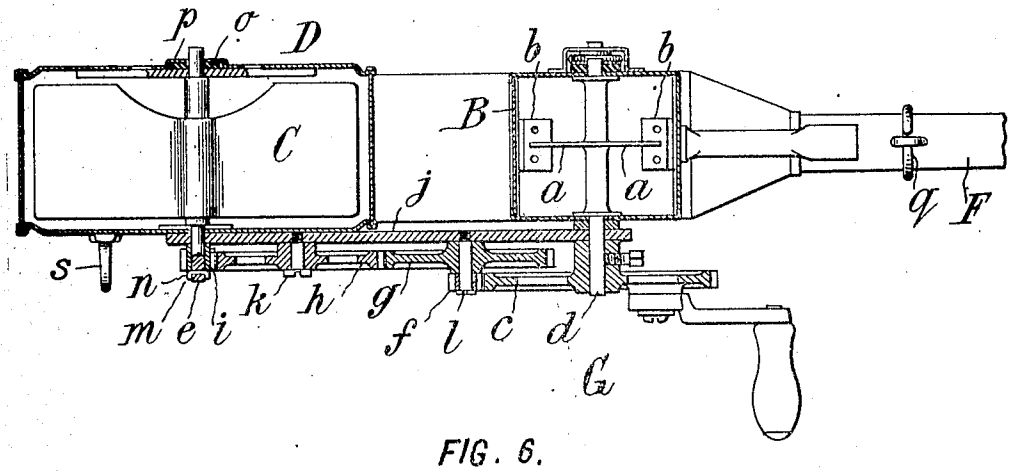


FIG. 6.



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UNITED STATES PATENT OFFICE.

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INSECTICIDE-DISTRIBUTER.

No. 916,728. Specification of Letters Patent. Patented March 30, 1909.

Application filed July 22, 1907. Serial No. 385,079

To all whom it may concern:

Be it known that I, CLINTON H. LEGGETT, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Insecticide-Distributers, of which the following is a specification.

This invention relates to insecticide distributers and is particularly directed to portable distributers adapted to be carried by the operator.

The object of the present invention is to provide a cheap and simple distributer which is adapted to distribute the insecticide in powdered form over several rows of plants; which is adjustable to alter the distance between the distributing nozzles so that rows of different distances apart may be dusted; and which is provided with a means whereby it may be easily carried, so as to render it particularly adapted for manual use.

In the drawings, wherein I have shown a form of my invention, Figure 1 is a perspective view of the machine showing the manner in which it is carried by the operator. Fig. 2 is an enlarged side elevation with the distributing nozzles removed. Fig. 3 is a horizontal section taken approximately on the line 3—3 in Fig. 2. Fig. 4 is a section of one of the pipe connections in one position. Fig. 5 is a similar section in another position. Fig. 6 is a detail of the connection between the pinion and its shaft.

Referring to the drawings the distributer A comprises a reservoir B for the powder, and a fan C rotating in a casing D which is connected with the air passage E passing beneath the reservoir B and terminating in the nozzle F. These parts are in general of the usual construction.

In the reservoir B is mounted an agitator having arms *a a* carrying blades *b b*, which are adapted to brush the powder across suitable apertures in the bottom of the reservoir in the well-known manner. The operating handle G is mounted upon a gear *c* fixed directly to the shaft *d* of the agitator as best seen in Fig. 3. The power is transmitted to the fan shaft *e* by gears *f*, *g*, *h* and *i*.

It is an advantage to avoid the use of sprocket chains or belts in distributers of this kind, and this is accomplished in the present construction without undue friction by introducing a gear such as *h* which serves merely to transmit power from the gear *g* to the gear *i*.

In order to avoid unnecessary friction and weight it is desirable that the distance between the fan and the reservoir be shortened as much as possible. In the construction shown this is done with the effect that only a single transmission gear *h* is required. I preferably provide a single plate *j* to form a bearing or support for all of the shafts used on the device; such plate extending from the fan casing to the reservoir, as shown in Fig. 3. This plate forms a bearing for the fan shaft and agitator shaft and a support for screw-threaded studs *k* and *l* for the gears *f*, *g* and *h*. The gear *i* is preferably provided with a notched extension *m* which is designed to receive a cotter pin *n* which passes through a hole in the shaft *e* (see Fig. 6). This construction avoids the necessity of squaring or feathering the shaft and gear and at the same time provides a secure nonrotative connection which is capable of being disengaged without difficulty.

In devices of this kind considerable trouble is sometimes found in keeping the bearings of the agitator and fan shafts lubricated. The cheapness of construction of the device prohibits the use of means which may be effectively employed in other connections. I have found that if a small piece of leather such as *o* be held in place around the ends of the shafts and occasionally well supplied with oil, a continuous and proper lubrication of the shafts can be obtained. I preferably provide a strap of metal *p* to hold the latter in place.

My invention includes a very simple means for supporting the distributer upon the person of the operator. This means, as indicated in Fig. 1, comprises a flexible member such as the rope H which is provided with an eye at one end adapted to engage a hook *q* fastened to the discharge nozzle F of the distributer. The rope H is then led through an eye *r* on the top of the reservoir and passed over the left shoulder of the operator, and thence downwardly under his right arm and is there fastened to a cleat or other similar device *s* fixed to the fan casing. By this means the distributer is held very firmly in its proper position with its fan casing resting against the front of the operator. The connection of the rope H with the reservoir by means of the eye *r* prevents any lateral swaying of the device. Other similar

means for supporting the distributer can be employed without departing from the invention. I prefer, however, the construction just described, since it is easily adjustable to alter the position of the machine by means of the cleat *s*. It is also very desirable since it permits the device to be used by operators of different heights.

The hook *q* may be affixed to the discharge nozzle F in any suitable manner, but I prefer to form it with a ring shaped shank, as best seen in Figs. 2 and 3, and to solder it to the nozzle.

In Fig. 1 I have illustrated my invention as adapted for use with two distributing nozzles so that two rows of plants may be simultaneously dusted. In this figure I have shown a pipe connection *t* having branches *t'* and *t²*, such connection being adapted to fit over or in the nozzle F. To each of the branches *t'* and *t²* is connected a distributing pipe *u* by means of a length of rubber hose or other flexible material *v*. The connections *v* are sufficiently stiff to support the distributing pipes.

It is frequently desirable to adjust the distance between the distributing nozzles *w w* to suit rows which are differently spaced apart. According to the present invention I provide a very simple and efficient means for accomplishing this result. In the construction shown such means comprises the brace *x* having its ends somewhat loosely strapped to the pipes *u* in such manner that the brace can be adjusted lengthwise of the latter. It will be observed that when the brace is moved rearwardly the outer ends of the pipes are caused to diverge and that when the brace is moved forwardly the opposite effect is obtained. By merely adjusting the brace therefor the proper distance between the nozzles can be obtained, the brace remaining in its adjusted position by friction. The connections *v* are sufficiently flexible to permit the necessary movement of the pipes. As will be seen from Fig. 4 it is desirable to provide the pipes *u* with a shoulder such as *y* to prevent the pipes from being pushed too far into the flexible tubes *v*.

The device provided by my invention is, of course, susceptible of being used with more than two nozzles, or with a single nozzle. In a great majority of cases, however, two nozzles will be sufficient. I may provide in connection with the machine a pipe having a single nozzle which is adapted to fit over the nozzle F. I prefer, however, to utilize one of the pipes *u*, and thus avoid the necessity of supplying a separate pipe. To this end I so proportion the shoulder or ring *y* and the nozzle F that the pipe *u* with its ring fits within the nozzle F, as shown in Fig. 5. By this construction it is only necessary to remove one of the pipes from its flexible connection *v* and free it from the brace *x*, whereupon the pipe can be inserted in the nozzle F and the duster thus adapted for single rows or the like.

I preferably provide the connection *t* with a hook *q'* which is similar to the hook *q* so that the flexible member H may be engaged at a point farther forward than the hook *q*. This provides a somewhat better support for the device when the several nozzles are used.

It will be seen that by my invention I provide an extremely cheap and simple distributer which is capable of being carried in the hand or supported upon the person and which is well adapted for dusting several rows of plants simultaneously in an efficient manner.

What I claim is:—

1. An insecticide distributer having a fan casing, a reservoir and a discharge nozzle in combination with a flexible member fastened to such discharge nozzle and having a sliding connection with the top of said reservoir, and being adapted to pass over the shoulder of the operator, and a cleat secured to said fan casing to which said flexible member is adapted to be fastened.

2. An insecticide distributer having a fan casing, a reservoir and a discharge nozzle in combination with a flexible member H, said nozzle having a hook and said member an eye whereby they may be engaged, and said reservoir having an eye through which said member passes and said casing having a cleat to which said member may be fastened.

3. An insecticide distributer having a fan casing, a reservoir and a discharge nozzle in combination with a flexible member H, said nozzle having a hook and said member an eye whereby they may be engaged, said reservoir having an eye through which said member passes and said casing having a cleat to which said member may be fastened, and a discharge pipe adapted to be fixed to said nozzle and having a hook whereby said member may be connected to either said nozzle or said pipe.

4. An insecticide distributer having two distributing pipes, and means carried by said pipes for adjusting their relative positions.

5. An insecticide distributer having two distributing pipes, and a rigid member having a sliding connection with both said pipes.

6. An insecticide distributer having two distributing pipes flexibly connected thereto, and a brace *x* slidingly connected to both said pipes.

7. An insecticide distributer having a discharge nozzle in combination with a connection having branch pipes, lengths of hose secured to said connections in which said branch pipes are adapted to fit, said branch pipes having shoulders adapted to limit the extent to which they can enter said hose, the shoulders of one of said pipes, and said nozzle being so relatively proportioned that

such shoulder can enter such nozzle whereby said pipe can be disconnected from said hose and connected with said nozzle.

8. A powder distributer having a fan, a casing for said fan, a reservoir, an agitator in said reservoir having a shaft, a crank on said agitator shaft, a connection between said shaft and the fan shaft comprising a train of gears and a plate secured to the reservoir and fan casing, and having bearings for all of said gears.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

CLINTON H. LEGGETT.

Witnesses:

EUGENE G. MYERS,

THEODORE T. SNELL.