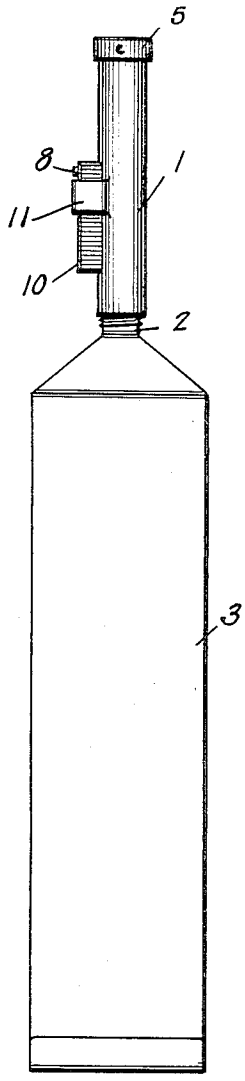
Jan. 28, 1936. W. M. GLIENKE 2,028,830

TUBE CAP

Filed Aug. 14, 1934

Fig. 1.



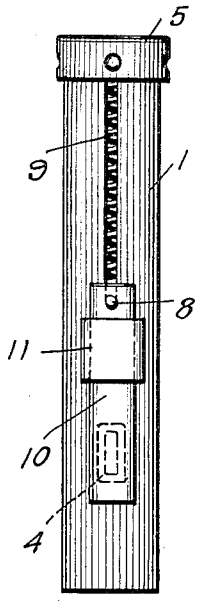


Fig. 2.

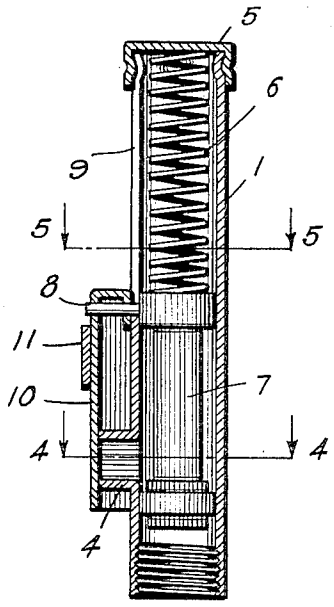
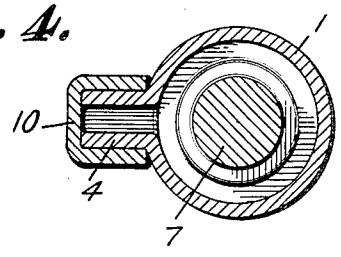


Fig. 3.

Fig. 4.



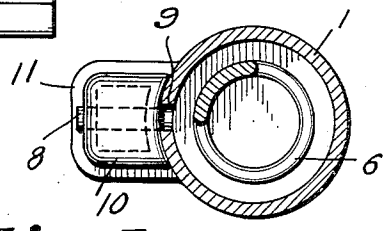


Fig. 5.

Walter M. Glienke,
INVENTOR

BY Victor J. Evans & Co.
ATTORNEY

Patented Jan. 28, 1936 2,028,830

UNITED STATES PATENT OFFICE

2,028,830

TUBE CAP

Walter M. Glienke, Sandusky, Ohio

Application August 14, 1934, Serial No. 739,791

1 Claim. (Cl. 221—60)

This invention relates to closures especially adapted for paste or semiliquid tubes of the collapsible type and has for the primary object the provision of a device of this character which may be readily attached to the discharge neck of the tube in a manner similar to the application of a conventional cap to said tube and which will open under the pressure of the contents of the tube during compressing or squeezing of the latter and will be self-closing when released of the pressure to bar the entrance of foreign matter to the tube and prevent evaporation of the contents.

With these and other objects in view this invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawing, in which

Figure 1 is a side elevation illustrating a closure applied to a collapsible tube and constructed in accordance with my invention.

Figure 2 is a front elevation illustrating the closure.

Figure 3 is a vertical sectional view illustrating the closure.

Figure 4 is a vertical sectional view taken on the line 4—4 of Figure 3.

Figure 5 is a similar view taken on the line 5—5 of Figure 3.

Referring in detail to the drawing, the numeral 1 indicates a cylinder, one end of which is internally screw threaded to be threaded to the neck 2 of a collapsible tube 3. A discharge neck 4 is integral with the cylinder 1 adjacent the latter's screw threaded end and the opposite end of said cylinder is closed by a cap 5 forming a seat for one end of a coil spring 6, the opposite end of which bears against a plunger-like valve 7. The spring 6 normally positions the plunger-like valve 7 so that the latter closes the passage in the cylinder between the latter's screw threaded end and the discharge neck 4.

A pin 8 is secured to the plunger-like valve 7 and operates in a slot 9 formed in the cylinder and is secured to a closure element 10 slidably mounted in a guide 11 carried by the cylinder 1. The closure element 10 normally occupies a position over the discharge neck 4 to prevent the entrance of foreign matter and also to retard evaporation of the contents of the tube 3. The closure element 10 is of channel construction and has wiping contact with the end of the discharge neck 4 for the purpose of removing therefrom surplus material. In operation, with the closure applied to the collapsible tube 3, the contents are closed to the atmosphere and foreign matter and by pressing or collapsing the tube 3 the contents act on the plunger 7 against the action of the spring 6 and slide the closure element to uncover the discharge neck 4 so that the contents may pass therefrom. On a release of pressure on the collapsible tube, the plunger 7 returns to its initial position by the action of the spring 6 positioning the closure element 10 over the discharge neck with wiping contact therewith.

Having described the invention, I claim:

A closure comprising a cylinder having one end screw threaded for attachment to the neck of a collapsible tube, a discharge neck extending laterally from the cylinder and in communication therewith and located adjacent the screw threaded end, said cylinder having a slot, a cap closing said cylinder and one end of the slot, a plunger slidable in the cylinder, a coil spring bearing against the cap and one end of the plunger to urge the other end of the plunger to lie between the discharge neck and the screw threaded end of said cylinder for closing the discharge neck to the collapsible tube, a pin secured to the plunger and projecting through the slot for limiting the movement of said plunger by the action of the spring, a channeled closure element secured to the pin and movable with the plunger to close and open the discharge neck, and a guide slidably receiving the closure element and secured to the cylinder.

WALTER M. GLIENKE.