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(54) **EXPANDABLE ELASTIC TOOTHBRUSH**

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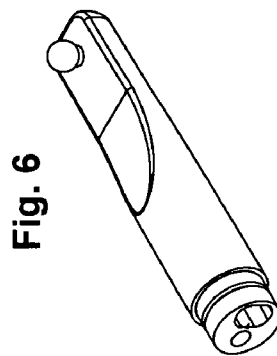
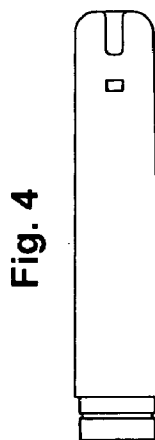
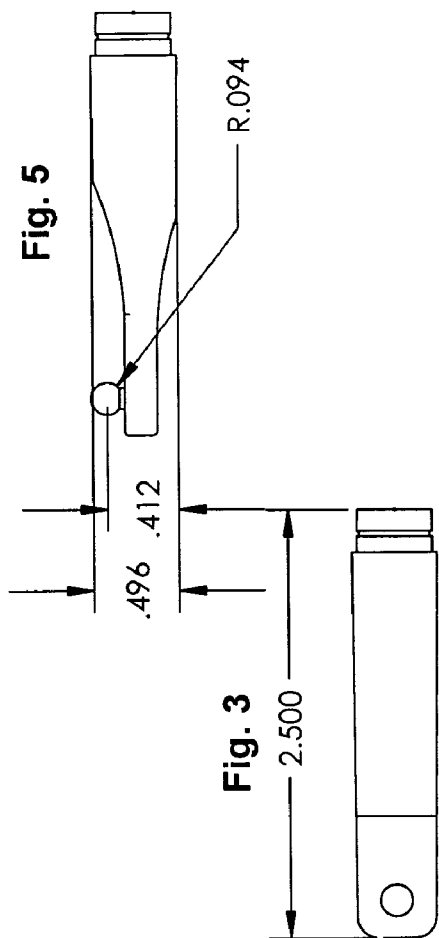
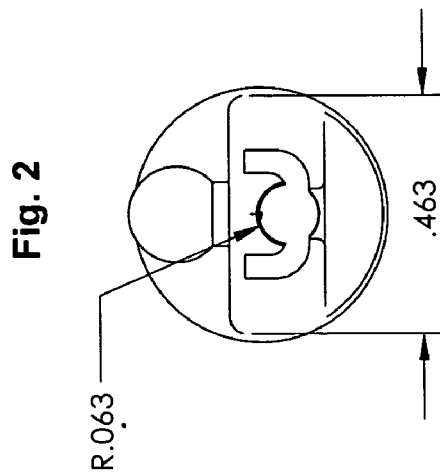
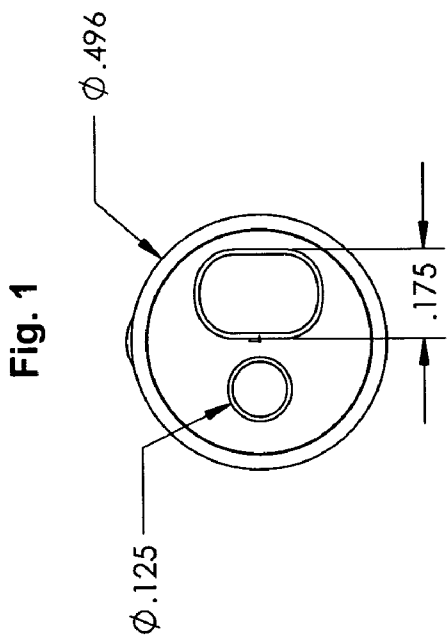
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(57) **ABSTRACT**

An expandable elastic toothbrush is a combination of three sections that include: a head, a body and a removable handle. The head contains a top brush that is connected with two expandable side brushes to form a tooth shaped (Convex U) brush. This configuration can cover most of the tooth surfaces during brushing, so it maximizes brushing effectiveness. Specifically, the head is made of an elastic rubber that allows the moveable side brushes to expand according to the tooth size and the depth of individual tooth. Therefore, it is able to conform to the teeth more closely and creates a personally sized toothbrush. Furthermore, the inside of the body and the removable handle have pre-defined areas for attachments such as a tartar remover or a small plaque brush insert. The end of the handle has a gum stimulator. A smaller removable round brush can be added to the top of the head for additional cleaning.



**EXPANDABLE ELASTIC TOOTHBRUSH**

**DESCRIPTION OF DRAWINGS**

- [0001] Sheet 1 of 13
- [0002] Brush Assembly
- [0003] FIG. 1—is a front elevation view of the enlarged brush.
- [0004] FIG. 2—is a top plan view of the brush.
- [0005] FIG. 3—is a bottom plan view of the brush.
- [0006] FIG. 4—is a side plan view of the toothbrush
- [0007] FIG. 5—is a perspective view of toothbrush from the bottom showing our design and arrangement of the bristle tufts.
- [0008] Sheet 2 of 13
- [0009] Assembly, Brush w/ Round Head Attachment
- [0010] FIG. 1—is a front elevation view of the enlarge brush head with removable brush.
- [0011] FIG. 2—is a top plan view of the brush with round head Attachment.
- [0012] FIG. 3—is a bottom plan view of the brush with round head Attachment.
- [0013] FIG. 4—is a side plan view of the toothbrush with round head Attachment.
- [0014] FIG. 5—is a perspective view of toothbrush from the bottom showing our design and arrangement of the bristle tufts with round head attachment.
- [0015] Sheet 3 of 13
- [0016] Head, Brush
- [0017] FIG. 1—is a front elevation view of the enlarge brush head.
- [0018] FIG. 2—is a top plan view of the brush head.
- [0019] FIG. 3—is a side plan view of the brush head.
- [0020] FIG. 4—is a perspective view of brush head.
- [0021] Sheet 4 of 13
- [0022] Head, Round Brush
- [0023] FIG. 1—is a front elevation view of the round brush head.
- [0024] FIG. 2—is a top plan view of the round brush head.
- [0025] FIG. 3—is a side plan view of the round brush head.
- [0026] FIG. 4—is a perspective view of the round brush head.
- [0027] Sheet 5 of 13
- [0028] Brush Head, Compared
- [0029] FIG. 1—is a front elevation view of the closed brush head.
- [0030] FIG. 2—is a front elevation view of the expanded brush head.

- [0031] Sheet 6 of 13
- [0032] Brush Head, Base
- [0033] FIG. 1—is a front elevation view of the expanded brush head base.
- [0034] FIG. 2—is a top plan view of the expanded brush head base.
- [0035] FIG. 3—is a side plan view of the expanded brush head base.
- [0036] FIG. 4—is a perspective view of the expanded brush head base.
- [0037] Sheet 7 of 13
- [0038] Brush, Side Wall
- [0039] FIG. 1—is a side elevation view of the sidewall.
- [0040] FIG. 2—is a side view of the sidewall.
- [0041] FIG. 3—is a front view of the sidewall.
- [0042] FIG. 4—is a side plan view of the sidewall.
- [0043] FIG. 5—is a perspective view of the sidewall.
- [0044] Sheet 8 of 13
- [0045] Brush, Body
- [0046] FIG. 1—is a Cross Section elevation view of the brush body.
- [0047] FIG. 2—is a Cross Section view of the brush body.
- [0048] FIG. 3—is a Top view of the brush body.
- [0049] FIG. 4—is a side plan view of the brush body.
- [0050] FIG. 5—is a perspective view of the brush body.
- [0051] Sheet 9 of 13
- [0052] Brush, Handle
- [0053] FIG. 1—is a Cross Section elevation view of the brush handle.
- [0054] FIG. 2—is a Cross Section view of the brush handle.
- [0055] FIG. 3—is a Top view of the brush handle.
- [0056] FIG. 4—is a bottom view of the brush handle.
- [0057] FIG. 5—is a side plan view of the brush handle.
- [0058] FIG. 6—is a perspective view of the brush handle.
- [0059] Sheet 10 of 13
- [0060] Attachment, Rubber Pick
- [0061] FIG. 1—is a side plan view of the rubber pick.
- [0062] FIG. 2—is a bottom plan view of the rubber pick.
- [0063] FIG. 3—is a front elevation view of the rubber pick
- [0064] FIG. 4—is a perspective view of the rubber pick.
- [0065] Sheet 11 of 13
- [0066] Assembly, Brush w/Tartar & Plaque
- [0067] FIG. 1—is a plan side view of the brush with tartar and plaque remover.

- [0068] FIG. 2—is a top plan view of the brush with tartar and plaque remover.
- [0069] FIG. 3—is a perspective view of the brush body at different position.
- [0070] FIG. 4—is a perspective view of the brush body at different position.
- [0071] FIG. 5—is a perspective view of the brush body at different position.
- [0072] Sheet 12 of 13
- [0073] Plaque Brush
- [0074] FIG. 1—is a front plan view of the plaque brush.
- [0075] FIG. 2—is a top plan of the plaque brush.
- [0076] FIG. 3—is a perspective view of the plaque brush showing our design.
- [0077] Sheet 13 of 13
- [0078] Tartar Remover
- [0079] FIG. 1—is a front plan view of the tartar remover.
- [0080] FIG. 2—is a top plan of the tartar remover.
- [0081] FIG. 3—is a side plan view of the tartar remover.
- [0082] FIG. 4—is a perspective view of the tartar remover showing our design.

DETAILED DESCRIPTION OF THE  
INVENTION

- [0083] Referring to sheet 1 of 13, FIG. 1 to 4 showing the front, top, bottom and side plan view of brush respectively, FIG. 2 with the broken line showing the attachments will be located; FIG. 5 is a perspective view from the bottom showing this invention. Referring to sheet 2 of 13, similarly to sheet 1 of 13 additions showing removable round brush attached.
- [0084] Referring to sheet 3 & 4 of 13 showing the closed view of the brush head.
- [0085] Referring to sheet 5 of 13, FIGS. 1 and 2 showing the side brush are flexible that can be expanded to fit the size of tooth. View B showing the inner side of both side brushes is slightly lifted up for expand.
- [0086] Referring to sheet 7 of 13, FIGS. 1 to 5 showing the details of the sidewall.
- [0087] Referring to sheet 7 of 13, FIG. 5 showing the edge of side brush has curve shape are make by the soft rubber to protect gum line.

- [0088] Referring to sheet 9 of 13, FIGS. 3 to 6 showing the front view of handle. In FIGS. 1 & 2 showing details of optional attachment location.
- [0089] Referring to sheet 10 of 13 FIGS. 1 to 4 showing the size and location of a gum stimulator.
- [0090] Referring to sheet 11 of 13, FIGS. 1 to 5 showing the top plan view and detail of location for removable attachments, which can be inserted.
- [0091] Referring to sheet 4 of 9 view A and sheet 7 of 9 view D showing the different size, length and direction of bristles from the bristles face.
- [0092] Referring to sheet 12 of 13 FIGS. 1 to 3 and sheet 13 of 13 FIGS. 1 to 4 showing the size and type of attachments, which can be inserted.
- [0093] The invention is not limited to the above embodiments but various modifications thereof may be made. It will be understood by those skilled in the art that various changes in form and detail may be made without departing from the scope of the invention.

I claim:

1. An expandable elastic toothbrush comprising of:
  - a head formed by top, left and right brushes;
  - a head with a large number of bristles thereon;
  - a slot at the top of head for an additional round brush;
  - a part connected to the head of said body;
  - a removable end of said handle;
  - a set of pre defined open areas located inside of the body and handle for attachments;
  - and a rubber gum stimulator on a lower end surface of the handle.
2. Both sides of the brush as shown in the drawing, said to expand to fit the size and the depth of teeth.
3. A plethora of bristles, the three sides of brush form a bristle face, said bristle face cover the top and both sides of teeth, said the top and both sides can be brushed in a single motion, said different bristles can be used to adjust to different areas of teeth.
4. An expandable elastic toothbrush attachment as shown and described.

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