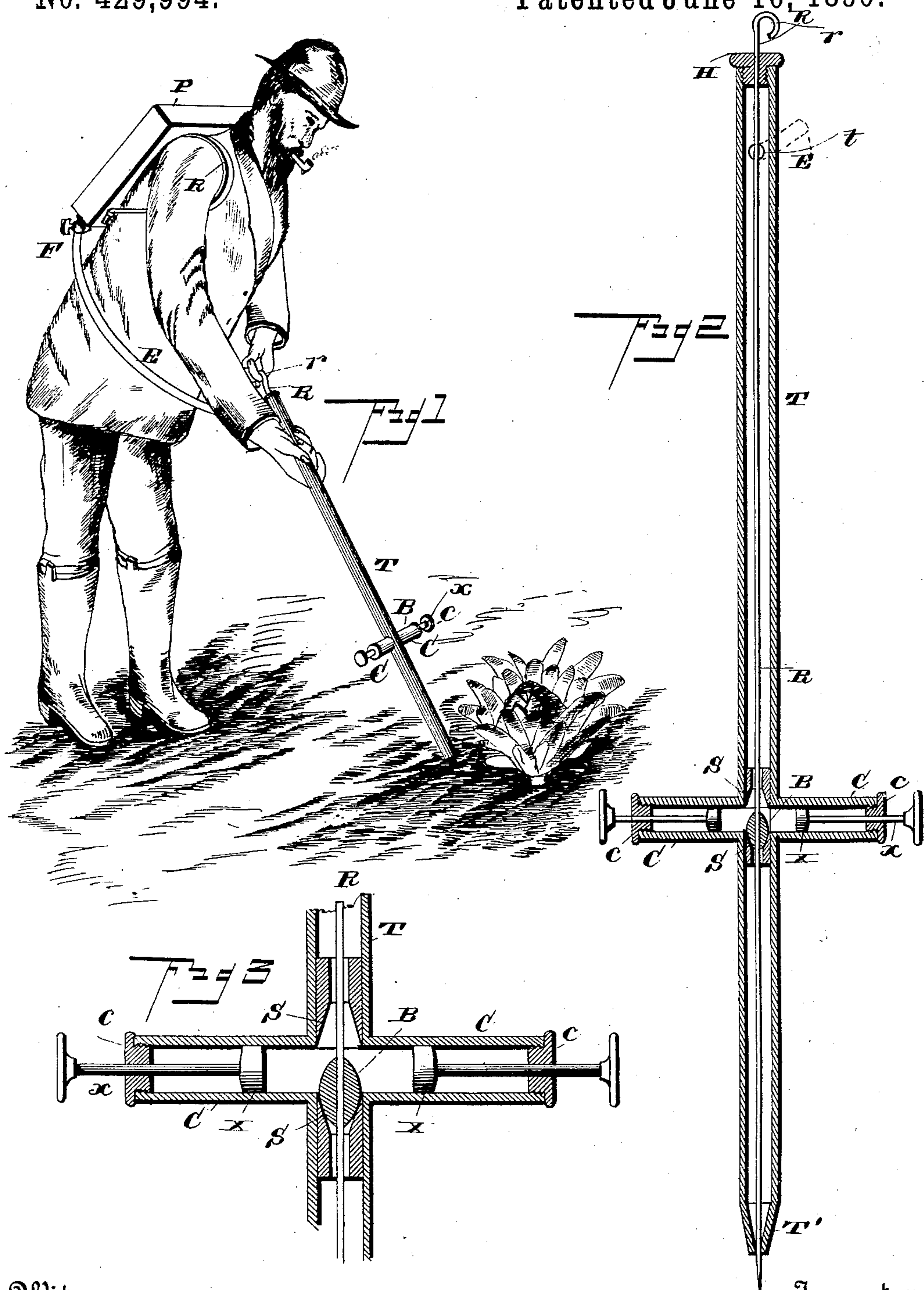


(No Model.)

J. J. BOTTER.  
IRRIGATOR.

No. 429,994.

Patented June 10, 1890.



Witnesses

John Smurie  
N. L. Hollamer.

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# UNITED STATES PATENT OFFICE.

JASPER JAMES BOTTER, OF MOBILE, ALABAMA.

## IRRIGATOR.

SPECIFICATION forming part of Letters Patent No. 429,994, dated June 10, 1890.

Application filed January 22, 1890. Serial No. 337,701. (No-model.)

### *To all whom it may concern:*

Be it known that I, JASPER JAMES BOTTER, a citizen of the United States, residing at Mobile, in the county of Mobile and State of Alabama, have invented a new and useful Irrigator, of which the following is a specification.

This invention relates to irrigators, more especially of that class adapted for use in connection with flowers or small plants or where great care must be exercised that a too great charge of water or nourishing-liquid may not be fed to the plant being irrigated; and the invention consists, broadly, of a pouch carried on the back of the operator, a flexible pipe leading therefrom, a main tube with which said pipe is connected, a two-way valve within said tube, and lateral branch tubes connecting with the main tube and adapted to be filled with the irrigating-liquid, whereby the size of the charge of the latter will be regulated.

In carrying out my invention the device further consists in certain details of construction and arrangements of parts, all as will be hereinafter explained.

In the accompanying drawings, Figure 1 is a general side view of my irrigator complete, showing its manner of use. Fig. 2 is a central vertical section of the main tube. Fig. 3 is an enlarged vertical section of the two-way valve and the lateral tubes.

The letter P designates a pouch of any suitable water-proof material adapted to be attached to the back of the operator by the straps R; or the same may be made in the shape and form of a tank and mounted on wheels; but the various capabilities and varieties of this reservoir will readily suggest themselves to the manufacturer. Leading from a faucet F in the bottom of this pouch is a flexible hose E, which is connected at its outer end with a lateral branch *t* of the main tube T. This main tube is preferably about three feet in its length and is reduced at its lower end, as at T', for a purpose hereinafter to be explained.

Within the body of the tube T is a longitudinally-disposed rod R, passing through a head H at the upper end of the tube, and provided with a handle *r* at its upper end, by means of which it may be operated. The lower

end of this rod protrudes slightly through the reduced lower end of the tube and is preferably pointed, as shown. Mounted upon the body of this rod at a point about twelve inches from the lower end is a double conical enlargement B, whose upper and lower ends are adapted to be seated against the upper and lower seats S S, thus forming an upwardly and a downwardly opening valve within the tube. Projecting laterally from the opposite sides of the main tube T, at a point opposite the enlargement B, are two short tubes C C, their inner ends communicating with the interior of the main tube between the valve-seats S S, and within these short tubes C are arranged the pistons X, which are adapted to be set nearer to or farther from the valve B by outwardly-projecting stems *x*, passing through apertures in the heads *c* at the outer ends of the tubes.

With this general construction of parts the operation of my improved irrigator is as follows: The pouch or reservoir is first filled with a suitable irrigating-liquid and strapped upon the back of the operator or mounted on a barrow or other support somewhat above the level at which it is desired the remaining parts of the implement shall be used. The operator then takes the main tube in his hand and places the reduced end thereof either at the base of the plant it is desired to irrigate or into the ground at the roots thereof, according to the nature of the plant and the dryness of the season. With the other hand he then draws upwardly upon the rod R, and a charge of liquid will flow out of the device to the exact point desired. The rod R is then released and the ball or valve B falls with its own weight, seating itself against the seat S below it and opening the valve at its top, and another charge of liquid immediately flows through this upper valve and out into the lateral tubes C C against the pistons therein. The operator has meanwhile walked on to the next plant, where the operation is repeated. The size of the charge of liquid can of course be regulated by setting the pistons in the lateral tubes at any desired point. When desired, the flow of liquid from the pouch P can be cut off by turning the cock F.

Especial attention is directed to the tapered shape of the lower end of the tube T and to



the pointed lower end of the rod R, by means of which the lower end of the irrigator can be pushed into the earth with facility, and the cylindrical body of the tube will perhaps spread apart, but will not cut or injure the finest roots of the plants being watered or irrigated. It will of course be understood that any suitable fertilizing-liquid can be supplied with this device, or even a suitable poison for worms that may be eating or destroying the roots.

I claim as the salient points of my invention—

1. A portable irrigator comprising a pouch, a flexible pipe connected therewith, an irrigating-tube connected with said pipe, lateral extensions opening from said tube, and means, substantially as described, for varying the holding capacity of said extensions and for delivering the irrigating-liquid from said tube, as and for the purpose set forth.

2. The tube T, having the two valve-seats SS, and provided with lateral extensions opening from said tube between said valve-seats, in combination with the rod R, extending through said tube and carrying the double conical valve B, the whole adapted for operation as and for the purpose set forth.

3. The tube T and the lateral tubes C C opening therefrom, in combination with the valve-seats S S within said main tube above

and below said lateral tubes, the conical valve B, adapted to be seated against said seats, and the rod R, passing through said valve and main tube, and having a handle r at its upper end, as set forth.

4. The combination, with the main tube T and the lateral tubes C C opening therefrom, of the valve-seats S S, above and below said point of connection, valves for opening and closing said valve-seats alternately, plungers or pistons X within said lateral tubes, and operating-stems x, projecting out of the ends thereof, as and for the purpose set forth.

5. The main tube T, the valve-seats S S within the same, and the rod R in said tube, carrying the enlarged valve B, adapted to make alternate connections with said seats, in combination with the lateral tubes C C, opening into said main tube between said seats and provided with heads c at their outer ends, the pistons X within said lateral tubes, and the stems x, projecting from said pistons X through said heads, as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JASPER JAMES BOTTER.

Witnesses:

JOS. A. HYNDE,

ROBT. A. SHELDON.