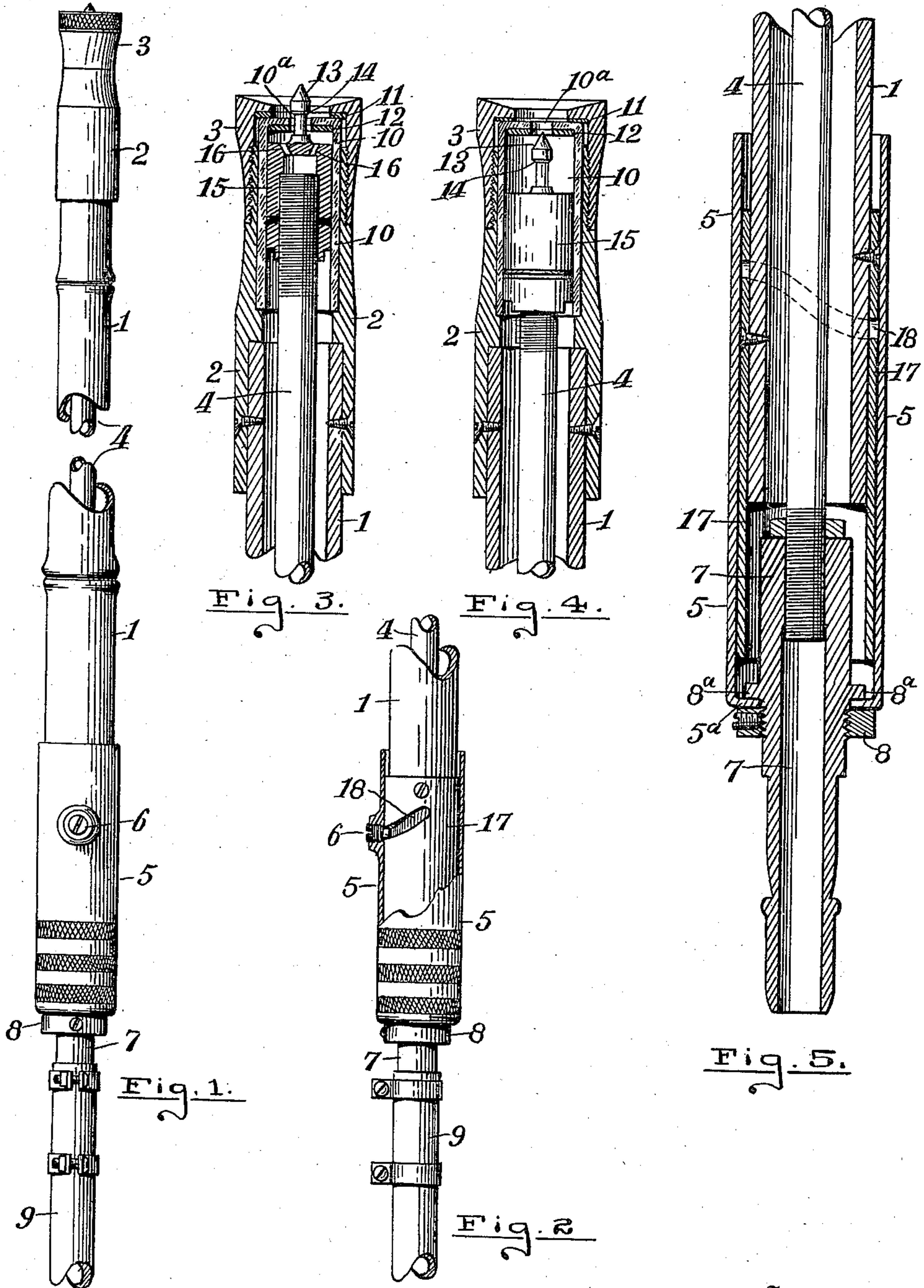


W. H. STOW & N. VICKERY.
 SPRINKLER.

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987,413.

Patented Mar. 21, 1911.



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SPRINKLER.

987,413.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, WILLIAM H. STOW and NELSON VICKERY, citizens of the United States of America, residing at Fennville, in the county of Allegan and State of Michigan, have invented certain new and useful Improvements in Sprinklers; and we 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.

Our invention relates to improvements in sprinklers and more particularly to sprinklers for spraying fruit trees and the like, and its object is to provide a device having an extended tubular portion with a nozzle at one end and suitable adjusting means for the same at the other end, whereby the nozzle may be operated at a distance from the operator; to provide improved means for controlling the spray and adjusting the same, and to provide the device with various new and useful features, hereinafter more fully described and particularly pointed out in the claims.

Our device consists essentially of an extended outer tube preferably of bamboo or other like material, a pipe extending therein, means at one end of the tube for longitudinally adjusting the pipe, and a spraying nozzle at the other end adjusted by the pipe, and in various features of combination and arrangement, as will more fully appear by reference to the accompanying drawings, in which:

Figure 1 is an elevation of a device embodying our invention with a portion broken away from the middle of the same; Fig. 2 a detail partially in section of the adjusting means at the lower end of the device; Fig. 3 an enlarged detail of the nozzle end in longitudinal section adjusted for a widely scattered spray; Fig. 4 the same adjusted for a narrow stream of the fluid; and, Fig. 5 a longitudinal sectional detail of the adjusting means.

Like numbers refer to like parts in all of the figures.

1 represents a tube of considerable length, preferably of bamboo or other like material.

2 is the hollow body of a nozzle attached to the upper end of the tube 1.

3 is a removable cap to the nozzle having

a large central opening through which the spray is projected.

4 is a pipe preferably of metal in the axis of the tube 1 and movable longitudinally therein.

5 is a sleeve rotative on the lower end of the tube 1 and inclosing a casing 17 fixed on the tube. This casing is provided with a spiral groove 18 engaged and traversed by a lug 6 in the sleeve 5, whereby the sleeve is longitudinally adjusted by rotating it about the casing. The lower end of this sleeve is flanged inward as at 5^a, and within the lower end of the sleeve 17 is a longitudinally adjustable nipple 7 having collars 8 and 8^a engaging this inwardly turned flange 5^a, whereby the adjustment of the sleeve 5 will also longitudinally adjust the nipple 7. Attached to this nipple is a suitable hose 9 to bring the fluid to the device and communicating with any suitable reservoir of fluid under pressure. The end of the pipe 4 is fixed in this nipple and extends upward in the axis of the tube 1 and within the body 2 of the nozzle. On the upper end of this pipe is a hollow piston 15 having its upper end perforated as at 16 to discharge the fluid, said piston being longitudinally adjustable in a tubular lining 10 with the nozzle, said lining being preferably of glass to prevent corrosion by the chemicals in solution, and having a small axial opening in its upper end as at 10^a in which is adjusted a conical sprayer point 13 having a circumferential shoulder 14. This point is carried on the piston and adjusted thereby. Within the upper end of the lining is a washer 12 against which the piston 15 is forced to close off the flow of fluid and a packing 11 is provided between the end of the lining and the cap to prevent fluid from escaping therebetween.

In operation, the nozzle can be placed among the branches of a tree, and the operator stands on the ground. By turning the sleeve 5, the point 13 is adjusted relative to the opening 10^a. When retracted as in Fig. 4, the device will throw a solid stream to a considerable distance, and when adjusted as in Fig. 3, the shoulder 14 will deflect and scatter the fluid widely in a fine spray, and in intermediate positions, the spray will be scattered more or less, according to such adjustment. It will be noted that this adjustment can be made while the

device is in operation, and that by turning the sleeve to the limit, the end of the piston 15 will be engaged with the washer 12, thus shutting off the flow altogether. The lining 5 10 is also readily removed and replaced, as occasion may require, and for some purposes, may be omitted entirely.

What we claim is:—

1. A sprayer, comprising an elongated 10 tube, a nozzle at one end of the tube, a piston in the nozzle and having an opening therethrough, a sprayer point mounted on the piston, a pipe attached to the piston, a sleeve rotative and longitudinally adjustable 15 on the tube, and means for connecting the sleeve and pipe to longitudinally adjust the pipe.

2. A sprayer, comprising an elongated 20 tube, an adjustable nozzle on one end of the tube, a pipe longitudinally movable in the tube and connected to the nozzle, a sleeve rotative and longitudinally adjustable on the tube, a casing fixed on the tube and having a spiral groove, a lug in the sleeve 25 traversing the groove, and means for connecting the sleeve and pipe.

3. A sprayer, comprising an elongated 30 tube, an adjustable nozzle at one end of the tube, a pipe attached to the nozzle to adjust the same and extending within the tube, a nipple attached to the pipe, collars on the nipple, a sleeve surrounding the tube and having an inwardly turned flange engaged by the collars on the nipple, and means for 35 longitudinally adjusting the sleeve on the tube.

4. A sprayer, comprising an elongated

tube, an adjustable nozzle at one end of the tube, a pipe connected to the nozzle to adjust the same, a nipple attached to the pipe, 40 collars on the nipple, a sleeve rotative on the tube and having an inwardly turned flange between the collars, a casing surrounded by the sleeve and fixed on the tube and also having a spiral groove, and a stud in the 45 sleeve engaging and traversing the groove.

5. A sprayer, comprising an elongated tube, a nozzle having a removable lining provided with a small axial opening at the end, a piston movable in said lining and 50 having an opening therethrough, a sprayer point having a circumferential shoulder and movable longitudinally within said opening, said point being mounted on the piston, and means for longitudinally adjusting the pis- 55 ton and point.

6. A sprayer, comprising a case, a removable cap on the case having a large end opening, a lining in the case retained by the cap and having a smaller end opening, a piston 60 adjustable in the lining, a sprayer point adjustable in the said openings and carried by the piston, means for adjusting the piston in the lining, and means for supplying fluid to the space between the piston and 65 said opening.

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

WILLIAM H. STOW.
NELSON VICKERY.

Witnesses:

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HATTIE FULLER.

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