March 10, 1942. B. OSHMAN ET AL 2,275,549

TOOTH BRUSH RETAINER

Filed March 11, 1940

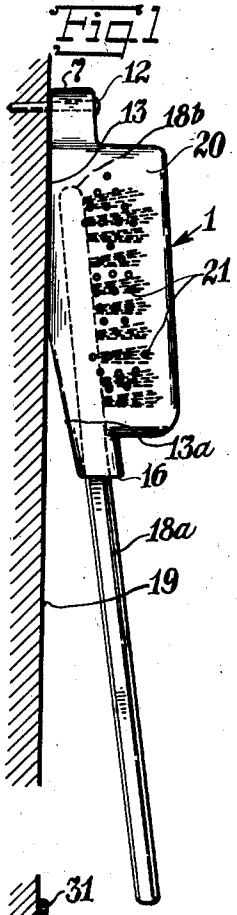


Fig. 1

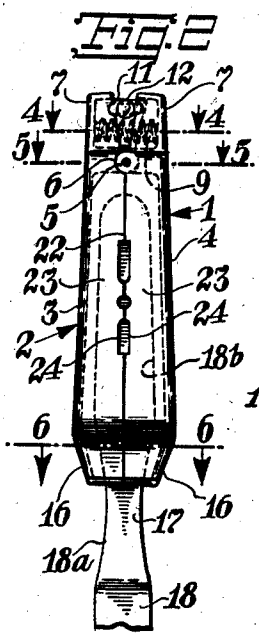


Fig. 2

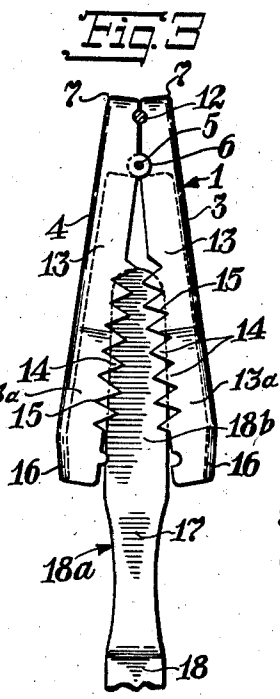


Fig. 3

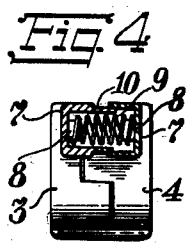


Fig. 4

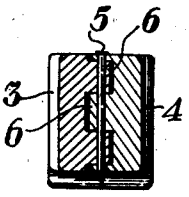


Fig. 5

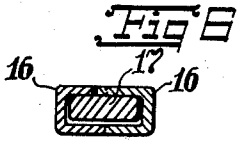


Fig. 6

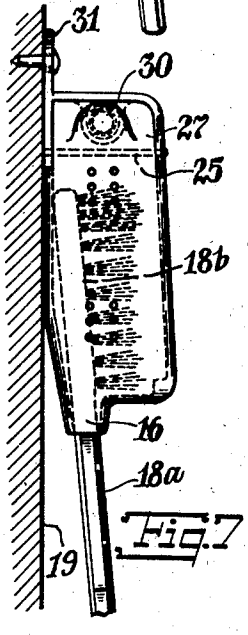


Fig. 7

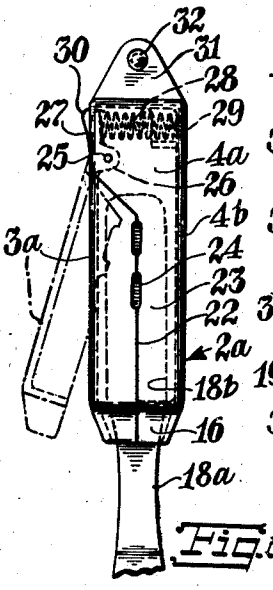


Fig. 8

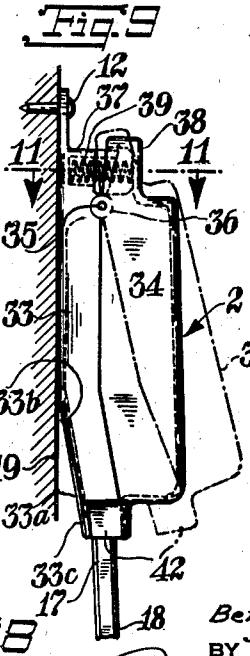


Fig. 9

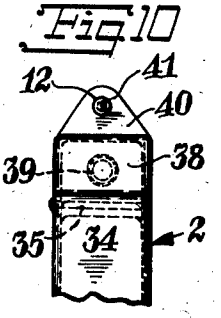


Fig. 10

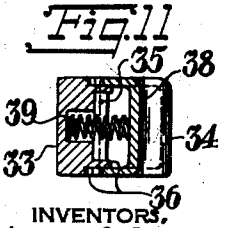


Fig. 11

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Patented Mar. 10, 1942

2,275,549

UNITED STATES PATENT OFFICE

2,275,549

TOOTHBRUSH RETAINER

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New York, N. Y.

Application March 11, 1940, Serial No. 323,310

8 Claims. (Cl. 312—112.5)

This invention relates to a tooth brush retainer, and its objects are to retain the brush efficiently in convenient location, to maintain it clean, dustproof, sanitary, and out of contact with other articles, and to provide improved means for its rapid, ready, and convenient withdrawal from the retainer and reinsertion thereinto.

Other objects and advantages will hereinafter appear.

In the accompanying drawing—

Fig. 1 shows a side elevational view of the tooth brush retainer of this invention.

Fig. 2 is a front elevation of the retainer shown in Fig. 1.

Fig. 3 is a rear elevational view of the retainer, showing it as it appears when opened for insertion or removal of the tooth brush.

Figs. 4, 5, 6 are transverse cross-sectional views of the tooth brush retainer, taken on the lines 4—4, 5—5, 6—6 respectively of Fig. 2.

Fig. 7 is a side elevational view of a tooth brush retainer, showing a modification of the invention.

Fig. 8 is a front elevation of the retainer shown in Fig. 7.

Fig. 9 shows a side elevation of a tooth brush retainer, which is another modification of the invention.

Fig. 10 is a fragmentary front elevational view of the retainer shown in Fig. 9.

Fig. 11 is a transverse cross-sectional view, taken on the line 11—11 of Fig. 9.

The tooth brush retainer 1, Figs. 1–6, comprises an elongated receptacle 2 consisting of two tray-like half members 3, 4, held to each other by a hinge-pin 5 passing through ears 6 forming part of said trays, whereby the members 3, 4 may be disposed to a closed state, as shown in Fig. 2, or they may be swung about said hinge to an open position, as illustrated in Fig. 3. The upper end of each of the members 3, 4 is provided with a projecting part 7, near hinge 5, which parts are hollow and provided with lugs 8 for retention in the manner shown of a helical spring 9 that normally presses said parts away from each other and thereby maintains the members 3, 4 in the closed state illustrated in Fig. 2. Upon pressing the parts 7 toward each other, contrary to the tension of spring 9, the members 3, 4 are swung about hinge 5 and are opened up as shown in Fig. 3. The projecting part 7 of the member 3 is provided with a laterally extending portion 10, which normally projects slightly within part 7 of member 4, Figs. 2, 4, and enters into the latter parts when both parts 7 are pressed against each other. The portion 10 is provided with a lateral notch 11, which constitutes an opening for suspension of the retainer upon any suitable nail 12, as illustrated in Figs. 1, 2, and it will be noted that this suspension means will carry out its function efficiently while the retainer is in the closed suspended position of Fig. 2 or while its operating parts 7 are being pressed together for opening the retainer as shown in Fig. 3. Each of the rear walls 13 of the members 3, 4 has its edges formed as saw-like teeth 14 that project into corresponding grooves 15 of the opposing wall 13, with the result that when the members 3, 4 are swung away from each other, Fig. 3, the teeth 14 partially close the gapped opening that occurs between said opposing walls, for the better guiding of the brush head into the members 3, 4 of the retainer. As shown in Fig. 1, the lower portions 13a of rear walls 13 of members 3, 4 are disposed obliquely and forwardly away from the remaining vertical portions of said walls, and the terminals of said portions 13a form part of spout-like projections 16 provided upon the lower ends of the members 3, 4, which projections serve to embrace the necked portions 17 of the brush handle 18, as shown, and the disposal of the projections 16 forwardly away from the vertical portions of walls 13, as well as the said angular disposal of the portions 13a of said walls, both serve to maintain the brush handle 18 angularly away from the body 19 against which the retainer may be suspended. The side walls 20 of members 3, 4 are provided with ventilating openings 21, and the meeting edges 22 of the front walls 23 of said members with registering notches 24, so that when the members 3, 4 are in closed state the notches 24 supply additional ventilating openings, as illustrated in Fig. 2.

The tooth brush retainer 1 is normally maintained in the suspended state shown, upon the nail 12, for its operation and utilization. When the tooth brush 18a is to be inserted into the receptacle 2 for retention, the projecting parts 7 of the latter are pressed toward each other to spread apart the receptacle members 3, 4, for inserting the brush head 18b thereinto, in the manner illustrated in Fig. 3. Thereupon the parts 7 are released, and said members are closed up by the spring 9 to efficiently retain the brush head 18b, with the conjoint projections 16 of said members in embracement with the neck 17 of the brush handle 18. When the tooth brush 18a is to be removed from the retainer 1, the

parts 7 of the latter are similarly pressed together to open the receptacle members 3, 4, and to permit the ready and convenient withdrawal of the tooth brush.

According to the modification shown in Figs. 7, 8, the upper portion 4a of receptacle member 4b is of a width which is coextensive with the breadth of the receptacle 2a, and a hinge-pin 25 passes through the portion 4a and through ears 26 of a wing 27 forming part of the receptacle member 3a. The latter may therefore be swung about the hinge 25 either to a closed position as shown or to an open state, as indicated by the dash-and-dot lines, Fig. 8. A helical spring 28 located within the receptacle portion 4a is lodged in a socket 29 and bears against said socket and upon the interior side of wing 27, whereby it normally maintains both members 3a, 4b in firm and efficiently closed state under tension. The wing 27 is provided with a finger-piece 30, to therewith facilitate the manipulation of the wing 27, for spreading apart the receptacle members 3a, 4b contrary to the tension of spring 28, in the manner described above in connection with members 3, 4. The receptacle portion 4a is provided with a hanger 31 having an opening 32 for suspension of the retainer, as shown. When the tooth brush 18a is to be inserted into the receptacle 2a for retention, therefore, the finger-piece 30 is pressed inwardly to open the members 3a, 4b, whereupon the brush head 18b may be inserted thereinto, and upon release of the portion 4a and piece 30 the said members close up by the action of spring 28 to retain the brush head 18b in the manner above described in connection with Figs. 1–6.

In the modification shown in Figs. 9, 10, 11, the tooth brush retainer 1 comprises an elongated receptacle 2 consisting of a rearward tray-like half member 33 and a cooperating front member 34, held to each other by a hinge-pin 35 passing through ears 36 forming parts of the upper ends of said members, whereby the members 33, 34 may be disposed to a closed state, as shown, or they may be swung about said hinge to an open position, as indicated by the dash-and-dot lines, Fig. 9. The upper ends of the members 33, 34 are provided with projecting parts 37, 38 respectively, near hinge 35, which parts are hollow and within which is located a helical spring 39 that normally presses said parts away from each other and thereby maintains the members 33, 34 in the closed state illustrated. Upon pressing the part 38 toward the part 37, contrary to the tension of spring 39, the member 34 is swung about the hinge 35 and is opened up away from member 33, as shown by the dash-and-dot lines in Fig. 9. The projecting part 37 of member 33 is provided with a hanger 40 having an opening 41 for suspension of the retainer upon a nail 12. The lower portion 33a of rear wall 33b of member 33 is disposed obliquely and forwardly away from the remaining vertical portion of said wall, and the terminal of said portion 33a serves to close a spout-like projection 42 provided upon the end of the member 34, which projection together with said terminal 33c serve to embrace the necked portion 17 of the brush handle 18 as shown. The disposal of the projection 42 with cooperating terminal 33c forwardly away from the vertical wall portion 33b, as well as said angular disposal of wall portion 33a, all serve to maintain the brush handle 18 angularly away from the body 19 against which the retainer may be suspended, for the convenient grasping of the handle 18 while inserting the tooth brush head into or removing it from the retainer.

The tooth brush retainer 1 of Fig. 9 is normally maintained in the suspended state shown, upon the nail 12, for its operation and utilization. When the tooth brush 18a is to be inserted into its receptacle 2 for retention, the projecting part 38 is pressed against the projecting part 37 to spread apart the receptacle members 33, 34, for inserting the brush head 18b thereinto. Thereupon the part 38 may be released, and said members are closed up by the spring 39 to efficiently retain the brush head 18b, with the conjoint action of terminal 33c of member 33 and of projection 42 of member 34 in embracement with the neck 17 of the brush handle 18. When the tooth brush 18a is to be removed from this retainer, the part 38 of the latter is similarly pressed to open the member 34 away from the member 33 and to permit the ready and convenient withdrawal of the tooth brush.

Variations may be resorted to within the scope of the invention, and portions of the improvements may be used without others.

Having thus described our invention, we claim:

1. A tooth brush retainer adapted to receive the brush head consisting of a receptacle comprising two elongated severable parts, a hinge securing the ends of said parts whereby they are swingable transversely of each other about said hinge toward and away from each other, the opposite ends of said parts having conjoint outlets for the brush handle, each of said parts having a hollow extension beyond said hinge, and a spring located within said extensions normally pressing them apart to maintain said parts closed for retention of the brush head within the parts, whereby simultaneous pressing of said extensions contrary to the tension of said spring will cause said parts to swing away from each other for removal of the brush from the retainer.

2. A tooth brush retainer adapted to receive the brush head consisting of a receptacle comprising two elongated severable parts, a hinge securing the ends of said parts whereby they are swingable transversely of each other about said hinge toward and away from each other, the opposite ends of said parts having conjoint outlets for the brush handle, each of said parts having an extension beyond said hinge, and a spring normally pressing said extensions apart to maintain said parts closed for retention of the brush head within the parts, whereby simultaneous pressing of said extensions contrary to the tension of said spring will cause said parts to swing away from each other for removal of the brush from the retainer.

3. A tooth brush retainer adapted to receive the brush head consisting of a receptacle comprising two elongated severable parts, a hinge securing the ends of said parts whereby they are swingable transversely of each other about said hinge toward and away from each other, the opposite ends of said parts having conjoint outlets for the brush handle, each of said parts having a hollow extension beyond said hinge, a spring located within said extensions normally pressing them apart to maintain said parts closed for retention of the brush head within the parts, whereby simultaneous pressing of said extensions contrary to the tension of said spring will cause said parts to swing away from each other for removal of the brush from the retainer, one of said extensions having a portion adapted to enter the other of said extensions when the extensions

are pressed toward each other, and said portion having an opening for suspension of the retainer.

4. A tooth brush retainer adapted to receive the brush head consisting of a receptacle comprising two elongated severable parts, a hinge securing the ends of said parts whereby they are swingable transversely of each other about said hinge toward and away from each other, the opposite ends of said parts having conjoint outlets for the brush handle, each of said parts having a hollow extension beyond said hinge, a spring located within said extensions normally pressing them apart to maintain said parts closed for retention of the brush head within the parts, whereby simultaneous pressing of said extensions contrary to the tension of said spring will cause said parts to swing away from each other for removal of the brush from the retainer, and one of said extensions having a portion adapted to enter the other of said extensions when the extensions are pressed toward each other.

5. A tooth brush retainer adapted to receive the brush head consisting of a receptacle comprising two elongated severable parts, a hinge securing the ends of said parts whereby they are laterally swingable transversely of each other about said hinge toward and away from each other, the opposite ends of said parts having conjoint outlets for the brush handle, spring means, normally maintaining said parts closed for retention of the brush head within the parts, means to suspend the retainer whereby the adjacent rearward walls of said parts are maintained vertically, and the lower parts of said walls being formed obliquely forwardly to dispose and maintain the brush handle forwardly.

6. A tooth brush retainer adapted to receive the brush head consisting of a receptacle comprising two elongated severable parts, a hinge securing the ends of said parts whereby they are laterally swingable transversely of each other about said hinge toward and away from each other, the opposite ends of said parts having conjoint outlets for the brush handle, spring means, normally maintaining said parts closed for retention of the brush head within the parts, means to suspend the retainer whereby the adjacent rearward walls of said parts are maintained vertically, the lower ends of said parts having conjoint spoutlike projections for retention of the brush handle, and said projections being located forwardly of said vertical walls to maintain the brush handle forwardly.

7. A tooth brush retainer adapted to receive the brush head consisting of a receptacle comprising two elongated severable parts, a hinge securing the ends of said parts whereby they are laterally swingable transversely of each other about said hinge toward and away from each other, the opposite ends of said parts having conjoint outlets for the brush handle, spring means, normally maintaining said parts closed for retention of the brush head within the parts, means to suspend the retainer whereby the adjacent rearward walls of said parts are maintained vertically, and each of said rearward walls being adapted to partially project within the other of said walls to provide a reduced gap between their edges while said parts are away from each other.

8. A tooth brush retainer adapted to receive the brush head consisting of a receptacle comprising two elongated severable parts, a hinge securing the ends of said parts whereby they are laterally swingable transversely of each other about said hinge toward and away from each other, the opposite ends of said parts having conjoint outlets for the brush handle, spring means, normally maintaining said parts closed for retention of the brush head within the parts, means to suspend the retainer whereby the adjacent rearward walls of said parts are maintained vertically, and the conjoint edges of the front walls of said parts having registering indentations for ventilation of the retainer.

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