

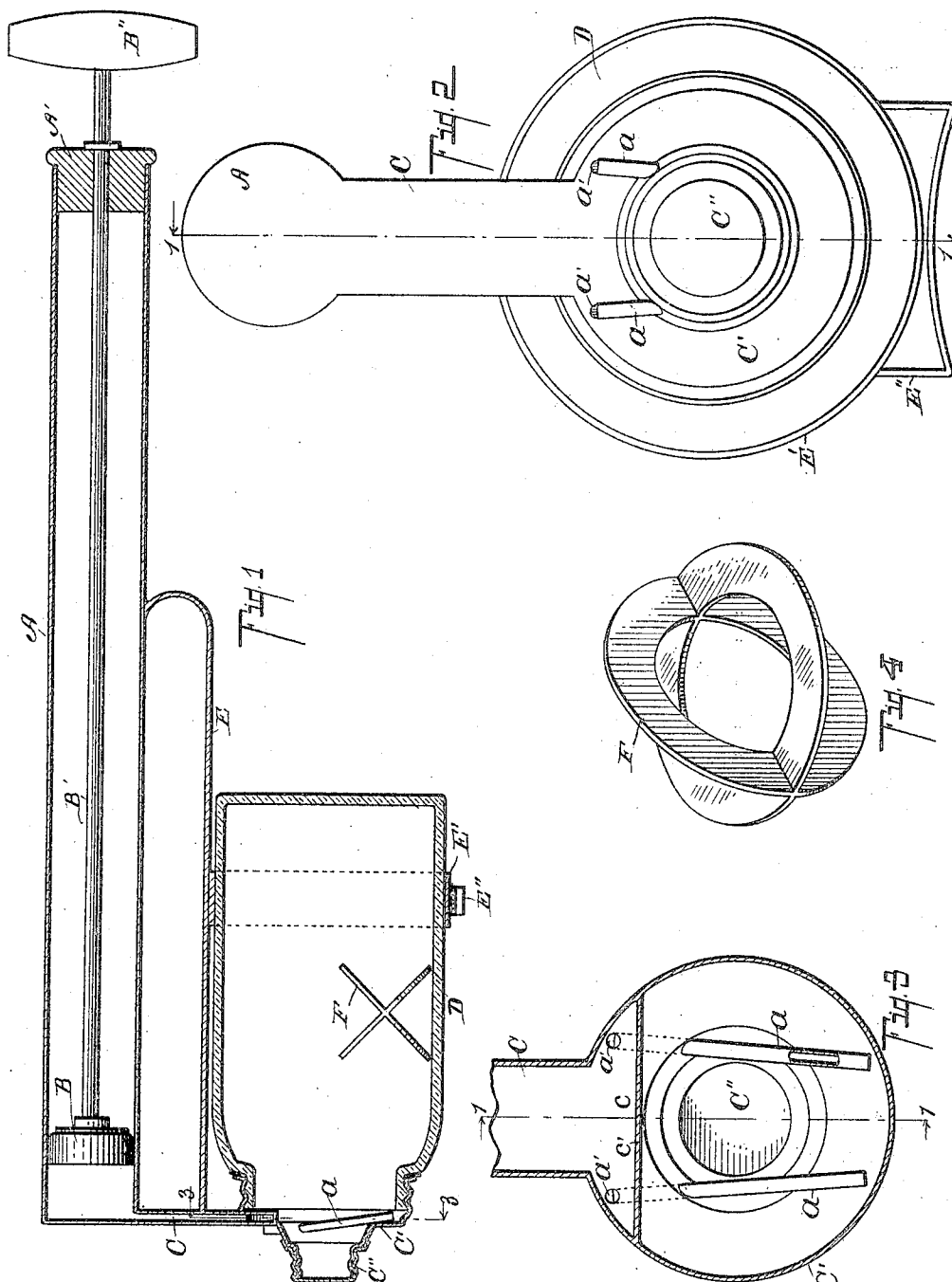
No. 818,392.

PATENTED APR. 17, 1906.

C. W. PARKS.

SPRAYER.

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Witnesses:

Wm. A. Teller
Otho W. Carl

Inventor.

Clarence W. Parks
By Fred L. Chapin
Att'y.

UNITED STATES PATENT OFFICE.

CLARENCE W. PARKS, OF LOWELL, MICHIGAN, ASSIGNOR TO DEXTER G. LOOK AND WILLIAM A. WATTS, OF LOWELL, MICHIGAN.

SPRAYER.

No. 818,392.

Specification of Letters Patent.

Patented April 17, 1906.

Continuation of application Serial No. 115,501, filed July 14, 1902. This application filed September 14, 1903. Serial No. 173,202.

To all whom it may concern:

Be it known that I, CLARENCE W. PARKS, a citizen of the United States, residing in the village of Lowell, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Sprayers, of which the following is a specification.

This invention relates to improvements in sprayers.

The objects of this invention are, first, to provide an improved spraying device in which the spray may be easily and effectively applied to low-growing plants, such as vines and the like; second, to provide an improved spraying device which is convenient to handle and easy to operate; third, to provide an improved spraying device which, though light and simple in structure, is strong and durable; fourth, to provide in a spraying device an improved arrangement of air and atomizing tubes; fifth, to provide in a spraying device improved means for agitating the solution.

Further objects and objects relating to structural details will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure embodying the features of my invention is fully illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a detail longitudinal sectional view of my improved spraying device, taken on lines 1 1 of Figs. 2 and 3. Fig. 2 is an enlarged end elevation view of my improved spraying device. Fig. 3 is an enlarged detail cross-sectional view taken on a line corresponding to line 3 3 of Fig. 1. Fig. 4 is an enlarged perspective view of my improved solution-agitator.

In the drawings the sectional views are taken looking in the direction of the little arrows at the ends of the section-lines, and similar letters of reference refer to similar parts throughout the several views.

Referring to the lettered parts of the drawings, A is the cylinder or barrel of the air-

pump of my improved spraying device. Within the barrel is a suitable piston or plunger B, which is secured to the inner end of the rod B', on the outer end of which is a handle B''. The rod B' is arranged through the plug A', which serves as a guide and bearing therefor.

Depending downwardly from the forward or delivery end of the barrel A is an air-delivery tube C. On the lower end of the downwardly-extending air-delivery tube C the cap C' of the liquid-receptacle D is secured. The partition c' in the upper portion of the cap C' forms a chamber c, into which the air-delivery tube C opens. The chamber c is provided with discharge openings or ports a'.

Arranged through the cap C', so that their delivery ends are adjacent to the air-delivery openings or ports a' of the air-chamber c are spray or liquid tubes a. On the lower side of the pump barrel or cylinder A is a loop or handhold E, one end of the same being secured to the pump-cylinder and the other to the depending air-delivery tube C. The portion of the pump barrel or cylinder A embraced by the loop E forms a handle. Secured to this handhold E is a supporting-ring E' for the receptacle D. On the lower side of the supporting-ring E' is secured the rest E''. (See Fig. 2.) The cap C' is screw-threaded to engage the receptacle D, so that the same may be readily removed for filling or cleaning, or, if desired, the same may be filled through the closure C'' on the cap.

The solution agitator or mixer F is formed of a pair of disk-like rings which are arranged in intersecting relation substantially at right angles to each other and secured together. In operating the device this agitator is tumbled about, which keeps the contents of the receptacle thoroughly mixed.

By this arrangement of the parts I secure a spraying device which is convenient to handle and one by which low-growing plants, such as vines, can be effectively treated, it being possible to easily spray the under side of the leaves of such plants. Other advantages are apparent from the foregoing detailed description.

I have illustrated and described my improved spraying device in detail in the form

preferred by me. I am aware, however, that it is capable of considerable structural variation without departing from my invention.

I desire to remark that this application is a continuation of my copending application, filed July 14, 1902, Serial No. 115,501, allowed April 15, 1903, and forfeited by lapse of time.

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

1. In a sprayer, the combination of an air-pump, a downwardly-depending air-delivery tube therefor, a liquid-receptacle, a cap therefor secured to said air-delivery tube, an air-chamber adjacent to the exterior of said cap, delivery-ports for said chamber, spraying-tubes arranged through said cap, with their outer ends adjacent to said ports, a handhold secured to the under side of said pump and to said air-delivery tube, and a supporting-ring for said receptacle secured to said handhold.

2. In a sprayer, the combination of an air-pump, a downwardly-depending air-delivery tube therefor, a liquid-receptacle, a cap therefor secured to said air-delivery tube, an air-chamber adjacent to the exterior of said cap, delivery-ports for said chamber, spraying-tubes arranged through said cap, with their outer ends adjacent to said ports, a handhold secured to the under side of said pump, and a supporting-ring for said receptacle secured to said handhold.

3. In a sprayer, the combination of an air-pump, a downwardly-depending air-delivery tube therefor, a liquid-receptacle, a cap therefor secured to said air-delivery tube, an air-chamber adjacent to the exterior of said cap, delivery-ports for said chamber, spraying-tubes arranged through said cap, with their outer ends adjacent to said ports, a handhold secured to the under side of said pump.

4. In a sprayer, the combination of an air-pump, a downwardly-depending air-delivery tube therefor, a liquid-receptacle, a cap therefor secured to said air-delivery tube, an air-chamber adjacent to the exterior of said cap, delivery-ports for said chamber, spraying-tubes arranged through said cap, with their outer ends adjacent to said ports.

5. In a sprayer, the combination of an air-pump; a downwardly-depending air-delivery tube therefor having a suitable delivery-port at its lower end; a handhold on the under side of said pump; a liquid-receptacle supported on said handhold and on said delivery-tube; and a suitable spray-tube arranged with its outer end adjacent to said air-delivery port, for the purpose specified.

6. In a sprayer, the combination of an air-pump; a downwardly-depending air-delivery tube therefor having a suitable delivery-port

at its lower end; a handhold on the under side of said pump; a liquid-receptacle; and a suitable spray-tube arranged with its outer end adjacent to said air-delivery port, for the purpose specified.

7. In a sprayer, the combination of an air-pump; a downwardly-depending air-delivery tube at the end thereof, having a suitable delivery-port at its lower end; a liquid-receptacle arranged below said air-pump; a cap therefor secured to said air-delivery tube; and a suitable spray-tube carried by said cap arranged with its outer end adjacent to the air-delivery port of said air-delivery tube, for the purpose specified.

8. In a sprayer, the combination of a pump; downwardly-depending arms on said pump, the pump between said arms constituting a handle; a liquid-receptacle on said arms; an air-passage having a delivery-port near said receptacle; and a suitable spray-tube arranged with its outer end adjacent to said air-delivery port; for the purpose specified.

9. In a sprayer, the combination of a pump having a suitable discharge-port; a liquid-receptacle; a spray-tube arranged within said receptacle with its outer end adjacent to said air-discharge port; and an agitating device within said receptacle comprising disk-like rings connected on diametrical lines.

10. In a sprayer, an agitator comprising disk-like rings arranged in intersecting relation substantially at right angles and secured together.

11. In a sprayer, the combination with an air-pump carrying holding means, and the reservoir carried by said holding means, of a cover for the reservoir having fluid-tubes, an air-chamber adjacent to the external periphery of said cover and provided with jet-orifices coöperating with the fluid-tubes, and an air-trunk connecting said chamber with the outlet of the pump.

12. In a sprayer, the combination with the reservoir and air-supply means, of a main cover or cap for the reservoir, fluid-tubes carried by said main cover or cap, and an air-chamber in connection with the air-supplying means and adjacent to the exterior periphery of the main cover or cap, said air-chamber being provided with jet-orifices coöperating with the fluid-tube.

13. In a hand-sprayer, the combination with an air-pump carrying a rest and holding means, the reservoir carried by said holding means, a screw-cover for the reservoir having a filling-cap and also provided with a plurality of fluid-tubes having their delivery ends disposed outside of the cover, an air-chamber adjacent to the external periphery of the cover and provided in its front wall with jet-orifices, and an air-trunk connecting said chamber with the outlet of the pump.

14. In a sprayer, the combination with an
air-pump, of a non-corrodible reservoir sup-
ported by said pump, a cover for the reser-
voir, fluid-tubes carried by said cover, an air-
5 chamber adjacent to a portion of the external
surface of the cover and having orifices, and
an air-trunk connecting said chamber with
the outlet of the pump.

In witness whereof I have hereunto set my
hand and seal in the presence of two wit- 10
nesses.

CLARENCE W. PARKS. [L. s.]

Witnesses:

W. A. WATTS,
D. W. NORTON.