

A. J. KUEHL.
 SPRAYING DEVICE.
 APPLICATION FILED APR. 25, 1912.

1,063,806.

Patented June 3, 1913.

Fig. 1.

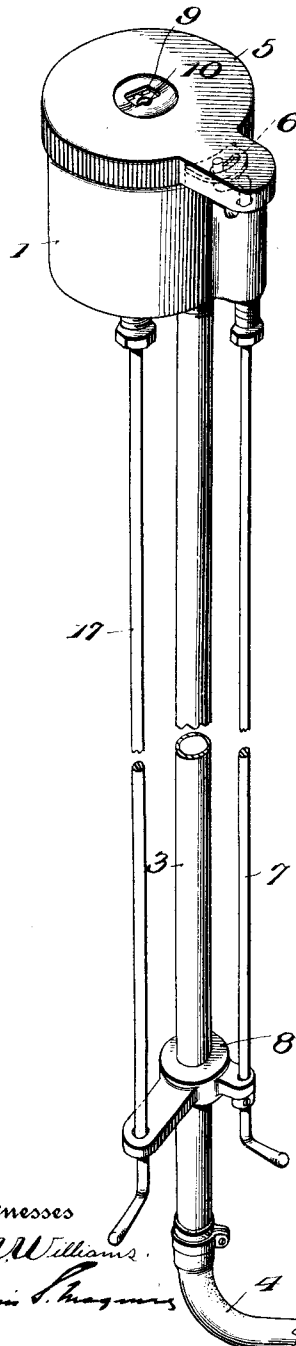


Fig. 2.

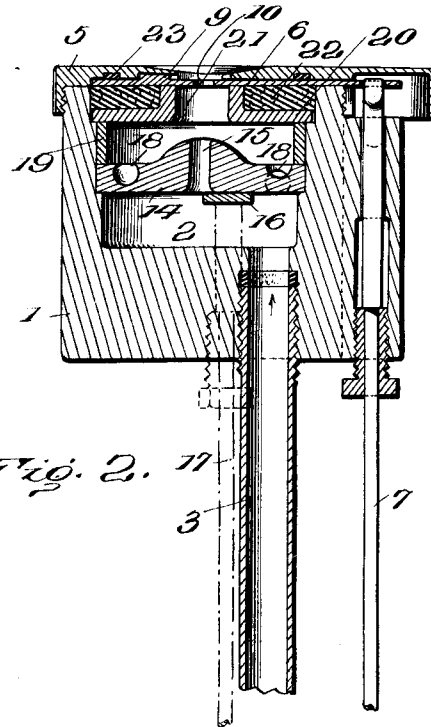


Fig. 4.

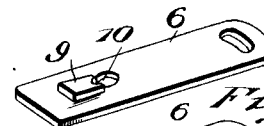


Fig. 3.

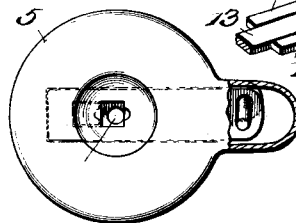
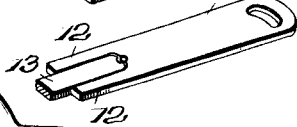


Fig. 5.



Witnesses
 W. A. Williams.
 Francis S. Higgins

Inventor

August J. Kuehl.

By

[Signature]

Attorney

UNITED STATES PATENT OFFICE.

AUGUST J. KUEHL, OF WATERVLIET, MICHIGAN.

SPRAYING DEVICE.

1,063,806.

Specification of Letters Patent.

Patented June 3, 1913.

Application filed April 25, 1912. Serial No. 693,189.

To all whom it may concern:

Be it known that I, AUGUST J. KUEHL, of Watervliet, in the county of Berrien and State of Michigan, have invented certain new and useful Improvements in Spraying Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The primary object of this invention is to provide a simple and highly efficient spraying device especially adapted for spraying germicides, etc., on trees and plants. And further objects of the invention are to avoid all liability of the outlet being permanently clogged by undissolved material in the solution; to regulate the size of the outlet; and to provide either a straight or a spreading spray.

In the accompanying drawings, Figure 1 is a view in perspective. Fig. 2 is an enlarged vertical sectional view. Fig. 3 is a plan view with parts in section. Fig. 4 is a view in perspective of the outlet controlling valve. Fig. 5 shows a slight modification.

Referring to the drawings, 1 designates a head having a centrally arranged chamber 2 into which opens a supply pipe 3, the latter being off center, as shown in Fig. 2, such pipe 3 being connected by a hose 4 to a supply tank or other reservoir containing the germicide or other liquid which is usually distributed under pressure.

5 is a cover for the outer end of head 1, and this cover is provided with an outlet opening the size of which may be controlled by a valve 6 arranged to slide transversely of the cover, such sliding action being effected by a crank rod 7 which parallels pipe 3 and is supported by a bearing 8 mounted on the pipe. The upper end of rod 7 is cranked to fit in a slot in the valve, and this rod is passed through a tubular opening in a lateral extension of head 1 over which an extension of the cover projects. The valve 6 has a lug 9 which fits in a slot in the cover, and in one wall of this slot and the opposite wall of the lug are formed curved cut outs which constitute the normal outlet opening. When this becomes clogged, as by any undissolved material in the solution, the valve 6 is moved so as to allow a larger opening 10 in the valve to coincide

with the slot in the cover. By this means any obstruction may be readily removed. The valve fits in a groove in the underside of the cover. Any preferred means may be employed for guiding the valve, and the lug 9 may be wholly omitted. In Fig. 5, for instance, I have shown spaced-apart fingers 12 of the valve guided by a fixed portion 13 of the cover.

Within chamber 2 is seated a disk 14 which has a central opening 15 which, when unobstructed, allows the liquid to pass out of the device on a direct line. When it is desired to distribute the liquid over a greater area, the opening 15 is closed by a valve 16 mounted on a rod 17 located eccentrically of opening 15 and, like rod 7, supported by bearing 8. In disk 14 are formed two oppositely-disposed obliquely-arranged openings 18 through which the liquid will be forced to pass when opening 15 is closed. Spaced from the disk 14 by ring 19 is a second disk 20 having an enlarged central outlet opening in line with the opening 15 and the outlet through the cover and valve. On this disk 20 is packing 22, and preferably between the valve and the cover I provide additional packing 23 so that when the cover is in place there is no danger of leakage.

The advantages of my invention will be readily appreciated from what has been said. By means thereof, by simply turning the rod 17 I am enabled to discharge the liquid either on a straight line or on divergent lines; and also by simply turning the rod 7 I can enlarge or decrease the size of the outlet, and when the smaller opening becomes clogged impediment may be discharged by slightly shifting the valve.

I claim as my invention:

1. A spraying device comprising a head having a chamber, a supply pipe opening into said chamber, a cover for said head having an outlet opening, a sliding valve having an opening with enlarged and reduced diameters for controlling the area of said outlet opening and means for sliding said valve.

2. The combination with a chambered head, and a cover therefor having a groove, and an outlet opening therein, of a valve movable transversely of said cover, and having a lug fitted in said groove, said valve having an opening with enlarged and re-

duced diameters for controlling the area of said outlet opening and means mounted on the head for sliding said valve.

3. The combination with a head having
5 a chamber, and a supply pipe opening into said chamber, of a disk in said chamber having a central opening and obliquely arranged upwardly extending side openings, a valve for controlling said central opening,
10 a rod for manipulating said valve paralleling said pipe, a cover for said head having a central outlet and a valve for varying said outlet.

4. The combination with a head having a
15 chamber, and a supply pipe opening into said chamber, of a disk in said chamber

having a central opening and obliquely arranged side openings, a valve for controlling said central opening, a rod for manipulating said valve paralleling said pipe, a
20 cover for said head having a central outlet, a valve slidable transversely of said head for varying said outlet, and a rod mounted in said head for actuating said valve, said rod also paralleling said pipe. 25

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

AUGUST J. KUEHL.

Witnesses:

FRANCIS S. MAGUIRE,
J. NOTA MCGILL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."