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CLOSURE FOR A DISPENSER

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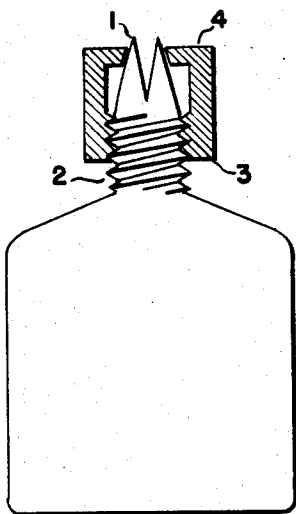


FIG. 1

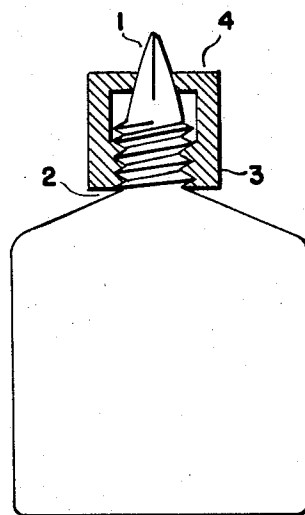


FIG. 2

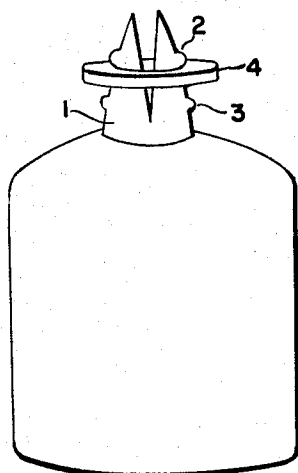


FIG. 3

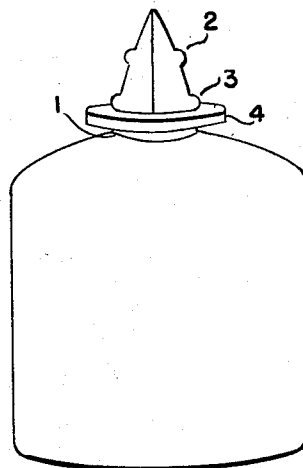


FIG. 4

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CLOSURE FOR A DISPENSER

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1 Claim. (Cl. 222—502)

This invention is directed to a new and useful closure device for dispensers such as toothpaste tubes, beer cans, catsup bottles and scouring powder.

At present dispensers for pastes, creams, liquids and similar materials have caps which must be removed in order to dispense the contents. These caps are frequently lost. They become difficult to replace due to clogging of the thread with the contents of the container or hardening of the contents around the closure. Various attempts have been made by the manufacturers of such dispensers to solve this problem. One such attempt, for example, joins the cap to the container with a flexible plastic band, a string or similar retainer. The trouble with such solutions to the problem is that the retainer generally makes it difficult to twist the cap back over the closure. Further, the closure still becomes stuck with the contents of the container and hence difficult to close.

It is an object of the present invention to provide a closure for a dispenser with a cap which does not have to be removed in order to open the closure.

It is a further object of the present invention to provide a closure for a dispenser which will remain clear of caking and will be easily opened or closed.

These and other objects of the invention are achieved by a closure consisting of a nipple which tapers toward the tip and which is cleft at the tip. This nipple is made of elastic material so that the cleft normally tends to remain open. A cylindrical collar is placed over this nipple and means are provided for retaining the collar both at the base of the nipple and close to the tip. When the collar is retained at the base of the nipple, it presses against the tapered sides, forcing the sides of the cleft in the nipple together and thereby closing the opening.

When the collar is retained close to the tip of the nipple, the elasticity of the material causes the cleft to open, thereby allowing the material in the container to be dispensed.

The novel features that are considered characteristic of this invention are set forth with particularity in the appended claim. The invention itself, both as to its organization and method of operation, as well as additional objects and advantages thereof, will best be understood from the following description when reading in connection with the accompanying drawings, in which:

Figure 1 is a cutaway drawing of an embodiment of the invention in which the collar is held over the nipple by a screw thread and shows the closure in the open position; and

Figure 2 is a drawing of the same embodiment and shows the closure in the closed position.

Figure 3 is a drawing of a second embodiment of the invention in which the collar is held over the nipple by projections on the surface of the nipple and shows the closure in the open position.

Figure 4 is a drawing of the same embodiment as is shown in Figure 3 and shows the closure in the closed position.

Referring now to Figure 1, the nipple consists of a

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tip 1 and a base 2. The base 2 of the nipple is threaded.

The collar consists of two parts, a base 3 and a top 4. The base of the collar 3 is internally threaded so it screws on the base of the nipple 2. The top of the collar 4 has a smaller internal diameter than the base of the nipple so that as the collar is screwed down on the nipple, the narrow portion at the top of the collar 4 forces the sides of the cleft together and closes the opening. Figure 2 shows the closure with the collar screwed down and the cleft closed.

The cooperating threads of the nipple and the collar are dead-ended so that once the collar has been screwed down past a certain point on the nipple, it cannot be unscrewed easily past this point. This provision is made in order to prevent loss of the collar as a result of the users' completely unscrewing it. Other methods of achieving the same object are well known in the art.

Figure 3 shows another embodiment of the same invention. In this embodiment, the nipple 1 is tapered toward the top and cleft. Near the top is a projection 2 and further toward the base is another projection 3.

Both projections are sufficiently flexible so that the collar 4 may be forced past them down toward the base of the nipple. The first projection 2 is larger than the second projection 3, and extends outward from the nipple further than the second projection 3. Once the collar has been initially forced over projection 2, it is not easily removed so that danger of losing the collar is minimized. When the collar has been forced past projection 2, the cleft, as Figure 3 shows, is not closed.

When the collar has been forced past projection 3, as Figure 4 shows, it forces together the sides of the nipple and closes the opening. Projection 3 is made of such a size that the collar 4 may be easily pushed up and down over it.

There has accordingly been described and shown a novel and useful closure for a dispenser.

I claim:

A closure for a dispenser consisting of a hollow cone-shaped nipple which is cleft from the tip toward the base, said nipple being made of an elastic material such that pressure against the sides of said nipple can cause said cleft to close but such that in the absence of this pressure said cleft remains open, collar means having an internal diameter such that when said collar means is placed in a first position on said nipple close to its tip, no pressure is exerted against the sides of said nipple so that said cleft remains open, and when said collar means is placed in a second position on said nipple close to the base of said nipple, pressure is exerted against the sides of said nipple so that said cleft is forced closed, first and second retaining means, said first retaining means being located on said nipple closer to the tip of said nipple than said second retaining means, said first retaining means being of such a size in relation to the internal diameter of said collar means that said collar means can be forced past said first retaining means only with difficulty, said second retaining means being of such a size that said collar means may be pushed back and forth past said second retaining means with relative ease, said first retaining means being so positioned as to retain said collar means in said first position on said nipple, said second retaining means being so positioned as to retain said collar means in said second position on said nipple.

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