May 14, 1935. F. J. KAPS 2,001,426

BOTTLE CLOSURE

Filed Dec. 4, 1933

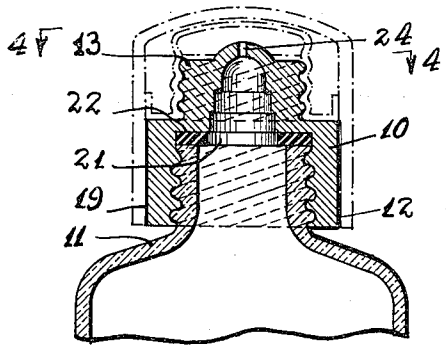


Fig. 1.

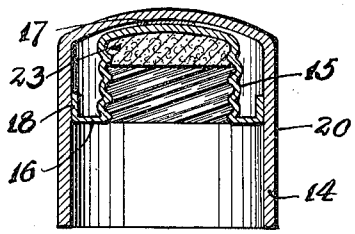


Fig. 2.

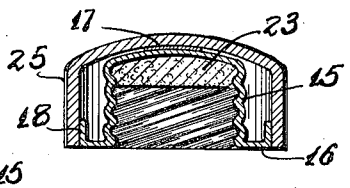


Fig. 5.

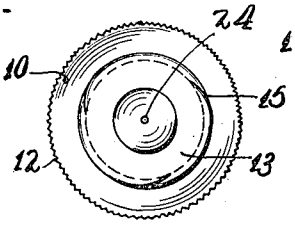


Fig. 4.

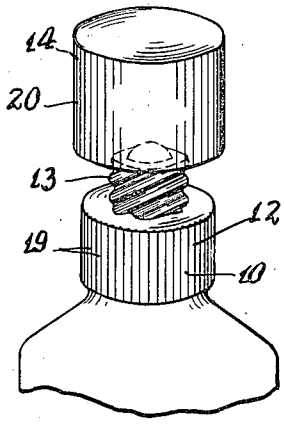


Fig. 3.

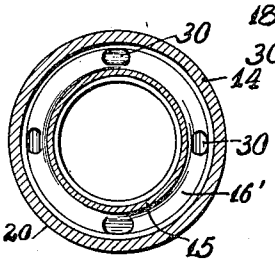


Fig. 9.

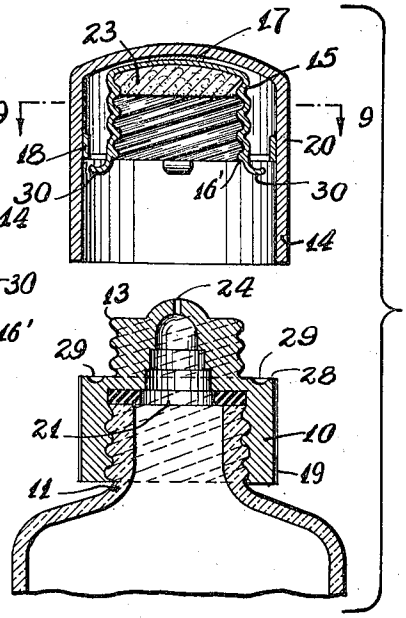


Fig. 8.

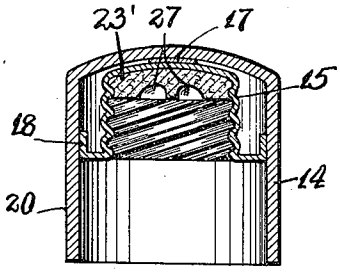


Fig. 6.

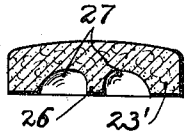


Fig. 7.

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BOTTLE CLOSURE

Frank J. Kaps, New York, N. Y.

Application December 4, 1933, Serial No. 700,767

3 Claims. (Cl. 215—43)

This invention relates to new and useful improvements in a bottle closer.

The invention has for an object the construction of a bottle closer which is characterized by a member for the neck of the bottle and a cover for engaging upon said member in a novel fashion.

Still further the invention proposes an arrangement whereby the member for the neck of the bottle is designed to be constructable from composition material and having a substantially cylindrical outer surface, and whereby the cover is adapted to have side walls extending over said other surface.

Still further the invention proposes the arrangement of a ribbed outer side upon said member and also ribbed outer sides upon said cover.

As another object of this invention it is proposed to so arrange the member and cover that the side walls of the cover form continuations from the outer surface of said member.

Still further the invention proposes an arrangement whereby the member is provided with a reduced portion having a small discharge opening, and whereby the cover is adapted to support a packing element adapted to engage against said small opening to close the bottle.

Furthermore as another object of this invention it is proposed to so arrange the cover and member that the packing elements may be compressed for the purpose of maintaining the cover upon the member.

Still further an arrangement is proposed whereby resilient elements project from a certain portion of the cover and engage niches upon certain portions of the member for the purpose of resiliently holding the cover in position upon the member.

Still further the invention proposes the construction of an article as mentioned which is simple and durable and which may be manufactured and sold at a reasonable cost.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:—

Fig. 1 is a vertical sectional view of a member shown engaged upon a bottle according to this invention.

Fig. 2 is a vertical sectional view of a cover for the member shown in Fig. 1.

Fig. 3 is a perspective view of Figs. 1 and 2 showing the cover above the member.

Fig. 4 is a plan view looking in the direction of the line 4—4 of Fig. 1 illustrating the details of the threads upon the portion of the member.

Fig. 5 is a sectional view similar to Fig. 2 but illustrating another embodiment of the cover.

Fig. 6 is a sectional view similar to Fig. 2 but illustrating another embodiment of the invention.

Fig. 7 is an enlarged detailed view of the packing element shown in Fig. 6.

Fig. 8 is a sectional view of a member and cover according to a modification of this invention.

Fig. 9 is a horizontal sectional view taken on the line 9—9 of Fig. 8.

The bottle closer according to this invention comprises a member 10 of composition material for the neck 11 of a bottle and having a cylindrical outer surface 12 and a top small threaded portion 13. A metallic cover 14 is adapted to engage upon said member and has a portion 15 for threadedly engaging the portion 13. This cover also is provided with side walls adapted to extend over the said cylindrical outer surfaces 12.

More particularly the cover member is constructed from an outer shell and an inner element 16 engaged therein. This outer shell has an open bottom into which the element 16 is engaged. The element 16 is provided with a threaded portion. The parts are secure together by solder 17 upon the upper end of the threaded portion 15 and engaging the bottom face of the end of the shell. The inner member 16 has its edges 18 turned inwards and engaging against the inner wall of the shell for the purpose of firmly holding the parts in position.

The outer cylindrical surface 12 is formed with a plurality of vertical ribs 19 constituting an ornamentation. The outer surface 20 of the shell of the cover 14 is also formed with a plurality of the vertical ribs. The vertical ribs 19 upon the member 10 also constitute a rough surface by which the member 10 may be gripped for its engagement at and removable by the neck 11. A washer 21 is located upon the upper edge of the neck 11 and engages against the shoulder 22 formed within the member 10 to produce a tight joint so that liquid within the bottle cannot seep under the member.

The threads 13 are of triple construction as clearly illustrated in Fig. 4 that is, the threads

comprise a three lead thread. This construction is advantageous in that the cover may be engaged in place by rotating it merely through 180°. There is a still further advantage namely that the upper end of the member **10** will tightly jam into the packing element **23** disposed within the threaded portion **15**. An opening **24** is formed in the upper end of the member **10** through which liquid within the bottle may pass. The packing element **23**, preferably constructed of cork is adapted to engage against the opening **24** for the purpose of closing this opening. Because of the triple lead thread **13** the packing element **23** will be greatly compressed during the engagement of the cover upon the member and so serve to clamp the cover in place. In Fig. 3 the cover is illustrated above the member to indicate the relative appearance of these parts.

In Fig. 5 a modified form of cover has been illustrated for use in conjunction with the member **10** previously described. This cover comprises an outer shell **25** of composition material having its outer diameter substantially of the same size as the outer diameter of the member **10** and also formed with vertical parallel ribs to look identical with the ribs formed on the outer surface **12**. Within this outer member is located a metallic shell **16** formed with a threaded portion adapted to engage the threads **13**. This shell has its edges **18** turned inwards and engaging against the inner wall of the outer member **25**. The packing element **23** is located within the member **15**. This cover may be engaged upon the threaded portion **13** of the member previously described for the purpose of closing the opening **24**. When engaged the outer surface of both the member **10** and the cover may be seen. This distinguishes from the previous arrangement wherein the cover engaged over the outer surface of the member **10** covering the member.

In Figs. 5 and 6 a cover similar to that illustrated in Fig. 2 is shown except that it is provided with a packing member **23'** distinguishing from the member **23** in the provision of small central projections **26** adapted to extend into the opening **24** on the member **10**. This central projection **26** is located at the center of a spherical zone recess **27** in the bottom face of the packing element **23'**. With this arrangement the possibility of leakage of any of the liquid from the opening **24** is materially reduced.

In Figs. 8 and 9 a modification of the invention has been disclosed in which an arrangement is provided for preventing the accidental unscrewing of the cover from the member. The construction of the member **10** is identical to that previously described except for the fact that a portion thereof, a shoulder **28** connecting the outer surface of the member with the reduced threaded portion **13**, is formed with a plurality of niches **29**. The cover is identical to that shown in Fig. 2 except that the inner shell has a shoulder portion **16'** formed with several stamped out portions **30**, stamped in a manner so as to be resilient and adapted to engage in the niches **28** for the purpose of holding the cover against accidental rotation.

In the form of the device illustrated in Figs. 8 and 9, the cover may be threadedly engaged upon the reduced portion of the member **10** and is so proportioned that the packing element **23** will engage tightly against the opening **24** when the cover is screwed completely down upon the frame **13**. Furthermore in this position the projections **30** will align and engage into the niches **29** so as to hold the cover against accidental unscrewing. These resilient projections **30** work in conjunction with the natural gripping ability of the packing element **23** which since it is jammed against the upper end of the threaded portion, itself tends to prevent rotation of the cover. The triple arrangement for preventing rotation insures against the accidental coming off of the cover.

While I have shown and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

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

1. In a bottle closer, a member for the neck of a bottle and having a substantially cylindrical outer surface connecting with a top flat shoulder from which a threaded portion projects, and a cover for engagement over said member and having a portion threadedly engaging said threaded portion and connecting with a bottom flat shoulder having resilient elements adapted to engage niches upon the top flat shoulder for releasably holding said cover screwed upon said member.

2. In a bottle closer, a member for the neck of a bottle and having a substantially cylindrical outer surface connecting with a top flat shoulder from which a threaded portion projects, and a cover for engagement over said member and having a portion threadedly engaging said threaded portion and connecting with a bottom flat shoulder having resilient elements adapted to engage niches upon the top flat shoulder for releasably holding said cover screwed upon said member, said resilient elements comprising portions stamped from said cover.

3. In a bottle closer, a member for the neck of a bottle and having a substantially cylindrical outer surface connecting with a top flat shoulder from which a threaded portion projects, and a cover for engaging said threaded portion and connecting with a bottom flat shoulder having resilient elements adapted to engage niches upon the top flat shoulder for releasably holding said cover screwed upon said member, said resilient elements comprising portions stamped from said cover, said cover comprising an outer shell and an inner shell interengaged therewith, and said resilient elements being stamped from said inner shell.

FRANK J. KAPS.