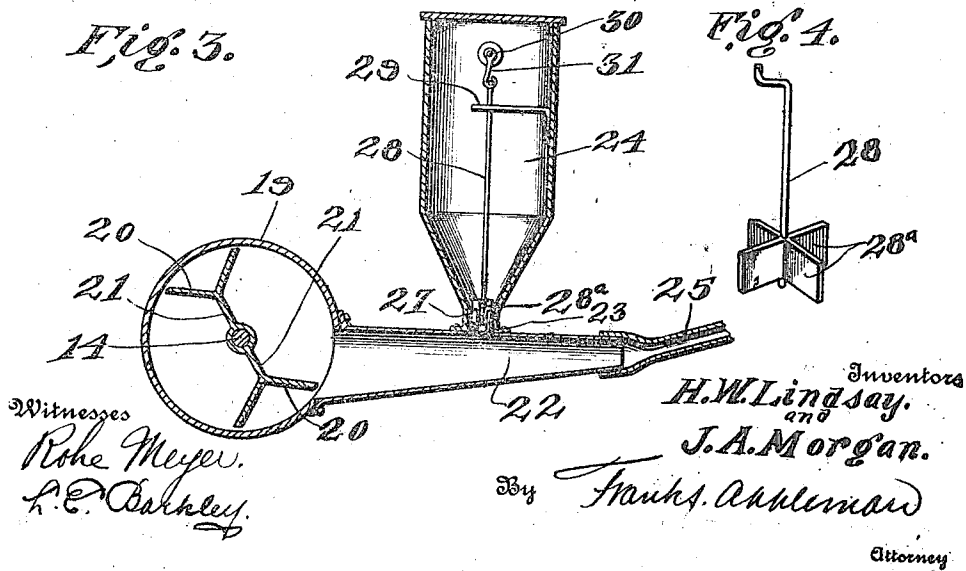
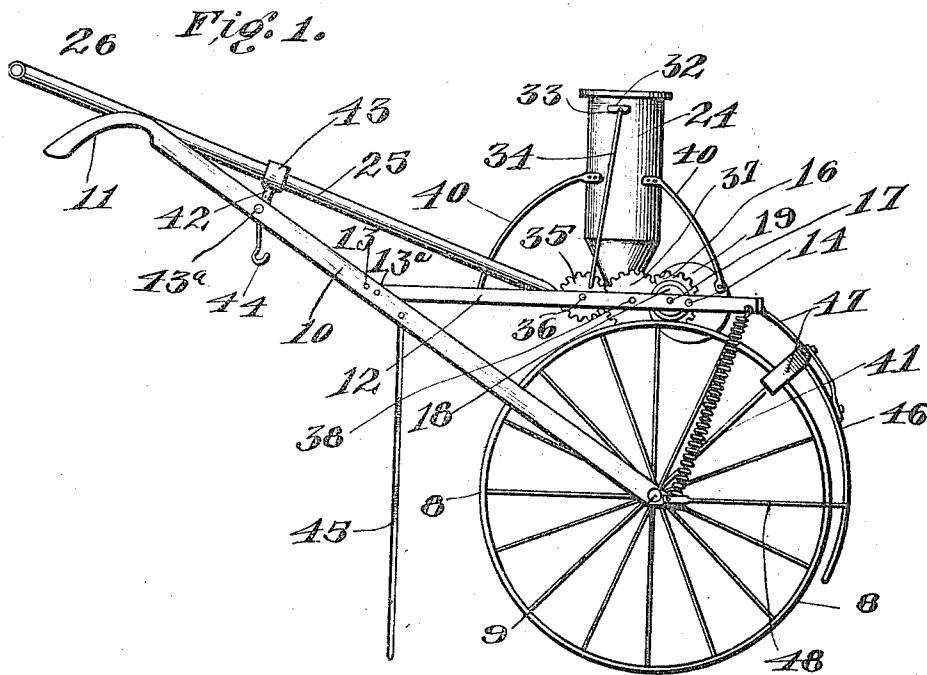


1,063,373.

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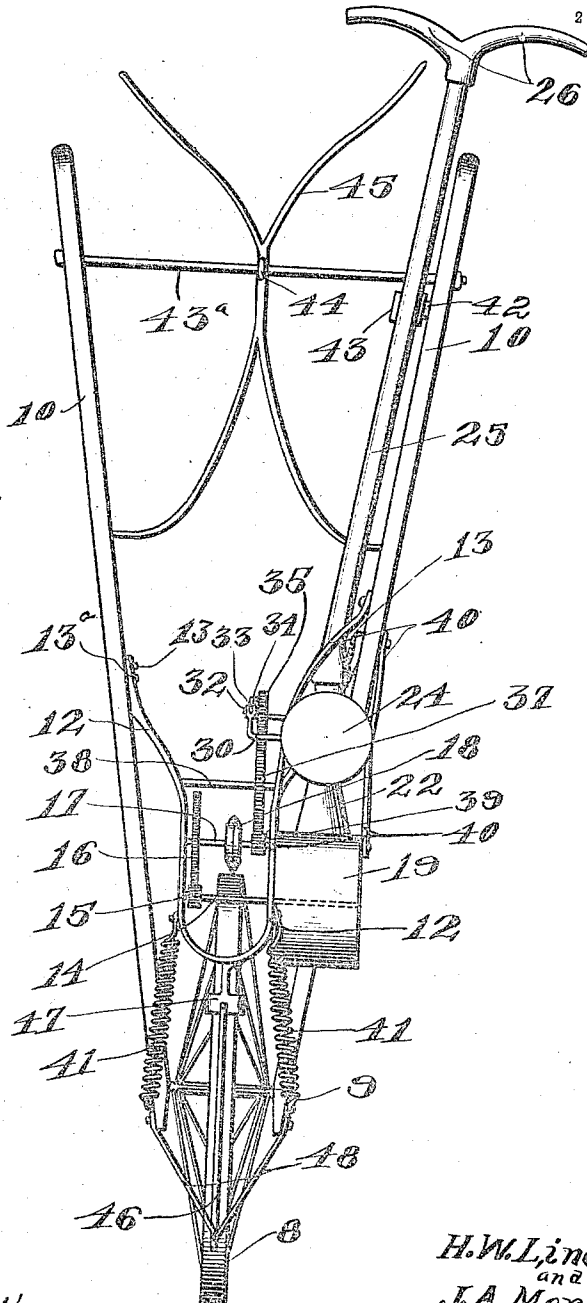


J. A. MORGAN & H. W. LINDSAY.
 PLANT DUSTING MACHINE.
 APPLICATION FILED JUNE 3, 1912.

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 2 SHEETS—SHEET 2.

Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN A. MORGAN AND HUGH W. LINDSAY, OF DOVER, TENNESSEE.

PLANT-DUSTING MACHINE.

1,063,373.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, JOHN A. MORGAN and HUGH W. LINDSAY, citizens of the United States of America, and residents of Dover, in the county of Stewart and State of Tennessee, have invented certain new and useful Improvements in a Plant-Dusting Machine, of which the following is a specification.

10 This invention relates to plant dusting machinery and particularly to a machine of the character indicated having novel means for agitating dust or powder contained in a hopper simultaneously with the driving of a fan for creating a blast of air to carry the dust dislodged by the agitator or stirrer through a suitable distributing spout having its exit in the rear of an operator of the machine.

20 With the foregoing and other objects in view, the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

25 In describing the invention in detail, reference will be had to the accompanying drawings forming part of this specification wherein like characters denote corresponding parts in the several views, and in which—

30 Figure 1 illustrates a view in elevation of a dust distributing machine embodying the invention; Fig. 2 illustrates a top plan view thereof; Fig. 3 illustrates a detail view of the fan and hopper; Fig. 4 illustrates a perspective view of the stirrer.

35 In these drawings 8 denotes a traction wheel having a shaft 9 journaled in the lower ends of the handles 10, the said handles extending a suitable distance and terminating in hand grips 11.

40 A frame 12 has its ends pivotally secured to the handles as shown at 13, the central portion of the frame being bent into and looped over the traction wheel and having apertures therein to form bearings for the shaft 14 which shaft is provided with a pinion 15 adapted to be driven by a gear wheel 16, said gear wheel 16 being mounted on a shaft 17 which also extends through the frame and is rotatable therein. The shaft 17 is further provided with a friction wheel 18 which bears on the traction wheel and is driven thereby so that through the friction wheel 18, the shaft 17 is rotated, thereby driving the gear wheel and pinion and the

shaft 14. As shown in the drawing, the said shaft 14 extends through the fan casing 19, which fan casing is substantially cylindrical and has the fan blades 20 therein, which fan blades are mounted on the arms 21 carried by the shaft 14 so that as the shaft 14 is rotated, the fan blades travel in the fan casing and force the air through the spout 22 which is connected to the said fan casing.

60 The spout 22 is shown as having a nipple 23 thereon to which the tapered end of a hopper 24 is connected, so that the contents of the hopper may be fed into the spout 22 and forced from the spout through the action of the fan blades. The spout 22 has a pipe 25 connected to it, the said pipe extending longitudinally of the handles and terminates in branch nozzles 26 at the rear of an operator who may be manipulating the machine.

75 As a means for preventing choking of the dust or powder within the hopper, the said hopper is partitioned at its discharge end by the partition strips 27 which are suitably anchored to the internal wall of the tapered portion of the hopper at opposite sides thereof. A stirrer shaft 28 having paddles 28^a is adapted to operate in proximity to the partition strips 27. The stirrer shaft extends through an aperture formed in the bracket 29 which bracket projects from the wall of the hopper and acting as a fulcrum for the stirrer. The upper end of the stirrer shaft is bent at an angle with relation to the length of the stirrer shaft and a shaft 30 which is journaled in the hopper near the upper end has a depending hook 31 which engages the angular portion of the stirrer shaft and serves to move the same back and forth as the shaft 30 is partially rotated in opposite directions. The reciprocating shaft 28 is provided with blades 28^a which reciprocate in the lower end of the hopper at its junction with its spout 22. As a means for actuating the said shaft 30, the outer end thereof is provided with a crank 32 apertured to receive the angular end 33 of the pitman 34, which pitman is connected to the wheel 35 eccentrically thereof, the said wheel in turn being mounted on a shaft 36 journaled in the frame. The wheel 35 is preferably toothed and is engaged by the gear wheel 37 which is mounted on the shaft 38, the said shaft 38 being journaled in the frame 12 and the gear wheel 37 being in

mesh with a pinion 39 on the shaft 17 so that motion from the friction wheel 18 communicated to the shaft 17 serves to drive the gearing by which the pitman 34 is reciprocated for the purpose of moving the stirrer in the manner heretofore described.

The hopper 24 is supported by the curved rods 40 which extend parallel, one on each side of the hopper, the said rods being connected to the hopper in any appropriate way and having their ends anchored to the fan casing 19 toward the front end of the machine and to the frame toward the rear end of the machine.

The frame 14 at the looped portion thereof has the springs 41 connected to it, the lower ends of said springs being attached to the handles 10 near the ends remote from the hand grasps thereof, the said springs being for the purpose of affording a yielding connection to relieve the vibration of the apparatus as the traction wheel is passing over rough ground, and it will be seen that the vibrating movement of the frame is limited by the pin 13^a.

One of the handles 10 has a bracket 42 thereon with a forked end 43 adapted to support the pipe 25. A rod 43^a connects the handles near the outer ends thereof and said rod is provided with a hook 44 adapted to support a brace 45 which is hinged to the handles and is designed to act as a prop for the frame when the machine is not being operated, it being the purpose of the hook 44 to hold the prop in its elevated position while the machine is traveling.

The forward end of the machine is provided with a diverging rod 46 which is connected to an arm 47 attached to the end of the frame 12, the said rod 46 having braces 48 connected to it and extending from the ends of the handles, the said rod and braces forming a guard for plants to prevent them from being damaged by the rotation of the traction wheel.

We claim—

1. In a dusting machine, a spout, a hopper above the spout, said hopper having a tapered end terminating in a relatively straight portion, partition strips secured to the inner walls of the relatively straight portion, a stirring member having paddles adapted to operate between the partitions, means for operating the stirring member, and a pipe associated with the spout for distributing dust.

2. In a dusting machine, a spout, a hopper having one end thereof communicating with the interior of said spout, partition strips secured to the inner walls of one end of the hopper, a stirring member associated with the partitions, means for operating the stirring member, and means associated with the spout for distributing dust.

In testimony whereof, we affix our signatures in the presence of two witnesses.

JOHN A. MORGAN,
HUGH W. LINDSAY.

Witnesses:

H. C. VINSON,
J. L. REYNOLDS.