

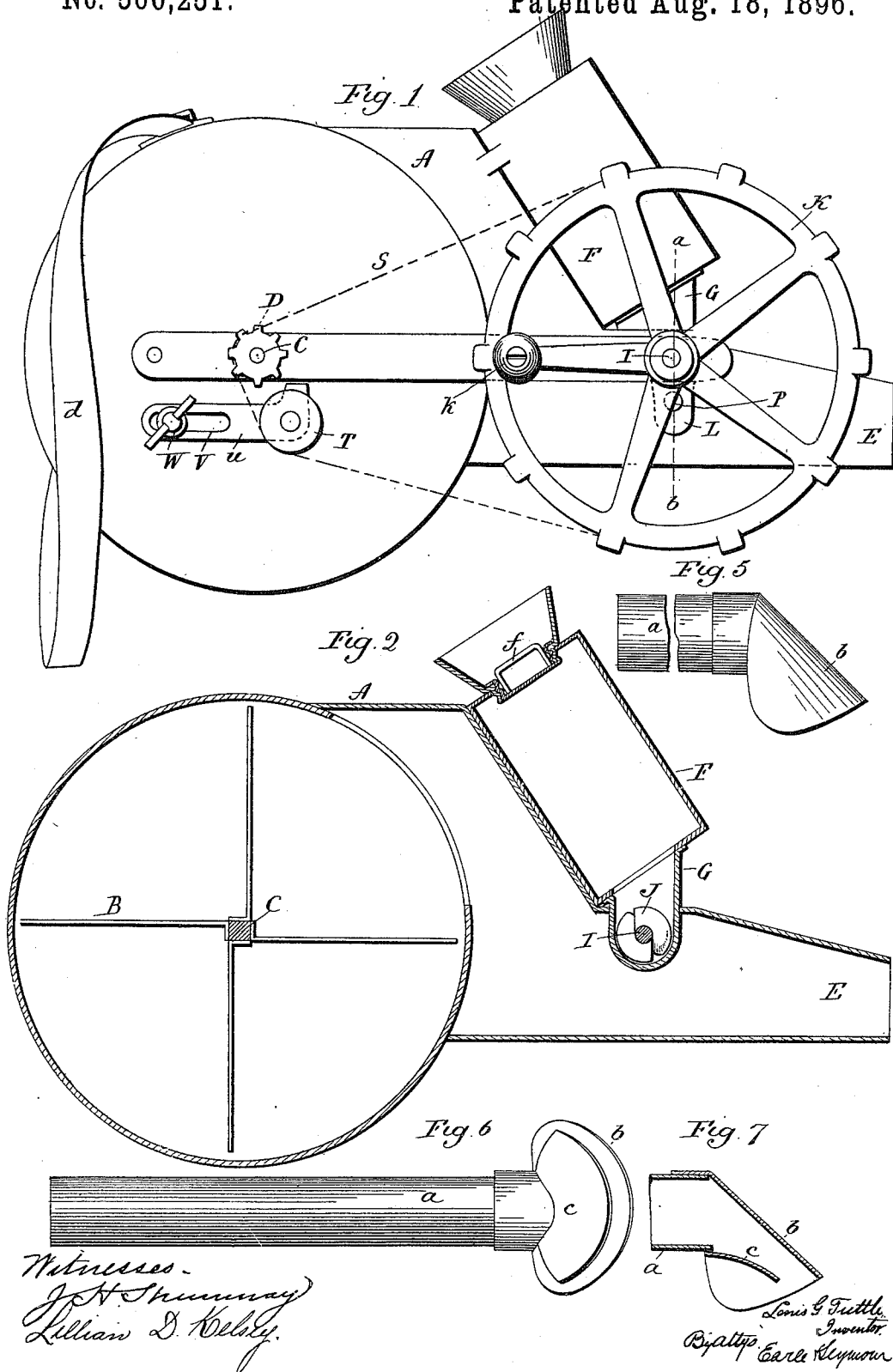
(No Model.)

2 Sheets—Sheet 1.

L. G. TUTTLE.
POISON DISTRIBUTER.

No. 566,251.

Patented Aug. 18, 1896.



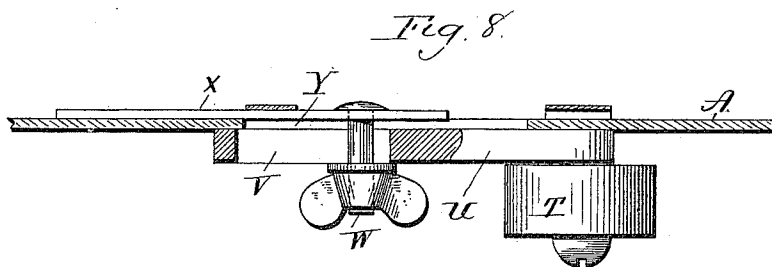
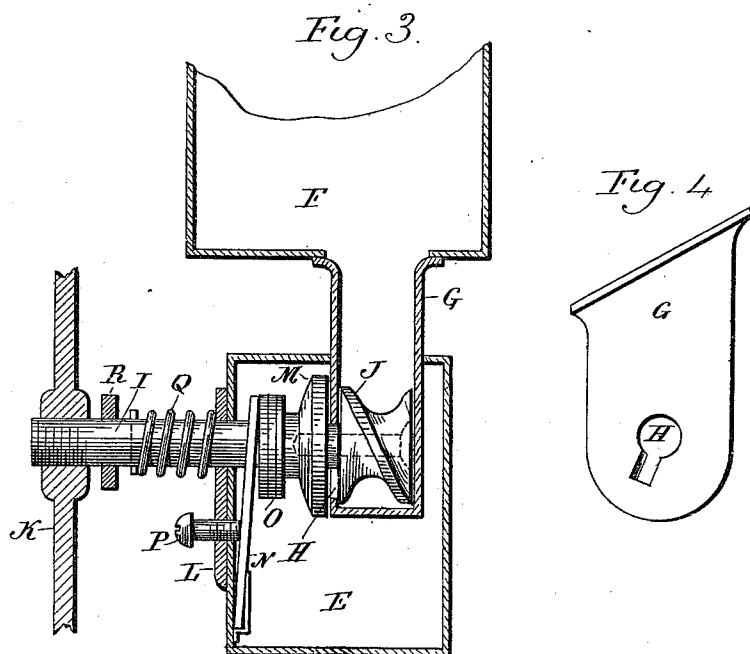
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2 Sheets—Sheet 2.

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Witnesses.
J. H. Shumway.
William D. Kellogg.

Lewis G. Tuttle.
Inventor.
By atty
Earle Heyman

UNITED STATES PATENT OFFICE.

LEWIS G. TUTTLE, OF NORTH HAVEN, CONNECTICUT.

POISON-DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 566,251, dated August 18, 1896.

Application filed February 10, 1896. Serial No. 578,640. (No model.)

To all whom it may concern:

Be it known that I, LEWIS G. TUTTLE, of North Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Powder-Distributers; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view of a powder-distributor with the spout removed; Fig. 2, a vertical section of the same; Fig. 3, a section on line *a b* of Fig. 1; Fig. 4, a side view of the lower portion of the reservoir; Fig. 5, a side view of the spout; Fig. 6, an under side view of the same; Fig. 7, a sectional view of the outer end of the spout; Fig. 8, a sectional view illustrating the take-up mechanism.

This invention relates to an improvement in powder-distributers, and particularly to such as may be carried in the arms for distributing poison upon plants, &c., the object of the invention being to positively feed the powder from the reservoir into the blast and to regulate the amount so fed.

A further object of the invention is the employment of a peculiar take-up for regulating the tension of the driving mechanism, and a still further object is the construction of a spout by means of which the powder is deflected as it leaves the apparatus; and the invention consists in the construction and arrangement of parts as will be hereinafter described, and particularly recited in the claims.

The apparatus consists of a case A, which contains a blower B, mounted upon an axle C, one end of which projects through the case and carries a small sprocket-wheel D. From the blower the case is contracted, forming a passage E, above which a reservoir F is mounted. The reservoir is constructed at its lower end with a depending chamber G, which extends into the passage E, and is formed with an opening H, the upper end of which is circular to form a bearing for one end of a shaft I, to which end a worm or forcing-screw J is secured and so arranged that when revolved it will force the material in the reservoir outward through the lower por-

tion of the slot H. The upper end of the reservoir is closed by a cap *f* in the usual manner. The said shaft I projects outward and receives at its outer end the driving-wheel K, to which a handle *k* is attached, and by which it may be turned. The side of the case is reinforced by a plate L, through which the shafts I and C extend. The inner end of the shaft I is provided with a disk M, the face of which stands parallel with the side wall of the chamber G, and so that if it be moved toward or from the wall it will increase or diminish the flow of the powder from the reservoir into the air-passage. To move this disk inward, a plate N is arranged inside the air-passage, its upper end surrounding the shaft I and bearing against a collar O, mounted thereon.

Extending through the side wall of the receiver is a screw P, the inner end of which bears against the plate N, and whereby its upper end may be forced inward to press the disk M against the side of the reservoir. To move the disk in the opposite direction, a spring Q is arranged upon the shaft I outside the case, one end of the spring bearing against the reinforce L and the opposite end against a collar R, mounted on the said shaft, the tendency of the spring being to force the shaft outward, and hence, if the screw P be turned outward, the spring will draw the disk M away from the side of the reservoir.

The drive-wheel K is connected with the small sprocket-wheel D by a drive-chain S, which chain also passes around an idler T, mounted in the end of an arm U, which is formed at its opposite end with a slot V, through which a set-screw W extends, the inner end of the screw being made fast to a sliding plate X, mounted inside the case, the said case being formed with a slot Y for the passage of the said screw. This construction permits a long range of adjustment of the take-up, as it may be adjusted to the limit of the combined length of the slots V Y.

The outer end of the passage is adapted to receive the spout *a*, from the upper portion of which depends a downwardly-curved flaring flange *b*, and from the lower portion of the end of the spout is a flange *c*, which extends outwardly toward the flange *b*, to the sides of which its sides are united, and so as

to form a contracted curved flaring mouth. It will be understood that this spout may be turned upon the end of the passage, so as to present the mouth in any desired direction.

5 The apparatus is also provided with a strap *d*, by which it may be suspended from the shoulder in the usual manner, if desired.

From the foregoing description it will readily be seen that if the chain is arranged upon
10 the wheels under proper tension and the wheel K revolved the blower will be turned to force a blast of air outward through the passage E. At the same time the shaft I will be turned by the wheel K and the forcing-screw J re-
15 volved, forcing the powder from the reservoir out through the passage H, the space between the disk M and the side of the reservoir regulating the amount of powder fed. The powder thus fed drops into the passage E and
20 into the current of air, which forces it out of the spout A, the end of the spout deflecting it in the desired direction.

Having fully described my invention, what I claim as new, and desire to secure by Letters
25 Patent, is—

1. In a powder-distributor, the combination with the blower, air-passage and reservoir thereof, said reservoir formed with an opening in one of its side walls into said air-pas-
30 sage, of a forcing-screw mounted in the said reservoir on an axis at right angles to said wall, and adjacent to said opening through which its axis projects, and a disk on said axis, and adjustable toward and away from
35 the outside of said opening, substantially as described.

2. In a powder-distributor, the combination

with the blower air-passage and reservoir thereof, of a main driving-shaft extending into said air-passage and reservoir, a feed- 40 screw in said reservoir and mounted on the said shaft, a disk also mounted on said shaft and adjustable toward or away from the outside of said reservoir, a plate adapted to force said shaft inward, and a spring tending to 45 force said shaft outward, substantially as described.

3. In a powder-distributor, the combination with a case and driving mechanism thereof of a take-up consisting of a slide outside the 50 case formed with a slot at its forward end, and an idler mounted at its rear end, a plate arranged within the casing which is constructed with a clearance-slot, and a clamp extending through said clearance-slot in the case and 55 adapted to connect the said slot and plate with the case, substantially as described.

4. In a powder-distributor, the combination with the blower, reservoir and air-passage thereof, of a spout, the outer end of which is 60 constructed with a downwardly-flaring flange depending from its upper edge, and a downwardly-depending flange from its lower edge, the ends of the said flanges united to form a contracted curved flaring mouth, substan- 65 tially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

LEWIS G. TUTTLE.

Witnesses:

FRED. C. EARLE,
GEO. D. SEYMOUR.