

No. 638,207.

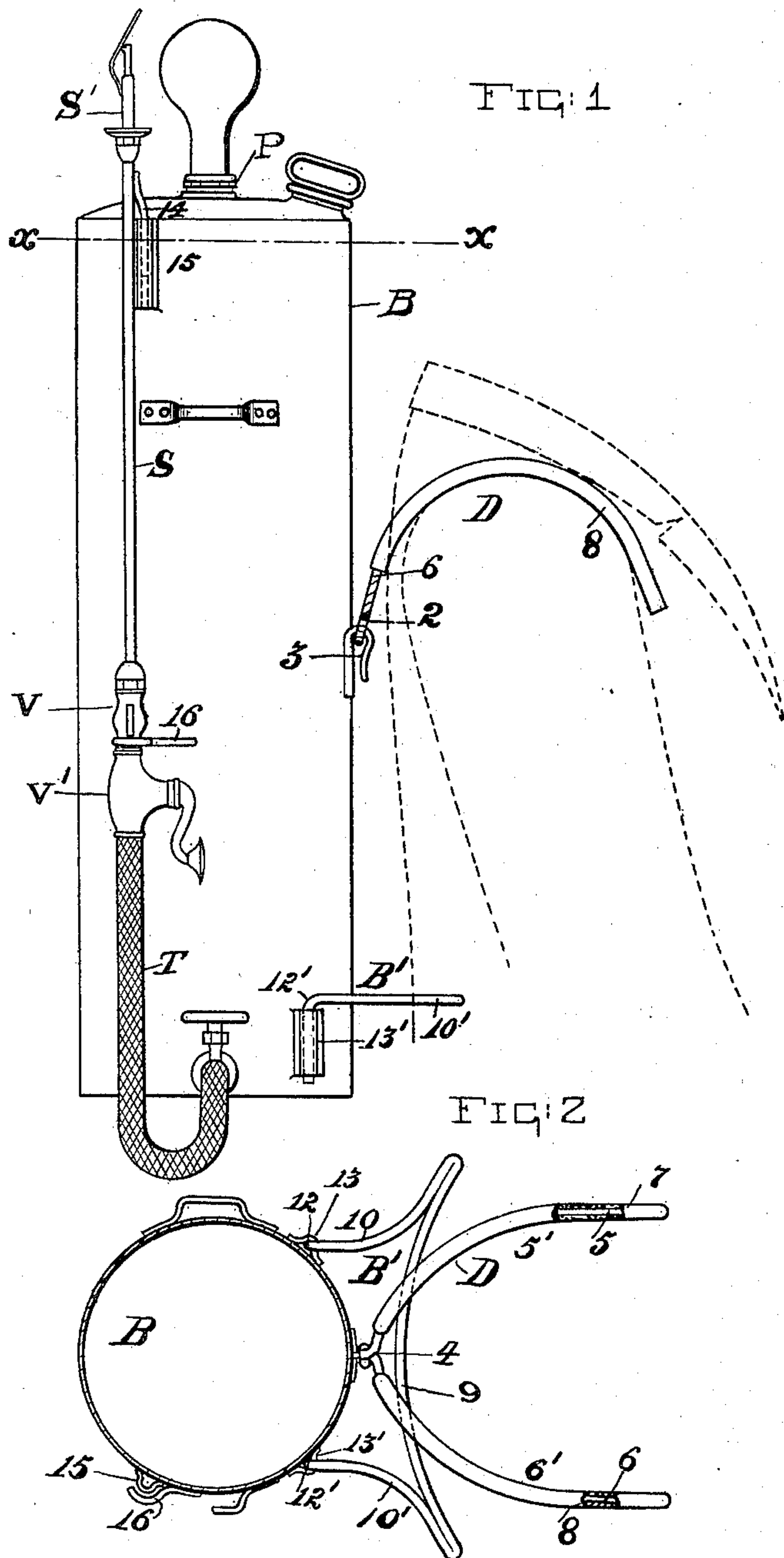
Patented Nov. 28, 1899.

W. H. RICE.

LIQUID DISCHARGING APPARATUS.

(Application filed May 22, 1899.)

(No Model.)



WITNESSES
L. H. Blood.
M. H. Flynn.

INVENTOR
Wayne H. Rice
By E. B. Whitney, Attorney.

UNITED STATES PATENT OFFICE.

WAYNE H. RICE, OF EAST WINDSOR HILL, CONNECTICUT.

LIQUID-DISCHARGING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 638,207, dated November 28, 1899.

Application filed May 22, 1899. Serial No. 717,808. (No model.)

To all whom it may concern:

Be it known that I, WAYNE H. RICE, a citizen of the United States of America, and a resident of East Windsor Hill, county of
5 Hartford, and State of Connecticut, have invented certain new and useful Improvements in Liquid-Discharging Apparatus, of which the following is a specification.

This invention relates generically to a liquid-discharging apparatus of that class embodying a portable liquid-receptacle having a discharge - nozzle in communication therewith, and more particularly to an apparatus adapted for use in spraying or spotting tobacco, disseminating disinfectants, or deodorizing liquids in infected places, &c.

One object of the present invention is to provide in an apparatus of the class specified, embodying a liquid-receptacle and a discharge - nozzle in communication therewith, improved means whereby the apparatus may be quickly applied to and secured to the back of the operator in a vertical position and be carried and used without inconvenience and
25 without the necessity of strapping the same thereto, as heretofore customary.

A further object of the invention is to provide, in connection with the liquid-receptacle and discharge-nozzle of an apparatus of the class specified, improved, simple, and convenient means whereby the nozzle may be readily secured to and held in place in an upright position on the liquid-receptacle, so as to secure compactness in the apparatus as a
35 whole when not in use.

With these objects in view my present invention consists in certain details of construction and in the combination and organization of the several parts of the apparatus, as will be hereinafter described, and more particularly pointed out in the claims.

In the drawings accompanying and forming part of this specification, Figure 1 is a side elevation of a spraying apparatus embodying my present invention, said figure showing the apparatus in its relation to the operator or when supported from the shoulders and upon the back of said operator, the dotted lines indicating in profile a portion of
45 said operator; and Fig. 2 is a cross-sectional view taken on a line corresponding with the dotted line $x x$ in Fig. 1 and showing the

parts below said line and with the pump and nozzle of the apparatus removed.

Similar characters indicate the same parts
55 in both figures of the drawings.

My present invention is for convenience shown in the accompanying drawings embodied in an apparatus which is in a general way similar to the spraying apparatus shown, described, and claimed in my prior application, Serial No. 712,793, filed April 12, 1899, and which spraying apparatus comprises in part a liquid-receptacle B, an air-pump P, (a portion of the upper end only of which is
60 shown,) a discharge-nozzle S, connected at its lower end by means of a flexible tube T to and communicating with the interior of the liquid-receptacle, an atomizing member S', fixed to the discharge end of said nozzle, and
65 two valves V and V', respectively in connection with said nozzle and effective one for regulating the discharge and the other for cutting off and establishing communication between the discharge-nozzle and liquid-receptacle.
75

It is distinctly to be understood that the present invention is not limited to a spraying or spotting apparatus such as shown in the accompanying drawings or to any particular
80 kind of liquid-receptacle having a discharge-nozzle, as the subject-matter of said invention, while confined in its embodiment to a liquid-receptacle and discharge-nozzle of some kind, may be embodied in various kinds of
85 apparatuses analogous to spraying devices—such, for instance, as a chemical fire-extinguisher of the well-known "Babcock" type.

Referring particularly to tobacco spraying and spotting apparatuses, considerable difficulty has been experienced on account of the non-provision of adequate means in connection therewith for enabling the same to be conveniently carried about from place to place during the operation of spraying or spotting
90 tobacco, the only means within my knowledge heretofore provided for this purpose being a set of straps applied to the liquid-receptacle and used by the operator much after the manner of the well-known knapsack shoulder-
95 straps, the receptacle being supported when in use with its longitudinal axis substantially in a horizontal plane, this rendering the carrying of said apparatus laborious and incon-

venient; and it is the chief object of this invention to overcome these disadvantages by providing an apparatus embodying means whereby the liquid-receptacle may be quickly secured in an upright position to the back of the operator for convenient use and in such manner that the weight will be so distributed or applied as to be least burdensome to the operator while using the same.

As a simple and convenient means for attaching the apparatus to the back of the operator and retaining the same against movement with relation to said operator and in a vertical position I have provided, in connection with the liquid-receptacle, a bifurcated supporting device (designated in a general way by D) constructed to embrace the shoulders of the operator and preferably having at the inner end thereof a hinged or pivotal connection with the outer face of the liquid-receptacle at a point preferably substantially midway between the upper and lower ends thereof and a brace or back-rest B', secured to the liquid-receptacle below the supporting device and constructed to bear against the lower portion of the back of the operator, whereby to hold the receptacle against lateral movement.

In the preferred construction and organization thereof shown in the accompanying drawings the supporting device B is constructed from a single piece of heavy rigid wire bent and twisted substantially midway of its length to form a loop 2, whereby the same may be, as shown in Fig. 1, attached to a hook or attaching device 3, fixed to the outer face of the receptacle, the outwardly-projecting arms or end strands of the wire being separated or diverging from the point 4 to form the bifurcated end of the supporting device, the two end strands 5 and 6 thereof being correspondingly curved or bowed at 5' and 6' to adapt them to the shape of the shoulders of the operator, said strands being adapted for engaging the shoulders at opposite sides, respectively, of the neck of said operator, as will be readily understood by reference to Fig. 2 of the accompanying drawings. In practice the end strands 5 and 6 of the supporting device will be padded or covered with flexible material for obvious reasons, said strands being shown in the accompanying drawings as covered by tubes 7 and 8, which may be of rubber or any suitable material.

I do not desire to limit myself to the particular construction of supporting device shown in the accompanying drawings, as modifications thereof may be employed without departure from this invention.

The back-rest or brace B' in the form thereof shown most clearly in Fig. 2 comprises a horizontally-disposed curved bar 9, constructed to embrace the back of the operator and having at opposite ends thereof inwardly-projecting horizontal arms 10 and 10', respectively bent at their inner ends downwardly,

as shown at 12 and 12', and which inner ends are supported in eyes or sleeves 13 and 13', secured to opposite side faces of the receptacle B, near the lower end thereof.

In practice the back-rest or brace will preferably be constructed of a single piece of wire bent in the form shown in Fig. 2 of the drawings, and the inner ends thereof will be removably seated in the eyes or sleeves 13 and 13'.

As a simple and convenient means of supporting the discharge-nozzle of the apparatus when not in use in a vertical position upon the receptacle said nozzle is provided at one end thereof with a longitudinally-disposed depending hook 14, and the receptacle is furnished on the outer face thereof in the proper locality with an eye or sleeve 15 to receive said hook, whereby the nozzle may be suspended on said receptacle in vertical parallelism therewith in the manner shown in Fig. 1 of the drawings, and to prevent lateral displacement of the lower end of the nozzle a clip or hook 16 is secured to the receptacle B in position for engaging the lower portion of said nozzle, as will be readily understood by reference to said figure.

I claim—

1. The combination with the liquid-receptacle having a hook or attaching device secured to the side face thereof, of a substantially rigid bifurcated supporting device movably secured at its inner end to said hook and having its outer end constructed to engage over and fit both shoulders of the operator.

2. The combination with a liquid-receptacle having a hook or attaching device secured to the side face near the middle portion thereof, of a substantially rigid supporting device having at the inner end thereof a loop in movable connection with said hook and having at the outer end thereof two outwardly-extending curved arms constructed to fit over and engage both shoulders of the operator, whereby the apparatus may be conveniently carried in an upright position.

3. A spraying apparatus comprehending a liquid-receptacle having a discharge-nozzle in communication therewith; a bifurcated supporting device pivotally connected with said receptacle and having two normally-curved divergent end strands or arms constructed to fit over the shoulders of an operator at opposite sides, respectively, of the neck, whereby the apparatus may be carried in an upright position; and means, substantially as described, in connection with, and effective for supporting the nozzle in an upright position on, the liquid-receptacle.

4. An apparatus of the class specified including a liquid-receptacle; a discharge-nozzle communicating with said receptacle; a hook or attaching device secured to said receptacle; a bifurcated supporting device shiftably secured to said attaching device; and having two outwardly-extending normally-curved rigid arms constructed to fit over the

shoulders of the operator; an eye or loop secured to said receptacle; and a hook secured to the nozzle and adapted to enter the said loop, whereby said nozzle may be supported
5 on the receptacle in parallelism therewith, substantially as described.

5. The combination, in an apparatus of the class specified, of a liquid-receptacle having an attaching device secured to the outer face
10 thereof substantially midway between opposite ends thereof; a bifurcated supporting device pivotally secured to said attaching device and having its outwardly-extended arms

normally curved to fit over the shoulders of the operator; a pad or flexible covering secured to said arms; and a back-rest secured
15 to the receptacle near the bottom thereof and having a curved horizontally-disposed bar adapted to fit the back of the operator, substantially as described. 20

Signed by me at Hartford, Connecticut, this
19th day of May, A. D. 1899.

WAYNE H. RICE.

Witnesses:

E. C. WHITNEY,
M. H. FLYNN.