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B. WEISSMAN

TOOTHBRUSH

Filed August 8, 1925

Fig. 1.

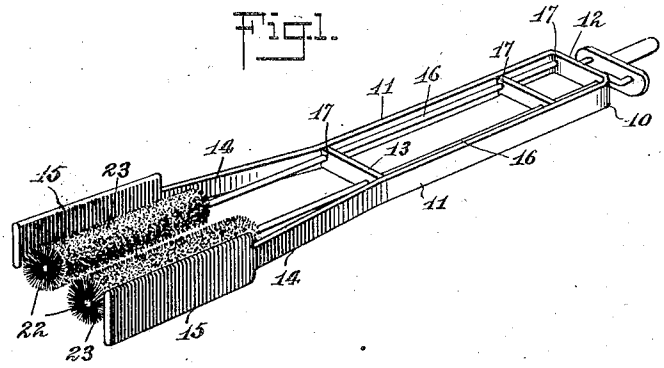


Fig. 2.

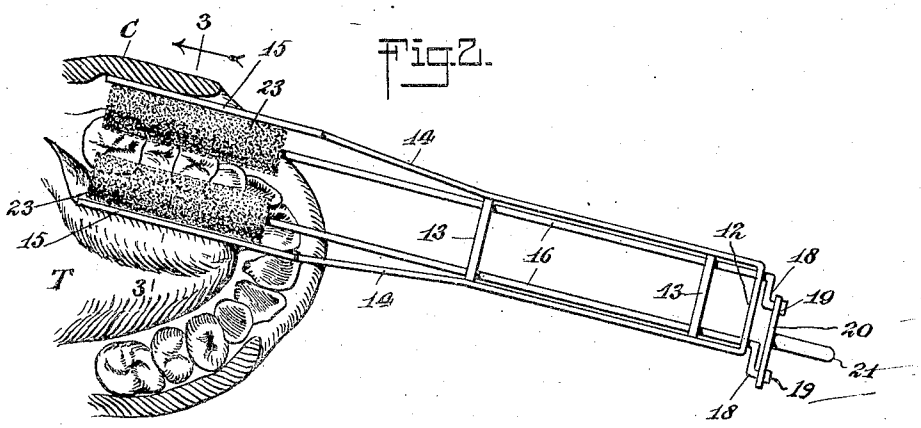
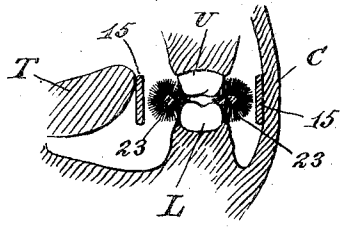


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

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TOOTHBRUSH.

Application filed August 8, 1925. Serial No. 49,125.

This invention pertains to toothbrushes, and aims for its principal object to provide an improved form of toothbrush by means of which a more thorough and effectual cleaning of the teeth may be accomplished in the minimum time with a maximum of effect.

It is an outstanding object of the present invention to devise an improved form of toothbrush by the use of which a thorough cleansing of all the exposed surfaces of the teeth is insured and this in an expeditious manner.

More specifically the invention contemplates a toothbrush including a pair of rotatable brush members mounted in relative relation and operable in unison to clean both the inner and outer surfaces of the upper and lower teeth simultaneously, together with means for preventing contact of the brushes with the cheek, lips or tongue to preclude any possibility of irritation thereto.

The invention furthermore comprehends a toothbrush which is comparatively simple in its construction and mode of operation, inexpensive to manufacture and produce, highly efficient in its purpose and sanitary to a high degree.

With the above recited and other objects in view, reference is had to the following specification and accompanying drawings in which there is exhibited one example or embodiment of the invention which is in no way intended as a limitation upon the scope of the appended claims as it is to be clearly understood that variations and modifications which properly fall within the scope of said claims may be resorted to when found expedient.

In the drawings—

Figure 1 is a perspective view of a toothbrush constructed in accordance with the invention;

Fig. 2 is a plan view of the same in applied and operating position;

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

Referring to the drawings by characters of reference, the brush includes a substantially U-shaped frame 10, the side arms 11 of which are joined at one end by a bight 12, and further connected at longitudinally spaced points by cross members 13. The portion of the arms 11 between the bight 12 and the outermost cross member 13, constitutes a handle, while the remaining portions 14 of the arms 11 which extend beyond the outermost cross member 13, diverge slightly and are slightly resilient. The portions 14 are provided with enlarged terminals 15, which due to the divergence of the arms 14 are offset laterally with respect to the major length or handle portion of the arms 11. A pair of rotary parallel shafts 16 extend through alined bearing openings 17 formed, respectively, in the bight 12 and the cross members 13. The ends of the shafts which extend through and beyond the bight 12, are formed with cranks 18, the crank pins 19 of which are journaled in a connecting link 20 formed with a manipulating handle 21, whereby rotation of the manipulating handle 21 will effect a simultaneous rotation of the shafts. The opposite end portions 22 of the shafts are provided with radial bristles 23, which together with the portions 22, constitute brush heads rotatable with the shafts. The brush heads lie wholly within the confines or areas of the enlarged terminals 15, so that when the brush is in applied position, as illustrated in Fig. 2, the cheek C and tongue T will be fully protected from contact with the brushes and irritation thereby when the device is in use.

In use and operation, the brush is inserted in such a manner that the brush heads are disposed on opposite sides of the upper and lower teeth U and L, with the terminals 15 of the arms 11 interposed between the bristles and the cheek and tongue C and T, respectively. The operator supports the device by grasping the arms 11 between the outermost cross member 13 and the bight 12, with one hand, and employing the other hand for the purpose of grasping and turning the manipulating handle 21 alternately in opposite directions. The bristles are thus rotated in opposite directions to effect an up-and-down brushing of the teeth to clean and scour both the inner and outer surfaces of the same, the user biting down to engage the biting or guiding surfaces of the teeth, after which a separation of the teeth will permit the brushes to cleanse the biting surfaces.

It is, of course, obvious that a dentifrice may be applied to the brush bristles and that the brush heads are moved and positioned at various points to effect the cleansing of all the teeth.

After the cleaning operation, the bristles

may be cleansed by running water or by submerging the same in a cleansing solution, if desired, it being understood that the material from which the frame and shafts are constructed is of a nature which is unaffected by water or cleansing fluids, and, furthermore, that all parts are exposed whereby the stream of water or cleansing fluid may strike the same and mechanically remove foreign matter therefrom.

What is claimed is:

1. In a toothbrush, a substantially U-shaped frame, including side arms connected at one end by a bight and transverse connecting means between the side arms at longitudinally spaced points, a pair of parallel shafts extending through the bight and the transverse connecting means, said shafts having crank terminals protruding beyond the bight, a connecting element between the crank terminals having a manipulating handle, bristles connected to and disposed radially from the opposite ends of the shafts to provide brush heads in parallel spaced relation adapted to be disposed on opposite sides of the teeth, and enlarged terminals at the free ends of the side arms of the frame constituting means for respectively protecting the cheek, lips and tongue from contact of the brush heads therewith.

2. In a toothbrush, a substantially U-shaped frame, including side arms connected at one end by a bight and transverse connecting means between the side arms at longitudinally spaced points, a pair of parallel shafts extending through the bight and the transverse connecting means, said shafts having crank terminals protruding beyond the bight, a connecting element between the crank terminals having a manipulating handle, bristles connected to and disposed radially from the opposite ends of the shafts to provide brush heads in parallel spaced relation adapted to be disposed on opposite sides of the teeth, and enlarged terminals at the free ends of said arms of the frame constituting means for respectively protecting the cheek, lips and tongue from contact of the brushes heads therewith, said frame between the bight and the connected portions of the side arms constituting a hand-grasping portion for holding the device in juxtaposition to the teeth.

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