

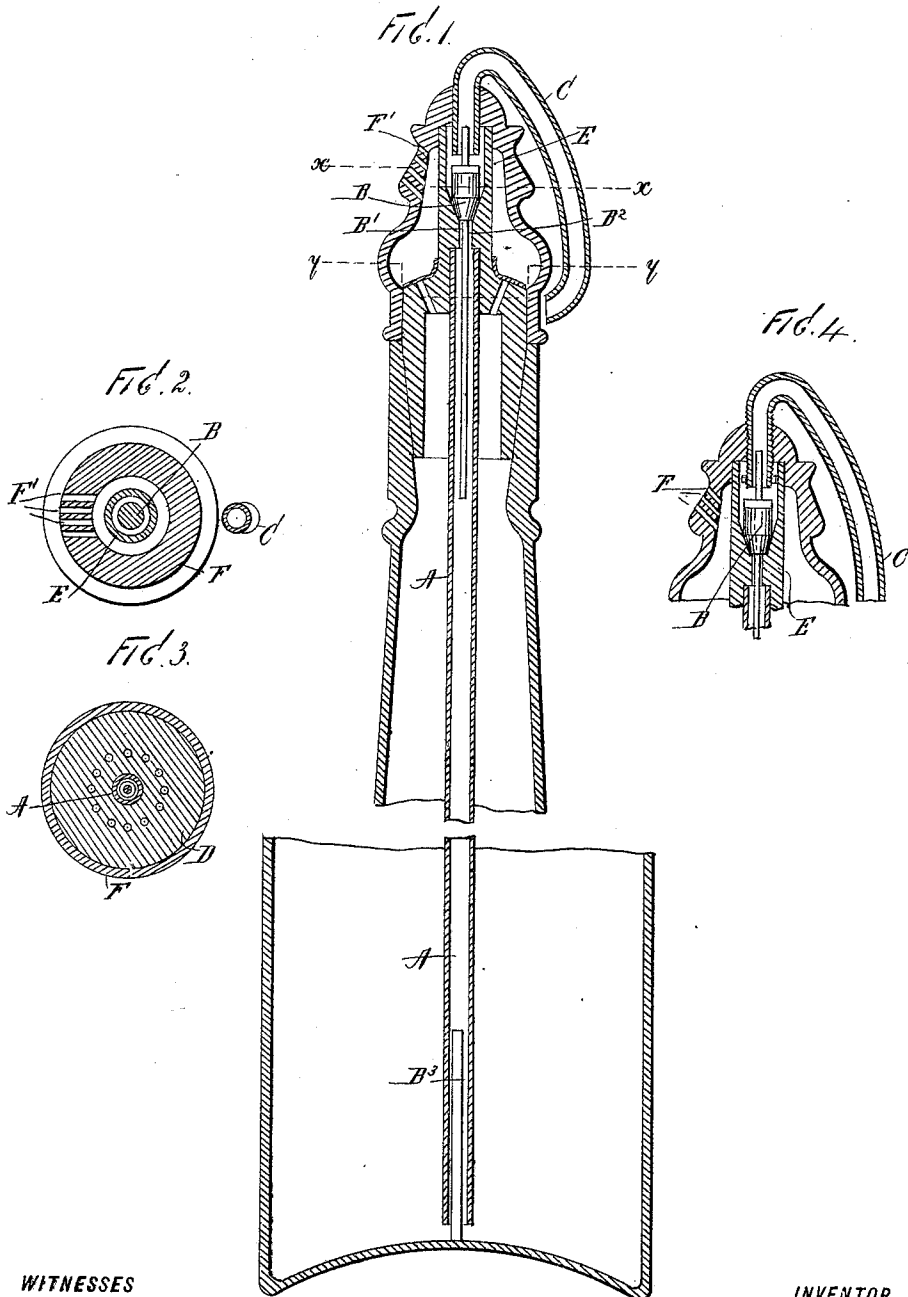
(No Model.)

2 Sheets—Sheet 1.

T. R. JORDAN.
NON-REFILLABLE BOTTLE.

No. 566,322.

Patented Aug. 25, 1896.



WITNESSES

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E. C. Frost

INVENTOR

Thomas R. Jordan,
BY
Edgar Tate & Co.
ATTORNEYS.

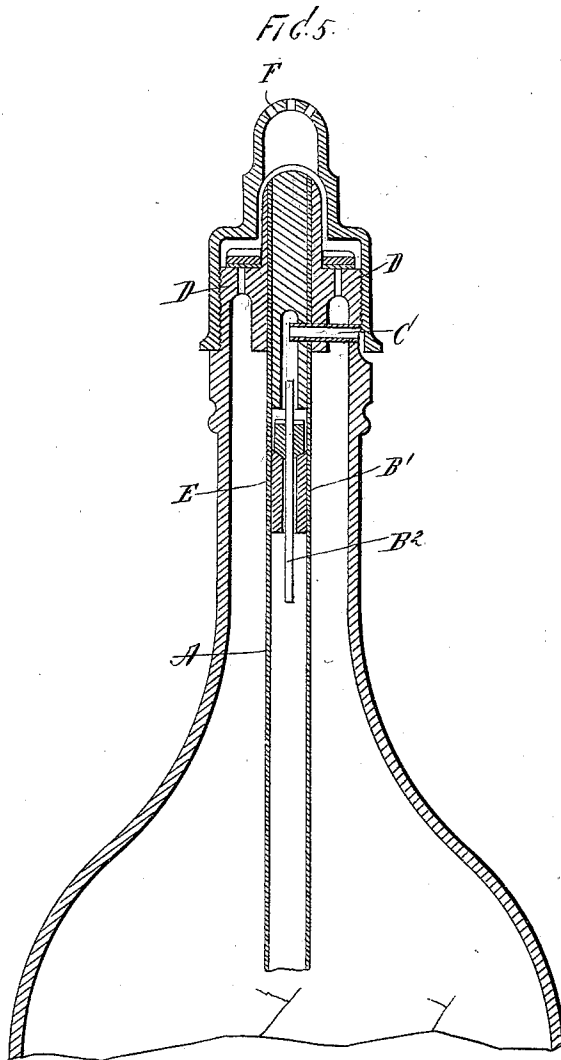
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John Buckler,
C. Gerst

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UNITED STATES PATENT OFFICE.

THOMAS ROWLAND JORDAN, OF NEW YORK, N. Y.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 566,322, dated August 25, 1896.

Application filed February 18, 1896. Serial No. 579,810. (No model.)

To all whom it may concern:

Be it known that I, THOMAS ROWLAND JORDAN, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Non-Fillable Bottles, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

My invention relates to bottles or bottle attachments, and may be so constructed as to form a permanent portion of a bottle or other vessel or a separate attachment capable of being applied to any vessel or bottle; and the object of my improved mechanism is to allow the contents of a bottle or vessel to flow out easily and freely while preventing the possibility of refilling the same partly or wholly, except by breaking a conspicuous portion of the said mechanism, and thereby clearly indicating any attempt to tamper therewith. I attain this object by the construction and arrangement of valves, passages, and general mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal section of my apparatus applied to an ordinary bottle. Fig. 2 is a cross-sectional plan along the line $x x$. Fig. 3 is a longitudinal section of a somewhat modified arrangement. Fig. 4 is a modification of the construction shown in Fig. 1, in which the bent tube C is screw-threaded; and Fig. 5 is a plan view of the outlet-valves, showing openings therein.

The drawings illustrate the method of effecting the purpose of my invention, though I do not confine myself to the exact form of valves or arrangements of parts therein shown.

A is a small tube of glass or other material passing from the bottom of the bottle up into the portion of the apparatus in the neck forming the stopper of the bottle. This tube has a valve B, having a passage B', connecting with the tube A. This valve may be either of the ball type or of the conical pattern shown in the drawings and fitted with a spindle or stem B². This spindle is fixed to the valve and extends below it into the tube A and above into the bent tube C. The pur-

pose of this portion of the mechanism is to freely admit air into the bottle or the vessel (when it is desired to pour the liquid out) while preventing the liquid from passing or being forced into the bottle or vessel through these channels. I also provide a weight B³, adapted to slide up and down in the tube A, under the action of gravity when the bottle is inverted and strike the stem of the valve B, thus immediately opening the air-passage to permit of the passage of air through the port B' to maintain atmospheric pressure upon the contents of the bottle.

It will be seen that the end of the bent tube C is directly above the valve B, and that the slightest pressure of either air or liquid passing through this passage will act against the upper area of the said valve B and force it into its seat. The other end of the bent tube C has its opening close to and facing the casing of the apparatus, or is covered by said casing, as shown in Fig. 3. This is a further safeguard against any attempt to refill the bottle or vessel.

The bent tube C in Fig. 4 may have a slight play and have screw-threaded connections with the top of the apparatus, so that it can be pushed or screwed down on the top of valve B, thus sealing the bottle from air, and by this means preventing the outlet of liquid. This portion of the device may take the place of an ordinary tap when it is desired to retain the bottle or vessel containing the liquid in an inverted position.

In the body of the apparatus at D is the main outlet for the liquid, the channel or channels of which are entirely separated from the air-channels. At this point I employ a valve or valves, which may be either of the flap or ball pattern or of the construction shown in the drawings at D. The passages of this valve are a series of small holes, which lead into the bottle or vessel, as shown. The surfaces of these holes are covered by a disk of glass, cork, leather, rubber, or other suitable material, thus forming the valve. In the case of glass being used its lower surface is ground to the surface of the holes, having slight play vertically over the stem E, around which it fits. Thus when the bottle or vessel is turned upside down to pour out the liquid the weight of the liquid will force the

valve open. In the case of rubber or other thin material being used for this valve, as shown in Fig. 1, the same is drawn tightly down over the stem E until the outer portion
 5 lies on the valve-surface, the slightest pressure either way acting on this valve opening or shutting the same. In the case of glass or other soft material being used for this valve, as shown in Fig. 3, the same may be a loose
 10 fit over the stem E, as shown. These openings at D connect with the small openings in the outer casing F at F' through which the liquid passes out of the bottle. These openings at F' may be covered or sealed up by affixing thereon a label of paper or other thin
 15 material, which label is simply punctured to open the bottle.

The outside casing is cemented to the body of the apparatus, as shown in the drawings, and the whole may be cemented to the bottle or vessel, if so desired.

Having specified and described the nature of my invention, I wish to claim and desire to secure by Letters Patent—

25 1. A non-fillable bottle having separate valve-controlled passages for liquid and air, an adjustable air-inlet tube to lock said air-valve and prevent the outflow of the contents of the bottle, by shutting off the inlet of air
 30 thereto.

2. The combination with a bottle or similar vessel of an antifilling attachment adapted to be secured to the neck thereof, said attachment consisting of a stopper, a superimposed
 35 cover the former having a plurality of small peripheral openings around the base thereof, and having secured therein and in the center thereof, a depending tube in which is slidably mounted a weight or bar, a frusto-conical
 40 valve to close the outer end of said tube having a spindle extending therethrough, and projecting into said tube and stopper, a short air-inlet tube communicating with said tube to form an inlet of air into the bottle and
 45 means consisting of an adjustable tube for regulating the discharge of and admission of air into the bottle, substantially as described.

3. The combination with a bottle or similar vessel of an antifilling attachment adapted to be secured to the neck thereof, said attachment consisting of a stopper superimposed
 50 cover, the former having a plurality of small peripheral openings around the base thereof, and having secured therein central thereof, a depending tube in which is slidably mounted a weight or bar, a frusto-conical valve
 55 to close the outer end of said tube having a spindle extending therethrough, and projecting into said tube and stopper, a short air-inlet tube communicating with said tube to form an inlet of air into the bottle, an annular valve mounted upon the central extension
 60 of said stopper and adapted to close the small discharge-openings therein, and means consisting of an adjustable tube for preventing the admission of air into the bottle, substantially as described.

4. The combination with a bottle or similar vessel of an antifilling attachment adapted to be secured to the neck thereof, said attachment consisting of a stopper provided with a
 70 plurality of small peripheral openings around the base thereof, and having secured therein, central thereof, a depending tube in which is slidably mounted a weight or bar, a valve to close the outer end of said tube having a spindle
 75 extending therethrough, and projecting into said tube and stopper, a short air-inlet tube communicating with said tube to form an inlet of air into the bottle, an annular valve mounted upon the central extension of said
 80 stopper and adapted to close the small discharge-openings therein, and means for preventing the admission of air into the bottle, a superimposed cap or cover for said stopper provided with small discharge-openings
 85 therein, and located at a distance from said stopper whereby an annular chamber is formed within said cap and whereby the valves are protected and the liquid has free discharge and the air free inlet, and the admission of air can be cut off when desired, substantially as described.

5. The combination with a bottle or similar vessel of an antifilling attachment adapted to be secured to the neck thereof, said attachment consisting of a stopper provided with a
 95 plurality of small peripheral openings, and having secured therein, central thereof, a depending tube in which is slidably mounted a weight or bar, a valve to close the outer end of said tube and having a spindle extending
 100 therethrough and projecting into said tube and stopper, a short air-inlet tube communicating with said tube to form an inlet of air into the bottle, an annular valve mounted upon the central extension of said stopper and
 105 adapted to close the small discharge-openings therein, and means for preventing the admission of air into the bottle, and an air-inlet tube communicating with said stopper and with the tube depending therefrom, and means for shutting off the supply of air to said
 110 depending tube, and a covering or case of paper or other thin material closing the discharge, turned so as to permit of the opening of the bottle by puncture of the covering, substantially as described.

6. The combination with a bottle or similar vessel of an antifilling attachment adapted to be connected with, or a part of the neck thereof, consisting of a stopper provided with a tubular depending projection to which is
 120 secured a depending tube, the outer portion of said stopper being provided with a central extension around the base of which is formed a plurality of discharge-openings for liquid, an annular flange secured to said central extension and adapted to close said discharge-opening,
 125 an air-inlet tube secured in the neck of said bottle communicating with said tubular projection, and a cap or cover adjustably mounted upon the neck of the bottle the depending rim of which closes the orifice of

said air-inlet tube, said cap being provided with a central projection having a small opening therein, a valve movably mounted within said depending tube around the valve-seat
5 formed therein, said valve having a spindle passing therethrough, the end of which projects into said tube and into the tubular projection of the stopper, and a sliding weight mounted in said depending tube to unseat
10 the valve therein, whereby the supply of air

may be regulated within the bottle, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 17th 15 day of January, 1896.

THOMAS ROWLAND JORDAN.

Witnesses:

C. GERST,

A. C. VAN BLASCOM.