

E. C. DYE.
TOOTH BRUSH HOLDER AND STERILIZER.
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1,122,881.

Patented Dec. 29, 1914.

Fig. 1.

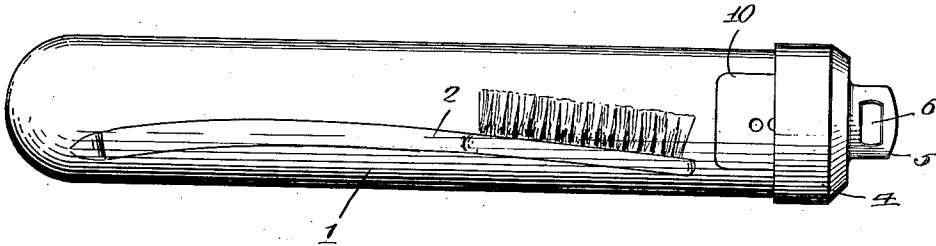


Fig. 2.

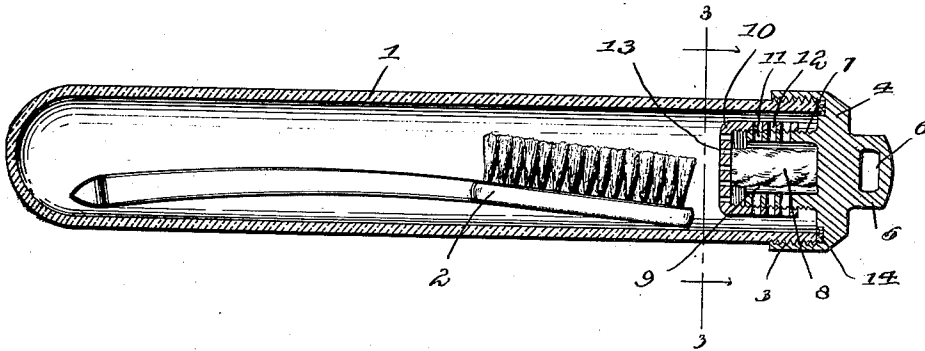


Fig. 3.

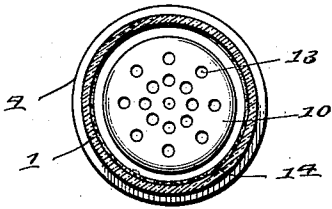
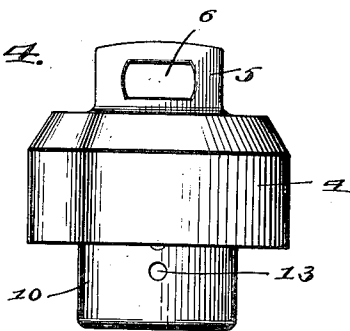


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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TOOTH-BRUSH HOLDER AND STERILIZER.

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To all whom it may concern:

Be it known that I, ERNEST C. DYE, a citizen of the United States, residing at Greenville, in the county of Greenville and State of South Carolina, have invented new and useful Improvements in Tooth-Brush Holders and Sterilizers, of which the following is a specification.

This invention relates to a tooth brush holder and sterilizer, the object of the invention being to provide a simple and efficient construction of device for containing a tooth brush when not in use and for thoroughly sterilizing the same.

A further object of the invention is to provide a device of the character described comprising a casing constructed to permit of the ready insertion and removal of a tooth brush and having a closure embodying simple and effective means for supplying a gas having germicidal properties, whereby the germs will be destroyed or rendered harmless.

A still further object of the invention is to provide a device embodying means whereby the amount of germicidal gas or vapor supplied to the casing may be conveniently controlled and regulated.

The invention consists of the features of construction, combination and arrangement of parts herein fully described and claimed, reference being had to the accompanying drawing in which:—

Figure 1 is a side elevation of a tooth brush holder and sterilizer embodying my invention. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a vertical transverse section on the line 3—3 of Fig. 2. Fig. 4 is a detail view of the closure and germicide container.

Referring to the drawing 1 designates a casing made of glass or other suitable material, of the proper size and shape to receive a tooth brush 2. One end of this casing is closed, while the opposite end thereof is open and externally threaded to receive a closure and germicide container 4, through which open end of the casing the brush may be inserted and removed when the said closure is attached.

A closure member 4 is in the form of a cap having an internally threaded flange to engage the threads 3, whereby said closure member is held in applied position. Any

other form of connection between the casing and cap or closure member may, however, be employed. As shown, the cap or closure member 4 is provided with a lug 5 serving as a finger piece by which the cap may be conveniently attached and detached, said lug having an opening 6 therein, adapting the lug for engagement with a nail, hook or other suspending device, whereby the casing may be hung up in a ready and easy manner. The cap 4 is provided with an annular internal projection 7, which is designed to extend a suitable distance into the casing 1 and forms a chamber for the reception of a germicide holder 8. This holder 8 may consist of a body of absorbent material, such as a cotton or wool roll of proper dimensions, saturated with a suitable germicide liquid, such as formaldehyde, capable of giving off by evaporation a gas or vapor. The roll is held within the chamber 9 formed by the annular projection 7 by a cap 10, the outer surface of the projection 7 and inner surface of the flange of said cap being threaded or otherwise connected, whereby the cap may be applied and removed and adjusted on the projection as occasion requires. In the sides of the projection 7 are formed vapor outlets or perforations 11 which are adapted to register with similar outlets or perforations 12 formed in the flange of the cap 10, by which the vapor given off from the holder 8 may pass into the casing 1. Perforations 13 are also formed in the body of the cap 10 to allow the gas or vapor to flow from the chamber 9 to the body of the casing, while a gasket 14, consisting of a ring of packing material of any suitable character, is fitted within a receiving groove in the body of the closure 4 and adapted to bear against the adjacent end of the casing 1 to tightly seal said casing against the escape of the germicidal gas or vapor.

It will be understood from the foregoing description that the gas or vapor supplied from the holder 8 will fill the casing 1, thus subjecting the tooth brush 2 to the direct action of such gas or vapor, whereby all the germ life contained thereon is destroyed or rendered harmless. The closure 4 may be readily attached at any time for the removal of the brush and cap 10 attached therefrom for the purpose of replenishing

the roll 8 with a fresh supply of the germicidal agent or for the substitution of a new roll saturated with the liquid germicide to a desired degree.

5 It will be evident that the cap 10 may be adjusted to regulate the amount of gas or vapor discharging through the perforations 11, and may also be adjusted to move the openings 11 and 12 out of register, 10 thereby closing the openings 11, leaving the openings 13 as the only vent for the flow of the gas or vapor to the casing. The cap 10 may further be adjusted to compress or squeeze the roll 8 to force out more or less 15 of the germicidal liquid, so that it will vaporize for supply to the casing.

It will be observed that the absorbent roll or holder 8 is of somewhat less diameter than the chamber 9 so that an intervening 20 space will be provided for the evaporation of the germicide, and that by adjusting the cap inwardly the size of the germicide receptacle may be increased to correspondingly increase the evaporation of the germicide and its supply to the casing 1. 25

It will be seen that my invention not only provides a holder to contain and maintain a tooth brush out of contact with the outer atmosphere, but at the same time provides 30 means for subjecting the tooth brush to the action of a germicide vapor. It will be evident that the brush does not at any time come in contact with the germicide liquid, but if any small amount of the liquid should 35 pass through the perforations into the body of the container it would evaporate, thus obviating any liability of the germicide remaining on the brush bristles in liquid form when the brush is removed from the casing 40 for use.

I claim:—

1. A tooth brush holder and sterilizer comprising a container of a size and shape to receive a tooth brush, a closure member detachably connected with said container, 45 said closure member having a projection forming a chamber to receive a holder of suitable material containing a volatile liquid germicide, said chamber being provided with perforations in the sides thereof, and 50 a closure member for said chamber having perforations for coaction with the perforations in said chamber, said closure member being adjustable on said chamber to close or regulate the effective size of the perfora- 55 tions therein.

2. A tooth brush holder and sterilizer comprising a casing of a size and shape to receive a tooth brush, a detachable closure member for said casing, said closure member having a projection extending inwardly therefrom and forming a chamber provided with perforations, a body of absorbent material disposed in said chamber and containing a volatile liquid germicide, and a 65 cap adjustably connected with said projection and provided with apertures in the flange thereof for coaction with the perforations in said projection and provided also with apertures in its body portion, said cap 70 being adjustable to close or vary the effective size of the perforations and to compress the body of absorbent material.

In testimony whereof I affix my signature in presence of two witnesses.

ERNEST C. DYE.

Witnesses:

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STEPHEN NETTLES.