No. 779,832. PATENTED JAN. 10, 1905.

P. B. T. BERNER.

NON-REFILLABLE BOTTLE.

APPLICATION FILED SEPT. 1, 1904.

Fig. 1.

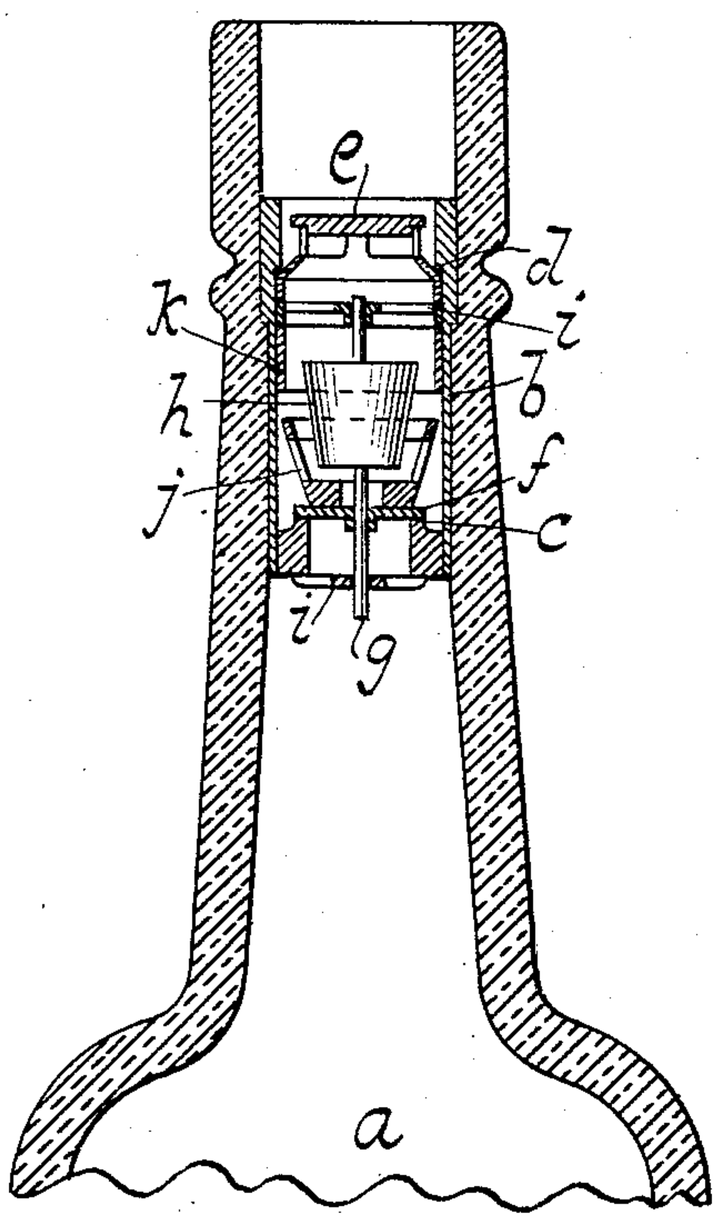


Fig. 2.

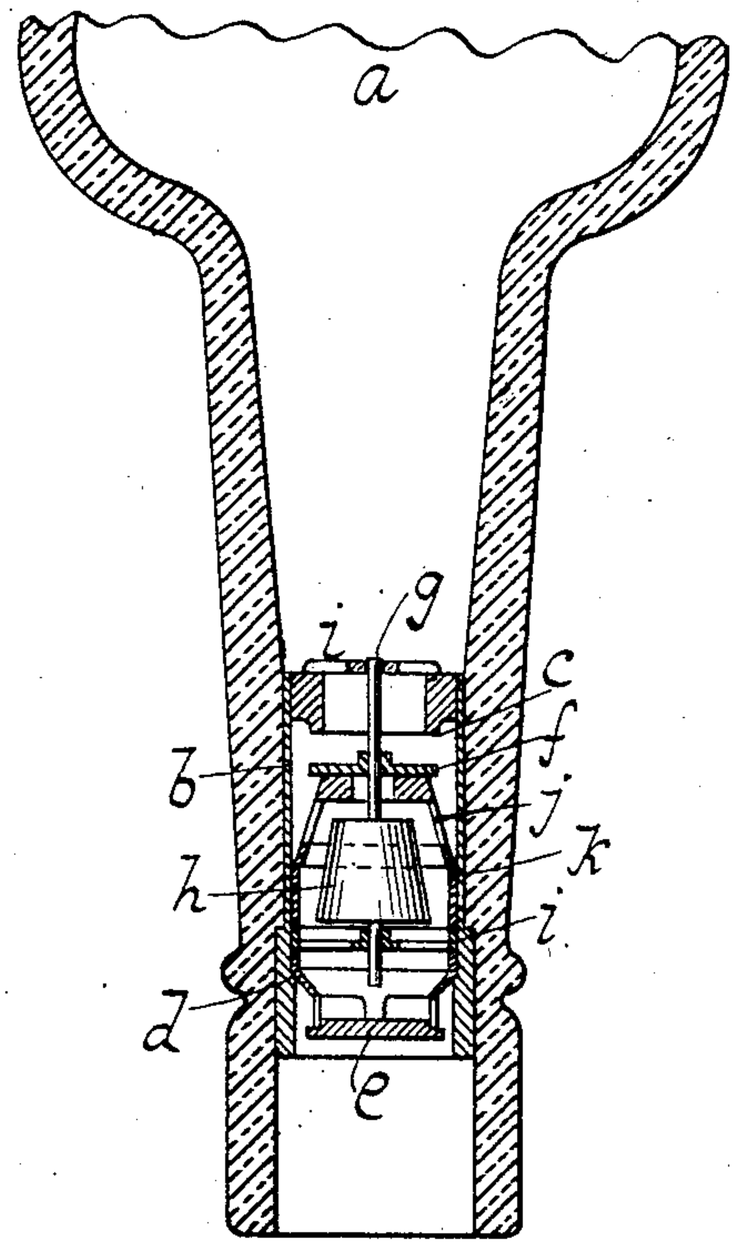


Fig. 3.

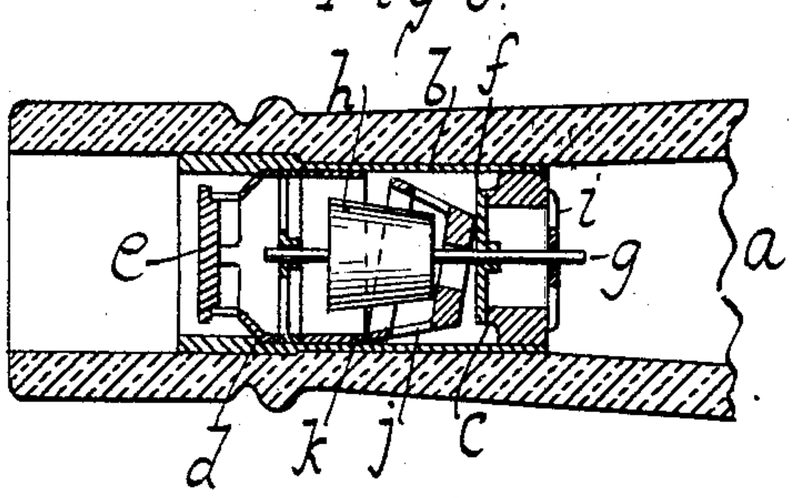


Fig. 4.

Fig. 5.

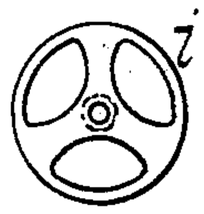


Fig. 6.

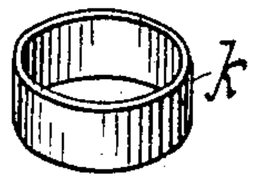


Fig. 7.

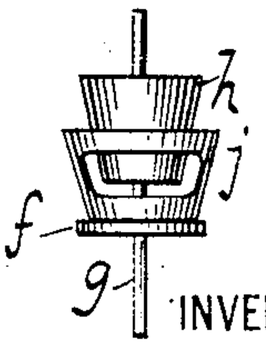


Fig. 8.

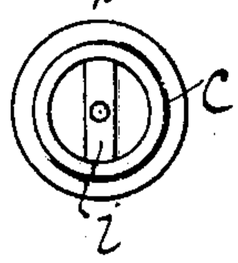
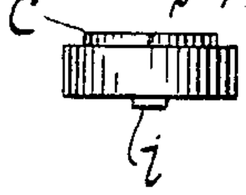


Fig. 9.



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No. 779,832. Patented January 10, 1905.

UNITED STATES PATENT OFFICE.

PAUL B. T. BERNER, OF BROOKLYN, NEW YORK.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 779,832, dated January 10, 1905.

Application filed September 1, 1904. Serial No. 222,997.

To all whom it may concern:

Be it known that I, PAUL B. T. BERNER, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention relates to a device adapted to prevent or baffle the refilling of a bottle and which can be made to resist attempts at tampering, as set forth in the following specification and claims and illustrated in the annexed drawings, in which—

Figure 1 shows a non-refillable bottle or neck in vertical section embodying this invention. Fig. 2 is a view like Fig. 1 reversed. Fig. 3 shows the bottle in vertical section in lying or horizontal position. Fig. 4 is a detail view of a baffler. Fig. 5 shows the upper guide or spider. Fig. 6 shows a stop or ring. Fig. 7 shows the valve with stem and float and a basket. Fig. 8 shows the lower guide or spider. Fig. 9 is an edge view of the valve-seat.

The valve in this non-refillable bottle is so constructed that it effectively prevents refilling of the bottle even if the bottle is held upside down and the liquid attempted to be forced under pressure into the neck of the bottle.

In the drawings the letter *a* designates a bottle having a neck, to the interior of which is fastened a tubular shell *b*. Near the lower end of said tubular shell is located a valve-seat *c*, and the upper part thereof has a contracted portion or mouth and a baffle-plate *e*. A disk valve *f* normally closes or covers the mouth of the valve-seat, and the former is fastened to a valve-stem *g*, having a float *h*, of cork or suitable material. The valve-stem is guided or can move freely up and down in the eyes of a series of spiders *i i*. A cage *j* engages with the upper part of the disk valve and tends to prevent the valve from leaving its seat when the bottle is upright. A stop *k* limits the upper or vertical movement of the said cage when the bottle is tilted. When the bottle is turned upside down or tilted to horizontal position, the liquid therein can flow through the bottom spider, out of the valve-mouth, into the cage, and out of its open top, thence through spider to contracted mouth, up and out underneath baffle-plate, and out of the neck of the bottle. If any liquid were forced into the bottle when it is tilted or placed horizontally or turned upside down, the float will instantly move toward the valve-seat and carrying the stem, with its valve, therewith close the mouth of the seat.

The baffle *e* is slipped into the shell and is prevented from passing therethrough by the contracted mouth or shoulder *d*. The spider *i* at the baffler is also slipped into the sleeve, as also the stop-ring *k*. These parts fit snug or tight, so that they will normally remain in place. Should it be attempted to tamper with the baffler, any pressure thereon of a tool or otherwise would force the baffler toward the valve, or the parts *e* and *k*, with upper spider *i*, would be jammed into the sleeve and result in the valve being locked or held to its seat. The result of locking the valve to its seat of course is obvious. Refilling becomes impossible when the valve is held shut. If the bottle is held upside down, the cage *j* comes to rest on the stop *k* and the valve can fall from its seat. The contents can now flow from the bottle. If the bottle is empty and refilling is attempted in this position, the entering liquid will raise float *h* and the valve *f* will close or rise to its seat. The looseness or play of the cage or weight about the stem and between the valve and float allows the valve and float to rise, while the cage remains on its seat or stop *k*. If an empty bottle is laid in horizontal position, Fig. 3, the cage will fall to inclined position and hold the valve shut. Refilling in this position is thus made impossible.

The various parts in the shell or sleeve can be formed by punch and die and can be slipped in place or held by friction. Such parts as the spiders or guides *i* and other parts can thus be readily renewed or put in place, as desired. The lower spider *i* and valve-seat *c* can be formed as or attached to one ring slipped into the shell. The float is shown spaced from the valve, but might be close to or in contact or embodied with the valve.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a bottle, a sleeve having a valve-seat,

a valve having a suitably-guided stem and float and movable to and from the seat, a cage movable independently of and located between the valve and float and a stop to limit the play of the cage.

2. In a bottle, a valve-seat, a valve having a float and movable to and from the seat, a cage movable to and from the valve and a baffler.

3. In a bottle, a valve-seat, a valve having a float and movable to and from the seat, a cage movable to and from the valve and a baffler slidably arranged so that on pressure against or tampering on the baffler the latter will be moved toward the valve to lock or force the same to its seat.

4. In a bottle, a valve-seat, a valve having a float, a cage movable to and from the valve, and a stop or seat for the cage to hold the same on reversal of the parts.

5. In a bottle, a valve-seat, a valve having a float, a cage movable to and from the valve, and a stop or seat for the cage to hold the same on reversal of the parts, said cage having play or looseness so that on tilting the bottle said cage will incline or press against the valve to hold the same to its seat.

6. In a bottle, a valve-seat, a stem carrying a valve or float, a cage having loose play about the stem, and a stop-ring, a guide and a baffler slidably or movably arranged so that on pressure said parts are forced toward or against the valve.

7. In a bottle, a sleeve having a stop or shoulder, a baffler slid into the sleeve against the stop, a guide or spider and stop or shoulder ring slid into the sleeve below the baffler and a second guide or spider slid into the sleeve, a valve having a float and a stem guided by the spiders and a cage having play about the stem.

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

PAUL B. T. BERNER.

Witnesses:
CHARLES POENSGEN,
GEORGE HULSBERG.