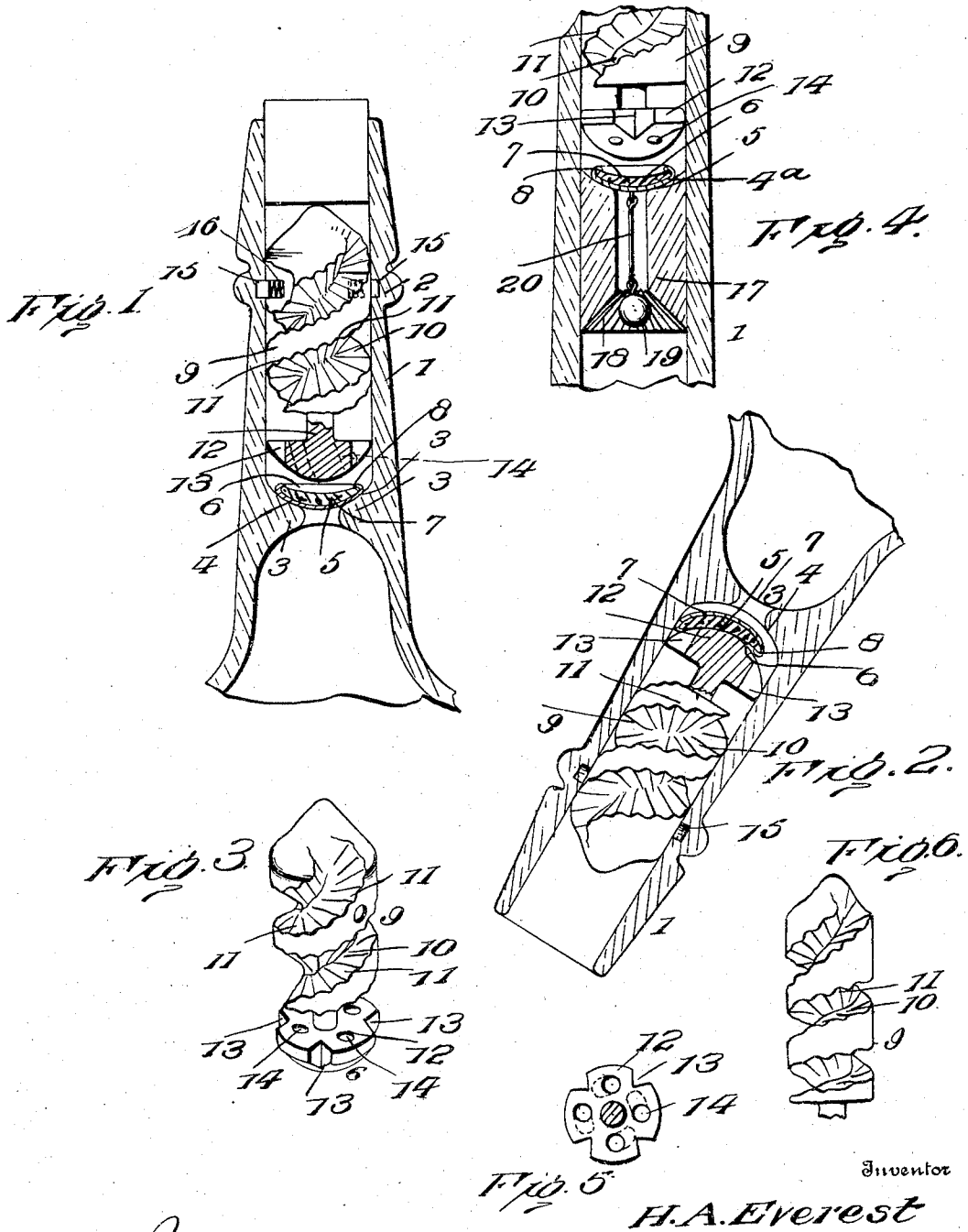


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H. A. EVEREST.
NON-REFILLABLE BOTTLE.
APPLICATION FILED NOV. 26, 1904.



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NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 788,527, dated May 2, 1905.

Application filed November 26, 1904. Serial No. 234,404.

To all whom it may concern:

Be it known that I, HOMER A. EVEREST, a citizen of the United States, residing at Mattapoisett, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention appertains to that class of receptacles employed for holding wines, spirituous liquors, or the like; and the essential feature of the invention resides in the provision of means adapted to be applied to receptacles of the above type for preventing fraudulent refilling thereof after the original contents have been removed with inferior goods.

The invention provides peculiar valve means in connection with a special construction of guard device which coöperates with the valve in accomplishing the desired result in such a manner that all likelihood of second filling of the receptacle is obviated, giving rise to advantages which are obvious to those versed in this art.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still some of the preferred embodiments are shown in the accompanying drawings, in which—

Figure 1 is a vertical sectional view showing the upper portion of a bottle embodying the essential features of the invention. Fig. 2 is a view similar to Fig. 1, the receptacle being partially inverted. Fig. 3 is a detail perspective view of the guard device. Fig. 4 is a sectional view embodying a modification of the invention. Fig. 5 is a sectional view of a guard looking down upon the guard member. Fig. 6 is a side elevation of a guard partially broken away, showing the

pitch of the spiral passage thereon varied in its length.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The mechanism which comprises the invention is designed with a view of retaining the general structure of bottle which is at present commonly in use and may be applied to such bottles in the practical embodiment thereof.

Referring to the drawings, the neck of the receptacle is designated 1, and adjacent the mouth thereof is formed interiorly an annular groove 2, the latter being preferably upon the inner side of the bead which is usually formed upon the necks of bottles. Some distance below the groove 2 above mentioned the neck 1 is contracted, as shown at 3, said portion 3 forming a valve-seat 4. The contracted portion 3 is preferably molded with the body of the bottle. However, this is not material, since the valve-seat may be located upon a removable part, such as will be hereinafter described. A valve 5 is adapted to seat itself upon the seat 4 aforesaid, and this valve is of peculiar construction, being convex upon one side and depressed or concaved, as shown at 6, upon the other side. The convex side of the valve 5 is adapted to snugly fit in the seat 4 of the neck when the receptacle is in a normal upright position. In order to facilitate unseating of the valve 5 when it is desired to displace or pour out the contents of the bottle, buoyant material, such as cork 7, is carried by the valve in the depressed portion thereof. The material 7, which is designed to float the valve 5, is retained in place in the depression 6 by an annulus 8 upon the peripheral portion of the valve. The annulus 8 may constitute an integral rib or enlargement of the body of the valve 5 and overlaps the material 7 in such a manner as to effectively retain the same.

As is customary in this class of devices, guard means are utilized, and the same consist of a guard 9, having a spiral passage extending from the upper end thereof to a

point adjacent its lower extremity. The spiral passage 10 may be made of a size suitable for the purpose of the invention, and the walls of this passage are transversely fluted or ribbed, as shown at 11. The contents of the receptacle are adapted to pass through the passage 10 and out of the mouth of the receptacle, and the purpose of providing the portions 11 in the passage 10 is to obviate all likelihood of insertion of a wire or like part into the neck 1 of the bottle in an attempt to interfere with the proper operation of the valve 5. At the lower end of the guard 9 is provided a guard member 12 in the form of a disk, preferably integral with the body of the guard and having its under side (that adjacent the valve 5) convex or rounded, as shown most clearly in Fig. 1. The member 12 is provided at its peripheral portion with notches 13 or is cut away in a similar manner, so as to admit of ready passage of the contents of the bottle when the valve 5 is open or unseated. The member 12 is likewise provided with a plurality of openings 14, and the latter are inclined in a direction opposite the spiral passage 10 in order to guard against tampering with the valve, as before premised upon. The openings 14 form egress openings or passages also. The guard 9 is held in place by any suitable means within the contemplation of the invention, the means shown consisting of lock-pins 15, mounted in a lateral opening in the upper portion of the guard and adapted to engage in the groove 2 of the neck 1 at their outer ends. The pins 15 are automatically projected into the groove 2 by means of a spring 16 when the guard 9 is introduced in the neck of a bottle in assembling the parts of the invention after the receptacle has been filled.

The peculiar formation of the member 12 of the guard is advantageous in that should the bottle be laid upon its side and submerged the valve 5 will have a tendency to float, due to the buoyant substance 7, and said valve will of course wedge between the member 12 and its seat, the convex side of the valve, however, conforming to the curvature of the valve-seat in such a manner as to snugly fit thereagainst under these conditions, thereby remaining closed upon its seat, so as to prevent ingress of liquid. Should the receptacle be entirely inverted or submerged, the valve 5 would of course float and seat itself, thwarting an attempt of this character effectually.

In the modification of the invention shown

in Fig. 4 the valve-seat 4^a is located at the upper extremity of a tubular section 17, adapted to be inserted into the neck 1 and securely held in place therein. In order to prevent displacement of the part 17, it is preferred to roughen the interior portion of the neck 1 by grinding or like operation and also roughen the exterior portion of the part 17, so that when the latter is inserted in the neck 1 the roughened portions of the parts 17 and 1 will so bind against each other that all likelihood of displacement of the tubular section without mutilation of the bottle is prevented. The lower end of the section 17 is also concaved or hollowed out and provided with grooves or passages 18. In the construction in Fig. 4 a weight 19, such as a ball or like part, is pendant from the valve and is suspended by a cord or wire 20, secured at its upper end to the under side of the valve and passes through the tubular portion of said part 17. The weight or the ball 19 insures seating of the valve 5 at all times except when the receptacle is entirely inverted. When inverted, the contents of the bottle will pass by the ball 19 through the passages 18 above described.

The several parts of the invention are simply constructed and do not necessitate any substantial modification in the construction of the bottle, which is of importance in this class of devices.

The several parts of the invention may be quickly assembled in the actual use thereof.

Having thus described the invention, what is claimed as new is—

1. In a non-refillable bottle, the combination of a neck provided with a valve-seat in the length thereof, a valve operating upon said seat, and a guard coöperating with said valve and provided with a spiral passage having the walls thereof fluted or ribbed.

2. In a non-refillable bottle, the combination of a neck provided with a valve-seat in the length thereof, a valve operating upon said seat, and a guard coöperating with said valve and having a spiral passage leading from the upper end thereof to a point adjacent its lower end, the walls of said passage being transversely fluted or ribbed throughout its length.

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

HOMER A. EVEREST. [L. S.]

Witnesses:

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