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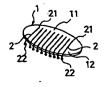
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(57) Abstract

A thin wig stopper having no eyelet and allowing no entangling of the wearer's hairs, characterized by comprising a curved invertible member (1), made invertible by bending a single elastic sheet, and many hair holding members (2), whose bottoms (21) are disposed in the lengthwise direction (11) at the upper end of the curved invertible member (1), and whose tips (22) extend in the lengthwise direction (12) at the lower end of the curved invertible member (1) and are arranged in a substantially comb-like form.









ABSTRACT

A wig stopper including a bent, counter-bendable, component that is obtained by processing a single elastic thin sheet to bend and impart a counter-bendable characteristic thereto. The wig stopper further includes a number of hair-fastening components, each having a base end part provided on the longitudinal side of the upper end of the bent, counter-bendable, component. Also, a tip end part is extended to the longitudinal side of the lower end of the bent, counter-bendable, component such that the hair-fastening components are arranged in a comb-tooth fashion.



Title of the Invention

Wig fastener and wig fastener fitting sheet

Field of the Invention

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The present invention relates to a wig stopper, i.e. wig fastener, for fitting a wig to the head and a wig fastener-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 that enables fitting a wig to the hair (natural hair) of a wig-wearing person, includes comb-tooth fashion hair-fastening components (hereafter may be referred to as a stopper) which need to be bent to prevent both ends thereof from coming to the surface when it is fitted to the head. Further, for the purpose of facilitating 15 wearing and removal of the hair-fastening components, extrusion pressure on an elastic sheet that constitutes the stopper prevents counter-bending of the wig stopper, and hence the wig (official gazette of Japanese Utility Model Application No. 56-23294).

A conventional stopper (a) as shown in Figure 8 is manufactured, in 20 order to impart such a bent configuration and to prevent counter-bending, by a method comprising blanking an elastic metal thin sheet into a U-shaped form, forcibly fixing the open ends with a circular metal fitting, an eyelet (b), forcibly to make an O-shaped form and bending it into a bow-like form.

However, the stopper (a) obtained according to such a method is uncomfortable since two metal sheets are joined in a piled stated at the spot of the eyelet (b).

Moreover, the following problems may occur when fitting a conventional wig stopper to the back of a wig base. When the stopper is adhered and fitted by means of a plastic sheet-like stopper-fitting component 30 (c), eyelets (b) and (d); (b is used also for joining the above metal sheets together) for the fitting component (c), considerably increases the thickness, which decreases the comfort. On the other hand, when the stopper (a) is fabricated so as to be sewn onto a wig base, a process of providing sewing holes on the stopper is required. Further, if the stopper (a) is fabricated so as to be sewn onto a wig base, 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 cause pain to the wig-wearing person while wearing and removing a wig having such a stopper.

In addition, a tubular frictional component (f) is provided on the leg piece (a1) of the stopper, pressure from comb teeth (e) prevent the stopper from coming off from the held hair. However, the thickness of such a frictional component has become one factor in deteriorating comfort.

The present invention provides solutions to the above problems. An advantage of the present invention is that it provides a thin stopper with no eyelet. A further advantage is that it provides 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.

15 Summary of the Invention

In a first aspect, the invention is 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 counterbendable 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, 25 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.

In a second aspect, the invention is 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, counterbendable, 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.

In a third aspect, the invention is 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,

35 component.

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The wig fastener may be characterised in that a hollow portion is provided at the centre of the bent, counter-bendable, component.

The wig fastener may comprise a sheet-like flexible component fitted thereto, which may be characterised in that hair-fastening components

arranged in a comb-tooth fashion state are exposed onto the sheet-like flexible component.

Furthermore, the wig fastener may be characterised in that a pressuresensitive adhesive is adhered to one side of the sheet-like flexible component.

10 Brief Description of Drawings

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Figures 1(a) - 1(d) show a wig stopper according to the present invention;

Figure 1(a) is a plan view;

Figure 1(b) is a front view;

Figure 1(c) is a perspective view taken from the upper part; and Figure 1(d) is a front view after counter bending.

Figures 2(a) and 2(b) show a wig stopper-fitting sheet according to the present invention;

Figure 2(a) is a plan view; and

Figure 2(b) is a perspective view illustrating the state of the fitting sheet being fitted to a stopper.

Figures 3(a) and 3(b) show a wig stopper-fitting sheet according to the present invention;

Figure 3(a) is a plan view; and

Figure 3(b) is a perspective view illustrating the state of the fitting sheet being fitted to a stopper.

Figures 4(a) and 4(b) show a wig stopper-fitting sheet according to the present invention;

Figure 4(a) is a plan view; and

Figure 4(b) is a perspective view illustrating the state of the fitting sheet being fitted to a stopper.

Figures 5(a) - 5(c) show a wig stopper and a fitting sheet according to the present invention;

Figure 5(a) is a plan view of the wig stopper;

Figure 5(b) is a plan view of the fitting sheet; and



Figure 5(c) is a perspective view illustrating the state of the fitting sheet being fitted to the stopper.

Figure 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.

Figures 7(a) and 7(b) are sectional side views illustrating the operation state of a wig stopper according to the present invention;

Figure 7(a) illustrates the state before contra-rotation; and Figure 7(b) illustrates the state after contra-rotation.

Figures 8(a) and 8(b) show a conventional wig stopper;

Figure 8(a) is a plan view; and

Figure 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

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Figure 1 shows a wig stopper according to the present invention; Figure 1(a) is a plan view, Figure 1(b) is a front view, and Figure 1(c) is a perspective view taken from the upper part. Figure 1(d) is a front view illustrating the state when the wig stopper is counter bent and hair-fastening components 2 arranged in a comb-tooth fashion state are fastened to a bent, counterbendable, component 1.

In Figure 1, the wig stopper of the present invention comprises the
bent, counter-bendable, component 1, that may be obtained by processing a
single elastic thin sheet to obtain a bent, yet counter-bendable, shape. Also a
plurality of hair-fastening components 2 are fastened to the bent, counterbendable, component 1.

Non-limiting examples of an elastic thin sheet of the wig stopper of the
present invention include a planar metal sheet and a plastic sheet. As for a
metal sheet, for example, a stainless steel thin sheet with excellent spring
properties, is preferred. In order to bend such a thin sheet, and to impart
counter-bendable properties to obtain a bent and counter-bendable
component 1 the thin sheet is subjected to extrusion pressure processing
(heating processing in the case of a plastic sheet). However, such a



component may be obtained by distorting a thin sheet by any other process which produces a bent sheet having a counter-bendable property.

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 5 fixed with an eyelet in a conventional stopper, such processing is not needed in the present invention. More specifically, in accordance with the present invention, a single thin sheet with no piling spot can be employed.

It is desirable from the viewpoint of increasing the counter-bendability of the thin sheet that the elastic thin sheet has an elasticity modulus from 0.4 to 2 kg (load at the time when both ends of the thin sheet are fixed and the centre of the thin sheet is loaded to counter-bend). However, it is not necessary to limit an elasticity modulus to the above range from the viewpoint as a stopper.

Besides, as shown in Figure 5(a), the bent counter-bendable component 1 may have a configuration having a hollow part 13 at the centre for the purpose of adjusting extrusion pressure required for counter-bendable and decreasing its weight. In this case, the hollow part 13 at the centre is formed by blanking the corresponding spot of the sheet before subjecting the sheet to said extrusion pressure processing.

The hair-fastening components 2 of the present example have a part thereof provided on the longitudinal side of the bent, counter-bendable, component 1 wherein, the longitudinal sides are longer than the lateral sides of the bent, counter-bendable, component 1. The hair-fastening components 2 obtained by forming elastic metal materials with excellent spring properties 25 into a linear or sheet-like form. Non-limiting examples include plastic stainless steel and steel materials. In addition, one continuous linear material may be processed into a U-shaped or V-shaped corrugated form and fixed to the bent, counter-bendable, component 1.

When the hair-fastening components 2 are formed of a metal elastic 30 linear material, they are preferably moderately bent inward toward the bent, counter-bendable, component 1 at the intermediate part of the tip end part 22 and the base end part 21, so as to enable the tip end part to deeply enter and scoop up, the hair of the head. Moreover, the tip end part 22 preferably has an enlarged spherical configuration in order to prevent damage on the head skin while wearing a wig having a wig stopper in accordance with the present invention.



The hair-fastening components 2 may be attached to the upper longitudinal side 11 of the base end part 21 of the bent, counter-bendable, component by means of welding or an adhesive. Another exemplary method of attaching hair-fastening components 2 to the base end part 21, includes forming the bent, counter-bendable, component 1, and the hair-fastening components 2 simultaneously, and integrally by cutting a single metal elastic thin sheet.

A number of hair-fastening components 2 are arranged in a comb-tooth fashion so that they may fasten to the hair, and the tip end parts 22 extend to the longer direction of the lower end of the bent, counter-bendable, component. Exemplary comb-tooth embodiments of the hair-fastening components include forms that are linear, doglegged or S-shaped. Moreover, in another embodiment the hair-fastening components maybe provided diagonally across the longitudinal direction of the bent, counter-bendable, component.

The tip end parts 22 of the hair-fastening components 2 preferably extend beyond the lower end of the bent, counter-bendable, component 1, to easily scoop up hair. However, the end parts 22 do not particularly need to extend since hair is held and press-fixed between the hair-fastening components 2 and either bent, counter-bendable, component 1 or a wig stopper-fitting sheet to be described later.

Similar to a conventional wig stopper, a flexible frictional component, for example, a component made of rubber or a soft resin, is fastened to the lower end 12 to which the metal linear material 2 is press-fastened during counter-bendable, thereby increasing the ability to hold hair therebetween. However, a wig stopper-fitting sheet, to be described later can be employed more effectively.

(2) Wig Stopper-Fitting Sheet

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Figure 2(a) is a plan view of a wig stopper-fitting sheet (hereafter may be referred to as a fitting sheet), and Figure 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 to accommodate a wig stopper and to fix the wig stopper to the back of the wig base. Moreover, the fitting sheet increases the fixing force for holding hair as it comprises, a material having better frictional properties than the bent, counter-bendable, component. The fitting sheet covers the portion of the lower end of the bent, counter-bendable, component 1 to which the hair-fastening components 2 of the wig stopper are located.

Hence, the fitting sheet 3 is preferably a sheet-like flexible component capable of emulating the bent shape counter-bendable characteristics of the wig stopper. More preferably, the fitting sheet 3 may comprise a component having an excellent frictional force.

Preferable materials for such a fitting sheet include urethane-based 10 polymers.

An acrylic pressure- sensitive adhesive is adhered to the back of the fitting sheet to permit the fitting sheet to be fitted to, or removed from the back of the wig base. As an alternative to an acrylic pressure-sensitive adhesive, a pressure-sensitive adhesive may be used which comprises a natural or synthetic rubber as a main agent and further comprises 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 may be exposed through 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 combtooth fashion is exposed from the base part 21 through the fitting sheet, and
the movement thereof is not restricted. Further, the hair of the wig wearer
can be fastened to or removed from the longitudinal side 12 of the component
1 according to the counter-bendable movement of the bent, counter-bendable,
component 1. Sheet 3 covers stopper with the exception of the hair-fastening
components 2 of the stopper.

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

A notch 31 may be provided on the sheet 3 in various embodiments, for example, as shown in Figure 3 and Figure 4. In each of Figure 3 and Figure 4, Figure (a) is a plan view of a stopper fitting sheet and Figure (b) is a perspective view illustrating the state of the fitting sheet being fitted to the wig stopper of the present invention.



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

A notch 31 is provided in such a manner as the upper end part of the fitting sheet shown in Figure 4(a) is cut, and as shown in Figure 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.

Figure 5(a) is a plan view of a wig stopper comprising a bent, counterbendable, component 1 having a hollow part 13 at the centre thereof and hairfastening components 2 arranged in a comb-tooth fashion state, Figure 5(b) is a plan view of a fitting sheet, and Figure 5(c) is a perspective view illustrating the state of the fitting sheet being fitted to the wig stopper shown in Figures (a).

Since the hollow part 13 is provided, as shown in Figure 5(a), the longer side portions 11 and 12 may be referred to as leg-pieces.

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 be covered by
the longitudinal side 12 of the lower end of the bent, counter-bendable,
component 1 in the wig stopper. Further, the intermediate part 32 can be
arranged between the lower parts of a number of metal linear hair-fastening
components 2 arranged in a comb-tooth fashion and the longitudinal side 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
longitudinal side 12 of the lower end according to the bent state of the bent,
counter-bendable, 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 longitudinal side 12, and can increase hair holding ability.

(3) Embodiment of Use of the Wig Stopper
Figure 6 is a plan view illustrating the state of the stopper being fitted to the back of the wig base.



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

As shown in Figure 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, 5 by way of the fitting sheet 3.

As shown in Figure 6 wherein the stopper is 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. One or more stoppers may be fitted depending on the size of the wig.

To wear a wig using stoppers in accordance with the present invention, a wig-wearing person could place the wig 5, with stoppers fitted thereto, on his head and press both ends of each stopper from above the wig 5.

15 Consequentially, the bent configuration of the bent, counter-bendable, component 1 counter-bends from the state shown in Figure 7(a) to the state shown in 7(b).

As a result, a number of hair-fastening components 2 arranged in a comb-tooth fashion and separated from the longitudinal side 12 (not shown) of the lower end of the bent, counter-bendable, component 1 are pressed to the fitting sheet 3 on the longitudinal side 12 of the lower end thereby holding hair to grab the hair.

In the case of removing the wig inversely, the central part of the stopper is pressed from above the wig. Consequentially the bent, counter-bendable, component 1 returns to its original state and easily lets go of the hair.

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 bent, counter-bendable, component 1 of the wig stopper is a single sheet obtainable by subjecting an elastic thin sheet to extrusion pressure processing. Contrary to a conventional stopper the stopper of the present invention has no spot for stacking two metal



sheets, nor an eyelet for fixing them. As such, the present invention provides a very thin stopper that imparts excellent wearing comfort. In addition, since the stopper of the present invention has no eyelet, pain caused by a wig-wearing person's hair tangle can be prevented.

Moreover, if the centre of the stopper is hollow, the stopper can be made more lightweight and can be worn more comfortably.

- (2) If the wig stopper-fitting sheet comprises a material having frictional component, hair can be held and fixed surely at the spot where the hair-fastening components arranged in a comb-tooth fashion come into contact. Moreover, the sheet can be made thin as compared with a conventional sheet employing a tubular frictional component.
- (3) Since the only part of the stopper not covering the fitting is the part comprising the hair-fastening components, hair tangling can be surely prevented.
- (4) Furthermore, in the case that the centre of the bent, counterbendable, component of the stopper is hollow, broad adhesion area including the corresponding part of the fitting sheet to the wig base can be ensured; consequentially a sufficient fixing force can be obtained by a pressure-sensitive adhesive instead of a strong adhesive so that wearing and removal thereof are easy. As such, a wig-wearing person can change and adjust the stopper-fitting spot easily by himself without any aid.

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THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:-

1. A wig fastener comprising:

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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.
- 20 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, counterbendable, 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 30 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, counterbendable, 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:

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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.
- 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.
- 5 12. A wig fastener substantially as herein before described with reference to the accompanying figures.

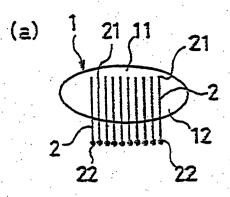
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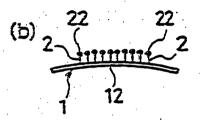
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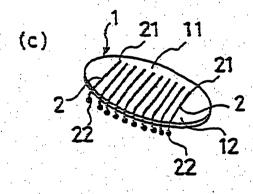
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Fig. 1







(d)

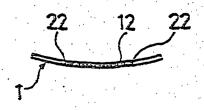
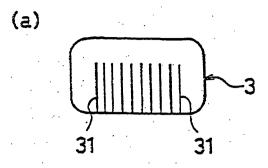


Fig. 2



(b)

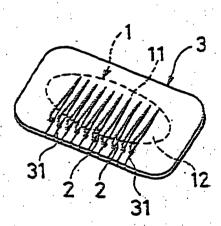
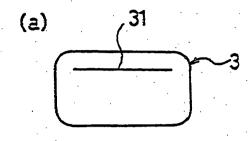


Fig. 3



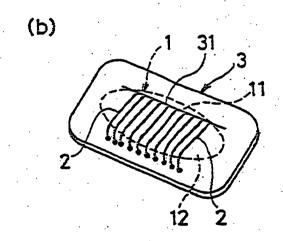
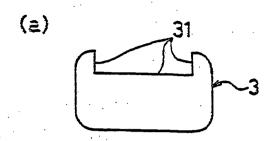


Fig. 4



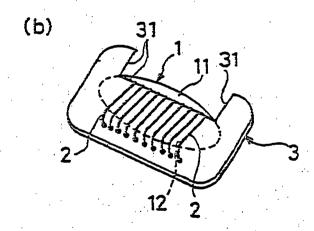
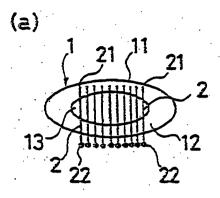
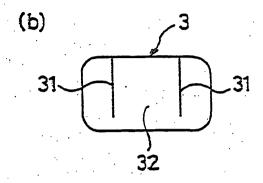


Fig. 5





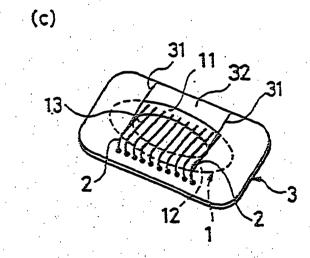


Fig. 6

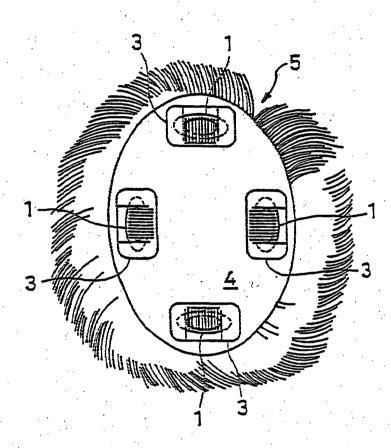
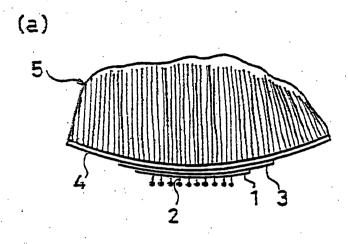


Fig. 7



(b)

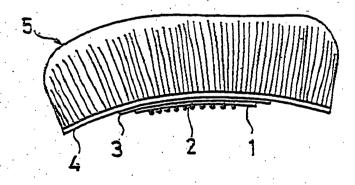
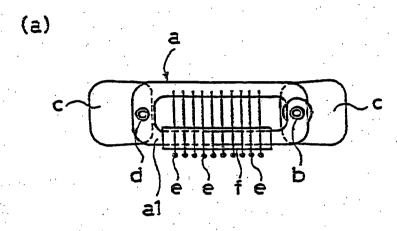


Fig. 8



(b)

