June 4, 1929. S. C. ENDICOTT 1,715,452

RECEPTACLE CLOSURE

Filed March 5, 1928

Fig. 1.

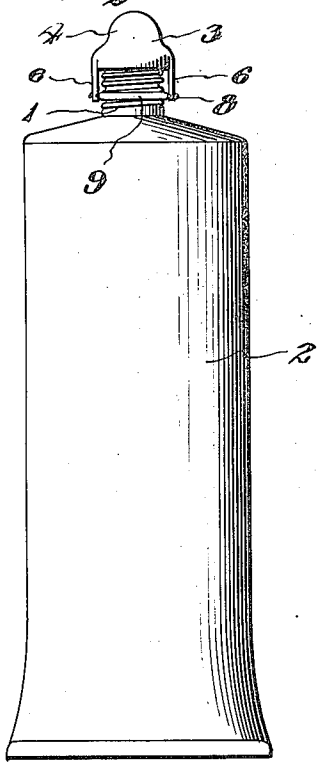


Fig. 2.

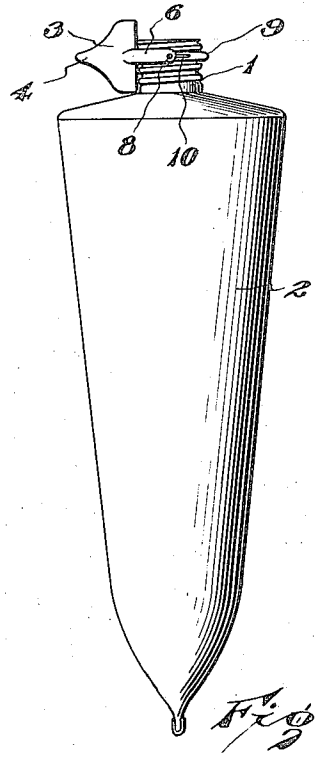


Fig. 3.

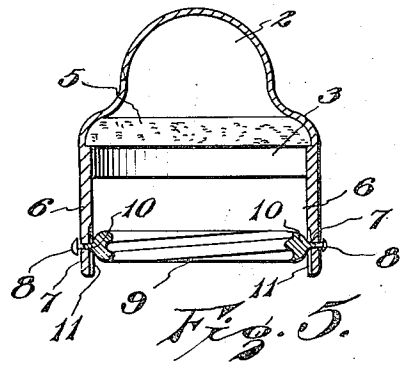


Fig. 4.

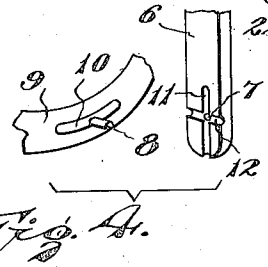


Fig. 5.

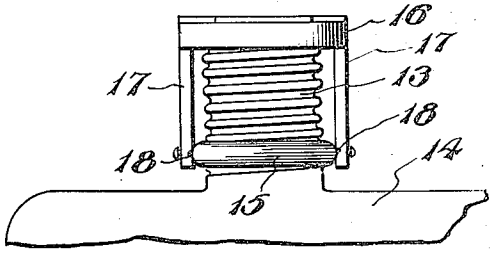
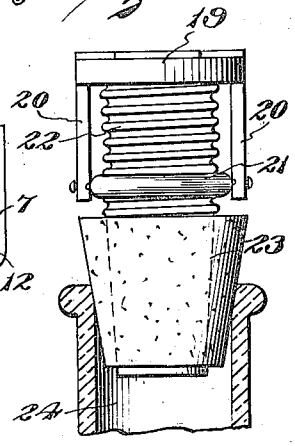


Fig. 6.



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UNITED STATES PATENT OFFICE.

SOLOMON C. ENDICOTT, OF EUGENE, OREGON.

RECEPTACLE CLOSURE.

Application filed March 5, 1928. Serial No. 259,239.

This invention relates to special receptacles and more particularly to a closure adapted to be applied to a bottle or collapsible tube of the type in which tooth paste and the like is stored.

One object of the invention is to provide a closure which may be applied to a discharge neck of a receptacle and moved into and out of position to close the neck without being entirely released therefrom. Therefore, the closure is not liable to be dropped and either lost or broken.

Another object of the invention is to provide a closure of this type which may tightly seal the outer end of a discharge neck and to further so construct the closure that it may be frictionally held in a set position and prevented from accidentally moving towards or away from a position opposite the open end of the neck.

The invention is illustrated in the accompanying drawing, wherein

Figure 1 is a view in side elevation showing the improved closure applied to a collapsible tube and in sealing relation to the outer end of the discharge neck of the tube;

Fig. 2 is a view taken at right angles to Fig. 1 and showing the closure moved to an opened position;

Fig. 3 is an enlarged sectional view taken longitudinally through the closure;

Fig. 4 is a fragmentary perspective view of a ring and arm forming part of the closure;

Fig. 5 is a view in side elevation showing the closure applied to a bottle such as a flask, and

Fig. 6 is a view in side elevation showing a closure employed in connection with a discharge tube or neck carrying a cork and adapted to be fitted into the neck of a bottle.

The closure, which is shown in Figs. 1 and 2, is employed to seal the outer end of the discharge neck 1 of a collapsible tube 2 of the type employed as a container for tooth paste and similar substances. The neck 1 is externally threaded and at the present time it is customary to seal the outer end of the neck through the medium of a cap threaded thereon but when the cap is removed it is entirely disconnected from the neck and is liable to be dropped and either lost or stepped upon and broken.

The cap 3, which I employ to seal the outer end of the discharge neck 1, is formed of metal and is preferably provided with an extended central portion 4 having flattened sides so that it may be easily grasped and rotated. This cap is of sufficient internal diameter to be easily fitted upon the neck 1 and carries a sealing disk 5 which is formed of cork or any other suitable material, and it will be readily understood that, when the cap is applied to the outer end of the discharge neck of the tube and sufficient pressure applied, the disk 5 will be pressed tightly against the end of the discharge neck and the neck tightly sealed. Arms 6 extend from opposite portions of the cap and adjacent their free ends are formed with openings 7 to rotatably receive pins 8 which project outwardly from opposite sides of a ring or collar 9. This ring or collar is formed of strong metal and is internally threaded so that it may be screwed upon the externally threaded discharge neck of the tube. By an inspection of Fig. 1, it will be readily apparent that, when the arms are disposed longitudinally of the neck and rotary motion imparted to move the collar towards the inner end of the neck, the cap will fit upon the outer end of the neck and the sealing disk 5 will be compressed tightly against the outer end of the neck. Therefore, the contents of the tube will be protected from exposure to the atmosphere and will not become dried. When it is desired to dispense the contents of the tube, the cap is grasped and rotary motion imparted to unscrew the collar. This is continued until the collar has been moved toward the outer end of the neck a sufficient distance to permit the cap to be swung to one side of the neck, as shown in Fig. 2, where it will be out of the way and not interfere with discharge of the contents of the tube through the neck. It is desired to prevent the cap from accidentally moving towards a closing position while the contents of the tube are being dispensed and, therefore, I have provided the ring with ribs 10 which project radially from the pins 8 circumferentially of the ring. I have also provided the arms with grooves 11 and 12 which extend in crossed relation to each other and are intersected by the openings 7, as shown in Fig. 4. The arms are resilient and normally in such spaced relation to each other that they will firmly grip the ring when the ribs 10 are disposed in either the grooves 11 or the grooves 12 but sufficient play is permitted upon the pins 8 to allow the ribs 10 to move out of

the grooves when the cap is swung towards a position at one side of the neck or towards a position in opposed relation to the free end of the neck. It will thus be seen that the cap will be frictionally held in a set position and will not be liable to accidentally drop down in front of the discharge neck of the tube where it will be in the way.

In Fig. 5, a closure of the same general type disclosed in Figs. 1 and 2 has been shown applied to the discharge neck 13 of a flask or similar container 14. This neck which is formed integral with the body portion of the flask is externally threaded and carries a collar 15 corresponding to the collar 9. The cap 16 is flat instead of substantially conical in shape and carries arms 17 which correspond to the arms 6 and are pivotally connected with the ring at opposite sides thereof similar to the manner in which the arms 6 are pivotally connected with the collar 9. The collar or ring 15 is also provided with latching ribs 18 similar to the ribs 10 and adapted to be received in grooves formed in the inner surfaces of the arms 17 and corresponding to the grooves 11 and 12. The manner of operating this closure is the same as that shown in Figs. 1 and 2.

In Fig. 6, a cap 19 which is similar is construction to the cap 16 and carries arms 20 pivoted to a collar 21 has been shown applied to a discharge tube or neck 22 which takes the place of the bottle neck 13 and has an unthreaded inner end portion about which is disposed a cork 23. This form of closure is intended for use in connection with a bottle having a neck 24, and by an inspection of Fig. 6 it will be seen that, when the original stopper is removed from the bottle, the tube or neck 22 and the cork 23 may be forced into the bottle neck to tightly close the same. By this arrangement a bottle containing hair tonic, perfumes or any other substance which is liable to lose its strength if exposed to the atmosphere may be kept tightly closed but at the same time allowed to be easily and quickly opened when needed.

Having thus described the invention, I claim:

1. A closure comprising a collar internally threaded and adapted to be screwed upon a neck, a cap to close the outer end of the neck, arms extending from the cap in opposed relation to each other and pivoted to the collar, and the collar and arms being provided with cooperating means to yieldably resist pivotal movement of the arms relative to the collar whereby the cap may be retained in adjusted positions.

2. A closure comprising a collar internally threaded and adapted to be screwed upon a bored neck, a cap to close the outer end of the neck, arms extending from the cap in opposed relation to each other and pivoted to the collar, the arms being resilient and yieldably gripping the collar, and the arms and collar being provided with companion ribs and grooves disposed in radiating relation to the pivots for the arms whereby the ribs may be received in the grooves as the arms are swung and releasably retain the cap in set positions.

3. A closure comprising a collar internally threaded and adapted to be screwed upon a tubular externally threaded neck, a cap to bear against and close the outer end of the neck, arms extending from the cap towards the collar in opposed relation to each other diametrically of the cap, the arms being of resilient material and gripping the collar from opposite sides thereof, pins extending from the collar through the arms to pivotally mount the arms, and ribs carried by the collar and extending from the pins radially thereof, the arms having pockets to receive the ribs whereby the cap may be releasably retained in set positions relative to the collar and neck.

In testimony whereof I affix my signature.

SOLOMON C. ENDICOTT. [L. S.]