

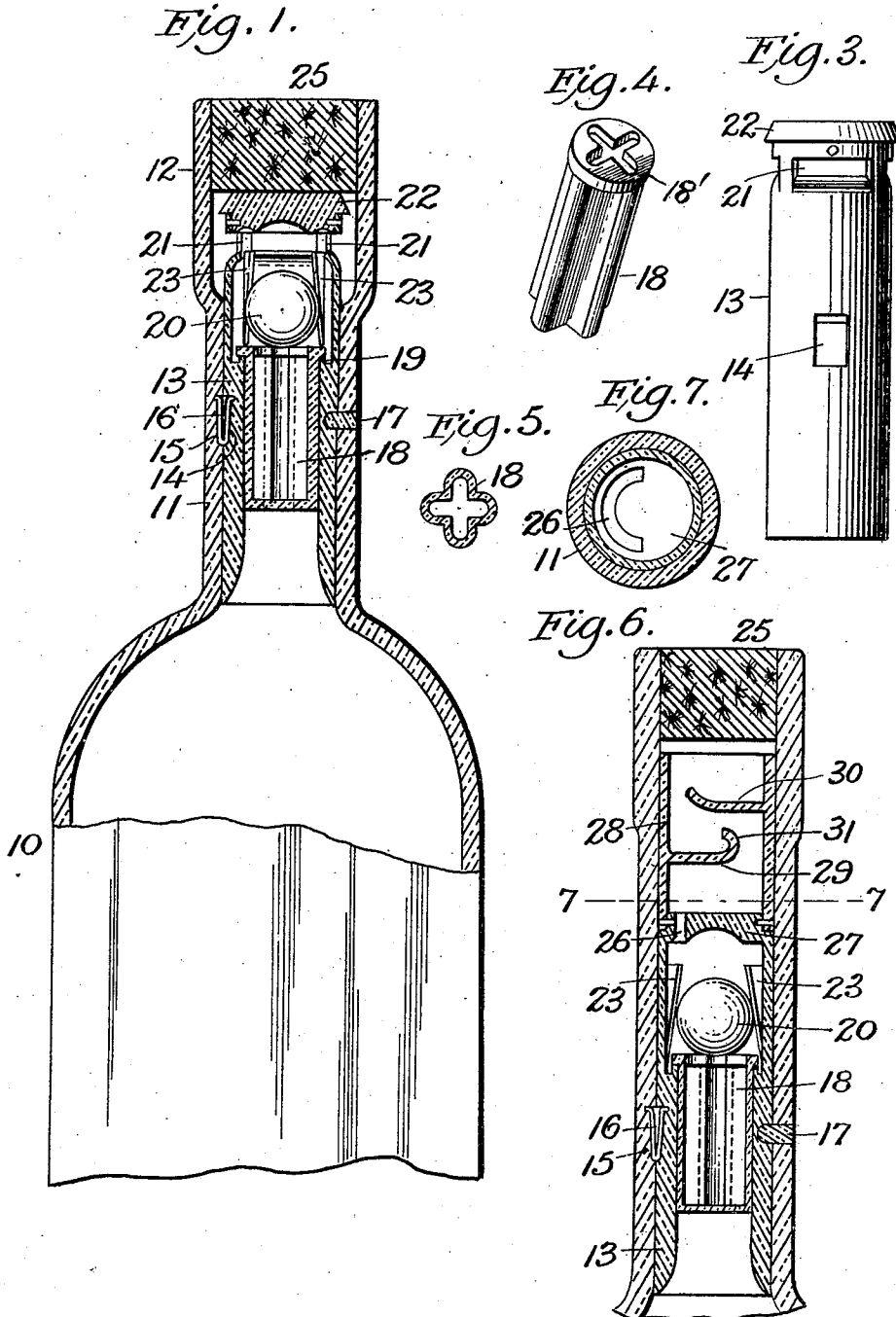
S. ROLFSON-SCHMIDT.  
BOTTLE.

APPLICATION FILED APR. 28, 1908. RENEWED JULY 16, 1909.

934,358.

Patented Sept. 14, 1909.

2 SHEETS—SHEET 1.



WITNESSES  
James F. Duhamel  
H. Allen

INVENTOR,  
Sven Rolfson-Schmidt,  
BY  
Victor J. Evans  
ATTORNEY

S. ROLFSON-SCHMIDT.

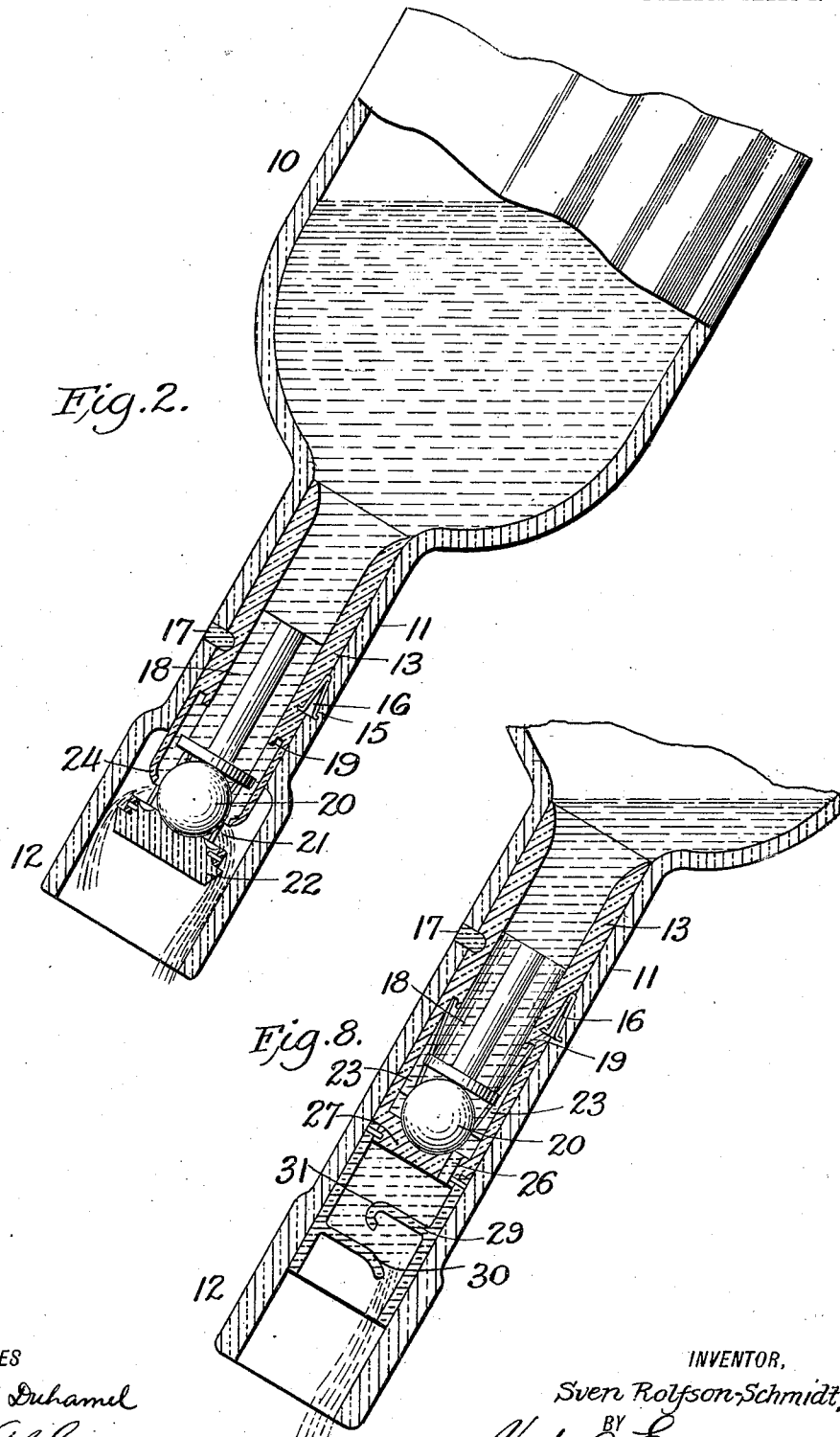
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# UNITED STATES PATENT OFFICE.

SVEN ROLFSON-SCHMIDT, OF FAIRGROUND, NEW YORK, ASSIGNOR TO FILLNOT COMPANY, A CORPORATION OF NEW YORK.

## BOTTLE.

934,358.

Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed April 28, 1908, Serial No. 429,744. Renewed July 16, 1909. Serial No. 507,877.

*To all whom it may concern:*

Be it known that I, SVEN ROLFSON-SCHMIDT, a subject of the King of Sweden, residing at Fairground, in the county of Suffolk and State of New York, have invented new and useful Improvements in Bottles, of which the following is a specification.

This invention relates to bottles and has for its object means for preventing the filling of the bottle after it has been originally filled and emptied. This is accomplished by an automatically weighted valve to close the neck of the bottle when attempts are made to force the liquid therein. The construction and operation of the same are more fully described in the following specification, set forth in the claims and illustrated in the drawings, where:

Figure 1 is a vertical sectional view of the upper part of a bottle embodying this invention. Fig. 2 is a similar view with the bottle inverted. Fig. 3 is a detailed elevation of the thimble carrying the valve. Fig. 4 is a perspective view of the valve. Fig. 5 is a cross sectional view of same. Fig. 6 is a sectional view of the neck showing a modified construction. Fig. 7 is a cross sectional view of same on the line 7-7. Fig. 8 shows the modified form inverted.

The present invention is designed to provide a bottle which may be readily emptied but when an attempt is made to fill same again the inlet to the bottle is closed. To insure this closing of the inlet a valve of novel construction is provided whose closing is aided by the liquid poured into the mouth of the bottle.

The bottle 10 shown in the drawings has the usual neck 11 and mouth 12 of apparently ordinary construction. From the outside and into the neck 11 is introduced a thimble 13 having in one side a recess 14 conforming with a similar recess 15 in the neck of the bottle and into the space formed by this recess is fitted a V-shaped spring 16, with outwardly projecting lips to engage the recesses and lock the thimble in the neck when inserted. The thimble 13 is further locked by means of a plug 17 of glass inserted in corresponding holes in the neck and thimble and cemented therein. Within

the thimble slides a valve 18 cruciform in cross section, hollow and closed at its lower end but at its upper end formed with a circular head 18' to fit the shoulder 19 and completely close the neck when the bottle is in its upright position. The upper end of the thimble 13 is formed with a cage 13', said cage carrying a ball 20 which normally rests upon the valve and after the bottle has been inverted and is being returned to its upright position the ball assists in seating the valve. At the upper end of the thimble are openings 21, the lower edges of which are turned inward and a cap 22 is fitted on the end of the thimble while ribs 23 are made on its interior to prevent the ball 20 from covering the openings 21 and to cause it to roll down the sides of the thimble to close the valve when the bottle is held in an approximately horizontal position. The object of the inturned lips 24 at the lower edges of the openings 21 is to prevent the insertion of a wire into the bottle to tamper with the ball 20 or the valve in attempts to refill the bottle.

When the thimble 13 is inserted in the neck of the bottle after it has been filled with its liquid and locked therein by the spring 16 or the plug 17 or both the bottle is further closed by means of the cork 25 and the bottle is ready to be disposed of. To empty the bottle the cork 25 is drawn and on inverting the bottle as shown in Fig. 2 the ball 20 falls into a socket in the cap 22, being directed thereto by the inclined ribs 23, and the weight of the liquid on the lower side of the valve 18 forces it out allowing the liquid to pass down between the outside of its arms and past its circular head, the liquid is then free to pass out of the openings 21 and the neck of the bottle.

The modification of this invention shown in Figs. 6, 7 and 8 is designed to prevent tampering with the operative parts by sticks or wires and allow the refilling of the bottle. The thimble 13 is similar to the one already described except that the openings 21 are dispensed with and the liquid passes out through an opening 26 in the top 27 and on the top is secured an extension 28 with staggered partitions 29 and 30 to prevent the in-

section of a wire. The partition 29 has an up-turned lip 31 as additional security and the cork 25 inserted in the neck as usual.

The bottle on its exterior has the appearance of an ordinary bottle and the complete device is made of glass entirely except where the spring 16 is used and it is obvious that the plug 17 only may be used. The cap 22 is secured to the thimble by means of cement or small plugs.

In attempting to fill the bottle besides the weight of the ball and valve the liquid filling the latter will insure its seating and if attempts are made to fill the bottle in a horizontal position the ball rolling down the inclined ribs will close the valve.

The dispensing with metal in the construction of this bottle is a very desirable feature, the parts being of such simplicity and strength as to permit of the use of glass alone.

It is obvious that I do not confine myself to the exact construction of the different parts as shown in the drawings and described as they may be modified without departing from the essential features necessary for their various functions.

As above explained it will be impossible to re-fill this bottle by pouring in the liquid while it stands in a vertical position or by immersing it while in a horizontal position in the liquid. It will be seen that it is impossible to invert the bottle and force in the liquid by gravity or by pressure. Likewise it will be found impossible to exhaust the air from the bottle so that the vacuum will cause the liquid to be sucked up into the bottle or in fact any methods or means are precluded by which the bottle may be filled after the original filling has been emptied.

What I claim as new and desire to secure by Letters Patent is:

1. A bottle having a neck, a thimble secured within the neck and provided at its upper end with a cage having an outlet, and also provided in its lower portion with a bore of less diameter than the cage and communicating at its upper end therewith, the upper end of the wall of the bore being formed with an annular seat shoulder at its juncture with the cage, a hollow body slidably mounted in the bore, said body being of cruciform shape so as to provide upon the exterior thereof longitudinal channels and intervening guide ribs, said body being closed at bottom and provided at its top with an apertured head having a laterally extending annular flange overhanging said channels and forming a valve adapted to close against said seat shoulder, a ball weight movable within the cage and adapted to rest upon the head of the hollow body, without

closing the aperture therein, and means upon the cage for guiding the ball and headed end of the body and limiting the outward movement thereof.

2. A bottle having a neck, a thimble secured within the neck and having a cage at its upper end and a bore of less diameter than the cage extending through its lower portion and communicating at its upper end with the cage, said cage being provided at its upper end with a contracted portion formed with an annular series of lateral outlet openings having their lower walls inclined to form guard lips, said bore having its wall formed with a shoulder at its point of juncture with the cage, a guard cap closing the upper end of the cage and overhanging the outlet openings, a hollow body slidably mounted in the bore and movable into the cage, said body being of cruciform shape so as to provide longitudinal channels and intervening guide ribs on the exterior thereof and being closed at bottom and provided at its top with a head having an opening therein and formed with a laterally extending annular flange overhanging said channels and forming a valve to seat upon said shoulder, a ball weight movable within the cage and adapted to rest upon the head of the hollow body without closing the opening therein, and upwardly converging ribs in the cage between said shoulder and the guard cap to guide and limit the outward movement of the ball and headed end of the hollow body.

3. A bottle having a neck provided with a seat, a hollow body slidably mounted in the neck and having a seat to engage the first named seat, said body being provided with an opening communicating with its interior above its seat, said body being of uniform diameter throughout and being exteriorly provided with a series of independent longitudinally extending channels closed against the interior of the body, a weight upon said body, and means to retain said weight within the neck.

4. A bottle having a neck provided with a seat, a hollow body slidably mounted in the neck and having a seat to engage the first named seat, said body being of uniform diameter throughout and closed against the admission of fluid below the body seat, the exterior of the body being formed with a series of independent longitudinally extending channels closed against the interior of the body, said body being provided with an opening communicating with its interior above its seat, a weight upon said body, and means to retain said weight within the neck.

5. A bottle having a neck provided with an annular seat, a hollow body having an an-

5 nular seat to co-act with the first named seat, the body being of uniform diameter throughout and closed below the seat against the admission of fluid, the exterior of the body being formed with a series of independent longitudinal channels closed at one end by the annular seat, the body above the seat being formed with an opening communicating with its interior, a weight to act upon the

upper end of said body above its seat, and 10 means to retain said weight in the bottle.

In testimony whereof I affix my signature in presence of two witnesses.

SVEN ROLFSON-SCHMIDT.

Witnesses:

JAMES F. DUHAMEL,  
MAE W. CLINTON.