L. E. EVSLIN.

TOOTHBRUSH HOLDER.

APPLICATION FILED MAR. 24, 1916. RENEWED MAY 7, 1920.

1,361,842. Patented Dec. 14, 1920.

3 SHEETS—SHEET 1.

Fig. 1.

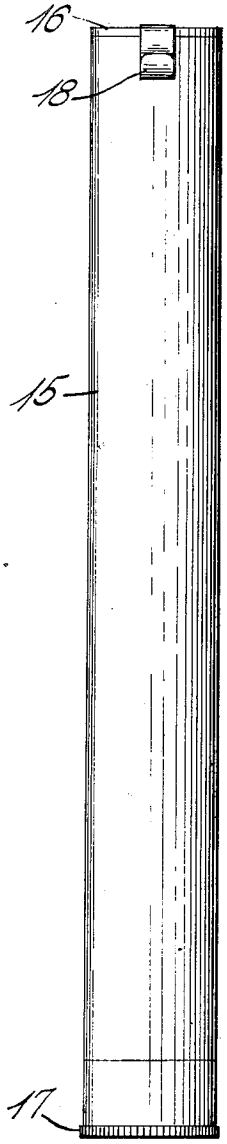


Fig. 2.

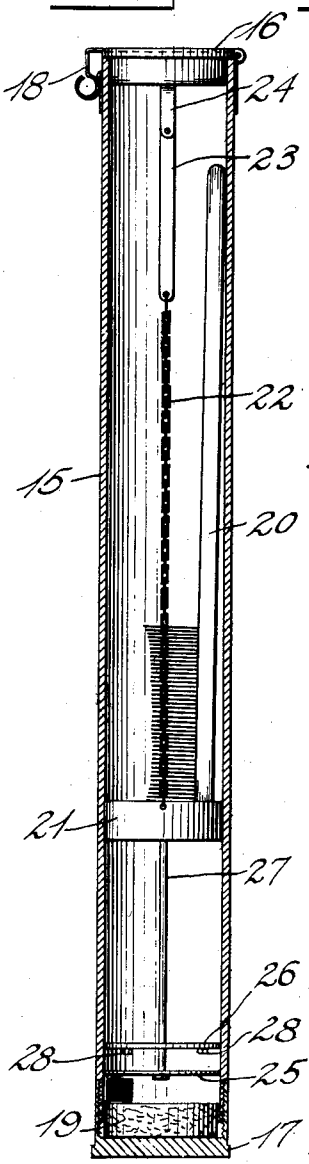


Fig. 3.

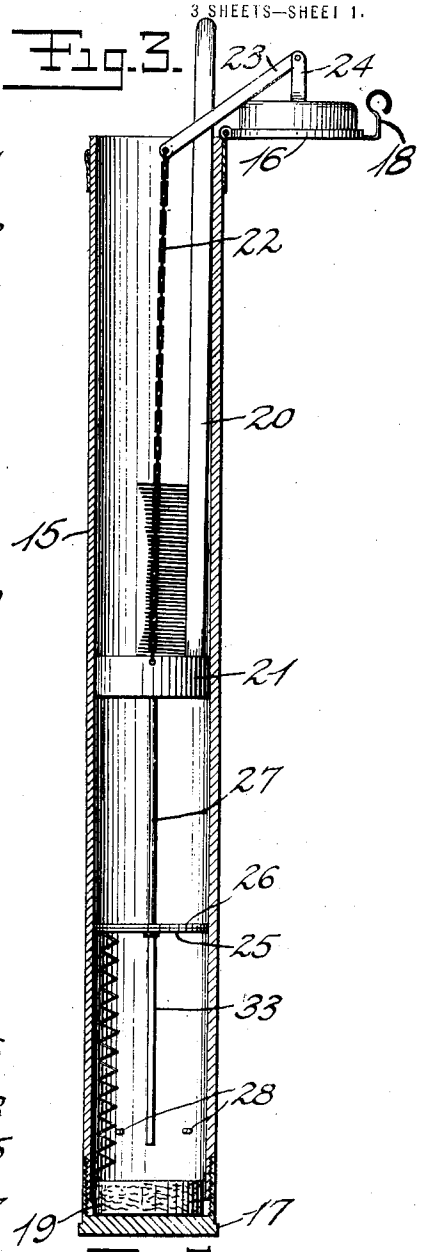


Fig. 4.

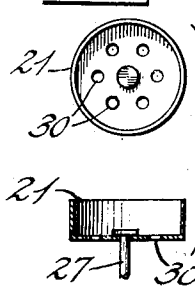


Fig. 5.

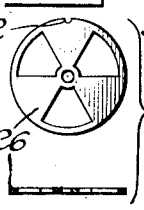


Fig. 6.

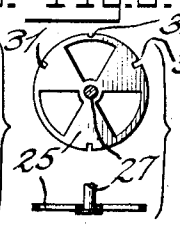
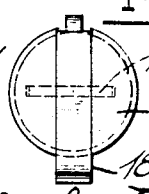


Fig. 7.



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3 SHEETS—SHEET 2.

Fig. 8.

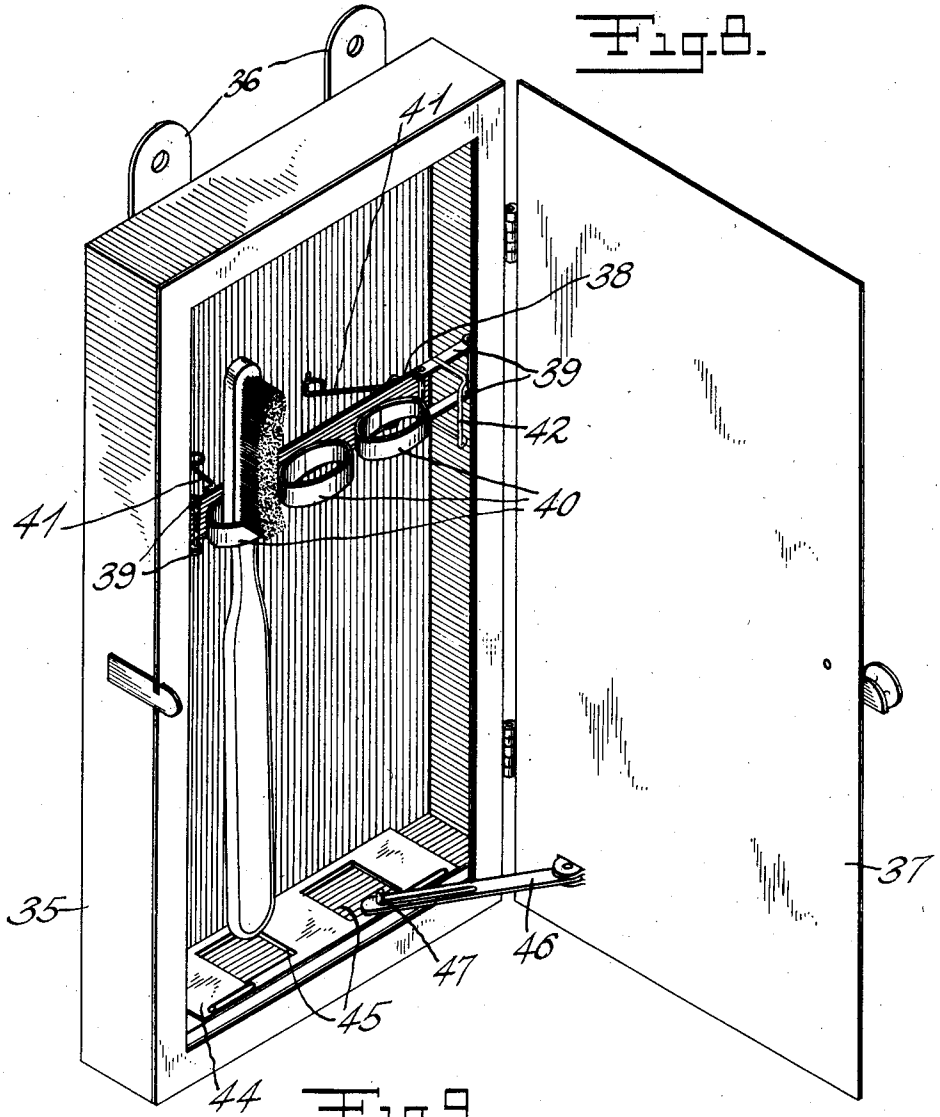
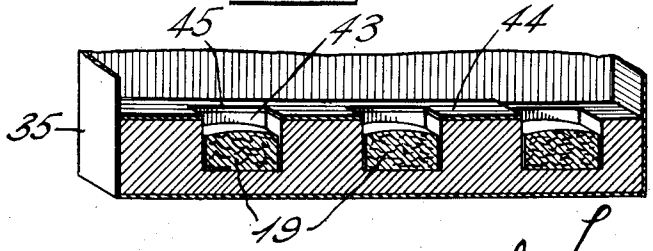


Fig. 9.



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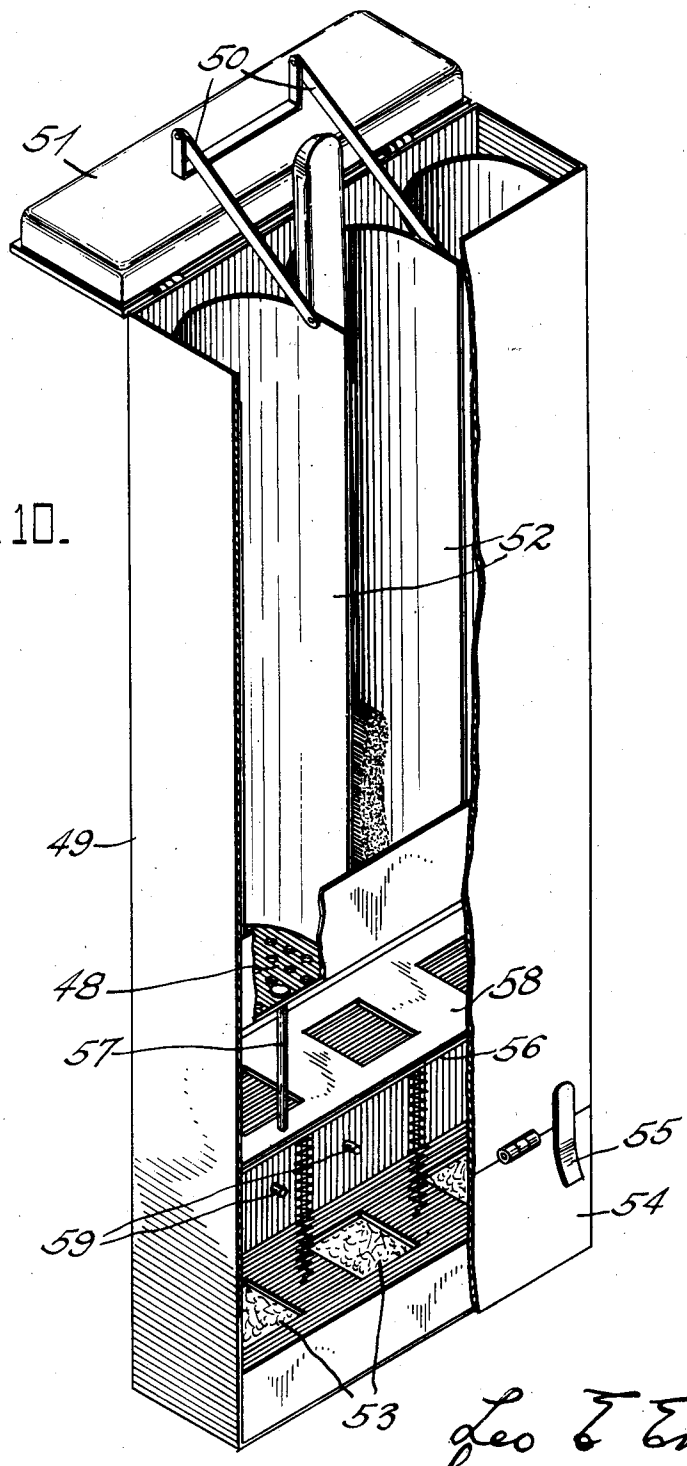
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3 SHEETS—SHEET 3.

Fig. 10.



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UNITED STATES PATENT OFFICE.

LEO E. EVSLIN, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS, TO LEE SURGICO-DENTAL M'F'G CO., INC., A CORPORATION OF NEW YORK.

TOOTHBRUSH-HOLDER.

1,361,842. Specification of Letters Patent. Patented Dec. 14, 1920.

Application filed March 24, 1916, Serial No. 86,341. Renewed May 7, 1920. Serial No. 379,686.

To all whom it may concern:

Be it known that I, LEO E. EVSLIN, a subject of the Czar of Russia, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Toothbrush-Holders, of which the following is a specification.

My present invention has reference particularly to holders for tooth brushes. Important objects of the invention are to provide a simple and inexpensive device of this character which will serve to maintain the brush or brushes supported therein, in a clean sterile and hygienic condition.

Another object is to prevent waste of the sterilizing agent employed.

A further object is to facilitate the removal and replacement of the brush.

These objects and others I have attained by making a holder in the form of a normally closed container provided with a compartment in the bottom thereof for the antiseptic or sterilizing agent and with a cover permitting insertion and removal of the brush, means being provided for supporting the brush above the antiseptic compartment so as to be acted upon by the fumes arising therefrom. Waste and loss of the sterilizing agent is guarded against by providing, in a preferred form of the invention, means, operable upon opening of the cover to cut off escape of the sterilizing medium. Removal and replacement of the brush is facilitated, in my invention, by causing the brush-supporting means to automatically advance the brush as the cover of the holder is opened.

Other features and details of construction will appear as the specification proceeds, attention being directed to the accompanying three sheets of drawings, forming a part hereof and wherein I have illustrated the invention embodied in several practical and preferred forms.

In these drawings, Figure 1 is an outside view of a holder for a single tooth brush; Fig. 2 is a sectional view showing the internal construction thereof and with the parts in the normal "closed" position; Fig. 3 is a similar view showing the holder opened to permit removal of the brush; Fig. 4 is an illustration, in plan and sectional views, of the movable brush support; Figs. 5 and 6 are similar illustrations of the upper and lower valve disks; Fig. 7 is a plan view of the holder with the cover in closed position; Fig. 8 is a perspective view of a "cabinet" style of holder for a number of brushes; Fig. 9 is a sectional view taken through the antiseptic compartment in the bottom of the same; and Fig. 10 is a broken perspective view of a plural brush holder embodying features common to both the other forms illustrated.

In the "single" form of brush holder illustrated on the first sheet of drawings, the body of the holder is in the form of a cylindrical container 15, slightly longer than a single tooth brush, provided at its upper end with a tight-fitting hinged cover 16 and closed at its lower end, by a removable screw cap 17. A spring clip 18, serves in the case illustrated, to hold the cover in its normally closed position.

The bottom portion of the container forms a compartment for a sterilizing agent, which agent is here shown embodied in the form of a tablet 19, resting on the removable bottom cap 17. This removable bottom thus provides for the ready inspection and renewal of the antiseptic.

The brush, indicated at 20, rests on a supporting disk or platform 21, slidably guided in the container and connected by flexible connections 22 and links 23 to studs 24 dependent from the underside of the cover.

From this it will be seen that when the cover is opened, the brush support will be lifted and the brush will be thereby advanced into convenient reach.

The valve mechanism for preventing loss of the sterilizing agent when the cover is open, consists in this form of the invention, of two valve disks 25 and 26, the first of these being carried by a rod 27 dependent from the movable brush support and the other, in the normal "closed" position of the holder, indicated in Fig. 2, resting on supporting lugs 28, above and separated from the first and lower disk. These disks are provided with openings 29 therein, offset in the respective disks so that the solid parts in one disk lie opposite the openings in the other disk.

In the closed condition of the holder, the valve disks are separated and the fumes from the antiseptic compartment are therefore free to pass upward, through openings 30 in the brush support and so into

contact with the brush. When the cover is swung open, the lower valve disk, moving as it does, with the brush support, rises into engagement with the upper valve disk, whereby the openings in the two disks are closed and further escape of the sterilizing fumes is cut off and thereafter the two disks simply move idly upward with the brush support. The lower disk may be notched as indicated at 31 so as to pass the lugs 28 which normally support the upper disk. The two disks may be held against turning with respect to each other by notching them as indicated at 32 to engage over a guiding rib on the inside of the holder.

A spring such as indicated at 34 may be provided for withdrawing the brush support as the cover is closed.

In the "cabinet" type of holder illustrated in Fig. 8, the container 35 is in the shape of a box-like structure, adapted to be supported upon a wall or the like, as by means of the supporting lugs 36, shown, and provided with a hinged door or cover 37.

The brush support is in this case shown as a bar 38, supported at its ends on links 39, and carrying loops 40, said support being pressed forwardly by springs 41 at the back thereof and held back when the cover is closed by a stop 42 thereon engaged by the cover. As soon as the cover is opened and the force holding back the brush support is thereby removed, it will be seen that the springs will assert themselves, carrying the brush support forwardly and thereby advancing the brushes into convenient position for withdrawal from the supporting loops.

In the construction under consideration, the sterilizing tablets 19 are shown seated in pockets 43 formed in the bottom of the box and the escape of fumes is cut off when the box is open, in this case by means of a slide 44 provided with openings 45 normally registering with said pockets and adapted to be shifted as the door is opened so as to close said pockets by means of a link 46 connected to the door. This link is shown as having a slotted engagement 47 with the slide so as to permit the door being opened to the full extent without displacing the slide.

The holder illustrated in Fig. 10 is of the portable type and arranged to hold a plurality of brushes. This construction is similar in a general way to the one first described, the brush support 48, being guided for vertical movement in the box or container 49 and connected by links 50 with the cover 51, so as to be drawn upward as the cover is opened. The brush support is shown provided with a number of partitions 52, dividing it into compartments for the different brushes. This construction resembles also the second form disclosed, in that the sterilizing agent, in the shape of tablets, is seated in pockets 53 formed in the bottom of the container, access being had to the antiseptic compartment thus provided by means of a hinged door 54, normally held closed by springs 55, only one of which appears in this view.

The valve or cut-off mechanism in the construction shown, is like that first disclosed in that it consists of a valve plate 56, carried by rods 57 dependent from the perforated bottom of the brush support and arranged to engage and coöperate with a second valve plate 58 above the same and normally resting on the supporting lugs 59.

From the foregoing it will be seen that the invention is simple and inexpensive and provides in a practical form, means for preserving and maintaining brushes in a clean and sterile condition.

I claim:

1. In a device of the character set forth, a holder provided with a cover, an antiseptic compartment in said holder, and valve mechanism operable on the closing of said cover to establish communication between said compartment and the interior of the holder and operable on the opening of said cover to shut off communication between said compartment and the interior of the holder.

2. In a device of the character set forth, a normally closed container provided with a cover, an antiseptic compartment in said container, valve mechanism controlling communication between said compartment and the interior of the container and operating connections from the cover to said valve mechanism.

3. An antiseptic brush holder comprising a normally closed container provided with a cover and with means for supporting a brush therein, an antiseptic compartment in said container and valve mechanism controlled by the cover for controlling communication between said compartment and the interior of the container.

4. An antiseptic brush holder comprising a container provided with a cover, an antiseptic compartment in the bottom of said container, a brush support in the container above said antiseptic compartment, means for extending said brush support to advance the brush when the cover is opened, and valve mechanism controlled by the cover for controlling communication between the compartment and the interior of the container.

In testimony whereof I affix my signature.

LEO E. EVSLIN.