TRIPLE ACTION TOOTHBRUSH

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The present invention relates to a toothbrush in which there are a multitude of undivided bristle units spaced from each other and each freely rotatable upon application of a manipulative contact with the teeth of a user.

An object of the present invention is to provide a toothbrush in which there are a plurality of bristle units each independently and freely rotatable upon application of a manipulative contact with the teeth of a user.

Another object of the present invention is to provide a toothbrush in which there are several spaced rows of bristle units with each unit freely rotatable upon application of a manipulative contact with the teeth of a user and the perimeters of the bristles of the respective units contiguous to each other.

A further object of the present invention is to provide a toothbrush which simultaneously cleans the crowns and sides of the upper and lower teeth in a highly efficient manner.

A still further object of the present invention is to provide a toothbrush of sturdy construction, one economically practical, and one highly effective in action.

These and other objects and advantages of the present invention will be fully apparent from the following description when taken in conjunction with the annexed drawings, in which:

Figure 1 is a plan view of the toothbrush according to the present invention;

Figure 2 is a view on an enlarged scale, taken on the line 2—2 of Figure 1; and

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

Referring to the drawing in which like numerals indicate like parts throughout the several views, the reference numeral 10 designates the toothbrush of the present invention consisting in an elongated handle 12 and a first support member 14 rising from one end of the handle 12.

Another or second support member 16 is positioned inwardly of and spaced from the member 14 and rises from the handle 12.

A pair of stub shafts 18 and 20 are arranged in parallel spaced relation and lie in a common horizontal plane. The shafts 18 and 20 are positioned between the upper support members 14 and 16 adjacent to and spaced above the lower ends of the support members 14 and 16 with their ends fixedly secured in the support members 14 and 16.

Another stub shaft 22 is positioned between the support members 14 and 16 and has its ends fixedly secured in the support members 14 and 16. The shaft 22 is positioned adjacent to and spaced below the upper ends of the support members 14 and 16.

A plurality of individual bristle units 24 are arranged in side by side relation and are circumposed about each of the stub shafts 18, 20, and 22 with each unit 24 freely rotatable about the respective one of the stub shafts. Each unit 24 embodies a hub 26 having a single row of individual bristles 28 projecting in radial relation about the longitudinal center of said unit or the entire perimeter of the hub 26 with the bristles 28 lying in a common vertical plane on each hub 26.

The stub shafts 18, 20, and 22 are arranged with respect to each other and spaced from each other so that the peripheries of the bristles 28 of the bristle units 24 on the respective shafts 18, 20, and 22, are contiguous to each other.

The portion of the handle 12 between the support members 14 and 16 is divided longitudinally by a centrally disposed ridge 30 subdividing the adjacent face of the handle 12 into two concavely curved subsidiary faces 32 and 34.

It is to be noted that all of the component parts of the thus described toothbrush are made of nylon plastic which is produced by E. I. du Pont de Nemours & Company, Wilmington, Delaware, and marketed by said company under the name "Zytel 101."

In use, upon application of a manipulative contact with the teeth of a user, each bristle unit 24 will rotate freely about its respective stub shaft 18, 20, or 22, so as to effect optimum cleaning action on the faces of the lower teeth and the faces of the upper teeth of the user, and upon the crown portions of the teeth of the user simultaneously. The single construction of each bristle unit allows each unit to rotate independently of the other units and this arrangement obviates the chance of any one bristle getting between the gums and the teeth although affording an effective massaging action to the gums. The free rotation of the bristle units 24, with the perimeters of the bristles contiguous to each other, assures the user that the bristle units are easily cleaned and freed of foreign matter when placed in a stream of running water and permitted to rotate freely under the action of the stream of running water.

What is claimed is:

1. A triple action toothbrush comprising an elongated handle, a first upstanding support member rising from one end of said handle, a second upstanding support member positioned inwardly of and spaced from said first member and rising from said handle, a pair of stub shafts arranged in parallel spaced relation and lying in a common horizontal plane positioned between said first and second support members adjacent to and spaced above the lower ends thereof and having the ends fixedly secured to said first and second support members, another stub shaft positioned between said first and second support members adjacent to and spaced below the upper ends thereof and having the ends fixedly secured to said first and second support members, and a plurality of individual bristle units arranged in side by side relation circumposed about each of said stub shafts and each freely rotatable about said stub shaft, each unit embodying a single row of individual bristles projecting in radial relation about the longitudinal center of said unit with the bristles all lying in a vertical plane, said another stub shaft and pair of stub shafts being spaced from each other so that the peripheries of the bristles of said bristle units on the respective shafts are contiguous to each other.

2. A triple action toothbrush comprising an elongated handle, a first upstanding support member rising from one end of said handle, a second upstanding support member positioned inwardly of and spaced from said first member and rising from said handle, a pair of stub shafts arranged in parallel spaced relation and lying in a common horizontal plane positioned between said first and second support members adjacent to and spaced above the lower ends thereof and having the ends fixedly secured to said first and second support members, another stub shaft positioned between said first and second support members adjacent to and spaced below the upper ends thereof and having the ends fixedly secured to said first and second support members, and a plurality of individual bristle units arranged in side by side relation circumposed about each of said stub shafts and each freely rotatable about said stub shaft, each unit embodying a single row of individual bristles projecting in radial relation about the longitudinal center of said unit with the bristles all lying in a vertical plane, said another stub shaft and pair of stub shafts being spaced from each other so that the peripheries of the bristles of said bristle units on the respective shafts are contiguous to each other.
said first and second support members, and a plurality of individual bristle units arranged in side by side relation circumposed about each of said stub shafts, each unit embodying a hub, a single row of individual bristles projecting in radial relation about the entire perimeter of said hub, the hub of each unit being freely rotatable about the adjacent stub shaft, said another stub shaft and pair of stub shafts being spaced from each other so that the peripheries of the bristles of said bristle units on the respective shafts are contiguous to each other.

3. A triple action toothbrush comprising an elongated handle, a first upstanding support member rising from one end of said handle, a second upstanding support member positioned inwardly of and spaced from said first member and rising from said handle, a pair of stub shafts arranged in parallel spaced relation and lying in a common horizontal plane positioned between said first and second support members adjacent to and spaced below the upper ends thereof and having the ends fixedly secured to said first and second support members, and a plurality of individual bristle units arranged in side by side relation circumposed about each of said stub shafts, each unit embodying a hub, and a single row of individual bristles projecting in radial relation about the entire perimeter of said hub, the bristles in each hub lying in a common vertical plane, the hub of each unit being freely rotatable about the adjacent stub shaft, said another stub shaft and pair of stub shafts being spaced from each other so that the peripheries of the bristles of said bristle units on the respective shafts are contiguous to each other.

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