(No Model.)

W. L. ROORBACH.

BOTTLE STOPPER.

No. 272,775. Patented Feb. 20, 1883.

Fig. 1.

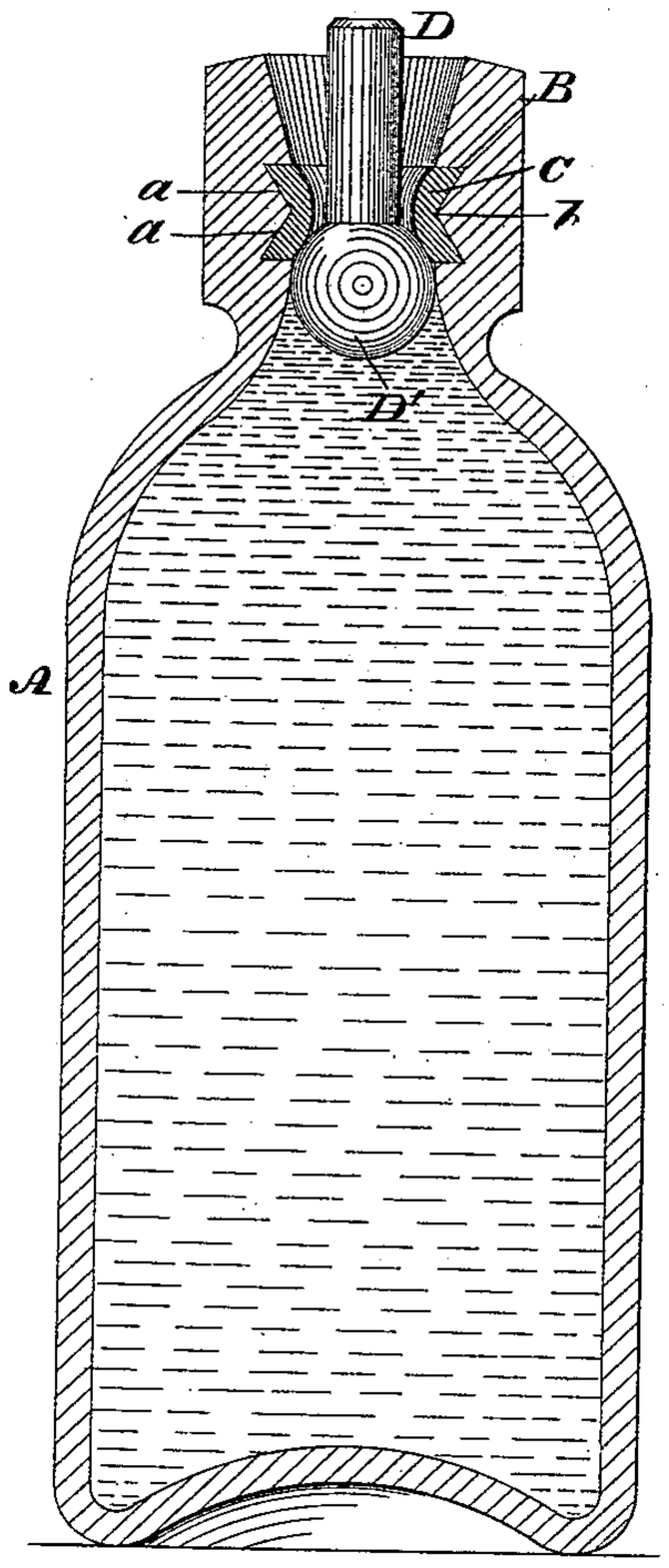


Fig. 2.

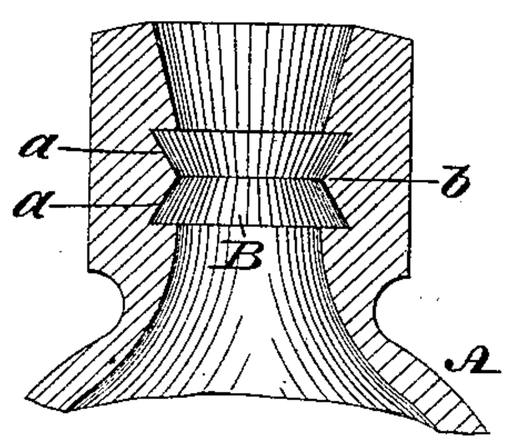
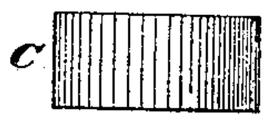


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM L. ROORBACH, OF PHILADELPHIA, PENNSYLVANIA.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 272,775, dated February 20, 1883.

Application filed December 22, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. ROORBACH, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Bottle-Stoppers, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a vertical section of a bottle and stopper embodying my invention. Fig. 2 is a view of a portion of the bottle, the stopper being removed. Fig. 3 is a side elevation of the seat of the stopper.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to that class of bottle-stopping devices in which an internally-grooved neck is used in combination with packing for its groove and a globular stopper extending below the same.

Referring to the drawings, A represents a bottle, in the neck of which is a double horizontal groove, B, which has two inclined faces, *a a*, the inclinations being respectively from the top and bottom walls of the groove toward the interior of the neck of the bottle, and forming at their junction a ridge, *b*.

C represents a rubber bushing or packing, of an annular form, the diameter of which is greater than that of the ridge *b*, the said bushing being forced around the ridge, so that its center is compressed and the ends spread in opposite directions into the groove.

D represents the stopper, which is formed of a stem, the bottom of which has a spherical head or bulb, D′, the diameter of the latter being less than that of the neck of the bottle and ridge *b*, so that the stopper may be inserted into the bottle prior to location of the bushing, it being noticed that the stopper closes upwardly from below against the bushing as a seat. The bottle is filled and charged in any suitable manner, and the pressure within the same holds the stopper firmly on its seat. The increased pressure on the stopper increases the closing action of the same, it being noticed that the seat part of the bushing is conical and forms an elastic point of contact for the head of the stopper, yielding under the pressure of the stopper without leaving its bearings in the groove B. Furthermore, the bushing is removed from contact with the contents of the bottle as the lower edge of said bushing is above the equatorial line of the head of the stopper, and thus not exposed below said line. The bushing remains firmly within the annular groove B, and cannot be removed therefrom by the upward pressure of the head of the stopper, as the upper wall of the groove acts as a shoulder or stop, against which the bushing abuts and restrains the same. When the bottle is to be opened the stopper is forced downwardly, thus overcoming the internal pressure thereon and causing it to leave its seat, the effect of which is evident.

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

A bottle constructed with a double groove in the inside of its neck, said groove having two inclined faces and an intervening ridge, in combination with a packing which fits into said double groove and over said ridge, and a bulbous stopper extending below said groove and packing, substantially as and for the purpose set forth.

WM. L. ROORBACH.

Witnesses:
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