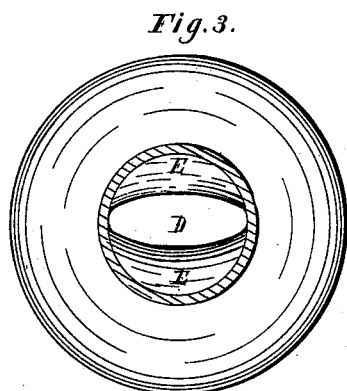
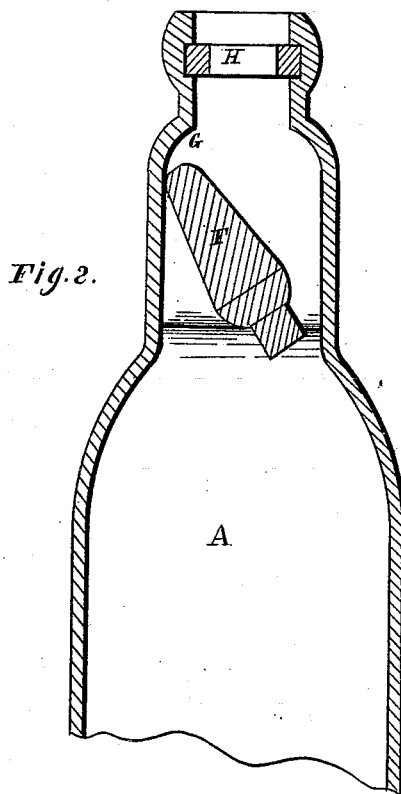
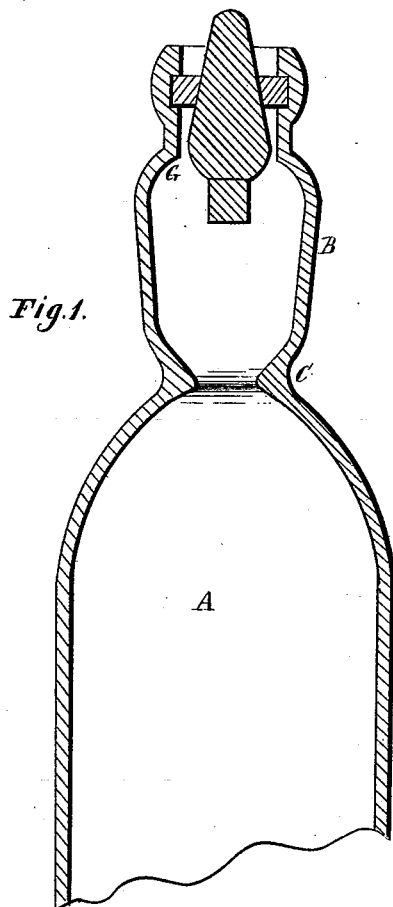


W. H. KELLEY.
Bottle-Stopper.

No. 199,980.

Patented Feb. 5, 1878.



Witnesses.
Julius Schmitt.
Aaron Higley

Inventor.
W. H. Kelley
Per Burridge & Co.
Atty

UNITED STATES PATENT OFFICE.

WILLIAM H. KELLEY, OF CLEVELAND, OHIO.

IMPROVEMENT IN BOTTLE-STOPPERS.

Specification forming part of Letters Patent No. **199,980**, dated February 5, 1878; application filed May 17, 1877.

To all whom it may concern:

Be it known that I, WILLIAM H. KELLEY, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Bottles, of which the following is a description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figures 1 and 2 are transverse vertical sections of a bottle, showing different positions of the stopper therein. Fig. 3 is a top view of the bottle, showing a horizontal transverse section of the neck, and a view of the inside of the base of the neck and opening into the body of the bottle.

Like letters of reference refer to like parts in the views.

The nature of this invention relates to a bottle, and the special object of which is to cork said bottle by means of a stopper permanently remaining in the neck thereof, and which, by the pressure of the aerated liquid wherewith the bottle is filled, is forced into the mouth of the same. The bottle is uncorked by forcing the stopper back into the neck, and is prevented from getting into the mouth of the bottle while pouring out the liquor therefrom by an annular shoulder at the upper end of the neck, upon which the end of the stopper rests on pouring out the liquid, but which slips therefrom into the mouth of the bottle when turned directly upside down.

A further and more full description of the invention is as follows:

In the drawings, A represents the bottle, which may be of any holding capacity. B, the neck of the bottle at its junction with the body, is contracted from two opposite sides, as seen at C, Fig. 1, thereby narrowing up in one direction the opening or throat at the base of the neck, forming an oblong opening, as seen at D in Fig. 3. Thereby is formed on each side of the opening a shoulder, E, whereon the stopper rests when the bottle is in an upright position and empty, as shown in Fig. 2, the opening D being too narrow to allow the base of the stopper to pass into the body of the bottle, and the stopper too long to become inverted in the neck thereof. The stopper therefore remains in a partially upright posi-

tion in an empty bottle standing on its base. The stopper, when the bottle is inverted, will drop into the mouth thereof, as shown in Fig. 1, and be therein maintained when the bottle is standing on its base by the pressure of the aerated liquor, or by the pressure of compressed air that may have been forced into the bottle while being filled with unaerated or still liquor. The annular shoulder G will prevent the stopper from falling into the mouth of the bottle when the bottle is inclined in the act of pouring out its contents, and which will not slip from the shoulder until the bottle is in a vertical position, or nearly so; hence the stopper will offer no obstruction to the pouring out of the contents of the bottle, though it may be held in any position while so doing—that is to say, in any position so far as respects the circumference of the bottle. Its vertical position, when bottom upward, will permit the stopper to slip from the annular shoulder into the mouth of the bottle, as aforesaid, and the elastic packing H secures an air-tight fit therein. After the bottle is made the stopper is then placed in the neck, and then the packing, which may be removed for cleansing the bottle.

The above-described bottle is such a one as is used in connection with a bottling-machine and for holding aerated liquids and still liquids, which are filled into the bottle under a pressure of air which is sufficiently strong to hold the stopper securely in the mouth of the bottle.

I do not claim, separately considered, balls or tapering corks in connection with elastic packing to prevent percolation when bottled or corked; but that which distinguishes my improvement from others is the arrangement of the several parts herein described, whereby I am enabled to prevent breaking of bottles, as is the case with a gravitating stopper without extra thickness and weight of glass are employed; and, further, I am enabled to open and close the bottle without any extra tools or instruments, as the stopper projects so far from the mouth as to be readily pushed back into the neck to permit the fluid to escape, and, as the stopper is confined in the neck only of the bottle, the fluid, in opening the bottle, is not materially disturbed or agitated

therein; also, with my improvement, no projections in the neck are required, which admits of the bottle being readily cleaned out, and there is no necessity of holding the bottle or having the stopper in any one certain place in filling and pouring out the liquor from the bottle.

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

The elongated conical-shaped glass stopper F, in combination with the ring H and neck of the bottle A, contracted at its base at C, and having a shoulder, G, substantially as and for the purpose described.

WILLIAM H. KELLEY.

Witnesses:

J. H. BURRIDGE,

AARON HIGLEY.