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(54) **HAIR EXTENSION FOUNDATION CAP WITH
HAIR ATTACHMENT TEMPLATE AND HAIR
PROTECTION INSULATION**

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(57) **ABSTRACT**

The hair extension foundation cap with hair attachment template and hair protection insulation is a base worn on the head to which a wearer attaches pre-made hair wefts for the purpose of hair extension without affecting the natural hair. The template to guide hair attachment is printed, marked or woven to the foundation cap. The hair protection insulation is made of moisture resistant paper and lines the inner cap base to prevent bonding adhesives used for attaching hair wefts to base from coming in contact with a wearer's natural hair. One embodiment of the invention has a pre-attached anti-stress nape component and a crown hair part component. The device also has an antiskid tabs component that support and retains the light weight stretchable mesh base to a head without retention adhesives, clips, sew-on retentions or abrasive hard surfaces that can cause damage to a wearer's hair.

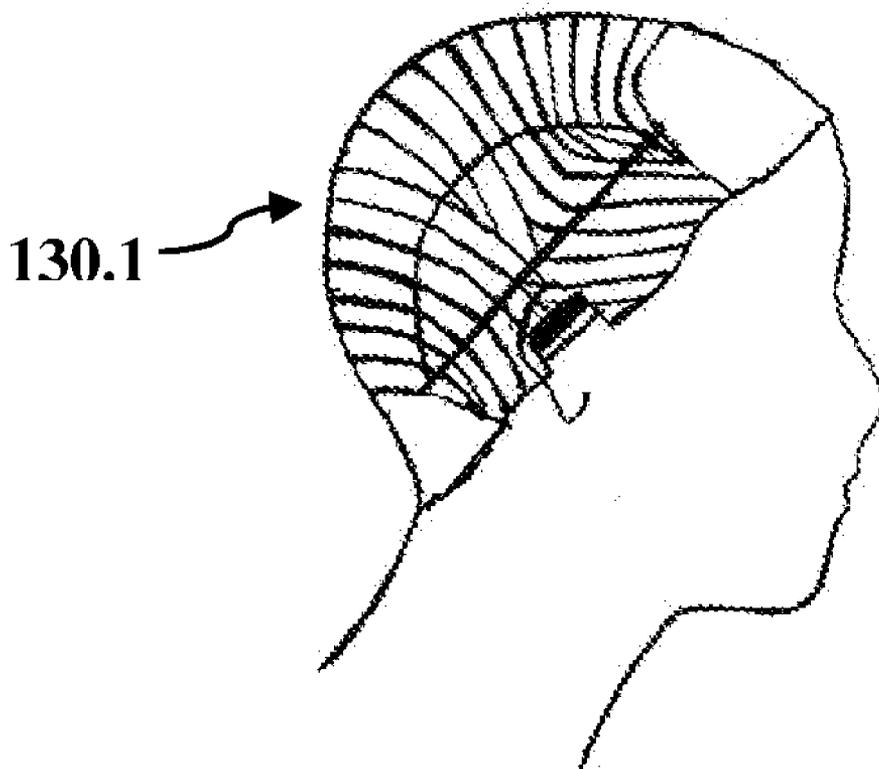


FIGURE 1

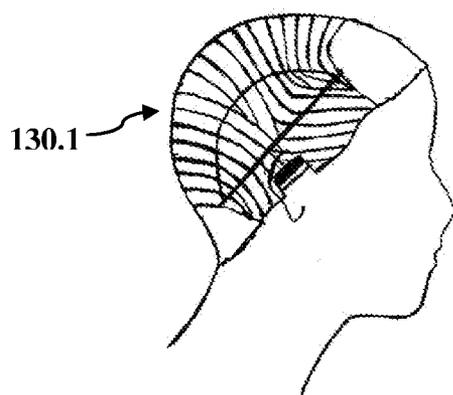


FIGURE 2

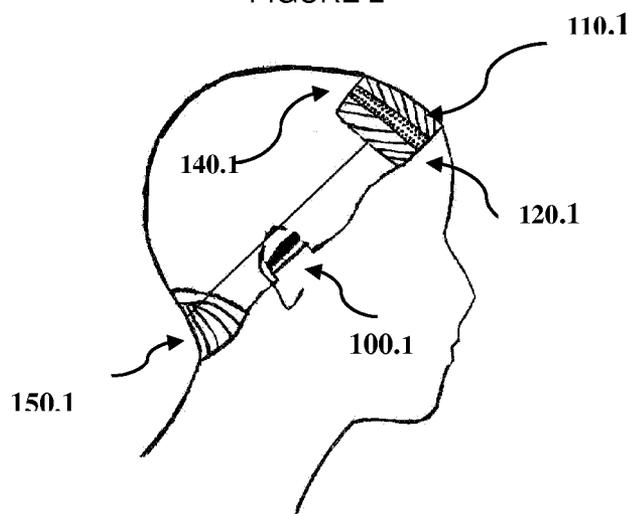
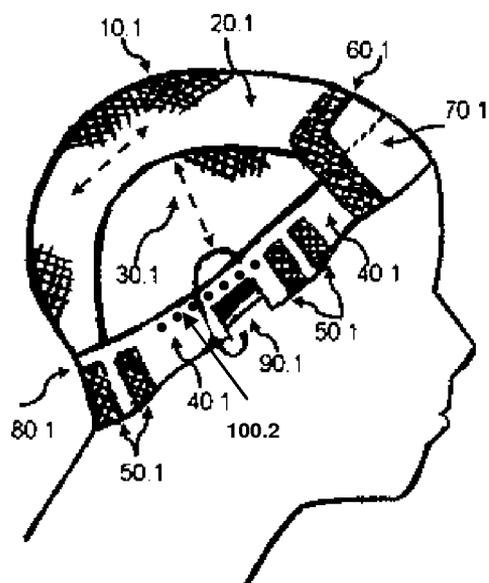


FIGURE 3



HAIR EXTENSION FOUNDATION CAP WITH HAIR ATTACHMENT TEMPLATE AND HAIR PROTECTION INSULATION

TECHNICAL FIELD

[0001] The new invention relates to a residual class for devices and methods used by persons in making their personal grooming and hygiene. The field includes closely related professional devices and methods for treating or grooming hair; which includes wig-making processes. The new invention also relates to devices on which the wearer's false hair is supported.

BACKGROUND ART

[0002] To enjoy the convenience of a low cost custom made hair extension device especially of natural or human hair, consumers have resorted to a popular practice known as stocking cap weaving. In stocking cap weaving a stretchable skullcap base is secured to a wearer's head and then adhesive is used to bond rows of pre-made hair wefts to create styles. This is a manual process has limited style capacity since it is done on the wearers head. The common stocking cap used is usually one-sized and can be very uncomfortable, the stocking is also usually very soft and has no support structure; therefore, it has to be bonded usually with adhesives to the wearer's head. Even when bonded, over time, the stocking cap usually retracts from the wearer's hairline damaging the natural hairline and becomes unattractive. Overtime built up moisture and lack of ventilation can cause mould to grow the wearers head when the base is bonded to the head.

[0003] An example of related prior art is a non-patented reference as disclosed at "http://snghair.com/StyleGuide2.aspx" a leading hair distributors: "Secure your hair under a weave or stocking cap. Begin applying 1/2 inches apart, ear to ear, from the bottom hairline working towards the top to the temple area." This method is known as stocking cap weaving wherein a stretchable cap of stocking type fabric is placed on the head of the wearer. The hair is then bonded to the base. This method is the alternative used to make low cost custom fitted human hair extension hairpiece.

[0004] A related prior art that sought to update this manual stocking cap weave method is prior art; Hair extension hairpiece or wig device with flexible-grip cap base in U.S. application Ser. No. 13,185-073, Palmer-Rogers. The invention disclosed a completed stretchable mesh base wig for protecting a wearer's hair from damage while providing total hair coverage; which is a wig having firstly a self-retention capacity of non-adhesive, non-metal, non-abrasive, breathable anti-skid and retention components and secondly hair arrangement that aids ventilation, attractively imitate natural hair yet discreetly reduce manufacturing time and cost. This prior art is a completed wig and does not provide an option to allow a user to use the antiskid base and create their own hairpiece weave.

[0005] In addition many other prior art hairpiece weaves and wigs have components that damage a wearers' own hair. Some of these hair-damaging components are: hard plastic or metal clips, hooks, wire retention components, non-breathable materials that block ventilation and stop hair growth, rigid stiff material that rests directly on the wearers hair or scalp and cause friction, sharp edges and ridges on stiff ribbons and stiff lace and the edge of the hair wefts that cause friction and hair breakage, structures that pull the wearers

hairline such as the popular stocking cap or wig cap and adhesives tend to peel strands of hair from the scalp when being removed.

SUMMARY OF INVENTION

Brief Summary of the Invention

[0006] The new invention is a lightweight stretchable mesh base hair extension foundation cap with embedded template lines to guide hair attachment and a moisture resistant insulation that protects a wearers hair from bonding adhesives used for hair weft attachment. One embodiment of the invention has a pre-attached nape and hair part components. The device has a non-adhesive, non-metal, clip-less, non-invasive retention system wherein an antiskid tabs component supports, retains and keeps said wig positioned on a head. The retention system has long narrow antiskid tabs made of a breathable rigid mesh connected selected sections of an outer layer of a tensioned stretchable periphery band and the antiskid tabs effect a periphery with alternate stretchable and non-stretchable areas on the hair extension foundation cap. It provides a wearer with a foundation cap to which they can attach hair wefts in natural hair growth pattern and complete their own custom made hairpiece weave. The embodiment of the foundation cap with pre-attached hair components provides a device with components that would be very difficult if not impossible to produce on a wearer's head. The invention provides an alternative to users who might desire a device that allows them to minimize cost and have the flexibility to choose the length and type of hair to complete their hairpiece. For example a wearer can simply use the current invention of the foundation cap with the pre-attached human hair components then use cheaper synthetic hair to complete the remaining undone portion.

[0007] This new invention allows a practice known as stocking cap weaving the to be completed in a modern and efficient way by providing a device with pre-attached hair components of a hair part component or what is commonly known in the art as a crown closure. An anti-stress nape hair component on one embodiment protects the wearer's own hair and the longevity of the hairpiece with an arrangement that enables the base to be properly aligned on the head and over the nape hair while providing flexibility to prevent stress tangling at the back of the head and this pre-attached nape component would be difficult to achieve manually on a wearer's head. The device also has a removable moisture resistant coated or wax paper insulation that lines that inner base to prevent seepage when adhesive is the bonding method used to attach hair wefts to the hair extension cap base. The new device has the capacity to be affixed to the wearers own natural hair if they choose to do so, but has a self-retention capacity that other fabric base prior arts lack.

OBJECTIVE OF THE INVENTION

[0008] The current invention provides users a device with ease of use and speed of application and the main objectives are to:

[0009] 1) Provide a device that simplify the process attaching pre-made hair wefts used to complete a cap base hair extension by providing a base with lines to guide alignment of hair wefts which is critical to producing a natural looking finished product

[0010] 2) Provide a device that does not require or depend on the length of a wearer's hair for functionality by providing a device that covers the all the wearer's own natural hair and can be used for hair at any stage of growth or hair-loss. If needs be a wearer with longer hair may simply secure their own hair in a chignon or braids to allow the soft stretchable base to conformation to a natural shape. While women who are experiencing advance hair loss can confidently wear this device because of the high self retention capacity provided by the anti-skid tabs

[0011] 3) Provide a device that does not negatively impact or damage a wearer's natural hair via a moisture resistant insulation that prevents seepage when adhesive is used to attached hair wefts to the hair extension foundation cap

[0012] 4) Provide a device that fits securely to a wearer's head without the use of adhesives clips, rigid sharp edged ribbons or other objects that can harm a wearer's natural hair

BRIEF DESCRIPTION OF DRAWINGS

[0013] Description of drawings:

[0014] FIG. 1 illustrating template lines to guide hair attachment

[0015] FIG. 2 illustrating stitch-line of pre-attached hair components

[0016] FIG. 3 illustrating a plan view of the hair extension foundation cap

EXPLANATION OF MARKS AND SYMBOLS

[0017] Illustrations as set forth in FIG. 1-FIG. 3:

[0018] 10.1 Stretchable mesh fabric base for airflow

[0019] 20.1 Center panel that is wider at the front and stretches lengthwise

[0020] 30.1 Side panels that stretch downwards

[0021] 40.1 Stretchable areas of the band

[0022] 50.1 Antiskid reinforcement tabs made of rigid non-stretch mesh fabric

[0023] 60.1 Front antiskid reinforcement tab of rigid non-stretch mesh fabric

[0024] 70.1 Scalp colored overlay fabric for preferred embodiment said overlay has hair strands interconnected before attachment for embodiment two

[0025] 80.1 Periphery band of stretchable mesh fabric

[0026] 90.1 Opening at the ear section of the periphery band

[0027] 100.1 Support component for opening at ear section made of 85% percentage of nylon and 15% spandex.

[0028] 100. 2 Additional elastic support: ¾ inch (1.9 cm) wide x 2.5 inches (6.4 cm) long

[0029] 110.1 The fixed micro hair part with imitation scalp presentation having a vertical hair weft border, a uniformed line of implanted hair strands, a compressed zigzag stitch line that imitate thicken hair root and a second uniformed line of implanted hair strands that imitate scalp with hair growth

[0030] 120.1 Uniformly narrow opening between the left and right arrays of hair wefts that forms the fixed hair part feature, the opening or demarcation area is approximately ¼" (6 mm) wide to reduce the manually implanted or ventilated hair strands

[0031] 130.1 Template lines to guide attachment of hair wefts to the base

[0032] 140.1 Knotted area for the permanent or fixed micro hair-part

[0033] 150.1 Anti-stress nape arrangement with hair wefts vertically oriented, these vertically aligned wefts are approximately half inch ½" (1.27 cm) short in order to form a flat textured layer of hair that covers the back of the fabric base and imitate natural nape hair

DETAILED DESCRIPTION OF INVENTION

Best Mode of Carrying Out the Invention

[0034] The drawing in FIG. 1, illustrates the base of the current invention to which human or synthetic hair is attached. The best mode to carry out the new invention is a preferred embodiment with the following components and process:

[0035] The base is 10.1 a lightweight stretchable mesh fabric with a percentage of nylon and spandex. The antiskid reinforcement tabs 50.1 are made of a stiff nylon netting fabric popularly known as crinoline or stiff tulle. The center panel 20.1, which is wider at the front that stretches lengthwise and two side panels 30.1 stretch downwards to adapt to the shape and size of the wearer's head. The periphery is a band 80.1 made from a stretchable fabric of 85% percentage of nylon and 15% spandex. The band fabric is folded to form a smooth durable edge. The band is 3 inches (7.6 cm) wide. The circumference of the band is based on international hat sizes, for example hat-size 7 ½ measures 23.5 inches (59.7 cm) and is regarded as large. The large would be a popular size, but the scope to manufacture a variety of sizes is one of the advantages of this new invention as opposed to prior arts that is one-size-fits-all foundation. The opening at the ear section of the periphery band 90.1 is 1.5 inches (3.8 cm). The opening is reinforced with the stretchable fabric of 85% percentage of nylon and 15% spandex 100.1. The reinforcement fabric for this ear section is folded to form a smooth durable edge that can rest on the wearer's ear crease without irritation. The remaining opening easily accommodates the ear. 100.2 is a ¾ inch (1.9 cm) elastic member about 2.5 inches (6.4 cm) long with a soft textured surface is connected to the inside of the cap base at least ¾ inch (1.9 cm) above the opening for each ears. With the opening not being the entire width of the band and the additional elastic support it allows continuous tension that helps hold the soft structure of the base in place. The fabric overlay 70.1 for the front reinforcement tab protects a wearer's hair from the rigid reinforcement mesh and provides a foundation for an imitation scalp presentation

[0036] The ant-skid reinforcement tabs 50.1 are made from stiff nylon netting fabric popularly known as crinoline or stiff tulle. The stiff net is double folded lengthwise and stitched on the outside layer of the base below the attached hair. Placing the tabs on the outer layer of the base prevents the rough texture from coming in contact with the wearer's hair or scalp. The side and back reinforcement tabs are 2.5 inches (6.4 cm) long and ¾ inches (1.9 cm) wide. The front reinforcement tab 60.1 is 3" (7.62 cm) wide, 4" (10.16 cm) long. The tabs are placed in a longitude position along the periphery band. The front reinforcement tab 60.1 has a scalp colored fabric 70.1 the fabric stretchable fabric can be the same as the periphery band of the wig. This scalp colored overlay forms the imitation scalp at the crown and forehead area of the base.

[0037] The invention has an embodiment with a pre-attached hair part component that conceals exposed top edges of hair wefts attached to the foundation cap by a wearer. The pre-attached hair part component has strands of hair interconnected to scalp colored fabric overlay that covers the front

antiskid tab. The hair strands forms a hair part that is either fixed or variably selected by a wearer. For a variable wearer-select hair part, **70.1** the scalp colored mesh overlay of the front antiskid tab has multiple strands of hair implanted or ventilated prior to being attached to foundation cap base. The implanted hair strands covers an area large enough to allow a wearer to selectively make hair part the crown and forehead area. For a fixed micro hair part with imitation scalp, the crown area of foundation cap has arrays of hair wefts attached to the front antiskid tab. The arrays of hair wefts are slanted towards the center of the forehead from both left and right direction and have a lengthwise vertical hair weft border **120.1** overlay that conceals the slanted arrays. The vertical hair weft border is concealed by a uniformed line of implanted, knotted or ventilated hair strands followed by a dual function compressed zigzag stitch-line that secures the line of implanted or knotted hair strands in a permanently fixed position over edges of the hair weft border. The zigzag stitch line effects a simulated thickened hair root and a second line of implanted or knotted hair strands seamlessly blend with the zigzag stitch line and form **110.1** a natural looking hair-part with visible imitation scalp. The open or blank demarcation area; **140.1** is only $\frac{1}{4}$ inch (6 mm) wide and 3"(7.62 cm) long but can vary in length. The narrow opening or blank demarcation area makes it possible to use the two uniformed lines of ventilated hair and the zigzag stitch line to form a complete natural looking hair part with imitation scalp presentation.

[0038] In FIG. 2, **130.1** illustrate template lines to guide attachment of pre-made hair wefts to the foundation cap. Attaching hair wefts in a proper position is critical to achieving a natural looking finished product. A manual method for achieving a cap base with pre-marked line template is to use a head mold to hold the foundation cap then using a concave outer mould with the prescribed open pattern areas through which to apply a non-toxic ink or dye to the outer surface of the finished foundation cap. Another manual method is to use a head mould with engraved attachment lines to guide application of non-toxic ink or dye to finished foundation cap. An automated method of achieving pre-marked template lines on the foundation cap to use a flat or one dimensional image of the hair weft attachment lines of a completed hair extension cap weave device and have the image woven or printed on each segment of the stretchable mesh fabric for that forms the completed cap base prior to assembling. For example the lines would be $\frac{1}{2}$ " (1.27 cm) apart and the side panels of the base would have vertical lines and center panel would have horizontal lines. When the side and center panels are stitched together to form the contoured base the lines elongate around the curvature of a head with the lines on the side panel slanted. The line template guides hair weft attachment to form natural hair growth pattern and the line formation can vary to produce different hair styles.

[0039] The elastic support **100.1** extends across the width of the opening at the ear to help size adjustment. It provides support for the base and helps eliminate the need for retention devices such as clips, comb clips, hooks and adhesives along with the narrow anti-skid reinforcement tabs along the periphery band with alternate stretch space between each tab creates a flexible grip pattern of arrangement to allow a firm and secure but comfortable fit that also eliminate the need for retention devices such as clips, comb clips, hooks and adhesives.

[0040] The anti-stress nape hair component **150.1** spans a depth of 2" (5.06 cm) and 4" (10.16 cm) across the neck-back area. The wefts are placed in a longitude position, and the hair strands are and shortened to $\frac{1}{2}$ " (1.27 cm) length. The hairs are positioned with alternate spaces in between each piece and are positioned from left and right inwardly. The hair strands overlap and cover each inner weft-edge. This arrangement forms a flat textured layer of hair that allows total coverage of the wearer's nape hair. It also allows the wearer's clothing to glide over these shortened nape hairs. This anti-stress nape arrangement prevents the hair strands at the nape from becoming easily stressed and tangled from friction with the wearers clothing. The vertical positioning and shortened hair strands allow the wefts to discreetly cover the foundation cap with a natural looking textured layer of hair while allowing the base to maintain its flexibility and prevent friction on the wearer's own nape hair in a manner that would not be possible if the hair in the nape section is positioned horizontally as in other prior arts.

[0041] The moisture resistant insulation for the hair extension foundation cap is made of a lightweight double sided dry wax paper. It prevents seepage of adhesive used for bonding hair wefts to the foundation cap. It protects the user's hair from damaging effects of bonding adhesives. The detachable insulation is removable prior to attaching hair wefts when wefts are attached by means of sewing or after attaching hair wefts when adhesive is the means of attachment. The insulation is oval-shaped and has an elastic band around the periphery that contours the paper structure as well as enables expansion and contraction of the paper structure when in use. The insulation is attached to the inner front area of the hair extension foundation cap and allows the hair extension cap base to be partially lifted away from the insulation but allows the insulation to remain fixed during the weaving process. A dry wax paper with a twenty pounds (21#) base weight provides strength, flexibility and a surface that prevents paper residue from transferring to the inner surface of the cap base due to the wet adhesive and also enables the use of heated air from a blow dryer to be used for quick drying of bonding adhesives during attachment of hair wefts used to complete the hair extension process.

[0042] Applicant has set forth the best mode contemplated of carrying out the invention into a complete operative device. The present disclosure having been thus described makes particular reference to the preferred mode of carrying out the invention thereof, it will be obvious that various changes and modification may be made therein without departing from the scope of the present disclosure as defined

1-3. (canceled)

4. A hair extension foundation cap, comprising:

- a ridge-less interior surface;
- an elastic member extending around the circumference of the hair extension foundation cap;
- a center panel having a wider front than back, wherein the center panel is configured to stretch in a direction between the front and the back;
- template guidelines positioned on an exterior surface, the template guidelines being configured to guide attachments of hair wefts to the hair extension foundation cap; and
- antiskid reinforcement tabs comprised of a non-stretch mesh fabric, the antiskid reinforcement tabs including a front reinforcement tab positioned on the front of the hair extension foundation cap and circumference tabs

positioned along a circumference of the hair extension foundation cap, wherein the circumference tabs are placed along the elastic member.

5. The hair extension foundation cap of claim 1, further comprising:

a moisture resistant insulation layer positioned on the ridge-less interior surface of the hair extension foundation cap, the moisture resistant insulation layer being comprised of wax paper.

6. The hair extension foundation cap of claim 1, wherein the template guidelines are woven into the exterior surface.

7. The hair extension foundation cap of claim 1, wherein the template guidelines are printed into the exterior surface.

7. The hair extension foundation cap of claim 1, further comprising:

a plurality of panels, wherein the template guidelines associated with each of the plurality of panels is different.

8. The hair extension foundation cap of claim 7, further comprising:

a weft border positioned between two of the plurality of panels, wherein the template guidelines associated with the two of the plurality of panels are slanted towards the weft border.

* * * * *