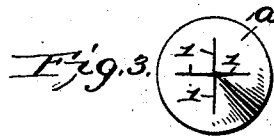
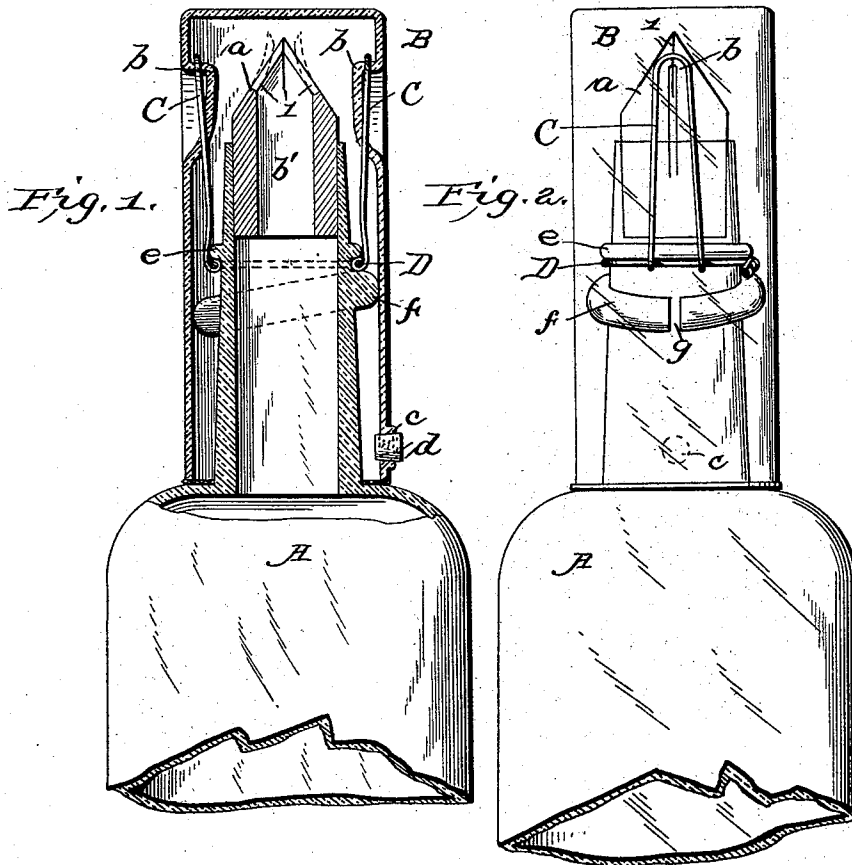


(No Model.)

J. F. KRIES.
NON-REFILLABLE BOTTLE.

No. 571,047.

Patented Nov. 10, 1896.



Attest
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UNITED STATES PATENT OFFICE.

JOHN FRANK KRIES, OF CHARLESTON, WEST VIRGINIA.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 571,047, dated November 10, 1896.

Application filed May 18, 1896. Serial No. 591,954. (No model.)

To all whom it may concern:

Be it known that I, JOHN FRANK KRIES, a citizen of the United States, residing at Charleston, in the county of Kanawha and State of West Virginia, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to a non-refillable bottle, and particularly to a form of cork or stopper adapted to be used in connection with a form of bottle shown in an application filed by me in the United States Patent Office on the 22d day of April, 1896, Serial No. 588,498, and while shown in this connection I do not desire to limit myself in the application of the present improvement to the particular form of bottle made the subject of my former application.

In the drawings I have illustrated the invention as applied to the form of bottle referred to, and in Figure 1 I show a side elevation of such a bottle with the improvement of the present invention applied. Fig. 2 is a sectional view. Fig. 3 is a detail view of the stopper.

In the drawings, A represents a bottle of ordinary construction, and this is provided with a glass cap B, which has at its upper end inwardly-extending projections *b*, adapted to be engaged by spring-bails C, secured to the neck of the bottle by a wire D, and it will be observed that when the glass cap is slipped over the bottle and the projections *b* engage the spring-bails the cap is securely held and cannot be removed except by breaking the same. This is the construction, broadly, of the application referred to, but in this construction it is not possible to extract any of the contents of the bottle except by breaking the glass cap, as the mouth of the bottle in such case is sealed by a stopper of ordinary form.

It is the object of the present invention to provide an improved stopper which will permit of the discharge of the contents of the bottle gradually without breaking the glass cap. To this end I form the stopper (shown in Fig. 3) of cork, rubber, or other suitable material, making its circumference of such size as to fit the bottle, this being preferably tapered, as shown at *a*. The upper part of

the cork or stopper is cone-shaped, and this cone covers a central passage *b'*. The cone is divided by four slits *l*, and the tongues left by the slits are sufficiently flexible to open when the bottle is inverted and allow the liquid to run out, but they immediately close when the bottle is restored to its former position. After the liquid passes through the stopper it is between the neck of the bottle and the cap, and to allow it to be discharged from this space I provide an opening *c* in the cap, which is closed by a suitable stopper *d*.

The projections *b* are of course integral with the glass of the cap and are hollow, as shown in Fig. 1. A rib *e* forms a bearing for the wire D and prevents upward movement of the same. The bottle-neck is provided with an inclined rib *f*, which serves to prevent downward displacement of the wire D, is a support for the cap, and prevents any tampering with the bails C. This rib is inclined and has a passage *g* at its lowest point, and when the liquid flows from the bottle through the stopper to the space between the cap and neck it passes through passage *g*, below the rib *f*, and out at the opposite side through the opening *c*. Under the lower edge of the cap I place a cork gasket or ring *i*.

I claim—

1. In combination with a bottle, a cap sealing the neck thereof, wire bails on the bottle-neck engaging the cap said bails being located within the cap, a stopper fitted to the bottle and adapted to allow the egress of the fluid and an opening in the cap with a closure for said opening, substantially as described.

2. In combination with a bottle, a cap sealing the neck thereof, and secured thereto, a stopper fitted to the bottle within the cap and adapted to allow the egress of the fluid, a projecting rib around the neck and between it and the inner wall of the cap having a passage through it and an exit-opening in the cap on the side opposite the said passage, substantially as described.

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

JOHN FRANK KRIES.

Witnesses:

HENRY E. COOPER,
WM. F. HALL.