Nov. 27, 1956 R. RIPPER 2,771,624

TOOTHBRUSH

Original Filed April 15, 1952

Fig. 1

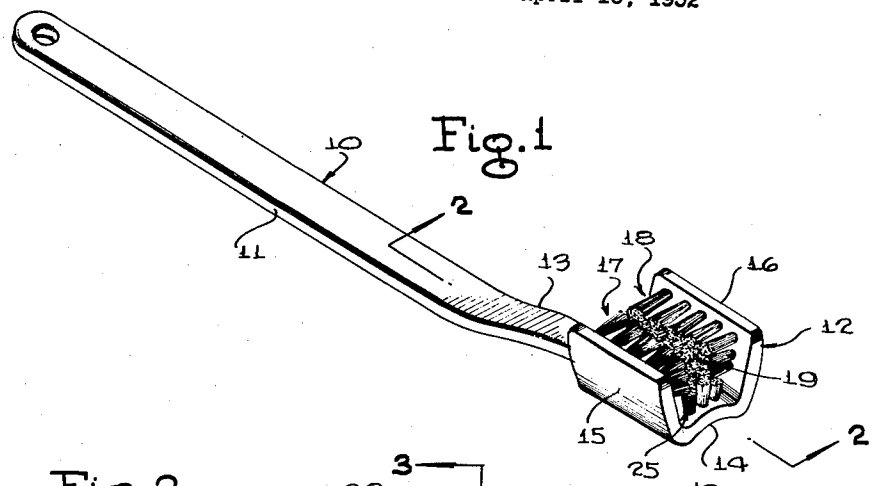


Fig. 2

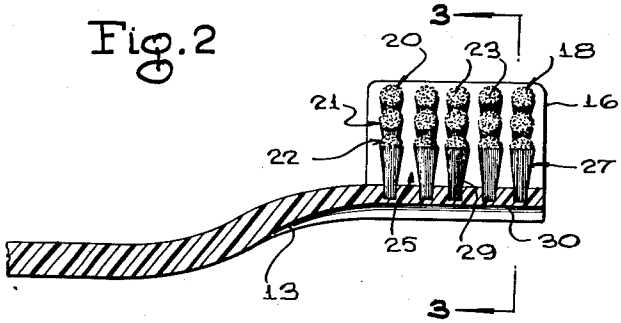


Fig. 3

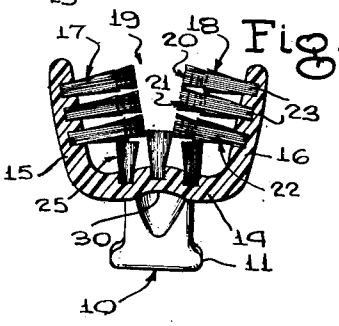


Fig. 4

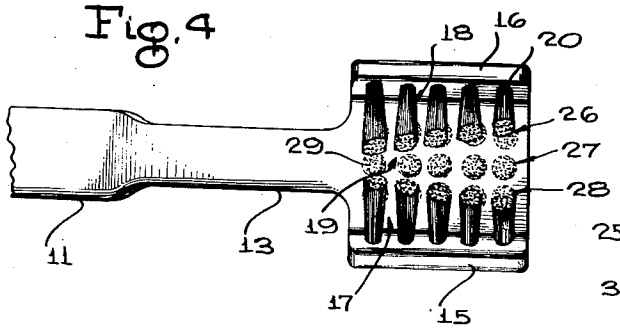
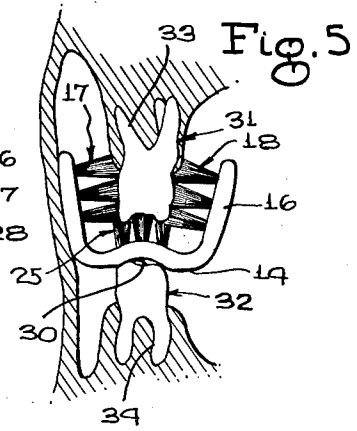


Fig. 5



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TOOTHBRUSH

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Continuation of application Serial No. 282,440, April 15, 1952. This application February 23, 1955, Serial No. 489,841

2 Claims. (Cl. 15—167)

This invention relates to a toothbrush, and more particularly to the type of toothbrush which permits both cleaning of the teeth and massaging of the gums.

An object of the present invention is to provide a toothbrush, which permits the cleaning of the teeth while the mouth is closed.

Another object of the present invention is to provide a toothbrush in which the brush head is adapted to straddle and ride back and forth along the teeth of one of the jaws while being guidingly supported by the other of the jaws.

A further object of the present invention is to provide a toothbrush which enables the cleaning and massaging of the teeth and the adjacent gum of one of the jaws by imparting to the brush head while guidingly supported between the teeth of a user longitudinal reciprocatory movement.

A still further object of the present invention is to provide a toothbrush which is of simple structure, highly efficient in action, and commercially feasible.

Other and further objects and advantages will become apparent from the following description taken in conjunction with the accompanying drawing, in which:

Figure 1 is a perspective view of the toothbrush of the present invention.

Figure 2 is an enlarged sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a sectional view taken on the line 3—3 of Figure 2.

Figure 4 is an enlarged top plan view of the head portion of the toothbrush of Figure 1.

Figure 5 is a side elevational sectional view showing the head of the toothbrush of the present invention in use between the teeth of a human.

Referring to the drawing, the numeral 10 designates the toothbrush of the present invention, the toothbrush comprising a flat handle 11, and a head 12 arranged transversely of the handle and connected at its mid-top portion to the handle by means of the neck 13 projecting at an angle from one end of the handle.

The head 12 is of U shape and includes a bight 14 and a pair of legs 15 and 16 secured to the bight in diverging relation, the head being arranged transversely of the handle 11 and has one end edge of the bight 14 secured to one end or the neck 13 of the handle. A pair of groups 17 and 18 of bristle tufts arranged in longitudinal aligned face to face spaced relation are positioned between the legs 15 and 16 intermediate the ends thereof and project from the inner faces of the legs 15 and 16 respectively, the spacing between the groups 17 and 18 tapering from the other end edge of the bight 14 to the one end edge of the bight to which the handle 11 is secured to thereby form between said groups a slot 19 tapering from the other end edge of the bight 14 to the one end edge of the bight contiguous to the handle 11. Since each of the groups 17 and 18 is of the same structure, only one will be specifically described. The group 18 embodies a plurality of longitudinally extending rows, three in this instance, namely,

20, 21 and 22, arranged in superimposed spaced relation with each of such rows having a plurality of bristle tufts 23 arranged in longitudinal aligned spaced relation. It is to be noted that the tufts 23 of the respective rows 20, 21 and 22 of the groups 17 and 18 gradually decrease in height from the other end edge of the bight 14 to the one end edge of the bight to which the neck 13 of the handle 11 is secured, the resulting gradually decreasing spacing between the tufts of the respective rows of the groups 17 and 18 forming the tapering slot 19.

Positioned between the legs 15 and 16 adjacent the bight 14 is another group 25 of bristle tufts, the group 25 being arranged in intersecting relation with respect to the groups 17 and 18. The group 25 embodies a plurality of longitudinally extending rows spaced from one another, also three in this instance, namely, 26, 27 and 28, with each of such rows having a plurality of bristle tufts 29 arranged in longitudinal aligned spaced relation. As shown in Figures 3 and 5, the intermediate row 27 is higher than the tufts of bristles of the adjacent rows 26 and 28 and projects into the lower end of the slot 19.

The outer face of the bight 14 is provided with a groove 30 which extends longitudinally from the one end edge to which the neck 13 of the handle 11 is secured to the other end edge of the bight 14, said groove being for a purpose to be subsequently described.

In use of the toothbrush of the present invention, the U-shaped head 12 is inserted, Figure 5, between the teeth 31 and 32 of the upper and lower jaws 33 and 34 respectively, with the groups 17, 18 and 25 of the bristle tufts arranged so as to embracingly receive the teeth of the upper jaw, whereupon the jaws are moved toward each other until the teeth, in this instance, the second molar of the upper jaw 33 is wholly within the slot 19 and is embracingly contacted by the groups 17, 18 and 25 of bristle tufts and the groove 30 of the bight 14 has wholly received therein the top portion of the lower jaw 34, in this instance, the complemental second molar. In this position, longitudinal reciprocatory movement is applied to the handle to cause the head to be moved over the head of the upper jaw forwardly and backwardly from the second molar over the first molar, second and first pre-molars, canine, and incisors, while simultaneously applying a rocking movement to the handle. By this procedure, the head 12 of the toothbrush is guidingly supported by the teeth 32 of the lower jaw 34 and the tops of the teeth 31 of the upper jaw 33 are engaged by the bristle tufts of group 25 with the sides of the teeth 31 of the upper jaw 33 and adjacent portion of the gum contacted by the bristle tufts of the groups 17 and 18, resulting in effectively cleaning the teeth 31 of the upper jaw 33 and simultaneously massaging the adjacent portion of the gum. By repeating this same procedure with the remaining portion of the upper jaw 33 and like portions of the lower jaw 34 all of the teeth in the two jaws can be effectively cleaned and the gums massaged.

This application is a continuation of Serial No. 282,440, filed April 15, 1952.

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

1. A toothbrush comprising a handle, a U-shaped head including a bight and a pair of legs secured to said bight in diverging relation arranged transversely of said handle and having one end edge of said bight secured to one end of said handle, a pair of groups of bristle tufts arranged in longitudinal aligned face to face spaced relation positioned between said legs intermediate the ends thereof and projecting from the inner faces of said legs, the spacing between said groups tapering from the other end edge of said bight to the one end edge of said bight to which the handle is secured to thereby form between said groups a slot tapering from the other end edge of said bight to

said one end edge thereof, each group embodying a plurality of longitudinally extending rows arranged in superimposed spaced relation with each row having a plurality of bristle tufts arranged in longitudinal aligned spaced relation, and another group of bristle tufts positioned between said legs adjacent said bight and arranged in intersecting relation with respect to said pair of groups and projecting from the inner face of said bight, said another group embodying a plurality of longitudinally extending rows spaced from one another with each row having a plurality of bristle tufts arranged in longitudinal aligned spaced relation, the outer face of said bight being provided with a groove extending longitudinally from said one end edge to which said handle is secured to the other end edge of said bight.

2. A toothbrush comprising a handle, a U-shaped head including a bight and a pair of legs secured to said bight in diverging relation arranged transversely of said handle and having one end edge of said bight secured to one end of said handle, a pair of groups of bristle tufts arranged in longitudinal aligned face to face spaced relation positioned between said legs intermediate the ends thereof and projecting from the inner faces of said legs, the spacing between said groups tapering from the other end edge of said bight to the one end edge of said bight to which the handle is secured to thereby form between said groups a slot tapering from the other end edge of said bight in

said one end edge thereof, each group embodying a plurality of longitudinally extending rows arranged in superimposed spaced relation with each row having a plurality of bristle tufts arranged in longitudinal aligned spaced relation, and another group of bristle tufts positioned between said legs adjacent said bight and arranged in intersecting relation with respect to said pair of groups and projecting from the inner face of said bight, said another group embodying a plurality of longitudinally extending rows spaced from one another with each row having a plurality of bristle tufts arranged in longitudinal aligned spaced relation, tufts of bristles of the intermediate row of said another group bring higher than the tufts of bristles of the adjacent rows and projecting into said slot, the outer face of said bight being provided with a groove extending longitudinally from said one end edge to which said handle is secured to the other end edge of said bight.

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