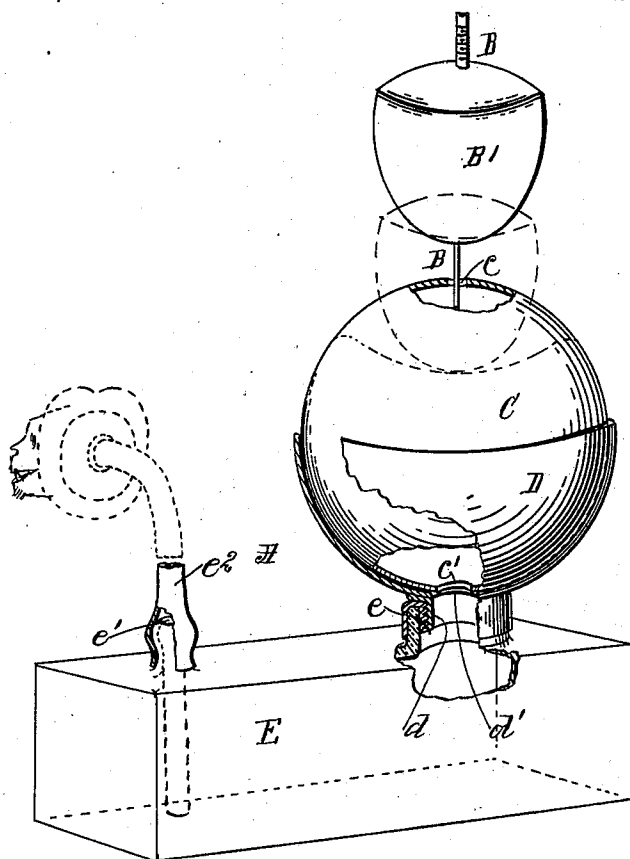


(No Model.)

J. J. RIEGEL & E. B. LUNDY.
AUTOMATIC LIQUID DISTRIBUTING MACHINE.

No. 578,025.

Patented Mar. 2, 1897.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES J. RIEGEL AND EVERETT BELL LUNDY, OF BOSTON, MASSACHUSETTS.

AUTOMATIC LIQUID-DISTRIBUTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 578,025, dated March 2, 1897.

Application filed November 13, 1895. Serial No. 568,851. (No model.)

To all whom it may concern:

Be it known that we, JAMES JOSEPH RIEGEL and EVERETT BELL LUNDY, of Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Automatic Liquid-Distributing Machines, which may be employed for perfuming handkerchiefs, &c., as a vending-machine, of which the following is a specification.

The object of our invention is to effect a liquid-receptacle capable of being controlled by a coin-controlled mechanism and prevent a discharge of the liquid contained in the receptacle other than effected by the mechanism.

The figure is a perspective view of our liquid-containing receptacle.

B' is a metallic weight employed in connection with the air-compressing ball C, as further described below. The rod B has a threaded engagement through the weight B' to admit of adjusting the weight. A reciprocating movement of the weight is produced by connecting rod B at its upper end to any power mechanism, preferably that of a coin-controlled machine.

The lower end of this rod is designed to extend a little below the end of the weight, so as to enter the hole *c* in the ball C for the purpose of acting as a guide for the lower end of the rod. This ball is an elastic hollow

ball, preferably of rubber, or it may be a bellows of any form or substance to accomplish the end sought. The ball has two holes therein, clearly shown at *c* and *c'*. The upper hole

c is for another purpose more essential than to act as a mere guide for the lower end of the weight-rod—viz., to effect a complete air-passage around the guiding-rod through the receptacle A. This letter A represents the entire receptacle mechanism.

c' represents the lower hole in the ball.

D denotes a cup to receive the ball, as shown. This cup has the collar *d* and the hole *d'*, and this collar has screw-threads to engage screw-threads on the collar forming the opening *e* of the liquid-containing tank E, as shown.

e' represents another opening in the receptacle E, which we call the "discharge-passage," and *e''* denotes the discharge-pipe.

Thus it will be seen that should air be forced into the outer terminal of the liquid-discharge pipe *e''* it will have its final exit at the upper

hole in the ball at *c* when the weight B' is in its normal position, as shown, avoiding a compression of air, except by the mechanism, as intended. The position of the weight B' as shown is its normal position, and the dotted position of the weight in the drawing is the secondary position of the operating mechanism, and this secondary position denotes that a regulated quantity of the liquid has been ejected in the form of a quick stream or squirt out of the liquid-containing tank through the discharge-pipe. The discharge-pipe enters the tank so as to have its inner end immersed in the liquid near the bottom of the tank, as shown by the drawing, the object of which is to prevent the air which is compressed in the receptacle by the weight in its downward movement escaping through the discharge-pipe. When this weight contacts the top of the ball, it closes the upper hole, and by descending, as illustrated, so as to depress the ball, the air contained within the ball and the tank receives a pressure, it having no escape-passage, thereby causing a certain quantity of liquid to escape through the discharge-pipe; and this weight being adjustably fitted to its retaining-rod, such discharge can be regulated. When the weight B' is withdrawn from its compressing position, (shown by the dotted lines,) the liquid in the outer end of the discharge-pipe is instantly drawn back into the tank by the suction of the ball in regaining its normal position, thereby avoiding any waste of the liquid by dripping at the end of the discharge-pipe.

Having described our invention, we claim—

1. A liquid-receptacle mechanism consisting of a liquid-containing tank, a discharge-pipe in communication with the tank and having one end immersed in the liquid and near the bottom of the receptacle, the collar and opening *e*, the ball-holding cup, having a hole in communication with the opening *e*, and secured to the tank, the elastic hollow ball C suitably fitted to or in cup, and having the holes *c* and *c'* therein, the whole to be operated by any suitable power mechanism, capable of producing a reciprocating movement which in its action produces compression of the elastic hollow ball so as to create a pressure of air whereby the liquid

in the tank is ejected through the discharge-pipe in the form of a quick stream or squirt, in quantity governed by the regulated pressure.

5 2. A liquid-receptacle mechanism consisting of a liquid-containing tank, a discharge-pipe in communication with such tank and having one end immersed in the liquid and
10 near the bottom of the tank, the collar and opening *e*, the ball-holding cup, such having a hole in communication with the tank-opening *e* and secured to the tank, the elastic hollow air-compressing ball suitably fitted to or
15 in such cup, and the holes *c* and *c'* therein, in combination with weight *B'* and its connecting-rod *B* said weight and rod employed for the purpose set forth in specification.

3. A liquid-receptacle mechanism consisting of tank *E*, a discharge-pipe *e*², collar and
20 opening *e*, a ball-holding cup *D*, an elastic

hollow air-compressing ball *C* with holes *c* and *c'*, as above described, in combination with the weight *B'* and its connecting-rod *B* designed to depress the air-compressing ball so as to create a pressure of air within the receptacle, whereby the liquid in the tank is ejected through the discharge-pipe in quantity governed by the regulated pressure, and the avoidance of waste of the liquid by dripping when the compression ceases, as described in specification. 25 30

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JAMES J. RIEGEL.

EVERETT BELL LUNDY.

Witnesses:

THOMAS W. HOBDAY,

HIRAM A. KENT.