A plurality of cosmetic brush concepts, including the use of discrete strips of brush material to assemble brush heads so as to provide a wide variety of functional and ornamental designs. Also disclosed is the use of different lengths of brush hair in the same head.
Step 7 - Hair is placed into mold to be injected with glue

FIG. 1-C
Creating Swirl Hair

Sliced Hair

FIG. 1-G
FIG. 1-H

Creating Swirl Hair

First Hair Slice 122 (Unflattened)

Slice Base 124 (Unflattened)
Step 11

Hair slice is put in the machine to be thinned further.
(As the glue is not dried all the way, the machine presses the hair thin it a little.)

FIG. 1-I
FIG. 10

1. Put the hair into the shaping mold.
2. Unite the thread to the hair.
3. Shape the hair.

Creating the Domed Swirl Hair

Relax the shaped hair

Step 14(c): Put the hair into the shaping mold.
Step 14(c): Unite the thread to the hair.
Step 14(c): Shape the hair.
FIG. 11-A

UNTouched

Roll the inner round of hair (the core)

TOUCHED UP

Roll the inner round of hair (the core)

CORE SLICE 450

CENTER OF CORE SLICE/LAYER

OUTER EDGE OF SECOND SLICE/LAYER
Wrap the second layer of hair around the core hair.

Core Slice 430
Second Slice 440

FIG. 11-B

Untouched

Touched Up

Center of Core Slice/Layer
Outer Edge of Second Slice/Layer

Human Hand
FIG. 11-C

Wrap another layer of hair

SECOND SLICE 440

THIRD SLICE 450

CORE SLICE 430

CENTER OF THIRD LAYER

OUTER EDGE OF THIRD SLICE/LAYER
FIG. 11-D

UNTouched
Add several small pieces to make it more irregular

SMALL OUTER 450

SECOND SLICE 440

THIRD SLICE 450

SMALL OUTER PIECE 460

CENTER OF THIRD LAYER

TOUCHED UP
Add several small pieces to make it more irregular

SMALL OUTER 460

SECOND SLICE 440

THIRD SLICE 450

SMALL OUTER PIECE 460

OUTER EDGE OF THIRD LAYER
FIG. 11-E
Bind the hair with thread

FIG. 11-F
Put the head into headshaping mold

Shaping/Forming Mold
FIG. 11-G
Bind the shaped hair with thread

FIG. 11-H
Pull off the PP sleeve and the head takes shape

(This end was just previously formed by the mold)
PATERNED BRUSH HEAD MANUFACTURING PROCESS

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the full benefit and priority of pending provisional patent application No. 61/454,482, filed Mar. 18, 2011, entitled “Swirl Brush and Manufacturing Method”. The entire contents of said application are incorporated herein by reference.

BACKGROUND OF THE INVENTION

[0002] The type of hair used in cosmetic applicators and makeup brushes may differ depending on its intended use. For example, natural hairs may be better suited for transferring certain cosmetic products from a container to the skin, while synthetic hairs may be better suited for blending the cosmetic product on the skin. For mineral based makeup, such as powders, blushes, bronzers, etc., it may be desired to use synthetic fibers to apply the makeup and natural fibers to blend. For example, a blush may be applied to the user’s cheekbone with the synthetic fibers and the blush may then be blended on the cheekbone with the natural fibers. For pan or pressed products such as pressed powders, eye shadows, etc., it may be desired to use natural fibers to apply and synthetic fibers to blend. For example, eye shadow may be applied with the natural fibers and then blended with synthetic fibers. In addition, certain other properties of brush hairs, such as stiffness, thickness, length, etc., may affect the quality and nature of their use in cosmetic brushes.

[0003] Traditional cosmetic brushes are comprised of a single type of hair. As such, the tasks of application and blending require the use of two separate brushes. Certain brushes exist in the prior art that incorporate a blend of natural and synthetic hair; however, oftentimes blending one type of hair with another simply dilutes the beneficial qualities of each type of hair. Providing separate brushes within the same ferrule can be useful but may require reorientation of the brush in the user’s hand for effective use of the separate fibers. Thus, there is a need for a cosmetic brush that is capable of incorporating different types of brush hairs while maintaining the separate qualities of the different brush hairs and providing the ability to seamlessly switch between different tasks such as application and blending.

[0004] There is also a need in the art for improvements relating to brushes that have hair of different colors, but not necessarily other different properties (natural or synthetic).

BRIEF SUMMARY OF THE INVENTION

[0005] An object of the invention is to provide a method of making brush heads. According to one aspect of the invention, a method comprises making elongate bundles of brush hair held by flexible adhesive base at one hair end. According to another aspect of the invention, a method comprises combining one or more elongate bundles of brush hair in a ferrule. According to another aspect of the invention, the elongate bundles are each comprised of a different type of brush hair.

[0006] According to another aspect of the invention, the elongate bundles are each comprised of brush hair having at least one dissimilar property. According to another aspect of the invention, the dissimilar property between the brush hairs may be the average length of the brush hairs. According to another aspect of the invention, the dissimilar property between the brush hairs may be the color of the brush hairs. According to another aspect of the invention, the dissimilar property between the brush hairs may be the thickness of the brush hairs.

[0007] Another object of the invention is to provide a brush head comprising one or more elongate bundles of brush hair.

[0008] Another object of the invention is to provide elongate bundles of brush hair for use in forming brush heads.

[0009] Generally described, the present inventions relate to various concepts, including but not limited to a method of providing a cosmetics brush head, the method including the use of first and second bristle portions, each of the bristle portions being comprised of a plurality of elongate flexible bristle portions, each of the bristle portions having two opposing ends, one end being an application end and the other end being a secured end, the method comprising the steps of: A) providing a first elongate, substantially planar, strip of hair itself comprising a plurality of first elongate flexible bristles, each of the first elongate bristles having two opposing ends, one end being an application end and the other end being a secured end, the first elongate strip of hair itself also comprising a first elongate strip base which interconnects the secured ends; B) providing a second elongate, substantially planar, strip of hair itself comprising a plurality of second elongate flexible bristles, each of the second elongate bristles having two opposing ends, one end being an application end and the other end being a secured end, the second elongate strip of hair itself also comprising a second elongate strip base which interconnects the secured ends; C) stacking the first elongate strip of hair on top of the second elongate strip of hair in substantially planar contact, such that a two-layer elongate strip of hair is provided; D) rolling up the two-layer elongate strip of hair from one end to the other, while keeping the strip bases of the first and second hair slices substantially aligned, such that a rolled up elongate flexible bristle assembly is provided, comprised of a rolled up plurality of bristles having at one end the application end and at the other end the secured end; and E) securing a portion of the rolled up plurality of bristles together proximate their secured ends, such that a brush head is provided having at one of its ends a plurality of bristle application ends including the application ends of the first and second elongate flexible bristles.

[0010] Also included is a method of providing a cosmetics brush head, the method including the use of first and second bristle portions, each of the bristle portions being comprised of a plurality of elongate flexible bristle portions, each of the bristle portions having two opposing ends, one end being an application end and the other end being a secured end, the method comprising the steps of: A) providing a first elongate, substantially planar, strip of hair itself comprising a plurality of first elongate flexible bristles oriented generally transverse to its length, each of the first elongate bristles having two opposing ends, one end being an application end and the other end being a secured end, the first elongate strip of hair itself also comprising a first elongate strip base which interconnects the secured ends; B) providing a second elongate, substantially planar, strip of hair itself comprising a plurality of second elongate flexible bristles, each of the second elongate bristles having two opposing ends, one end being an application end and the other end being a secured end, the second elongate strip of hair itself also comprising a second elongate strip base which interconnects the secured ends; C) rolling up the first elongate strip of hair from one end to the other, thus creating a core brush portion; D) rolling the second elongate
strip of hair at least partially around the core brush portion, such that a rolled up elongate flexible bristle assembly is provided, comprised of a rolled up plurality of bristles each having at one end the application end and at the other end the secured end; and E) securing a portion of the rolled up plurality of bristles together proximate their secured ends, such that a brush head is provided having at one of its ends a plurality of bristle application ends including the application ends of the first and second elongate flexible bristles.

[0011] Also included is the method of manufacturing above, wherein in step “A”, the first elongate, substantially planar, strip of hair is provided by: a) grouping a number of separate first elongate flexible bristles in a mold such that the secured ends of the number of separate first elongate flexible bristles are substantially aligned in a plane; b) applying glue to the secured ends of the number of separate first elongate flexible bristles while they are substantially aligned in the plane, such that a substantially planar layer of glue is provided which partially adheres proximate the secured ends of the first elongate flexible bristles; c) allowing the planar layer of glue to at least partially dry; d) removing the mold such that the planar layer of glue tends to hold the number of separate first elongate flexible bristles together via their secured ends; and e) slicing the planar layer of glue such into elongate slices, such that one of the slices comprises the glue strip base.

[0012] Another of the inventions includes a method of using a cosmetics brush head, the brush head including first and second bristle portions, each of the bristle portions being comprised of a plurality of elongate flexible bristle portions, each of the bristle portions having two opposing ends, one end being an application end and the other end being a secured end, the second bristle portions being longer than the first bristle portions, the method comprising the steps of: applying cosmetics from the brush head to a skin surface with the use of a first pressure; and applying cosmetics from the brush head to a skin surface with the use of a second pressure greater than the first pressure, such that the ratio of cosmetic volume applied by the first bristle portions relative to the cosmetic volume applied by the second bristle portions is greater in step “B” relative to step “A” due to the increased contact of the first bristle portions due to the greater pressure.

[0013] Another of the inventions includes a method of using a cosmetics brush, the brush head including first and second bristle portions, each of the bristle portions being comprised of a plurality of elongate flexible bristle portions, each of the bristle portions having two opposing ends, one end being an application end and the other end being a secured end, the second bristle portions being longer than the first bristle portions, the method comprising the steps of: applying cosmetics from the brush head to a skin surface with the use of a first pressure in order to apply cosmetics; and applying cosmetics from the brush head to a skin surface with the use of a second pressure greater than the first pressure, in order to blend cosmetics.

[0014] Another of the inventions includes a cosmetics brush, the brush comprising: a first elongate, substantially planar, strip of hair itself comprising a plurality of first elongate flexible bristles oriented generally transverse to its length, each of the first elongate bristles having two opposing ends, one end being an application end and the other end being a secured end; and a second elongate, substantially planar, strip of hair itself comprising a plurality of second elongate flexible bristles, each of the second elongate bristles having two opposing ends, one end being an application end and the other end being a secured end, the second elongate flexible bristles being shorter than the first set of bristles and configured such that the application ends are recessed relative to the application ends of the first set of bristles, such that different application pressures of the brush provide different relative application properties of the first and second sets of bristles.

[0015] Also included are the concepts as included in the original claims of this application.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] Reference will now be made to the accompanying drawings, which are not necessarily drawn to scale, and wherein:

[0017] FIGS. 1A-1P illustrate swirl brush manufacturing method steps according to embodiments of the present invention;

[0018] FIG. 1-A shows steps 1-5.

[0019] FIG. 1-B shows step 6.

[0020] FIG. 1-C shows step 7.

[0021] FIG. 1-D shows step 8.

[0022] FIG. 1-E shows step 9.

[0023] FIG. 1-F shows step 10.

[0024] FIG. 1-G shows the slices at 271.

[0025] FIG. 1-H shows a separated first (unflattened) hair slice 122.

[0026] FIG. 1-I shows step 11.

[0027] FIG. 1-J shows a final hair slice 122.

[0028] FIG. 1-K shows step 12.


[0030] FIG. 1-M shows rolled hair in the form of a brush head 110.

[0031] FIG. 1-N shows steps 14a (tied the hair) and 14b (cutting the hair with glue).

[0032] FIG. 1-O shows step 14c (hair put into shaping mold), step 14d (untie the thread) step 14e (untie the thread) and step 15a (untie the thread).

[0033] FIG. 1-P shows step 15b (hair inserted into ferrule).

[0034] FIG. 1-Q shows step 16 and step 17.

[0035] FIG. 2 is a side perspective view of a cosmetic brush made using a swirl manufacturing method of the present invention (aka First Manufacturing Method);

[0036] FIG. 3 is a top view of the cosmetic brush made using a swirl manufacturing method of the present invention (aka First Manufacturing Method);

[0037] FIG. 4 is a side view of the cosmetic brush made using a swirl manufacturing method of the present invention (aka First Manufacturing Method);

[0038] FIG. 5 is a side view of another cosmetic brush made using a swirl manufacturing method of the present invention (aka First Manufacturing Method);

[0039] FIG. 6 is a top view of the other cosmetic brush made using a swirl manufacturing method of the present invention (aka First Manufacturing Method);

[0040] FIG. 7 is a side perspective view of another cosmetic brush made using a swirl manufacturing method of the present invention (aka First Manufacturing Method);

[0041] FIG. 8 is a top view of the other cosmetic brush made using a swirl manufacturing method of the present invention (aka First Manufacturing Method);

[0042] FIG. 9 is a side perspective view of another cosmetic brush made using a swirl manufacturing method of the present invention; and
FIG. 10 is a top view of the other cosmetic brush made using a swirl manufacturing method of the present invention.

FIG. 11-A shows two similar figures showing a core slice 430 (aka inner slice) being rolled by human hands. This could also be interpreted as “folding over” the slice over itself. The lower of the two figures has been touched up to show the outer edges of the slice in darker dotted line, with the centerline of the slice 430 in lighter centerline.

FIG. 11-B shows two similar figures showing a second slice 440 being wrapped around a core slice 430 by human hands. The lower of the two figures has been touched up to show the outer edges of centerline of slice 440 in lighter dotted line, with the centerline of the slice 430 in lighter centerline.

FIG. 11-C shows two similar figures showing a third slice 450 being wrapped around second slice 440 by human hands. The lower of the two figures has been touched up to show the outer periphery of slice 450 in darker regular dotted line, with the centerline of the slice 450 in darker centerline.

FIG. 11-D shows two similar figures showing small outer pieces 460 being placed by human hands in a spaced apart manner around the periphery of third slice 450. The lower of the two figures has been touched up to show the outer periphery of slice 450 in darker regular dotted line, with the centerline of the slice 450 in darker centerline.

FIG. 11-E shows the assembly of FIG. 11-D being tied by a thread.

FIG. 11-F shows the assembly of FIG. 11-E being placed into a forming mold.

FIG. 11-G shows the assembly of FIG. 11-E removed after being formed.

FIG. 11-H shows the brush head in a ferrule ready to be connected to a handle as needed.

FIG. 12 is an illustrative view of a various “swirl designs” 500 for a third manufacturing method. Note that five designs are shown, each with various colors used therein.

DETAILED DESCRIPTION OF THE INVENTION

Various embodiments of the present invention provide a multi-fiber brush head and a method for making cosmetic brush heads from at least two sets of brush hairs. The present invention now will be described in more fully hereinafter with reference to the accompanying drawings, in which embodiments of the invention are shown. This invention may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein; rather, these embodiments are provided so that this disclosure will be thorough and complete, and will fully convey the scope of the invention to those skilled in the art. Like numbers refer to like elements throughout.

PARTS LIST

First Manufacturing Process and Brush Made Thereof (aka Swirl)

- 126 Bundle base (layer of adhesive)
- 130 Second type of brush hair
- 132 Slice of second brush hairs
- 134 Base of second slice of brush hairs
- 140 Ferrule
- 150 Handle
- 210 Comb
- 220 Bundle
- 230 Scale
- 240 Mold
- 250 Adhesive
- 260 Cord
- 265 Shaping mold
- 270 Slicing apparatus
- 271 Cut lines through base
- 280 Hair press
- 285 Opening in the hair press
- 290 Ferrule press
- 300 Cosmetic brush
- 320 First type of brush hair
- 322 First slice of brush hairs
- 330 Second type of brush hair
- 332 Second slice of brush hairs

PARTS LIST

Second Manufacturing Process and Brush made Thereof (aka Spotted Print or Animal Print)

- 430 Core slice
- 440 Second slice
- 450 Third slice
- 460 Outer pieces (three shown in FIG. 11-D)

PARTS LIST

Third Manufacturing Process and Brush made Thereof (aka Spiral Design)

- 500 Various designs

GENERAL OUTLINE

This disclosure includes discussions regarding three brush head configurations and the methods for manufacturing same. These include:

A “Swirl Head” manufacturing process, hereinafter also referenced as the First Manufacturing Process (see FIGS. 1-10)

A “Spotted Print” manufacturing process, hereinafter also referenced as the Second Manufacturing Process (see FIGS. 11A-11H)

A “Spiral Design” manufacturing process, hereinafter also referenced as the Third Manufacturing Process (see FIG. 12)

The First Manufacturing Process

FIGS. 1A through 1P depict an embodiment of a first multi-step brush head manufacturing method according to one aspect of the present invention for making a brush head with two types of brush hairs or fibers in a swirl configuration with respect to one another in the same ferrule. In various embodiments, the two types of brush hairs are selected or blended from a wide range of natural hairs (e.g., goat, pony, sable, and the like), synthetic hairs well known in the art (e.g., nylon, polyester, Taklon fiber, polybutylene terephthalate or polyamide), or blends of synthetic fibers. These brush hairs may vary in characteristics such as stiffness (stiffer vs. more...
flexible), hardness (harder vs. softer), or bristle end structure (for example, a simple cut end vs. a pointed end vs. a split end). Synthetic brush hairs may be grooved or roughened. The different types of brush hair may be a single fiber or may be a blend of fibers or colors.

[0096] FIG. 1A shows steps 1-5 of a multistep manufacturing process. In Steps 1 and 2, as denoted in FIG. 1A, a first type of brush hair 120 is sorted and blended according to conventional methods.

[0097] In Step 3, the sorted and blended brush hair 120 is combed with a combing instrument 210, in preparation for placement in a bundle 220, as shown in Steps 4 and 5, with the hairs roughly parallel to one another. At Step 6 (FIG. 1-B) there is weighing with a scale 230.

[0098] As shown in FIG. 1-C, at Step 7, the depicted manufacturing method departs from conventional methods. As denoted in FIG. 1-C, a first type of brush hair 120 is placed into a mold 240. The mold 240 has an adjustable wall 245, the position of which can be secured by a tightening arm 247 to form a secure fit around the bundle, ensuring that the brush hair 120 is held in place. The wall 245 of the mold also defined a peripheral wall which, in combination with the ends of the brush hairs, defines an upwardly directed cavity. In Step 8, as denoted in FIG. 1-D, a layer of adhesive 250 is poured into this cavity, atop the bundle of the first type of brush hair 120 over an area of hair ends in the mold 240 as the bundle is held in the mold 240. A suitable adhesive known in the art is Max-Bond Glue 888.

[0099] In Step 9, as denoted in FIG. 1-E, the glue 250 begins to dry while infiltrating downward into the first type of brush hair 120 between the hair ends. As a result, the individual brush hairs are glued together by a layer of adhesive forming a bundle base 126 at one of the ends of the hairs, which may be referred to as their base ends (or secured ends).

[0100] In Step 10, as denoted in FIG. 1-F, the mold 240 holding the first type of brush hair 120 and partly dried adhesive is fed through a slicing machine 270. The slicing machine 270 has a lever 275 that holds a blade (not shown) capable of slicing through the adhesive base 126 across the width of the mold, for at least the depth penetrates the adhesive. FIG. 1-G shows a bundle of brush hair still in the mold 240 after it has been sliced along cut lines 271 into a number of pieces.

[0101] As shown in FIG. 1-H, a plurality of hair slices 122 are removed from the bundle. As may be seen, they are elongate and substantially planar as viewed in FIG. 1-H. As depicted in FIG. 1-H, the first hair slices 122 have a thickness of approximately 5 mm and a slice base 124 formed of adhesive 250. In various embodiments, the hair slices may have a thickness of approximately 2 mm to 5 mm, and the brush hairs may have average lengths of approximately 20 mm to 90 mm.

This first hair slice could also be referenced as a first hair strip, including a plurality of elongate flexible bristles being generally aligned along their lengths, each of said bristles having two opposing ends, one end being an application end and the other end being a secured end. Said first hair strip itself also comprising an elongate strip base 124 which interconnects said secured ends. The elongate flexible bristles within the slice could be said to have their axes oriented generally transverse to the elongate length or axis of the slice, although elongate slice is not necessarily straight, but curved.

[0102] In Step 11, as denoted in FIG. 1-I, the slice of brush hair 122 is subjected to a thinning process before the adhesive 250 of the slice base 124 completely dries. As such, the slice 122 is fed through an opening 285 in a hair press 280 until it reaches a desired thickness. For example, the press 280 may feed the slice 122 between rollers separated by the desired thickness. In the present embodiment, the slice 120 is pressed until it is approximately 4 mm in thickness.

[0103] Drying time varies based on how large the brush is, but typically the time is 2-5 hours.

[0104] As illustrated in FIG. 1-J, the thinning process may create a concave curvature in the base 124 such that the brush hairs oppose the slice base fan out along the length of the slice 122. Nevertheless, they are elongate and substantially planar as viewed in FIG. 1-J.

[0105] Steps 1A through 1L are then carried out with a second type of brush hair 130 to create a second slice 132 of brush hair, as shown in FIG. 1-K. Depending on the desired functions and features of the resultant brush head, the second type of brush hair could be selected to differ from the first type of brush hair in length, texture, stiffness, hardness, and/or structure. For example, either or both of the first or second sets of brush hairs may be subjected to an additional texturizing step at any point in the process. For example, the ends of the brush hairs may be tapered or split with a razor to create a feathered effect.

[0106] In the illustrated embodiment, the brush hairs in the second slice 132 are generally longer than the brush hairs in the first slice. For example, the brush hairs in the first slice 122 have an average length of approximately 53 mm, while the average length of the brush hairs in the second slice is approximately 60 mm. Therefore, the average difference in length is approximately 7 mm. In other embodiments, the average difference in length between the first set and second set of brush hairs may be greater or less than 7 mm, depending on the size and intended use of the brush. The desired difference in length may also vary depending on the respective properties (e.g., stiffness, thickness, etc.) of the first and second types of brush hair. Alternatively, in other embodiments, the first and second sets of brush hairs may be approximately the same length.

[0107] In Step 12, the first and second slices of brush hair to be combined in a brush head are assembled. In the embodiment shown in FIG. 1-K, the first slice of brush hair 122 is stacked on top of the second slice of brush hair 132 in planar contact such that a two-layer elongate strip of hair is provided.

[0108] In Step 13, as denoted in FIG. 1-L, the two-layer elongate strip of hair is rolled up from one end to the other, while keeping the glued bases 124 and 134 of the first and second hair slices 122, 132, substantially aligned (as illustrated in FIG. 1-M), to form a brush head 110. In Step 14(a), as denoted in FIG. 1-N, the brush head 110 is tied at its base with a cord 260.

[0109] At this point in the manufacturing process, the next step will vary depending on the desired shape of the brush head. In various embodiments where a domed or rounded brush head is desired, the brush head 110 may then be subjected to a doming and shaping process, which is depicted from Step 14(b) in FIG. 1-N through Step 14(e) in FIG. 1-O.

[0110] The Doming and Shaping Process of Steps 14(b)-14(e)

[0111] In Step 14(b), as shown in FIG. 1-N, the glued bases 124 and 134 are cut off of the brush head 110, forming a cut end 118 opposite an exposed end 116 of the brush head. In this way, the cut end 118, along with the remaining portions of both the first slice 122 and the second slice 132, are free of adhesive.
In Step 14(c), as shown in FIG. 1-O, the brush head 110 is placed into a shaping mold 265. The shaping mold 265 has an open end 266 and a closed end 267. The open end 266 of the shaping mold 265 receives the exposed end 116 of the brush head, which situates into the closed end 267 of the shaping mold 265. In Step 14(d), the cord 260 is united, allowing the brush hairs to conform to the shape of the internal walls of the shaping mold 265 in Step 14(e). In this step, the shaping mold 265 may be subjected to gentle shaking or tapping in order to encourage the brush hairs into a conforming position. In Step 15(a), as further denoted in FIG. 1-O, the brush head 110 is then retired (or tied, in the case Steps 14(a) through 14(e) are bypassed) at its base with the cord 260.

In the depicted embodiment of the present invention, the interior of the closed end 267 of the shaping mold 265 is substantially dome-like. However, in other embodiments, the interior of the closed end 267 of the shaping mold 265 may take any of a variety of other shapes. For example, the shaping mold may be pointed, square, or any of a number of other shapes on the interior. Accordingly, the brush head resulting from the shaping step of these various shaping molds would be shaped correspondingly.

Skipping Dome/Shaping Process

In various embodiments of the present invention, the brush head will not be shaped as shown in Steps 14(a) through 14(e). In this way, the process for making the brush head in these various embodiments will therefore follow the rolling step (i.e., Step 13, as shown in FIG. 1-L) with the tying step (i.e., Step 15 or 15(a), as shown in FIG. 1-O). For example, the brush head 300 shown in FIGS. 5 and 6, as further described below, was manufactured according to an embodiment of the present invention that bypassed the shaping steps shown in Steps 14(a) through 14(e).

After Steps 14(a) through 14(e) are either used or bypassed, as illustrated by FIGS. 1-O through 1Q, a cosmetic brush 100 is then assembled using conventional methods. In Step 15(b), as denoted in FIG. 1-P, the brush head 110 is planted into a ferrule 140. Wrapping the head in a removable polypropylene sheet can help this process as needed. As shown in FIG. 10, in Step 16, an open end of the ferrule 140 is then attached to the glued end of the brush head 110 using a ferrule press 290. Finally, in Step 17, a handle 150 is attached to the ferrule 140 in any conventional manner, such as cramming, with adhesive, or a combination of the two, to create a finished cosmetic brush 100. The selection of the ferrule 140 and the handle 150, as well as the means for attaching the handle 150 to the ferrule 140, are known in the art.

The finished cosmetic brush 100 shown in FIGS. 2 through 4 is manufactured according to the above-described method. Rolling the respective slices of differing hairs together results in a swirl pattern in the brush head 110 comprised of the first slice 122 formed from the first type of brush hair 120 and the second slice 132 formed from the second type of brush hair 130, all secured by the ferrule 140. In the embodiment shown in FIG. 4, the second slice 132 has been positioned to form the outer perimeter of the brush head 110. In the alternative, the first slice 122 could be positioned to form the outer perimeter.

One advantage of the finished cosmetic brush 100 over brushes known in the art is that it incorporates the benefits of both the first type of brush hair 120 and the second type of brush hair 130 without diluting the properties of either as could happen when conventionally blending the type of hairs and making a brush head treating the blended hairs as a single type. When using the brush 100, the second type of brush hair may be better suited for applying a cosmetic powder, and the first type of brush hair may be better suited for blending the cosmetic powder. In one embodiment, the longer hair is natural hair, being more suited to pick up the product, and the shorter hair is synthetic fiber, which is more ‘slick’ than natural or smooth so it works best with emollient based make-up.

With the cosmetic brush 100 with a swirled brush head 110 as seen in FIGS. 2 through 4, the longer second type of brush hair forming the outer circumference of the brush head can be used to lightly apply the cosmetic powder without interference from the first type of brush hair, which is recessed due to its shorter length, thus providing discrete recessed portions. However, the first type of brush hair can be brought in contact with the application surface by applying slightly greater pressure on the brush head. In this way, the first type of brush hair can be accessed and used as desired for blending, without having to switch cosmetic brushes or change the orientation of the user’s grip on the brush handle. Furthermore, unlike brush heads with a blended distribution of different types of brush hairs, the properties of the different brush hairs are not diluted in the swirled brush head 110, since the brush hairs of separate slices remain mostly separated from one another.

Note that the “slices” or “strips” of hair can have glue strip bases prior to final assembly, but can still be considered “slices” or “strips” of hair even when installed and without the glue bases.

Another finished cosmetic brush 300 manufactured according to the above-described method is shown in FIGS. 5 and 6. This cosmetic brush 300 comprises a swirled brush head 310 comprised of a first slice 322 formed from a first type of brush hair 320 and a second slice 332 formed from a second type of brush hair 330. Unlike the brush head 110 in FIGS. 2 through 4, the brush hairs in the first slice 322 are approximately the same length as the brush hairs in the second slice 332.

Yet another finished cosmetic brush 340 manufactured according to an embodiment of the present invention is shown in FIGS. 7 and 8. Furthermore, another finished cosmetic brush 360 manufactured according to another embodiment of the present invention is shown in FIGS. 9 and 10.

The Second Manufacturing Process (FIGS. 11A-H)

Reference is now made to FIGS. 11-A to 11-H, which describes a “spotted print” manufacturing process, hereinafter also referenced as the Second Manufacturing Process.

Generally described, this process includes taking various slices of hair and overlaying them together in a different manner than the “dual layer—rolled up” configuration of the First Manufacturing Process described above. A core slice 430 (aka first slice, aka first layer) is folded over itself to form a sort of irregular core (see FIG. 11-A). As shown in FIG. 11-B, a second slice 440 (aka second layer) having a different property such as color, etc., is wrapped around the core slice 430. As shown in FIG. 11-C, a third slice 450 (aka third layer) of an even different property such as color; etc.) is wrapped around the second slice 440. As shown in FIG. 11-D, (in this case) three separate outer pieces 460 are positioned about the periphery of the third slice 450.

At FIG. 11-E the combined elements are tied together, and placed in a forming mold with or without the
assistance of first being rolled in a polypropylene sheet (not shown) which is removed upon insertion into the mold.

0127] At FIG. 11-G the hair has been shaped, and reared to retain the shape. At FIG. 11-H, the end opposite the shaped end has been inserted into a ferrule with or without the assistance of first being rolled in a polypropylene sheet (not shown) which is removed upon insertion into the ferrule.

0128] It should be noted that in the configuration above, the first 430, second 440, and third 450 slices are of different properties, such as color, and the outer pieces 460 are of the same color as the second slice. However, other various substitutions of properties of the various slices are contemplated under the inventions.

0129] Note that the thicknesses and lengths of the slices used for the Animal Print could be the same or different as the slices used in the Swirl concept, it just depends on the design desired.

0130] The Third Manufacturing Process (FIG. 12)

0131] In the third manufacturing process, aka the "Spiral Design" process, strips of hair are used, but in this case the strips themselves have patterns/designs built into them (as opposed to being substantially of one color as in the previous configurations). The designs shown and/or desired can be provided by rolling a single strip into a head, rolling two strips together similar to the first method above, or folding, piecing, and/or otherwise assembling multiple sections having similar or different patterns/designs.

0132] Another possible alternative is that the different colors of hair could be "premixed" in a sense and then put into a strip, rolled, cut etc. with another strip of pre-mixed hair to form the desired effect. The invention anticipates that the multi color effect would come from both the premix of colors within the strips and then rolling and cutting multiple strips together. For example, in the first color option shown in FIG. 12, there may be a pre-mixing of white and teal together as one 'strip' and then roll it and slice it with a gray as a separate slice.

0133] Other Variations

0134] Those skilled in the art will understand that slices of brush hair can be combined using the concepts of the present invention in ways other than rolling two slices together. For example, three or more slices could be rolled together, or slices could be folded together, or short lengths of slices could be combined and captured within surrounding slices to form areas of different types of brush hair within a ferrule. Such areas could be formed in various shapes. As will be appreciated by one of skill in the art, various other embodiments of the swivel manufacturing method described herein may be used to create a swivel brush head.

CONCLUSION

0135] Many modifications and other embodiments of the present invention will come to mind to one skilled in the art to which this invention pertains having the benefit of the teachings presented in the foregoing descriptions and the associated drawings. Therefore, it is to be understood that the invention is not to be limited to the specific embodiments disclosed and that modifications and other embodiments are intended to be included within the scope of the appended claims. Although specific terms are employed herein, they are used in a generic and descriptive sense only and not for purposes of limitation.

What is claimed:

1. A method of providing a cosmetics brush head, said method including the use of first and second bristle portions, each of said bristle portions being comprised of a plurality of elongate flexible bristle portions, each of said bristle portions having two opposing ends, one end being an application end and the other end being a secured end, said method comprising the steps of:

A) providing a first elongate, substantially planar, strip of hair itself comprising a plurality of first elongate flexible bristles, each of said first elongate bristles having two opposing ends, one end being an application end and the other end being a secured end, said first elongate strip of hair itself also comprising a first elongate strip base which interconnects said secured ends;

B) providing a second elongate, substantially planar, strip of hair itself comprising a plurality of second elongate flexible bristles, each of said second elongate bristles having two opposing ends, one end being an application end and the other end being a secured end, said second elongate strip of hair itself also comprising a second elongate strip base which interconnects said secured ends;

C) stacking said first elongate strip of hair on top of said second elongate strip of hair in substantially planar contact, such that a two-layer elongate strip of hair is provided;

D) rolling up said two-layer elongate strip of hair from one end to the other, while keeping the strip bases of said first and second hair slices substantially aligned, such that a rolled up elongate flexible bristle assembly is provided, comprised of a rolled up plurality of bristles each having at one end said application end and at the other end said secured end; and

E) securing a portion of said rolled up plurality of bristles together proximate their secured ends, such that a brush head is provided having at one of its ends a plurality of brush application ends including said application ends of said first and second elongate flexible bristles.

2. The method of manufacturing as claimed in claim 1, wherein said second elongate flexible bristles provided in step "B" have at least one different color or other property than said first elongate flexible bristles provided in step "B".

3. The method of manufacturing as claimed in claim 1, wherein said second elongate flexible bristles provided in step "B" are of a different color than said first elongate flexible bristles provided in step "B".

4. The method of manufacturing as claimed in claim 1, wherein said second elongate flexible bristles provided in step "B" are longer than said first elongate flexible bristles provided in step "B", such that in Step "E", said application ends of said second elongate flexible bristles protrude relative to said application ends of said first flexible bristles.

5. The method of manufacturing as claimed in claim 1, wherein in steps "A" and "B", said first and second elongate strip bases, respectively, are each made with the use of glue.

6. A method of providing a cosmetics brush head, said method including the use of first and second bristle portions, each of said bristle portions being comprised of a plurality of elongate flexible bristle portions, each of said bristle portions having two opposing ends, one end being an application end and the other end being a secured end, said method comprising the steps of:

A) providing a first elongate, substantially planar, strip of hair itself comprising a plurality of first elongate flexible bristles oriented generally transverse to its length, each of said first elongate bristles having two opposing ends,
one end being an application end and the other end being a secured end, said first elongate strip of hair itself also comprising a first elongate strip base which interconnects said secured ends;

B) providing a second elongate, substantially planar, strip of hair itself comprising a plurality of second elongate flexible bristles, each of said second elongate bristles having two opposing ends, one end being an application end and the other end being a secured end, said second elongate strip of hair itself also comprising a second elongate strip base which interconnects said secured ends;

C) rolling up said first elongate strip of hair from one end to the other, thus creating a core brush portion;

D) rolling said second elongate strip of hair at least partially around said core brush portion, such that a rolled up flexible bristle assembly is provided, comprised of a rolled up plurality of bristles each having at one end said application end and at the other end said secured end; and

E) securing a portion of said rolled up plurality of bristles together proximate their secured ends, such that a brush head is provided having at one of its ends a plurality of bristle application ends including said application ends of said first and second elongate flexible bristles.

7. The method of manufacturing as claimed in claim 6, wherein said second elongate flexible bristles provided in step “B” have at least one different color or other property than said first elongate flexible bristles provided in step “B”.

8. The method of manufacturing as claimed in claim 6, wherein said second elongate flexible bristles provided in step “B” are of a different color than said first elongate flexible bristles provided in step “B”.

9. The method of manufacturing as claimed in claim 6, wherein said second elongate flexible bristles provided in step “B” are longer than said first elongate flexible bristles provided in step “B”, such that in Step “E”, said application ends of said second elongate flexible bristles protrude relative to said application ends of said first flexible bristles.

10. The method of manufacturing as claimed in claim 6, wherein prior to step “E”, third and fourth elongate strips of hair are provided in a manner similar to the provision of said first elongate strips of hair, and said third and fourth elongate strips are positioned on separate peripheral portions of said second elongate strip of hair and are incorporated into said rolled up plurality of bristles.

11. The method of manufacturing as claimed in claim 6, wherein in steps “A” and “B”, said first and second elongate strip bases, respectively, are each made with the use of glue.

12. The method of manufacturing as claimed in claim 11, wherein in step “A”, said first elongate, substantially planar, strip of hair is provided by:

a) grouping a number of separate first elongate flexible bristles in a mold such that the secured ends of said number of separate first elongate flexible bristles are substantially aligned in a plane;

b) applying glue to said secured ends of said number of separate first elongate flexible bristles while they are substantially aligned in said plane, such that a substantially planar layer of glue is provided which partially adheres proximate said secured ends of said first elongate flexible bristles;

c) allowing said planar layer of glue to at least partially dry;

d) removing said mold such that said planar layer of glue tends to hold said number of separate first elongate flexible bristles together via their secured ends; and

e) slicing said planar layer of glue such into elongate slices, such that one of said slices comprises said glue strip base.

13. The method of manufacturing as claimed in claim 11, wherein in step “A”, said first elongate, substantially planar, strip of hair is provided by:

a) grouping a number of separate first elongate flexible bristles in a mold such that the secured ends of said number of separate first elongate flexible bristles are substantially aligned in a plane;

b) applying glue to said secured ends of said number of separate first elongate flexible bristles while they are substantially aligned in said plane, such that a substantially planar layer of glue is provided which partially adheres proximate said secured ends of said first elongate flexible bristles;

c) allowing said planar layer of glue to at least partially dry;

d) removing said mold such that said planar layer of glue tends to hold said number of separate first elongate flexible bristles together via their secured ends; and

e) slicing said planar layer of glue such into elongate slices, and squeezing said planar layer of glue into a thinner plane, such that one of said slices comprises said glue strip base.

14. A method of using a cosmetics brush head, said brush head including first and second bristle portions, each of said bristle portions being comprised of a plurality of elongate flexible bristle portions, each of said bristle portions having two opposing ends, one end being an application end and the other end being a secured end, said second bristle portions being longer than said first bristle portions, said method comprising the steps of:

A) applying cosmetics from said brush head to a skin surface with the use of a first pressure; and

B) applying cosmetics from said brush head to a skin surface with the use of a second pressure greater than said first pressure, such that the ratio of cosmetic volume applied by said first bristle portions relative to the cosmetic volume applied by said second bristle portions is greater in step “B” relative to step “A” due to the increased contact of said first bristle portions due to the greater pressure.

15. A method of using a cosmetics brush head, said brush head including first and second bristle portions, each of said bristle portions being comprised of a plurality of elongate flexible bristle portions, each of said bristle portions having two opposing ends, one end being an application end and the other end being a secured end, said second bristle portions being longer than said first bristle portions, said method comprising the steps of:

A) applying cosmetics from said brush head to a skin surface with the use of a first pressure in order to apply cosmetics; and

B) applying cosmetics from said brush head to a skin surface with the use of a second pressure greater than said first pressure, in order to blend cosmetics.

16. A cosmetics brush including a plurality of elongate flexible bristle portions, each of said bristle portions having two opposing ends, one end being an application end and the other end being a secured end, said brush comprising:
A) a first elongate, substantially planar, strip of hair itself comprising a plurality of first elongate flexible bristles oriented generally transverse to its length, each of said first elongate bristles having two opposing ends, one end being an application end and the other end being a secured end; and

B) a second elongate, substantially planar, strip of hair itself comprising a plurality of second elongate flexible bristles oriented generally transverse to its length, each of said second elongate bristles having two opposing ends, one end being an application end and the other end being a secured end, said first and second elongate strips of hair sandwiched together and rolled up together on top of said second elongate strip of hair in substantially planar contact, such that a brush head is provided having at one of its ends a plurality of bristle application ends including said application ends of said first and second elongate flexible bristles.

17. A cosmetics brush including a plurality of elongate flexible bristle portions, each of said bristle portions having two opposing ends, one end being an application end and the other end being a secured end, said brush comprising:

A) a first set of bristles; and

B) a second set of bristles being shorter than said first set of bristles and configured such that the application ends are recessed relative to the application ends of said first set of bristles, such that different application pressures of said brush provide different relative application properties of said first and second sets of bristles.

18. A cosmetics brush, said brush comprising:

A) a first elongate, substantially planar, strip of hair itself comprising a plurality of first elongate flexible bristles oriented generally transverse to its length, each of said first elongate bristles having two opposing ends, one end being an application end and the other end being a secured end; and

B) a second elongate, substantially planar, strip of hair itself comprising a plurality of second elongate flexible bristles, each of said second elongate bristles having two opposing ends, one end being an application end and the other end being a secured end, said second elongate flexible bristles being shorter than said first set of bristles and configured such that the application ends are recessed relative to the application ends of said first set of bristles, such that different application pressures of said brush provide different relative application properties of said first and second sets of bristles.

19. The brush as claimed in claim 18, wherein said second elongate flexible bristles are grouped such that a recess is provided proximate their application ends, relative to the application ends of the first elongate flexible bristles, said recess configured to accept cosmetic for application purposes.

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