Dec. 19, 1922.

F. W. EDWARDS.

FLOSS CARRIER.

FILED APR. 16, 1921.

1,439,076.

Fig. 1,

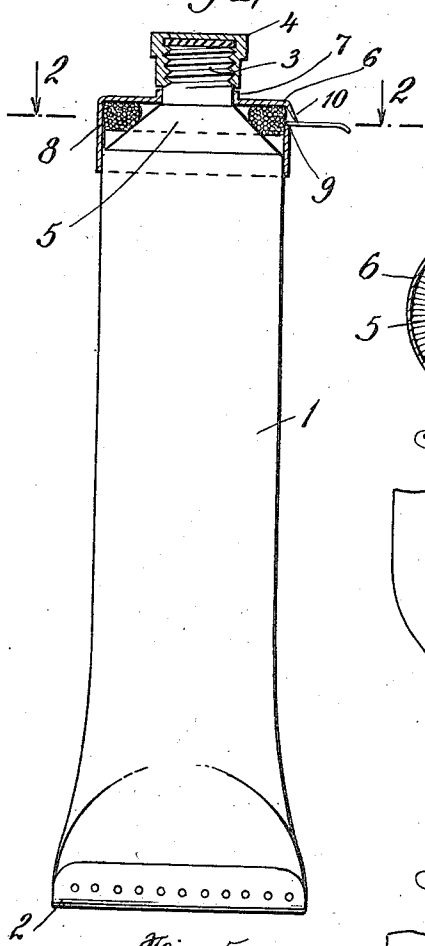


Fig. 2,

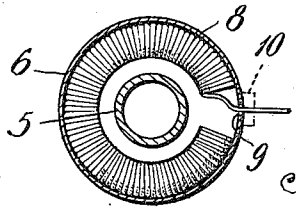


Fig. 4.

Fig. 8,

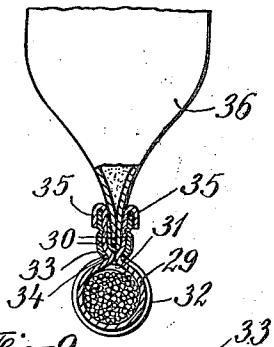


Fig. 9,

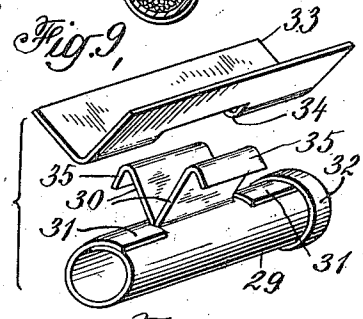


Fig. 3,

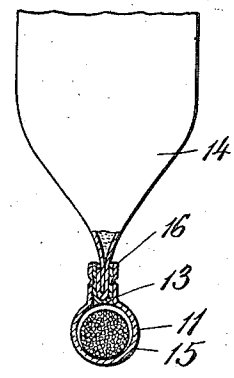


Fig. 6,

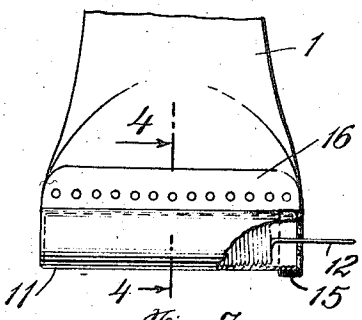
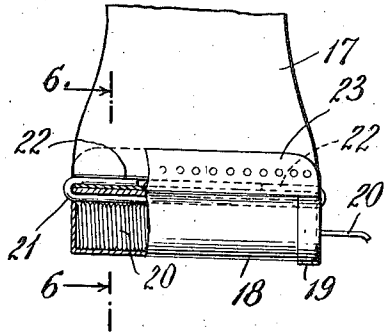


Fig. 5,



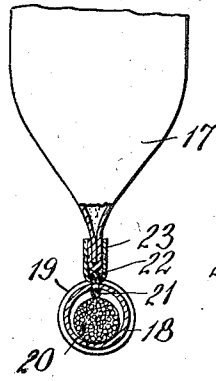
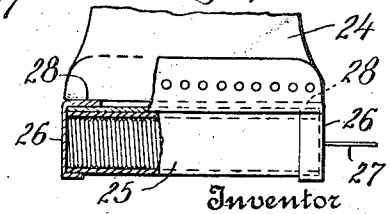


Fig. 7,



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UNITED STATES PATENT OFFICE.

FRANCIS W. EDWARDS, OF ELMHURST, NEW YORK.

FLOSS CARRIER.

Application filed April 16, 1921. Serial No. 461,951.

To all whom it may concern:

Be it known that I, FRANCIS W. EDWARDS, a citizen of the United States, residing at Elmhurst, in the county of Queens, State of New York, have invented certain new and useful Improvements in Floss Carriers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is an improvement in floss carriers, and relates to devices of the character specified, adapted for connection with the ordinary form of collapsible tube used for holding tooth paste and the like. Tooth brushes even when carefully and conscientiously used do not thoroughly clean the teeth, for the bristles cannot reach food deposits, accretions and the like, between adjacent teeth. To properly clean the teeth, the floss, known as dental floss, is made use of, strands of the same being drawn between adjacent teeth. Unless the floss is supported within some form of container, from which it may be withdrawn in suitable strands for use, without handling of the skein or spool, it soon becomes contaminated with dust and like impurities. Since the best results are obtained when the floss is used with dentifrice, it should be always at hand, in the immediate vicinity of the paraphernalia of the toilet.

It has been proposed to provide a container for the floss, supported by the tooth brush or by the receptacle for the tooth cleansing material, forming in the handle of the brush, or in the wall of the receptacle, a chamber for the floss. This procedure is objectionable however, since a particular form of receptacle, or a particular form of brush handle is required.

The object of the present invention is to provide a container for the floss, so constructed that it may be attached directly to the paste container, either at the time of insertion of the paste, at the retailers, or by the consumer, and from which the floss may be withdrawn in strands of the desired length for use, without the necessity for handling the floss that is in the container.

In the drawings;

Figure 1 is a front view of a collapsible tube provided with one form of the improved container, with parts of the container in section,

Figure 2 is a section on the line 2—2 of Figure 1,

Figure 3 is a plan view of a tube, showing another embodiment of the container with a part in section,

Figure 4 is a section on the line 4—4 of Figure 3,

Figure 5 is a front view of the bottom portion of a tube showing another embodiment of the invenaion with a part in section,

Figure 6 is a section on the line 6—6 of Figure 5,

Figure 7 is a view similar to Figure 5 of another embodiment of the invention with a part in section,

Figure 8 is a view similar to Figures 4 and 6 showing another embodiment of container,

Figure 9 is a perspective view showing the container and holding clip of Figure 8.

In the embodiment of the invention shown in Figure 1, the tube 1 is the usual form of collapsible tube, having its bottom closed by a clip 2, and having at its top a reduced externally threaded discharge nipple 3, with which engages a cap 4 to seal the tube. In this form of tube, the nipple 3 is of a rigid material, and is connected to the body of the tube by a tapering neck 5 also of rigid material. This is the usual form of collapsible tube and the container for the floss is in the form of a cap 6 shaped to fit over that end of the tube adjacent to the nipple. The cap has a flanged opening or nipple 7 through which the nipple 3 of the tube is passed, and the flange or nipple 7 fits closely about the nipple 3 between the cap 4 and the neck 5 of the tube. Thus the closing cap 4 for the tube holds the container 6 for the floss in place, and there is sufficient space between the tapering neck 5 and the cap for receiving a skein of floss indicated at 8. The container 6 for the floss has an opening 9 in its side wall, through which a strand of the floss may be drawn, and preferably a cutting blade 10 is secured to the cap adjacent to the opening 9 for engaging the floss to cut the same when desired. The improved container for the floss may be attached when the tube is filled with paste, that is at the place of manufacture, or it may be marketed separately for attachment to the tube. As for instance the container might be sold by retailers of the paste, either to be attached to the tube at the time of sale, or later. The floss may be easily renewed, if it should be exhausted before the tube is emptied,

merely by removing the container and inserting a new skein of floss. Obviously a single container might be used for many tubes of paste.

In the embodiment of the invention shown in Figure 3, the container 11 for the floss indicated at 12 is a tubular and cylindrical structure, of a convenient length, which secures the bottom of the tube 14 against leakage. This container is provided at one end with a removable cap 15, by means of which the floss may be inserted, and the cap has an opening through which a strand of the floss may be drawn. The improved container has a pair of longitudinally extending laterally spaced gripping jaws 16 which are adapted to engage opposite sides of the clip 13 and to be gripped thereon, or to be used in place of a clip by pressing said jaws toward each other. Each jaw is toothed on its inner face, in order to prevent slipping of the container from the clip.

In Figures 5 and 6 the tube 17 carries a cylindrical container 18, having at one end a detachable cap 19 through which a strand of the floss 20 may be drawn. The attaching means for the container is a wire 21 which extends longitudinally of the container within the same, the ends passing through the cap 19 and through the opposite end of the container. The ends are bent toward each other as indicated at 22, and are engaged within the clip 23 which secures the bottom of the tube against leakage. The ends of the wires, as shown, are inserted within the clip, between the same and the tube wall, and they are held in place by the clip, as shown more particularly in Figure 6.

In Figure 7, the tube 24 carries the container 25 which has removable caps 26 at its ends, the said container being tubular like the containers 11 and 18. One of the caps 26 has a central opening through which a strand 27 of the floss may be drawn, and each cap has a hook 28 extending longitudinally of the container toward the opposite cap. The hooks are designed to engage the clip in the same manner as the ends 22 of the wire in Figure 5, to hold the clip in place. In the construction shown in Figures 3 to 7 inclusive, the containers are cylindrical, and they fit closely against the fold of the clip. With this form of tube, as the contents are expressed, the bottom of the tube is folded to facilitate the expression of the contents and to insure that the contents of the tube are completely expressed from each portion of the tube as it is collapsed. The containers shown in Figures 3 to 7 inclusive, may be rolled up in the collapsed folds of the tube, without interfering with the collapsing of the tube or with the withdrawal of the floss. These containers may be attached to the tube at the place of manufacture, or they may be marketed separately and attached to the tube by the consumer. It is obvious that after the contents of the tube have been used, the container might be removed and applied to another tube. In practice however, the containers will probably be discarded with the empty tubes.

In the construction of Figures 8 and 9, the container 29 is formed from a sheet of suitable material having its ends reduced to form tongues 30. The sheet is then formed into a tube, as clearly shown in Figure 9. Projecting tabs 31 are provided at each side of each tongue, by slitting the sheet longitudinally at each side of the tongue, the slots being in register with the side edges of the tongue, and these tabs are lapped upon each other as shown. The tabs may be secured together, or they may be connected by a lock joint, or in any other manner. Caps 32 are placed on the ends of the tubes, and it will be obvious that the caps would hold the tube in shape, fitting as they do over the ends thereof. It will also be obvious that the caps might fit within the ends of the tube if desired, instead of engaging outside of the same. The clip 33 has a slot 34 extending longitudinally thereof, at the bend of the clip, and the tongues 30 are passed through this slot, and then bent outwardly over the edges of the clip as indicated at 35, after which the clip is clamped in place on the collapsible tube 36. The floss container 29 is now held in place on the tube, without any possibility of displacement. One of the caps may have an opening for the strand of floss. In each of the constructions where the container is held at the bottom of the collapsible tube that end of the container having the opening for the floss may have a blade in connection therewith, operating in the same manner as the blade 10 of Figure 1. While the containers shown in Figures 3 to 9 inclusive, are shown as cylindrical, it will be obvious that such containers might be polygonal in cross-section.

I claim:

1. In combination with a collapsible tube for holding tooth paste or the like, a container for floss or the like having means for engaging the tube to secure the container thereto, said container being tubular, and the holding means engaging the ends of the bottom holding clip of the tube to support said container diametrically of the tube and in a position to be rolled up in the collapsed tube.

2. A container for dental floss having an opening through which a strand of the floss may be withdrawn for use, and means in connection with the container for engaging

the holding clip at the bottom of a collapsible tooth paste-holding tube to connect the container to the tube.

3. A container for dental floss having an opening through which a strand of the floss may be withdrawn for use, means in connection with the container for engaging the holding clip at the bottom of a collapsible tooth paste-holding tube to connect the container to the tube, said container being cylindrical and adapted to be rolled up in the tube as it is collapsed.

4. A floss container of tubular form having an opening at one end through which a strand of the floss may be withdrawn, and provided with means for attaching the same to the bottom holding clip of a collapsible tooth paste holding tube diametrically of the same, whereby to permit the container to be rolled up in the tube as it is collapsed.

5. In combination with a collapsible tube for holding tooth paste or the like, a container of tubular form having means at its ends for engaging the bottom holding clip of the tube whereby the container will be held diametrically of the tube in position to be rolled up therein when it is collapsed.

6. In combination with a collapsible tube for holding tooth paste or the like, a container of tubular form having means at its ends for engaging the bottom holding clip of the tube whereby the container will be held diametrically of the tube in position to be rolled up therein when it is collapsed, said means comprising hooks at the ends of the container for engaging within the holding clip at the bottom of the tube.

7. In combination with a collapsible tube for holding tooth paste or the like, a container of tubular form having means at its ends for engaging the bottom holding clip of the tube whereby the container will be held diametrically of the tube in position to be rolled up therein when it is collapsed, said engaging means comprising caps fitting the ends of the container and provided with hooks for engaging the clip.

8. A closed container adapted to hold dental floss, and having an opening through which the floss may be drawn, said container having means for securing the same diametrically to a collapsible tooth paste holding tube at the bottom thereof, to permit the tube when collapsed to be rolled about the container.

In testimony whereof I affix my signature.

FRANCIS W. EDWARDS.