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Starnes

(54) **DROP AWAY TOOTHPASTE TUBE/BRUSH**

(75) Inventor: **Robert Paul Starnes**, Gate City, VA (US)

(73) Assignee: **STMicroelectronics Asia Pacific Pte. Ltd.**, Singapore (SG)

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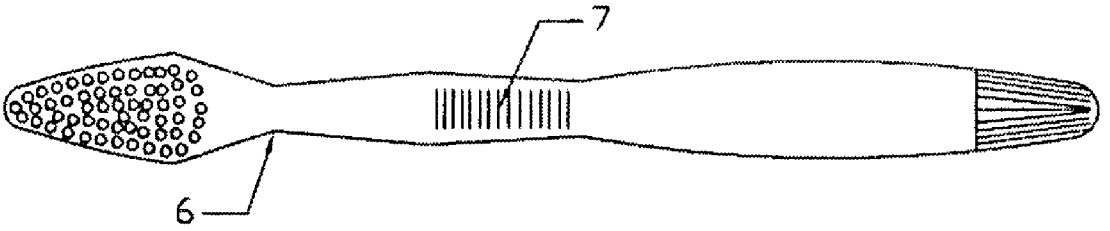
(57) **ABSTRACT**

A dispensing toothbrush includes a removable insert tooth paste tube for self application. This One for All design allows easy storage of tooth paste within the brush itself. It is simpler and different than other dispensing designs in that the tooth paste is not traveling through the length of a hollow tube to the bristles. The user simply unscrews the tube by twisting the cap off the bottom allowing self application. The user squeezes the flexing tube applying the toothpaste to the bristles. Storage of the toothpaste in the brush for subsequent self application is the major difference from other U.S. Patents. Again as in the other design, safety is a major concern with any dispensing toothbrush and this design allows for cleaning the brush the same as with any non-dispensing toothbrush.

A twist cap is present at the bottom of the tooth brush for twisting and removing an internal tube that is full of toothpaste or toothpaste pellets. After twisting the cap, the tube is removed by dropping it out of the toothbrush. The tube containing toothpaste is then manipulated by finger force to apply the paste to the bristles or in the case of pellets one would be removed at a time for application, and finally the tube is returned by inserting it back into the toothbrush handle and twisting the cap back into place at the bottom of the toothbrush.



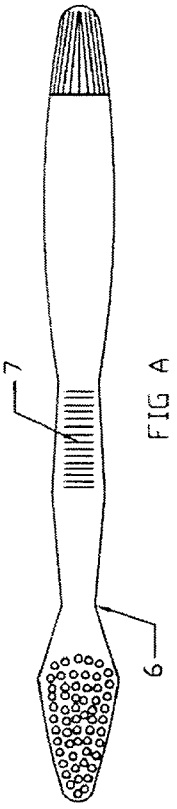


FIG A

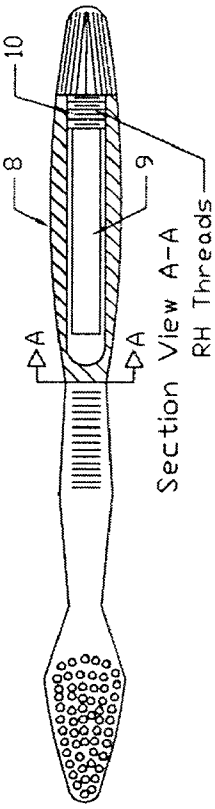


FIG B

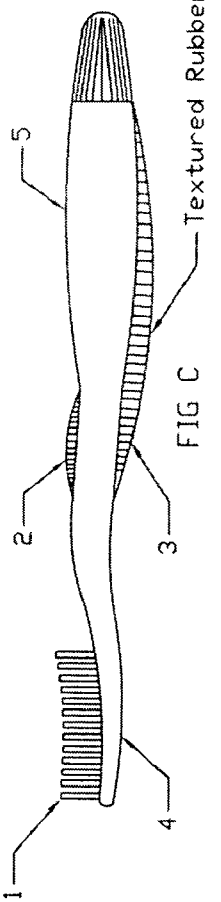


FIG C

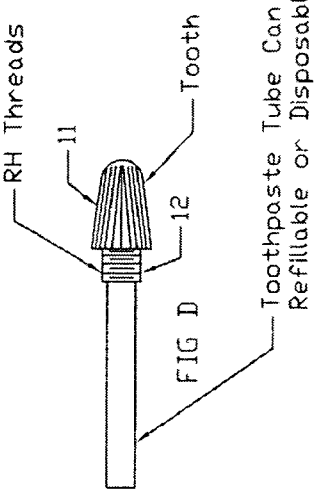


FIG D

FIG E

DROP AWAY TOOTHPASTE TUBE/BRUSH

BRIEF SUMMARY AND DESCRIPTION

[0001] The object of the 'Drop Away Toothpaste Tube/Brush' is to provide a simple, environmental safe, economical way to store paste within the brush reducing environmental concerns. The ability of the toothbrush to store toothpaste with its handle eliminates the need to carry an external tube of toothpaste on short trips. Today, the Federal Government does not allow full size commercially available toothpaste tubes inside of a commercial aircraft for security reasons. The toothbrush by design is operated by untwisting the cap located at the bottom of the brush removing the toothpaste tube applying the toothpaste onto the bristles by squeezing the tube and returning the cap onto the bottom of the brush by twisting the cap back into place. This design eliminates the need for separate toothpaste tubes and would satisfy the TSA's requirements for carry on items within a commercial aircraft.

[0002] A knurled twist cap is present at the bottom of the tooth brush for twisting and removing an internal tube that is full of toothpaste or toothpaste pellets. After twisting the cap; the tube is removed by dropping it out of the toothbrush; the tube containing toothpaste is then manipulated by applying finger force to squeeze and apply the paste to the bristles or in the case of pellets one would be removed at a time for application; and finally the tube is returned by twisting the cap back into place in the bottom of the toothbrush.

BRIEF DESCRIPTION OF DRAWING

[0003] Attached with this application is a single drawing labeled "Sheet 1" showing the toothbrush and its parts from five views figures A through E. The pertinent part of the drawing is the lower part of the brush where the cap is located. This toothbrush and its parts are made of pharmaceutical grade plastic and can be made of a wide variety of colors.

[0004] Figure A is the Top View of the toothbrush, the geometry, configuration of the toothbrush, its handle and a rubber textured area for thumb gripping. It also shows the toothpaste tube inserted into the toothbrush handle.

[0005] Figure B is another top view with a Section View A-A of the internal features design of the inner toothpaste tube cavity and mounting threads. It also shows the toothpaste tube inserted into the toothbrush handle.

[0006] Figure C is a Side View of the toothbrush that shows the bristles and the textured rubber gripping surfaces for the palm and thumb. It also shows the toothpaste tube inserted into the toothbrush handle.

[0007] Figure D is a Side View of the toothpaste tube design and shows a knurled circumference of the cap, mounting threads and the toothpaste tube itself as an assembly.

[0008] Figure E is a Left Hand End View of Figure D and shows that the toothpaste tube cap and tube are round in shape.

[0009] This substitute specification submitted in compliance with 35 U.S.C. 112; 37 CFR 1.52, 1.121(b)(3) and 1.125. This substitute specification contains no new matter or claim than previously submitted.

1.0 An oral care toothbrush that is comprised of an internally threaded cavity for the storage of a toothpaste tube, and a threaded toothpaste tube that stores bulk toothpaste or toothpaste pellets.

2.0 The toothbrush will be made from pharmaceutical grade plastic rubber. These can be made with a large variety of colors.

3.0 The toothpaste tube is threaded and has a knurled twist cap for toothpaste tube removal or installation.

4.0 The toothpaste tube is filled with bulk toothpaste or toothpaste pellets.

5.0 Upon twisting the cap counterclockwise; the tube is then removed by dropping it out of the toothbrush. The tube containing toothpaste is then becomes external of the toothbrush and is then easily manipulated by using finger force to squeeze and apply the paste to the bristles or in the case of pellets one would be removed at a time for application. Finally the tube is then inserted back into the toothbrush handle and secured by twisting the cap clockwise back into place in the bottom of the toothbrush.

6.0 It is materially different than U.S. Pat. No. 7,478,960 in that does not contain or require a piston. Application is then accomplished by the user. After application the user returns the tooth paste tube into the bottom of the brush allowing for storage. It is also materially different from other U.S Patents regarding dispensing toothbrushes in that the toothpaste tube is removed by the user, not self dispensing, from the bottom of the brush. The toothpaste is then self applied. The tooth paste does not travel through any hollow device making it different that U.S Pat. Nos. 7,331,731; 7,338,285; 7,350,526; and 7,367,737. The toothpaste is also not already on the bristles, but requires manual manipulation.

7.0 The two big improvements of this toothbrush's design from other dispensing toothbrush designs is safety and storage. It incorporates storage of the toothpaste tube within the bottom of the brush enabling a One for All design and ease of travel, but keeps safety a top concern by allowing for conventional cleaning (this simple design reduces the likelihood of accumulation of germs that might occur from other designs).

8.0 It is different from U.S. Pat. No. 7,044,333; 5,860,565: 5,199,610; 4,223,809; and 4,032,043 in that it is neither dispensing nor solely a tube, but is a hybrid of both.

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