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R. J. WHISLER
FLEXIBLE TUBULAR CONTAINER
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2,936,932

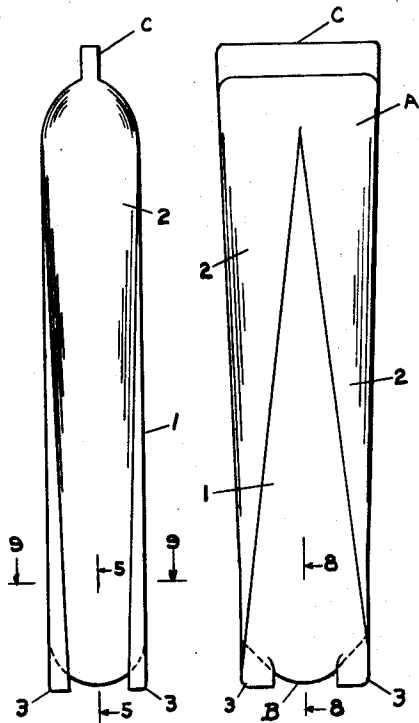


FIG. 2 FIG. 1

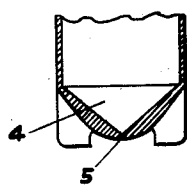


FIG. 5

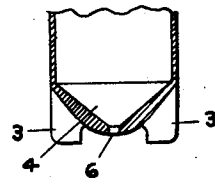


FIG. 6

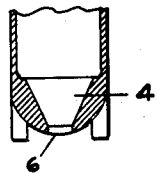


FIG. 8

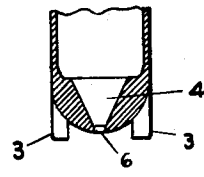


FIG. 7

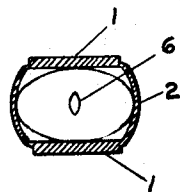


FIG. 10

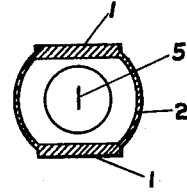


FIG. 9

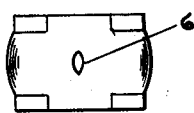


FIG. 4

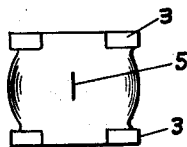


FIG. 3

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1

2,936,932

FLEXIBLE TUBULAR CONTAINER

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7 Claims. (Cl. 222-173)

My invention relates to an improvement in flexible containers for toothpaste, shaving lotions, and similar substances.

The objects of my invention are to provide handy tubes for household, storage and other uses, having an outlet tip at one end which will normally remain closed tightly enough to retain the contents of the tube, but which can be opened by moderate manual pressure on two of the opposite sides of the tip so as to permit escape of the contents as desired by the user while the opposite end remains tightly closed;

To provide such a container composed of rubber, plastic or other resilient means, of convenient size and which, while the outlet is closed, can be readily filled from the opposite open end and the open end can be readily sealed by pressure, heat or folding either with or without adhesive applied thereto;

To provide a form of tube which can be so placed that any weight thereon in storage or in transportation will hold the outlet more tightly closed, and that when the flat sides of the tip are compressed, the slit will open but when the rounded sides are compressed the slit will be more firmly closed;

To provide such a tube with feet whereon it may stand in vertical position with the outlet tip at the lower end thereof, without leakage and which will cause the contents to accumulate at or move toward the outlet end of the container.

I accomplish these objects by the means shown in the accompanying drawings, in which:

Figure 1 is a front elevation of my container in standing position;

Figure 2 is a side view of the container in similar position;

Figure 3 is an end view of the outlet and of Figure 1 with the outlet slit 5 in closed position;

Figure 4 is a similar end view, but shows the front and rear plates so compressed as to open the outlet slit at 6;

Figure 5 is a vertical sectional view on the line 5-5 of Figure 2;

Figure 6 is a similar view to Figure 5, but shows the front and rear flattened sides compressed to open the outlet;

Figure 7 is a view similar to Figure 8, but shows the front and rear flattened sides compressed to open the outlet;

Figure 8 is a sectional view on the line 8-8 of Figure 1;

Figure 9 is a sectional view on the line 9-9 of Figure 2, with the outlet in closed position;

Figure 10 is a corresponding view, but with the flattened front and rear sides compressed to open the outlet.

Similar numerals refer to similar parts throughout the several views.

My container comprises a tube A, having an outlet tip B integral therewith and with the opposite end C compressed or folded to close the tube.

2

The tube in general is round but has two opposite side portions thereof 1-1 thickened and tapered as pressure tabs, which for convenience will be referred to as the flattened front and rear sides. The intermediate portions 2 of the tube are rounded, but tapered somewhat toward the closed end and with the end portions united in any suitable way to prevent any escape of the contents therefrom and may be referred to as the rounded sides.

10 In filling the tube one end may stand open for convenience in filling and then be closed and the two sides brought together and sealed by folding or by heat or pressure as shown in Figures 1 and 2.

At the outlet end of the tube the flattened sides 1-1 have short projections of feet 3-3 formed thereon on which the tube may stand in vertical position without the slitted portion contacting the table or shelf on which it stands.

20 The outlet end of my tube is rounded in a dome shape and has a conical chamber 4 formed therein with its wall inclined inwardly and having a small fine slit 5 cut or formed in the tip thereof at a right angle to the feet 3.

When it is desired to remove a part of the contents of the tube, the front and rear sides 1-1 may be compressed between the finger and thumb of the user and such pressure will cause the slit to expand or open as at 6 thereby permitting movement of the contents of the container out through said slit.

30 When the pressure is removed, the elasticity of the tip and tube will cause the slit to close and prevent any further escape of the fluid or paste as the case may be.

For convenience the tube and cap have a diameter from one flattened side to the other somewhat less than the diameter between the rounded sides, so that if placed lengthwise in a traveling bag with a weight resting upon one of the rounded sides, it will tend to hold the slit closed.

40 Various modifications may be made in the form, size and material of the various parts without departing from the spirit of my invention as disclosed in the claims and I do not limit my claims to the precise forms shown in the drawings.

I claim:

1. In a tubular container for toothpaste, lather and other fluids or semi-fluids, the combination with a flexible tube of rubber or similar material, flattened and tightly closed at one end with the opposite outlet end rounded in dome shape and thickened to form a tapered chamber of somewhat conical form therein with the walls of the tube thickened at two opposite sides of the chamber, of stub feet formed integral with the outlet end of the tube and a fine transverse slit in the rounded end of the dome of the chamber at right angles to the thickened portion of the walls.

55 2. The combination as described in claim 1, said slit being adapted to remain tightly closed when not subjected to pressure at opposite ends thereof and to open and allow the tubal content to flow through it when the rounded end is compressed manually near both ends of the slit.

60 3. The combination as described in claim 2, said stub feet extending beyond the domed end of the tube far enough to support the tube in vertical position thereon and with slit spaced above any support on which the feet may be resting.

65 4. A tubular container for semi-fluids, comprising a flexible tube of rubber or similar material, flattened and tightly closed at one end with the opposite outlet end rounded in dome shape and thickened to form a tapered chamber of somewhat conical form therein, with the walls of the tube thickened at two opposite sides of the

70

3

chamber, stub feet formed integral with the outlet end of the tube and a fine transverse slit in the rounded end of the dome of the chamber at right angles to the thickened portion of the walls.

5. A tubular container for semi-fluids as described in claim 4, said slit being adapted to remain tightly closed when not subjected to pressure at opposite ends thereof and to open and allow the tubal content to flow through it when the rounded end is compressed manually at both ends of the slit.

6. A tubular container for semi-fluids, as described in claim 5, said stub feet extending beyond the domed end of the tube far enough to support the tube in vertical position thereon and with slit spaced above any support on which the feet may be resting.

7. In a tubular container for toothpaste, lather or other fluids or semi-fluids, the combination in a single integral unit with a flexible tube of rubber or similar material,

4

flattened and tightly closed at one end with the opposite outlet end rounded in dome shape and thickened to form a tapered chamber of somewhat conical form therein, with the walls of the tube thickened and flattened at two opposite sides of the chamber, of stub feet formed integral with the outlet end of the tube and a fine transverse slit in the rounded end of the dome of the chamber at right angles to the thickened portion of the walls.

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