May 10, 1932. J. A. MAKER ET AL 1,857,465

HOLDER

Filed April 4, 1928

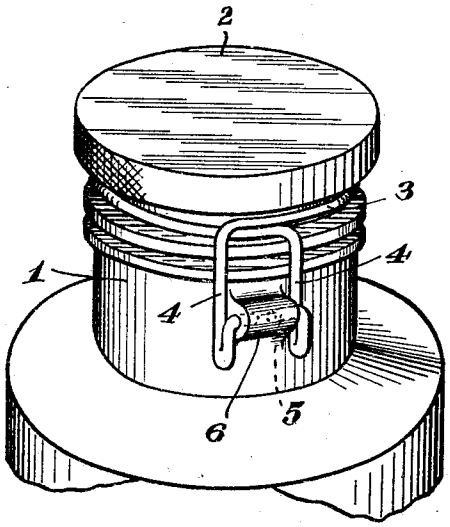


Fig. 1.

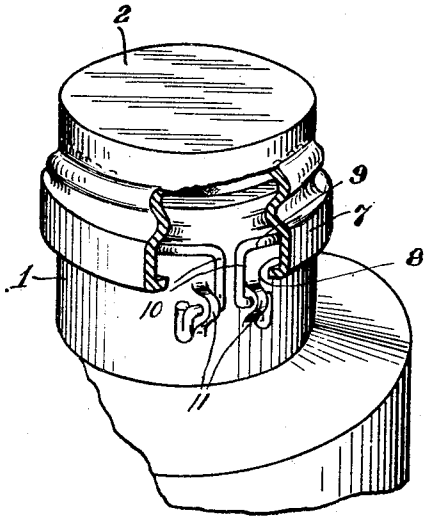


Fig. 2.

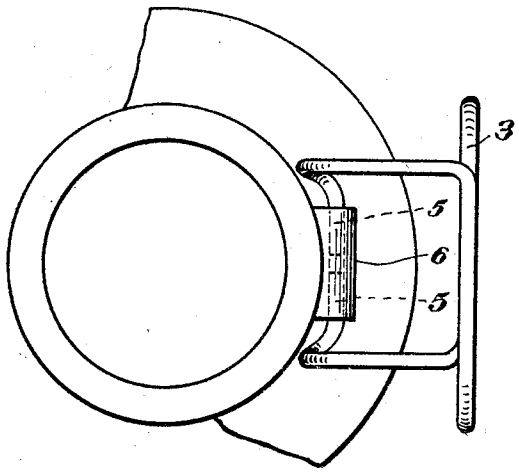


Fig. 3.

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Patented May 10, 1932 1,857,465

UNITED STATES PATENT OFFICE

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Application filed April 4, 1928. Serial No. 267,410.

This invention relates to closure controls and has special reference to a control or tether for closures such as used upon collapsible tubes or the like.

The principal object of the invention is to produce a more practical and efficient device of this character.

Another object is that of simplicity and cheapness of construction.

Further objects and advantages of the invention will appear in the following description thereof.

Referring now to the accompanying drawings, forming part of this application and wherein like reference characters indicate like parts:

Figure 1 is a perspective view of one form of our improved tether as applied to a collapsible tube;

Figure 2 is a modified form of same; and

Figure 3 is a plan view of the tether and its attachment shown in Figure 1.

1 represents the cylindrical neck of a common collapsible tube such as used for tooth paste or the like, having a screw threaded closure 2 mounted thereupon, and in this instance I have shown the closure 2 as being provided with an annular recess thereabouts, and within which recess is loosely mounted the cylindrical portion 3 of the tether, the ends of the wire forming the tether, which is obviously of spring wire construction, being shown as crossing each other and turned at right angles forming the spaced depending portions 4, which, still nearer their extremities, are bent backwardly upon themselves and then at right angles towards each other, forming the axis upon which the tether is pivoted; these two inwardly bent ends being shown at 5 and mounted within the fixed lug 6 formed upon the side of the cylindrical neck 1 of the tube.

It is apparent that by this construction the closure 2 may be readily turned in either direction without in any way interfering with the tether, it being assumed that the annular groove about the closure is of sufficient width to permit of the necessary raising and lowering when screwed on or off, and that the portions 4 of the tether projecting below the pivotal connection thereof will normally remain parallel with the walls of the neck of the tube, but if the closure is tipped away from the mouth of the opening the tether will pivotally conduct same simultaneously with the extreme lower ends of the portions 4 frictionally contacting the arcuate sides of the neck 1. By this contact of the lower ends of the portions 4 of the tether the closure is biased both in its closed and in its extreme open position, the portions 4 readily yielding from or towards each other as their extreme lower ends are pressed outwardly by engagement with the arcuate walls of the neck of the tube, or brought towards each other by their closing spring action.

In Figure 2 we have shown a slightly modified form of both tether and closure cap, the latter being provided with an enlarged annular depending flange like portion 7 forming a vertically elongated channel 8 about the marginal edge of the cap, and into which the circular portion or ring 9 of the tether is installed in lieu of being externally of the cap as shown in Figure 1.

The depending ends 10 of the wire forming the tether are bent downwardly and spaced apart rather than overlapping each other as shown in Figure 1, then bent at right angles outwardly away from each other forming the pivotal connection through spaced lugs 11 upon the wall of the cylindrical neck of the receptacle. Externally of the lugs 11 the termini of the wire are turned downwardly at right angles and then back upwardly upon themselves forming a depending neck engaging portion similar to the depending portions 4 of the tether shown in Figure 1 and which engages the sides of the cylindrical neck in the same manner as those illustrated in Figure 1 and for the same purpose.

In this modified form, however, it will be noted that the normal tendency of the ring 9 of the tether is to contract, thus freeing its frictional engagement with the cap simultaneously with the biasing effect of same both in its opened and closed positions, while in the construction shown in Figure 1 the termini of the wire also normally tend towards

each other and the effect of the ring 3 is that of being opened and likewise freeing its frictional contact with the cap or closure.

From the foregoing it is evident that we have devised an exceedingly simple wire tether for the closure of a receptacle and one which preferably is made to cooperate with the peculiar shape of the receptacle adjacent the opening therein.

Having thus described our invention, what we claim and desire to secure by Letters Patent, is:

1. An internally screw threaded closure of the type described having an inwardly flanged extension about the open circumferential edge thereof, a circular spring control wire removably mounted within the extension and pivotally attached to a container externally of the closure.

2. The combination with a receptacle having a screw threadedly mounted cap therefor, of an annular recess internally of the open face of the cap, a control for said cap comprising a spring wire having a yieldable circular portion fitting within the recess in the cap, the opposite extremity of the wire being pivotally attached to the receptacle.

3. In combination a receptacle having a closure therefor, a tether for the closure comprising a spring wire having a portion cooperatively engaged with the closure, an opposite portion pivotally engaged with a portion of the receptacle and means externally of the pivotal connection for engagement with portions of the tether for causing a stress therein when moved in opposite directions.

In testimony whereof we affix our signatures.

JOHN A. MAKER.
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