Nov. 6, 1951 N. T. STOOS, JR., ET AL 2,574,422

SWIVEL CAP

Filed May 27, 1948

Fig. 1.

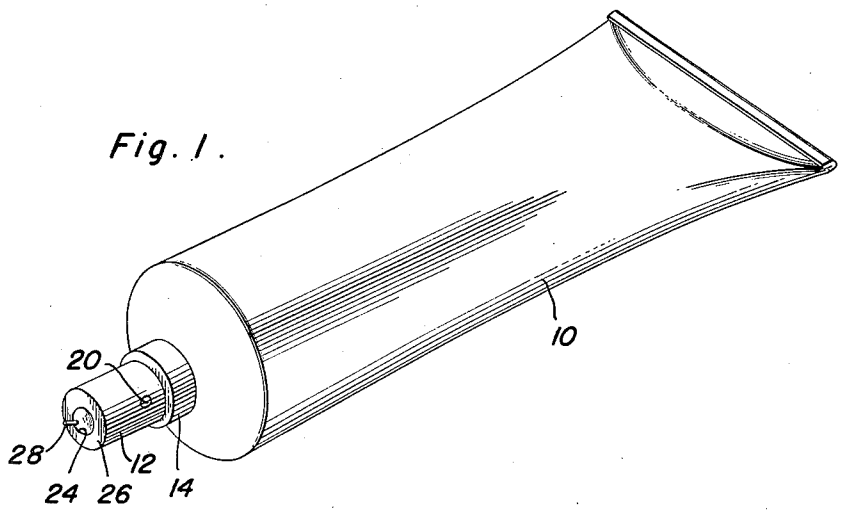


Fig. 2.

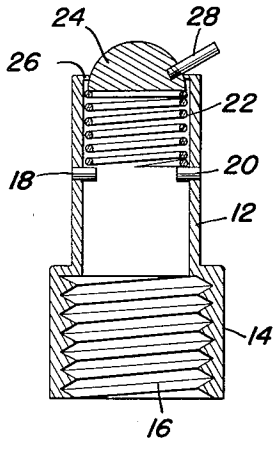


Fig. 3.

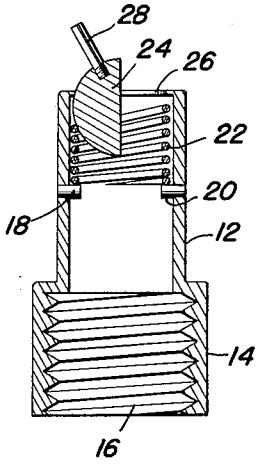
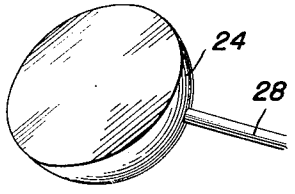


Fig. 4.



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SWIVEL CAP

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Application May 27, 1948, Serial No. 29,498

1 Claim. (Cl. 222—517)

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This invention relates to novel and useful improvements in closures or caps for use in association with tubes and the like.

An object of this invention is to provide a detachable closure for use in association with various material retaining tubes such as tooth paste, shaving cream, medication and the like which includes a sleeve having means at one end for fastening to a receptacle and a resiliently biased semi-spheroidal closure swivelly attached at the opposite end of the sleeve.

Another object of this invention is to provide a practical and simplified device for use as a closure for conventional material carrying receptacles.

Ancillary objects and features of novelty will become apparent to those skilled in the art, in following the description of the preferred form of the invention, illustrated in the accompanying drawings, wherein;

Figure 1 is a perspective view of a tube having the preferred form of the invention attached thereto;

Figure 2 is a sectional view of the closure;

Figure 3 is a sectional view of the closure showing the swivel top in a second operational position, and

Figure 4 is a perspective view of the semi-spheroid which is used as a swivel member in the invention.

The present invention is adapted primarily for use with receptacles of the malleable type whereby the contents thereof may be squeezed from the tube.

There are various modes of operation of the invention. The device may be used as a charge forming device in the following manner: the tube is squeezed applying a charge of material in the sleeve of the invention which is under pressure. Then, the closure is simply flipped to a second or open position allowing the material under pressure to be forcibly ejected.

A second mode of operation is simply to open the swivel closure and then squeeze the proper amount of material from the tube.

Other operational utilities of the invention may be realized, this being within the prerogative of the user.

A conventional tube 10 is shown in Figure 1 and is made of the usual flexible and malleable material. The improved closure may be seen best in Figures 2–4 and includes preferably a sleeve 12 having an enlargement 14 at one end thereof. This enlargement is internally threaded at 16 of the proper pitch to accommodate the

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majority of shaving cream, tooth paste, medication and the like necks of the usual tubes 10. Of course, the device may be made of any size in order to accommodate various sizes of necks in tubes. Further, the materials of construction may be many, such as metal, commercial plastic and the like.

Positioned interiorly of the sleeve 12 is a pair of pins 18 and 20 respectively which may project radially relative to the sleeve 12. A spring 22 or any other suitable resilient biasing means is seated on the pins 18 and 20, reacting on a swivel closure 24.

This swivel closure is preferably semi-spheroidal and is retained in the sleeve 12 through the medium of an annular flange or lip 26. This flange 26 provides an internal diameter measurement which is less than the largest diameter of the smooth face of the semi-spheroid thereby retaining the closure in swivel relationship to the open end of the sleeve 12 having the flange 26 thereon.

An operating pin 28 is attached to the swivel closure member 24 by any suitable means such as through screw threads. It is seen by inspection of Figure 3 and Figure 2 that the operating pin 28 is angularly disposed relative to the plane surface of the semi-spheroidal member. This permits a full actuating arc yet allows the flat portion of the semi-spheroidal member to effectively seal the open end of the sleeve 12 carrying the swivel member 24.

Due to the extreme simplicity of the invention a further description is deemed unnecessary. However, it is apparent that certain variations may be made without departing from the spirit of the invention.

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

For use with a receptacle, a dispensing cap comprising a sleeve having threads at the lower end for attachment with the open end of the receptacle, a coil spring seated within said sleeve, means fixed to the sleeve intermediate its ends and extending inwardly of said sleeve, supporting one end of said spring, a swivelly mounted closure engaged by the opposite end of said spring, means for retaining said closure swivelly within the upper end of said sleeve, said last mentioned means comprising a flange fixed to said sleeve at the upper end thereof and said closure having an arcuate surface and a flat surface, the flat surface having a larger diameter than the opening formed by the flange preventing the spring from urging the closure through the upper end of

said sleeve by engagement with said sleeve, and some of the coils of the spring passing around the flat and arcuate surfaces of said closure when the closure is swivelled to the sleeve opening position, so that the coils of the spring retain the closure in the open position.

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