June 9, 1936. B. B. V. LYON 2,043,629

ANTISEPTIC CONTAINER FOR TOOTH BRUSHES

Filed Nov. 2, 1935

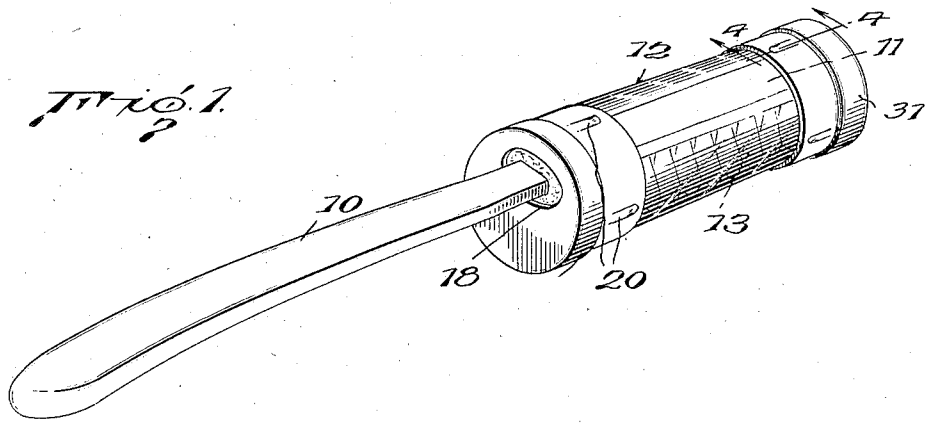


Fig. 1.

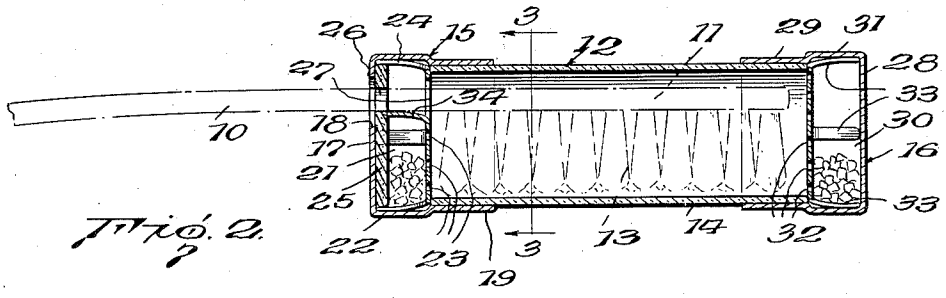


Fig. 2.

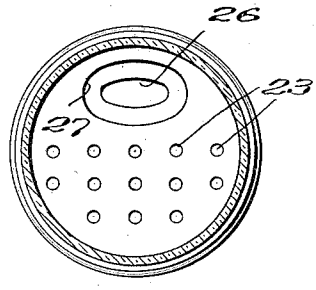


Fig. 3.

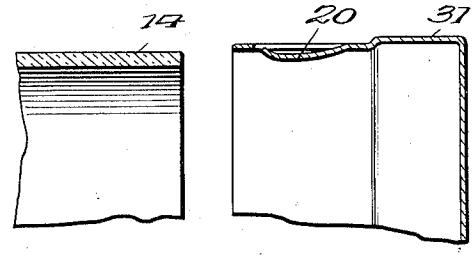


Fig. 4.

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ANTISEPTIC CONTAINER FOR TOOTH BRUSHES

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3 Claims. (Cl. 206—15.1)

This invention relates to containers adapted for use in disinfecting or sterilizing articles, and more particularly to a container adapted for use in the disinfection and sterilization of tooth brushes or the like.

An object of this invention is to provide a sterilizing means in the form of a container which is adapted to receive either a portion of a tooth brush, such as the head or brush portion thereof, or which may be constructed to receive the entire brush, including the handle, so that all portions of the brush may be sterilized.

It has been found in an extensive study that tooth brushes which have been or are in use are infected with either pathogenic or non-pathogenic bacteria, or both, and it is, therefore, an object of this invention to provide a means to render the bristles and other portions of the brush sterile and otherwise safe for use.

It is another object of this invention to provide a container having a chamber or chambers therein to receive a volatile chemical of a nature which will have an effective duration substantially equal to the life of the average tooth brush.

A further object of this invention is to provide a container which will not only sterilize the brush, but will protect the brush against dust, air-borne bacteria or the like.

A still further object of this invention is the provision of a container adapted to receive a volatile chemical which will not only effect a sterilization of the brush, but will also facilitate the drying of the brush after it has been used.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawing, wherein like symbols refer to like or corresponding parts throughout the several views:

Figure 1 is a perspective view of a container constructed according to an embodiment of this invention having a conventional tooth brush mounted therein.

Figure 2 is a longitudinal section of the container.

Figure 3 is a sectional view taken on the line 3—3 of Fig. 2.

Figure 4 is an enlarged fragmentary section taken on the line 4—4 of Fig. 1, but showing the parts separated.

Referring to the drawing, wherein like symbols of reference designate corresponding parts throughout the several views, the numeral 10 designates generally a brush of conventional construction which may be of the type used for brushing of the teeth, and which is provided with a head 11 including bristles 13.

In order to prevent the spread of bacteria which may accumulate on any portion of the head 11 and the bristles 13 of the brush, I have provided a container generally designated as 12 which is adapted to receive the head 11 of the brush and entirely enclose this head for treatment by volatile gases contained within the receptacle or disinfecting member 12.

The receptacle 12 comprises a body 14, which in the present instance is of tubular construction, being open at each end, and provided with closures in the form of caps 15 and 16 which cover the ends of the body 14. The body 14 may be of either cylindrical form, or may assume any other desired configuration, it being understood that the body 14 is designed as an enclosing means for the head of the brush, or if desired the body 14 may be enlarged sufficiently to enclose both the handle 10 and the head 11 of the brush. The body 14 may be constructed of any suitable material, preferably material which is impervious to water and material which is unaffected by the sterilizing gases which are adapted to be used in the container 12.

The cap 15 comprises an end wall 17 having an opening 18 through which the handle of the brush is adapted to project. A flange or skirt 19 is carried by the end wall 17 and is adapted to telescope an end of the hollow body 14. This flange or skirt 19 may be detachably secured to the body by any suitable means, and in the present instance a plurality of resilient fingers 20 are struck from the flange or skirt 19 and yieldably engage the body 14. If desired the cap 15 may be detachably secured on the body 14 by other means, such as screw threads, or like fastening means.

The cap 15 is provided with a disinfectant chamber 21 disposed between the end of the body 14 and the wall 17 of the cap, and preferably this chamber 21 is formed by enlarging the flange or skirt portion 19 as at 22. A perforate inner wall or plate 23 having spring fingers 24 is adapted to be detachably positioned within the cap 15, with the fingers 24 extending in the direction of the end wall 17 and engaging in the enlarged portion 22 of the cap. A fibrous plate or pad 25 is disposed in the chamber 21, and is provided with an opening 26 through which the handle 10 of the brush is adapted to be projected. This pad 25 constitutes a sealing means for the hole or opening 18 in the cap 15 so that less or none of the volatile gases within the container will be per-

mitted to escape. The perforate plate 23 has a relative large opening 27 through which the handle of the brush is adapted to project, and this opening 27 is adapted to aline with the opening 26 in the sealing pad or member 26.

The cap 16 is constructed somewhat similar to the cap 15 except that the cap 16 does not have any opening in the end wall 28 thereof. The cap 16 is provided with a flange or skirt 29 which telescopes the opposite end of the body 14 and may be provided with any suitable fastening means to removably secure the cap 16 on the body 14. The cap 16 has a disinfectant chamber 30 formed by providing an enlarged portion 31 between the end wall 28 and the outer end of the flange or skirt 29. A perforate inner wall 32 is disposed within the cap 16 and is provided with spring fingers 33 which engage the enlarged portion 31 and maintain the inner wall 32 in spaced relation to the end wall 28.

The disinfectant which is adapted to be disposed in the chambers 21 and 30 may take the form of crystals, powder, a liquid which is soaked into a fibrous pad, or any other suitable disinfecting means, it being understood that any volatile chemical capable of giving off a bacteria destroying gas or agent may be embodied in this device. If desired this volatile chemical may be combined with some sort of perfume or deodorant so that the disinfecting chemical will not leave an unpleasant odor on the brush.

In the use of this device the chambers 21 and 30 may receive the desired disinfecting means, the plates 23 and 32, respectively, being removed from the caps 15 and 16, respectively. Preferably the opening 27 in the plate 23 is defined by a flange or wall 34 so as to prevent any of the sterilizing means in the chamber 21 from leaking out through the opening 18 in the end wall 17.

Where a sterilizing container 12 is used which is adapted to only enclose the head of the brush, the cap 16 having the sterilizing means in the chamber 30 is first placed on an end of the body 14, and the cap 15 removed from the body 14. The head 11 of the brush is then inserted in the body 14, and then the handle 10 of the brush is passed through the opening 26 in the sealing member 25 and through the opening 27 in the perforate wall 23. The cap 15 may then be secured to the body 14, in the present instance being secured by the spring fingers 20. The bristles of the brush need not be dried out before the brush is placed in this container, in view of the fact that the volatile gases will assist in the drying of the bristles. Preferably the chemical used in the chambers 21 and 30 is of a character such that it will last substantially for the life of the brush, so that it will be possible for a manufacturer to put out both the brush and the sterilizing device.

It will be noted that this brush protecting and sterilizing device is not cumbersome and is only slightly larger than the head of the brush so that a brush having a device of this kind mounted thereon may be supported from the usual bathroom appliances for that purpose.

The material of which the receptacle 12 is constructed may be of either the frangible or non-frangible type, and it is, of course, understood that I do not wish to be limited to any particular character of material, and this material may be of transparent or non-transparent quality.

What is claimed is:

1. A brush sterilizing means comprising a container having at least one end thereof open, a perforate plate engaging against said open end and provided with outwardly extending fingers disposed substantially parallel with the longitudinal axis of the container, and a cap engaging over said fingers and telescoping the adjacent end of the container, said cap having a chamber between said plate and the end wall thereof, said fingers engaging against the end wall of the cap and determining the depth of the chamber, the end wall of the cap and said plate having alining brush handle receiving openings.

2. A brush sterilizing means comprising a container having at least one end thereof open, a perforate plate engaging against said open end and provided with outwardly extending fingers disposed substantially parallel with the longitudinal axis of the container, a cap engaging over said fingers and telescoping the adjacent end of the container, and means carried by the cap engageable with the outer surface of the container to removably hold the cap on the container, said cap having a chamber between said plate and the end wall thereof, said fingers engaging against the end wall of the cap and determining the depth of the chamber, the end wall of the cap and said plate having alining brush handle receiving openings.

3. A brush sterilizing means comprising a container open at each end, a perforate plate engaging against each end of the container, outwardly extending fingers carried by each plate and disposed substantially parallel with the longitudinal axis of the container, and a cap for each end of the container, each cap engaging over the fingers of the adjacent plate and partially telescoping the adjacent end of the container, each cap having a chamber between the perforate plate and the end wall thereof, the fingers of a plate engaging against the end wall of the cap disposed thereabout and determining the depth of the chamber, the end wall of one cap and the plate disposed therein being provided with alined brush handle receiving openings.

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