



(22) **Date de dépôt/Filing Date:** 2015/04/13

(41) **Mise à la disp. pub./Open to Public Insp.:** 2016/10/13

(51) **Cl.Int./Int.Cl. A46B 17/04** (2006.01)

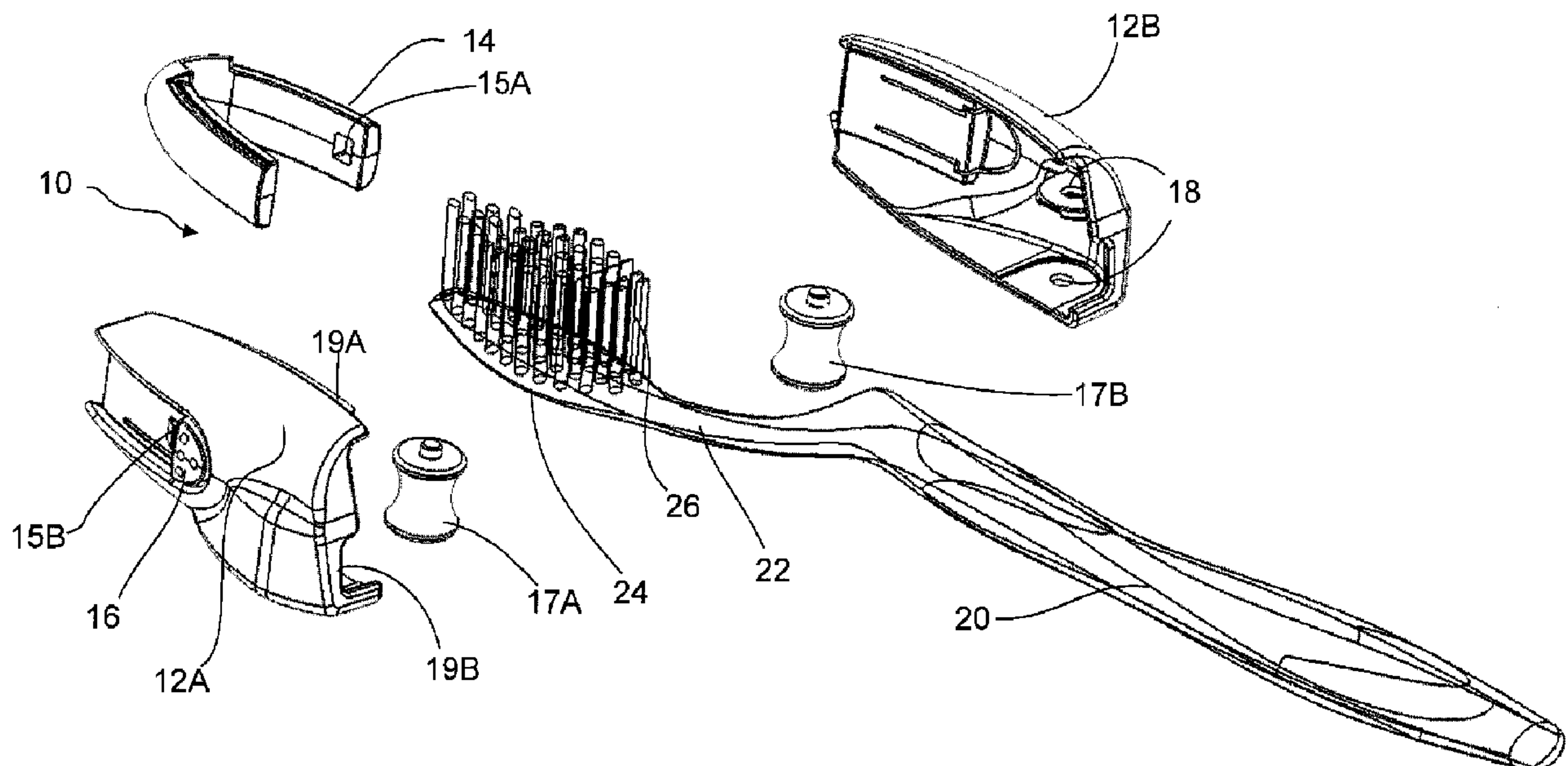
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(54) **Titre : SUPPORT DE BROSSE A DENTS**

(54) **Title: TOOTHBRUSH HOLDER**



(57) **Abrégé/Abstract:**

An effective assembly for a toothbrush holder is achieved by applying a biasing member's force to cause two portions of an enclosure, each receiving one of two rollers. In this way, the biasing action can be used both for the roller action as well as for keeping the enclosure closed around the toothbrush head.

Abstract

An effective assembly for a toothbrush holder is achieved by applying a biasing member's force to cause two portions of an enclosure, each receiving one of two rollers. In this way, the biasing action can be used both for the roller action as well as for keeping the enclosure closed around the toothbrush head.

TOOTHBRUSH HOLDER

Technical Field

The present application relates to toothbrush holders.

Background

5 A toothbrush holder providing protection for a toothbrush head is known in Applicant's published PCT patent application WO2014/078953 published May 30, 2014. In many embodiments of that patent application, a pair of juxtaposed rollers is provided at the ends of biased arms. The rollers allow for the easy insertion and removal of the toothbrush head from an enclosure for storage. In some embodiments, the rollers are
10 shaped concavely to keep the sides of the toothbrush head aligned or guided during insertion and removal, with the benefit that the toothbrush is unlikely to twist with the result that bristles of the toothbrush contact the holder or its enclosure during insertion, storage and/or removal.

Summary

15 Applicant has found that an effective assembly to provide such a toothbrush holder can be achieved by applying a biasing member's force to cause two portions of the enclosure each receiving one of the two rollers. In this way the biasing action can be used both for the roller action as well as for keeping the enclosure closed around the toothbrush head.

20 Brief Description of the Drawings

The various embodiments disclosed herein will be better understood by way of the following detailed description with reference to the appended drawings, in which:

Figure 1 is an exploded oblique view of various parts making up one embodiment of the toothbrush holder with a toothbrush;

Figure 2A is a front elevation view of the holder of Figure 1 shown while the toothbrush head is about to be inserted into the holder, the view showing in outline the rollers inside the enclosure parts

Figure 2B is a front elevation view of the holder of Figure 1 shown while the toothbrush head is being inserted into the holder with the enclosure partly expanded, the view showing in outline the rollers inside the enclosure parts; and

Figure 2C is a front elevation view similar to Figure 2A with the toothbrush head is fully inserted and the enclosure closed around the toothbrush head.

Detailed Description

As shown in Figure 1, the toothbrush 20 is a standard toothbrush having a neck portion 22 connecting a handle to a head portion 24 supporting bristles 26. While the toothbrush shown is of a conventional design, it is possible to constrain the use of the holder 10 to specific toothbrush designs instead of attempting to make it universal, namely suitable for the majority of commercially sold toothbrushes.

The holder 10 comprises two enclosure parts 12A and 12B. In the embodiment illustrated, they are substantially similar in shape. Alternative, one could be flat side for wall mounting or for resting on a flat surface while the other shaped to enclose the toothbrush one of said enclosure parts with a rounded surface. Using substantially similar shapes is convenient for a compact holder 10 that can be stored on the counter, in a travel bag or in a drawer.

The enclosure shells or parts 12 in the embodiment shown are structured to close with minimal gaps or openings around the head 24 and bristles 26. Interlocking flange 19A

closes the gap along the parting line between the shells 12A and 12B, while the flange 19B closes the gap around the neck 22 at the entry to the holder 10. It will be understood that the bristles do not contact the upper part of the flange 19B since the insertion of the head 24 causes the enclosure parts 12B and 12B to separate sufficiently
5 to make way for the bristles 26 entering and exiting the enclosure.

The biasing of the enclosure parts 12A and 12B is provided, in the embodiment shown, by a unitary clip 14. Other spring or biasing mechanisms can be contemplated and other mechanisms to articulate the enclosure parts with respect to one another can also be contemplated.

10 The clip member 14 is provided with a locking mechanism in the form of recesses 15A on each end of the clip member that engage protrusions 15B. To release the clip 14, buttons 16 can be depressed to disengage the protrusions 15B from the recesses 15A, to allow the clip 14 to be pulled away. It will be appreciated that the clip 14 could have protrusions while the parts 12 could have corresponding recesses. Likewise, a clip
15 could be provided with a lift tap to allow the user to pull the clip end away from one part 12 and disengage the clip. While a suitable release mechanism for the clip is likewise optional, it is used to provide a way for the user to easily disassemble the holder 10 to clean the inside of the holder.

The enclosure parts 12A and 12B receive guide rollers 17A and 17B respectively.
20 Suitable bearings, such as for example the ones shown at 18 in Figure 1 are provided. The rollers have convex surfaces for receiving the sides of the head 24 while guiding the same and preventing twisting of the head 24 as it is inserted and removed from the holder 10. Other roller shapes and designs are contemplated than the one shown, however, it is possible that the roller shape needs to take into account the shape of the
25 head 24 to provide for good guidance of the head during insertion and removal.

For example, when the sides of a toothbrush head 24 are made of smooth plastic, it is contemplated that the rollers can simply be replaced by suitable fixed guides that allow the sliding insertion of the head 24 to cause the separation of the parts 12A and 12B against the action of the biasing member 14. This requires some cooperation between
5 the materials, the shape of the head 24 and the guide members, as it is less tolerant than the shaped roller design illustrated in the Figures to a more bluntly shaped head 24 or a head made of rubberised material that would offer much higher friction than a smooth plastic material.

The parts shown in Figure 1 can be made of any suitable material, whether plastic or
10 metal.

Figures 2A and 2B illustrates how the two enclosure parts 12A and 12B are initially closed and then caused to separate against the action of the clip 14 during insertion of the toothbrush head 24 into the holder 10. The parts 12A and 12B are designed to articulate about a pivot point at their respective tops. As shown in Figure 2B, when the
15 head 24 is fully inserted, the enclosure parts 12 are fully enclosed around the head with the clip keeping the parts 12 securely closed.

While the enclosure shown is shaped to fit snugly around the toothbrush head 24, it will be appreciated that it may be oversized to accommodate a wider variety of toothbrush styles and designs.

20 Further details of the rollers, and other configurations and details of the holder are described in Applicant's PCT patent application PCT/CA2013/050733, filed 26 September 2013 (designating the United States) and published as WO2014/078953 on May 30, 2014, the content of which is hereby incorporated by reference as if fully set forth herein.

What is claimed is:

1. A toothbrush holder comprising complementary enclosure parts articulated relative to one another to separate while receiving a toothbrush head and come together when a toothbrush head is stored, and a biasing member interacting with said enclosure parts for biasing said enclosure parts to be closed, said enclosure parts each having a guide member for guiding the toothbrush head during insertion and removal and for facilitating the action of the insertion in forcing said enclosure parts to separate against the action of the biasing member.
2. The holder as defined in claim 1, wherein said enclosure parts are substantially of a similar form.
3. The holder as defined in claim 1, wherein one of said enclosure parts is configured to have a flat side for wall mounting or for resting on a flat surface, while another of said enclosure parts is configured to have a rounded surface.
4. The holder as defined in claim 1, 2 or 3, wherein said enclosure parts comprise an interlocking flange for closing a gap at a parting line between said enclosure parts.

5. The holder as defined in any one of claims 1 to 4, wherein said enclosure parts comprise at least one flange for closing an opening at an entry/exit of the holder.
6. The holder as defined in any one of claims 1 to 5, wherein said biasing member comprises a clip external to said enclosure parts for biasing said enclosure parts together.
7. The holder as defined in claim 6, wherein the biasing member cooperates with said enclosure parts to be releasable from said enclosure parts to facilitated disassembly and cleaning of the holder.
8. The holder as defined in claim 7, comprising a release button to release the clip from said enclosure parts.
9. The holder as defined in any one of claims 1 to 8, wherein said guide member comprises a roller.
10. The holder as defined in claim 9, wherein said guide roller is concavely shaped.

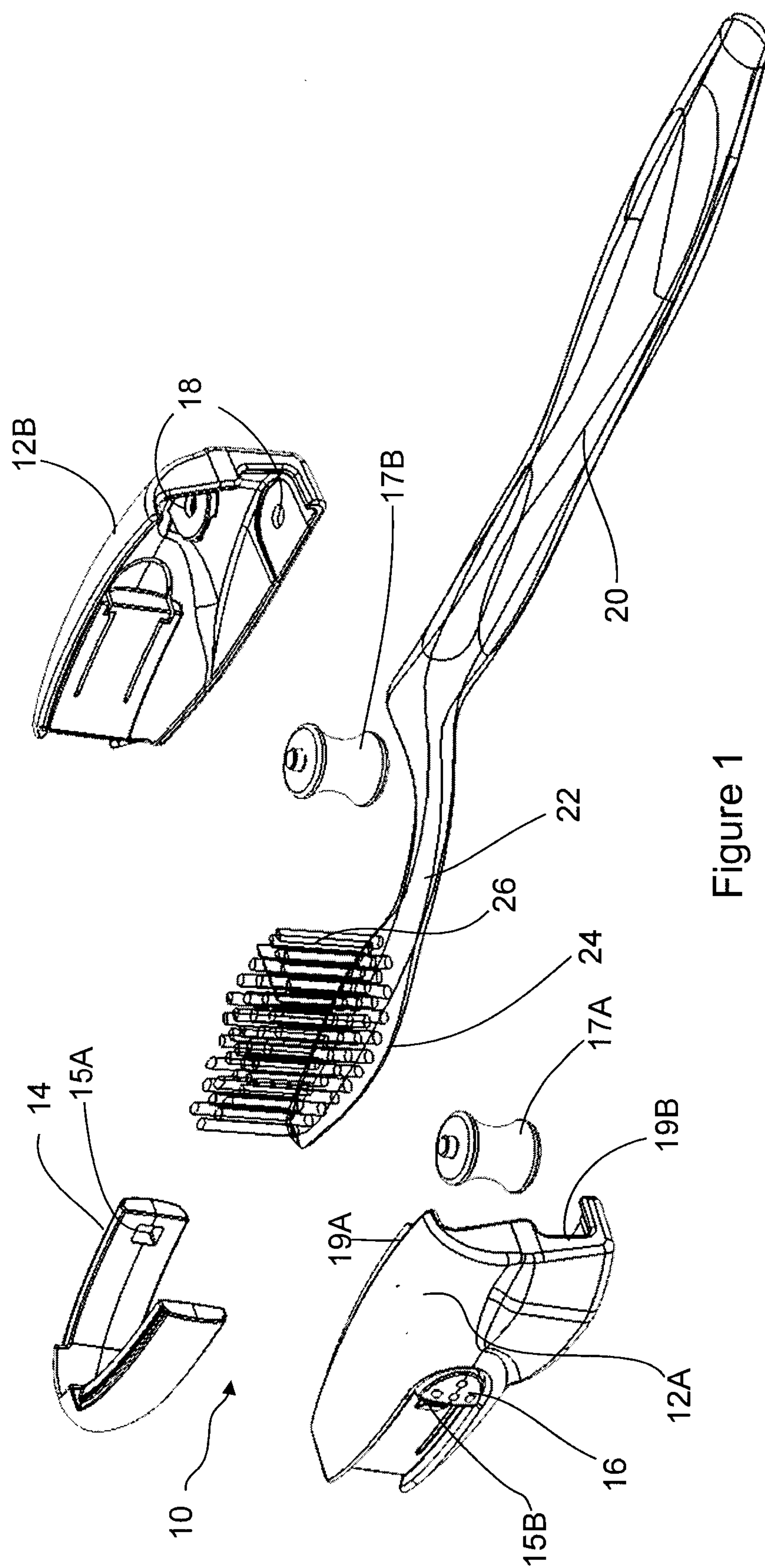


Figure 1

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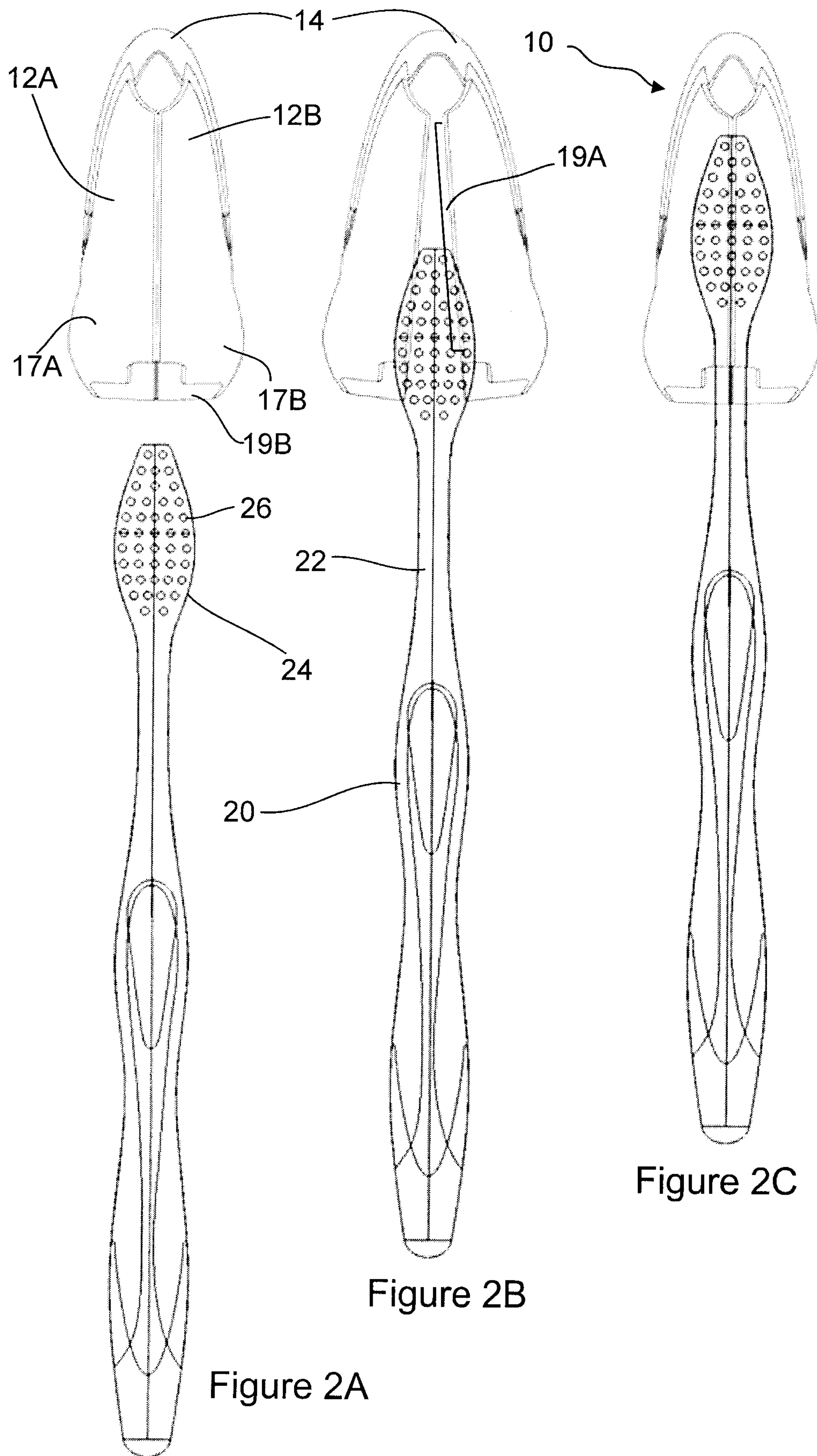


Figure 2C

Figure 2B

Figure 2A

