Feb. 18, 1941. Z. A. REUBEN 2,232,269

TOOTHBRUSH

Filed March 27, 1939

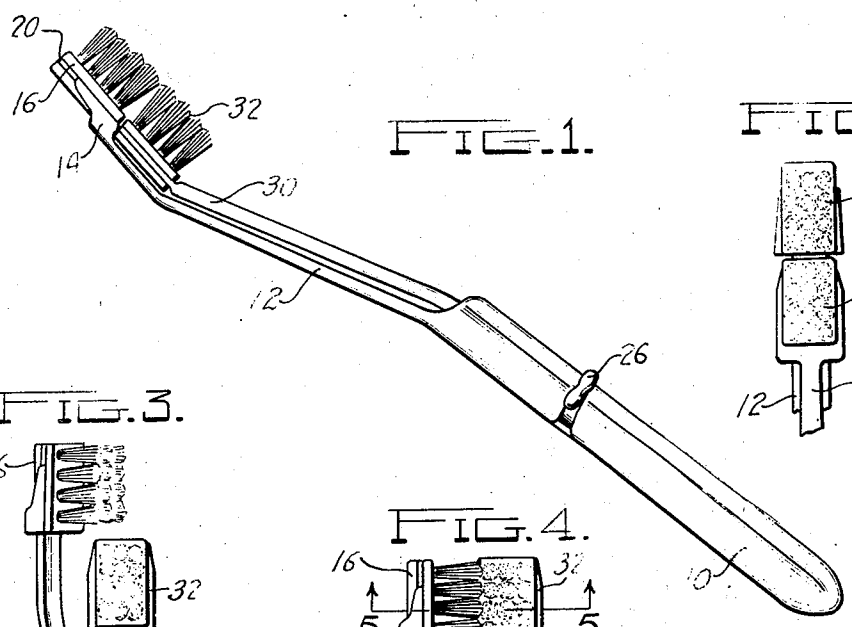


FIG. 1.

FIG. 2.

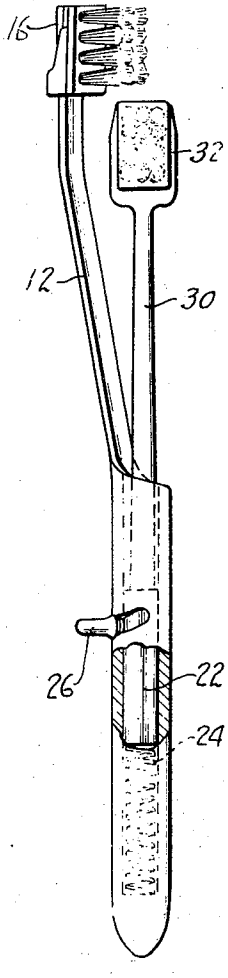


FIG. 3.

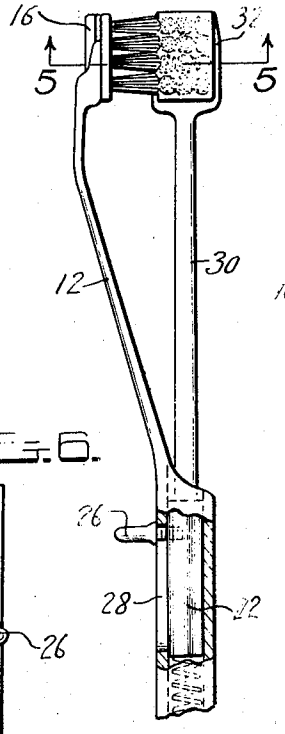


FIG. 4.

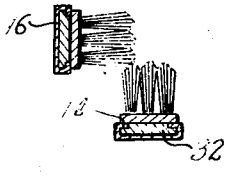


FIG. 5.

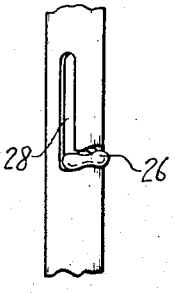


FIG. 6.

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TOOTHBRUSH

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Application March 27, 1939, Serial No. 264,317

3 Claims. (Cl. 15—172)

This invention relates to toothbrushes and has for its primary object the provision of a brush made in relatively movable sections and therefore usable in a plurality of adjusted positions.

It has heretofore been proposed to provide a toothbrush in which two brush sections are normally disposed adjacent to each other in substantially perpendicular planes so that the brush sections may be used simultaneously to clean separate tooth surfaces. While a brush of this character is satisfactory for certain teeth, it is entirely unsatisfactory for other teeth, which latter are best cleaned by a long, narrow brush.

An important object of the invention is, therefore, the provision of a toothbrush having relatively movable brush sections which may be adjusted to a position in which the sections are in alignment with one another and to another position in which the sections are contiguously disposed in substantially perpendicular planes.

Another object of the invention is the provision of a simple and efficient adjusting mechanism for a device of the above character.

Other objects and advantages of the invention will become apparent as the description of the invention proceeds, reference being had to the accompanying drawing, in which—

Figure 1 is a side elevation of a brush constructed in accordance with the present invention in one of its adjusted positions with the brush sections in alignment;

Fig. 2 is a fragmentary front elevation of the brush sections disposed in their aligned position, shown in Fig. 1;

Fig. 3 is an elevation, with parts broken away, of the brush with the sections in an intermediate position, moved part way between the two positions of adjustment;

Fig. 4 is a fragmentary side elevation, with parts broken away, of the brush with the sections disposed in the second of their adjusted positions, contiguously in substantially perpendicular planes;

Fig. 5 is a section on line 5—5 of Fig. 4, and

Fig. 6 is a detail view of the manually actuated adjusting means.

Referring to the drawing, the preferred form of the invention includes a hollow cylindrical handle portion 10 having an integral member 12 extending therefrom and curved outwardly to provide an offset, stationary, brush carrying portion 14. A brush section 16 is carried by the extension 14 and, if desired, may be made removable by providing inturned flanges 18 on the portion 14 which cooperate with longitudinal grooves 20 in the base portion of the brush section.

A second, cooperating cylindrical member 22 is mounted for sliding and turning movements within the cylindrical handle 10 and has a relatively close fit therein. A suitable spring 24 urges the cylindrical member 22 outwardly of the handle 10. In order to control the position of the cylindrical member 22 and to move it against the action of the spring 24, a control finger 26 is attached to the inner cylinder and extends through a slot 28 cut in the outer cylinder or handle 10. The slot 28 has its major portion longitudinally of the handle 10 and has a minor turning and locking portion substantially at right angles thereto. It will be seen that the shape and extent of slot 28 will control the relative movement of the inner cylinder 22 and the outer cylinder or handle 10.

The inner cylinder 22 is connected to and is preferably made integral with a forwardly extending brush carrying member 30. A brush section 32 is carried by the member 30 and, if desired, may be made removable therefrom by the same expedient used in connection with the brush section 16. The degree of offset of the member 30 is such that when the brush sections 16 and 32 are disposed in "tandem" or aligned relation, as shown in Fig. 2, the bristles of the brushes lie in the same plane so as to effectively constitute a continuation of each other. The degree of offset of each of the brush carrying extensions 12 and 30 is such that when the brushes are moved to the other position of adjustment, as shown in Figs. 4 and 5, the bristles of the two brush sections 16 and 32 become contiguous and lie in planes substantially at right angles to each other.

The movement from the tandem position shown in Figs. 1 and 2 to the side-by-side position shown in Figs. 4 and 5 is accomplished by the user forcing the control member 26 first sideways in slot 28, and then permitting the spring 24 to force the inner cylinder outwardly as far as it will go, or to the outer limit of slot 28. The intermediate position assumed by the members is shown in Fig. 3, which shows the control member 26 moved almost to the full extent of the minor or circumferential portion of slot 28. A very slight continued movement circumferentially will free the control member 26 and permit the inner cylinder 22 to move outwardly.

It will thus be seen that the user may employ the brush as an ordinary toothbrush with the parts disposed in the relation shown in Figs. 1

and 2, or he may use the brush to clean two tooth surfaces merely by moving the control member **26** circumferentially and axially so that the brush sections assume their contiguous relationship, as shown in Figs. 4 and 5. The brush sections may be returned to their tandem relationship merely by moving the control member **26** downwardly and circumferentially in the slot **28** against the tension of spring **24**.

While the invention has been described in connection with a particular form and disposition of the parts, it will be appreciated that various modifications and changes may be made without departing from the spirit and scope of the appended claims.

What I claim as new and desire to secure by United States Letters Patent is:

1. A device of the class described including a hollow member having a brush carrying extension, a second brush carrying member slidable and rotatable within said first member, brush sections carried by said members, and means to guide said second member in its sliding and rotating movements to a plurality of predetermined positions, one of said predetermined positions being a tandem position with the brush sections aligned.

2. A device of the class described including a hollow member having an integral brush carrying extension, a second brush carrying member slidable and rotatable within said first member, said first member having a substantially L-shaped slot, a control member fixed to said second brush carrying member and projecting through said slot to guide said second member by engagement with the sides of said slot to a plurality of predetermined positions.

3. A device of the class described including a hollow cylindrical member having a control slot therein, a brush carrying extension integral with said member and having a laterally offset portion, a brush section on said extension, a second cylindrical member received within said first member for sliding and turning movements, a spring urging said second cylindrical member outwardly with respect to said first member, a brush carrying extension having a laterally offset portion connected to said second cylinder, a second brush section carried by said last named extension, a control member connected to the inner cylinder and projecting through said control slot, the extent and direction of said slot being such as to cause said brush sections to assume a tandem position when the inner cylinder is retracted and a contiguous substantially perpendicular position when the inner cylinder is advanced.

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