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S. T. GREGOREK

2,245,774

BOTTLE CLOSURE

Filed April 2, 1940

Fig. 1.

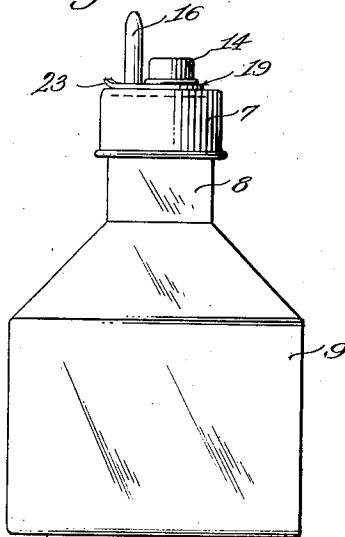


Fig. 2.

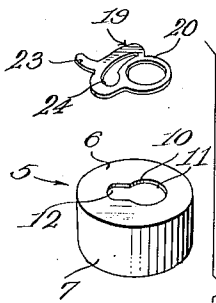
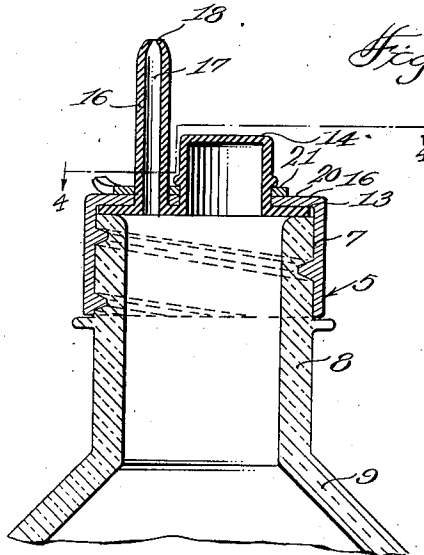


Fig. 5.

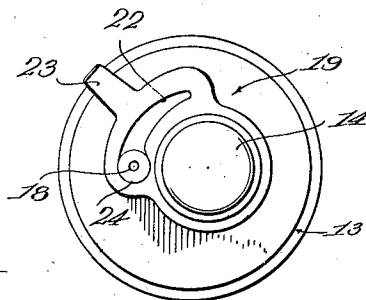


Fig. 3.

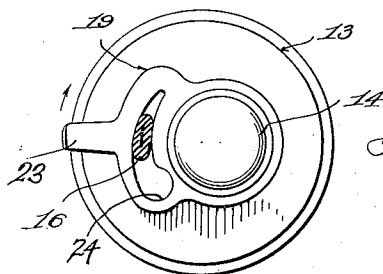


Fig. 4.

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2,245,774

BOTTLE CLOSURE

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Application April 2, 1940, Serial No. 327,514

2 Claims. (Cl. 221-148)

My invention relates to bottle closures and has as one of the principal objects thereof the provision of a bottle closure so constructed and arranged whereby the contents of the bottle may be dispensed drop by drop as desired.

Another object of my invention is to provide a closure of the above described character which is simple in construction, durable in use, efficient in operation and economical in manufacture.

A further object of my invention is to provide a closure of the above described character capable of being attached to bottles already in use without modifying the same.

A special object of my invention is to provide a closure of the above described character so constructed and arranged whereby the contents of the bottle is maintained in a sealed condition therein when not being dispensed.

Other objects and advantages will be apparent from the following description, appended claims and annexed drawing.

Referring to the drawing wherein like reference characters designate like parts throughout the several views:

Figure 1 is a side elevation of my invention as applied to a bottle.

Figure 2 is a vertical sectional view thereof on an enlarged scale.

Figure 3 is a top plan view of my novel form of closure and illustrating the parts in position to permit dispensing of the contents of a bottle.

Figure 4 is a sectional view taken on the plane of the line 4-4 of Figure 2 but illustrating the nipple in closed condition.

Figure 5 is a disassembled perspective view of the closure.

In practicing my invention I employ a cap 5 fashioned with a top wall 6 and a skirt 7, the latter being detachably and threadedly connected to the neck 8 of a bottle 9 or other similar container. The top wall 6 of the cap 5 is formed with a pyriform or keyhole-shaped opening 10 having communicating cycloidal and scopiform sections 11 and 12 respectively.

Interposed between the top face of the neck 8 and the inner face of the wall 6 and clamped therebetween by said cap 5 is a discoidal member 13, the latter being preferably constructed of rubber or other flexible material. The member 13 is integrally formed with an eccentrically located bulb 14, the latter having its open end communicating with the neck of the bottle 9.

Adjacent the bulb 14 and spaced from the latter the member 13 is integrally fashioned with an elongated nipple 16 having a centrally disposed

passage 17 extending throughout its length. The upper or outer end 18 of the passage 17 is constricted with respect to the remaining portion thereof to provide a relatively small opening in said end 18 as clearly illustrated in the drawing.

Disposed on the upper face of the top wall 6 of the cap 5 is a nipple closing device 19 comprising a plate fashioned on one side with an opening 20 through which extends the bulb 14, the latter being formed with a circumferentially outwardly disposed rib 21 overlying the plate and maintaining the latter in connected and pivotable relation with the bulb 14. The opposite side of the plate is fashioned with an arcuate cuneiform slot 22 through which extends the nipple 16 and said opposite side of said plate is fashioned with a laterally extending finger-piece 23 for moving said plate about said bulb for a purpose hereinafter set forth.

The relatively wide end 24 of the slot 22 is of a substantially cycloidal configuration with the wall defining the same loosely embracing the subadjacent end section of the nipple 16 as clearly illustrated in Figure 3 of the drawing. When the nipple is disposed through said end 24 of the slot 22, the passage 17 of the nipple is disposed in full open position.

When the plate is rotated to dispose the nipple through an adjacent section of the slot 22, the side walls defining said slot compress the nipple and effect closing of the passage 17 as illustrated in Figure 4 of the drawing.

When it is desired to dispense a quantity of the contents of said bottle, the parts being in the position illustrated in Figure 4, the finger-piece is moved in the direction of the arrow (Figure 4) to position the end of the slot 22 in embraced condition about the nipple 16 to decompress the latter and open the passage 17 (Figure 3) whereupon said bottle is tilted to permit the contents thereof being disposed within the nipple whereupon pressure is exerted on the bulb 14 to flex the same inwardly towards the neck. When the bulb is thus operated the contents of the bottle are discharged through the nipple, the construction of the upper end 18 of said nipple serving to effect drop by drop dispensing of the contents if desired. When a desired quantity of the contents of the bottle has been dispensed through the nipple the bottle is returned to upright position to clear the passage 17 of any of the contents contained therein and permits air to enter therethrough into the bottle. When the bottle has thus been positioned, the finger-piece 23 is operated in a reverse direction to effect com-

pressing of the nipple and closing of the passage as illustrated in Figure 4 of the drawing, thus sealing the contents therein.

It is obvious that the invention is not confined to the herein described use therefor as it may be utilized for any purpose to which it is adaptable. It is therefore to be understood that the invention is not limited to the specific construction as illustrated and described, as the same is only illustrative of the principles of operation, which are capable of extended application advance forms, and that the invention comprehends all construction within the scope of the appended claims.

What I claim is:

1. A bottle closure having a cap adapted for connection to the neck of a bottle and formed with a top wall for overlying said neck, a discoidal member within said cap and jacent said wall and adapted to engage the upper end face of said neck to establish a seal between said neck and cap, said member provided with a bulb extending upwardly through said wall, a flexible nipple carried by said member and extending up-

wardly through said wall, said nipple provided with a passage extending therethrough for effecting communication between the atmosphere and said neck, and a plate pivotally connected to said bulb and formed with an arcuate cuneiform slot receiving said nipple and operable to effect opening and closing of the passage in said nipple.

2. In combination with the neck of a bottle, a cap detachably connected to said neck and having a top wall formed with an opening, a discoidal member interposed between said wall and said neck for establishing a seal between the neck and cap, said member provided with a bulb extending upwardly through said opening, a flexible nipple carried by said member and extending upwardly through said opening, said nipple having a passage extending therethrough for effecting communication between the atmosphere and said neck, a nipple closing member pivoted about said bulb and formed with a cuneiform slot receiving said nipple and operable to effect opening and closing of said passage.

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