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COMBINED CAP AND DENTAL FLOSS CONTAINER

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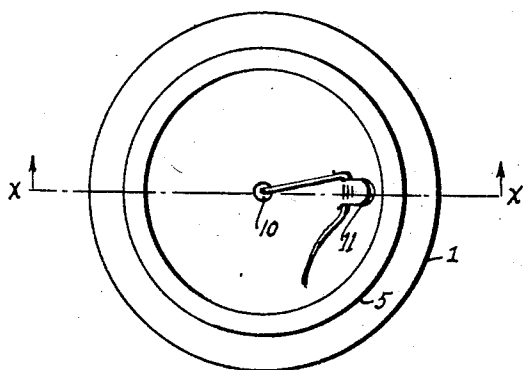


Fig. 2

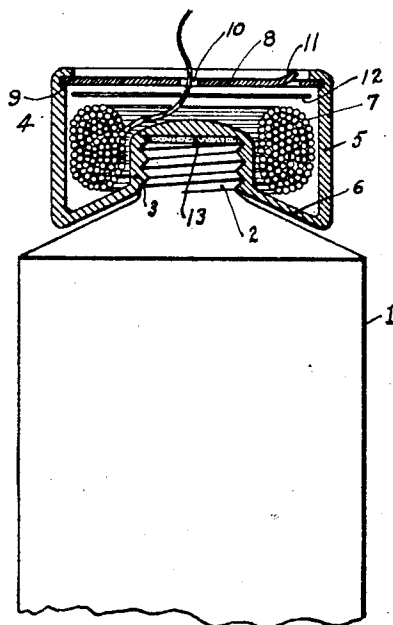


Fig. 1

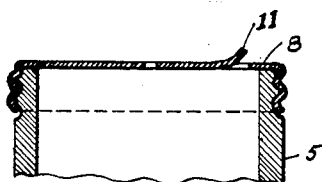


Fig. 7

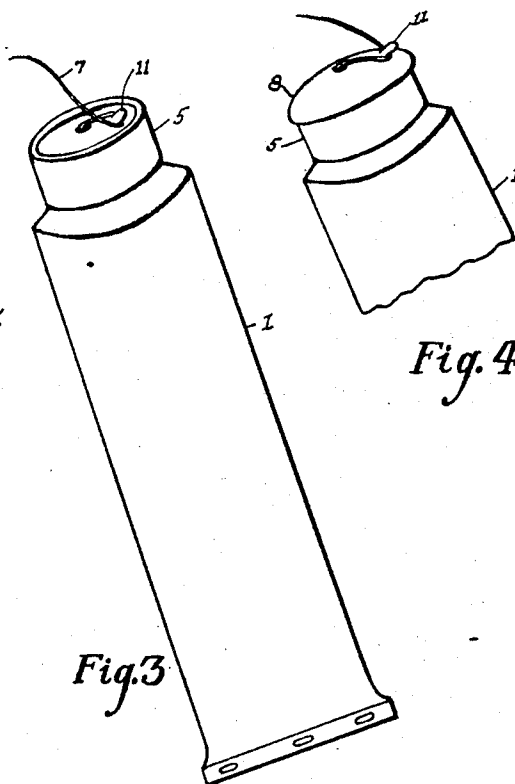


Fig. 3

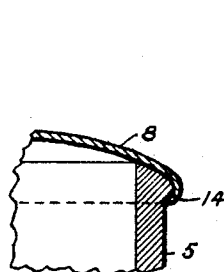


Fig. 5

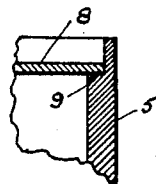


Fig. 6

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COMBINED CAP AND DENTAL FLOSS CONTAINER

Application filed September 20, 1929. Serial No. 393,972.

This invention relates to dentifrice- and dental-floss containers, and in particular to a closure for a toothpaste tube in the form of a combined cap and floss retaining chamber.

It is an object of the invention to provide a rigid closure member for a tube of the collapsible type, forming a chamber in which a coil of dental floss may be so positioned that it will readily unwind from the inside of the coil.

Other objects are to protect the floss from dust or dirt, to permit the coil to unwind freely, and to provide means for guiding the floss as it uncoils and for cutting it off at any desired point in its length.

It is also an object of the invention to shape the floss container so that it will follow the configuration of the upper, more rigid portion of the dentifrice container, so that it can not be easily struck off.

It is proposed to design a container so that it may be die-cast of metal, or molded of composition material and provided with a metal closure wall which may be sprung, crimped, threaded or otherwise secured to the container of composition material.

Briefly, the invention consists in the combination of elements and arrangement of parts hereinafter described whereby a container may be provided for the purpose set forth which shall be simple in construction, durable, convenient to use, and relatively inexpensive to manufacture. Some preferred forms of the invention are described in connection with the annexed drawings, but it is to be understood that our invention is not limited to the specific embodiments disclosed.

In the drawings Fig. 1 is a front view of the collapsible tube, showing the cap in cross section, the cross section being taken on line $x-x$ of Fig. 2.

Fig. 2 is a top view of Fig. 1.

Fig. 3 is a perspective view of the tube with combined cap and floss container attached.

Fig. 4 is a fragmentary view showing another form of the invention in which the container is made of molded insulation material with metal closure wall.

Fig. 5 is a detail showing the method of attaching the closure wall to the floss container of Fig. 4.

Fig. 6 is a detail showing the method of attaching the closure wall to the floss container of Figs. 1, 2 and 3.

Fig. 7 is a fragmentary view in cross section showing still another method of applying the closure wall to the top of the container.

In the embodiment of the invention shown in Fig. 1, the tube 1 is the usual form of collapsible tube having at the top a reduced, externally threaded discharge nipple 2. The tube is sealed by a closure device having a cap portion 3 forming part of a floss container the latter indicated as a whole by the numeral 4. The chamber containing the floss is formed by a cylindrical or tubular wall 5 made integral with the cap portion 3 by a flange 6 which follows the contour of the upper portion of the dentifrice container.

The coil of floss 7 is disposed in the chamber thus formed, the cap portion 3 forming a hollow core holding the coil of floss in place and permitting it to unwind from the inside. The chamber is closed by a metal disk 8 which rests upon a shoulder 9 formed in the tubular wall 5, and is held in place by folding the edge of the wall down over the disk.

Fig. 6 shows the metal disk in place before folding down the edge of the wall, and Fig. 1 shows the completed container with the edge folded down.

The metal disk 8 is provided with a central perforation 10 large enough to allow the strand of dental floss to pass through freely, and with a raised lip 11, which may be punched out with a die and serves as a cutting edge for the floss. Before applying the metal disk 8 to the top of the floss container, a paper or composition disk 12 having at its center a small hole just large enough to allow the strand of dental floss to pass through, is threaded onto the inner end of the coil of floss. In the completed structure this paper or composition disk lies just below the metal disk 8 and serves to close the larger hole in the metal disk, and thus to protect the floss

against dust or dirt. The paper disk is made of slightly smaller diameter than the internal diameter of the chamber. This permits the paper disk to shift slightly so as not to
 5 impede the free movement of the floss as it unwinds. The numeral 13 indicates a cork washer which is arranged between the outlet end of the discharge nipple and the inner surface of the cap 3.

10 Fig. 2 shows the floss wrapped around the raised lip 11, preparatory to cutting it off. In the form shown here the cutting lip lies within a depression formed by the top surface of the metal disk 8 and the bent over
 15 edge of the tubular wall 5; it is thus protected from injury and from "catching" on neighboring objects.

In Figs. 1, 2 and 3 the floss container is represented as being die-cast of metal, but it
 20 is obvious that the invention could be applied to a container made of molded composition material. This form is shown in Figs. 4 and 5 in which the metal cap 8 is somewhat rounded, or convex, and is sprung over the
 25 beaded edge 14 of the tubular wall 5 of the floss container.

In Fig. 7 the tubular wall 5 is made of composition material, the upper end being
 30 externally screw threaded to receive the internally threaded metal cap 8.

Figs. 5, 6 and 7 represent details of the floss container wall and its closure disc. It is to be understood that in each case the floss
 35 container is provided with a reentrant portion 3 which serves as a cap for the collapsible tube screwing on to the nipple 2, and that the coil of floss fits over this reentrant portion and has one end threaded thru the paper or composition disk 12 and the metal
 40 closure member 8.

It is obvious that the details of construction can be changed without departing from the spirit of the invention.

We claim:

45 1. A dispenser closure cap comprising a hollow perforated cap member adapted to act as a closure member for a dentifrice tube, a coil of dental floss disposed within said hollow closure member with one end projecting
 50 through the perforation in the closure member, and a perforated floating disc threaded on the end of the floss and supported by said floss against the hollow closure member, so that the perforations in the disc and closure
 55 member register with one another the perforation in the disc being smaller than the perforation in the hollow closure member.

2. A dispenser closure cap comprising a tubular hollow casing with a reentrant depression adapted to engage the paste ejecting
 60 end of a dentifrice tube, a coil of dental floss disposed immediately about said reentrant depression as a core, a perforated disc superposed upon said coil and supported
 65 thereby with the end of the floss threaded

through said perforation, and a closure disc for said casing provided with a perforation adjacent the perforation in said superposed disc and through which also said floss projects.

3. A dispenser closure cap comprising, a tubular casing with a reentrant depression in its lower wall adapted to engage the paste ejecting end of a dentifrice tube, a coil of dental floss disposed immediately about said
 75 reentrant depression as a core in such a way as to permit the floss to unwind from the inside of the coil, a closure disc for said casing having a central perforation through which said coil unwinds, and a protective disc
 80 threaded on the unwinding end of said coil and disposed between the floss and the closure disc so as to partially close the perforation in said closure disc.

In witness whereof we affix our signatures. 85

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