

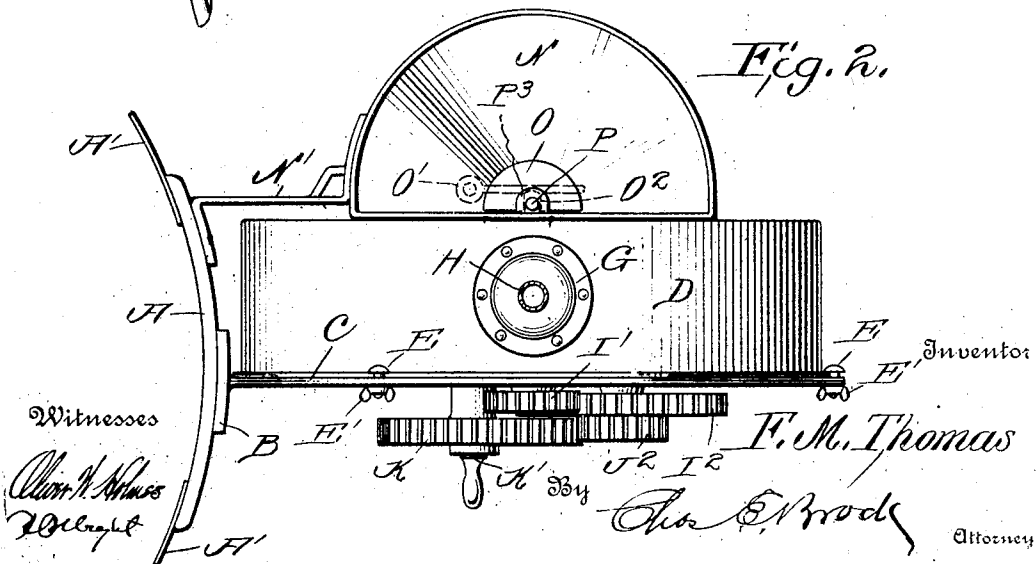
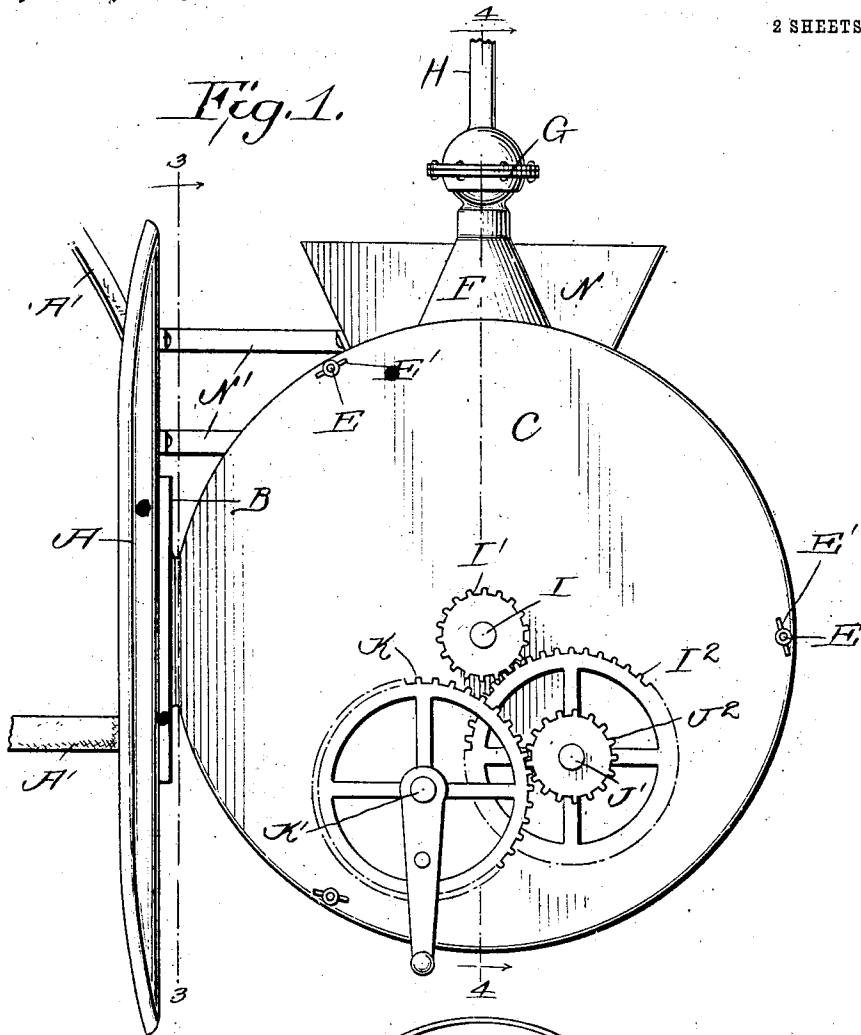
F. M. THOMAS.
TREE SPRAYER.

APPLICATION FILED SEPT. 27, 1910.

1,045,217.

Patented Nov. 26, 1912.

2 SHEETS-SHEET 1.



F. M. THOMAS.

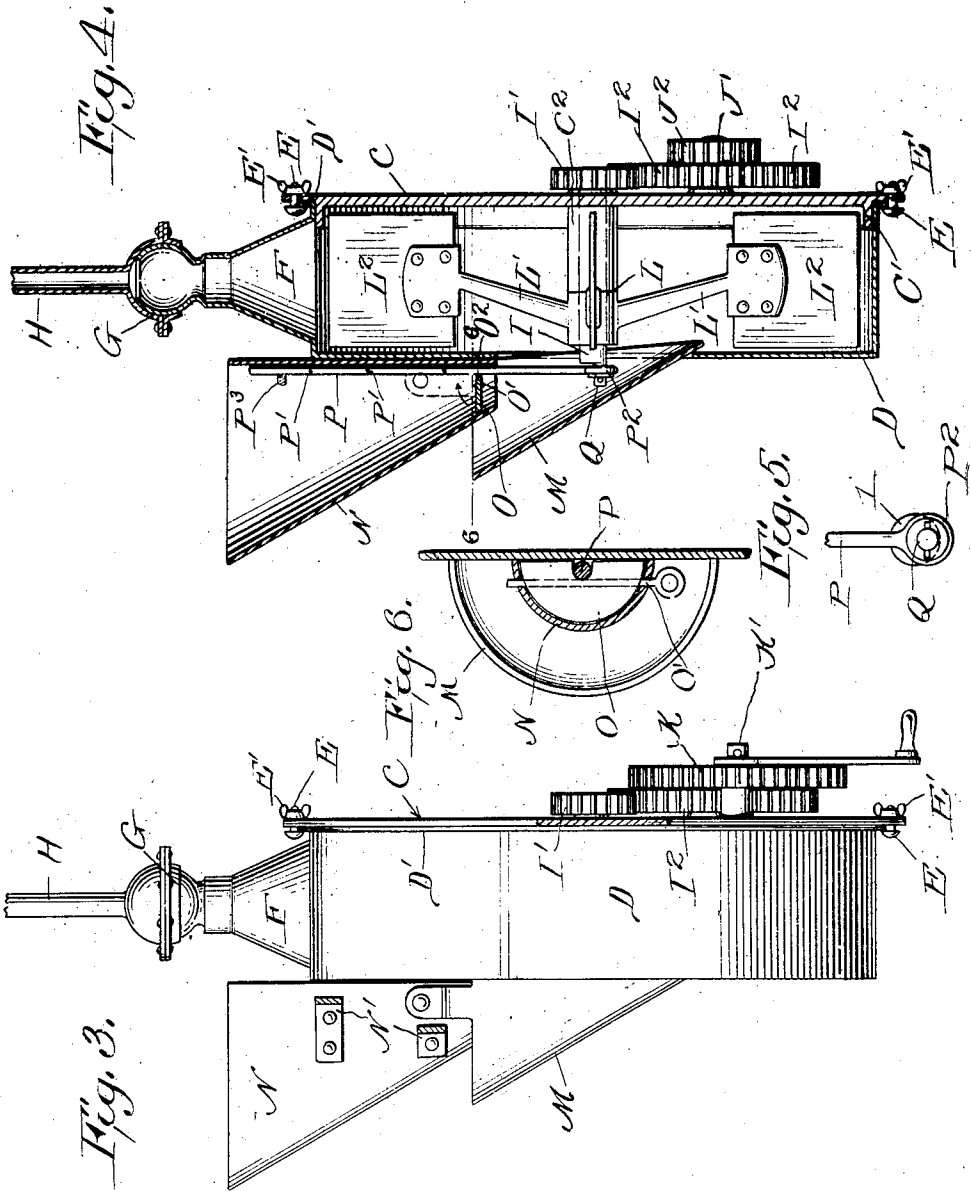
TREE SPRAYER.

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Witnesses

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UNITED STATES PATENT OFFICE.

FRANK M. THOMAS, OF MUNCIE, INDIANA.

TREE-SPRAYER.

1,045,217.

Specification of Letters Patent.

Patented Nov. 26, 1912.

Application filed September 27, 1910. Serial No. 584,063.

To all whom it may concern:

Be it known that I, FRANK M. THOMAS, a citizen of the United States, residing at Muncie, in the county of Delaware and State of Indiana, have invented a new and useful Improvement in Tree-Sprayers, of which the following is a specification.

This invention relates to certain new and useful improvements on my former patent for tree sprayers, for which U. S. patent was granted me August 19, 1910, Number 987,266, the object being to improve the general construction of sprayer, and to provide means for revolving the section of the fan-casing provided with a nozzle, in order to throw the same in any angle desired.

Another object of my invention is to provide a tree sprayer which is simple and cheap in construction, and one in which the parts are so mounted and connected together that a very strong, durable and compact sprayer is formed, whereby the same can be operated with greater ease than with sprayers of this character now in use.

A still further object of my invention is to provide a feed hopper in connection with the fan casing having an agitator and a valve so arranged that the supply of powder can be regulated and fed to the casing in such a manner that the same will be sprayed over the trees thoroughly.

With these objects in view, the invention consists in the novel features of construction, combination and arrangement of parts hereinafter fully described and pointed out in the claims.

In the drawing forming a part of this specification:—Figure 1 is a side elevation of my improved tree sprayer. Fig. 2 is a top plan view of the same. Fig. 3 is a front elevation. Fig. 4 is a vertical section. Fig. 5 is an end view of an eccentric and strap, a portion of the eccentric rod being shown in elevation. Fig. 6 is an enlarged section on the line 6—6 of Fig. 4.

In carrying out my improved invention, I employ a body or breast plate A which is provided with suitable straps A' for securing the same to the body of a person. Secured to the breast plate A is the integral plate portion B of a circular side plate C, which is provided with an annular flange C' upon its inner face over which is revolvably mounted a fan-casing D which is provided with an annular flange D' adapted to be locked to the plate C by bolts E car-

rying wing-nuts E', whereby the position of the fan-casing D can be changed in respect to the plate C. The casing D is provided with a discharged nozzle F having a ball and socket coupling G carrying a tube H to which is adapted to be connected a nozzle not shown for spraying the trees.

The plate C is provided with a central inwardly projecting bearing sleeve C², in which is mounted a shaft I carrying a pinion I' at its outer end which meshes with a gear I² carried by a stud shaft J' fixed to the outer face of the plate C as clearly shown. The gear I² carries a pinion J² which meshes with a crank operated gear K mounted on a suitable shaft K' of the plate C, in such a position that the crank can be readily operated by the person using the sprayer without any exertion. Fixed on the shaft I within the casing is a hub L provided with arms L' carrying blades L² forming a fan for forcing the powder out of the nozzle F as will be later described.

The casing D is provided with a central opening into which extends a feed spout M carried by a semi-funnel shaped hopper N which is arranged against the side of the casing, and is supported by braces N' extending from the breast plate A. The feed spout M is so arranged that the powder received from the hopper M will be fed into the fan-casing and forced out of the same through the discharge spout.

Rotatably and transversely mounted upon the lower portion of the hopper N is a rod O' which carries a semi-circular flap valve adapted to close when in a horizontal position the lower end of the hopper, and by rotating said rod the valve may be swung in order to increase or decrease the size of the opening, whereby the outlet of powder will be operated. The disk O is provided with a slot O² through which extends an agitating rod P provided with agitating arms P', and having a strap P² at its lower end, which is mounted on an eccentric Q formed on the end of the shaft I as clearly shown in order to reciprocate the agitating rod, whereby an even feed of powder is obtained. The upper end of the rod extends through a guide P³, and it will be seen that as the fan is rotated the agitating rod will be reciprocated so as to agitate the powder within the hopper.

What I claim is:—

1. In a device of the kind described, the combination with a breast plate, of a sec-

tional fan-casing carried by said breast plate formed of a fixed and a movable section, a discharge spout formed on the movable section of said casing, means for locking said movable section in respect to the fixed section, a ball and socket joint carried by said spout, a tube carried by said joint, and a feed hopper arranged to deliver powder into said fan-casing.

10 2. A free sprayer comprising a breast plate having means for supporting the same on the body of a person, a side plate carried by said breast plate having an annular flange upon its inner face, a fan-casing mounted on said flange provided with a central opening, bolts carried by said plate for locking said fan-casing in its adjusted position, a discharge spout carried by the fan-casing, a fan mounted in said casing, a

hopper, a feed spout arranged under said hopper extending into said casing, and means for operating said fan.

3. A free sprayer comprising a sectional fan-casing formed of a fixed and a movable section, a discharge spout carried by the movable section, a shaft arranged within said casing, a fan carried by said shaft, a feed spout extending into said casing, a hopper arranged above said feed spout provided with a controlling valve, an agitator extending into said hopper carrying a strap, an eccentric mounted on the fan shaft adapted to receive said strap, and crank operated gearing for rotating said fan shaft.

FRANK M. THOMAS.

Witnesses:

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