

J. B. WINFIELD & C. F. ACKERMAN.
 SPRAYING NOZZLE.

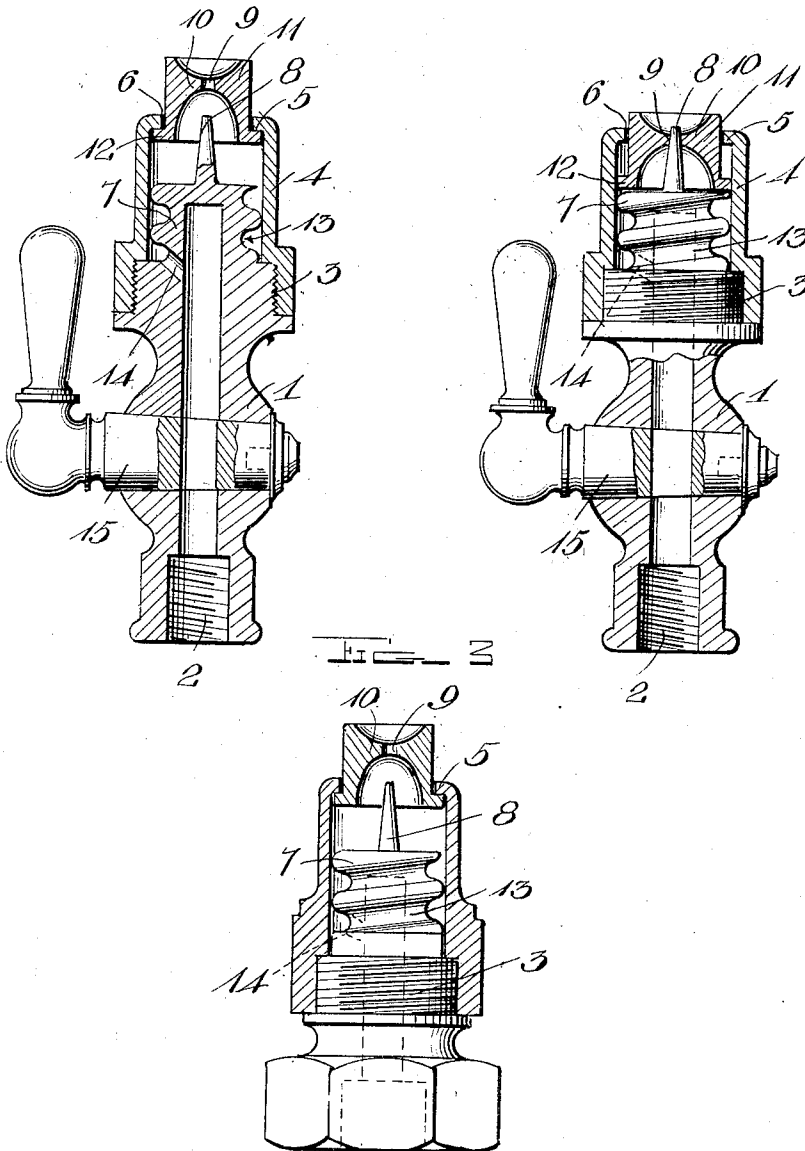
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FIG. 1

FIG. 2



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN B. WINFIELD AND CHARLES F. ACKERMAN, OF MANSFIELD, OHIO.

SPRAYING-NOZZLE.

No. 924,866.

Specification of Letters Patent.

Patented June 15, 1909.

Application filed August 20, 1908. Serial No. 449,555.

To all whom it may concern:

Be it known that we, JOHN B. WINFIELD and CHARLES F. ACKERMAN, citizens of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Spraying-Nozzles; and we do 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.

This invention relates to new and useful improvements in spraying nozzles.

The principal object of the invention is to provide a spraying nozzle embodying means for quickly cleaning the spraying tip and without the necessity of disassembling any of the parts.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a central longitudinal section of a nozzle constructed in accordance with the invention, the spraying tip in spraying position; Fig. 2 is a similar view, the spraying tip in cut-off position; and, Fig. 3 is a similar view illustrating a slightly modified form of the invention.

In the embodiment illustrated, the nozzle comprises a tubular casing 1 provided with an interior thread 2 at one end whereby it may be screwed to a suitable hose connection and with an exterior thread 3 near its opposite end, upon which is adapted to screw a bonnet 4, the outer end of which is closed by an end wall 5 having a central tip receiving opening or aperture 6. The exterior threaded end of the casing 1 is closed in by a wall 7 provided with a central longitudinal cone-shaped disgoring or cleaning pin 8 adapted to extend through a corresponding central aperture 9 produced in the outer end wall 10 of a spray tip 11 mounted to slide longitudinally within the bonnet, the inner end of said tip having an annular rim 12 which fits against the inner surface of the bonnet, and which limits the outward movement of the tip by engaging the end wall of the bonnet.

The outer end of the casing 1 is provided beyond its exterior thread 3 with a spiral groove 13, the inner end of which communicates with the interior of the casing 1 by a

port 14 formed in the wall of said casing. The body of the casing 1 is provided with a plug 15 of any ordinary construction, whereby the supply of liquid may be permanently cut off.

In the modified form of the invention illustrated in Fig. 3 of the drawings, the plug 15 is dispensed with but in all other respects the construction of the nozzle is identical with that shown in Figs. 1 and 2.

In practice, the liquid passes from the casing 1 through the outlet port 14 and around the spirals of the spiral groove 13 in the outer surface and outer end of the casing, the spiral groove imparting a whirling or rotary movement to the liquid and causing it to pass through the spray tip in a circular spray.

It will therefore be noted that by employing the construction to which we resort the most delicate plants or vines may be sprayed without danger of damaging the same in any respect.

It will be further noted that to clean the spraying tip, it is only necessary to press the latter against a limb or the like to cause the disgoring pin to enter the aperture 9 thereof, after which operation the spraying tip will be immediately returned to its former position by the water pressure.

The plug 15 is used when it is desired to cut off the supply of liquid for an appreciable period of time, as in moving from one tree to another.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention as defined in the appended claims.

Having thus described our invention, what we claim as new and desire to secure by Letters-Patent is:—

1. A spraying nozzle comprising a tubular casing closed at one end and provided near said end with an outlet port, a bonnet screwing over the closed end of the casing, a spraying tip having a central aperture, mounted to slide in the bonnet in front of the closed end of the casing and a disgoring pin projecting from the closed end of the

casing and adapted to enter the aperture of the spraying tip when the latter is moved inward into inoperative position.

2. A spraying nozzle comprising a tubular casing closed at one end and having an exterior spiral groove at its closed end and an outlet port leading from the interior of the casing to the inner end of said groove, a bonnet screwing over the closed end of the casing and projecting in advance of the same, a cylindrical spraying tip mounted to slide longitudinally in the projecting end of the bonnet, and having a central aperture to permit the passage of the spraying fluid there-
 10 through when in operative position and a longitudinal disgorging pin projecting from the closed end of the casing adapted to enter the aperture of the spraying tip when the latter is moved inwardly into inoperative position.
 20 tion.

3. A spraying nozzle comprising a tubular casing closed at one end, having a spiral exterior groove at said end and an outlet port leading from its interior to the inner end of said groove, a bonnet screwing over the closed end of the casing and projecting in advance of the same, a portion of the inner surface of said bonnet fitting snugly against the grooved portion of the casing, a cylindrical
 25 apertured spraying tip mounted to slide in and through the projecting end of the bon-

net, and a longitudinal disgorging pin projecting from the closed end of the casing and adapted to enter the aperture of the spraying tip when the latter is moved into inoperative position.
 35 position.

4. A spraying nozzle comprising a tubular casing closed at one end, having a spiral exterior groove at said end and an outlet port leading from its interior to the inner end of said groove, a bonnet screwing over the closed end of the casing and projecting in advance of the same, a portion of the inner surface of said bonnet fitting snugly against the grooved portion of the casing, a cylindrical apertured
 40 spraying tip mounted to slide in and through the projecting end of the bonnet and a longitudinal disgorging pin projecting from the closed end of the casing and adapted to enter the aperture of the spraying tip when the latter is moved inwardly into inoperative position and a cut off plug arranged near the open end of the casing.
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In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.
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JOHN B. WINFIELD.
 CHARLES F. ACKERMAN.

Witnesses:

ANSON H. SMITH,
 JOHN C. CARROLL.