

April 21, 1942.

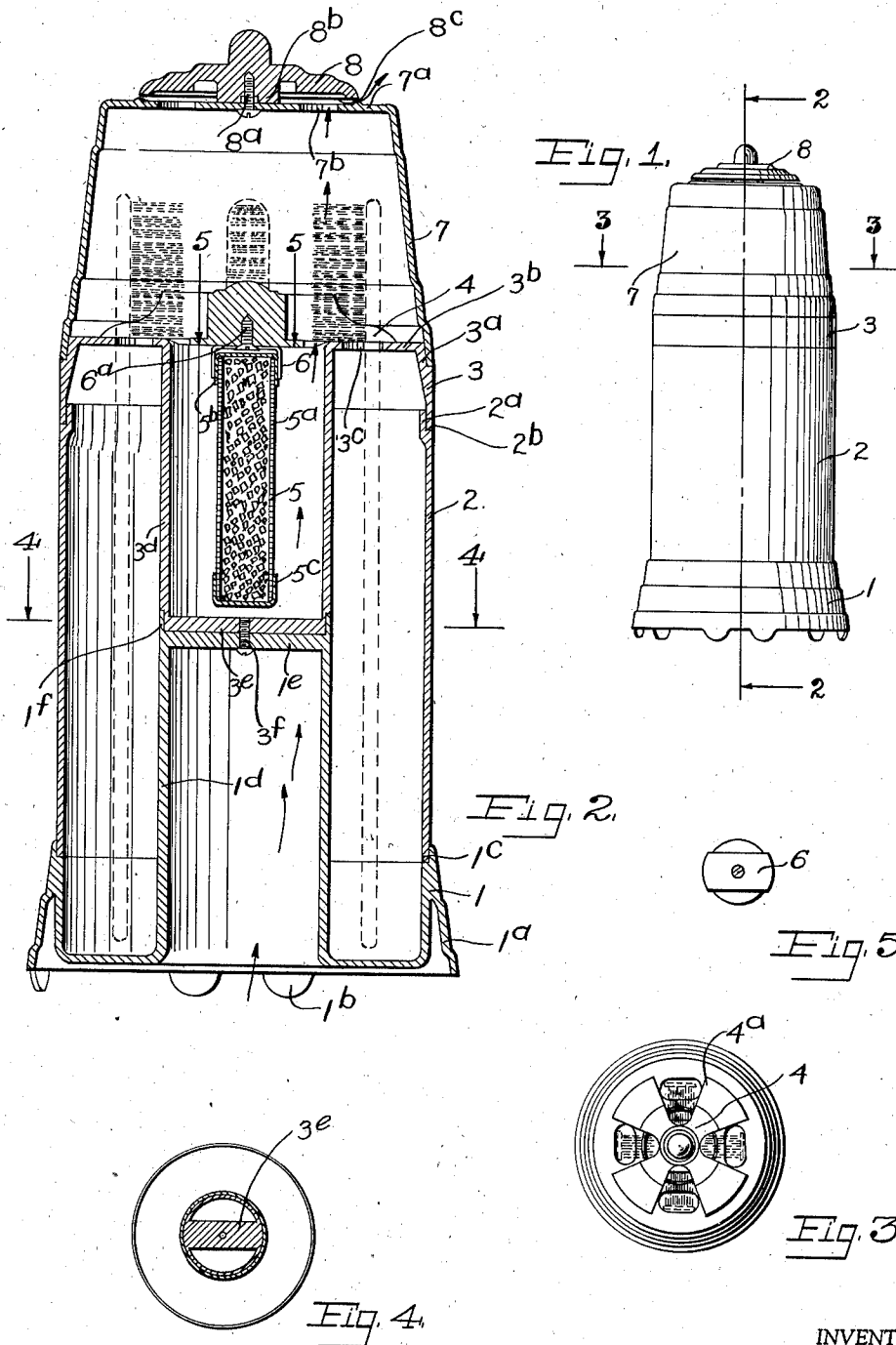
F. E. HART

2,280,431

TOOTHBRUSH HOLDER

Filed May 18, 1938

2 Sheets-Sheet 1



INVENTOR.
BY *Fred E. Hart*
A. B. Bowman ATTORNEY.

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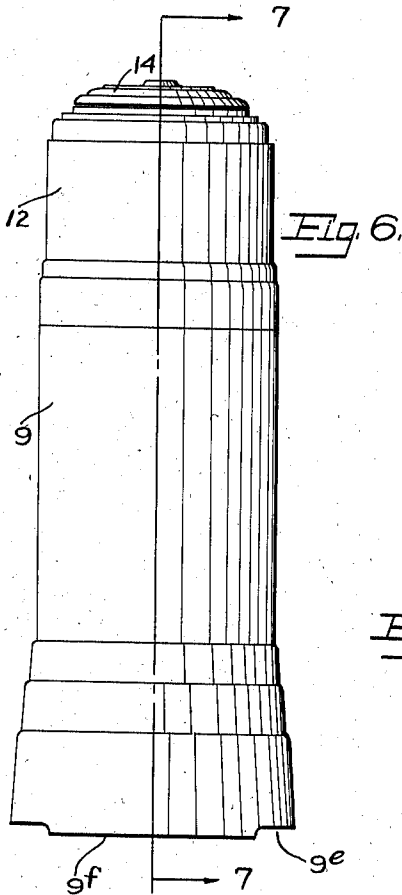
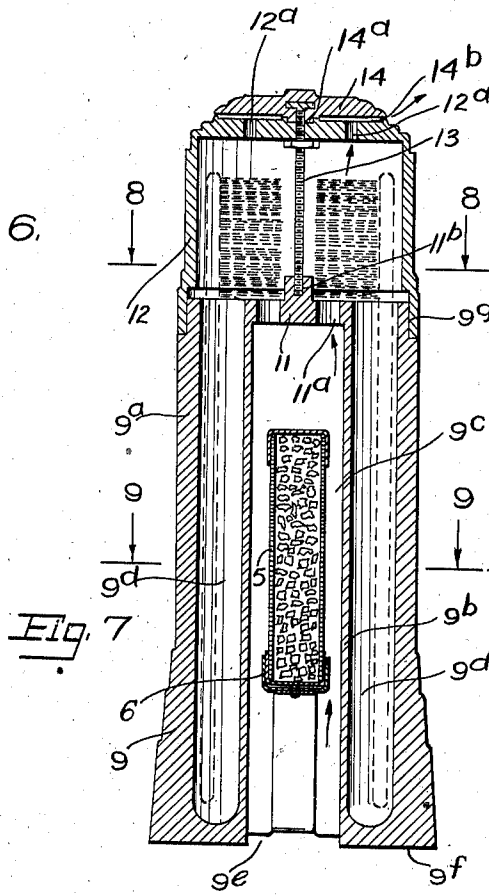
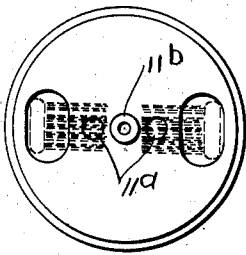
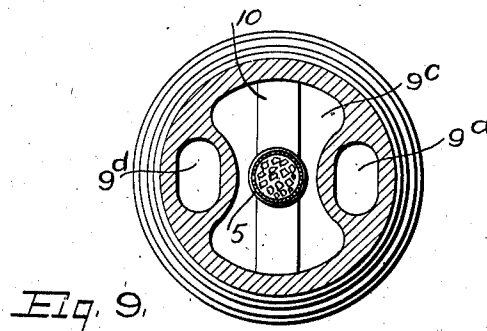
F. E. HART

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TOOTHBRUSH HOLDER

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2 Sheets-Sheet 2



INVENTOR.

Fred E. Hart

BY

G. B. Bowman

ATTORNEY.

UNITED STATES PATENT OFFICE

2,280,431

TOOTHBRUSH HOLDER

Fred E. Hart, Los Angeles, Calif.

Application May 18, 1938, Serial No. 208,609

6 Claims. (Cl. 206—15.1)

My invention relates to a holder for toothbrushes which cleanses and sterilizes the brushes while they are supported and enclosed in said holder and the objects of my invention are:

First, to provide a holder of this class that is so constructed that air moves therethrough for quickly drying the brush bristles;

Second, to provide a holder of this class which is very sanitary;

Third, to provide a holder of this class with novel means of supporting a germicide or sterilizing agent in effective relation with the bristles of the toothbrush;

Fourth, to provide a holder of this class in which a plurality of brushes may be held for drying and sterilizing;

Fifth, to provide a holder of this class which is so arranged and constructed that there is free flow and passage of air therethrough carrying with it the sterilizing agent in close proximity to the toothbrush bristles;

Sixth, to provide a holder of this class in which the entire toothbrush is entirely enclosed;

Seventh, to provide a holder of this class which is very compact;

Eighth, to provide a holder of this class with a central air shaft in which a sterilizing medium is positioned and the toothbrush arranged for receiving the air in its passage directly on the bristles of the brushes;

Ninth, to provide a holder of this class which holds the brush bristles in certain position at all times after they are positioned; and

Tenth, to provide a toothbrush holder of this class which is very simple and economical of construction, efficient in its action and in which the brushes are readily accessible.

With these and other objects in view as will appear hereinafter, my invention consists of certain novel features of construction, combination and arrangement of parts and portions as will be hereinafter described in detail and particularly set forth in the appended claims, reference being had to the accompanying drawings and to the characters of reference thereon which form a part of this application in which:

Figure 1 is a side elevational view of my toothbrush holder complete; Fig. 2 is a longitudinal sectional view of my brush holder complete taken from the line 2—2 of Fig. 1 on an enlarged scale showing some of the parts and portions in elevation to facilitate the illustration; Fig. 3 is a transverse sectional view taken from the line 3—3 of Fig. 1; Fig. 4 is a reduced sectional view taken from the line 4—4 of Fig. 2 and Fig. 5 is

a sectional view taken from the line 5—5 of Fig. 2; Fig. 6 is a side elevational view of my brush holder in a slightly modified form from that of Figs. 1 to 5 inclusive; Fig. 7 a longitudinal sectional view taken from the line 7—7 of Fig. 6; Fig. 8 a transverse sectional view taken from the line 8—8 of Fig. 7 and Fig. 9 is a transverse sectional view taken from the line 9—9 of Fig. 7.

Similar characters of reference refer to similar parts and portions throughout the several views of the drawings.

The base member 1, body member 2, toothbrush support 3, chemical container support 4, chemical container 5, chemical container clip 6, cap member 7 and ventilator 8 constitute the principal parts and portions of my toothbrush holder in the preferred form.

The base member 1 is provided with an outer spaced downwardly extending flange portion 1a which is provided with a plurality of downwardly extending foot members 1b which serves to hold the base member up off of a table or other object upon which it is positioned. It is provided with a recessed portion 1c in its upper outer edge adapted to receive the lower edge of the body member 2. This base member 1 is provided with an upwardly extending central cylindrical portion 1d which serves as an air shaft. It is provided across its upper end with a bar 1e and a reduced flange portion 1f at its upper end all as shown best in Fig. 2 of the drawings. The body member 2 is cylindrical in form and is seated at its lower edge in the recess 1c and is provided at its upper edge with a reduced portion 2a forming a recess 2b in which is mounted the lower outer edge of the toothbrush support 3. This toothbrush support 3 is provided with a reduced portion 3a over which the lower edge of the cap member 7 is mounted as shown best in Fig. 2 of the drawings. This member 3 is provided with a horizontal flat portion 3b in which is a plurality of holes 3c which are adapted to receive the handle of the toothbrush. In this case I have shown four. The central portion of this member 3 extends downwardly in cylindrical form designated 3d which forms a continuation of the shaft and cylindrical portion 1d. It is provided in its lower end with a bar 3e which is secured to the bar 1e in alignment therewith by means of a screw 3f, thus providing a shaft from the lower end of the holder at the base 1 to the upper side of the toothbrush support 3. Mounted up over the upper end of the cylindrical portion 3e and extending past the side thereof is the chemical

container support 4 which is a spider like member shown best in Figs. 2 and 3 of the drawings the outer extremities extending past the openings 3c in the member 3. These recesses are designated 4a and extend inwardly toward the center of the member 4 sufficiently to provide space for the bristles of the toothbrush as shown best in Fig. 3 of the drawings.

Mounted centrally on the lower side of the member 4 by means of a screw 6a is the chemical container clip 6 which is provided with curved ends shown best in Fig. 5 of the drawings and is a spring clip which is adapted to receive the one end of the chemical container 5 which consists of a cylindrical member 5a which is foraminous and provided with end caps 5b and 5c, the end member 5b being clamped by the member 6 for supporting it in suspended position as shown best in Fig. 2 of the drawings.

The cap member 7 is an inverted cup shaped member the walls of which converge upwardly and it is provided in its upper side 7a with a plurality of perforations 7b and mounted centrally on the upper end of this cap member 7 by means of a screw 8a is the ventilator member 8 which is provided with a downwardly extending central supporting portion 8b which rests on the central portion of the cap 7 at the upper end and supports the same and leaving a space at 8c for the exit of air in its passage upwardly through the shaft formed by the cylinder members 1d and 3d, then through the openings 3c past the brush bristles and out through the openings 7b and 8c. It will be here noted that the member 4 is readily removed which carries with it chemical container 5 which may be pulled from the member 6 and another chemical container placed therein when deterioration has taken place in the chemical in the container 5 by age or usage.

In the modified form of construction shown in Figs. 6 to 9 inclusive of the drawings, the toothbrush holder is simpler in form but provides for only two brushes. In this case the base portions and body portion and shaft portion are formed in an integral member designated 9 consisting of an outer cylindrical portion 9a, an inner cylindrical portion 9b spaced therefrom and forming the air shaft. This inner air shaft is designated 9c and is irregular in cross section as shown best in Fig. 9 of the drawings and provides two longitudinal chambers 9d for receiving the handles of the toothbrush. This base member is provided with cutaway portions 9e at opposite sides to admit air leaving engaging portions 9f.

Mounted in the lower ends of the chamber 9c is a chemical supporting spring clip 10 which is U-shaped and the free ends are spring fitted into the sides of the chamber 9c as shown best in Fig. 9 of the drawings. Secured centrally on this clip 10 is the chemical container clip 6 which is similar to the chemical container clip heretofore described and it supports the chemical container 5, which is the same as heretofore described.

Mounted in the upper end of the portion 9b integral therewith is central support 11 provided with openings 11a therein which is adapted to conduct the air from the shaft formed by the portion 9b through the bristles of the brush. This portion 11 is provided with a central portion 11b which is screw threaded.

The cylindrical portion 9a is provided with a reduced portion 9g over which a cap member 12

is mounted. This cap member 12 is provided with a screw threaded bolt 13 which is adapted to fit in the threads in the portion 11b and is secured centrally in the cap member 12. This cap member 12 is also provided with openings 12a adapted for the exit of air and over this cap is provided a ventilator 14 which is provided with a central support portion 14a and leaving spaced portions 14b for the exit of air, all as shown best in Fig. 7 of the drawings. Thus air will pass through the portion 9e up through the chamber 9c around the chemical container 5 through the openings 11a, through the brush bristles then through the opening 12a and out between the ventilator and cap at 14b.

Though I have shown and described a particular construction, combination and arrangement of parts and portions and certain modifications thereof, I do not wish to be limited to this particular construction, combination and arrangement nor to the modification, but desire to include in the scope of my invention the construction, combination and arrangement substantially as set forth in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a toothbrush holder of the class described, the combination of a base member provided with a central cylindrical shaft portion, a body member concentric therewith forming a chamber around said central cylindrical shaft portion, a toothbrush support mounted on the upper end of said body member and provided with a central downwardly extending cylindrical shaft portion conforming to said first mentioned shaft portion and forming a continuous shaft therewith, said support provided with a plurality of brush handle receiving openings outwardly of said central cylindrical shaft portion, a chemical container support positioned centrally over the upper end of said toothbrush support provided with bristle receiving recesses, and a chemical container suspended centrally from said chemical container support in said air shaft.

2. In a toothbrush holder of the class described, the combination of a base member provided with a central cylindrical air conducting shaft portion, a body member concentric therewith forming a chamber around said central cylindrical air conducting shaft portion, a toothbrush support mounted on the upper end of said body member and provided with a central downwardly extending cylindrical air conducting shaft portion conforming to said first mentioned shaft portion and forming a continuous shaft therewith, said support provided with a plurality of brush handle receiving openings outwardly of said central cylindrical air conducting shaft portion, and a chemical container positioned in said central downwardly extending cylindrical shaft portion.

3. In a toothbrush holder of the class described, the combination of a base member provided with a central cylindrical air conducting shaft portion, a body member concentric therewith forming a chamber around said central cylindrical air conducting shaft portion, a toothbrush support mounted on the upper end of said body member and provided with a central downwardly extending cylindrical air conducting shaft portion conforming to said first mentioned shaft portion and forming a continuous shaft therewith, said support provided with a plurality of brush handle receiving openings out-

wardly of said central cylindrical air conducting shaft portion, a chemical container positioned in said central downwardly extending cylindrical shaft portion, and a ventilating cap positioned on the upper end of said casing forming a toothbrush bristle portion chamber communicating with said central cylindrical air conducting shaft portion and with said chamber around said central cylindrical air conducting shaft portion.

4. In a toothbrush holder of the class described, the combination of a casing provided with a central air conducting shaft extending the full length of said casing and open to atmosphere at its lower end, a toothbrush handle receiving chamber in said casing intermediate the wall of said shaft and the wall of said casing outwardly of said shaft and a cap provided with vents in its upper side positioned on the upper end of said casing above said shaft forming a toothbrush bristle portion chamber, a chemical container supported in said shaft and communicating openings between said chemical container and the toothbrush bristle portion chamber.

5. In a toothbrush holder of the class described, a casing provided with a central air con-

ducting shaft open at its upper and lower ends and extending from the bottom of said casing to its upper end, a toothbrush handle receiving chamber in said casing outwardly of said central air conducting shaft intermediate the wall of said shaft and the wall of said casing and a cap provided with vents positioned on the upper end of said casing above said shaft forming a toothbrush bristle portion chamber.

6. In a toothbrush holder of the class described, a casing provided with a central air conducting shaft open at its upper and lower ends and extending from the bottom of said casing to its upper end, a toothbrush handle receiving chamber in said casing outwardly of said central air conducting shaft intermediate the wall of said shaft and the wall of said casing, a cap provided with vents positioned on the upper end of said casing above said shaft forming a toothbrush bristle portion chamber, a chemical container supported in said shaft and means at the upper end of said air conducting shaft for conducting air from said chemical container toward the bristles of said brush in said cap.

FRED E. HART.