No. 820,576. PATENTED MAY 15, 1906.

A. W. HUTCHINS.

AUTOMATIC DOSE MEASURING BOTTLE OR VESSEL.

APPLICATION FILED JUNE 30, 1905

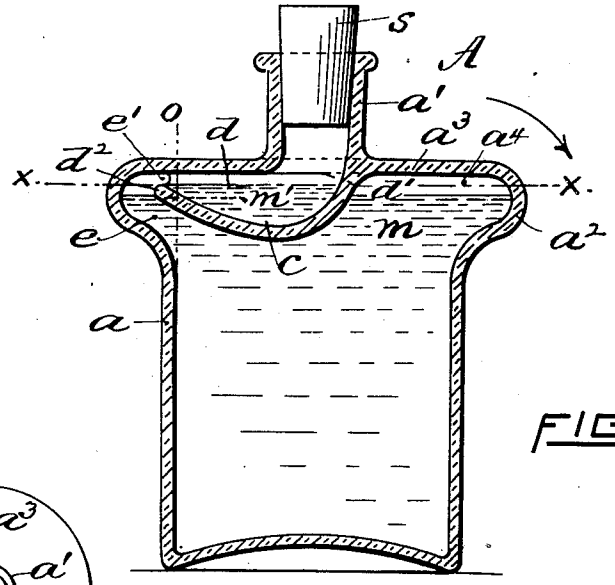


FIG. 1.

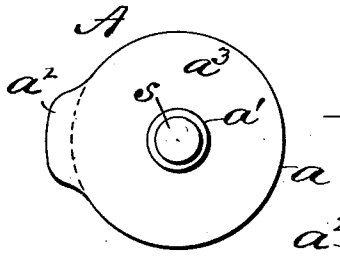


FIG. 3.

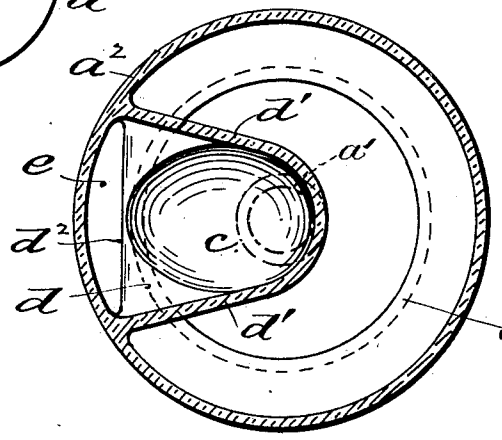


FIG. 2.

WITNESSES.

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AUTOMATIC DOSE-MEASURING BOTTLE OR VESSEL.

No. 820,576. Specification of Letters Patent. Patented May 15, 1906.

Application filed June 30, 1905. Serial No. 267,717.

To all whom it may concern:

Be it known that I, ARTHUR W. HUTCHINS, a citizen of the United States of America, and a resident of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Automatic Dose-Measuring Bottles or Vessels, of which the following is a specification.

In a pending application, Serial No. 266,108, filed by me June 20, 1905, in the United States Patent Office, is shown and described a novel bottle or vessel constructed and arranged to automatically measure and dispense liquid therefrom in predetermined quantities or doses.

My present invention also relates to bottles or vessels of the kind just referred to; and it consists in enlarging the upper portion of such liquid-container in a lateral or radial direction and providing it interiorly with a depressed or recessed partition having an aperture therein in continuous open communication with the neck and body portions of the vessel and, further, having the edge of said aperture extending laterally to or beyond the line of the inner wall, thereby producing a curved or somewhat circuitous passage for the liquid, while at the same time forming a seal to prevent outflow from the reservoir during the act of pouring or dispensing the measured portion of the liquid from the neck of the bottle. By reason of the enlarged upper portion of the vessel, as just stated, an increased space is provided into which the contents flow while the premeasured dose is being dispensed, the vessel meanwhile being tilted a correspondingly less degree or extent from its normal or perpendicular position.

In the drawings herewith, Figure 1 is a vertical central sectional view illustrating a bottle or vessel embodying my present improvements. Fig. 2 is a horizontal sectional view taken on line $x\,x$ of Fig. 1; and Fig. 3 is a plan view, in reduced scale, showing a slightly-modified form of the vessel.

I would state here that while the drawings represent a bottle provided with my improvement the latter may be employed equally as well in other forms of liquid-holding vessels or packages—as, for example, jugs, cans, &c.

In the bottle A, made, say, of glass, the body a may be cylindrical or have any other suitable shape and having its upper end portion enlarged circumferentially, (see a^2,) the latter materially increasing the normal internal area at that point. The top a^3 of the bottle is provided with a neck or nozzle a', adapted to receive a stopper s.

At the base of the neck and integral with the top end a^3 is formed interiorly a small substantially horizontal partition or diaphragm d, having a recess or cavity c therein, the latter constituting the measuring member. The space above the partition is in direct communication with the bottle's neck and is separated from the main body or reservoir portion (except as stated above) by the short circumscribing wall d'. (See also Fig. 2.)

The member d extends outwardly to or beyond the inner wall of the normal body a of the bottle (see line o, Fig. 1) and into the space formed by said enlargement a^2, thereby producing an edge or interposed weir d^2, separating the upper and lower adjacent passages e' e, respectively.

In using my improved bottle or vessel A the latter, assuming it to be filled with the liquid m, while still stoppered, is first inverted, thereby permitting some of the liquid to flow via passages e e' into and fill the neck and the adjacent space. The bottle is then returned to the normal or vertical position, the surplus liquid meanwhile flowing back over the edge d^2 of the partition and through the passage e into the reservoir or body a, but leaving the cavity c filled with the dose or charge m', Fig. 1. Now upon removing the stopper s and tilting or tipping the bottle to one side (see arrow direction) or until the discharge-outlet is substantially horizontal the said dose or premeasured quantity of the liquid will flow from the cavity c and through the neck a' by gravity.

While the bottle is in the tipped position, its contents m are prevented from entering the passage e, owing to the presence of the interposed partition d, whose outer edge d^3 extends to or beyond the normal wall of the body part a. It may be unnecessary to add that when dispensing the charge the outer edge of the member d should lie uppermost and substantially level.

Of course the level of the contents m of

the bottle when normally or properly filled should not extend above the partition *d*, thereby leaving a small space a^4 between the top a^3 of the bottle and said contents. This space, however, is filled with the liquid when the bottle is tipped, as in pouring, so that practically the level of the contents is then even lower than the line *o*. Obviously the last-named level will gradually recede correspondingly with the successive delivery of charges *m'* from the bottle.

Fig. 3 represents a bottle in which the enlargement a^2 extends only partly around its upper end.

I claim as my invention—

1. As a new and improved article of manufacture a bottle or vessel for holding liquids, the same having a dose-measuring partition or member located in the upper interior portion of the vessel contiguous to and communicating with the latter's neck or discharge-outlet, and having an open aperture or passage for the flow of the liquid formed between the outer edge of said partition and the adjacent wall, the latter extending diametrically beyond and forming a continuation of the normal wall of the vessel's body.

2. A bottle or vessel provided with a discharge-outlet, and having the upper portion of the body enlarged in a lateral direction beyond the vertical plane of its normal wall and provided interiorly with an integral dose-measuring partition or member having its outer edge extending to or into said enlarged portion and forming an open passage past said edge between the discharge-outlet and the main body of the bottle, said partition completely separating the neck or outlet portion from the body or reservoir and preventing circulation of the liquid except through said open passage.

3. A bottle or vessel having its upper portion enlarged circumferentially to increase its capacity, a nozzle or neck member integral therewith adapted to receive a suitable stopper, an integral interior dose-measuring partition forming an upper passage for the liquid to and from said nozzle and extending into said enlarged part, and also forming a passage *e* between the edge of said partition and the outer wall in continuous open communication with said upper passage and the main body, all constructed, arranged and adapted for use substantially as hereinbefore described.

4. In a bottle or vessel, an interior dose-measuring partition communicating with the discharge-outlet and extending in a lateral direction beyond the normal vertical plane of the vessel's wall, and having the latter enlarged adjacent the outer edge of said partition to form a continuously-open passage past said edge and between the nozzle and body portions of the vessel.

Signed at Providence, Rhode Island, this 29th day of June, 1905.

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Witnesses:
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