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(54) **HAIR INTEGRATION ASSEMBLY**

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(57) **ABSTRACT**

A hair integration assembly includes a resilient mesh band extending substantially laterally about the wearer's scalp and a plurality of longitudinally-extending resilient mesh bands. A multiplicity of extrinsic hair strands are fastened to and extend outwardly from each of the mesh bands. The laterally-extending mesh band and the longitudinally-extending mesh bands are fastened together such that the wearer's natural hair can be drawn from within openings formed between the mesh bands, thereby enabling the extrinsic hair extending from the mesh bands to be integrated with the wearer's natural hair. The assembly can further include one or more lengths of elastic material fastened to one or more of the mesh bands. The lengths of elastic material are capable of securing the assembly to the wearer's scalp, thereby providing more comfort and flexibility to the assembly, and to accommodating different head sizes of wearers.

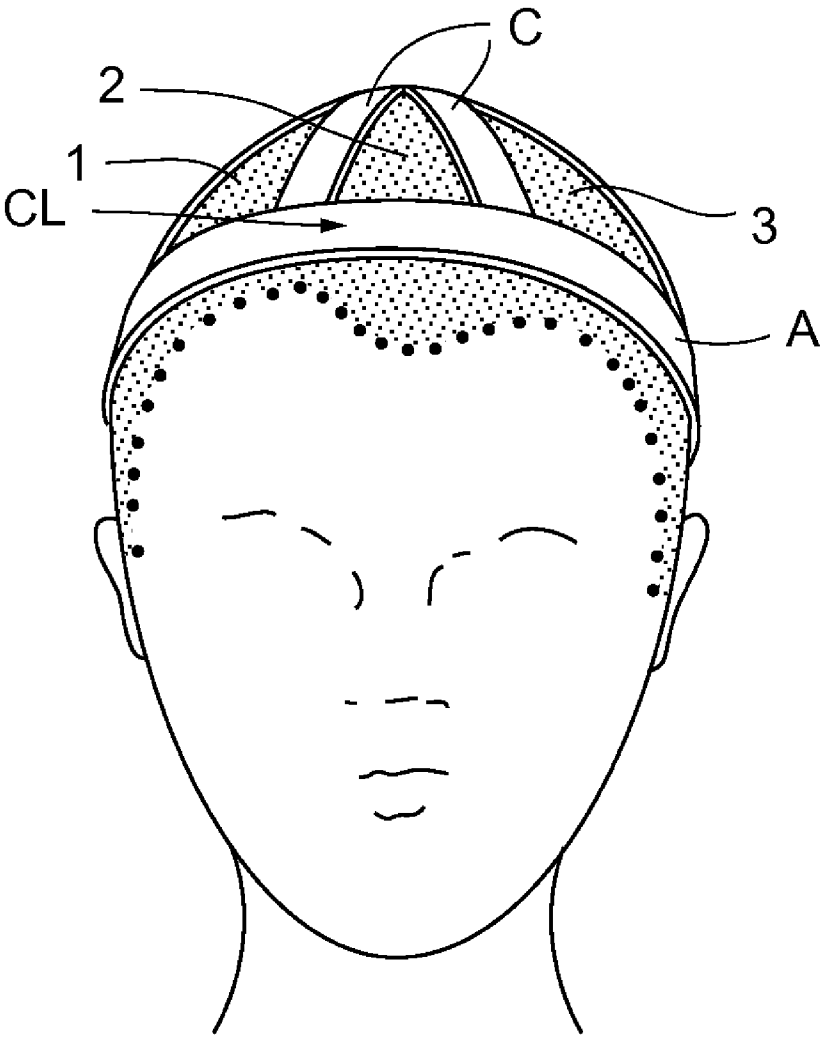


Fig. 1

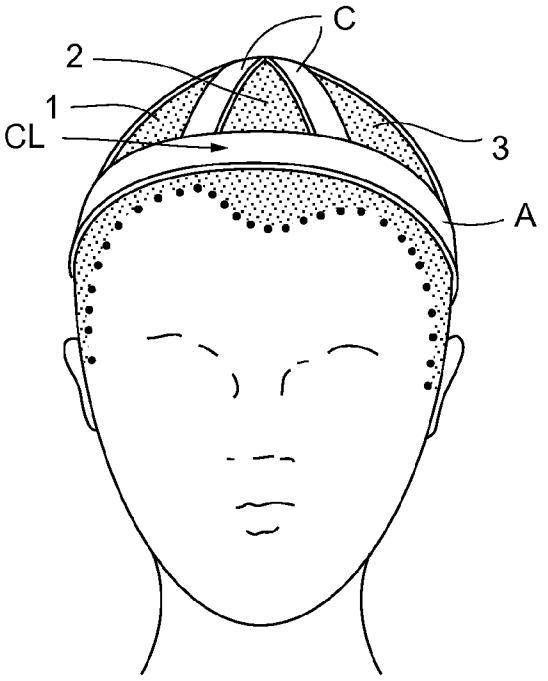


Fig. 2

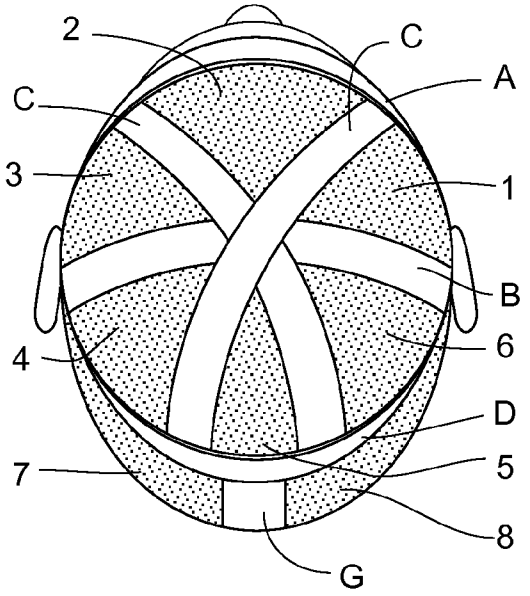


Fig. 3

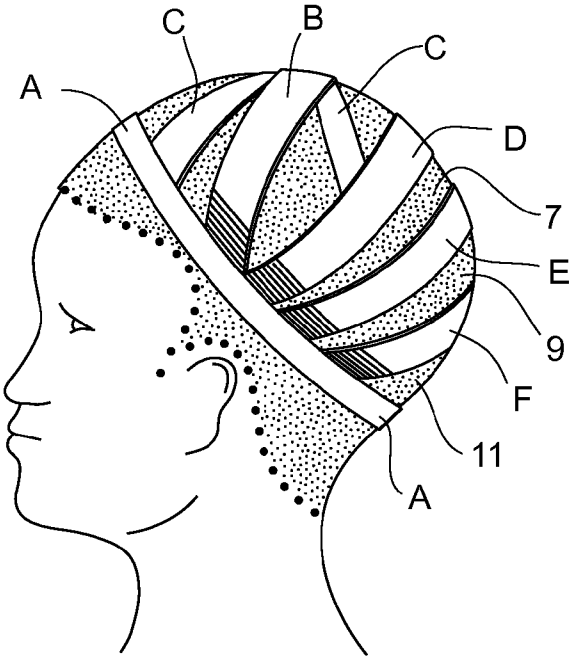


Fig. 4

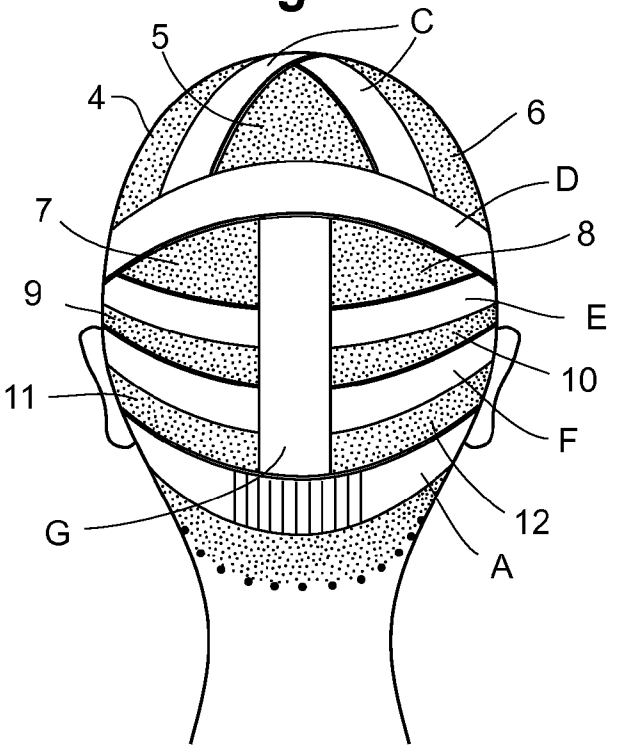


Fig. 5

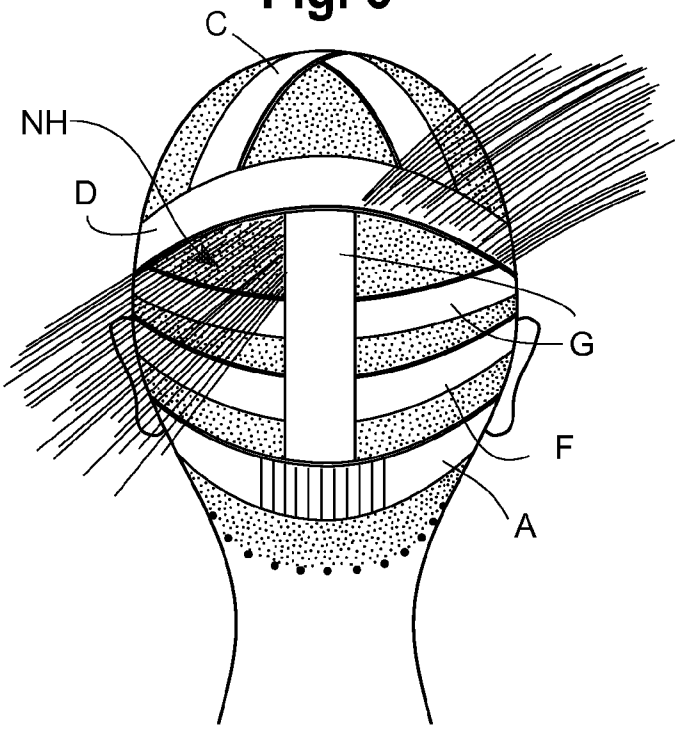
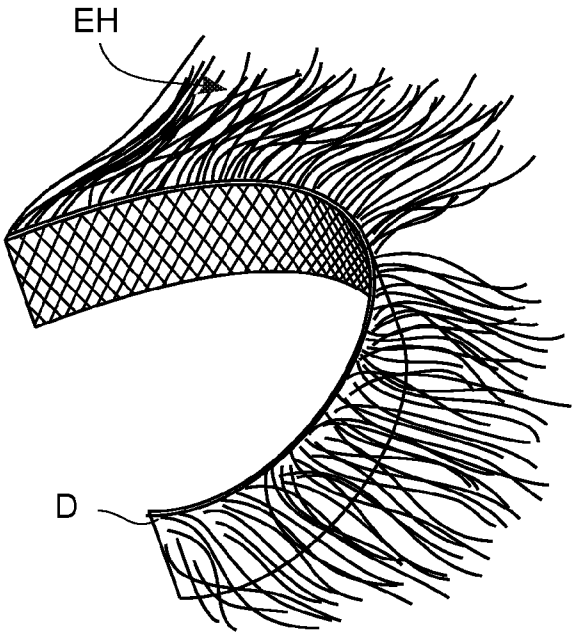


Fig. 6



HAIR INTEGRATION ASSEMBLY

FIELD OF THE INVENTION

[0001] The present invention relates to hair augmentation. In particular, the present invention relates to an assembly for integrating hair obtained from an extrinsic source with natural hair extending from a wearer's scalp.

BACKGROUND OF THE INVENTION

[0002] Although not the exclusive market, the target market for the present hair integration assembly is women with fine and/or thin hair. Conventional hair integration designs are formed with hair obtained from an extrinsic source attached to braided strands or cables that are arranged close together in a network, thereby making it difficult to pull a wearer's natural hair through the hairnet-style cable network without damage. Another problem with conventional cable-based designs is their tendency to look unnatural. The present design addresses these shortcomings by replacing the cables with mesh strips preferably formed from nylon. Elastic material can also be integrated with the mesh strips to provide more comfort and flexibility to the assembly, and to accommodate different head sizes of wearers. In the present design, the size the shape of the openings or interstices between the mesh strips is sufficiently large that the wearer's natural hair can be pulled though the openings more easily than in conventional hairnet-style designs. In conventional hair integration designs, the wearer's natural hair can be damaged as a result of being pulled through openings as small as 1/16 inch to 1/2 inch wide. The present design also enables the assembly to be removed from the wearer's head more easily and safely than in conventional designs.

[0003] One company, Fashion World Enterprises, Inc. of Niles, Ill., offers a hair integration unit called the Reprieve. This patented design (see U.S. Pat. No. 5,992,424) attempts to overcome the problems associated with conventional hair integration designs by using a full top-of-the-head cap with side panels only made from polyurethane. This unit covers the entire top of the wearer's head and would only be of value to those women who have diffused hair loss or alopecia. In conventional hair integration designs, the size, shape and spaces between the cables are often varied but none of these conventional designs affords the same advantages achieved by the present hair integration assembly, which employs interconnected laterally-extending and longitudinally-extending mesh bands.

SUMMARY OF THE INVENTION

[0004] One or more of the shortcomings of conventional hair integration designs are overcome by an assembly for integrating hair obtained from an extrinsic source with natural hair extending from a wearer's scalp. The assembly comprises:

[0005] (a) at least one resilient mesh bands extending substantially laterally about the wearer's scalp, the laterally-extending mesh band(s) having a multiplicity of extrinsic hair strands independently fastened to and extending outwardly from the laterally-extending mesh band(s);

[0006] (b) a plurality of resilient mesh bands extending substantially longitudinally about the wearer's scalp from a first portion of the laterally-extending mesh band to a location at the wearer's crown region, the longitudinally-extending mesh bands being fastened together at the wearer's crown region and having a multiplicity of extrinsic hair strands independently fastened to and extending outwardly from each of the longitudinally-extending mesh bands.

[0007] The laterally-extending mesh band(s) and the longitudinally-extending mesh bands are fastened together such that the wearer's natural hair can be drawn from within openings formed between the mesh bands, thereby enabling the extrinsic hair extending from the mesh bands to be integrated with the wearer's natural hair.

[0008] In a preferred embodiment, the first portion and second portions of the laterally-extending mesh band(s) are located on opposite sides of the wearer's scalp. The laterally-extending mesh band(s) preferably comprise a plurality of laterally-extending mesh bands spaced apart from one another and in a parallel arrangement from the top of the wearer's head at, near or slightly behind the wearer's hairline.

[0009] A preferred hair integration assembly further comprises at least one length of elastic material fastened to at least one of the laterally-extending mesh band(s) and the longitudinally-extending mesh bands. The length(s) of elastic material can be in the form of strands or bands. The length(s) of elastic material are capable of securing the assembly to the wearer's scalp.

[0010] The length(s) of elastic material preferably comprise a plurality of elastic material bands. Each of the elastic material bands is attached to one of the laterally-extending mesh bands and the longitudinally-extending mesh bands.

[0011] The mesh bands are preferably formed from a transparent material, but could also be formed, less preferably, from an opaque material. The preferable material for the mesh bands is nylon.

[0012] In this description, the term "longitudinally" is intended to mean extending in a direction that is angled with respect to the laterally-extending mesh band, and is therefore intended to encompass mesh bands and other structures that extend diagonally with respect to the laterally-extending mesh band.

[0013] A method of producing an assembly for integrating a wearer's natural hair with hair obtained from an extrinsic source comprises:

[0014] (a) extending one or more resilient mesh bands substantially laterally about the wearer's scalp, the laterally-extending mesh band having a multiplicity of extrinsic hair strands independently fastened to and extending outwardly from the laterally-extending mesh band;

[0015] (b) extending one or more mesh bands substantially longitudinally about the wearer's scalp from a first portion of the laterally-extending mesh band to a location at the wearer's crown region, the longitudinally-extending mesh being fastened together at the wearer's crown region, the longitudinally-extending mesh having a multiplicity of extrinsic hair strands independently fastened to and extending outwardly from the at least one longitudinally-extending mesh band;

[0016] (c) fastening together the longitudinally-extending mesh bands at the wearer's crown region, the longitudinally-extending mesh bands having a multiplicity of extrinsic hair strands independently fastened to and extending outwardly from each of the longitudinally-extending mesh bands;

[0017] (d) fastening together the laterally-extending mesh band(s) and the longitudinally-extending mesh bands such that the wearer's natural hair can be drawn from within openings formed between the mesh bands,

thereby enabling the extrinsic hair extending from the mesh bands to be integrated with the wearer's natural hair.

[0018] In preferred embodiments of the foregoing method, the first portion and second portions of the laterally-extending mesh band(s) are located on opposite sides of the wearer's scalp. The laterally-extending mesh band(s) can comprise a plurality of laterally-extending mesh bands spaced apart from one another and in a parallel arrangement from the wearer's crown portion to the wearer's hairline.

[0019] The method preferably further comprises fastening at least one length of elastic material to at least one of the laterally-extending mesh bands and the longitudinally-extending mesh bands. The length(s) of elastic material are capable of securing the assembly to the wearer's scalp. More preferably, the length(s) of elastic material comprises a plurality of elastic material lengths, each of the elastic material lengths attached to one of the laterally-extending mesh band (s) and the longitudinally-extending mesh bands. The lengths of elastic material are capable of securing the assembly to the wearer's scalp to provide more comfort and flexibility to the assembly and to accommodate different head sizes of wearers.

BRIEF DESCRIPTION OF THE DRAWING(S)

[0020] FIG. **1** is a front view of the present hair integration assembly shown mounted on a mannequin head.

[0021] FIG. **2** is a top view of the hair integration assembly shown in FIG. **1**.

[0022] FIG. **3** is a side view of the hair integration assembly shown in FIGS. **1** and **2**.

[0023] FIG. **4** is a back view of the hair integration assembly shown in FIGS. **1-3**.

[0024] FIG. **5** is a back view of the hair integration assembly shown in FIG. **4**, further illustrating the openings through which the wearer's natural hair is drawn.

[0025] FIG. **6** is a perspective view of the mesh band component of the present hair integration assembly, specifically showing the extrinsic hair strands fastened to and extending outwardly from the mesh band.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENT(S)

[0026] Turning first to FIG. **1**, a mannequin head has a hair integration assembly mounted on its crown. In this front view, the assembly includes a mesh band A extending laterally about a top portion of the mannequin head. Although omitted for simplicity in FIG. **1**, in actual practice, a multiplicity of hair strands obtained from an extrinsic source extend from mesh band A.

[0027] As further shown in FIG. **1**, a pair of mesh bands C extend approximately longitudinally about the top portion of the mannequin head from locations on laterally-extending mesh band A. As with mesh band A, a multiplicity of hair strands obtained from an extrinsic source extend from mesh bands C in actual practice, but are omitted from FIG. **1** for simplicity. Openings or interstices **1**, **2**, **3** are formed between laterally-extending mesh band A and longitudinally-extending mesh bands C. Natural hair of the wearer can be drawn through openings **1-3** and integrated with the extrinsic hair extending from mesh bands A, C.

[0028] A hair clip (not shown) can be used to fasten mesh band A (and/or any of the other mesh bands) to the wearer's natural hair at, for example, a location denoted by the arrow CL in FIG. **1**.

[0029] In the top view shown in FIG. **2**, a further laterally-extending mesh band D extends about the mannequin head. A further mesh band B extends longitudinally from one location on laterally-extending mesh band D to an oppositely-disposed location on mesh band D. A further mesh band G extends downward longitudinally from a location on laterally-extending mesh band D to a location (not visible in FIG. **2**) on mesh band A. As in FIG. **1**, openings or interstices **1-8** are formed between the laterally-extending mesh bands A, D and the longitudinally-extending mesh bands B, C. As in FIG. **1**, natural hair of the wearer can be drawn through openings **1-8** and integrated with the extrinsic hair extending from mesh bands A-D.

[0030] In the side view shown in FIG. **3**, further laterally-extending mesh bands E, F extend about the mannequin head. Further openings or interstices **9**, **11** are formed between the laterally-extending mesh bands E, F, A and the longitudinally-extending mesh band G (not visible in FIG. **3**). Natural hair of the wearer can be drawn through openings **9**, **11** and integrated with the extrinsic hair extending from mesh bands E, F, A.

[0031] In the back view shown in FIG. **4**, further openings or interstices **10**, **12** are formed between the laterally-extending mesh bands E, F, A and the longitudinally-extending mesh band G. Natural hair of the wearer can be drawn through each of the illustrated openings **4-12** and integrated with the extrinsic hair extending from mesh bands A, C-G

[0032] In actual practice, a multiplicity of hair strands obtained from an extrinsic source extend from each of the mesh bands illustrated in FIGS. **1-4**, but are omitted for simplicity in those drawing figures. In FIG. **5**, the wearer's natural hair NH is shown being drawn through opening **7** shown in FIG. **4** for integration with the extrinsic hair extending from laterally-extending mesh band D, as well as from mesh bands E, F, A (extrinsic hair extending from mesh bands E, F, A omitted for simplicity).

[0033] In FIG. **6**, extrinsic hair strands EH are shown fastened to and extending outwardly from the mesh band D.

[0034] FIGS. **1-5** show that the size of the openings between the mesh bands is significantly greater than in conventional cable-based hair integration designs, thereby promoting ease of application and removal and reducing damage to the wearer's natural hair. The present hair integration assembly is made lighter and more comfortable by using nylon mesh bands instead of securing the extrinsic hair on cables. An overall more natural look is achieved using the present nylon mesh assembly. The mesh bands could also be formed from cotton or other mesh-forming resilient material (s).

[0035] In the present hair integration assembly, a wider mesh base creates a more natural look; each piece of the nylon mesh band will be bonded on the edges to make it stronger and more durable for the wearer, and prevents the assembly from unraveling. Increasing the space between the bands allows the wearer to pull his/her natural hair through with greater ease, thereby reducing the tendency of the natural hair to break. This present design also promotes easy removal of the assembly from the wearer's head.

[0036] The present hair integration assembly provides the following benefits:

[0037] (a) Allows the wearer to use more of his/her natural hair,

[0038] (b) Enhanced comfort,

[0039] (c) Minimal damage to natural hair both in applying and removing the assembly,

[0040] (d) Can be styled and maintained at home, thereby decreasing the number of trips required to the beauty salon and saving the client time and money, and

[0041] (e) Can be made of extrinsic hair that is colorable to match the wearer's hair.

[0042] (f) Provides comfort, flexibility, and accommodates different head sizes of wearers.

[0043] While particular elements, embodiments and applications of the present invention have been shown and described, it will be understood, of course, that the invention is not limited thereto since modifications can be made by those skilled in the art without departing from the scope of the present disclosure, particularly in light of the foregoing teachings.

What is claimed is:

1. An assembly for integrating hair obtained from an extrinsic source with natural hair extending from a wearer's scalp, the assembly comprising:

(a) at least one resilient mesh band extending substantially laterally about the wearer's scalp, said at least one laterally-extending mesh band having a multiplicity of extrinsic hair strands independently fastened to and extending outwardly from said at least one laterally-extending mesh band;

(b) a plurality of resilient mesh bands extending substantially longitudinally about the wearer's scalp from a first portion of said at least one laterally-extending mesh band to a location at the wearer's crown region, said longitudinally-extending mesh bands being fastened together at the wearer's crown region and having a multiplicity of extrinsic hair strands independently fastened to and extending outwardly from each of said longitudinally-extending mesh bands,

wherein said at least one laterally-extending mesh band and said longitudinally-extending mesh bands are fastened together such that the wearer's natural hair can be drawn from within openings formed between said mesh bands, thereby enabling said extrinsic hair extending from said mesh bands to be integrated with the wearer's natural hair.

2. The hair integration assembly of claim **1** wherein said first portion and second portions of said at least one laterally-extending mesh band are located on opposite sides of the wearer's scalp.

3. The hair integration assembly of claim **1** wherein said at least on laterally-extending mesh band comprise a plurality of laterally-extending mesh bands spaced apart from one another and in a parallel arrangement from the wearer's crown portion to the wearer's hairline.

4. The hair integration assembly of claim **1** further comprising at least one length of elastic material fastened to at least one of said laterally-extending mesh bands and said longitudinally-extending mesh bands, said at least one length of elastic material capable of securing said assembly to the wearer's scalp.

5. The hair integration assembly of claim **4** wherein said at least one length of elastic material comprises a plurality of elastic material strands, each of said elastic material strands attached to one of said laterally-extending mesh bands and said longitudinally-extending mesh bands.

6. The hair integration assembly of claim **1** wherein said at least one laterally-extending mesh band and said longitudinally-extending mesh bands are formed from a transparent material.

7. The hair integration assembly of claim **1** wherein said at least one laterally-extending mesh band and said longitudinally-extending mesh bands are formed from an opaque material.

8. The hair integration assembly of claim **1** wherein said mesh bands are formed from nylon.

9. A method of producing an assembly for integrating a wearer's natural hair with hair obtained from an intrinsic source, the method comprising:

(a) extending at least one resilient mesh band substantially laterally about the wearer's scalp, said at least one laterally-extending mesh band having a multiplicity of extrinsic hair strands independently fastened to and extending outwardly from said at least one laterally-extending mesh band;

(b) extending a plurality of resilient mesh bands substantially longitudinally about the wearer's scalp from a first portion of said at least one laterally-extending mesh band to a location at the wearer's crown region;

(c) fastening together said longitudinally-extending mesh bands at the wearer's crown region, said longitudinally-extending mesh bands having a multiplicity of extrinsic hair strands independently fastened to and extending outwardly from each of said longitudinally-extending mesh bands;

(d) fastening together said at least one laterally-extending mesh band and said longitudinally-extending mesh bands such that the wearer's natural hair can be drawn from within openings formed between said mesh bands, thereby enabling said extrinsic hair extending from said mesh bands to be integrated with the wearer's natural hair.

10. The method of claim **9** wherein said first portion and second portions of said at least one laterally-extending mesh band are located on opposite sides of the wearer's scalp.

11. The method of claim **9** wherein said at least one laterally-extending mesh band comprise a plurality of laterally-extending mesh bands spaced apart from one another and in a parallel arrangement from the wearer's crown portion to the wearer's hairline.

12. The method of claim **9** further comprising fastening at least one length of elastic material to at least one of said laterally-extending mesh bands and said longitudinally-extending mesh bands, said at least one length of elastic material capable of securing said assembly to the wearer's scalp.

13. The method of claim **12** wherein said at least one length of elastic material comprises a plurality of elastic material lengths, each of said elastic material lengths attached to one of said laterally-extending mesh bands and said longitudinally-extending mesh bands.

14. The method of claim **9** wherein said at least one laterally-extending mesh band and said longitudinally-extending mesh bands are formed from a transparent material.

15. The method of claim **9** wherein said at least one laterally-extending mesh band and said longitudinally-extending mesh bands are formed from an opaque material.

16. The method of claim **9** wherein said mesh bands are formed from nylon.

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