June 24, 1930. W. P. WEBER 1,768,301

FOUNTAIN TOOTHBRUSH

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Fig. 1.

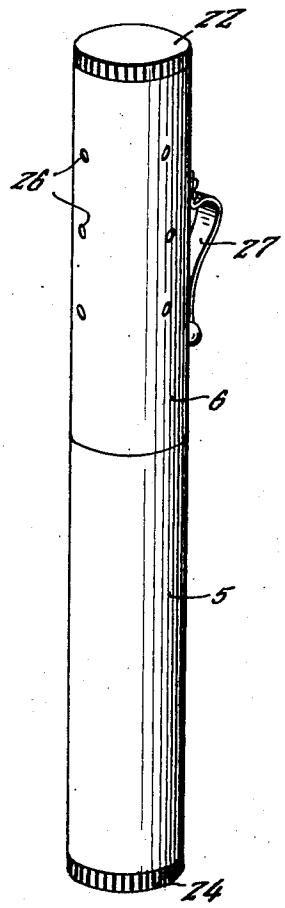


Fig. 4.

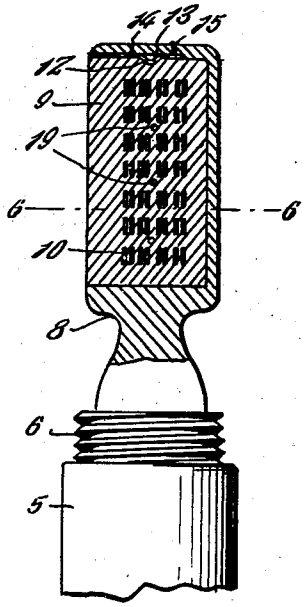


Fig. 5.

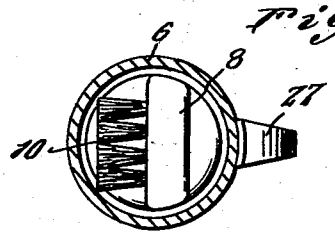
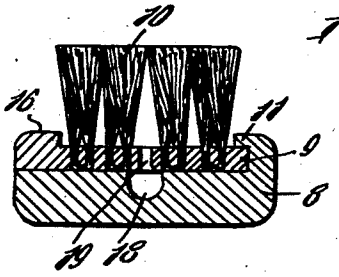


Fig. 6.



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Fig. 2.

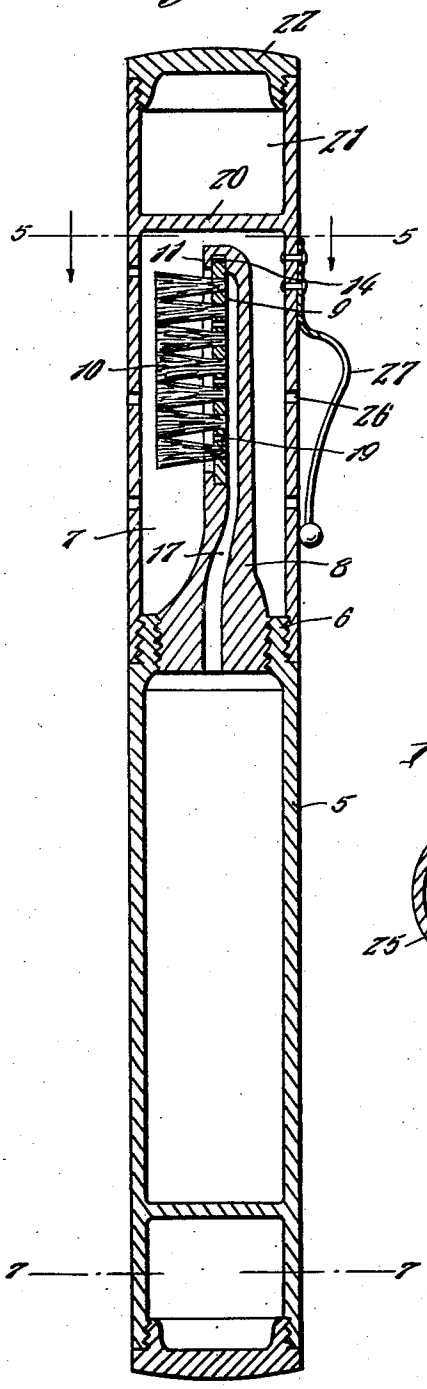


Fig. 3.

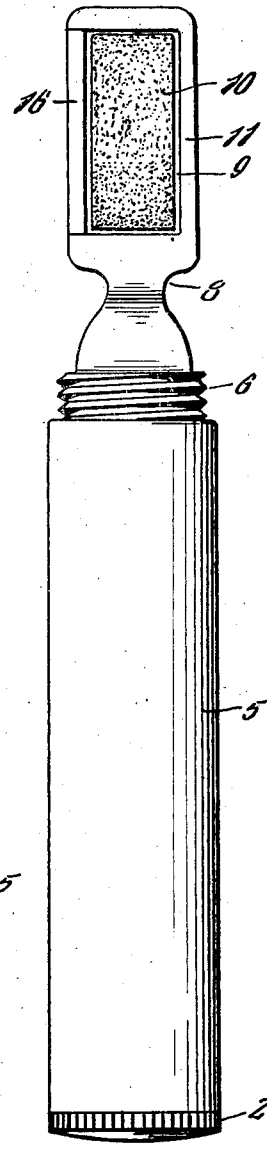
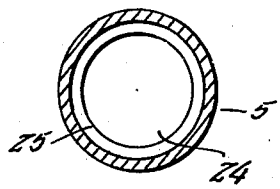


Fig. 4.



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UNITED STATES PATENT OFFICE

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FOUNTAIN TOOTHBRUSH

Application filed April 15, 1930. Serial No. 444,588.

The present invention relates to toothbrushes and has for an important object to construct a brush with a hollow handle and provides the removable cover for the brush end thereof and to keep the same substantially in simulation of a fountain pen, the cover for the brush being provided with a pocket clip so that the device may be conveniently carried in the pocket of a person.

Another important object of the invention is to form the hollow handle of the brush into a liquid reservoir for containing a suitable quantity of liquid dentifrice, mouth wash or the like and providing a passage between the head of the brush and the reservoir for the purpose of feeding the liquid to the brush.

A still further important object of the invention is to provide means for removing and replacing the bristles of the brush so that the same may be removed, from time to time, when desired.

Another object is to provide separate compartments at the end of the device for the purpose of carrying a tooth cleaning preparation in the tube.

A still further object is to provide an article of this character which is neat and attractive in appearance, which may be conveniently carried about the person of travellers and others, relatively inexpensive to manufacture and otherwise well adapted to the purpose for which it is designed.

Other objects and advantages reside in the special construction, combination and arrangement of the various elements forming the invention as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

In the drawings:

Figure 1 is a perspective view of the device in assembled position;

Figure 2 is a longitudinal sectional view therethrough.

Figure 3 is a side elevational view of the brush with the cap removed;

Figure 4 is a fragmentary view in elevation of the upper end of the barrel forming the brush holder and illustrating the brush in vertical section;

Figure 5 is a transverse sectional view through the cap taken along a line 5—5 of Figure 2, and showing the position of the brush bearing;

Figure 6 is a transverse sectional view of the brush head taken along a line 6—6 of Figure 4, and

Figure 7 is a transverse sectional view through one of the compartments taken along the line 7—7 of Figure 2.

Referring to the drawings in detail, the invention comprises a fountain toothbrush comprising a cylindrical barrel 5 having its upper end open and formed with a reduced upper end 6, internally and externally threaded as clearly shown in Figure 2 of the drawings.

A cap 7 is threaded on the externally threaded section of the barrel and is adapted to enclose a brush head 8 having its inner end externally threaded for threaded engagement with the internal threads of the reduced end 6 of the barrel.

The outer end of the brush head is of a substantially flattened formation and adapted to receive a plate member 9 at one face thereof, said plate member providing a mounting for a set of bristles 10, the bristles being threaded through openings formed in the plate as clearly illustrated in Figure 6 in the drawing in a manner for permitting the removal and replacement of the bristles when desired.

At three of the side edges of the flattened portion of the brush head against which the plate 9 is threaded, is formed a flange 11 disposed in outwardly spaced relation from the surface of the head and adapted to receive the edges of the plate between the flange and the head whereby to retain the plate in position thereon.

The outer edge of the plate 9 is formed with a recess 12 adapted to receive a shallow projection formed intermediate the ends of a leaf spring 14 secured by a screw 15 or the like, at the outer end of the brush head between the flange and the flattened surface thereof.

The spring thus prevents accidental displacement of the plate 9 from the brush head. The remaining edge of the brush head, not provided with the flanges 11, is free to permit the sliding of the plate 9 into position for engagement by the flanges and the outer face of the plate 9 adjacent such free edge of the brush head is formed with a flange 16 in order to complete the flange formation entirely about the edges of the brush head.

The brush head 8 is formed with a longitudinally extending duct 17 communicating at its lower end with the interior of the barrel 5 and terminating at its upper end in a channel 18 formed in the base of the brush head adjacent the plate 9.

The plate 9 at its position disposed over the channel 18 is also formed with a plurality of openings 19 providing discharge ports for the fluid passing from the barrel into the channel. The fluid from the barrel will accordingly be fed to the bristles 10 and will accordingly serve to facilitate the cleaning of the teeth when the brush is in use.

The inner portion of the cap 6 adjacent its outer end is formed with a transversely disposed partition 20 forming the outer end of the cap into the compartment 21, open at its outer end and internally threaded about said opening for threadedly receiving a plug 22.

A similar partition 23 is formed adjacent the lower end of the barrel 5, the valve being open at its lower end and also internally threaded for threadedly receiving the plug 24. A compartment 25 is formed at the bottom of the barrel which may be used for carrying a tooth cleaning preparation in tablet form and the compartment 21 may be similarly used or may be employed for the purpose of carrying various medicinal pills or tablets.

The cap 6 is formed with a plurality of vent openings 26 and is provided at its outer wall with a pocket clip 27 for the purpose of securing the device in the pocket of a person. When the device is assembled in the manner indicated, the same may be conveniently carried in the pocket of a person and since the brush head is turned upwardly the fluid in the valve 5 will then flow therefrom.

Upon removing the cap 6 and reversing the position of the barrel a suitable quantity of fluid will flow therefrom through the bristles 10 and the brush will then be in condition for use. When brushing the teeth the liquid may be drawn through the brush by sucking on the brush. The cap 6 provides means for maintaining the brush closed, when not in use, and as clearly illustrated in Figure 1 of the drawings the parts, when assembled, present the appearance of a fountain pen and by reason of the appearance thus created the objections of carrying the brush in the pocket are eliminated.

It is obvious that my invention is susceptible to various changes and modifications in construction without departing from the spirit of the invention or the scope of the appended claim, and I accordingly claim all such forms of the device to which I am entitled.

Having thus described my invention, what I claim as new is:

A toothbrush comprising a barrel member constituting a handle for the brush and provided with a threaded opening at one end, a brush head threadedly mounted on the open end of the barrel, said head having one side of its outer end flattened and formed with a recessed face, an inturned flange formed about three sides of the recess of the head, one of the longitudinal edges of the recess being unobstructed, a duct leading from the recess through the head and communicating with the interior of the barrel, a bristle supporting plate adapted for insertion through the unobstructed side of the recess transversely of the head with its edges disposed under said flanges and constituting a cover for the recess, said plate also having openings formed therein communicating with said duct and said plate having one edge formed with a flange for closing the unobstructed edge of the recess when the plate is mounted in position and a spring clip carried by the head and engaging one edge of the plate whereby to releasably secure the plate against transverse sliding movement.

In testimony whereof I affix my signature.

WALTER P. WEBER.