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TOOTHPASTE TUBE HAVING A HOLLOW HEAD WITH A CAP FITTED THEREON FOR CONTROLLING DISPENSING

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Fig. 1.

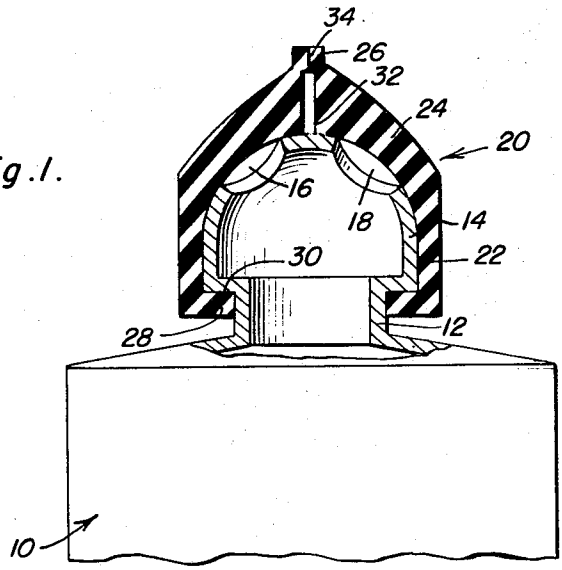


Fig. 2.

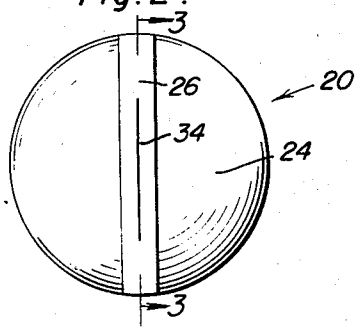
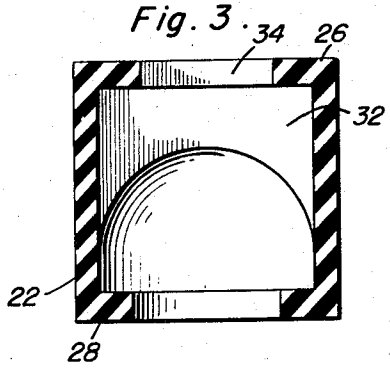


Fig. 3.



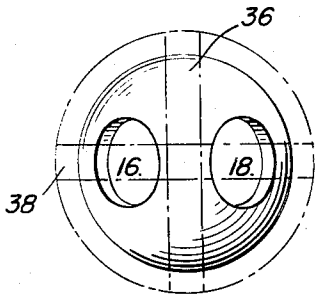


Fig. 4.

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TOOTHPASTE TUBE HAVING A HOLLOW HEAD WITH A CAP FITTED THEREON FOR CONTROLLING DISPENSING

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2 Claims. (Cl. 222—92)

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This invention relates to the class of containers, and more particularly to a novel container and closure device therefor for sanitary storage and disposal of toothpaste and the like.

An object of the present invention is to provide a novel cap for a tube of toothpaste which need not be removed from the tube in order to apply toothpaste to a toothbrush.

Another object of the invention is to provide a toothpaste tube having a novel cap which will readily dispense toothpaste in one position, but will prevent the emission of the toothpaste when in another position.

Still another object of the invention is to provide a cap for a toothpaste tube formed of natural white rubber of sterile appearance which is so constructed as to be readily and easily cleaned.

Still further objects reside in the provision of a toothpaste tube and cap therefor which are strong, durable, highly efficient in operation, sanitary, adapted to keep toothpaste fresh, simple in construction and manufacture, easy to use, pleasing in appearance, and quite inexpensive.

These, together with the various ancillary objects of the invention which will become apparent as the following description proceeds, are attained by this automatic toothpaste cap, a preferred embodiment of which has been illustrated in the accompanying drawings, by way of example only, wherein:

Figure 1 is a vertical sectional view of the novel cap for a tube of toothpaste showing it in operative placement upon a novel container used therewith;

Figure 2 is a top plan view of the automatic cap comprising one element of the present invention;

Figure 3 is a vertical sectional view as taken along line 3—3 in Figure 2; and

Figure 4 is a top plan view of the dispensing head of the tube which the novel cap is adapted to be emplaced.

With continuing reference to the accompanying drawings wherein like reference numerals designate similar parts throughout the various views, 10 generally represents a toothpaste tube or like article which is formed with a reduced neck portion 12 of hollow construction through which toothpaste or other paste-like material is adapted to be urged. Integrally formed with the neck 12 or otherwisee attached thereto is a head 14 which is preferably of substantially hemispherical exterior configuration and has a hollow interior. A pair of oppositely disposed circular apertures 16 and 18 are cut on either side of the equator of the hemispherical head 14.

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On this head 14 the novel white rubber cap generally designated by reference numeral 20 is adapted to be emplaced. This cap though preferably made from white sterile appearing rubber may equally well be made from resilient plastics or other suitable materials. The cap 20 comprises a cylindrical wall forming a cylindrical like chamber 22 which has integrally formed therewith a substantially hemispherical top wall or dome-shaped upper end 24 formed with an integral substantially rectangular projecting nozzle 26. An annular flange 28 is formed integral with the other end of the cylinder chamber 22. As can be readily seen, the annular flange is adapted to be fitted to abutting engagement with the neck 12 and is held by the shoulder 30 formed by the head extending radially from the neck portion.

The nozzle 26 is of substantially rectangular shape and is provided with a slot 32 in its lower portion. Furthermore, the slot 32 is in communication with the chamber 22. A slit 34 in communication with the slot 32 is formed in the upper portion of the nozzle and is normally closed when pressure is not applied against the tube.

With reference to Figure 4 in the drawings, it will be seen that when the cap is emplaced about the head 14 of the tube, and when the nozzle 26 is in the position as designated by reference numeral 36, the cap will be in its off position. The pressure upon the tube 10 will in no way cause the slit 34 to open so as to emit toothpaste. However, when the nozzle is rotated to the position shown by the reference numeral 38, it will be in the "on" position so that the toothpaste passing through openings 16 and 18 will cause the slit 34 to open allowing toothpaste to emit therefrom. Since the nozzle closes when there is little or no pressure applied to it from the contents of the tube, it may be fixed in the "on" position during the entire useful life of the tube of toothpaste.

It is to be realized that in order to secure a snug fit between the head 14 and the chamber 22, it is necessary that the head be of a size very slightly larger than the chamber. Thusly, the plastic cap 20 is securely held to the head 14.

Suitable markings, not shown in the drawings, are used to indicate the off and on positions of the nozzle. This may be done using suitable colors, or other marks of indicia.

However, since numerous modifications will readily occur to those skilled in the art after a consideration of the foregoing specification and accompanying drawings, it is not intended to limit the invention to the precise embodiment shown and described, but all suitable modifica-

tions and equivalents may be resorted to which fall within the scope of the appended claims.

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

1. The combination of a flexible tube having a substantially spherical hollow head with a pair of oppositely disposed discharge apertures and a cylindrical neck connecting said head with said tube, and a cap mounted rotatively on said head, said cap including a substantially hemispherical top wall located on said head, an inwardly extending flange fixed to said wall and having a substantially cylindrical opening therein in which said neck is fitted, a nozzle fixed to said wall and having a longitudinal orifice in the upper part thereof, said wall having a longitudinal slot in alignment with and in communication with said orifice, and said cap being rotatively disposed on said head so that said slot is positionable in communication with said apertures and in such position that said slot is out of registry with said apertures.

2. The combination of a tube and a cap fitted thereon, said tube including a neck and a substantially hemispherical hollow head connected to said neck, said head having at least one aperture therein, said aperture being offset from the central axis of the head, said cap including a cylindrical wall having a dome-shaped upper end, said cap being provided with a hemispherical chamber receiving the head of the tube, an annular flange extending inwardly from the lower edge of said cylindrical wall and embracing said neck, a nozzle projecting from said dome-shaped upper end and having a longitudinal slit therein, said dome-shaped upper end having a longitudinal slot on the inner surface thereof in communication with said chamber and said slit, said cap being rotatively disposed on said head to selectively place the slot into and out of engagement with the head aperture.

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