

No. 744,085.

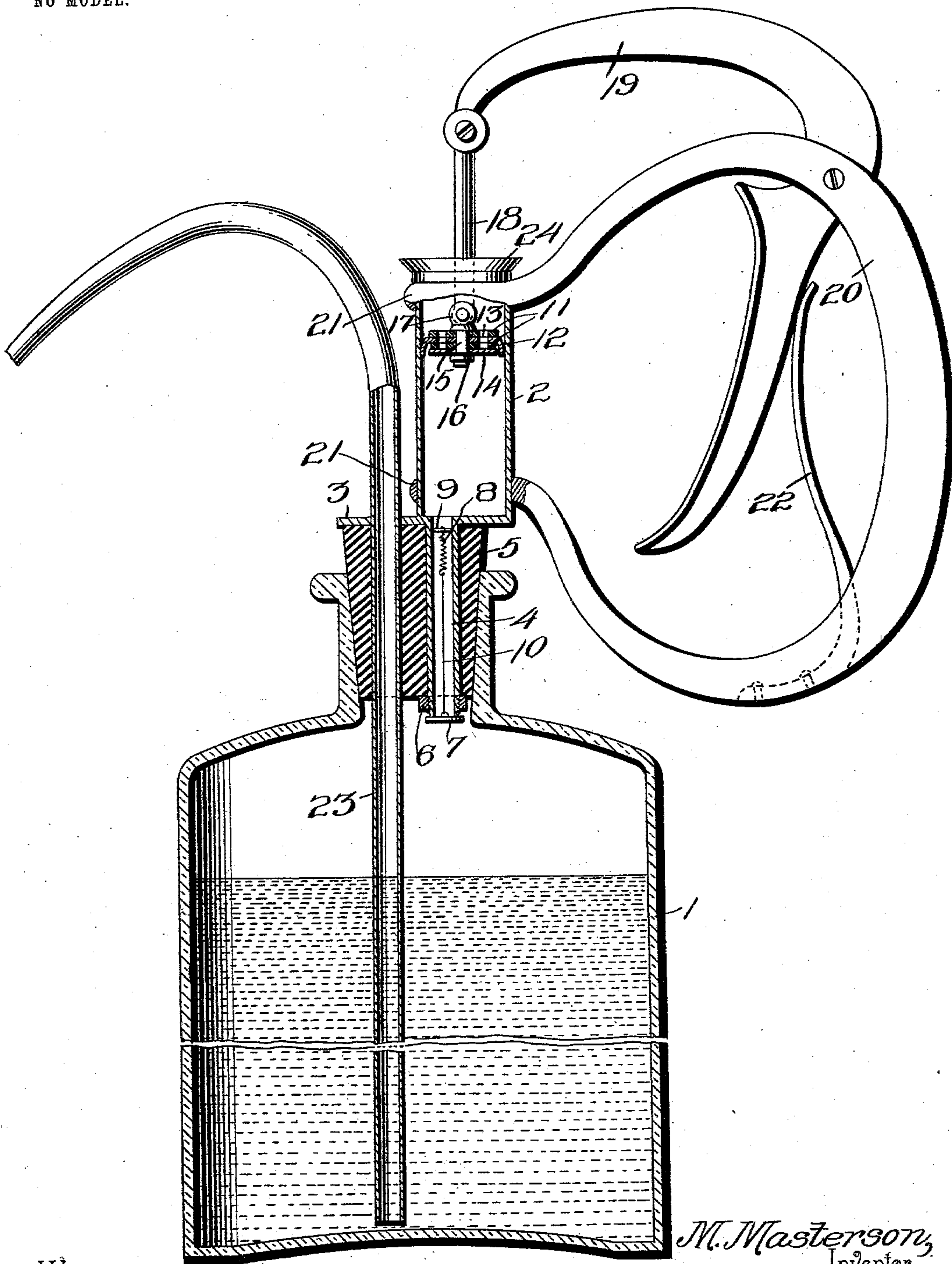
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M. MASTERSON.

LIQUID DISPENSING APPARATUS.

APPLICATION FILED MAY 16, 1902. RENEWED MAR. 25, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

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LIQUID-DISPENSING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 744,085, dated November 17, 1903.

Application filed May 15, 1902. Renewed March 25, 1903. Serial No. 149,586. (No model.)

To all whom it may concern:

Be it known that I, MECKLEY MASTERSON, a citizen of the United States, residing at Cripplecreek, in the county of Teller and State of Colorado, have invented a new and useful Liquid-Dispensing Apparatus, of which the following is a specification.

This invention relates to liquid-dispensing apparatus.

The object of the invention is in a ready, thoroughly feasible, and practical manner to obviate the necessity of lifting heavy jugs or bottles to remove liquid therefrom and to obviate the waste of liquid.

A further object is to present a thoroughly-efficient form of liquid forcing or dispensing apparatus that shall be adapted for ready attachment to any style of jug or bottle.

With these and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of a liquid-dispensing apparatus, as will be hereinafter fully described and claimed.

In the accompanying drawing, forming a part of this specification, and in which like numerals of reference indicate corresponding parts, there is illustrated one form of embodiment of the invention capable of carrying the same into practical operation, it being understood that the elements therein exhibited may be varied or changed as to shape, proportion, and exact manner of assemblage without departing from the spirit thereof; and in this drawing the figure is a view in elevation, partly in section, exhibiting a liquid-forcing device constructed in accordance with the present invention and positioned in the neck of a bottle.

Referring to the drawing, 1 designates a holder, which may be a jug or bottle, for containing liquid. Associated with the neck of the holder is a liquid-forcing device comprising a cylinder or air-pump 2, secured to or integral with a plate 3, carrying a tubular extension 4, which opens into the cylinder and constitutes a passage-way for air from the cylinder. The extension projects through a closure 5, preferably of rubber, and carries at its lower end a nut 6, by which to secure the parts together in a positive manner. The lower end of the extension is closed by a

valve 7, which is held in operative position to close the said end by a coiled spring 8, the upper end of which is secured to a transversely-disposed pin 9, seated in openings in the extension. The lower end of the spring has a straight extension 10, which is connected in any suitable manner with the valve 7. The tension of the spring is to be sufficient to effect a positive sealing of the lower end of the extension against back passage of air from the holder, but is not to present such resistance to operation of the air-forcing means as to render the operation of the latter difficult.

The air-forcing means comprises a piston composed of two plates 11, between which is clamped a packing 12 to impinge the inner walls of the cylinder, the plates and packing being provided with a plurality of aligned orifices 13, constituting air-supply openings, which are normally closed by a valve 14, arranged on the under side of the piston, the plates, packing, and valve being held assembled by an eyebolt 15, carrying a clamping-nut 16, which bears against the valve. The eye 17 of the bolt is bifurcated and has pivoted between it one end of a piston-rod 18, the other end of which is pivotally connected with an operating-lever 19, carried by a handle 20, the terminals of which are formed into bands or rings 21 to encircle and thus hold the handle firmly associated with the cylinder. The lower terminal of the lever is projected into the space between the handle and the cylinder and is borne upon by a spring 22, the normal tendency of which is to hold the piston at the upper end of the cylinder, or, in other words, to effect its automatic return after each downstroke.

The passage-way for conducting the liquid from the holder comprises a tube 23, of glass or any other material, which is mounted in an orifice in the plug extending, preferably, parallel to that occupied by the extension, the upper end of the tube being curved or bent in the manner common to such devices to facilitate catching the liquid as it is forced from the cylinder and to permit the filling of other bottles or vessels without spilling. The tube is held in operative position by frictional engagement with the orifice in the plug, in which it is seated, this for the pur-

pose of permitting its adjustment with relation to the depth of the holder and also to allow it to be removed when necessary.

As shown, the upper end of the air-cylinder is flared, as at 24, to facilitate the seating of the piston therein; but it is to be understood that the invention is not to be limited to this particular construction, as the said end may be straight and still be within the scope of the invention.

The apparatus herein described without the holder is designed to be sold as an article of manufacture and may be readily attached by the purchaser to any holder from which it is desired to remove liquid.

The operation of the apparatus will be apparent. On the upstroke of the piston air is supplied to the cylinder by passing through the orifices 13 and unseating the valve 14. On the downstroke of the piston air will be forced down through the extension 4 and unseat the valve 7 and by exerting pressure on the contained liquid will force it out through the discharge-tube 23.

It will be seen from the foregoing description that although the device of this invention is exceedingly simple of construction it will be found thoroughly efficient in use for the purpose designed and may be readily applied to any ordinary jug or bottle and as readily detached therefrom.

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

1. A device of the character specified, comprising a closure, a cylinder operatively connected therewith and provided at its lower portion with valve mechanism, a handle secured to the cylinder, a piston, and an oper-

ating-lever carried by the handle and connected with the piston.

2. A device of the character specified, comprising a closure, a cylinder having a valved extension secured therein, a handle secured to the cylinder, a piston, and an operating-lever carried by the handle and connected with the piston.

3. An apparatus of the character specified, comprising a closure, a discharge-tube adjustably associated therewith, a cylinder operatively connected with the closure and provided at its lower portion with valve mechanism, a handle secured to the cylinder, a piston mounted in the cylinder, an operating-lever carried by the handle and connected with the piston, and a spring carried by the handle and engaging the lever to effect automatic upstroke of the piston.

4. A device of the character specified, comprising a closure, a cylinder provided at its lower end with a plate to bear upon the closure and having an extension projecting there-through, means associated with the extension to clamp the closure and plate together, valve mechanism associated with the extension, a handle secured to the cylinder, a piston, an operating-lever carried by the handle and connected with the piston, and a discharge-tube adjustably associated with the closure.

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

MECKLEY MASTERSON.

Witnesses:

JOHN MCLEOD,
P. T. ROBERTS.