

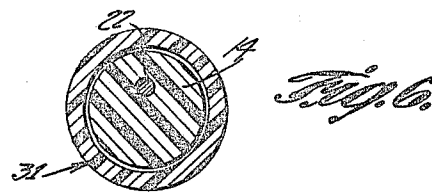
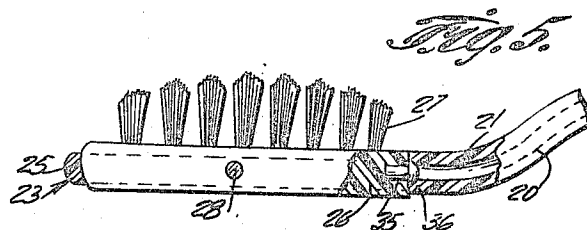
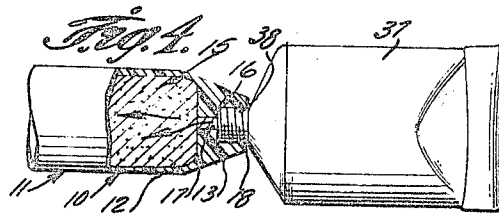
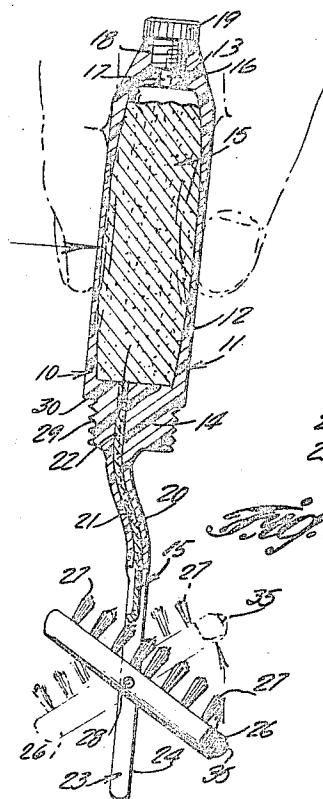
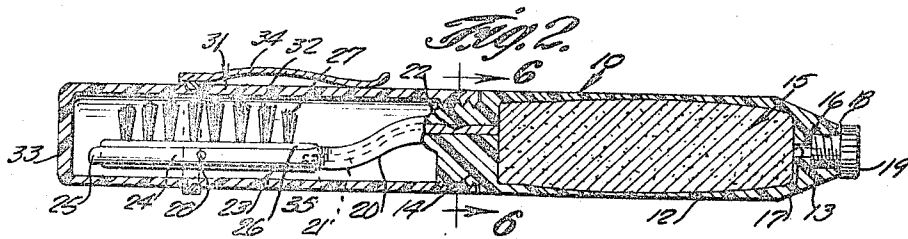
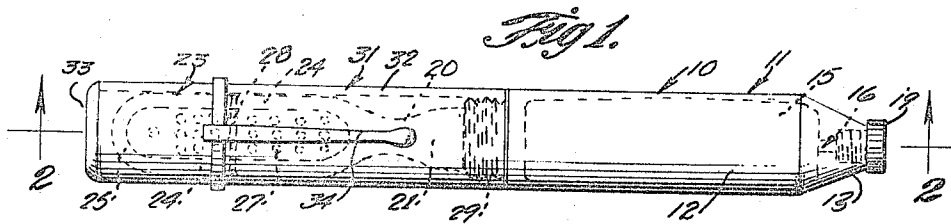
Aug. 25, 1959

S. RIVERO

2,900,650

TOOTHBRUSH HAVING A DENTIFRICE SUPPLY UNIT

Filed April 3, 1958



INVENTOR.  
*Santiago Rivero*  
BY *Vicente J. Enamorado*

ATTORNEYS

1

2,900,650

## TOOTHBRUSH HAVING A DENTIFRICE SUPPLY UNIT

Santiago Rivero, Santa Clara L.V., Cuba

Application April 3, 1958, Serial No. 726,216

3 Claims. (Cl. 15-133)

This invention relates to a toothbrush.

The object of the invention is to provide a toothbrush which includes a reservoir for holding a quantity of dentifrice so that when the toothbrush is to be used, a quantity of the dentifrice can be squeezed or forced from the dentifrice reservoir onto the bristles of the brush so that the toothbrush can be used in the usual manner.

Another object of the invention is to provide a toothbrush which is adapted to be conveniently carried in a person's pocket until it is needed, and wherein the toothbrush can be readily filled or loaded with dentifrice such as toothpaste, powder or the like when the device is empty, and the toothbrush is constructed so that when the device is to be used, a cover member can be removed to expose the bristles whereby a member can be squeezed to force dentifrice from a reservoir onto the bristles so that the toothbrush can be used for conveniently cleaning or brushing the teeth whenever desired or required.

A further object of the invention is to provide a toothbrush which is extremely simple and inexpensive to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are used to designate like parts throughout the same:

Figure 1 is an elevational view of the toothbrush of the present invention.

Figure 2 is a sectional view taken on the line 2-2 of Figure 1.

Figure 3 is a sectional view illustrating the step of squeezing the dentifrice onto the bristles.

Figure 4 is a fragmentary sectional view illustrating the step of filling the reservoir with dentifrice when the reservoir is empty.

Figure 5 is a fragmentary sectional view illustrating the locking feature between the bristle base and the shank.

Figure 6 is a sectional view taken on the line 6-6 of Figure 2.

Referring in detail to the drawings, the numeral 10 designates the toothbrush of the present invention, and the toothbrush 10 is shown to comprise a body member 11 which includes a wall portion 12 of compressible material. The body member 11 further includes first and second spaced apart wall members 13 and 14, and the wall members 13 and 14 coact with the wall portion 12 to define therebetween a reservoir 15 for holding dentifrice which may be toothpaste or the like.

The wall member 13 is provided with a port or opening 16 which is shown to comprise in Figure 2 a first inner portion 17 and an enlarged outer internally threaded socket portion 18, and the numeral 19 indicates a plug which is removable and which threadedly engages the section 18 of the port 16.

Extending outwardly from the wall member 14 and secured thereto or formed integral therewith is a shank 20 which is provided with an elongated passageway 21

2

that communicates with or registers with a passageway 22 in the wall member 14, Figure 2. Formed integral with or secured to an end of the shank 20 is a support member 23 which is shown to comprise spaced apart side pieces 24 and an end piece 25. The numeral 26 indicates a base which is movably mounted between the side pieces 24 of the support member 23, and bristles 27 extend from the base 26 and are connected thereto. The numeral 28 indicates a pivot pin which connects the base 26 to the side pieces 24.

As shown in the drawings, the outer surface of the wall member 14 is threaded as at 29, and the wall member 14 is provided with a shoulder 30. The numeral 31 indicates a cover member which includes walls 32 and 33, and the cover member 31 is removable and includes an inner threaded portion for engaging the threaded portion 29 of the wall member 14, and an end of the cover member 31 is adapted to abut the shoulder 30. When the parts are in the position shown in Figure 2, the cover member 31 serves to protect or enclose the bristles 27, and when the toothbrush is to be used, the cover member 31 can be readily removed. It is to be noted that the cover member 31 and the body member 11 have the same outside diameter, and the numeral 34 indicates a clip which can be used for facilitating the carrying of the toothbrush in a person's pocket or the like.

There is further provided a means for retaining the base 26 in the position shown in Figure 5, as for example when the teeth are being brushed. This means comprises a headed pin 35 which is connected to an end of the movable base 26, and the head of the pin 35 is adapted to selectively engage a flaring portion 36 which is arranged adjacent the end of the shank 20.

In Figure 4 there is illustrated the method of filling the device with toothpaste. Thus, it will be seen that when the reservoir 15 is to be filled with dentifrice or paste, the plug 19 is removed, whereby the neck 38 of a toothpaste tube 37 can be arranged in engagement with the portion 18 so that by squeezing the tube 37, paste from the tube 37 will flow from the neck 38 through the opening 16 and into the reservoir 15. After the reservoir 15 has been filled with dentifrice, the tube 37 is detached or removed, and the plug 19 is replaced.

From the foregoing, it is apparent that there has been provided an automatic toothbrush which is constructed so that toothpaste and a toothbrush are conveniently available in one instrument. When the device is not being used, it can be conveniently carried in a pocket, and the clip 34 provides a convenient supporting or retaining means. When the toothbrush is not being used, the cover member 31 is in the position shown in Figures 1 and 2 so that the bristles 27 are properly guarded or protected. To use the device or toothbrush 10, the plug 19 can be removed so that the reservoir 15 can be filled as previously described. Then the plug 19 is replaced. Then, with a suitable quantity of dentifrice in the reservoir 15, when it is desired to brush the teeth, the cover member 31 is unscrewed from the portion 29 of the wall member 14 and then sufficient manual pressure can be exerted on the base 26 so as to free the pin 35 from the flaring portion 36 whereby the base 26 can be moved to the solid line position shown in Figure 3. Then, finger pressure can be applied to the flexible wall portion 12 so as to compress the reservoir 15 whereby the dentifrice will flow or be squeezed out from the reservoir 15 and this dentifrice will flow out through the passageways 22 and 21 whereby the dentifrice can be arranged along the bristles 27, and the pivotal support including the pin 28 permits all of the bristles 27 to be covered with dentifrice.

After the bristles 27 have been covered with the desired amount of dentifrice, the base 26 is returned from

3

the solid line position shown in Figure 3 to a position such as that shown in Figure 5, and in the position shown in Figure 5 it will be noted that the head of the pin 35 engages the flaring portion 36 which in effect is a slight recess so that accidental pivotal movement of the base 26 is prevented. Then, the toothbrush or bristles can be used for brushing the teeth in the usual manner. After the toothbrush has been used for brushing the teeth, the brush can be washed off or cleaned off, and then the cover member 31 is replaced so that the device can be put away until it is needed again.

The parts can be made of any suitable material and in different shapes or sizes.

The toothbrush of the present invention is extremely useful and practical and is economical and sanitary and it is to be noted that the toothbrush and toothpaste are included in one implement. The device is made of a minimum number of parts and the flexible wall portion 12 may be made of a suitable material such as a transparent plastic so that the amount of dentifrice in the reservoir 15 can be readily observed. As previously stated, due to the provision of the clip 34, the toothbrush 10 can be carried in a pocket similar to a fountain pen, pencil or the like.

Minor changes in shape, size and rearrangement of details coming within the field of invention claimed may be resorted to in actual practice, if desired.

I claim:

1. In a toothbrush, a hollow cylindrical body member providing a reservoir for dentifrice, said body member including a compressible wall portion for dispensing the dentifrice from said body member, said body member further including first and second spaced apart wall members that are formed integral with the opposite ends of said wall portion, said first wall member being of frusto-conical formation and said second wall member being of cylindrical formation, there being a port in said first wall member, said port including a first inner portion and an enlarged outer internally threaded socket portion, a removable plug threadedly engaging said internally threaded socket portion, a shank extending from said second wall member, there being passageways in said shank and second wall member, a support member on the end of the shank, said support member including spaced apart side pieces and an end piece, a base movably mounted between said side pieces, a pivot pin connecting said base to said side pieces, and bristles extending from said base.

2. The structure as defined in claim 1, wherein the outer portion of the second wall member is provided

4

with a reduced threaded portion, the end of the wall portion adjacent said reduced threaded portion providing a shoulder circumjacent to said reduced threaded portion, and a cover member of hollow cylindrical formation having an end thereof threadedly engaging the threaded portion of the second wall member and said cover member adapted to abut said shoulder.

3. In a toothbrush, a hollow cylindrical body member providing a reservoir for dentifrice, said body member including a compressible wall portion for dispensing the dentifrice from said body member, said body member further including first and second spaced apart wall members that are formed integral with the opposite ends of said wall portion, said first wall member being of frusto-conical formation and said second wall member being of cylindrical formation, there being a port in said first wall member, said port including a first inner portion and an enlarged outer internally threaded socket portion, a removable plug threadedly engaging said internally threaded socket portion, a shank extending from said second wall member, there being passageways in said shank and second wall member, a support member on the end of the shank, said support member including spaced apart side pieces and an end piece, a base movably mounted between said side pieces, a pivot pin connecting said base to said side pieces, and bristles extending from said base, the outer portion of the second wall member having a reduced threaded portion and the end of the wall portion adjacent said reduced threaded portion providing a shoulder circumjacent to said reduced threaded portion, a cover member of hollow cylindrical formation having an internally threaded end thereof engaging the threaded portion of the second wall member and said cover member adapted to abut said shoulder, said cover member and body member being of the same outside diameter, an end of the passageway at the end of the shank adjacent the support member being of enlarged flaring formation, and a headed pin connected to an end of the base for selective engagement with the flared portion of the passageway.

#### References Cited in the file of this patent

##### UNITED STATES PATENTS

1,768,301	Weber	June 24, 1930
1,855,572	Gabriel	Apr. 26, 1932
2,756,450	Stolarevsky	July 31, 1956