Dec. 5, 1933. A. G. TEASON 1,937,674

CAP RETAINER FOR COLLAPSIBLE TUBES AND THE LIKE

Filed April 11, 1932

Fig. 1.

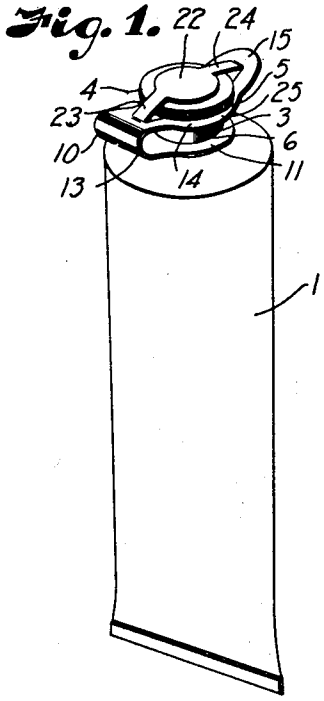


Fig. 2.

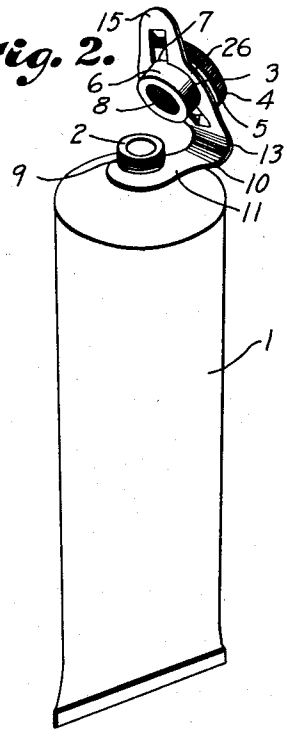


Fig. 3.

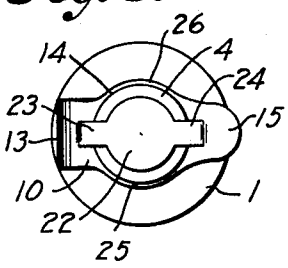


Fig. 4.

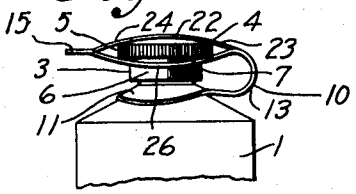


Fig. 5.

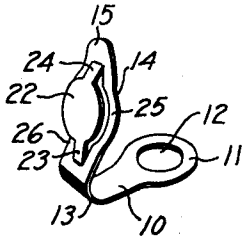
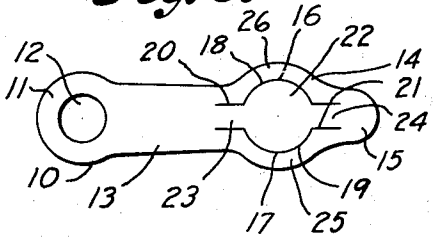


Fig. 6.



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CAP RETAINER FOR COLLAPSIBLE TUBES AND THE LIKE

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Application April 11, 1932. Serial No. 604,500

5 Claims. (Cl. 221—60)

This invention relates to cap retainers and more particularly to those of that character for retaining the caps of collapsible tubes, and has for its principal object to provide a simple easily constructed means for preventing loss of the cap from such tubes which will not interfere with the ready removal or application of the cap from or to the tube.

In accomplishing this and other objects of the invention, I have provided improved details of structure, the preferred form of which is illustrated in the accompanying drawing, wherein:

Fig. 1 is a perspective view of a collapsible tube equipped with a cap retainer constructed in accordance with my invention showing the cap in position closing the neck of the tube.

Fig. 2 is a similar view showing the cap removed from the neck of the tube but anchored to the tube by the retainer.

Fig. 3 is a plan view of the cap in the position as illustrated in Fig. 1.

Fig. 4 is a side elevational view of the upper portion of the tube illustrating the application of the cap retainer.

Fig. 5 is a detail perspective view of the retainer.

Fig. 6 is a plan view of the retainer.

Referring more in detail to the drawing:—

1 designates a container, such as an ordinary collapsible tube, having an externally threaded neck 2 at its upper end closed by a threaded cap 3.

The cap 3 includes a disk-shaped head portion 4 having a knurled periphery 5 projecting beyond the neck portion 6 thereof to form an annularly projecting shoulder 7. The neck 6 is internally threaded as at 8 to accommodate the threads 9 on the neck 2 as in ordinary construction.

The cap retainer 10 includes a flexible strip preferably stamped from sheet material, such as celluloid or the like, and includes a ring-shaped end portion 11 having an opening 12 therein to engage over the threads 9 of the neck 2 to anchor the retainer on the neck of the tube, as illustrated in Fig. 2.

Extending from the ring-shaped portion 11 of the strip is a laterally projecting strip or hinge portion 13 terminating in a substantially circular head portion 14.

The head portion 14 is of substantially the same diameter as the disk portion of the cap and is provided with a tongue-shaped extension 15 in longitudinal alignment with the hinge portion 13 of the retainer by which the cap may be moved away from the neck when the cap is loosened. Formed in the portion 14 are spaced slits 16 and 17, each including arcuate shaped portions 18 and 19 positioned concentrically with the portion 14 and which terminate in parallel, laterally extending portions 20 and 21 to form a substantially circular disk-like portion 22 connected with the body of the retainer by tongues 23 and 24 defined between the slit portions 20 and 21 and arcuate shaped flange-engaging portions 25 and 26, as best illustrated in Fig. 6. The arcuate shaped portions of the slits are cut on the same radius as the outer periphery of the neck on the cap so that the neck may be rotatably mounted therein as now described.

In assembling the retainer constructed as described, the ring portion 11 is inserted over the neck of the tube, as illustrated in Fig. 2, and the cap 3 is slipped through one of the slits 16 or 17 so that the circular portion 22 engages over the top of the cap, while the portions 25 and 26 of the retainer engage under the shoulder 7 formed on the under side of the disk-shaped portion of the cap, whereby the neck of the cap projects through the circular opening formed between the arcuate-shaped portions of the slits, as is also best illustrated in Fig. 2.

It is, therefore, apparent that the cap is rotatably mounted in the head portion of the retainer so that when the cap is moved by means of the hinge portion toward the neck of the tube the knurled portion thereof may be grasped by the thumb and finger of the hand to rotate the cap for screwing it onto the neck of the tube or to rotate it in reverse direction in removing it from the tube.

While I have described the cap as being threaded onto the neck of the tube, it is obvious that my retainer will operate equally as well with a cap having a bayonet or other similar type of connection with its tube.

From the foregoing it is obvious that I have provided a simple inexpensive cap retainer which is readily applied to a conventional type of tube and cap, and which is of pleasing appearance as well as providing easy removal or application of the cap.

What I claim and desire to secure by Letters Patent is:

1. A cap retainer comprising a flexible strip, means at one end of the strip for anchoring the retainer to the neck of a tube, a head formed on the opposite end of the strip and having spaced arcuate-shaped slits to form an opening for rotatably receiving the neck portion of a cap, and means adapted to extend over the cap to retain the neck portion of the cap in said opening.

2. A cap retainer comprising a flexible member, means at one end of the member for anchoring the retainer to the neck of a tube, a head on the opposite end of the member, means on the head for rotatably mounting the neck portion of a cap, and means on the head adapted to extend over the cap to retain the cap in position.

3. A cap retainer comprising a flexible strip,

means at one end of the strip for anchoring the retainer to the neck of a tube, a head formed on the opposite end of the strip, means on the head for rotatably mounting the neck portion of a cap, and means on the strip adapted to extend over the cap to retain the cap in position.

4. A cap retainer including a flexible strip having a head at one end provided with an aperture for snugly receiving the neck of a container and a head at its opposite end provided with laterally spaced slits having arcuate shaped portions intermediate their ends forming an aperture for receiving the neck of a cap, and a keeper member for engaging the top of the cap.

5. A cap retainer including a flexible strip having a head at one end provided with an aperture for snugly receiving the neck of a container and a head at its opposite end provided with laterally spaced slits having arcuate shaped portions intermediate their ends forming an aperture for receiving the neck of a cap, a keeper member for engaging the top of the cap, and tongues extending oppositely from the keeper member and attaching said member to the body of the strip.

ADAM G. TEASON.