No. 725,146. PATENTED APR. 14, 1903.

J. C. ROSENKRANZ.

NON-REFILLABLE BOTTLE.

APPLICATION FILED MAY 20, 1902.

NO MODEL.

Fig. 1.

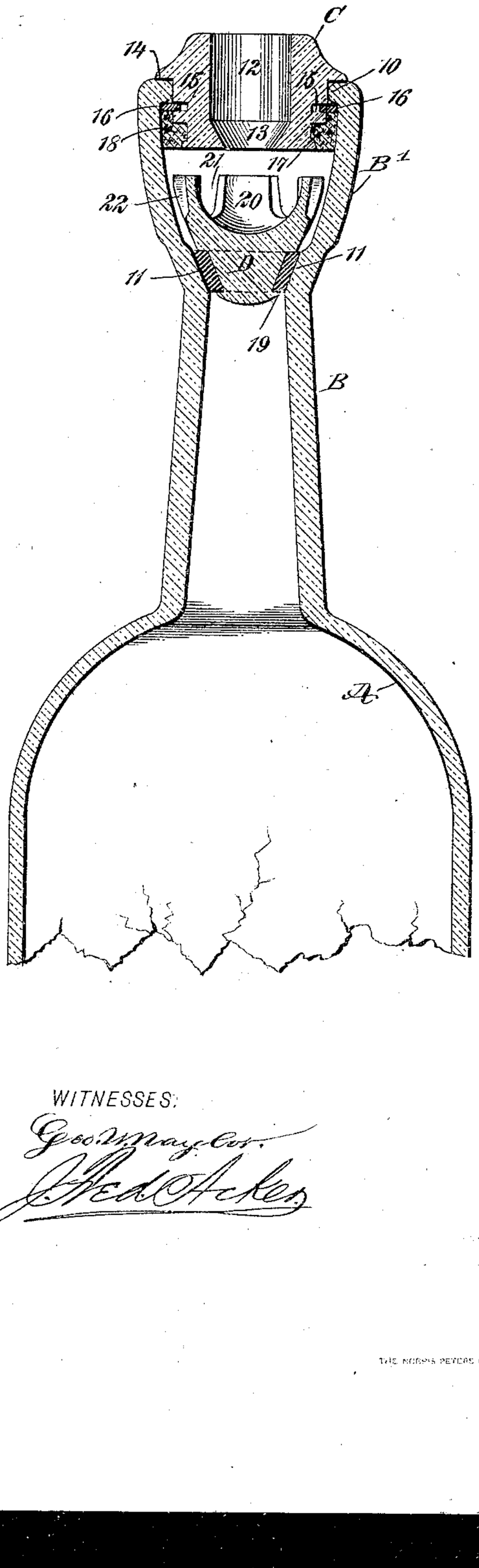


Fig. 2.

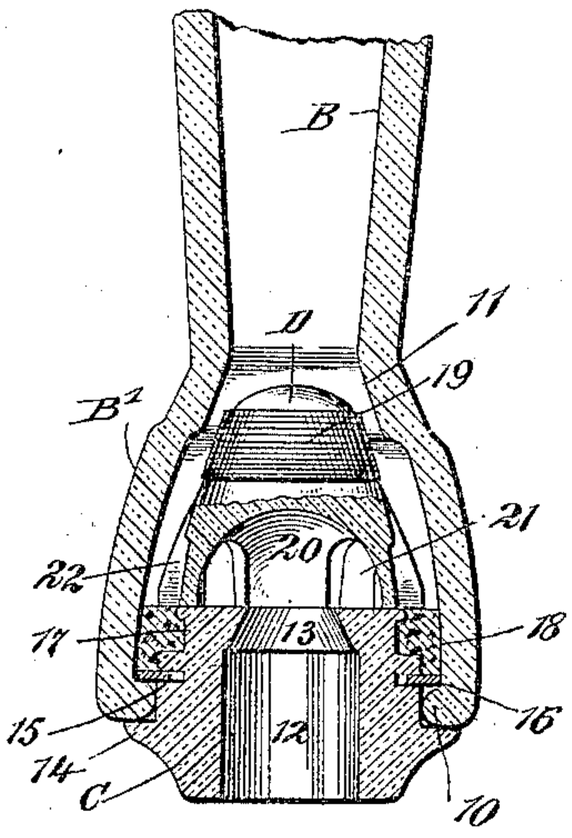


Fig. 3.

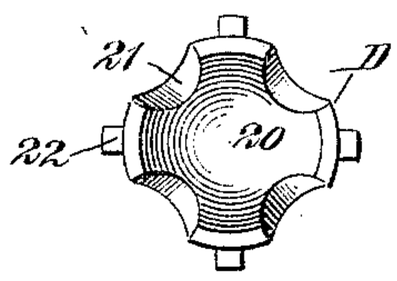
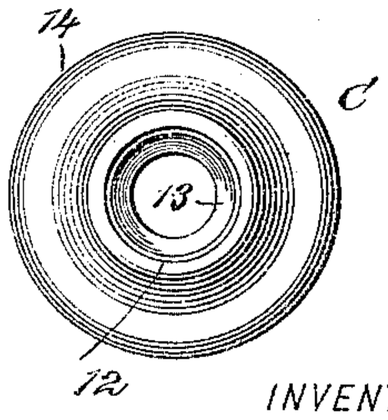


Fig. 4.



WITNESSES:

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NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 725,146, dated April 14, 1903.

Application filed May 20, 1902. Serial No. 108,194. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. ROSENKRANZ, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Non-Refillable Bottle, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide a simple construction of bottle which when once sealed after filling cannot be refilled and again presented as an original package without detection.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical section through the upper body portion and neck of a standing bottle and the improved stopper and valve applied. Fig. 2 is a vertical sectional view of the neck and stopper and valve of the bottle, showing the position of the valve when the bottle is inverted and liquid is to be poured from the bottle. Fig. 3 is a plan view of the valve, and Fig. 4 is a plan view of the stopper.

A represents the body of a bottle, and B the neck thereof, which neck is provided with an enlarged mouth-section B′, somewhat pear-shaped in general formation, and at the mouth of the bottle an inwardly-extending horizontal flange 10 is formed, and where the enlarged mouth-section B′ of the bottle connects with the main portion B of the neck the inner wall at said point is inclined downward and inward, forming a valve-seat 11.

The mouth of the bottle is closed through the medium of a stopper C. This stopper is preferably made of glass and is provided with a central opening 12, preferably circular in contour for the major portion of its length, but of conical formation at its lower portion 13, as is best shown in Fig. 1. Such conical formation is given to the opening 12 in the stopper in order to prevent wire or like devices being introduced into the neck of the bottle and operated at the side portions of the same. The stopper C is provided with an annular flange 14, which flange when the stopper is in position in the mouth portion of the bottle rests upon the upper surface of the flange 10 at the mouth of said bottle, as is shown in Figs. 1 and 2. The diameter of the stopper C, below the flange 14, is such that a space is obtained between the outer edge of that portion of the stopper below the flange 10 at the bottle-mouth and the inner wall of the enlarged section B′ of the mouth, and at a point just below the flange 10 at the mouth of the bottle-neck an annular exterior groove 15 is produced in the stopper C. In this groove a spring-key 16 is fitted, which is preferably in the form of a split ring. When the stopper is forced into the mouth of the bottle, this spring-key slips by the flange 10 at the mouth of the bottle and finds a position beneath the said flange while yet remaining in the groove 15 of the stopper, thus preventing the latter from being withdrawn from the mouth-section of the bottle after it has been once placed in position therein. At the lower portion of the stopper C an exterior recess 17 is formed, and in this recess a cork washer 18 is snugly fitted, which washer extends up at the outside of the stopper beyond the recess 17 to an engagement with the under surface of the spring-key 16, as is shown in Figs. 1 and 2. The valve D is also preferably made of glass and is of approximately conical formation and near its contracted end is provided with an exterior rubber packing 19, which is fitted in an appropriate exterior groove in the said portion of the valve, and this rubber packing when the valve is seated is in direct contact with the valve-seat, as is shown in Fig. 1. At the upper larger portion of the valve D a cup-shaped recess 20 is produced in the interest of lightness, and at the upper recessed portion of the valve openings 21 are made, thus forming scallops at the upper portion of the valve and providing means for the liquid to flow to the recess 20 and thence to the opening 12 in the stopper C when the valve is unseated. In order that the valve shall be quickly guided to its seat, longitudinal lugs 22 are formed between the openings 21 at the exterior of the upper portion of the stopper, as is shown in Figs. 1, 2, and 3.

The means employed for preventing the

bottle being refilled and again presented as an original package are very simple and economic, adding but very little to the cost of the bottle over that of an ordinary bottle.

When the bottle has been filled, the valve is placed in position therein and next the stopper is introduced and locked in the mouth portion of the neck and an auxiliary stopper of cork or like material is fitted in the opening 12 of the glass stopper C. When liquid is to be poured from the bottle, the auxiliary cork stopper is removed, and as the bottle is turned mouth downward the valve D unseats itself and is practically brought to an engagement with the bottom of the stopper C, whereupon the liquid flowing from the body of the bottle will pass through the slots 21 in the stopper to its recessed portion 20 and from thence to the opening 12 in the stopper C.

It will be observed that when the stopper C is locked in the neck of the bottle by means of the spring-key 16, which is preferably of metal, any attempt to withdraw the stopper C would result in the fracture of the flange 10 at the mouth of the neck.

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

1. A bottle with a flared mouth having an inwardly-extending annular flange at the top, and a conical valve-seat at the bottom of said enlarged portion; a stopper fitted in the mouth of the bottle and having a central opening from top to bottom and a flange at its top engaging the top of the flange of the bottle-neck; means for locking the stopper in the neck of the bottle; and a conical valve fitted to the conical seat, said valve having an enlarged upper portion provided with a conical recess, side openings leading into said recess, and longitudinal lugs at the exterior of the enlarged portion of the valve between said openings, as specified and for the purposes set forth.

2. A bottle, the neck whereof is provided with an enlarged mouth-section and an inwardly-extending flange at the upper end of the said section, a stopper having a flange which fits upon the flange at the mouth of the bottle and an exterior recess below said flange, the said stopper being provided with an opening extending through from top to bottom and of conical formation at its lower portion, a spring-key fitted in the exterior recess of the stopper, engaging with the under surface of the flange at the mouth of the bottle, a cork washer engaging with the exterior of the said stopper below the said key and with the under face of the key, and a valve having a seat where the enlarged portion of the neck engages with the body portion of the neck, which valve is of conical formation and is provided with an elastic washer where it engages with its seat, the larger upper portion of the valve being provided with a conical recess and side openings leading into the said recess, and longitudinal lugs at the exterior of the enlarged portion of the valve between the said openings, being adapted to assist in guiding the said valve to its seat, substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN C. ROSENKRANZ.

Witnesses:
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