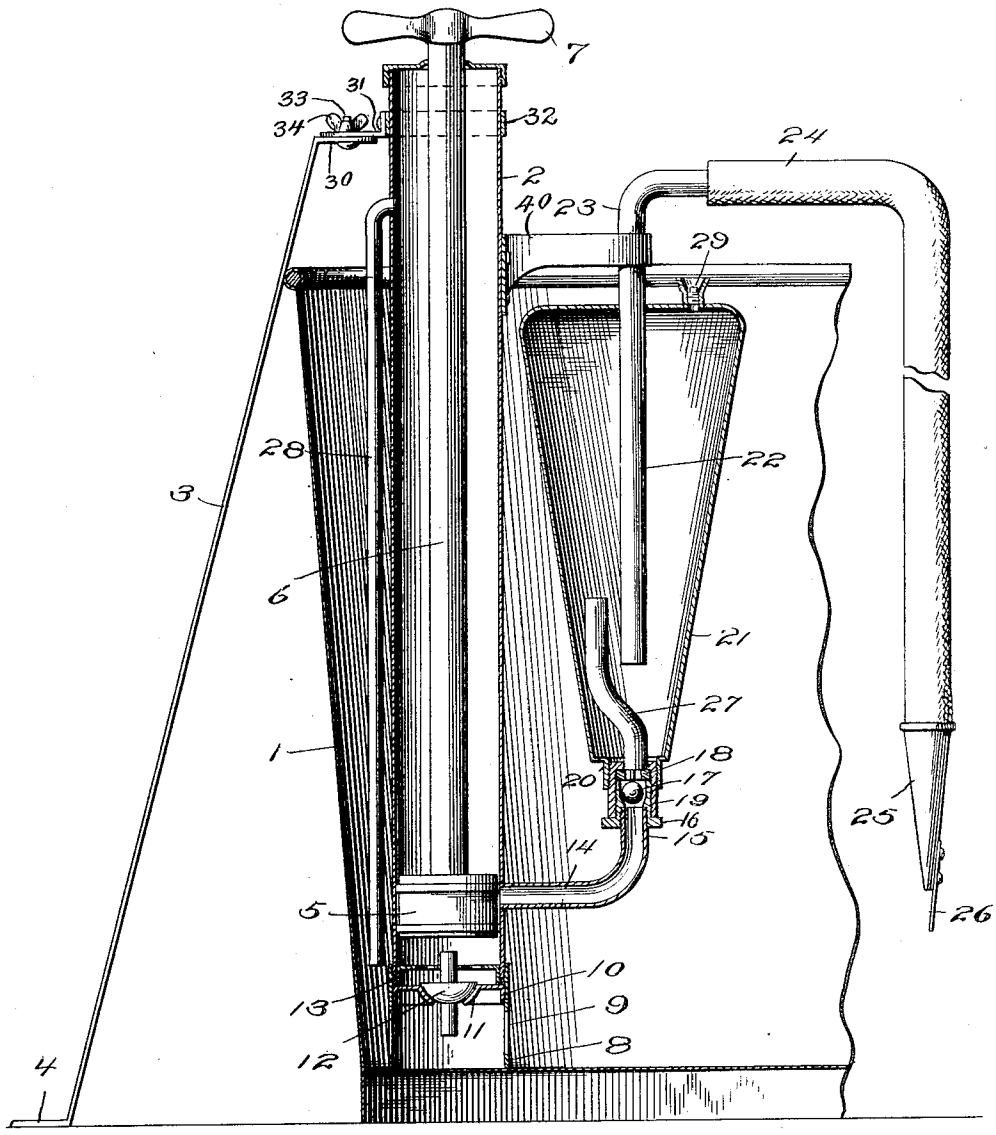
J. FARNER.

PORTABLE FORCE PUMP.

APPLICATION FILED MAY 27, 1913.

1,134,042.

Patented Mar. 30, 1915.



Witnesses

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JOHN FARNER, OF ORILLIA, WASHINGTON.

PORTABLE FORCE-PUMP.

1,134,042. Specification of Letters Patent. Patented Mar. 30, 1915.

Application filed May 27, 1913. Serial No. 770,226.

To all whom it may concern:

Be it known that I, JOHN FARNER, a citizen of the United States, residing at Orillia, in the county of King and State of Washington, have invented certain new and useful Improvements in Portable Force-Pumps; 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.

This invention relates to spraying apparatus for use in association with a receptacle such for instance as a pail, tub or the like and adapted to spray vegetation of various kinds.

The chief object of the invention is to provide the apparatus with improved means extending over the edge of the receptacle to the ground and engaged by the foot of the user to hold the force pump in operative position.

A further object is to improve details of construction so as to render all parts detachable and accessible for purpose of cleansing and repair.

With these and other objects in view the invention comprises certain novel constructions, combinations and arrangement of parts as will be hereinafter more fully described and claimed.

The drawing is a diametrical sectional view through the cylinder and air chamber of the apparatus.

The improved apparatus which forms the subject matter of this application is adapted for use in connection with any usual and ordinary form of receptacle as shown conventionally at 1. The apparatus comprises a pump barrel herein shown as a cylinder 2 of such length as to set into the receptacle and extend above the upper edge thereof with an oblique metal brace 3 proportioned to extend over the edge of the receptacle and terminating in a foot piece 4 upon which the foot of the user may be placed to hold the device in position. The upper end of the brace is bent into a horizontal lip 30 and underlies an L-shaped bracket 31, whose upright portion is secured to a collar 32, which closely surrounds the barrel 2, and the bracket and lip are connected by a bolt 33 having a thumb nut 34, whereby the brace may be detached at will. Within the cylinder 2 a piston 5 is mounted to reciprocate, actuated by means of piston rod 6 having a handle 7 at its upper end. At the lower end the cylinder 2 is provided with a sleeve 8 having inlet openings 9 formed therein to permit liquid to flow from the receptacle 1 into the cylinder 2. Inserted in the sleeve 8 is a diaphragm 10 having a valve seat 11 formed therein co-acting with a valve 12 to permit liquid flowing through the inlets 9 to pass upwardly into the cylinder 2 but prevent the backward flow of such liquid. A spider 13 is provided above the valve 12 to serve as a guiding and limiting member for the valve.

Extending from one side of the cylinder 2 is an elbow 14 whose upstanding end 15 as shown in the drawing carries a fitting 16 removably secured thereto. The fitting 16 and end of the elbow serves as a valve seat for the valve 17 which is maintained in position by spider 18 held upon the fitting 16 by a sleeve 19.

Seated upon and inclosing the sleeve 19 is a nipple 20 depending from an air chamber 21 into whose upper end an outlet pipe 22 extends, the pipe being bent at 23 and a hose 24 connected therewith in the usual well known manner. The hose 24 is fitted with a nozzle 25 which latter carries a spray plate 26. The sleeve 19 also carries a pipe 27 which extends upwardly into the air chamber above the lower end of the outlet pipe 22 as shown so that liquid forced upwardly by the descent of the piston 5 flows into the air chamber at a point above the extremity of the pipe 22 and traps air in the upper portion of said chamber.

As liquid is liable at all times to work onto the top of the piston and to cause annoyance by being ejected around the piston rod 6, provision is made for taking care of it by providing a pipe 28 connected with the cylinder adjacent its top and extending downwardly to carry off any liquid which may be carried upwardly by the piston 5.

When the device is set into a receptacle as shown, it is intended that the brace 3 shall bind against the edge of the receptacle so that even in cases where the sleeve 8 does not rest on the bottom of the receptacle the device may be clamped firmly in place within the receptacle by the foot of the user upon the foot piece 4. The bending of the pipe 22 as shown at 23 serves to prevent the breakage of the hose 24 when bent to a horizontal or substantially horizontal position. The spray plate 26 serves to break up the

column of water discharged from the nozzle 25.

It will be noted that all of the parts are detachable and accessible. An opening is provided in the top of the air chamber 21, closed by a removable plug 29 to permit the emptying of such chamber when it is desired to clean out the various parts. A bracket 40 projecting laterally from the barrel 2 carries the outlet pipe 22 which extends through the top of the chamber and supports the same, while the nipple 20 at its lower end centers and supports the latter upon the sleeve 19. The parts are by preference entirely of metal, and their proportions and specific details are matters of no moment.

I claim:—

The herein described portable force pump comprising a barrel having a valved inlet at its lower end, an elbow opening from the barrel above said inlet, an air chamber mounted on the elbow and into whose lower end the elbow delivers, a bracket on the barrel, and an outlet pipe carried by the bracket and extending down into said chamber; combined with a collar fast around the upper end of the barrel, a bracket carried by said collar, an oblique brace having a foot piece at its lower end and its upper end connected with said bracket, and a pipe connected with the cylinder adjacent its upper end and extending downward alongside the same, for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN FARNER.

Witnesses:
G. WARD KEMP,
A. M. HUMMER.

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