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T. F. LEAHEY

2,069,093

BOTTLE CLOSURE

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FIG. 1.

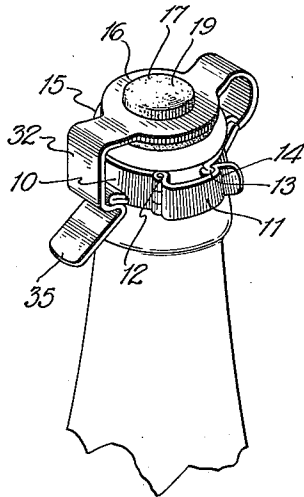


FIG. 3.

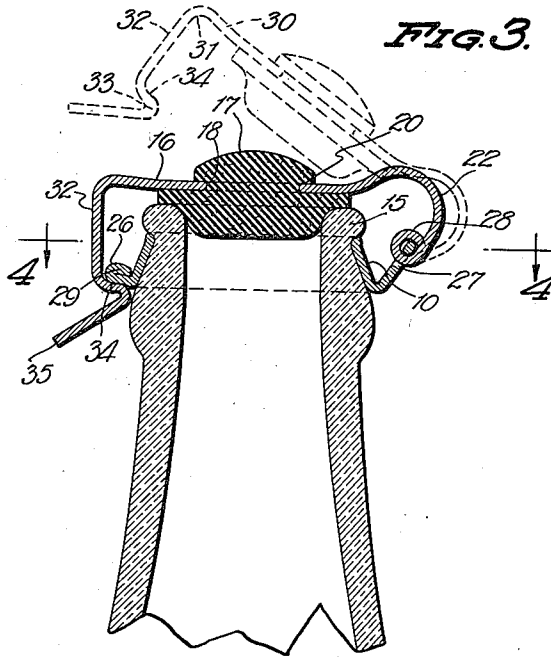


FIG. 2.

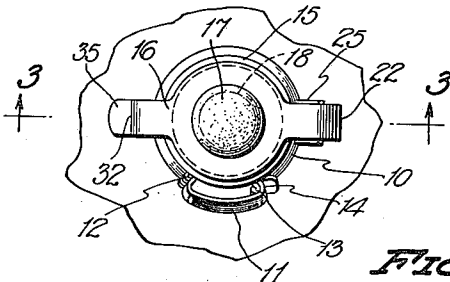


FIG. 4.

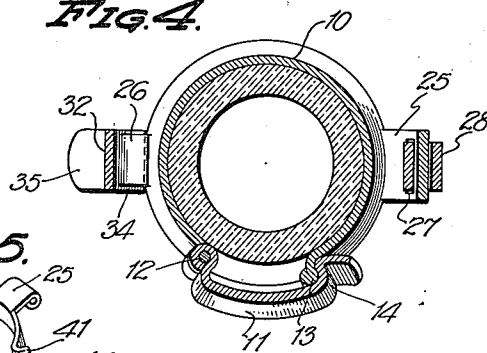


FIG. 5.

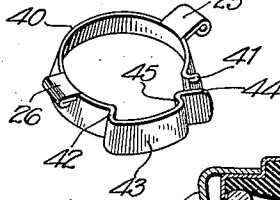


FIG. 6.

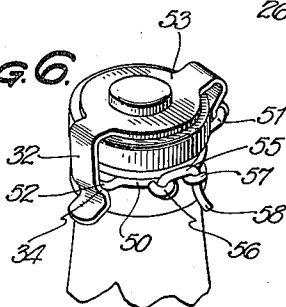
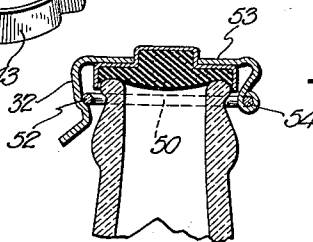


FIG. 7.



WITNESS:

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BOTTLE CLOSURE

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2 Claims. (Cl. 215—72)

This invention relates to closures for containers and while it is adaptable to containers of various types, it particularly lends itself to use in connection with bottles the contents of which are of a gaseous nature.

Beverages, waters and similar liquids are often of a gaseous nature either natural or artificially charged. Such liquids, if left exposed to atmosphere, lose their gaseous charge and rapidly deteriorate to a point where they are unfit for use.

In commercial use, such beverages are packed in containers, generally bottles of such size that the contents are seldom used immediately the container is opened, and unless the container is again sealed against exposure to atmosphere, the deterioration above mentioned is unavoidable and takes place in a relatively short lapse of time. The original closures of such containers are of such nature that removal from the container results in mutilation of the closure so that when it is replaced upon a container the closure is not gas or air tight and deterioration of the contents results.

It is the object of the present invention to provide a closure for such containers which is intended for use after the original closure has been removed and which will provide a gas and air tight closure for the container and thereby maintain the gaseous condition of the contents after the original closure has been removed.

A feature of the invention resides in a new and novel means for attaching a closure to a bottle neck in such a manner that it may be attached and removed at will without damage to the closure.

A further feature of the invention resides in a novel construction whereby, when the closure is in closed position, an air and gas tight closure for the container is provided.

A further feature of the invention resides in a novel construction whereby the closure may be readily opened and closed, thus rendering it particularly adaptable to use where only small portions of the original contents are removed at intervals.

Other features of the invention relate to certain novel and improved constructions, arrangements and combinations of parts herein-after described and particularly pointed out in the claims, the advantages of which will be readily understood and appreciated by those skilled in the art.

The invention will be clearly understood from the accompanying drawing illustrating the invention in its preferred forms and the following

detailed description of the constructions therein shown.

Referring to the drawing, Figure 1 is a perspective view of a device constructed in accordance with one form of the present invention showing the device in use upon a bottle,

Figure 2 is a top plan view thereof,

Figure 3 is a vertical sectional view taken substantially on the line 3—3 of Figure 2, the view being on an enlarged scale.

Figure 4 is a horizontal sectional view taken substantially on the line 4—4 of Figure 3,

Figure 5 is a perspective view illustrating a modified form of the invention,

Figure 6 is a perspective view illustrating a still further modified form of the invention, and;

Figure 7 is a vertical sectional view illustrating that form shown in Figure 6.

The form illustrated in Figures 1 to 4 of the drawing consists of a two-part bottle neck encircling band. One of the parts of this band is designated 10, the other one being designated 11. The part 11 is pivotally connected to one end of the part 10 as at 12. The opposite end of the part 10 is provided with a flange or projection 13 and the part 11 is provided with a shoulder 14 which is adapted to resiliently and removably engage the flange or projection 13 to retain the neck encircling band in position upon the neck of the bottle. This neck encircling band, as best illustrated in Figure 3, is so constructed as to conform to the shape or contour of the bottle neck. In the present showing it has been illustrated as tapered in order to follow the outline of the bottle neck closely adjacent the mouth of the bottle, its smallest diameter being such as to engage beneath the bead or flange 14 formed on the bottle. The resiliency is provided by reason of the shape of the member 11 which, when formed from suitable material, will provide the necessary resiliency to permit of engagement and disengagement of the shoulder 14 with the flange or projection 13, in which position the parts are shown. The reference numeral 16 designates a bottle closing member and this bottle closing member carries a stopper of relatively soft yielding material such as rubber. The bottle closing member 16 may have an opening 18 therein and a stopper 17 is formed with a head 19 which provides a channel 20 for the reception of the defining edge of the opening 18 to secure the stopper in place upon the bottle closing member. The bottle closing member has projecting therefrom a curved extension 22 and said curved extension 22 is so formed as to provide a certain

resiliency or spring in the bottle closing member and said curved extension also provides means for pivotally attaching the bottle closing member to the bottle neck encircling band.

By reference to Figure 4 it will be noted that the bottle encircling band 10 has projections extending therefrom at opposite points. These projections are designated 25 and 26. The projection 25 is in the form of an ear having an opening 27 and the end of the curved extension 22 heretofore mentioned is preferably rolled through the opening 27 as at 28 to provide for pivotally mounting the bottle closing member as before stated. The projection 26 is in the form of a lug or an ear which is formed by folding a portion of the material over upon itself, as indicated at 29 in Figure 3. This lug or projection provides means with which a resilient finger or the like projecting from the bottle closing member may be engaged to hold the bottle closing member in closed position. The resilient finger which is adapted for engagement with the projection 26 consists of an extension 30 bent as at 31 to provide a depending portion 32, which in turn terminates in a bent portion 33 to provide a shoulder 34 which is adapted to engage beneath the projection 26, as best illustrated in Figures 1 and 3. An angular extension 35 provides means by which the bottle closing member may be removed from engagement beneath the projection 26 merely by applying pressure to the under side of the extension 35 by the thumb or finger.

This form of the invention operates in the following manner. With the parts in the position in which they are shown in full lines in Figure 3, it is only necessary to exert a pressure on the under side of the angular extension 35 to remove the shoulder 34 from engagement beneath the projection 26 whereupon the bottle closing member may be moved to open position as illustrated in dotted lines in said figure. To close the bottle it is only necessary to move the bottle closing member into position where the shoulder 34 will engage beneath the projection 26 as shown in full lines. During this operation the stopper will engage within the mouth of the bottle and the tension under which the bottle closing member is placed will serve to maintain the stopper in gas and air tight engagement with the mouth of the bottle to seal the contents thereof.

In the modified form illustrated in Figure 5, the container encircling band 40 is formed of one continuous piece of metal. Upon one end it is provided with a projection or flange 41 and its opposite end is bent as at 42 to provide a resilient section 43 bent as at 44 to provide a shoulder 45 which is adapted to engage around the lug or projecting flange 41 when the device is snapped upon the neck of a bottle. The band 40 is provided with the diametrically opposite projections 25 and 26 and the bottle closing member would be of substantially the same type as that illustrated in the form illustrated in Figures 1 to 4. The operation of this form of the invention is the same as described for the form illustrated in Figures 1 to 4.

In Figures 6 and 7 I have shown a still further modified form of the invention in which the bottle neck encircling band is in the form of a length of spring wire 50 provided with diametrically opposite loops or projecting portions 51 and 52. In this form of the invention the

bottle closing member 53 is substantially the same as in the forms heretofore described and is pivotally connected in the loop or projection 51 as at 54, see Figure 7. The loop or projection 52 provides a means for engagement by the shoulder 34 of the depending portion 32 to hold the bottle closing member in bottle closing position.

In this form of the invention the bottle encircling band is retained in position by means of a locking lever 55 which is pivotally connected to the band by being looped into an eye 56 in one end of the band the opposite end of the band being formed with a hook 57 around which the locking lever 55 is adapted to engage to contract the band into gripping position around the bottle neck.

In Figures 6 and 7 the device constructed in accordance with this last mentioned modified form of the invention is shown in position upon the bottle and to remove the same it is only necessary to exert a slight pressure upwardly or outwardly upon the extension 58 of the locking lever 55 thereby to disengage it from the hook 57, thus permitting of spreading of the band sufficiently to permit of its removal from the end of the bottle.

The operation of this form of the invention is substantially the same as that described for the other forms thereof.

From the foregoing it will be apparent that the present invention provides a new and improved closure means for bottles the contents of which may be charged, which closure is readily attachable and detachable with respect to a bottle, may be opened and closed so that portions of the contents of the bottle may be from time to time removed and which, when in its closed position, will maintain an air tight closure to prevent deterioration of the contents of the bottle.

Having thus described the invention, what is claimed as new, is:

1. A closure for containers comprising a split band of sheet metal adapted to embrace the neck of a container, catch means releasably connecting the split ends of the band, projections extending from diametrically opposite sides of the band, a slot in one of the projections, and a closure member bridging the mouth of the container, said member also being of sheet metal and having one end inserted in said slot and bent upon itself to form a hinge connection therefore, the other end of the closure member being bent to form a catch cooperating with the other of said projections for releasably securing the closure member to the band.

2. A closure for containers comprising a split band of strap material adapted to embrace the neck of a container, catch means releasably connecting the split ends of the band, projections extending from diametrically opposite sides of said band and having horizontal outer edges to form relatively broad shoulders, a closure member also formed of strap material and hingedly connected at one end to one of said projections, the other end of said closure member being releasably engageable with the outer edge of the other projection to retain the closure member in closed position and a stopper carried by the closure member for seating over the mouth of the container.

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