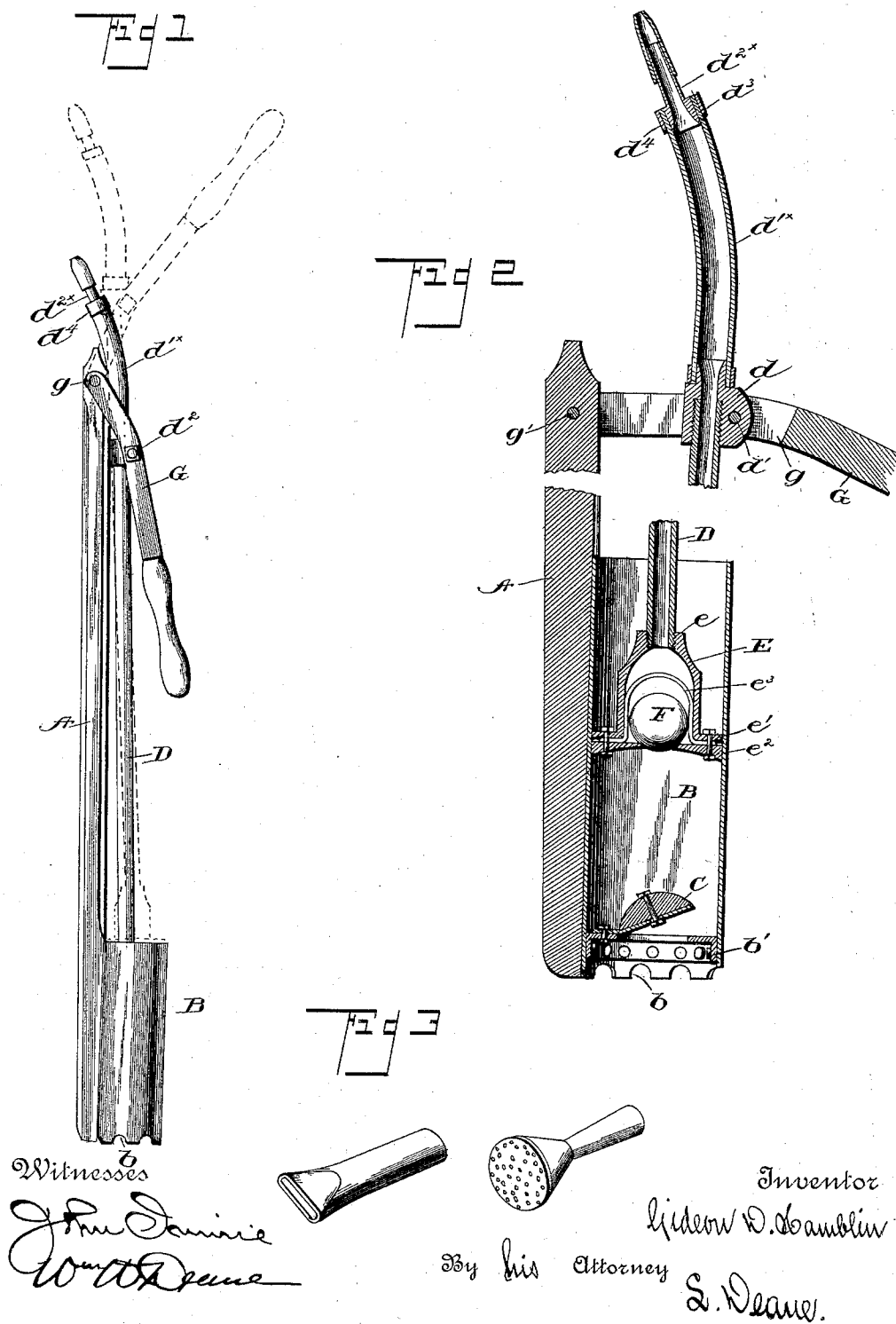


(No Model.)

G. D. HAMBLIN.
PORTABLE GARDEN OR SPRAYING PUMP.

No. 482,681.

Patented Sept. 13, 1892.



UNITED STATES PATENT OFFICE.

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PORTLAND, MAINE.

PORTABLE GARDEN OR SPRAYING PUMP.

SPECIFICATION forming part of Letters Patent No. 482,681, dated September 13, 1892.

Application filed April 6, 1892. Serial No. 428,039. (No model.)

To all whom it may concern:

Be it known that I, GIDEON D. HAMBLIN, a citizen of the United States, residing at Deering, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Portable Garden or Spraying 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.

Figure 1 is a side elevation of this device. Fig. 2 is a central section through the cylinder and the hollow plunger, as well as the stock and handle. Fig. 3 is a perspective view of some forms of nozzles which may be applied to the exit end.

This device belongs to that class which is denominated "garden" or "spraying" pumps, which are light and portable articles and designed, as the name indicates, for watering or diffusing any of the prepared liquids for treating plants, vegetables, &c., on the farm or in the garden. It may also be used for a variety of other purposes which it is not necessary now to speak of.

The novelty in the present invention consists in the peculiar structure of the several parts and in their combination with each other and in the device as a whole.

In the accompanying drawings, A denotes any suitable stock, standard, or support, of wood or metal, to the lower end of which is secured in any desired way the pump-cylinder B. This is preferably of sheet metal and ordinarily about two and a half inches in diameter and about eight inches long; but these figures are given more for illustration than for limitation. This cylinder is open at both ends. For strength and finish it is usual to have the lower ends of the standard or stock and the cylinder coincide. The lower end of the cylinder is notched at *b*, so that when the pump is set into a bucket or a well or any receptacle where it is to be used there may be spaces for the entry of water into the cylinder. Inside and near the lower end of this chamber is an annulus *b'*, fixed to the wall, and to said annulus is hinged in the usual way any ordinary valve C, which is adapted to open upward.

To the lower end of the hollow piston D is secured, preferably by screw-thread *e*, at its upper end the hollow plunger E. This plunger is of considerably less diameter than the main cylinder B. To its flanged lower end *e'* is secured in any desired way or manner the annulus *e''*. Both flange and annulus are of suitable diameter to fit snugly within the cylinder B. The ball or check F inside the plunger E is adapted to be seated when the pump is at rest, or when the tubular piston is moved upward said ball seats upon and over and tightly closes the opening in the annulus *e''*. As the piston is pushed down this ball, being moved upward a little, readily allows the free movement of the piston. The arched wire check-bar *e'''*, whose ends are fastened between the flange *e'* and the annulus *e''*, will properly limit the upward movement of this ball F. At its upper end the piston has secured upon it an enlarged metal ring or collar *d*. This affords means for securing the piston to the bifurcated end *g* of the handle G by headed bolt *d'*, which passes through handle, fork, and collar. The nut *d''* on the end of the bolt holds the bolt secure in position. The ends of the forks of the handle are pivoted at *g'* near the top of the stock or standard A. The handle G may be curved or bent downward at its outer end, as clearly seen in Fig. 1, this curve beginning at or just beyond the pivot-pin *d'*, whereby said handle may be folded down compactly against the rod D. The forks of said handle also begin, preferably, at or near said curve, whereby when the handle is folded down said forks will take over the collar the more compactly. It will be seen, also, that, the handle and pump-cylinder being both mounted on the same side of the stock A, a very compact construction results. The lower end of the elastic and hollow tip *d'* is fastened to the top of the piston by rivets or screw-thread and so as to make a tight joint at the point of connection. The nozzle *d''* is fixed in the end of the tip *d'* by screw-thread or by inserting its enlarged shank *d'''* into the end of tip *d'* and then putting the ring *d''* over the outside of the tip and fastening all the parts together by bolts. The nozzle may be a rose or it may be a piece of small pipe flattened at the point, so that the water or other

liquid shall be delivered in the form of a thin sheet. This manner of delivery is in some instances much to be preferred to an ordinary stream or to the spraying form. The ball F 5 inside the hollow plunger E, being made of Babbitt metal, is non-corrosive and is adapted for the most permanent wear. Heretofore in devices of this sort there has been very general complaint that the prepared liquids used 10 in them were very destructive of the valves. This has been a very serious objection, because it is exceedingly inconvenient for the user of such pumps to be constantly calling on a mechanic to repair the valves so dam- 15 aged or destroyed.

I am aware that portable pumps for garden and other purposes are not new; also, that a hollow piston for pumps of analogous character is not broadly new, and that a cylinder 20 attached at the end of the pump-stock is not new, and a movable and hollow piston is not new in devices of this general description.

What I claim is—

1. In a pump, the combination, with a cyl- 25 inder, of a flanged hollow plunger therein, an

annulus e^2 , secured to the plunger and having a valve-seat, a check-bar e^3 , having its ends bent outwardly and secured between said annulus and the flange of the plunger, a ball- 30 valve inclosed between said check-bar and the annulus, and means for operating the plunger, substantially as set forth.

2. In a pump, the combination, with the stock or standard, of a cylinder mounted thereon having a valve at its base, a forked 35 lever secured to the other end of the standard and projecting from the same side as the cylinder, a hollow plunger within the cylinder, provided with a valve, a collar pivotally secured in the fork of the lever, a hollow piston- 40 rod communicating with the plunger and the collar, and a flexible tip secured to the collar above the handle, substantially as set forth.

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

GIDEON D. HAMBLIN.

Witnesses:

JOHN I. PERRY,
GEORGE LIBBY.