

(No Model.)

J. D. WESTGATE.
APPARATUS FOR MEASURING LIQUIDS AND DISCHARGING THE SAME
INTO BOTTLES.

No. 340,646.

Fig. 1.

Patented Apr. 27, 1886.

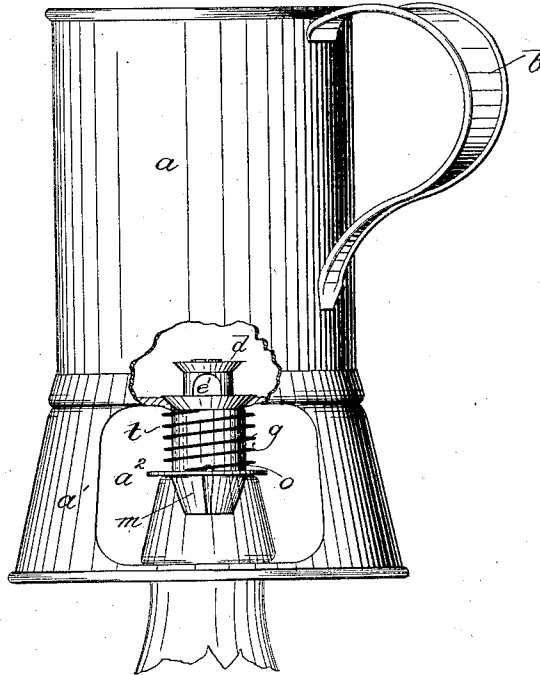


Fig. 2.

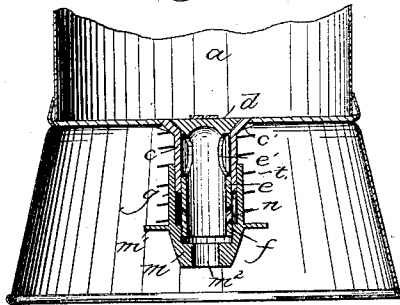
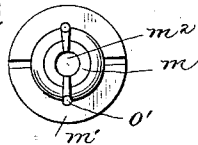


Fig. 3.



Witnesses
Fred L. Emery.
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UNITED STATES PATENT OFFICE.

JOSEPH D. WESTGATE, OF WORCESTER, MASS., ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF THREE-FOURTHS TO FRANK N. EDDY, ALFRED ELCOCK, AND WILLIAM E. HADWEN, ALL OF SAME PLACE.

APPARATUS FOR MEASURING LIQUIDS AND DISCHARGING THE SAME INTO BOTTLES.

SPECIFICATION forming part of Letters Patent No. 340,646, dated April 27, 1886.

Application filed April 20, 1885. Serial No. 162,785. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH D. WESTGATE, of Worcester, county of Worcester, and State of Massachusetts, have invented an Improvement in Apparatus for Measuring Liquids and Discharging the Same into Bottles, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to produce an improved apparatus for measuring liquids and discharging the same directly into bottles, demijohns, cans, &c., without waste.

In accordance with my invention I have provided the bottom of a measure with a tube, one part of which forms a valve-seat, and in the said tube I have placed a hollow sliding valve adapted to drop into the said seat. The lower end of the hollow sliding valve is provided with a nozzle to enter the mouth of a bottle or other vessel, said nozzle being provided with a collar or flange to rest upon the top of the bottle-neck, the nozzle being provided with grooves or vent-passages, which permit the escape of air contained in the bottle or other vessel to be filled from the measure as the liquid from the measure enters the bottle through the said valve.

The particular features in which my invention consists will be hereinafter more specifically pointed out in the claims at the end of this specification.

Figure 1 shows in elevation a measuring and bottle-filling apparatus embodying my improvements, the measure being shown in position to fill a bottle, the valve being open; Fig. 2, a vertical section of a portion of the apparatus, showing the valve closed; Fig. 3, a detail to be referred to.

The measure or receptacle *a*, provided with a handle, *b*, has secured to its bottom or lower part a tube, *c*, the said tube being provided with the annular inclined flange *c'*, to form a seat for the valve *d*. This valve *d*, frusto-conical in shape, is provided with a hollow stem, *e*, of sufficient diameter to fit but yet slide freely in the tube *c*, and is provided with openings *e'* (see Fig. 1) in the sides thereof for the admission of liquid when the valve is open.

This stem *e* is also open at its end for the discharge of the liquid, and is provided with screw-threads near its end, as at *f*, to retain a sleeve, *g*, screwed thereon, and of sufficient diameter to slide easily upon the tube *c*. The tube *c* and sleeve or cup *g* together form the case for the valve.

The sleeve or cup *g* is provided with a frusto-conical nozzle, *m*, adapted to fit bottles having mouths of varying diameters, and mounted upon the said nozzle is a flange or collar, *m'*, which may project over and bear upon the mouth of a bottle while filling the same.

The nozzle *m* has an opening, *m''*, through it for the passage of the liquid as it passes down through the stem *e*. The stem *e* is provided just above the screw-threaded portion with a series of holes, *n*, so that should any liquid remain or settle in the recess formed between the screw-threaded portion of the sleeve and the end of the tube *c*, as when the valve is closed, the same will be allowed to pass out.

The nozzle *m* is provided with one or more vertical grooves or vent-openings, *o*, extending upward to the flange *m'*, which is provided with one or more holes, *o'*, corresponding with the said grooves, to permit the air contained in the bottle to escape as the liquid enters.

The operation of the apparatus is as follows: Normally, the valve being closed by gravity, the vessel or receptacle *a* is filled, the nozzle *m* of the valve is made to enter the mouth of a bottle or other can or vessel to be filled, and the flange *m'*, bearing upon the top of the bottle, will by the weight above it force the sleeve or cup *g* and valve connected therewith upward to the position shown in Fig. 1, thus opening the valve, permitting the liquid to enter the opening *e'*, which, passing down through the hollow stem *e*, is discharged from the opening *m''* into the bottle. As the liquid enters the bottle the air therein is forced out through the grooves *o* and holes *o'* in the nozzle and flange, as shown in Fig. 3. When sufficient liquid has passed into the bottle, the apparatus is simply removed, when the valve drops upon the seat by gravity, stopping further flow of the liquid.

The receptacle or vessel *a* is provided with a base, portion, *a*, of such depth that when the ap-

paratus is placed upon the floor the valve cannot come in contact therewith. This base portion a' is preferably provided with an opening, a' , exposing the valve to the view of the operator.

- 5 The receptacle a , if desired, may be marked off with any suitable graduations.

It is obvious that instead of the holes o in the flange or collar, grooves may be made at the under side thereof at right angles to the grooves in the nozzle m , and forming continuation thereof. It is also obvious that the small holes n in the valve-stem e may be omitted, and the nozzle m and flange m' may be secured directly to the valve-stem.

- 15 It will be readily seen that this apparatus is simple in construction and positive in operation, opening and closing automatically.

A spring, t , may be interposed between the flange m' and the under side of the measure, to normally hold the valve closed and to make the valve work positively rather than by gravity alone, as were the spring omitted.

I claim—

1. A liquid-holding receptacle or measure
25 having a tube fitted to its base, and having a frusto-conical valve-seat formed therein, and an extended base portion, a' , combined with a sliding valve placed within the said tube, and having a nozzle, m , terminating at a point above
30 the plane upon which the receptacle rests, the said valve opening inward when placed in the neck of a bottle, and automatically closing when removed therefrom, substantially as described.

2. A liquid-holding receptacle having a tube
35 fitted to its base, a frusto-conical valve-seat formed therein, and an extended base portion,

a' , having an opening, a' , combined with a hollow sliding valve, comprising the valve d , stem e , frusto-conical nozzle m , and a flange, m' , all substantially as described.

3. A liquid-holding receptacle having a tube fitted to its base and a valve-seat formed therein, combined with a hollow sliding valve, comprising the valve d , stem e , nozzle m , having grooves or vent-openings o , flange m' , having vent-openings o' , and sleeve g , all substantially as described.

4. A liquid-holding receptacle having a tube fitted to its base and a valve-seat formed therein, combined with a hollow sliding valve, comprising the valve d , stem e , having holes n , nozzle m , having grooves or vent-openings o , flange m' , having vent-openings o' , sleeve g , and a base portion attached to the receptacle, protecting the valve from contact with the floor or bench, all substantially as described.

5. A liquid-holding receptacle having a tube fitted to its base, a valve-seat formed therein, and an extended base portion, a' , combined with a hollow sliding valve terminating at a point above a plane upon which the receptacle rests, and comprising the valve d , stem e , frusto-conical valve-seat m , and flange m' , and with a spring, t , to operate substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH D. WESTGATE.

Witnesses:

W. H. SIGSTON,

JOHN F. C. PREINKERT.