

Sept. 13, 1927.

1,642,620

J. R. MERRILL

POCKET OUTFIT FOR THE CARE OF TEETH

Filed Nov. 19, 1926

Fig. 1

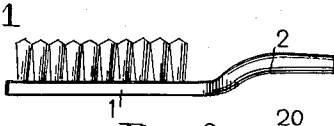


Fig. 2

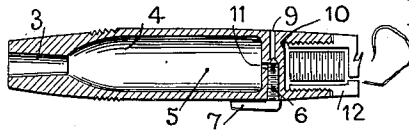


Fig. 3

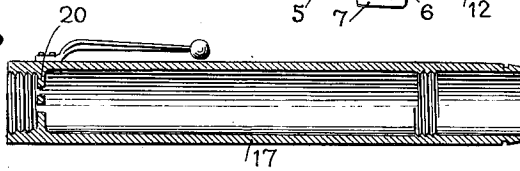
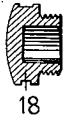


Fig. 4

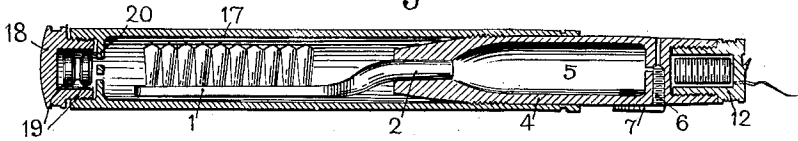


Fig. 5

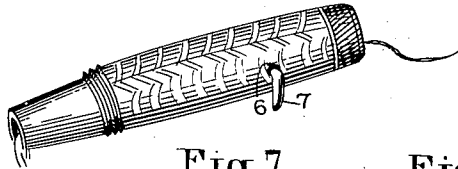


Fig. 7

Fig. 8

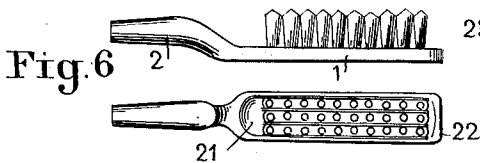


Fig. 6

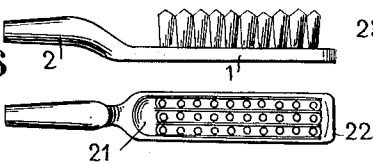


Fig. 9

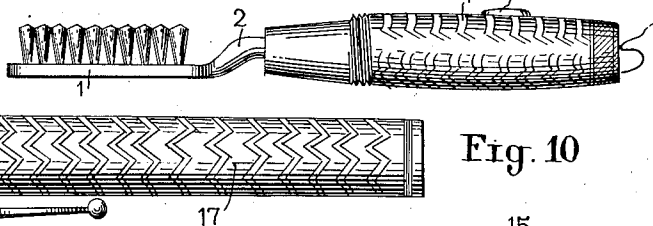


Fig. 10

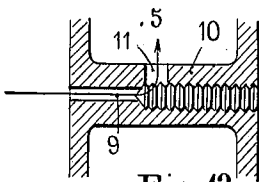


Fig. 11

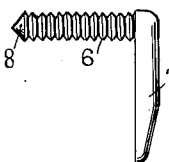


Fig. 12

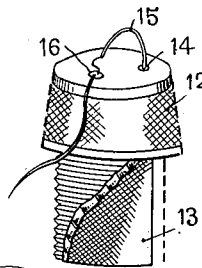
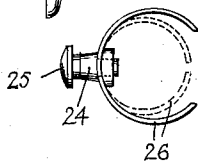


Fig. 14



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UNITED STATES PATENT OFFICE.

JOHN ROGERS MERRILL, OF PARIS, FRANCE.

POCKET OUTFIT FOR THE CARE OF TEETH.

Application filed November 19, 1926, Serial No. 149,433, and in France March 15, 1926.

My invention relates to a pocket outfit for the care of the teeth.

It has already been proposed, and chiefly for traveling purposes, to dispose tooth brushes in tightly closed cases or like recipients, but the devices employed for this purpose will only accommodate the tooth brush itself, and all the accessories such as dental silk thread, dentifrice in the form of liquid or paste, and the like, must be stowed and transported separately, thus increasing the space occupied.

According to my invention, the outfit comprises a tooth brush which is disposed in a hollow handle of which it forms the stopper, said handle containing a suitable dentifrice in the form of a liquid, paste or powder, whose discharge can be controlled by a suitable valve device, and the tooth brush may be protected by a cap or cover assuring aseptic conditions for the brush.

In the appended drawings which represent an embodiment of the invention:

Figs. 1 and 2 are respectively an elevational view of the brush and a lengthwise section of the handle,

Fig. 3 is a section of the enclosing cover,

Fig. 4 is a lengthwise section of the brush mounted in position,

Fig. 5 shows the method of supplying the brush with the dentifrice contained in the handle,

Figs. 6, 7 and 8 show the means employed to retain the liquid dentifrice in the brush,

Figs. 9 and 10 are external views showing respectively the brush in the operative position and the cover for the brush,

Figs. 11 and 12 are detail views on a larger scale showing respectively the valve device controlling discharge of the dentifrice, and the end of the brush handle adapted to contain the dental silk thread,

Figs. 13 and 14 show a modification of the valve device according to Fig. 11.

The outfit (Fig. 1) comprises a tooth-brush 1 provided with a shank 2 whose tapered end fits exactly into a corresponding aperture 3 formed in the hollow handle 4. By this arrangement the brush is well secured to its handle and at the same time the aperture 3 is closed, so that the chamber 5 in the interior of the handle 4 will serve to contain a dentifrice in the form of a liquid or a paste, or even a powder.

To enable the use of a liquid dentifrice in the chamber 5, I provide at the end of said

chamber a closing device allowing the admission of air and comprising (Figs. 2 and 11) a screwthreaded rod 6 which is provided with a controlling handle 8 and whose pointed end 8 serves to close the transverse channel 9 for the admission of air, which is formed in the solid portion 10 constituting the end wall of the chamber 5; said wall may be formed in one with the handle 4 or it may be separately secured in the interior of the said chamber. An orifice 11 connects the chamber 5 with the channel 9.

To utilize the brush, it is removed from its handle 4; it is then held in the horizontal position, as shown in Fig. 5, and the handle 7 is operated in order to rotate the valve rod 6. This will allow air to enter the chamber 5, so that the dentifrice contained in said chamber may be discharged in the form of drops which can be spread upon the brush 1. The valve device 6-7 is then closed, and the brush 1-2 is fitted into its handle, in the position represented in Fig. 9, and is then ready for use.

The handle 4 carries an internal screw thread in the rear of the wall 10, which is adapted for the insertion of a plug 12 in which is formed a suitable recess, for instance of cylindrical shape, adapted to contain a spool 13 of dental silk thread. In the end of the plug 12 is formed an aperture 14 for the egress of the silk thread 15, and a cutting device 16 is provided upon the end of the said plug 12 whereby the thread may be suitably cut off. Upon the brush handle 4 may be mounted a cap or cover 17 (Figs. 3, 4 and 10) of suitable length, in which the brush 1 may be contained.

The said cover may be maintained upon the handle by a simple friction fit, or preferably by screwing it upon a suitable length. The cover 17 is preferably provided at the outer end with a removable plug 18 which is suitably recessed in order to contain any desired product such as the compressed tablets 19 adapted for the disinfecting of the brush 1. For this purpose the cover 17 comprises adjacent the end an aperture wall 20 which serves to maintain the tablets 19, thus preventing the latter from entering the said cover but enabling the formation of an antiseptic atmosphere about the brush 1. The said cover may be optionally perforated for the admission of the outer air around the brush 1 for drying purposes.

The brush may be constructed in any suit-

able manner for the proper maintenance of the liquid dentifrice and for this purpose I may hollow out the back 22 of the brush as shown at 21 (Fig. 6) or may provide the channels 23 between the bristles, as shown in Figs. 7 and 8. The chamber 5 may contain, instead of a liquid dentifrice, a dentifrice in the form of a paste, or even a powder, which may be introduced in any suitable manner, for instance by dividing the said chamber into sections which allow the introduction of a paste or a powder in bulk, or of intermediate recipients containing such paste or powder, which may be compressed in an adequate manner for the discharge of their contents.

The valve device 6—8 shown in Fig. 11 and controlling the inlet of air into the chamber 5 could be replaced by a valve or plug 24 such as shown in Figs. 14 and 15, provided with an operating projection 25 and kept in closing position by means of an elastic ring 26.

The handle 2 of the brush I may further be apertured in such manner as to provide for the direct circulation of the dentifrice from the chamber 5 into the bristles of the brush. The brush, as well as its handle may be made in any suitable form, and the handle may consist of bone, celluloid, galalith or like materials.

My said invention is applicable to tooth brushes of all types and of all classes, irrespectively of their shape, and more generally to all toilet articles, and to all devices in which instruments or objects of any kind are to be protected against contact with the exterior.

What I claim is:

1. In a pocket outfit for the care of the teeth, a handle, a brush removably arranged in said handle, a reservoir in said handle for a liquid dentifrice, an opening for the distribution of such liquid, adapted to be closed by the brush shank, an aperture being provided in the end of said reservoir opposed to the opening of distribution of the liquid, means for regulating the entrance of air through said aperture, and means for sterilizing the said brush.

2. In a pocket outfit for the care of the teeth, a handle, a brush removably arranged in said handle, a reservoir in said handle for a liquid dentifrice, an opening for the distribution of such liquid, a valve for regulating the entrance of air through said aperture, a handle for operating said valve, and means for sterilizing said brush.

3. In a pocket outfit for the care of the teeth, a handle, a brush removably secured to said handle, a reservoir in said handle for a liquid dentifrice, an opening for the distribution of such liquid, a valve for regulating the entrance of air through said aperture, a handle for operating said valve, a

cover for the brush, a chamber provided in the end of said cover, apertures being in the wall of said chamber bringing the same in communication with the part of said cover accommodating said brush, a cover for said chamber, a recess in said cover for receiving sterilizing compressed tablets.

4. A pocket outfit for the care of the teeth, comprising a handle having a chamber for containing a dentifrice, said chamber having a discharge opening in one end and provided in its other end with a thread holder, a brush having a shank removably fitting in and closing the discharge opening of the chamber of the handle, and a casing removably secured to the handle and receiving the brush, said casing having in its end a holder for a disinfectant.

5. A pocket outfit for the care of the teeth, comprising a handle having a chamber for containing a liquid dentifrice, a discharge opening in one end and an air valve at the end opposite the discharge opening, a brush having a shank removably fitting in and closing the discharge opening, and a casing removably secured to the handle and receiving the brush.

6. A pocket outfit for the care of the teeth, comprising a handle having a chamber for containing a dentifrice and a discharge opening in one end, a brush having a shank removably fitting in the discharge opening, and a casing removably secured to the handle receiving the brush.

7. A pocket outfit for the care of the teeth including a tooth brush, said brush comprising a handle having a chamber for containing a dentifrice and an opening in one end leading into the chamber, and a brush having a shank removably fitting in the opening of the handle.

8. A pocket outfit for the care of the teeth including a tooth brush, said brush comprising a handle having a chamber for containing a dentifrice, an opening in one end leading into the chamber and a thread holder in the opposite end, and a brush having a shank removably fitting in the opening of the handle.

9. A pocket outfit for the care of the teeth including a tooth brush, said brush comprising a handle having a chamber for containing a dentifrice and an opening in one end leading into the chamber, the other end of the handle being recessed and having a plug removably fitting therein, said plug being recessed to receive a thread carrying spool and provided with an opening for the passage of a thread and a thread cutter, and a brush having a shank removably fitting in the opening of the handle.

In testimony whereof I have hereunto set my hand at Paris this 6th day of November 1926.

JOHN ROGERS MERRILL.