No. 847,006. PATENTED MAR. 12, 1907

G. KIRKEGAARD.

BOTTLE STOPPER.

APPLICATION FILED JUNE 13, 1906.

Fig. 1,

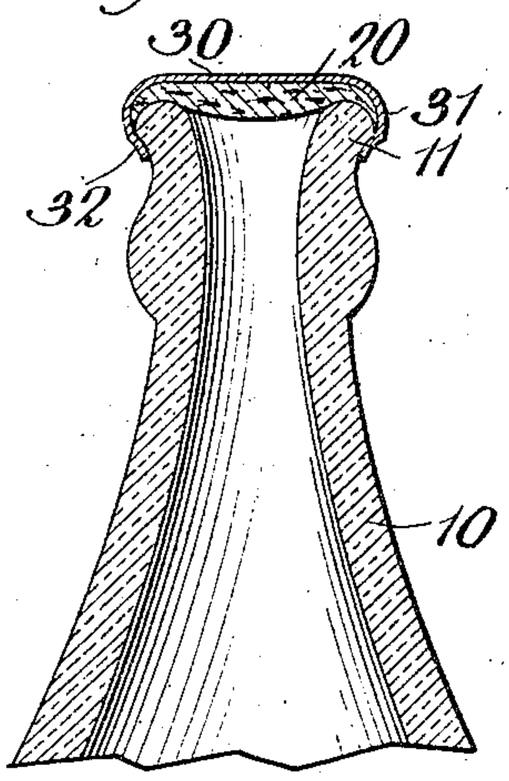


Fig. 2

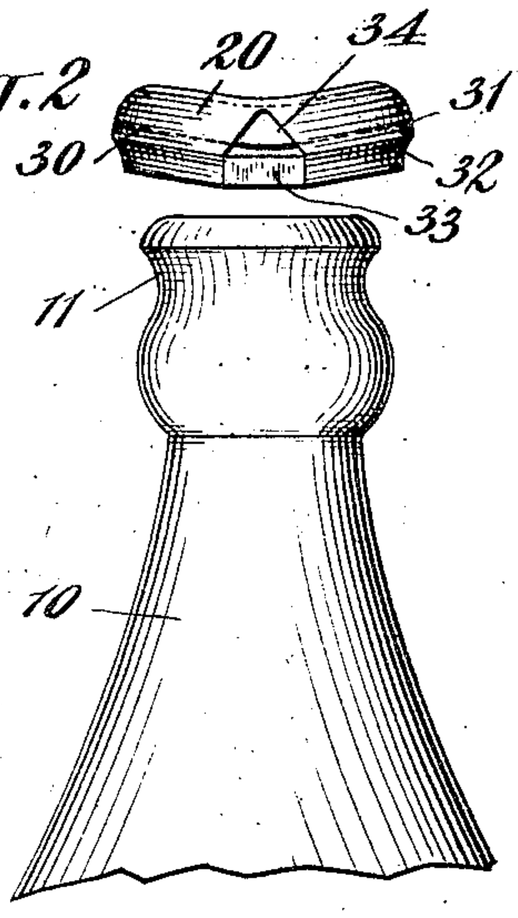


Fig. 3,

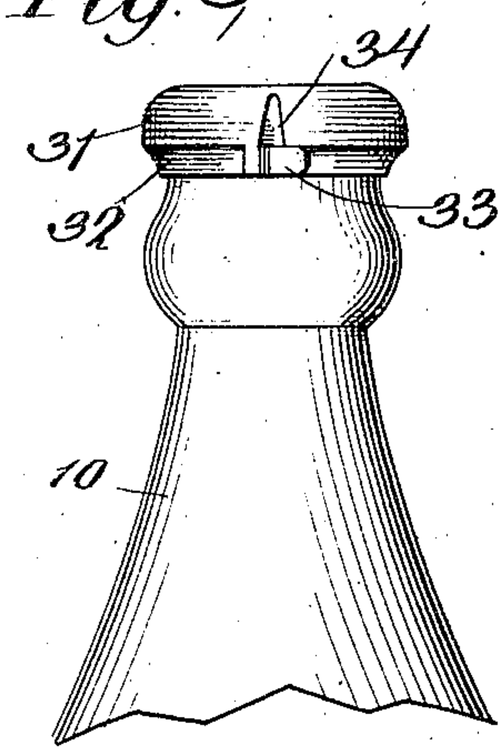


Fig. 4,

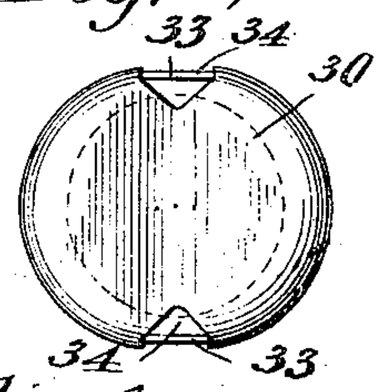


Fig. 5,

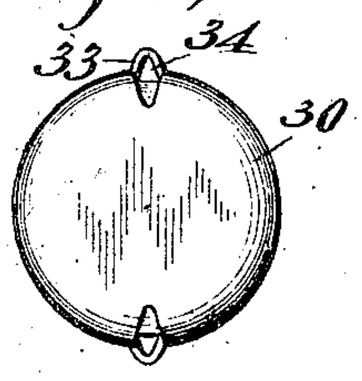


Fig. 6

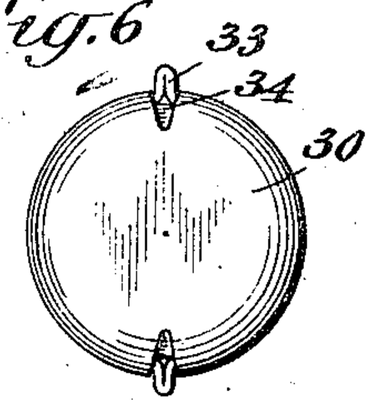


Fig. 7

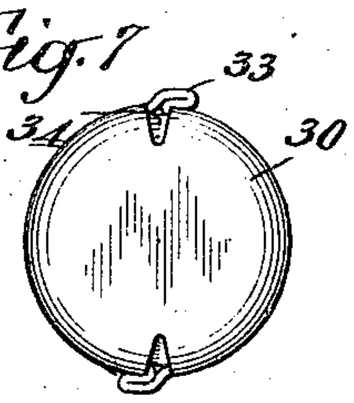


Fig. 8,

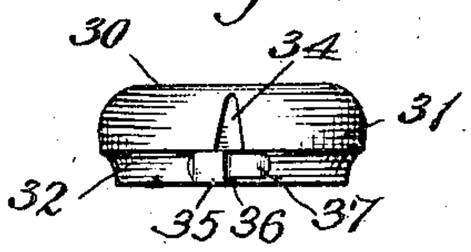
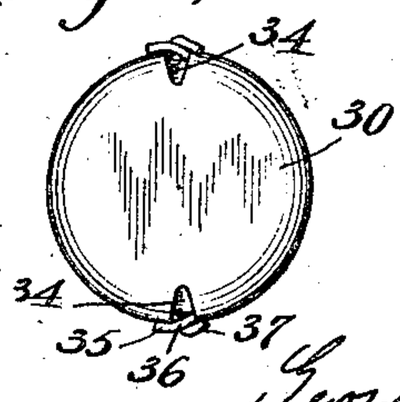


Fig. 9,



WITNESSES:

Francis. B. Hood.

Ella Lund

INVENTOR

Georg Kirkegaard

BY

E. W. Marshall

ATTORNEY

UNITED STATES PATENT OFFICE.

GEORG KIRKEGAARD, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO FRIDTJOF JEBSEN, OF NEW YORK, N. Y.

BOTTLE-STOPPER.

No. 847,006. Specification of Letters Patent. Patented March 12, 1907.

Application filed June 13, 1906. Serial No. 321,430.

To all whom it may concern:

Be it known that I, GEORG KIRKEGAARD, a citizen of the United States, and a resident of the city of New York, in the county of New York and State of New York, United States of America, have invented certain new and useful Improvements in Bottle-Stoppers, of which the following is a specification.

My invention relates to a bottle-stopper, which may be readily attached to and locked on a bottle or similar structure and which may be readily removed from the same; and its object is to provide a simple and efficient construction for such a device.

I will describe my invention in the following specification and point out the novel features thereof in claims.

Referring to the drawings, Figure 1 represents, in sectional elevation, the upper portion of a bottle with one of my improved stoppers attached thereto. Fig. 2 is an elevation of the upper portion of a bottle with one of my stoppers shown above it, the stopper being shown in its open position. Fig. 3 is an elevation of similar parts to those shown in Fig. 1, with the stopper shown attached to and locked on the bottle. Figs. 4, 5, 6, and 7 are plan views of my stopper, showing different steps of the operation of locking it to a bottle. Fig. 8 is a side elevation of a modification of my stopper, and Fig. 9 is a plan view of the structure shown in Fig. 8.

Like characters of reference designate corresponding parts in all of the figures.

10 designates a bottle, the upper portion of which may be provided below the opening with an annular inclined lip or shoulder 11, with its widest portion near the top of the bottle to which my improved stopper is to be attached.

20 designates a packing of resilient material, such as cork or some other suitable substance.

30 designates a cap which is in the form of a circular disk having a depending flange 31, the lower portion of which is provided with an inwardly-projecting bead or rim 32. A portion or portions of the flange 31 are cut away, as shown at 34; but the bead or rim 32 is not cut away. The portion of this bead or rim 32 which is directly below the openings 34 is designated by the numeral 33.

The top of cap 30 may be bent upward, as shown in Fig. 2, and the portion 33 of the rim 32 may then be flattened out to give it greater length.

The completed cap, prepared to be attached to a bottle or some other structure, is shown in the upper portion of Fig. 2. The resilient packing 20 may be placed within this cap and the cap placed upon the top of a bottle. The cap may then be pressed down upon the top of the bottle until the projecting rim or bead 32 encircles the annular lip or shoulder 11 on the top of the bottle, when the top of the cap will again be flat. The portions 33 of the rim may then be bent together to lock the cap upon the bottle in a manner which I will now more fully describe.

Referring to Fig. 4, the completed cap is shown in a plan view before it has been placed upon a bottle. Fig. 5 shows the same cap after it has been pressed down upon a bottle until the upper portion 30 has again become flattened. The flattened portions 33 of the rim 32 will then become bent outward into loops. (Shown in Fig. 5.) These loops may then be squeezed together until they have assumed the position shown in Fig. 6. This part of the operation will tighten the rim 32 about the shoulder 11 of the bottle and will cause the cap to be drawn down upon the bottle, so that the packing 20 will be compressed between the inner portion of the cap and the top of the bottle, and the bottle will thereby become securely sealed. The portions 33 may then be bent down against the rim of the cap, as shown in Fig. 7, and the cap will thus become securely locked to the bottle.

One of the great advantages of the cap made according to this invention is the ease with which it may be removed from a bottle. The portions 33 may be bent outward from the rim 32 until they have again assumed the positions in which they are shown in Fig. 6, in which case the top of the cap may be bent upward again into the position in which it is shown in Fig. 2, in which case the cap may be readily removed from the bottle.

In Figs. 8 and 9 I have shown a modification of my improved cap, in which case the inwardly-projecting rim 32 of the cap 30 is provided with projecting portions 35 and 37. The projecting portion 35 is provided with a

slot 36, through which the portion 37 may be thrust, and after the cap has been pressed down securely over the bottle these parts may be bent in such a manner as to lock the cap upon the bottle.

I have illustrated more than one modification of my invention to show that it may be constructed in more than one way and to show, also, that the invention is capable of many modifications.

In the drawings I have shown two portions 34 cut away in each cap. There may be as many of these openings and strips in each cap as desired, but I have found two a convenient number for manufacture and use.

What I claim is—

1. A bottle-stopper comprising a circular disk having depending flanges, said disk arranged to be bent upward across one of its diameters to permit of said flanges being placed over a body of greater diameter than the inner diameter of the flanges.

2. A bottle-stopper comprising a circular disk having depending flanges, said flanges being provided with inwardly-projecting rims, said disk arranged to be bent upward across one of its diameters to permit of said flanges and rims being placed over a body of greater diameter than the inner diameter of the projecting rims.

3. A bottle-stopper comprising a circular disk having depending flanges, said flanges being provided with inwardly-projecting rims, said disk arranged to be bent upward across one of its diameters to permit of said flanges and rims being placed over a body of greater diameter than the inner diameter of the projecting rims, and means for fastening said rims together.

4. A bottle-stopper comprising a circular disk having two flanges depending from opposite sides of its periphery, said disk arranged to be bent upward across one of its diameters to permit of said flanges being placed over a body of greater diameter than the inner diameter of the flanges.

5. A bottle-stopper comprising a circular disk having two flanges depending from opposite sides of its periphery, said flanges being provided with an inwardly-projecting rim, said disk arranged to be bent upward across a diameter between said flanges to permit of said flanges and rim being placed over a body of greater diameter than the diameter of the rim, and means for drawing the rim about said body.

6. A bottle-stopper comprising a circular disk having two flanges depending from opposite sides of its periphery, said flanges being provided with an inwardly-projecting rim, portions of said rim arranged to connect the bottom of said flanges, said disk arranged to be bent upward across a diameter between said flanges to permit of said flanges being placed over a body of greater diameter than the diameter of the rim, said connecting portions arranged to draw the rim about said body and to secure the disk to the body.

7. A bottle-stopper comprising a circular disk having depending flanges, a resilient packing within said disk, said disk arranged to be bent upward across one of its diameters to permit of said flanges being placed over a body of greater diameter than the diameter of the flanges.

8. In combination with a bottle having an inclined annular shoulder below its mouth, of a stopper comprising a circular disk having depending flanges, said flanges being provided with an inwardly-projecting rim of smaller diameter than the diameter of the annular shoulder, a resilient packing within the disk, said disk arranged to be bent upward across one of its diameters to permit of said flanges and rim being placed over the annular shoulder.

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

GEORG KIRKEGAARD.

Witnesses:
ERNEST W. MARSHALL,
ELLA TUCK.