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**(54) HAIR TREATMENT APPLICATOR**

**AUFTRAGSVORRICHTUNG ZUR HAARBEHANDLUNG**

**APPLICATEUR DE TRAITEMENT CAPILLAIRE**

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**EP-A- 1 036 521 WO-A-00/69308**  
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**Description****BACKGROUND OF THE INVENTION**Field of the Invention

[0001] The present invention relates to hair treatment devices. More particularly, the present invention relates to hair treatment applicators and a method of applying hair treatment to hair.

Description of the Prior Art

[0002] Hair treatment or hair color applicators are known. Such hair treatment applicators allow a user to apply a hair product, such as a highlighter, to hair.

[0003] In U.S. Patent No. 6,079,420 to Musum, a highlighting comb is disclosed. The comb has a plurality of tines that are secured to a spine, which is connected to a handle. The tines are disposed adjacent to each other along a straight line. The user of the comb places the treatment material into retaining areas that are disposed between each of the respective adjacent tines and then passes the tines through the hair. The disclosed comb suffers from the drawback of failing to provide a separation between the retaining areas through which hair may pass that will be untreated.

[0004] In U.S. Patent No. 6,142,157 to de Laforcade, an applicator system is disclosed. The applicator has a handle with a brush, and a plurality of brush members extending from a first side of the brush. The brush members are disposed along the first side of the brush in parallel and perpendicular rows. A user places the hair product onto the brush members and passes the applicator along a lock of hair so that the brush members transfer the hair product to the hair. The disclosed applicator suffers from the drawback of failing to allow for a separation between treated and untreated hair.

[0005] In U.S. Patent No. 4,605,026 to Nolin, a highlighting comb is disclosed. This comb comprises an elongated member from which teeth are departing. Intercalated to a group of three teeth, either special teeth or fluid passageways are placed. The special teeth or the fluid passageways are connected to a conduit contained in the elongated member, which dispenses the hair treatment.

[0006] In U.S. Patent No. 5,337,765 to Wong, a modular brush is disclosed. The modular brush comprises modules, which may or may not comprise bristles. The bristle modules are dipped into a hair treatment composition and then mounted on the brush body alternated to space modules, which do not contain bristles. The hair treatment is applied to the hair through the rotation of the modular brush, but the hair in contact with the space modules does not receive any treatment.

[0007] In European Patent No.1 036 521 to de Laforcade, an applicator according the preamble of claim 1 is disclosed. The applicator comprises teeth (or bristles)

implanted on an application support face. The application support face is designed to have stepped profile with at least two discrete levels, which generate hair colouring patterns formed of at least two hair strands with two different degree of coloration. The deep regions on the application support face contain more colouring product than those less deep and thus colour the hair strands more significantly than those less deep. In French Patent No. 2 645 725 to Le Bolloc'h, a notched brush is disclosed. The notched brush comprises tuft of bristles at regular interval over the wide part of a paintbrush. The proximal portion of the tuft of bristles is wrapped with a hard plastic sheath.

**SUMMARY OF THE INVENTION**

[0008] It is an object of the present invention to provide a hair treatment applicator that applies hair treatment to a plurality of sections of hair.

[0009] It is another object of the present invention to provide such an applicator that provides for a separate and distinct set of treated hair or highlights over two distinctly separate sections of hair.

[0010] It is yet another object of the present invention to provide such an applicator that provides a separate, untreated section of hair in between two treated sections of hair.

[0011] These and other objects and advantages of the present invention are provided by a hair treatment applicator according to Claim 1.

[0012] Other and further objects, advantages and features of the present invention will be understood by reference to the following.

BRIEF DESCRIPTION OF THE DRAWINGS**[0013]**

Fig. 1 is a top perspective view of the hair treatment applicator of the present invention;

Fig. 2 is a bottom perspective view of the applicator of Fig. 1;

Fig. 3 is a bottom view of the applicator of Fig. 1;

Fig. 4 is a top view of the applicator of Fig. 1;

Fig. 5 is a side view of the applicator of Fig. 1;

Fig. 6 is a front view of the applicator of Fig. 1;

Fig. 7 is a rear view of the applicator of Fig. 1; and

Fig. 8 is a bottom view of a hair treatment applicator not according to the present invention.

## DESCRIPTION OF THE INVENTION

**[0014]** Referring to the drawings and, in particular, Figs. 1 and 2, there is shown an embodiment of a hair treatment applicator of the present invention generally represented by reference numeral 10. Applicator 10 has a handle 20 and a head 50 connected to the handle. Preferably, handle 20 and head 50 are integrally molded or formed together.

**[0015]** Handle 20 is an elongated handle that a user grasps in his or her hand when passing head 50 along the user's hair, as will be discussed later in detail. Handle 20 can be any type of handle known in the art that is secured to, or integrally molded or formed with, head 50. Handle 20 is preferably ergonomically designed and contoured to maximize comfort and efficiency for a user due to the repetitive motion of applicator 10 as it passes along or strokes the user's hair.

**[0016]** Referring to Figs. 1 through 7, head 50 has a bilaterally symmetrical shape and preferably has a heart-like shape. Head 50 has a first comb 100 and a second comb 200. In this embodiment, applicator 10 has two combs 100, 200. However, as will be discussed later in detail, any number of combs can be used with the present invention.

**[0017]** Combs 100, 200 have bases 110, 210, respectively. Preferably, bases 110, 210 are circular in shape. Comb 100 has a plurality of tines 120 extending from base 110 and comb 200 has a plurality of tines 220 extending from base 210. Preferably, tines 120 are four tines that are disposed along base 110 in a square pattern and tines 220 are four tines that are disposed along base 210 in a square pattern. More preferably, tines 120, 220 are perpendicular to bases 110, 210.

**[0018]** Tines 120, 220 are preferably substantially cylindrical in shape, having proximal ends 122, 222 and distal ends 124, 224. Proximal ends 122, 222 are connected to bases 110, 210, respectively. More preferably, tines 120, 220 have a frusto-conical shape or are tapered from proximal ends 122, 222 to distal ends 124, 224, respectively. Distal ends 124, 224 preferably have a flat end surface but other than flat end surfaces can be used, such as, for example, a pointed or sharply tapered end, to facilitate initially inserting tines 120, 220 through the section or lock of hair to be treated.

**[0019]** Preferably, tines 120, 220 have a height of between about 0.6 cm to about 0.5 cm. More preferably, tines 120, 220 have a height of between about 1 cm to about 1.9 cm. Preferably, proximal ends 122, 222 have a diameter of between about 0.2 cm to about 0.8 cm. More preferably, proximal ends 122, 222 have a diameter of between about 0.3 cm to about 0.6 cm. Preferably, distal ends 124, 224 have a diameter of between about 0.2 cm to about 1cm. More preferably, distal ends 124, 224 have a diameter of between about 0.2cm to about 0.8cm

**[0020]** While this embodiment has four tines 120 and four tines 220, alternative numbers of tines 120, 220 can

also be used. Additionally, this embodiment arranges tines 120, 220 in square patterns along bases 110, 210 with each tine disposed in a corner of the square. Tines 120, 220 are disposed along bases 110, 210 such that the sides of the square pattern are either substantially parallel or perpendicular to the longitudinal axis of handle 20.

**[0021]** In use, hair flow is between tines 120, 220 parallel to the longitudinal axis of handle 20. The square pattern of tines 120, 220 is preferred because it provides for a more even distribution of the hair treatment that is held between the tines. The square pattern also facilitates the passage of hair through spaces 140, 240 between tines 120, 220, respectively, because the tines are evenly spaced apart and spaces 140, 240 are perpendicular to the hair flow (along the longitudinal axis of handle 20) so as to limit the resistance of the tines to the hair flow. However, alternative patterns or shapes for the arrangement of tines 120, 220 along bases 110, 210 can also be used, including rectangular patterns. Preferably, spaces 140, 240 are between about 0.1cm to about 8cm. More preferably, spaces 140, 240 are between about 0.2cm to about 0.5cm.

**[0022]** Combs 100, 200 also have baffles 130, 230. Baffles 130, 230 are formed between the inner or inside pairs of tines 120, 220 such that the baffles are substantially parallel to the longitudinal axis of handle 20 and parallel to the path of hair flow through spaces 140, 240. Preferably, the height of baffles 130, 230 is between about 0.3cm to about 2.5cm. More preferably, the height of baffles 130, 230 is between about 0.6cm to about 1cm.

**[0023]** Comb 100, base 110, tines 120 and baffle 130 form a retaining volume 150. Similarly, comb 200, base 210, tines 220 and baffle 230 form a retaining volume 250. In use, retaining volumes 150, 250 are filled with the hair treatment that is to be applied to the user's hair and the hair passes through the retaining volumes through spaces 140, 240.

**[0024]** Head 50 also has a separation volume 300 and a grip 400. Separation volume 300 is formed by inner tines 120 of comb 100 and inner tines 220 of comb 200. Separation volume 300 provides for a path for hair that will not be treated with the hair product. In use, hair flow is through retaining volume 150, separation volume 300 and retraining volume 250. Hair treatment is placed in both retaining volume 150 and retaining volume 250. The middle or center strands of hair pass through separation volume 300 without being exposed to the hair treatment, while the outer strands of hair pass through retaining volume 150 and retaining volume 250 where the hair treatment is applied. This provides for a separate and distinct set of treated hair or highlights over two distinctly separate sections of hair with a separate, untreated section of hair in between.

**[0025]** Referring to Figs. 6 and 7, separation volume 300 has a width S. Preferably, width S is a minimum of about 0.6 cm. This minimum for width S allows for distinct, separate hair treatments or highlights with a distinct, sep-

arate untreated section in between.

**[0026]** Previous applicators suffer from the drawback of applying the hair product in a single, wide stripe. At the time of application, it appears to the user of such an applicator that there are multiple stripes because the strands of hair are temporarily being separated by the tines or teeth of the applicator, as it passes through the hair.

**[0027]** Grip 400 of head 50 is an indent or recess that is formed in a center portion of the rear of the head. Grip 400 allows a user to position his or her finger in the grip for better handling and control of applicator 10.

**[0028]** In the embodiment, baffles 130, 230 assist in retaining the hair treatment in retaining volumes 150, 250 so that the hair treatment does not enter separation volume 300. Baffles 130, 230 also prevent strands of hair that are passing through separation volume 300 from making contact with any hair treatment that is on the outer periphery of retaining volumes 150, 250. This provides for a more even and uniform application of the hair treatment to the hair, and straighter lines of separation between the treated and untreated sections of hair.

**[0029]** In the embodiment, applicator 10 has first comb 100 and second comb 200 with separation volume 300 therebetween. However, any number of a plurality of combs 100, 200 can be used in the present invention to form any number of separation volumes 300. Additionally, applicator 10 has two separate combs 100, 200 with separation volume 300 therebetween.

**[0030]** Applicator 10 is preferably injection molded as a single piece. Applicator 10 can be made from any moldable material, such as, for example, polyethylene or polypropylene.

**[0031]** Referring to Fig. 8, there is shown a hair treatment applicator which is not part of the present invention generally represented by reference numeral 10'. Applicator 10' has a handle 20' and a head 50' connected to the handle. Head 50' has combs 100', 200' having tines 120', 220'. Tines 120', 220' are arranged in a square pattern with the sides of the square being either parallel or perpendicular to the longitudinal axis of applicator 10'.

## Claims

1. A hair treatment applicator (10) for applying a hair treatment composition to the hair comprising:-  
A handle (20), a head (50) connected to the handle (20), wherein said head (50) has a first comb (100) and a second comb (200), and wherein said first (100) and second combs (200) each comprise a base (110, 210) and a plurality of tines (120, 220) extending from the base (110, 210) and a baffle (130, 230), wherein said first tines (100), base (110) and baffle (130) and said second tines (200), base (210) and baffle (230) each form a retaining volume (150, 250) and a separation volume (300) separating said first and second retaining volumes (150, 250),

wherein said first (100) and second combs (200) have inner tines (120, 220) **characterised in that** said baffles (130, 230) are substantially parallel to the longitudinal axis of said handle (20) and are formed between said inner tines (120, 220) and said inner tines of said first comb and said second comb form the separation volume (300).

## 10 Patentansprüche

1. Haarbehandlungsapplikator (10) zum Auftragen einer Haarbehandlungszusammensetzung auf das Haar umfassend:-  
Einen Griff (20) und ein mit dem Griff (20) verbundenes Kopfstück (50), wobei das Kopfstück (50) einen ersten Kamm (100) und einen zweiten Kamm (200) aufweist und wobei die ersten (100) und zweiten Kämme (200) jeweils einen Gmndkörper (110, 210) und eine Vielzahl von sich vom Gmndkörper (110, 210) erstreckende Zinken (120, 220) und ein Leitelement (130, 230) umfassen, wobei die ersten Zinken (100), der Gmndkörper (110) und das Leitelement (130) und die zweiten Zinken (200), der Grundkörper (210) und das Leitelement (230) jeweils ein Rückhaltevolumen (150, 250) und ein Trennvolumen (300) bilden, das die ersten und zweiten Rückhaltevolumen (150, 250) voneinander trennt, wobei die ersten (100) und zweiten Kämme (200) Innenzinken (120, 220) aufweisen, **dadurch gekennzeichnet, dass** die Leitelemente (130, 230) im Wesentlichen parallel zur Längsachse des Griffs (20) verlaufen und zwischen den Innenzinken (120, 220) gebildet sind und die Innenzinken des ersten Kamms und des zweiten Kamms das Trennvolumen (300) bilden.

## Revendications

1. Appliqueur de traitement capillaire (10) pour appliquer une composition de traitement capillaire sur les cheveux, comprenant :-  
un manche (20), une tête (50) reliée au manche (20), dans lequel ladite tête (50) présente un premier peigne (100) et un second peigne (200), et dans lequel lesdits premier (100) et second peignes (200) comprennent chacun une base (110, 210) et une pluralité de dents (120, 220) s'étendant à partir de la base (110, 210) et un déflecteur (130, 230), dans lequel lesdites premières dents (100), ladite base (110) et ledit déflecteur (130) et lesdites secondes dents (200), ladite base (210) et ledit déflecteur (230) forment chacun un volume de retenue (150, 250), et un volume de séparation (300) séparant lesdits premier et second volumes de retenue (150, 250), dans lequel lesdits premier (100) et second peignes (200) ont des dents intérieures (120, 220), **caractérisé en**

**ce que** lesdits défecteurs (130, 230) sont sensiblement parallèles à l'axe longitudinal dudit manche (20) et sont formés entre lesdites dents intérieures (120, 220) et lesdites dents intérieures dudit premier peigne et dudit second peigne forment le volume de séparation (300). 5

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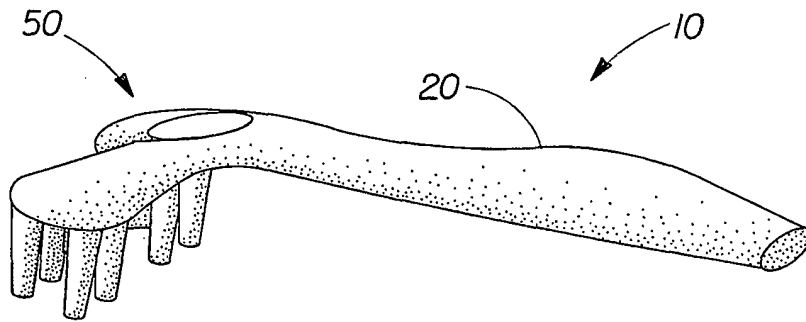


Fig. 1

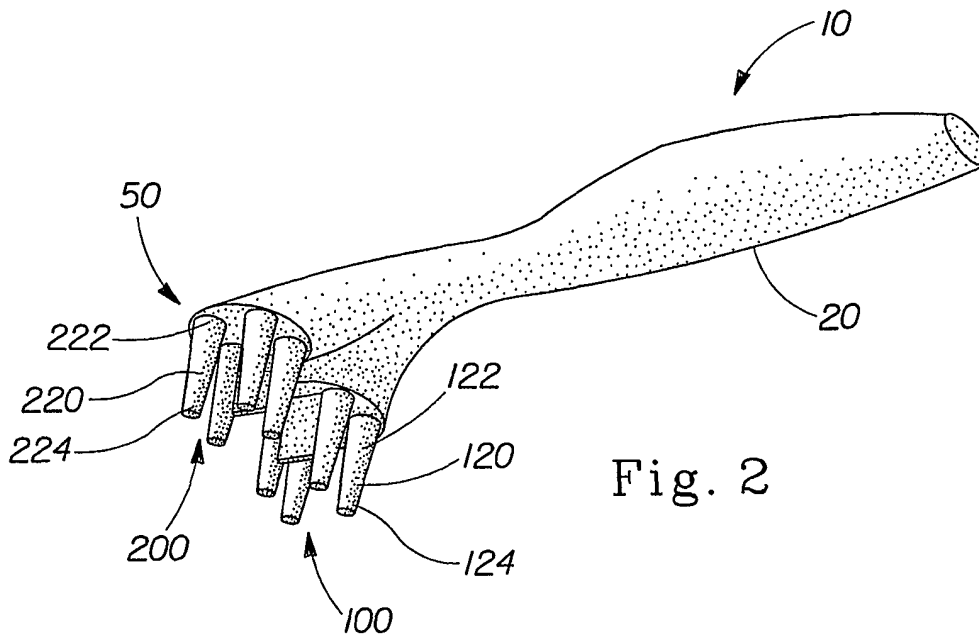


Fig. 2

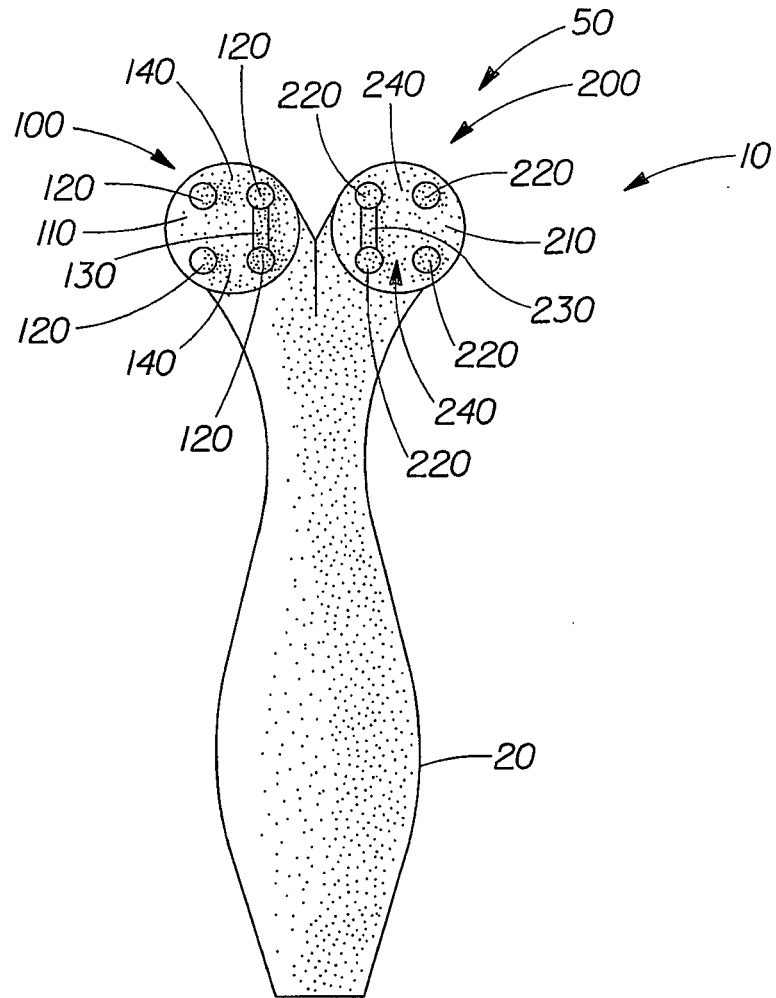


Fig. 3

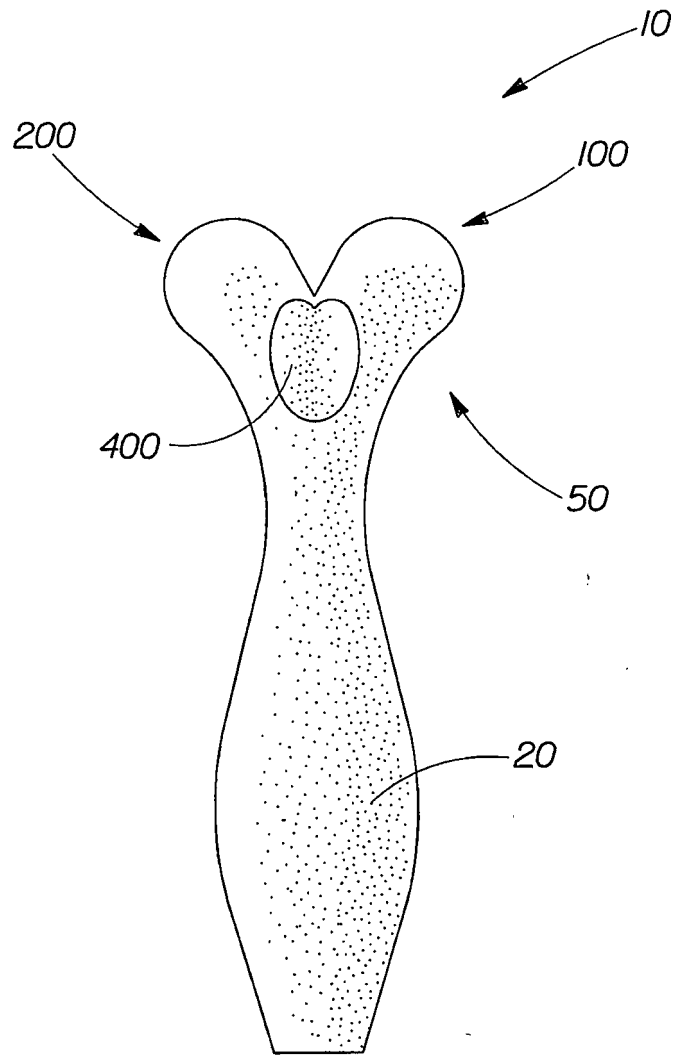
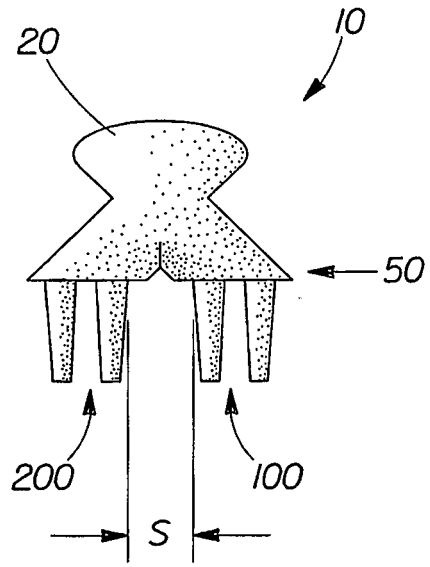
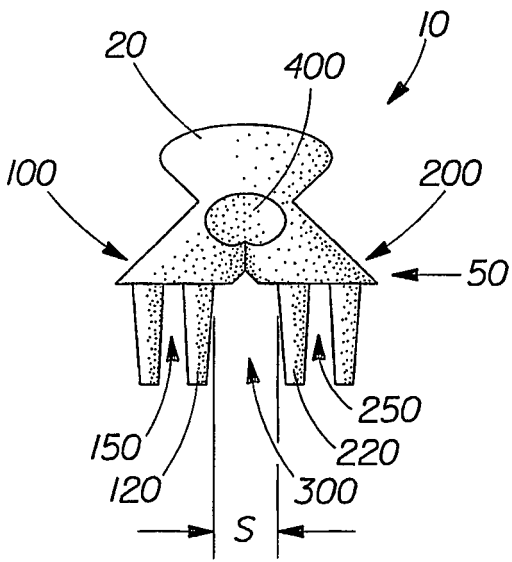
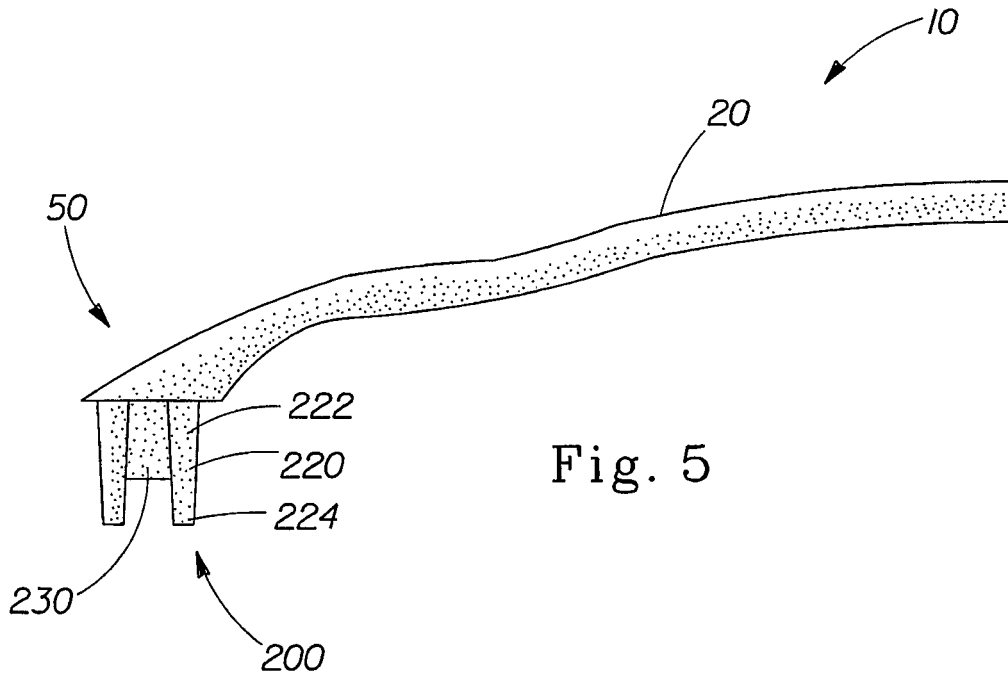


Fig. 4



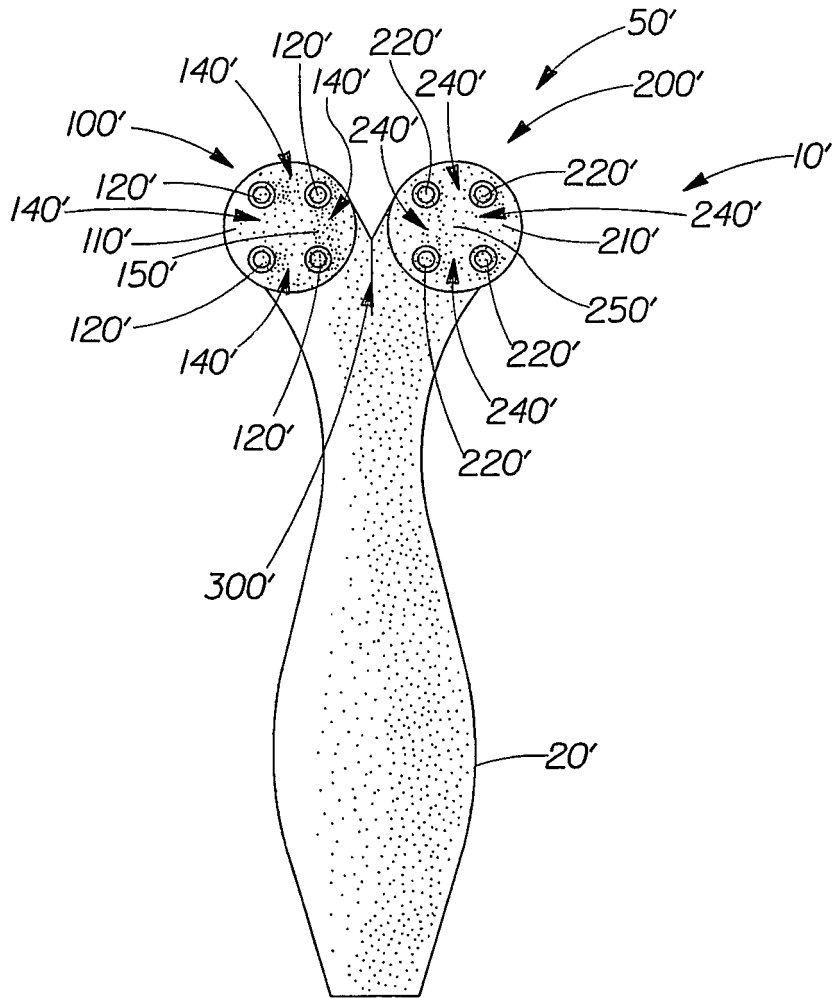


Fig. 8

**REFERENCES CITED IN THE DESCRIPTION**

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- US 6142157 A, Laforcade **[0004]**
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