TOOTHPASTE TUBE ROLL-UP RETAINER

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ABSTRACT

A system and method are provided for rolling up a tube of toothpaste and retaining the tube in the rolled-up condition as the toothpaste is dispensed from the tube. The roll-up means is achieved by providing a bendable strip of material and integrally molding a pair of parallel spaced bendable wires with the bendable strip of material. This device is then attached to a bottom end of the toothpaste tube. The ends of the integrally molded bendable strip and wires extend past the bottom end of the toothpaste tube on both sides of the toothpaste tube, and these extending ends are foldable over the toothpaste tube end to maintain the toothpaste tube in a progressively rolled up condition as the toothpaste is dispensed from the tube.
TOOTHPASTE TUBE ROLL-UP RETAINER

BACKGROUND OF THE INVENTION

[0001] The present invention relates to roll-up and retainer mechanisms and, more particularly, to a device attachable to the bottom end of a tube of toothpaste to maintain the tube in a progressively rolled-up state.

[0002] In the toothpaste tube aisle of any store, it is apparent that most toothpaste tubes are currently made of plastic. Consumers want to exhaust the supply of toothpaste in the tube before discarding it. Some consumers meticulously coil up the tube from the bottom as the toothpaste is dispensed. However, a plastic tube, if coiled, will tend to uncoil. This encourages other consumers to simply squeeze the tube from the top of middle to dispense the toothpaste, since the coiling effort is ineffective. Whether the tube uncoils, or the consumer does not squeeze the tube from the bottom anyway, the result is the same. The toothpaste tube remains partially spent, gives the appearance of messiness, and is difficult to completely exhaust. Additionally, when several people in a household share the same tube of toothpaste, disagreements can arise between the parties over the dispensing technique used by each party.

[0003] There have been a number of attempts in the art to provide suitable clips and retaining means for toothpaste tubes. Unfortunately, many such attempts have been generally ineffective or overly complicated, requiring custom dispensing cartridges, or are non-disposable devices.

[0004] It is seen then that there exists a need for an improved means for reversing the tendency of a plastic toothpaste tube to uncoil, that is convenient to use and is inexpensive to manufacture and produce.

SUMMARY OF THE INVENTION

[0005] This need is met by the toothpaste tube roll-up retainer mechanism of the present invention for controlling the coiling of the tube throughout the process of dispensing the contents. When attached to the bottom end of a tube of toothpaste, the device of the present invention enables a person to maintain the tube of toothpaste in a progressively rolled-up condition as the toothpaste is expressed from the tube.

[0006] In accordance with one aspect of the present invention, a tube of toothpaste can be progressively rolled up from its bottom end as the toothpaste is dispensed, and retained in the rolled up condition. The roll-up means is achieved by providing a bendable strip of material and integrally molding a pair of parallel spaced bendable wires with the bendable strip of material. This device is then attached to the bottom end of a toothpaste tube. The ends of the integrally molded bendable strip and wires extend past the bottom end of the toothpaste tube on both sides of the toothpaste tube, and these extending ends are foldable over the toothpaste tube end to maintain the toothpaste tube in a progressively rolled up condition as the toothpaste is dispensed from the tube.

[0007] Accordingly, it is an object of the present invention to provide a device for controlling the tendency of plastic tubes to uncoil. It is a further object of the present invention to provide such a device that is both convenient to use and inexpensive to manufacture. It is an advantage of the present invention that the device can be used to progressively roll-up a toothpaste tube to enhance dispensing of the toothpaste.

[0008] Other objects and advantages of the invention will be apparent from the following description, the accompanying drawings and the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIG. 1 illustrates the roll-up retainer device of the present invention attached to a tube of toothpaste;

[0010] FIG. 2 is a cutaway view of the roll-up retainer device of the present invention;

[0011] FIG. 3 is a bottom end view of the toothpaste tube and roll-up device of FIG. 1; and

[0012] FIG. 4 is a side view of the toothpaste tube and roll-up device of FIG. 1, with the toothpaste tube in a rolled-up configuration, with the device of the present invention maintaining the tube in its rolled-up configuration.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0013] The present invention is a device that, when attached to the bottom end of a tube of toothpaste, enables a person to maintain the tube of toothpaste in a progressively rolled-up position throughout the process of dispensing the contents of the tube.

[0014] Referring to the drawings, in FIG. 1 there illustrates a roll-up retainer device 11, in accordance with the present invention. The device 11 is attached to a tube of toothpaste, designated by reference number 10. The attachment of the device 11 to the tube 10 may be either permanent, so that it is discarded with the empty tube of toothpaste; or temporary, so that it can be removed from the tube when the tube is empty, and used on another tube. The attachment means may be any suitable attachment means, for example, a staple 12, as shown, clip means, an adhesive that may allow for removal of the device 11, or an adhesive that permanently attaches device 11 to the tube 10.

[0015] In a preferred embodiment of the present invention, as illustrated in FIG. 2, the retainer is comprised of a pair of parallel single strand maleable metal wires 14, 16, molded integrally with a flat flexible plastic strip 18. The two metal wires 14, 16 are approximately parallel to each other and preferably run along the entire length of the plastic strip 18. The wires 14, 16 are positioned at the extreme top and bottom of the strip 18, as illustrated by the view of FIG. 2.

[0016] When intended for use, the two ends 20 and 22 of the retainer device 11 are folded inward, to encompass both ends of the bottom edge of the toothpaste tube, as illustrated in the end view of FIG. 3. As the contents of the toothpaste tube 10 are dispensed, the ends 20 and 22 of the device 11 are unfolded and the toothpaste tube is rolled up from the end to squeeze the remaining contents of the tube towards the toothpaste cap 13, as illustrated in FIG. 4. Once the rolled-up bottom (empty) portion of the tube is positioned to keep the contents pushed towards the toothpaste tube cap 13, ends 20 and 22 of device 11 are then refolded into the retained position of FIG. 3 to keep the bottom (empty) portion of the tube from uncoiling. The ends 20 and 22 can be used to incrementally progress the rolled end of tube 10 throughout use of the tube, until the toothpaste is completely...
dispensed. At that time, the toothpaste tube 10 and retainer device 11 will be as illustrated in FIG. 4. Once the toothpaste tube 10 is empty, the entire assembly can be disposed of, including the toothpaste tube 10 and the retainer device 11. Alternatively, the retainer device 11 can be removed and reattached to the end of a new tube of toothpaste.

[0017] Having described the invention in detail and by reference to the preferred embodiment thereof, it will be apparent that other modifications and variations are possible without departing from the scope of the invention defined in the appended claims.

What is claimed is:

1. An improved method for rolling up a tube of toothpaste as the toothpaste is dispensed from the tube, the method comprising the steps of:

   providing a bendable strip of material;

   integrally molding a pair of parallel spaced bendable wires with the bendable strip of material;

   attaching the integrally molded bendable strip and wires to a bottom end of the toothpaste tube, wherein the integrally molded bendable strip and wires extend past the bottom end of the toothpaste tube on both sides of the toothpaste tube with the extending ends foldable over the toothpaste tube end to maintain the toothpaste tube in a progressively rolled up condition as the toothpaste is dispensed from the tube.

2. An improved method as claimed in claim 1 wherein the step of attaching the integrally molded bendable strip and wires to a bottom end of the toothpaste tube comprises the step of permanently attaching the integrally molded bendable strip and wires to a bottom end of the toothpaste tube.

3. An improved method as claimed in claim 2 wherein the step of permanently attaching comprises the step of using a staple.

4. An improved method as claimed in claim 2 wherein the step of permanently attaching comprises the step of using an adhesive.

5. An improved method as claimed in claim 1 wherein the step of attaching the integrally molded bendable strip and wires to a bottom end of the toothpaste tube comprises the step of temporarily attaching the integrally molded bendable strip and wires to a bottom end of the toothpaste tube.

6. An improved method as claimed in claim 5 wherein the step of temporarily attaching comprises the step of using a removable adhesive.

7. An improved method as claimed in claim 5 wherein the step of temporarily attaching comprises the step of using a clip.

8. An improved method as claimed in claim 1 wherein the step of providing a bendable strip of material comprises the step of providing a flexible plastic strip.

9. An improved method as claimed in claim 1 wherein the parallel spaced bendable wires comprise metal wires.

10. An improved method as claimed in claim 1 wherein the step of integrally molding a pair of parallel spaced bendable wires with the bendable strip of material further comprises the step of positioning the pair of parallel spaced bendable wires at a top and a bottom of a length of the flexible plastic strip.

11. An improved system for rolling up a tube of toothpaste as the toothpaste is dispensed from the tube, the system comprising:

   a bendable strip of material;

   a pair of parallel spaced bendable wires integrally molded with the bendable strip of material;

   means for attaching the integrally molded bendable strip and wires to a bottom end of the toothpaste tube, wherein the integrally molded bendable strip and wires extend past the bottom end of the toothpaste tube on both sides of the toothpaste tube with the extending ends foldable over the toothpaste tube end to maintain the toothpaste tube in a progressively rolled up condition as the toothpaste is dispensed from the tube.

12. An improved system as claimed in claim 11 wherein the integrally molded bendable strip and wires are permanently attached to a bottom end of the toothpaste tube.

13. An improved system as claimed in claim 11 wherein the integrally molded bendable strip and wires are temporarily attached to a bottom end of the toothpaste tube.

14. An improved system as claimed in claim 11 wherein the bendable strip of material comprises a flexible plastic strip.

15. An improved system as claimed in claim 11 wherein the parallel spaced bendable wires comprise metal wires.

16. An improved system as claimed in claim 11 wherein the parallel spaced bendable wires are positioned at a top and a bottom of a length of the flexible plastic strip.

17. A roll-up retainer device comprising:

   a bendable strip of material; and

   a pair of parallel spaced bendable wires integrally molded with the bendable strip of material.

18. A roll-up retainer device as claimed in claim 17 wherein the pair of parallel spaced bendable wires are positioned at a top and a bottom of a length of the flexible plastic strip.

19. A roll-up retainer device as claimed in claim 17 for use with a tube of toothpaste as the toothpaste is dispensed from the tube, wherein the integrally molded bendable strip and wires extend past the bottom end of the toothpaste tube on both sides of the toothpaste tube with the extending ends foldable over the toothpaste tube end to maintain the toothpaste tube in a progressively rolled up condition as the toothpaste is dispensed from the tube.