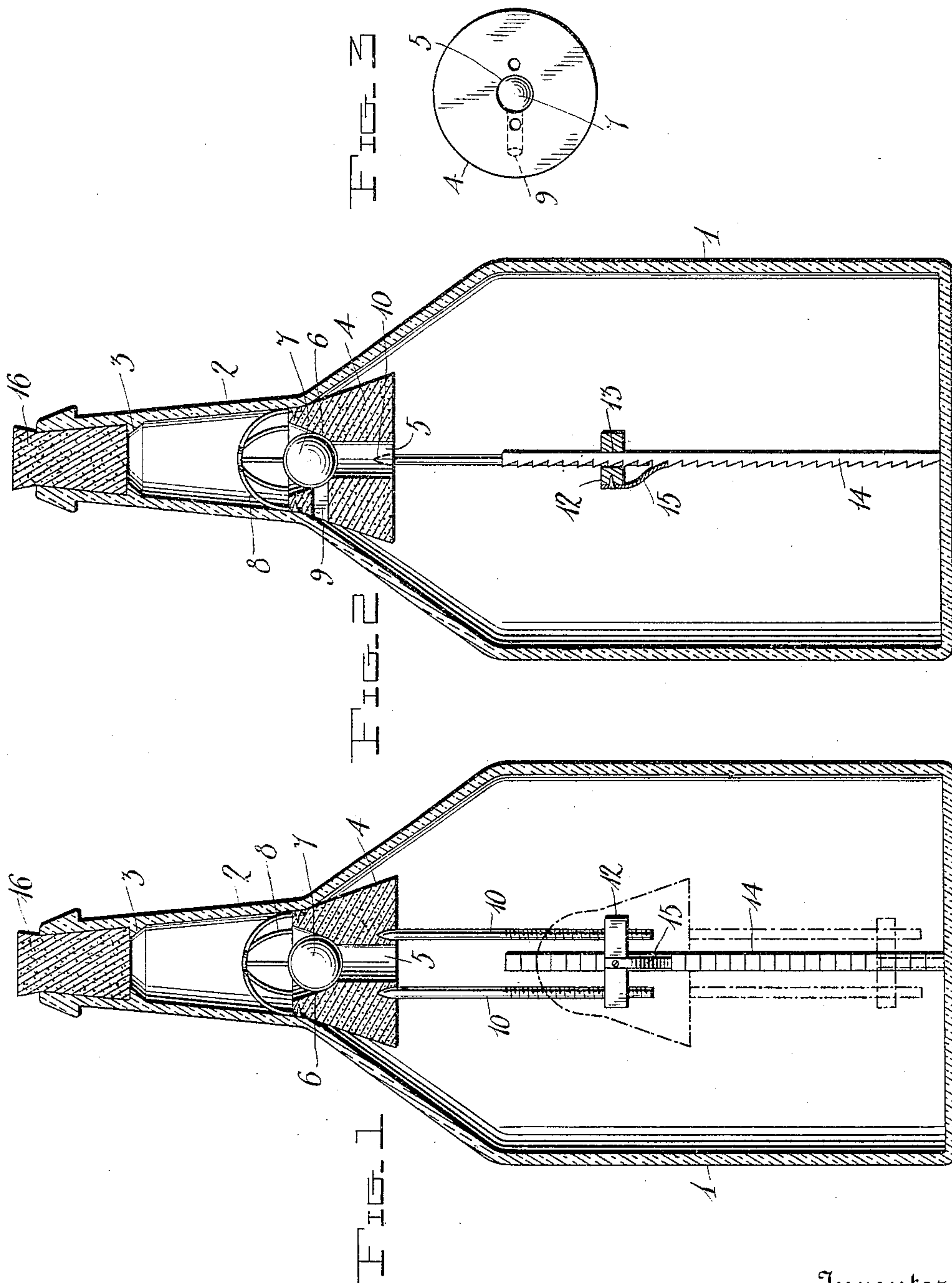


No. 824,278.

PATENTED JUNE 26, 1906.

J. BRUNETTE.
NON-REFILLABLE BOTTLE.
APPLICATION FILED OCT. 16, 1905.



Witnesses
L. E. Brown
C. H. Guisbauer

Inventor
Joseph Brunette
by *A. B. Wilson*
Attorney

UNITED STATES PATENT OFFICE.

JOSEPH BRUNETTE, OF ROCHESTER, NEW YORK.

NON-REFILLABLE BOTTLE.

No. 824,278.

Specification of Letters Patent.

Patented June 26, 1906.

Application filed October 16, 1905. Serial No. 282,960.

To all whom it may concern:

Be it known that I, JOSEPH BRUNETTE, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Non-Refillable Bottles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in non-refillable bottles.

The object of the invention is to provide a stopper which will automatically seal the bottle when the same is filled and which will prevent the refilling of the same after being emptied, means being provided whereby the liquid may be discharged from the bottle when the same is tipped or inclined in the proper direction, and means whereby the bottle will be automatically closed when set up again in an upright position.

A further object is to provide means whereby by the sealing device or stopper may be adjusted to fit bottles of various heights.

With the above and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a vertical sectional view through a bottle and stopper constructed in accordance with the invention and showing in full and dotted lines the closed and open position of the stopper. Fig. 2 is a similar view taken at right angles to Fig. 1, and Fig. 3 is a bottom plan view of the stopper.

Referring more particularly to the drawings, 1 denotes the bottle, which is preferably formed with a tapering neck 2, in which, near the upper end thereof, is formed an annular shoulder 3. Arranged in the bottle is a frusto-conical-shaped stopper 4, which may be formed of cork or other floatable material. In the stopper 4 is formed a centrally-disposed aperture 5, around the upper edge of which is formed a valve-seat 6, upon which is adapted to rest a spherical valve 7. Secured to the upper side of the stopper is a cage 8 to prevent the valve 6 from leaving the upper end of the stopper, but which will permit the valve to be unseated when the bottle is tipped in the proper direction. The cage 8 may be of any suitable construction, but is here

shown as formed of non-corrosive wire arranged to permit the free discharge of the contents of the bottle therethrough.

In one side of the stopper is formed a transversely-disposed aperture 9, which communicates with the passage or aperture 5 through the center of the stopper. The stopper 4 is adapted to be seated upon the upper pointed ends of two threaded adjusting-rods 10, the threaded lower ends of which are adapted to be screwed through an adjusting-block 12, said block being provided with threaded apertures to receive said threaded ends of the rods 10. In the block 12 is formed a centrally-disposed aperture 13, by means of which the block is loosely engaged with a vertically-disposed ratchet-bar 14, the lower end of which is adapted to rest upon the bottom of the bottle, as shown. Secured to one side of the block 12 in any suitable manner is a spring-pawl 15, which is adapted to engage the teeth of the ratchet-bar 14 to support the block 12 and the stopper 4.

Before the bottle has been filled the stopper 4 and the parts connected thereto are in the position shown in dotted lines in Fig. 1. When the bottle is filled, the stopper 4 will float upon the liquid, and as the latter rises in the bottle said stopper will be raised upwardly into engagement with the inner walls of the neck of the bottle, thereby closing or sealing said neck. As the float 4 rises the block 12 will be carried thereby, during which operation the pawl 15 will play loosely over the teeth of the ratchet-bar, the pawl, however, engaging said teeth of the ratchet-bar in such a manner that the block and the stopper will be prevented from dropping or being forced down into the bottle again after the liquid has been discharged therefrom. The engagement of the spherical valve 7 with the seat in the stopper will close the aperture in the latter when the bottle is in an upright position, and in order to discharge the contents of the bottle the same is inclined or tipped so that the valve will roll into the cage 8, thus opening said aperture in the stopper and permitting the contents of the bottle to pass therethrough. In order that all of the liquid may be drained from the bottle, the transversely-disposed aperture 9 is provided. The annular shoulder 3 in the upper end of the bottle-neck is provided to prevent the valve from being removed from the bottle should the cage 8 be broken or tampered with.

If desired, an ordinary stopper 16 may be placed in the upper end of the bottle-neck above the shoulder 3.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a device of the character described, the combination with an apertured, floating stopper adapted to be engaged with the neck of the bottle, of a valve adapted to close the aperture in said stopper, means to hold the valve on said stopper, and means to hold the stopper in place in the neck of the bottle after the fluid has been removed therefrom, substantially as described.

2. In a device of the character described, the combination with an apertured, floating stopper, adapted to be engaged with the neck of the bottle, of a gravity-valve adapted to be seated on the upper end of said stopper, a cage to retain the valve on the stopper, and an adjustable, automatically-operating locking mechanism to hold the stopper in the neck of the bottle after the latter has been emptied, substantially as described.

3. In a device of the character described,

the combination with an apertured, floating stopper, adapted to be engaged with the neck of the bottle, of a gravity-valve adapted to be seated on the upper end of said stopper, a cage to retain the valve on the stopper, a ratchet-bar arranged in the bottle to rest on the bottom thereof, an apertured block slidably mounted on said ratchet-bar, a spring-pawl carried by said block and means to adjustably connect the stopper with said block, substantially as described.

4. A bottle having formed in its neck an inwardly-projecting, annular shoulder, an apertured, floating stopper adapted to be engaged with the neck of the bottle, a valve-seat formed in the upper end of said stopper, a spherical valve to engage said seat, a cage to retain said valve on the stopper, a vertically-disposed ratchet-bar arranged in the bottle to rest on the bottom thereof, an apertured block slidably mounted on said ratchet-bar, a spring-pawl carried by said block to engage the teeth on said ratchet-bar, and threaded rods secured to the stopper and adapted to work through threaded apertures in said block, thereby adjustably connecting said stopper and block, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOSEPH BRUNETTE.

Witnesses:

ERICK S. JADESTROM,
JOSEPH DUPONT.