13 MAR 2003

SPECIFICATION



166166

Title of the Invention

Wig Stopper and Wig Stopper-Fitting Sheet

Field of the Invention

The present invention relates to a wig stopper for fitting a wig to the head and a wig stopper-fitting sheet for fixing said stopper to the back of a wig base.

Description of the Prior Art

A conventional wig stopper having a structure of fitting a wig to the hair (natural hair) of a wig-wearing person employing comb-tooth-like hair-fastening components (hereafter may be referred to as a stopper) need be crooked lest both ends thereof should come to the surface when it is fitted to the head; in addition, with a view to facilitating the wearing and removal of the hair-fastening components, contrarotation performance is imparted to an elastic sheet constituting the stopper by extrusion pressure (official gazette of Japanese Utility Model Application No. 56-23294).

A conventional stopper a as shown in Fig. 8 is manufactured, in order to impart such a crooked configuration and contrarotation performance, by a method comprising blanking an elastic metal thin sheet into a U-shaped form, fixing the open ends with a circular metal fitting, an eyelet b, forcibly to make an O-shaped form and crooking it into a bow-like form.

However, the stopper a obtained according to such a method has been insufficient in wearing feeling since two metal sheets are joined in a piled state at the spot of the eyelet b.

Moreover, there have existed the following problems occuring in fitting the stopper a to the back



G00002

of a wig base. That is, when it is adhered and fitted by means of a plastic sheet-like stopper-fitting component c, eyelets (b and d; b is used also for joining the above metal sheets) for the fitting component c are needed to cause a considerable thickness, which has influence upon wearing feeling. On the other hand, when the stopper a is sewd to fix, a process of providing sewing holes on the stopper is required, and besides, the wig base itself may be damaged.

Further, the hair of a wig-wearing person may tangle with the eyelets b and d and washers (b1 and d1), which may give pain to the wig-wearing person at the time of the wearing and removal of the stopper.

In addition, a tubular frictional component f is provided on the leg piece a1 of the stopper pressed by the comb teeth e in order to prevent the stopper from coming off from the held hair, and the thickness of such a frictional component has become one factor deteriorating wearing feeling.

The present invention has been accomplished with a view to dissolving the above problems, and it is an object of the present invention to provide a thin stopper with no eyelet and it is another object thereof to provide a stopper-fitting component in which a conventional stopper-fitting component and a frictional component are integrated with a view to making it thin and at the same time the wearing and removal thereof from a wig base is facilitated.

Summary of the Invention

In short, the wig stopper (Claim 1) of the present invention is "a wig stopper comprising a crooked contrarotating component (1) obtainable by processing a single elastic thin sheet to crook and imparting contrarotation performance thereto, and a

number of hair-fastening components (2) in which the base end part (21) is provided on the longer direction (11) of the upper end of the crooked contrarotating component (1) and the tip end part (22) is extended to the longer direction (12) of the lower end of the crooked contrarotating component (1) and which are arranged in a comb-tooth-like state".

The above wig stopper (Claim 1) is characterized in that "a hollow part (13) is provided at the center of the crooked contrarotating component (1)" (Claim 2).

The above wig stopper (Claim 1 or 2) is "a wig stopper comprising a sheet-like flexible component (3) fitted thereto, which is characterized in that hair-fastening components (2) arranged in a comb-tooth-like state are exposed onto the sheet-like flexible component (3)" (Claim 3).

Furthermore, the above wig stopper (Claim 3) is characterized in that "a pressure-sensitive adhesive is adhered to one side of the sheet-like flexible component (3)" (Claim 4).

Besides, the wig stopper-fitting sheet of the present invention (Claim 5) is "a wig stopper-fitting sheet which is a sheet-like flexible component for fitting a wig stopper consisting of a crooked contrarotating component comprising an elastic thin sheet, being crooked and having contrarotation performance imparted thereto, and a number of hair-fastening components arranged in one longer direction of said crooked contrarotating component in a comb-tooth-like state to the back of a wig base so that it can be removed freely, characterized in that a pressure-sensitive adhesive is adhered to one side thereof, and notches are provided on said sheet-like flexible component so that said hair-fastening

components should be exposed onto said sheet-like flexible component when said sheet-like flexible component is put on said wig stopper".

Brief Description of the Drawings

Fig. 1 shows a wig stopper according to the present invention; Fig. 1 (a) is a plan view, Fig. 1 (b) is a front view, Fig. 1 (c) is a perspective view taken from the upper part, and Fig. 1 (d) is a front view after contrarotation.

Fig. 2 shows a wig stopper-fitting sheet according to the present invention; Fig. 2 (a) is a plan view, and Fig. 2 (b) is a perspective view illustrating the state of the fitting sheet being fitted to a stopper.

Fig. 3 shows a wig stopper-fitting sheet according to the present invention; Fig. 3 (a) is a plan view, and Fig. 3 (b) is a perspective view illustrating the state of the fitting sheet being fitted to a stopper.

Fig. 4 shows a wig stopper-fitting sheet according to the present invention; Fig. 4 (a) is a plan view, and Fig. 4 (b) is a perspective view illustrating the state of the fitting sheet being fitted to a stopper.

Fig. 5 shows a wig stopper and a fitting sheet according to the present invention; Fig. 5 (a) is a plan view of the wig stopper, Fig. 5 (b) is a plan view of the fitting sheet, and Fig. 5 (c) is a perspective view illustrating the state of the fitting sheet being fitted to the stopper.

Fig. 6 is a plan view illustrating the state of a wig stopper according to the present invention being fitted to the back of a wig base.

Fig. 7 is a sectional side view illustrating the operation state of a wig stopper according to the

present invention; Fig. 7 (a) illustrates the state before contrarotation, and Fig. 7 (b) illustrates the state after contrarotation.

Fig. 8 shows a conventional wig stopper; Fig. 8 (a) is a plan view, and Fig. 8 (b) is a front view.

Description of the Preferred Embodiments

Hereafter, the present invention will be described with reference to the examples shown in the drawings.

(1) Wig Stopper

Fig. 1 shows a wig stopper according to the present invention; Fig. 1 (a) is a plan view, Fig. 1 (b) is a front view, and Fig. 1 (c) is a perspective view taken from the upper part. Fig. 1 (d) is a front view illustrating the state that the wig stopper is contrarotated and hair-fastening components 2 arranged in a comb-tooth-like state are fastened to a crooked contrarotating component 1.

In Fig. 1, the wig stopper of the present invention comprises the crooked contrarotating component 1 obtainable by processing a single elastic thin sheet to crook and imparting contrarotation performance thereto and the hair-fastening components 2.

As such an elastic thin sheet can be mentioned a planar metal sheet and a plastic sheet; a metal sheet, for example, a stainless steel thin sheet with excellent spring properties, is preferred; in order to crook such a thin sheet and to impart contrarotation performance thereto, it is subjected to extrusion pressure processing (heating processing in the case of a plastic sheet) to obtain a crooked contrarotating component 1, but such a component obtainable by causing distortion on a thin sheet by other means of processing and imparting crook and contrarotation

performance thereto may be employed.

Hence, while a stainless steel thin sheet was blanked into a U-shaped form and both open ends thereof were drawn to the inner side, piled and fixed with an eyelet in a conventional stopper, such processing is not needed in the present invention and a single thin sheet with no piling spot can be employed as it is.

It is desirable from the viewpoint of easiness of contrarotation operation that the elastic thin sheet has an elasticity modulus of from 0.4 to 2 kg (load at the time when both ends of the thin sheet are fixed and the center of the thin sheet is loaded to contrarotate); however, it is not necessary to limit to the above range from the viewpoint as a stopper.

Besides, as shown in Fig. 5 (a), the crooked contrarotating component 1 may have a configuration having a hollow part 13 at the center with a view to adjusting extrusion pressure required for contrarotation and making it lightweight. In this case, the hollow part 13 at the center is formed by blanking the corresponding spot of the sheet before subjecting the sheet to said extrusion pressure processing.

The hair-fastening components 2 with the base end part thereof provided on the longer direction of the upper end of the crooked contrarotating component 1 in the present Example are obtained by forming metal elastic materials with excellent spring properties such as plastic, stainless steel and steel materials into a linear or sheet-like form; it is desirable to provide a number of components 2 on the crooked contrarotating component 1. In addition, one continuous linear material may be processed into a U-shaped or V-shaped corrugated form to fix to the

crooked contrarotating component 1; however, it is desirable from the viewpoints of durability and easiness of scooping up hair to provide a lot of metal elastic linear materials on the crooked contrarotating component 1.

When the hair-fastening components 2 are formed of a metal elastic linear material, it is preferably bent inward moderately at the intermediate part of the tip end part 22 and the base end part 21 so that the tip end part should enter the hair of the head deeply scooping up hair. Moreover, in the metal elastic linear material, the tip end part 22 is preferably swelled and has a spherical configuration from the viewpoint of the prevention of damage on the head skin in wearing thereof.

The hair-fastening components 2 are generally provided by fastening the base end part 21 thereof to the longer direction 11 of the upper end of the crooked contrarotating component by means of welding or an adhesive; as another method can be mentioned a method comprising forming the crooked contrarotating component 1 and the hair-fastening components 2 simultaneously and integrally by subjecting a single metal elastic thin sheet to cutting processing.

A number of hair-fastening components 2 are arranged in a comb-tooth-like state so that they should fasten to the hair, and the tip end part 22 thereof extends to the longer direction of the lower end of the crooked contrarotating component. Here, the comb-tooth-like state includes, in addition to the case that the hair-fastening components 2 are linear, the case that they are bent into a doglegged or S-shaped state; moreover, it includes, in addition to the case that they are provided almost across the longer direction of the crooked contrarotating

component 1, the case that they are provided diagonally.

The tip end part 22 of the hair-fastening components 2 preferably extends beyond the longer direction 12 of the lower end of the crooked contrarotating component 1, taking easiness of scooping up hair into consideration; however, it particularly need not extend from the viewpoind of the action that hair is held between the hair-fastening components 2 and the crooked contrarotating component 1 or a wig stopper-fitting sheet to be described later and press-fixed.

Similarly to a conventional wig stopper, a flexible frictional component such as a rubber or a soft resin is fastened to the longer direction 12 of the lower end to which the metal linear material 2 is press-fastened during contrarotation, and thereby adhesion to hair held between them can be heightened, but a wig stopper-fitting sheet to be described later can be employed more effectively.

(2) Wig Stopper-Fitting Sheet

Fig. 2 (a) is a plan view of a wig stopper-fitting sheet (hereafter may be referred to as a fitting sheet), and Fig. 2 (b) is a perspective view illustrating the state of the fitting sheet being mounted on said wig stopper of the present invention.

The fitting sheet 3 is a component employed for the purpose of being put on a wig stopper and fixing the stopper to the back of a wig base; moreover, the fitting sheet, employing a material with better frictional properties, covers the longer direction 12 of the lower end of the crooked contrarotating component 1 to which the hair-fastening components 2 of the wig stopper are bond-fastened and thereby heightens fixing force to hair.

Hence, it is preferably a sheet-like flexible component capable of following the crook and contrarotation properties of the wig stopper, more preferably a component with excellent frictional force.

Preferable materials for such a fitting sheet include urethane-based polymers.

To the back of the fitting sheet to be capable of being fitted to or removed from the back of the wig base freely is adhered an acrylic pressure-sensitive adhesive or a pressure-sensitive adhesive comprising a natural or synthetic rubber as a main agent and containing a petroleum resin, rosin or a coumarone-indene resin as a tackifier.

On the fitting sheet 3 are provided notches so that the hair-fastening components 2 should be exposed onto the sheet 3.

In the present Example, a number of linear notches according to the number of the metal linear hair-fastening components 2 are provided, and hence, each of a number of hair-fastening components 2 arranged in a comb-tooth-like state is exposed from the base part 21 to the outside and the movement thereof is not restricted, and it can be fastened to or removed from the longer direction 12 of the component 1 according to the contrarotation movement of the crooked contrarotating component 1. The spot except that of the hair-fastening components 2 of the stopper is covered with said sheet 3.

Hence, the fitting sheet fixes the wig stopper to the back of the wig base and covers the longer direction 12 as a frictional component to heighten fastening properties to hair held.

As the notch 31 provided on the sheet 3 can be mentioned various embodiments as shown in Fig. 3 and

Fig. 4. In each of Fig. 3 and Fig. 4, Fig. (a) is a plan view of a stopper-fitting sheet, and Fig. (b) is a perspective view illustrating the state of the fitting sheet being fitted to the wig stopper of the present invention.

In Fig. 3, on the fitting sheet shown in Fig. 3 (a) is provided a transversely linear notch 31, and as shown in Fig. 3 (b), the base end part 21 of each hair-fastening component 2 is exposed from the notch 3.

In Fig. 4, a notch 31 is provided in such a manner as the upper end part of the fitting sheet shown in Fig. 4 (a) is cut, and as shown in Fig. 4 (b), the upper part from the base end part 21 of each hair-fastening component 2 of the stopper 1 is exposed.

As described above, the notch 31 may be a linear notch as above, or a notch cut in a planar state.

Hereafter, another example will be described.

Fig. 5 (a) is a plan view of a wig stopper comprising a crooked contrarotating component 1 having a hollow part 13 at the center thereof and hair-fastening components 2 arranged in a comb-tooth-like state, Fig. 5 (b) is a plan view of a fitting sheet, and Fig. 5 (c) is a perspective view illustrating the state of the fitting sheet being fitted to the wig stopper shown in Fig. (a).

Since the hollow part 13 is provided, as shown in Fig. 5 (a), the longer directions 11 and 12 are in a leg-piece-like state.

Since two linear notches 31 are provided on the fitting sheet 3, the intermediate part 32 of the notches 31 becomes a free piece to cover the longer direction 12 of the lower end of the crooked contrarotating component 1 in the wig stopper, and can

be arranged at the lower parts of a number of metal linear hair-fastening components 2 arranged in a comb-tooth-like state and the longer direction 11 of the upper end. Thus, a number of hair-fastening components 2 are exposed onto the sheet 3 and can be fastened to or removed from the longer direction 12 of the lower end according to the contrarotation of the crooked contrarotating component 1.

Hence, while the fitting sheet can fix the wig stopper to the back of the wig base, it also functions as a frictional component, covering the longer direction 12, and can heighten sealing properties to hair.

(3) Embodiment of Use of the Wig Stopper

Fig. 6 is a plan view illustrating the state of the stopper being fitted to the back of the wig base.

Fig. 7 (a) and (b) are sectional side illustrations showing the operation state of the stopper.

As shown in Fig. 6, the stopper is fixed to the surrounding rim part of the back of the base 4 of the wig 5 with hair planted on the surface thereof, employing the fitting sheet 3.

In Fig. 6 is shown the state of the stopper being fitted to the surrounding rim part of the back of the wig base 4; since a pressure-sensitive adhesive is adhered to the back of the fitting sheet 3, the stopper can be fitted by sticking the fitting sheet 3 to an optional spot of the back of the wig base 4 instead of the surrounding rim part. The number of stoppers to be fitted is 1 or plural in accordance with the size of the wig.

A wig-wearing person puts the wig 5 with stoppers fitted thereto on the head and presses both ends of each stopper from above the wig 5, and thereby the

crooked configulation of the crooked contrarotating component 1 contrarotates from the state shown in Fig. 7 (a) to the state shown in (b).

As a result, a number of hair-fastening components 2 arranged in a comb-tooth-like state and separated from the longer direction 12 (not shown) of the lower end of the crooked contrarotating component 1 are pressed to the fitting sheet 3 on the longer direction 11 of the lower end holding hair to fix the hair.

In the case of removing the wig inversely, the central part of the stopper is pressed from above the wig, and thereby the crooked contrarotating component 1 contrarotates in the original state and removes from hair easily.

The stopper is only fixed to the wig base with the pressure-sensitive adhesive on the back of the stopper-fitting sheet, and hence it can be released easily; hence, a wig-wearing person himself can adjust the stopper by fastening it to a spot where his natural hair is sufficiently fixed.

The wig stopper and the wig stopper-fitting sheet of the present invention are as described above and have the following effects.

(1) The crooked contrarotating component 1 of the wig stopper is a single sheet obtainable by subjecting an elastic thin sheet to extrusion pressure processing and has no spot for piling two metal sheets and fixing them with an eyelet as in a conventional stopper; thereby a very thin stopper can be obtained to impart excellent wearing feeling. In addition, since it has no eyelet, pain caused by a wig-wearing person's hair tangle can be prevented.

Moreover, if the center of the stopper is made a hollow part, the stopper can be made more lightweight

and can be worn more comfortably.

(2) If the wig stopper-fitting sheet employs a frictional component as a material, hair can be held and fixed surely at the spot with which the hair-fastening components arranged in a comb-tooth-like state come into contact, and at the same time, the sheet can be made thin as compared with a conventional sheet employing a tubular frictinal component.

(3) Since most part of the stopper except a part of the hair-fastening components is covered with the fitting sheet, a hair tangle can be prevented surely.

(4) Furthermore, in the case that the center of the crooked contrarotating component of the stopper is a hollow part, broad adhesion area including the corresponding part of the fitting sheet to the wig base can be ensured; thereby sufficient fixing force can be obtained by a pressure-sensitive adhesive instead of a strong adhesive and the wearing and removal thereof are easy; hence a wig-wearing person can change and adjust the stopper-fitting spot easily by himself without any aid.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A wig fastener comprising:

a bent, counter-bendable, component comprising an elastic bent sheet, said elastic bent sheet being formed by extrusion pressure processing of a sheet of elastic material, thereby imparting a bent shape and a counter-bendable characteristic to said sheet of elastic material, said elastic bent sheet having a length and a width, the length being longer than the width, said elastic bent sheet having an upper portion extending along its length and a lower portion extending along its length; and

a plurality of hair-fastening components arranged in a comb-tooth state, each said hair-fastening component comprising a base end and a tip end;

wherein said base ends of said plurality of hair-fastening components are provided on said upper portion of said bent, counter-bendable, component; and

wherein said tip ends of said plurality of hair-fastening components extend in the direction of the width of said bent, counter-bendable, component.

2. A wig fastener of claim 1, wherein said bent, counter-bendable, component further comprises a hollow portion at its centre.

3. A wig fastener according to claim 1 or claim 2, further comprising a flexible component having a front surface and a back surface, said back surface of said flexible component being attached to said bent, counter-bendable, component.

4. A wig fastener of claim 3, further comprising a pressure-sensitive adhesive on said back surface of said flexible component.

5. A wig fastener according to any one of the preceding claims, wherein said elastic bent sheet has an elasticity modulus from 0.4 kg to 2 kg.

6. A wig fastening element comprising:

a flexible component having notches therein, said flexible component having a front surface and a back surface, said notches extending through said flexible component from said front surface to said back surface;

a bent, counter-bendable, component comprising an elastic bent sheet and a plurality of hair-fastening components,

said elastic bent sheet having a counter-bendable characteristic, said elastic bent sheet having a length and a width, the length being longer than the width, said elastic bent sheet having an upper portion extending along its length and a lower portion extending along its length,

said plurality of hair-fastening components being arranged in a comb-tooth state, each said hair-fastening component comprising a base end and a tip end,

wherein said base ends of said plurality of hair-fastening components are provided on said upper portion of said bent, counter-bendable, component, and wherein said tip ends of said plurality of hair-fastening components extend in the direction of the width of said bent, counter-bendable, component; and

a pressure sensitive adhesive provided on said back surface of said flexible component, wherein said bent, counter-bendable, component is situated with said flexible component by said notches of said flexible component, such that said plurality of hair-fastening components are not covered by said flexible component.

7. A wig fastener comprising:

a bent, counter-bendable, component comprising an elastic bent sheet, said elastic bent sheet having a counter-bendable characteristic, said bent, counter-bendable, component having no overlapping portions, said elastic bent sheet having a length and a width, the length being longer than the width, said elastic bent sheet having an upper portion extending along its length and a lower portion extending along its length; and

a plurality of hair-fastening components arranged in a comb-tooth state, each said hair-fastening component comprising a base end and a tip end,

wherein said base ends of said plurality of hair-fastening components are provided on said upper portion in the direction of the length of said bent, counter-bendable, component, and

wherein said tip ends of said plurality of hair-fastening components extend in the direction of the width of said bent, counter-bendable, component.

8. The wig fastener of claim 7, wherein said bent, counter-bendable, component further comprises a hollow portion at its centre.

9. The wig fastener of claim 7 or claim 8, further comprising a flexible component having a front surface and a back surface, said back surface of said flexible component being attached to said bent, counter-bendable, component.

10. The wig fastener of claim 9, further comprising a pressure-sensitive adhesive on said back surface of said flexible component.

11. The wig fastener according to any one of claims 7, 8, 9 or 10, wherein said elastic bent sheet has an elasticity modulus from 0.4 kg to 2 kg.