Jan. 9, 1945. C. R. ROSS 2,366,876

TOOTHBRUSH RECEPTACLE

Filed Sept. 5, 1941

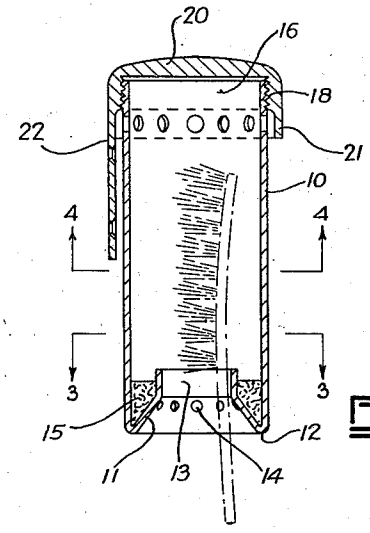

Fig. 2.

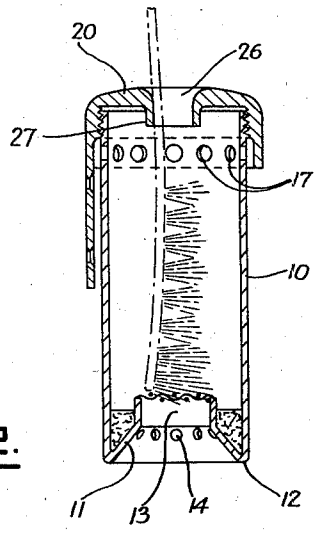

Fig. 5.

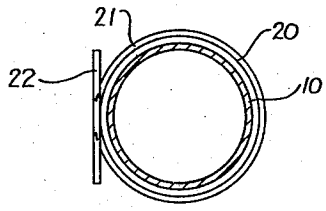

Fig. 4.

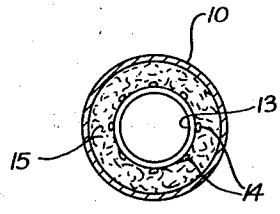

Fig. 3.

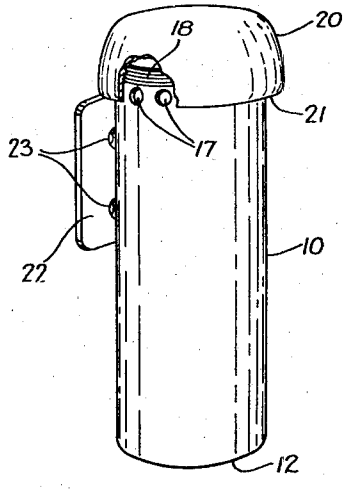

Fig. 1.

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TOOTHBRUSH RECEPTACLE

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In Canada September 28, 1940

7 Claims. (Cl. 206—15.1)

This invention relates to an improved tooth brush receptacle.

An object of the present invention is the provision of a tooth brush receptacle including means for rapidly drying the brush therein.

Another object is the provision of a tooth brush receptacle adapted to provide a good circulation of air around the brush while preventing dust and dirt from entering therein.

Another object is the provision of a tooth brush receptacle having means for sterilizing the brush therein in a very simple and effective manner.

Yet another object is the provision of a tooth brush holder having a Venturi opening therein for directing a flow of air through the bristles of the brush at an increased velocity.

A further object is the provision of a device of the character described which may be easily and cheaply manufactured.

With these and other objects in view, the present invention consists essentially of a tooth brush receptacle comprising a casing, ventilation openings in the casing, and a restricted opening in one end of the casing through which the tooth brush is inserted thereinto, said opening being adapted to direct air through the bristles of the brush, as more fully described in the following specification and illustrated in the accompanying drawing, in which

Figure 1 is a perspective view of the receptacle with a part of the cover removed,

Figure 2 is a vertical section through the receptacle,

Figure 3 is a cross section taken on the line 3—3 of Figure 2,

Figure 4 is a cross section taken on the line 4—4 of Figure 2, and

Figure 5 is a vertical section through an alternative receptacle.

Referring more particularly to Figures 1 to 4 of the drawing, 10 is a casing formed of any suitable material and of any desired shape, said casing, however, preferably being in the form of an elongated cylinder. This casing is preferably retained in a vertical position but it may, if desired, be positioned horizontally.

A tube 11 substantially in the form of a truncated cone or funnel-shaped, is formed on the bottom end 12 of the casing 10 and projects into said casing while an opening 13 is formed in the inner end of the cone or tube. Actually, 13 is a restricted opening in the bottom end of the casing through which the tooth brush may be inserted thereinto, said opening being slightly smaller than the head of the brush so that the bristles thereof must bend to permit the head to enter the casing. A plurality of ventilation openings 14 are formed adjacent the bottom 12 of the casing and, if desired, absorbent means 15, such as cotton batting, is situated in the casing adjacent or over these openings 14. This absorbent material carries or is impregnated with a suitable antiseptic for sterilizing purposes.

The upper end of the casing 10 is preferably open, as at 16, and a plurality of ventilation openings 17 are formed in the casing spaced from said upper end. The casing has external threads 18 at its upper end and an internally threaded cap 20 is adapted to be screwed on to the casing, although said cap may be removably secured to the casing in any other desired manner. This cap is formed with a depending flange 21 which, when the cap is positioned on the casing, overlaps the openings 17 but is spaced outwardly therefrom. The cap 18 and its flange 21 constitute a hood overlying the openings 17 to prevent dust or dirt from entering therein and yet permitting a circulation of air therethrough.

This receptacle may be mounted on a suitable support such as, for example, a wall, in any suitable manner. One simple and convenient method of accomplishing this is to suspend a lug 22 from the cap 20, said lug having orifices 23 therein through which nails or screws may extend to secure the cap to the support.

In use, the tooth brush is inserted through the restricted opening 13 into the casing 10, the flexibility of the bristles of the brush making this possible. The cone or funnel 11 acts as a Venturi tube and directs air at an increased velocity through the bristles of the brush in order rapidly to dry said bristles. This air circulates upwardly through the bristles and out through the openings 17 while the latter permit this circulation but prevent dust or dirt from entering the casing. At the same time, air entering the openings 14 assists in drying the bristles but the chief purpose of this air is to evaporate the antiseptic in the absorbent means 15 and to direct it through the brush bristles. The brush is withdrawn from the casing 10 merely by grasping the handle thereof which projects outwardly through the opening 13, and pulling it downwardly.

Figure 5 illustrates an alternative form of the invention, in which the casing 10 is constructed as described above, with the exception that a screen or perforated plate 25 covers the opening 13 in the inner end of the tube 11. The cap 20 has a central opening 26 extending therethrough which diverges towards its upper end. A short

annular flange 27 depends downwardly from the inner surface of the cap around the opening 26. The opening and the flange form a tube substantially in the form of a truncated cone projecting into the casing.

In this alternative, the brush is inserted into the casing 10 through the opening 26 of the cap 20. When in the casing, the brush rests on the screen or plate 25. The cone or funnel 11 directs air through the bristles of the brush and this air passes out through the openings 17. The tube formed by the opening 26 and the flange 27 also directs air through the bristles while air entering through the openings 14, directs the antiseptic through said bristles. The brush may be withdrawn from the casing merely by pulling it upwardly.

From the above, it will readily be seen that a tooth brush receptacle has been provided including means for rapidly drying the brush therein by providing a good circulation of air thereabout, suitable means also being provided for sterilizing the brush and preventing dust and dirt from being deposited thereon.

Various modifications may be made in this invention without departing from the spirit thereof or the scope of the claims and, therefore, the exact forms shown are to be taken as illustrative only and not in a limiting sense and it is desired that only such limitations shall be placed thereon as are disclosed in the prior art or are set forth in the accompanying claims.

What I claim as my invention is:

1. A tooth brush receptacle comprising a casing, a plurality of ventilation openings spaced from the top of the casing, a cap removably mounted on the upper end of the casing, a flange depending from the cap overlying and spaced from the ventilation openings, a lug extending downwardly from the cap by means of which the receptacle may be secured to a support, a tube substantially in the form of a truncated cone formed on the bottom of the casing projecting therein, ventilation openings adjacent the casing bottom, absorbent means at the latter openings for retaining an antiseptic, and an opening in the inner end of the tube through which the tooth brush is inserted into the casing, said tube being adapted to direct air through the opening and the bristles of the brush.

2. A tooth brush receptacle comprising a casing, a tube substantially in the form of a continuous truncated cone formed on the bottom of the casing and projecting therein, a large central opening in the inner end of the tube adapted to permit the free passage of air through the tube, screening means over said opening, a cap removably mounted on the casing, a central opening in the cap through which a tooth brush is inserted into the casing, and ventilation openings in the tube, said brush resting on the screening means when in the casing, whereby the tube directs air through the bristles thereof.

3. A tooth brush receptacle comprising a casing, a tube substantially in the form of a truncated cone formed on the bottom of the casing and projecting therein, an opening in the inner end of the tube, screening means over said opening, a cap on the casing, a central opening extending through the cap through which a tooth brush is inserted into the casing, an annular flange depending downwardly from the cover around the opening therein, and ventilation openings formed in the casing beneath the flange, said brush resting on the screening means when in the casing, whereby the tube directs air through the bristles thereof.

4. A tooth brush receptacle comprising a casing, a tube substantially in the form of a truncated cone formed on the bottom of the casing and projecting therein, a large central opening in the inner end of the tube adapted to permit the free passage of air through the tube, screening means over said opening, ventilation openings adjacent said casing end, adsorbent means at the latter openings between the cone and the casing for retaining an antiseptic, and an opening in the top of the casing through which a tooth brush is inserted into the casing, said brush resting on the screening means when in the casing, whereby the tube directs air through the bristles thereof.

5. A tooth brush receptacle comprising a casing, a plurality of ventilation openings spaced from the top of the casing, a cap removably mounted on the upper end of the casing, a flange depending from the cap overlying and spaced from the ventilation openings, a lug extending downwardly from the cap by means of which the receptacle may be secured to a support, a tube substantially in the form of a truncated cone formed on the bottom of the casing projecting therein, an opening into the casing through which a tooth brush is inserted therein, and ventilation openings in the tube, said brush being supported in the casing by the tube.

6. A tooth brush receptacle comprising a casing, a plurality of ventilation openings spaced from the top of the casing, a cap removably mounted on the upper end of the casing, a flange depending from the cap overlying and spaced from the ventilation openings, a lug extending downwardly from the cap by means of which the receptacle may be secured to a support, a tube substantially in the form of a truncated cone formed on the bottom of the casing projecting therein, an opening into the casing through which a tooth brush is inserted therein, ventilation openings adjacent the casing bottom, and absorbent means at the latter openings for retaining an antiseptic, said brush being supported in the casing by the tube.

7. A tooth brush receptacle comprising a casing, a plurality of ventilation openings spaced from the top of the casing, a cap removably mounted on the upper end of the casing, a flange depending from the cap overlying and spaced from the ventilation openings, a lug extending downwardly from the cap by means of which the receptacle may be secured to a support, a tube substantially in the form of a truncated cone formed on the bottom of the casing projecting therein, an opening in the inner end of the tube, screening means over the opening, ventilation openings in the tube, absorbent means in the casing over the latter openings for retaining an antiseptic, and an opening in the cap through which a tooth brush is inserted into the casing, said brush resting on the screening means when in the casing, whereby the tube directs air through the bristles thereof.

CHARLES RAYMOND ROSS.