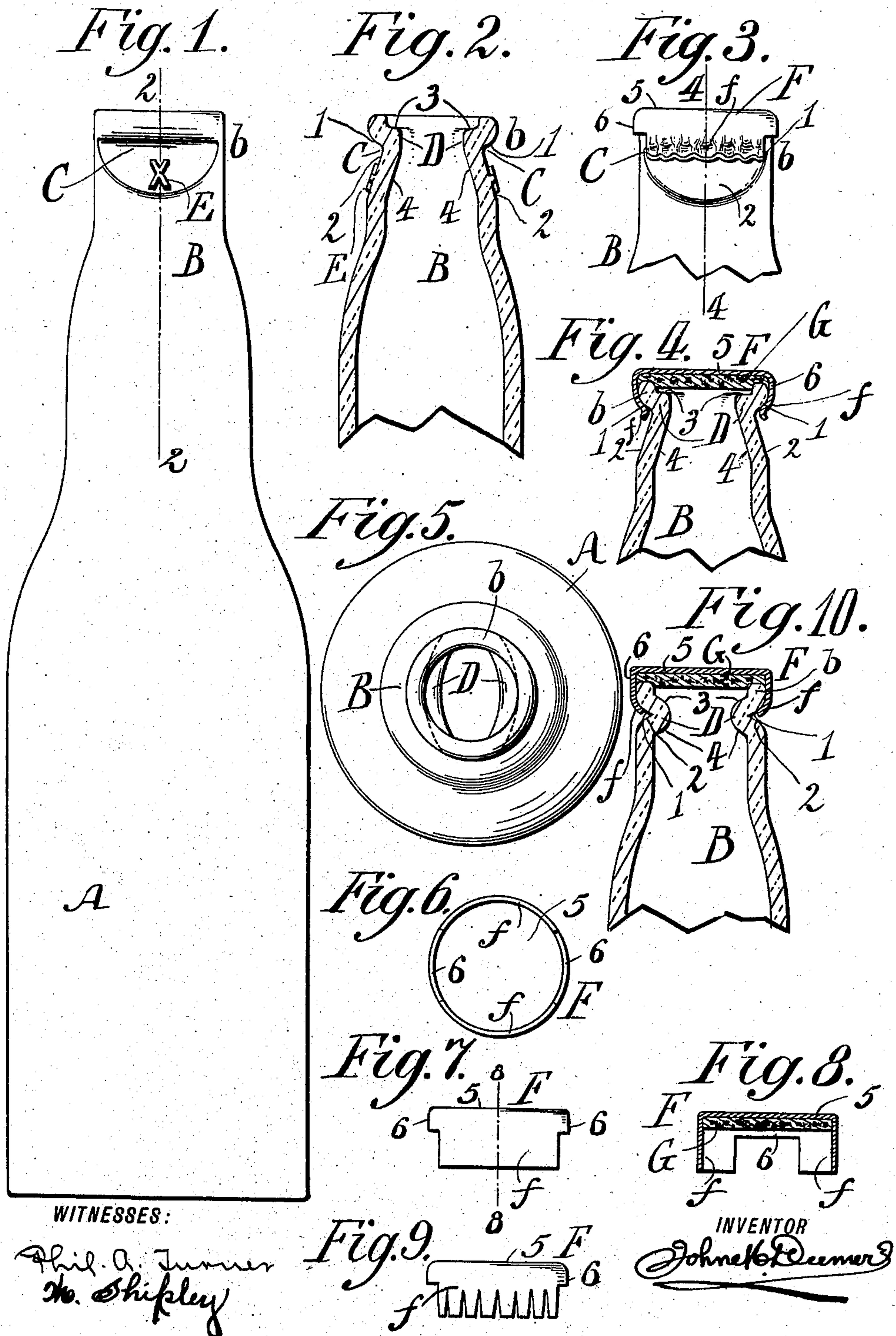


No. 885,734.

PATENTED APR. 28, 1908.

J. M. DEEMER.
BOTTLE AND SEALING CAP.
APPLICATION FILED AUG. 9, 1904.



UNITED STATES PATENT OFFICE.

JOHN M. DEEMER, OF NEW YORK, N. Y.

BOTTLE AND SEALING-CAP.

No. 885,734.

Specification of Letters Patent.

Patented April 28, 1908.

Application filed August 9, 1904. Serial No. 220,078.

To all whom it may concern:

Be it known that I, JOHN M. DEEMER, citizen of the United States, and resident of New York, county of New York, and State of New York, have invented certain new and useful Improvements in a Bottle and Sealing-Cap, of which the following is a specification, reference being had to the accompanying drawing, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to bottle caps for sealing and closing that class of bottles adapted to contain gaseous liquid compounds, such as ginger ale, beer etc., which are sold independently of the bottles and under conditions requiring said bottles to be returned to the bottler or manufacturer of the original contents, after they are emptied; the caps being machine-placed and susceptible of use co-jointly with bottles which are preferably of the construction illustrated in the accompanying drawings and hereinafter fully described, the objects of the invention being to provide an efficient sealing device and protective means for preventing re-use of the bottles unless they are re-closed by my improved cap, whereby illicit use, by refilling of the bottle, is prevented.

With the above named and other objects in view, the sealing means comprises a cap having depending tongues forming a clamp for engaging horizontal grooves in the bottle neck.

The invention will be hereinafter fully described and specifically set forth in the annexed claims.

In the accompanying drawings forming part of this specification, Figure 1, is a side elevation of my improved bottle; Fig. 2, is a vertical sectional view taken on the line 2—2, of Fig. 1; Fig. 3, is a side view of the bottle-neck having my improved cap attached thereto; Fig. 4, is a vertical sectional view taken on the line 4—4 of Fig. 3; Fig. 5, is a plan view of Fig. 2; Fig. 6, is an inverted plan view of the sealing-cap; Fig. 7, is a side view of said cap; Fig. 8, is a vertical sectional view taken on the line 8—8, of Fig. 7. Fig. 9, is a side view of a slightly modified form of cap, and Fig. 10, is a vertical sectional view of a bottle-neck having the last named form of cap attached. In this view the grooves in the bottle neck are of slightly modified shape.

In the practice of my invention, I employ a preferably glass bottle of adaptable con-

tour and capacity, comprising the body A and neck B, said neck terminating in an upper cylindrical part *b*, all of said parts formed integral.

Formed one on each side of the upper or head part *b*, of the bottle neck B, beneath the mouth thereof, is a horizontal groove or recess C, which, in vertical sectional elevation, embodies an overhanging part 1, and a downwardly and obliquely extended part 2. These grooves are parallel and directly opposite each other; and the inner walls of each groove extend into the bottle-neck and form an integral bar D, each of said bars embodying a top or ledge 3, and a tapering part 4. By means of these bars so proportioned and located, an effective means is provided in the bottle-neck to prevent the insertion of a cylindrical cork, but owing to the tapering contour of their walls, which merge obliquely into the neck, and the wide channel between them, outflow of fluid through said neck, when discharging the bottle, will not be retarded. This form of bar in the bottle-neck not only does not retard outflow of fluid from the bottle, but it presents only a minimum of vertical surface for contact with a cork, should an attempt be made to employ a cork of contour similar, in sectional plan, to the plan-formation of the outlet between the bars D; thus such cork could not be practicably employed to close the bottle.

On the visible parts 2, of the walls comprising the grooves C, I may place preferably integrally formed marks or characters, as E, Figs. 1 and 2, of the drawings, these may embody any arbitrarily selected characters or devices adapted to identify either ownership of the bottle or the class of goods contained therein.

The cap employed for closing and sealing the bottle comprises the metallic shell F, having the oppositely located depending tongues *f*, for clamping engagement with the grooves C, said cap also having the cork disk G, which latter, during the process of placing the cap, is forced by pressure exerted vertically against said cap, partly into the bottle mouth to provide an air-tight annular seal, the position of the bars D, slightly below the upper edge of the bottle-neck, not interfering with the partial insertion of said cork disk, nor with the process of producing the smooth and rounded formation of the said upper edge of the bottle-neck, after the major part of the bottle is blown or formed in

the mold, as will be evident to those familiar with the art of making bottles.

The caps F, each comprise a top 5 and depending flange 6, having oppositely located depending tongues *f*, which are adapted to be bent into engagement with the grooves C. These tongues may be slitted at their free ends, so that they are susceptible of being readily bent into engagement with the overhanging parts of the grooves C. Or they may be perfectly plain as shown by the Figs. 7 and 8, of the drawings; but in each case the cap is composed of sheet metal of a character adapted to be bent and forced into engagement by mechanism employed for the purpose.

In the form of bottle illustrated by Fig. 10, of the drawings, the grooves for engaging the clamping tongues of the bottle-cap are slightly contracted, but it is obvious that the angles of direction of the walls of the grooves may be varied without departing from the spirit and scope of my invention.

A bottle made as described, is especially applicable for containing beverages, such as beer or any gaseous or highly charged liquids, and the protective bars, owing to their slight lateral extension and specific formation, will not interfere with the insertion of filling-tubes, of standard size, into the body of the bottle for the purpose of charging the same. The bottle is also susceptible of being readily cleansed.

In the operation and use of the invention, the bottle being filled to the required height, a cap is placed over the mouth thereof and forced downwardly under sufficient pressure to form a seal between the cork lining of the cap and the mouth of the bottle-neck, the tongues *f*, of the cap F, are then bent into engagement within the grooves C, as illustrated by Figs. 3 and 4, of the drawings. In this construction the lower ends of the tongues are preferably crimped as well as bent under the overhanging parts of the grooves. Where a cap such as illustrated by Figs. 9 and 10, of the drawings, is employed crimping of the lower ends of the tongues is not necessary.

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

1. A bottle closing device comprising a

metallic cap having a cork disk therein, and a depending annular flange and a pair of oppositely located depending tongues formed integral with said flange, said tongues each having a serrated lower edge, each of the said tongues adapted to be bent into a horizontal depression in a bottle-neck, substantially as shown and described.

2. The combination with a bottle cap having a pair of depending tongues; of a bottle having horizontal grooves in its neck, the inner walls of said grooves extending into the channel of the bottle-neck and forming bars to prevent the insertion of a cylindrical cork, and the outer walls forming depressions, the free ends of the said depending tongues of the bottle cap being bent into engagement with said depressions to fasten the cap, substantially as shown and described.

3. In combination with a cork-lined bottle-cap having a pair of oppositely located depending tongues, a bottle having horizontal grooves located opposite each other, the inner walls of said grooves extending into the channel of the bottle-neck and the outer walls thereof forming depressions which engage the free ends of the said tongues which are bent into engagement with said depressions as a means for fastening the cap to the bottle-neck, substantially as shown and described.

4. A bottle having oppositely located depressions in its neck, the walls of said depressions extended into the channel of the bottle-neck, said walls in vertical sectional elevation, each embodying an approximately horizontal part and an oblique part; in combination with a metallic cap having a cork disk and a pair of oppositely located depending tongues, the free ends of said tongues bent under and in contact with the said horizontal parts of the walls of the said grooves for fastening the bottle and cap together, substantially as shown and described.

In testimony that, I claim the foregoing as my invention, I have signed my name in presence of two witnesses, this 8th day of August 1904.

JOHN M. DEEMER.

Witnesses:

PHILO. A. TURNER,
W. SHIPLEY.