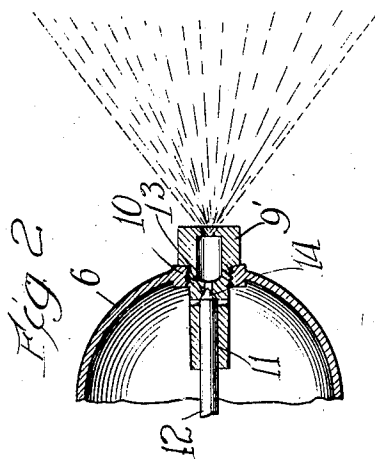
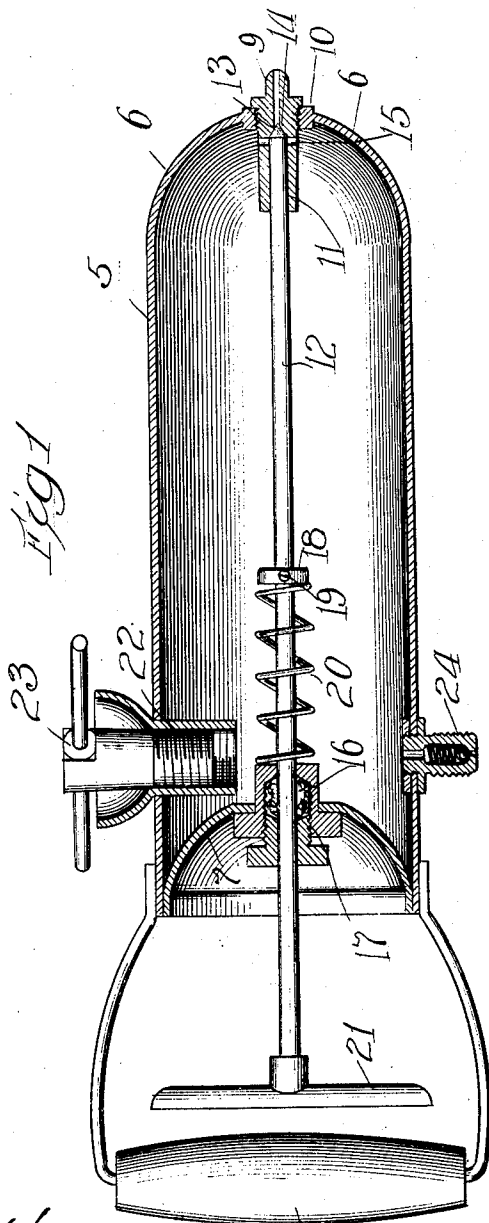


J. DESMOND.
LIQUID DISPENSER.
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1,046,997.

Patented Dec. 10, 1912.



Witnesses:
H. B. White
R. A. White.

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UNITED STATES PATENT OFFICE.

JOHN DESMOND, OF CHICAGO, ILLINOIS, ASSIGNOR TO ARTIZAN BRASS COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

LIQUID-DISPENSER.

1,046,997.

Specification of Letters Patent.

Patented Dec. 10, 1912.

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To all whom it may concern:

Be it known that I, JOHN DESMOND, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Liquid-Dispensers, of which the following is a specification.

My invention relates to improvements in liquid dispensers. It has particular reference to devices of this character wherein liquid is held within a receptacle or reservoir under pneumatic pressure and projected therefrom in a solid stream, or in an atomized spray as its use may vary.

One of the objects of my invention is to provide a device wherein a spraying liquid, such as an insecticide, or a cleaning liquid, such as gasoline or the like, or a very finely divided powder may be contained under pneumatic pressure and sprayed or projected against or on objects in desirable quantities and at convenient times.

Other and further objects of my invention will become apparent to persons skilled in the art from the description and drawings, wherein—

Figure 1 is a longitudinal section of the device; and Fig. 2 is a similar view of a fragment of the device, showing a spraying nozzle inserted therein, instead of the solid stream nozzle shown in Fig. 1.

In both views the same reference characters refer always to like parts.

The reservoir or cylinder, 5, may be made of a suitable metal, such as brass or the like, and is preferably provided with "bumped" ends.

A handle, 8, is secured to an end of the casing, as shown, by means of which the device may be manipulated. A nozzle, 9, for projecting a solid stream, shown in Fig. 1, is screwed into a threaded opening, 10. It is provided with a clear front opening and with a relatively long bore, as shown at 11, for guiding and retaining the valve stem, 12. At the inner end of the bore, 11, a valve seat, 13, is provided for reception of the needle valve, 14, on the end of the valve stem 12. Lateral openings, 15—15, admit liquid or powder, as the case may be, to the nozzle proper. A gland, 16, is secured to the other end of the casing for "packing" the valve stem to permit its easy reciprocation and to render the casing substantially pressure-tight. Packing, 17, as usual in such devices,

is employed for this purpose. A collar, 18, is secured to the valve stem, 12, as by a pin, 19, against which the open compression spring, 20, abuts for normally maintaining the valve closed, as clearly shown. The outer end of the valve stem, 12, carries a handle which is limited in its reciprocating movement by the handle 8. When the handle, 21, is moved its full extent, or until it comes into actual contact with handle 8, it has not been moved sufficiently to withdraw the valve, 14, from the bore, 11, of the nozzle, 9, and thus the valve cannot be displaced with reference to its seat. A filling cup, 22, is screw-threaded and extends into the cylinder about one third of the way across the diameter thereof so as to leave an unoccupied space above its lower edge when filling the device with material to be applied in the manner described. A stopper, 23, is screw-threaded into said cup and when inserted therein tightly closes the same. An air valve, 24, similar to valves of this character used on pneumatic tires, is secured to the cylinder, 5, and controls an air opening therein.

The use and operation of the device is as follows: When the reservoir is to be filled with the material to be dispensed, it should be held in the position shown in the drawing, and the liquid, or other material poured in through the cup, 22. The reservoir cannot be filled beyond the lower edge of the cup, leaving an unfilled space between the lower edge of the cup and the top of the reservoir. The device is then connected to an air pump, or compressed air reservoir at the valve, 24, and air under pressure is thereby admitted into the otherwise unoccupied space within the reservoir. The air may be compressed to any practicable limit, say in practice anywhere from 25 to 100 pounds per square inch, more or less. The instrument is now ready for use. If it has been charged with gasoline or the like, and compressed air, it should be held in the position shown or with its nozzle end pointing slightly in a downward direction and the handle, 21, compressed or drawn toward the handle 8. The valve is thus opened and the liquid contents will be violently projected, in a solid stream, against a surface to be cleaned, such for instance as the oily surface of an engine or the like, or the liquid in a stream may be used for other purposes. When the nozzle

9', shown in Fig. 2, is substituted for the nozzle 9, the liquid will be atomized or sprayed. The device may be charged with a suitable insecticide, such as the Bordeaux mixture, and the otherwise unoccupied space may be filled with air under pressure from a source of air supply. The air may be passed into the cylinder through the nozzle, 9 or 9', when the valve thereof is retracted by pressure applied to the handle, 21, in which event the check valve, 24, will not be necessary. The device thus "loaded" may be taken to the tops of high trees, from which position limbs and branches, inaccessible by the usual spraying devices with hose attached, may be conveniently and thoroughly sprayed.

While I have herein described a particular embodiment of my invention which I have found most advantageous to the ends sought, it will be apparent to those skilled in the art that numerous changes might be made in the construction shown without departure from the spirit of my invention and within the scope of the following claim.

What I claim is:

In a device of the character described, a cylinder having an inlet and an outlet for material to be projected therefrom and an inlet for compressed air, said inlets having

suitable closures, in combination with a nozzle for said outlet providing a small bore, a valve seat at the inner end thereof, and a cylindrical valve-stem-guiding portion extending inwardly from said valve seat, a valve stem extending through the opposite end of said cylinder, at its inner end shaped to coact with said valve seat and at its outer end having a portion extended laterally to provide a handle movable to move the stem, and a stationary handle mounted on said cylinder, by which said cylinder may be pointed in any desired direction, said handle for the valve stem being spaced from the stationary handle a distance less than the length of said cylindrical guiding portion of the nozzle, whereby said nozzle bore may be opened by grasping and drawing together said handles, said stem being in all positions guided at its inner end so that lateral pressure may be conveniently applied thereto, adjacent the handle, to aid in manipulation of said cylinder by suitable gripping of said handles.

In testimony whereof I hereunto set my hand in the presence of two witnesses.

JOHN DESMOND.

In the presence of—
W. LINN ALLEN,
MARY F. ALLEN.