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Taylor(10) **Pub. No.: US 2017/0196288 A1**(43) **Pub. Date: Jul. 13, 2017**(54) **HAIR EXTENSION WEAVING DEVICE**(52) **U.S. Cl.**(71) Applicant: **Michelle Taylor**, Florissant, MO (US)CPC **A41G 5/0086** (2013.01); **A41G 5/006**
(2013.01)(72) Inventor: **Michelle Taylor**, Florissant, MO (US)(21) Appl. No.: **15/404,151**(57) **ABSTRACT**(22) Filed: **Jan. 11, 2017****Related U.S. Application Data**(60) Provisional application No. 62/277,689, filed on Jan.
12, 2016.**Publication Classification**(51) **Int. Cl.**
A41G 5/00 (2006.01)

A hair extension weaving device is provided that is able to efficiently attach wefts to braided hair tracks, reducing the time necessary to add hair extensions and prevent both pain and damage to the hair stylist. The hair extension weaving device includes an upper body member and lower body member that may be releasably attached to one another. The upper body member may secure a needle member thereto that is used to sew the weft to the hair track. The lower body member may include a cavity for containing a spool of thread therein that is threaded through the needle member.

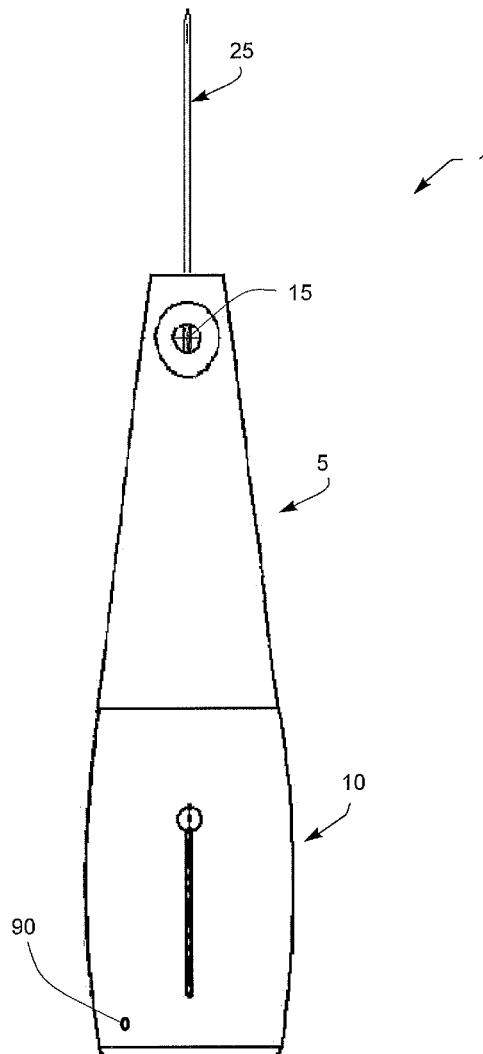


Figure 1

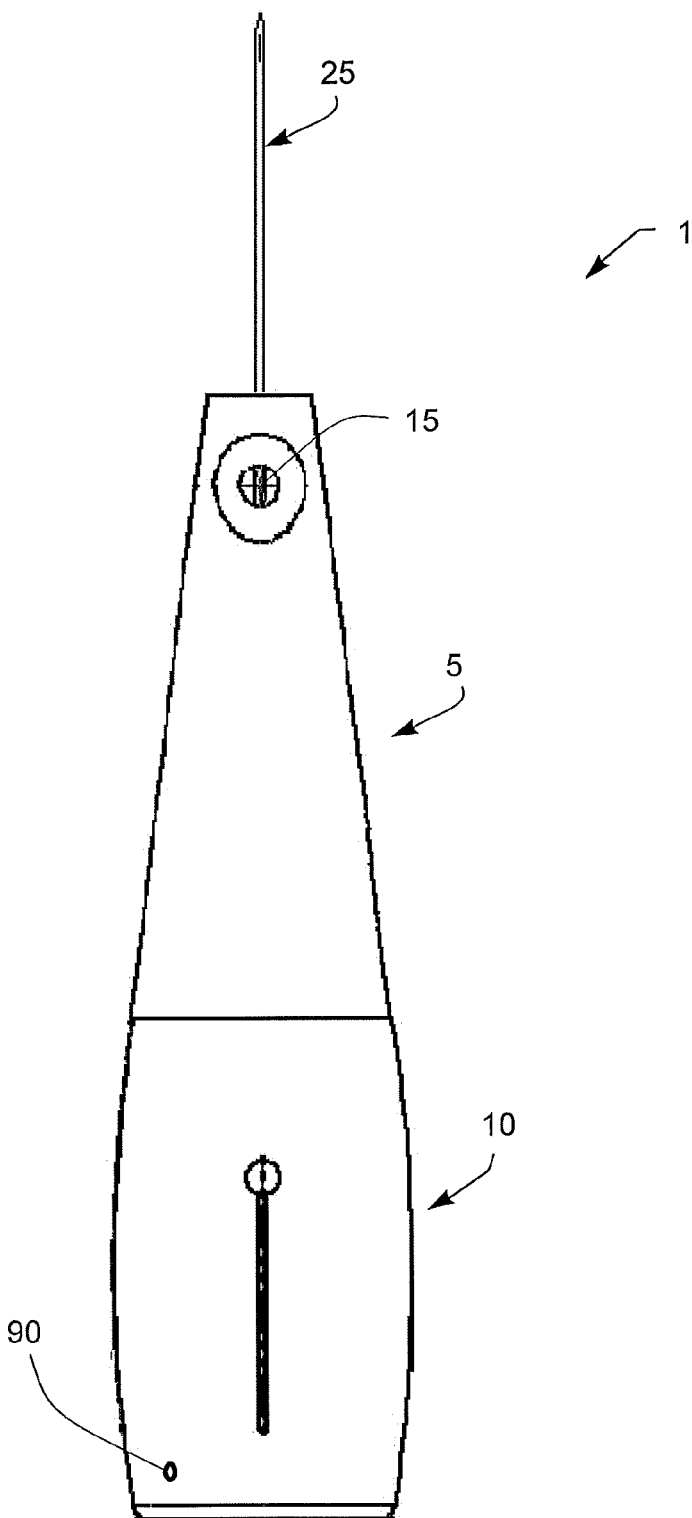


Figure 2

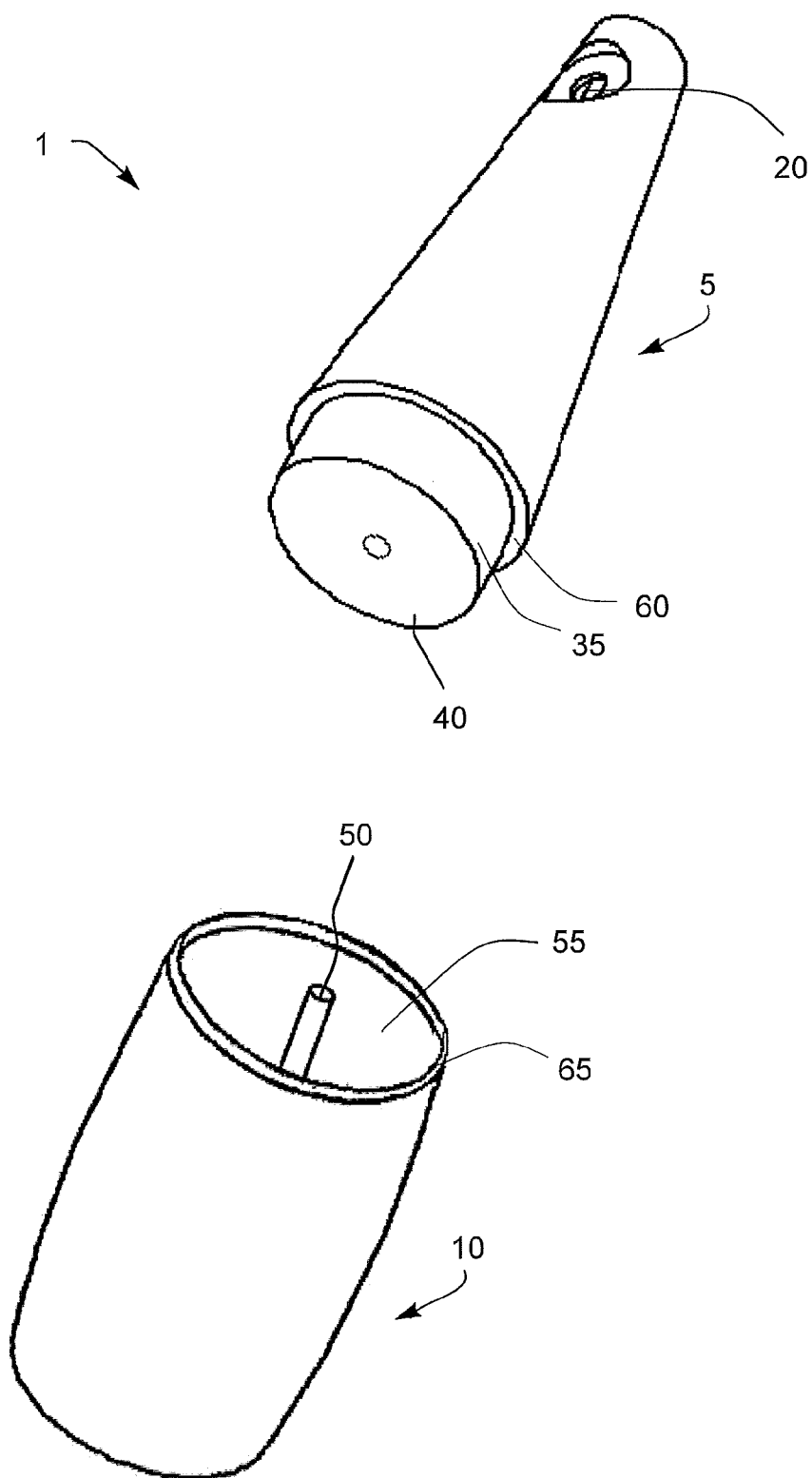


Figure 3

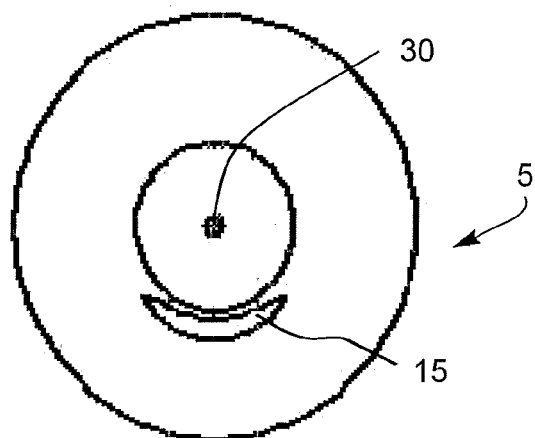


Figure 4

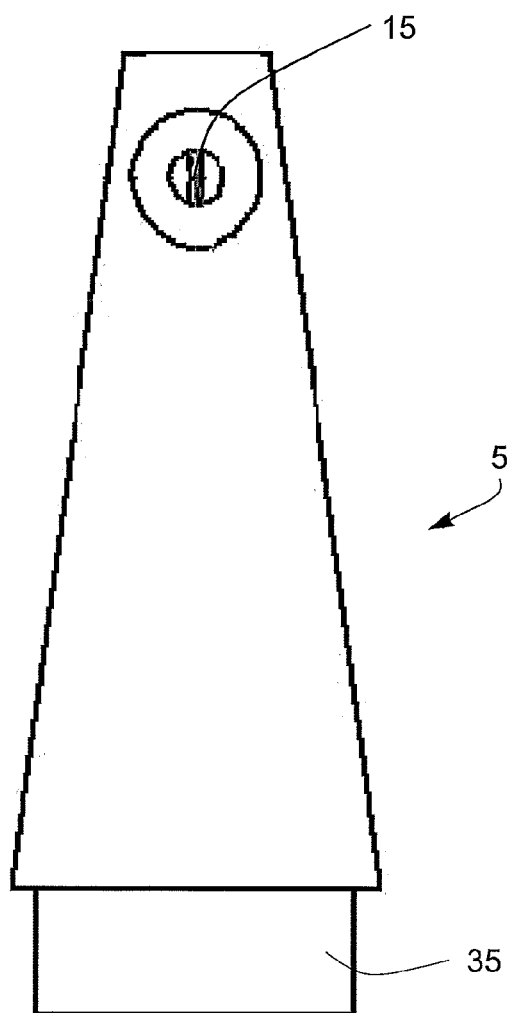


Figure 5

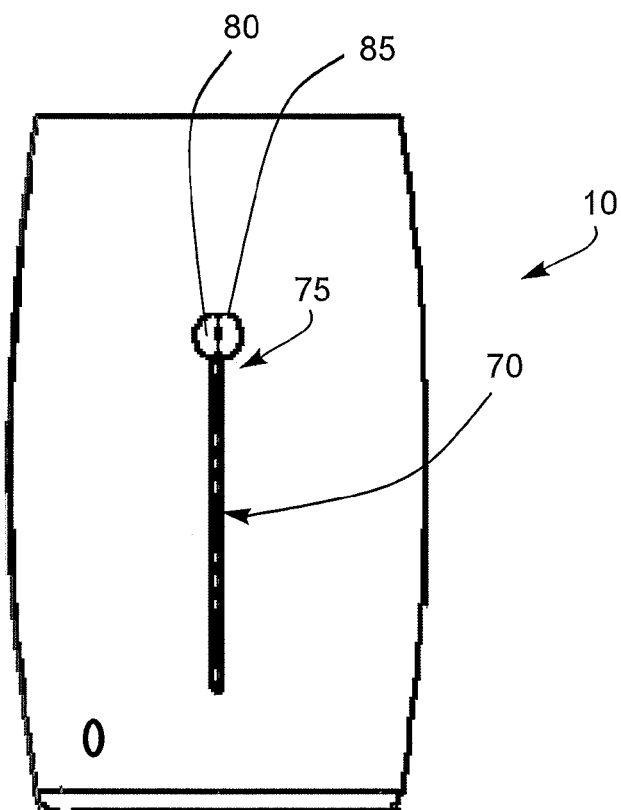


Figure 6

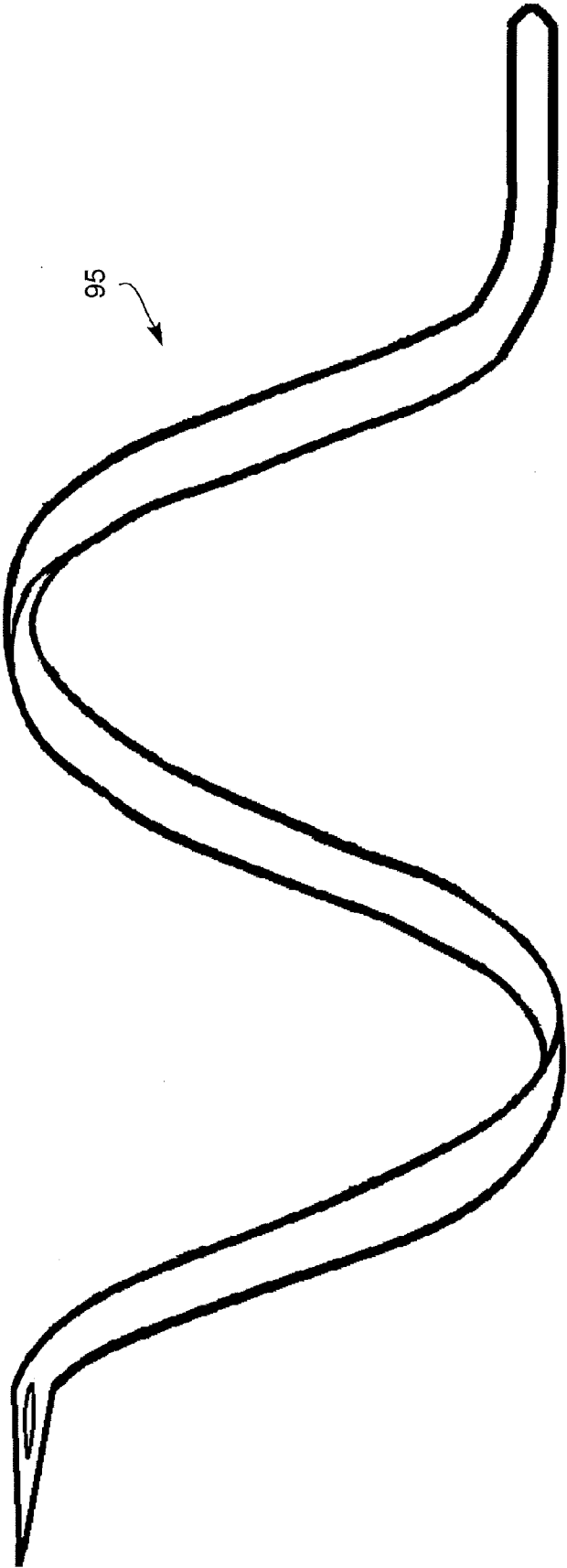


Figure 7

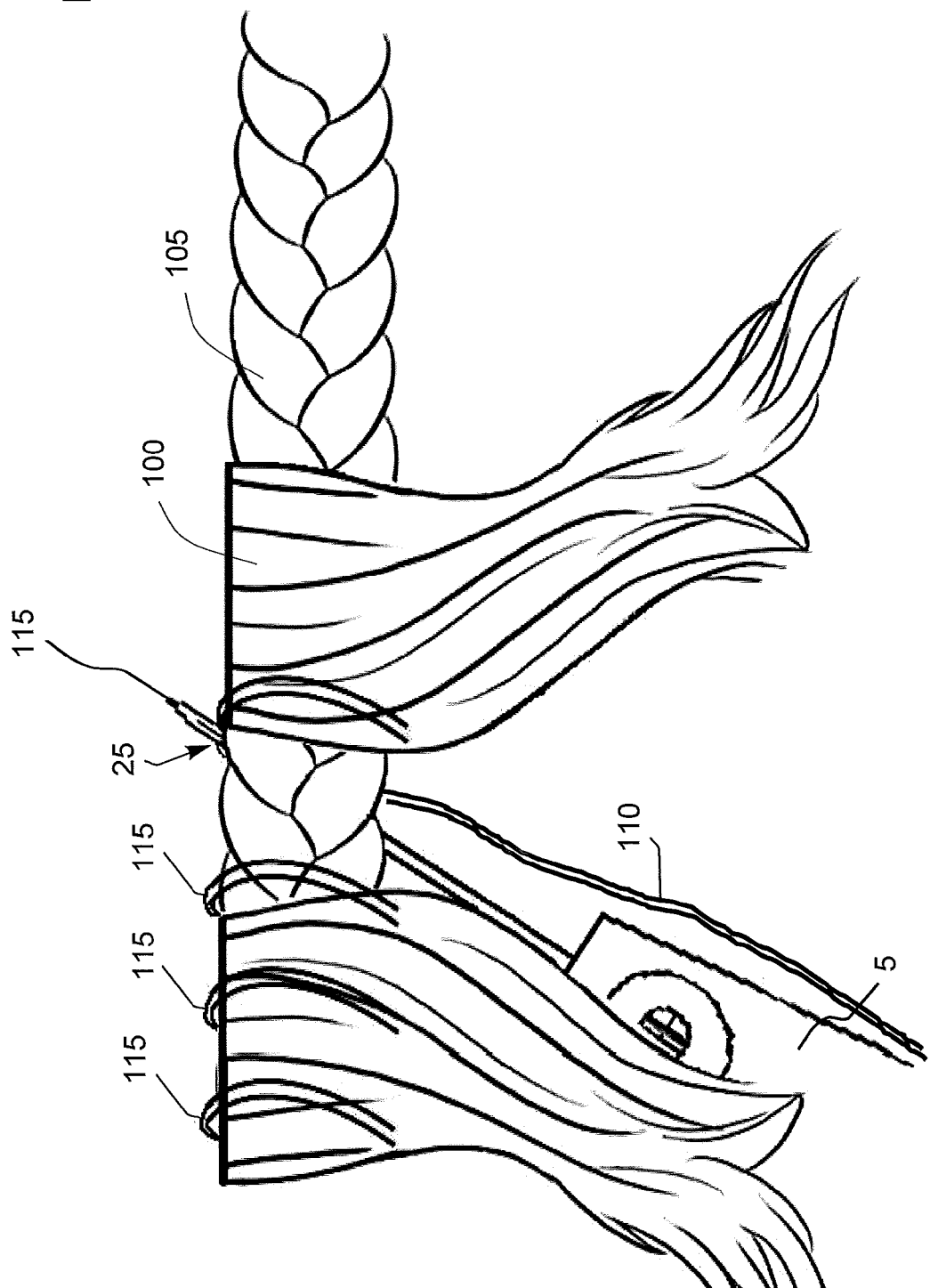


Figure 8

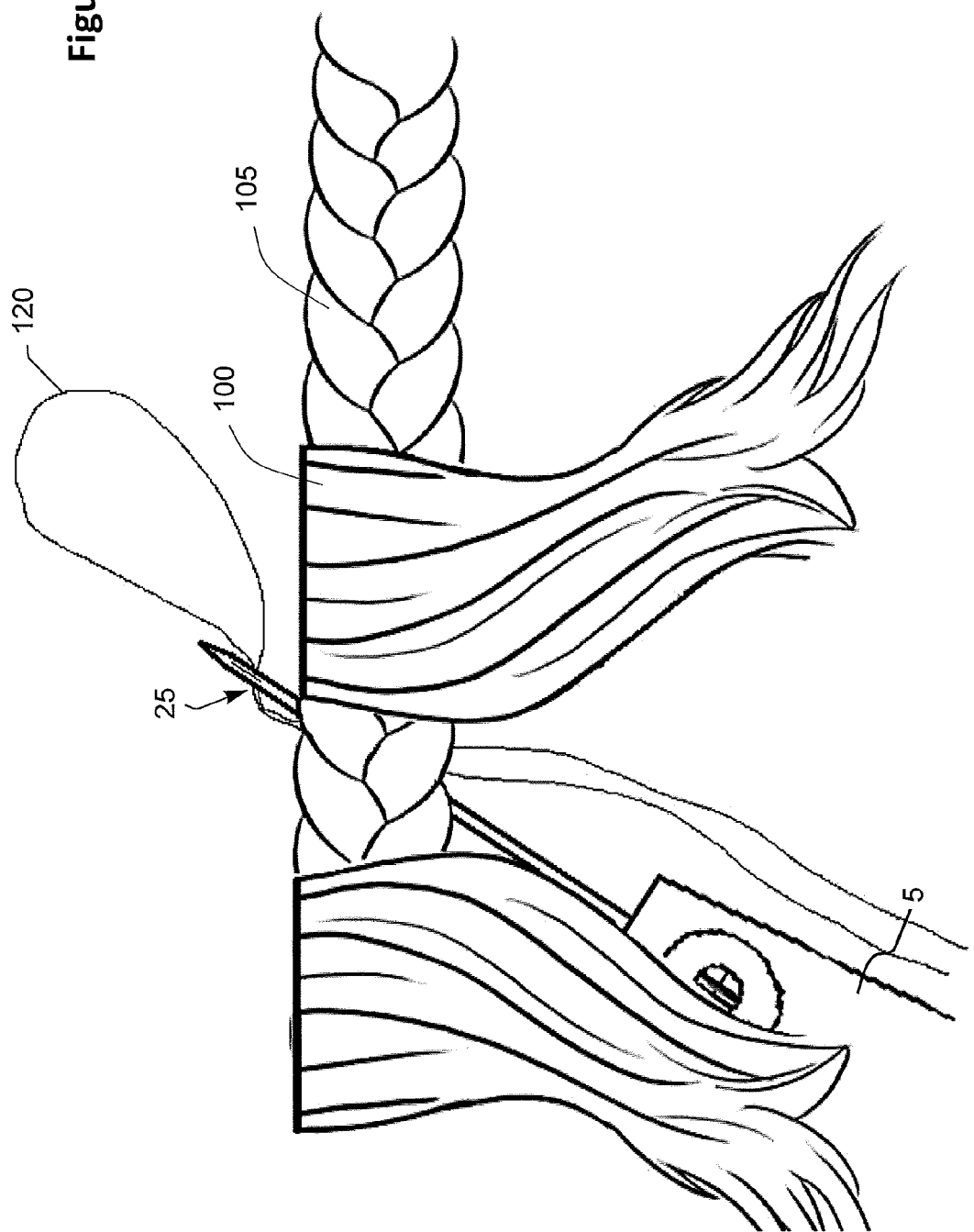


Figure 9

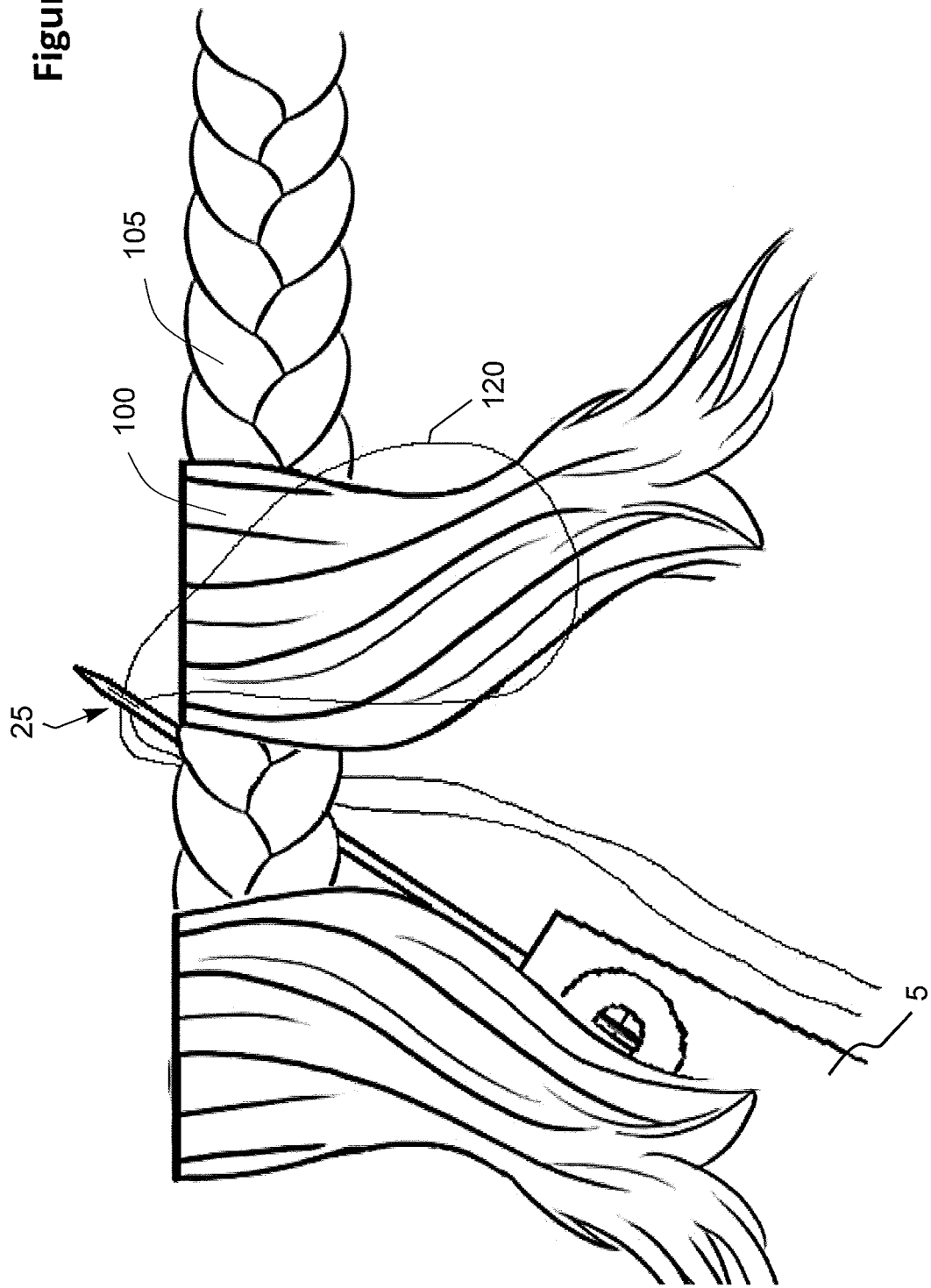


Figure 10

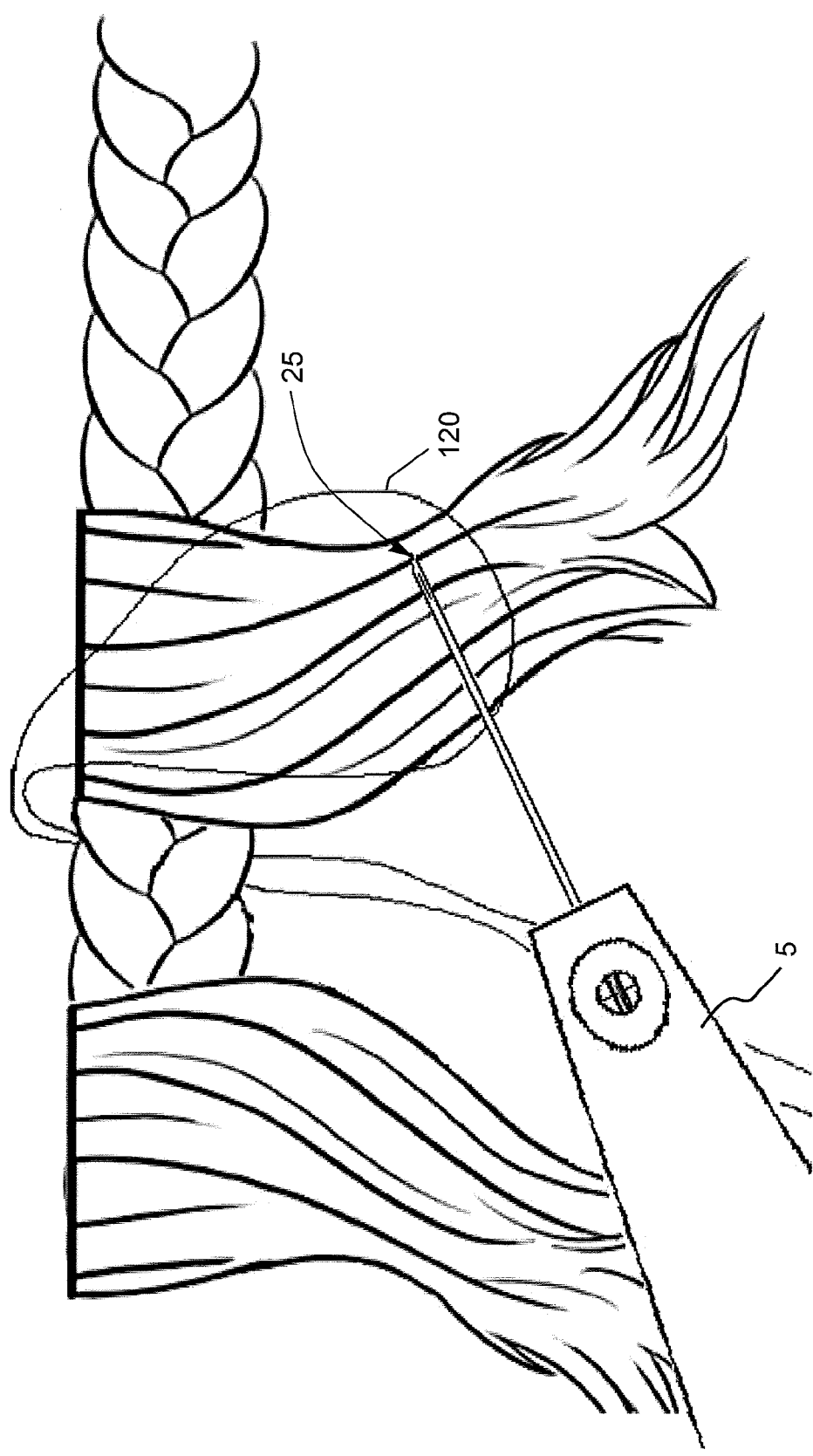
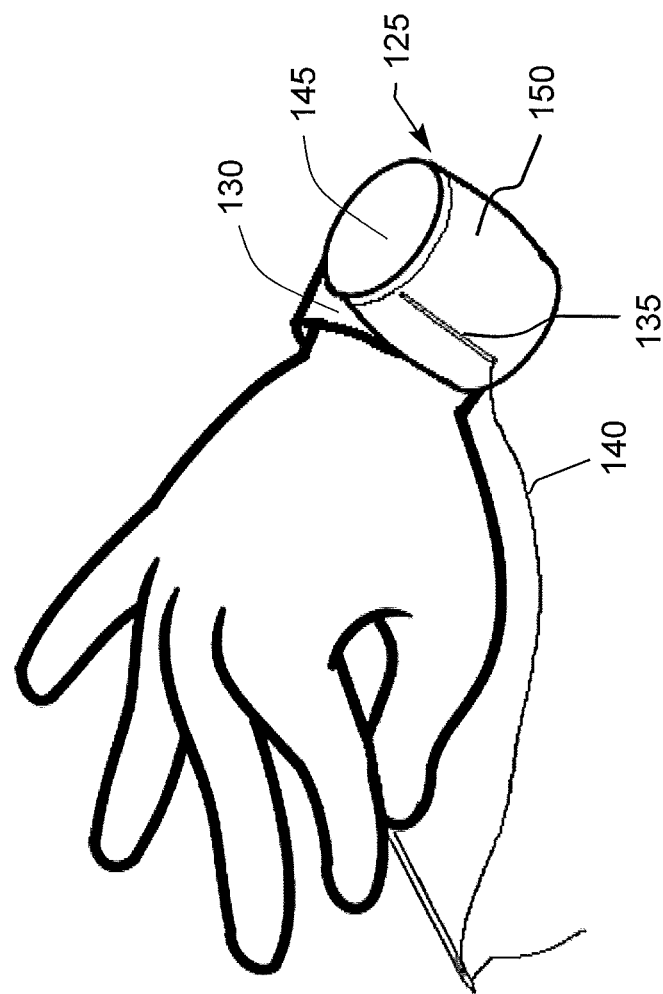


Figure 11



HAIR EXTENSION WEAVING DEVICE

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Application No. U.S. 62/277,689, filed Jan. 12, 2016, which is hereby incorporated by reference in its entirety.

FIELD OF INVENTION

[0002] The present invention relates generally to a cosmetic device for efficiently attaching hair extensions to existing hair. More particularly, the device hereof relates to a hair extension weaving device having an upper body member and lower body member, wherein the upper body member may include a needle member that can be releasably attached thereto, and a lower body member that can hold a spool of thread used to attach the hair extensions to the existing hair.

BACKGROUND OF INVENTION

[0003] Hair extensions, also known as artificial hair integrations, add length and/or fullness to a person's hair by attaching additional human or synthetic hair to the person's hair. There are several hair extension types used to attach to existing hair, such as clip-on extensions, tape-in extensions, hot or cold fusion extensions, and tracks-style extensions. Many of these existing extension types either look highly artificial or require professionals for installation.

[0004] For example, clip-on extensions include commercial hair sewn on a fine base (wefts) and attached to a clip. The clip may then subsequently be attached to a person's own, existing hair. Clip-on extensions can be installed quickly, adding both volume and length. However, they must be removed every night and re-attached in the morning. Additionally, clip-on extensions often look artificial and wear out with frequent use. They also may not be as securely fastened to hair and may easily slip out.

[0005] Another short-term form of extensions is glue-in extensions. For glue-in extensions, glue is applied to the weft and attached to the base or root of existing hair. The wefts have to be removed with an oil-based solvent after a few weeks. While glue-in extensions may be a good option for an individual who would like short-term extensions without having to remove them at night, glue-in extensions has its share of problems. Glue-in extensions only allow for limited ways of styling an individual's hair. The weight of the wefts can cause headaches or even cause dermatological problems like tension alopecia. Additionally, the glue can damage the hair if the extensions are applied or removed incorrectly. The glue can also clog hair follicles and cause bacterial scalp infections.

[0006] Tape-on extensions are connected by wide bonds, which look similar to two pieces of scotch tape. An individual's hair is placed between the bonds and clamped between them by using a heated tool to melt a thin strip of glue on the weft. In addition to causing tangling and matting hair, tape-on extensions can also damage an individual's hair.

[0007] Hot fusion extensions are keratin U-tip bonds that are lined with silicone that require the assistance of a hair care professional. They are attached close to the root of an individual's hair, leaving some room to allow for natural movement. An individual's hair is placed between the U-tip

and sealed with a hot extension tool that melts the bond to the hair. The silicone lining of the U-tip protects an individual's hair. Hot fusion extensions are one of the most durable types of hair extensions. However, the heat required to apply the extensions can damage both the hairstylist's hands and client's hair. In addition to the heat, the hours and constant squeezing motions required for attaching the extensions can also injure the hairstylist's hands.

[0008] Cold fusion extensions, on the other hand, are extensions where small sections of an individual's hair are pulled through a small bead or lock and clamped shut with a special tool. The small beads are usually copper cylinders lined with silicone to protect the individual's hair. Cold extensions are not an appropriate method of extensions for individuals with thin or fine hair because the beads are visible. The beads can also be visible if they are placed incorrectly, even in individuals with thick hair. Furthermore, the incorrect application and removal of the hair extensions can otherwise damage hair. The hairstylist can also injure her hands due to the time and constant squeezing motions required to attach the hair extensions.

[0009] Tracks are one of the most commonly used methods of adding hair extensions. Hair is braided into tight cornrows, either horizontally or vertically (or a combination of horizontally and vertically) across the head. Wefts are then sewn onto the braids with a specially made blunt-ended needle. A blunt-ended needle is threaded and knotted. The knot should be large enough to prevent the tail end of the thread from being pulled through the weft and the cornrow. The weft is placed against the track or cornrow and is sewn onto the cornrow, starting at the end of the weft. The weft is sewn onto the track by the hair stylist first placing the weft on the track and first pushing the needle through, at one end of the weft, and pulling downwards until the knot is secure against the weft. The weft is held in place by a knot, and the sewing process can begin. The needle may then be guided between the track and head, and then pulled upwardly until the thread is tight. The needle should then be pulled over both the weft and track, and then guided between the track and head. The needle should then be pulled upwards until the stitch is tight. This is repeated until either the end of the track or weft has been reached. Once the hair stylist has finished sewing the weft to the track, the thread is knotted against the weft to prevent the track from loosening and falling off.

[0010] When one weft is sewn onto the braid and secured with a knot, another weft can be added by using the same procedure. Track hair extensions can last for two to three months, with touch-ups, before they should be removed. A hairstylist can remove the extensions by simply cutting the thread, and carefully removing the thread before pulling the wefts off.

[0011] Applying track extensions can take several hours, in which the hairstylist has to complete the same motions. These repeated motions can cause repetitive strain injuries. Repetitive strain injuries affect tendons, tendon sheaths, muscles, nerves and joints. They cause persistent or recurring pains, ranging from discomfort to excruciating pain, in the neck, shoulders, forearms, hands, wrists, elbows and lower limbs. The symptoms include numbness, tingling and burning sensations, pain, loss of an ability to grasp items, swelling of hand and wrists, and wasting of the muscles around the wrist and hand.

SUMMARY OF THE INVENTION

[0012] The present invention relates to a device intended to reduce the time required to attach hair extensions, thereby reducing pain and damage caused by hours of repetitive motions. The hair extension weaving device preferably includes an upper body member and lower body member, wherein the upper body member abuts and engages the lower body member. In one embodiment, the upper body member has a needle member releasably attached, wherein the needle member is preferably spiral shaped. In that embodiment, the needle member is inserted substantially into the upper body member and further secured by a securing member.

[0013] In another separate embodiment, the hair extension weaving device can be worn on the wrist. In that embodiment, the needle member is not releasably secured and inserted into the upper body member. Instead, the needle member is held by the hair stylist.

[0014] The lower body member can preferably hold a spool of thread used to attach the extensions to the existing hair, and it may include a slot for dispensing the thread. The hair weaving device also preferably includes a cutting member used to cut the thread after the hair extensions have been attached.

DESCRIPTION OF THE DRAWINGS

[0015] For a better understanding of the various embodiments of the present invention, reference may be made to the accompanying drawings in which:

[0016] FIG. 1 is an elevation view of a hair extension weaving device constructed according to the teachings of the present invention;

[0017] FIG. 2 is an exploded perspective view of the hair extension weaving device of FIG. 1;

[0018] FIG. 3 is a top plan view of the upper body member of FIGS. 1 and 2;

[0019] FIG. 4 is an elevation view of the upper body member of FIGS. 1-3;

[0020] FIG. 5 is an elevation view of the lower body member of FIGS. 1 and 2;

[0021] FIG. 6 is a perspective view of a separate embodiment of the needle in FIG. 1;

[0022] FIG. 7 is a partial illustration of the hair extension weaving device of FIG. 1 used to attach a weft of hair to a braided hair track;

[0023] FIG. 8 is a partial illustration of the hair extension weaving device of FIG. 1 used to attach a weft of hair to a track, with the thread having a first upwards U-shaped loop;

[0024] FIG. 9 is a partial illustration of the hair extension weaving device of FIG. 1 used to attach a weft of hair to a track, with the thread having a first downwards U-shaped loop;

[0025] FIG. 10 is a partial illustration of the hair extension weaving device of FIG. 1 used to attach a weft of hair to a track, with the thread having the first downwards U-shaped loop with a needle member going through the first downwards U-shaped loop;

[0026] FIG. 11 is an illustration of alternative embodiment of the hair extension weaving device of FIG. 1.

DETAILED DESCRIPTION OF THE INVENTION

[0027] According to the embodiment(s) of the present invention, various views are illustrated in FIG. 1-11 and like reference numerals are being used consistently throughout to refer to like and corresponding parts of the invention for all of the various views and figures of the drawing.

[0028] FIG. 1 illustrates a hair extension weaving device 1 constructed according to the teachings of the present invention. The hair extension weaving device 1 may be used for attaching wefts of real or manufactured, artificial hair to an individual's braided hair. The individual's braided hair may be embodied as, for example, a cornrow, or braid. The device aims to reduce the amount of time required to attach the wefts of hair. The weaving device 1 consists of an upper body member 5 and a lower body member 10 which are selectively engageable with one another.

[0029] The upper body member 5 is preferably shaped like a cone frustum. In various embodiments, the size and shape of upper body member 5 may be modified to make the hair extension weaving device 1 easier to hold and grip. The upper body member 5 is preferably made out of plastic. However other materials such as metal, ceramic, wood, and rubber are contemplated and foreseeable herein.

[0030] The upper body member 5 preferably includes a securing member 15 that in the present embodiment is embodied as a blunt screw. The securing member 15 may be inserted into an aperture 20 and preferably extends into the upper body member 5 (see FIG. 2). The securing member 15 preferably secures a needle member 25 within the upper body member 5. To do so, the needle member 25 is first preferably inserted substantially into a receiver 30 that is embodied as a tunnel shaped bore that channels downwardly through the upper body member 5 (see FIG. 3). In some embodiments, a sheathing device may further be provided to secure and protect the needle member 25. The sheathing member may even include a mechanism for retracting when the device 1 is in use. The securing member 15 may then be inserted and subsequently screwed using a common threading technique into the aperture 20. In the preferred embodiment, the securing member 15 is tightened until it abuts the needle member 25, thus securing the needle member 25 substantially in its position emerging upwardly from the upper body member 5, and perpendicular to the securing member 15. However, other securing mechanisms are contemplated and foreseeable. The upper body member 5 preferably includes a cylindrical inner portion 35 (shown in FIGS. 2 and 4) that has a circumference slightly smaller than that of the rest of the upper body member 5. The cylindrical inner portion 35 has a circumference that is also just smaller than that of the lower body member 10 so that when the upper body member 5 is inserted into the lower body member 10, the cylindrical inner portion 35 forms a friction fit within the lower body member 10. A bottom surface 40 of the cylindrical portion 35 also includes an opening 45 for receiving and securing a rod member 50 extending upwardly from within the lower body member 10.

[0031] The lower body member 10 is preferably substantially barrel-shaped so that it can better hold a spool of thread. The lower body member 10 may take on a different size and/or shape to ensure the hair extension weaving device 1 is easier to hold and grip. Additional shapes, dimensions, and sizes of the lower body member 10 are contemplated and foreseeable. Lower body member 10 is

preferably made out of plastic, but other materials such as metal, ceramic, wood, and rubber may also be used.

[0032] The lower body member 10 preferably includes a cavity 55 for receiving a spool of thread (not illustrated). The rod member 50 is housed within the cavity 55 and preferably receives and secures the spool of thread. As set forth above, when the lower body member 10 and the upper body member are selectively engaged, the inner cylindrical member 35 is releasably secured within the cavity 55 such that a lip 60 that circumscribes the upper body member 5 abuts a lip 65 that circumscribes the lower body member 10.

[0033] Turning now to FIG. 5, the lower body member 10 further preferably includes a slit-like slot member 70 for dispensing thread (not illustrated). At an upper end 75 of the slot member 70, the slot member 70 preferably includes a throat 80 that allows for a greater range of motion and reduces fraying and breaking of the thread. The throat 80 is shown and illustrated as having rounded edges 85 to reduce fraying and breaking. Lower body member 10 further also preferably includes a cutting member 90. The cutting member 90 may be used to sever thread, as described in greater detail below. The cutting member 90 may be placed anywhere on the device 1, preferably near the bottom of lower body member 10 where it will not interfere with other components of the device 1.

[0034] The cutting member 90 may be screwed, glued, or nailed onto the hair extension weaving device 1. Other methods of attaching the cutting member 90 are contemplated and foreseeable. However, the cutting member 90 does not have to be a separate piece attached to the hair extension weaving device 1.

[0035] FIG. 6 provides an elevation view of a preferred embodiment of a needle member, needle member 95. The needle member 95 is spiral shaped, and the illustrated needle member 95 completes a full turn. The spiral shape of the needle member 95 preferably makes it easier for a hairstylist to push the needle 95 through an existing hair track or braid, and thus it may reduce the time required to attach hair extensions. Other types of needles, including straight and curved, are contemplated and foreseeable. The needle members 25, 95 are preferably made out of stainless steel, but other materials are contemplated and foreseeable.

[0036] When a spool of thread is placed onto the rod member 50 inside the cavity 55 of the lower body member 10, a tail end of the thread can then be pulled from the cavity 55 of the lower body member 10 through the slot member 70.

[0037] Turning now to FIGS. 7-10, the hair weaving device 1 is shown at various stages of sewing an extension weft 100 to a braided track 105. Prior to beginning to sew the weft 100 onto the track 105, a tail end of the thread 110 may be threaded through an eye 115 of the needle member 25 in a known manner. The thread 110 should be knotted at its tail end so that it cannot be pulled through a base (not illustrated) of the weft 100. The weft 100 may be placed on top of the track 105, and the knotted thread pulled through a base (not shown) of the weft 100. The weft 100 is preferably attached to the braided hair track 105 via slip knots 115 so the weft 100 can be easily removed by simply cutting the thread once, as shown in FIG. 7. This allows the remaining thread 110 to unravel quite easily.

[0038] To form the slip knots 115 that are used to attach the weft 100 to the track 105, the threaded needle member 25 should be guided upwardly under the track 90 as shown

in FIG. 8, between the track 105 and the head itself (not illustrated). With the excess thread between the needle member 25 and the hair weaving device 1, a loop 120 should be formed that has an arch or rainbow-like shape (see FIG. 8). The loop 120 should be held with the hand not holding the hair extension weaving device 1. The loop 120 may be pulled downwardly over the track 105, so the loop 120 is inverted to be U-shaped in front of the track 105, as shown in FIG. 9.

[0039] The needle member 25 may then be pushed through the U-shaped loop 120 as shown in FIG. 10, and then again guided between the head and the track 105. This motion, repeated several times, forms the slip knots shown in FIG. 7 that allow the weft 100 to be firmly attached to the track 105. After every stitch, the thread 110 should be pulled until the stitch is tight against the base of the weft 100. These steps should be repeated until the entire weft 100 is sewn onto the track 105. Once at the end portion (not illustrated) of the weft 100, the thread should be knotted to prevent the weft 100 from becoming detached from the braid 105.

[0040] FIG. 11 shows an illustration of another embodiment of a hair extension weaving device 125 that may be smaller and more efficiently used than the device 1 described above. The hair extension weaving device 125 may be fixedly or releasably attached to a strap 130 worn by a hairstylist on his or her wrist. The weaving device 125 may include a slot member 135 through which thread 140 may be dispensed in a manner substantially similar to the manner described above. In the embodiment shown in FIG. 11, the weaving device 125 includes an upper lid member 145 that is releasably engageable to a lower body member by a screw-top mechanism. Other means for engaging the upper lid member 145 and lower body member 150 to one another are contemplated and foreseeable. The manner in which the thread 140 is used to secure a braid and weft to one another may be substantially similar as set forth above.

[0041] From the foregoing, it will be seen that the various embodiments of the present invention are well adapted to attain all the objectives and advantages hereinabove set forth together with still other advantages which are obvious and which are inherent to the present structures. It will be understood that certain features and sub-combinations of the present embodiments are of utility and may be employed without reference to other features and sub-combinations. Since many possible embodiments of the present invention may be made without departing from the spirit and scope of the present invention, it is also to be understood that all disclosures herein set forth or illustrated in the accompanying drawings are to be interpreted as illustrative only and not limiting. The various constructions described above and illustrated in the drawings are presented by way of example only and are not intended to limit the concepts, principles and scope of the present invention.

[0042] Thus, there have been shown and described several embodiments of a novel hair extension weaving device. As is evident from the foregoing description, certain aspects of the present invention are not limited by the particular details of the examples illustrated herein, and it is therefore contemplated that other modifications and applications, or equivalents thereof, will occur to those skilled in the art. The terms "having" and "including" and similar terms as used in the foregoing specification are used in the sense of "optional" or "may include" and not as "required".

[0043] Many changes, modifications, variations and other uses and applications of the present constructions will, however, become apparent to those skilled in the art after considering the specification and the accompanying drawings. All such changes, modifications, variations and other uses and applications which do not depart from the spirit and scope of the invention are deemed to be covered by the invention which is limited only by the claims which follow.

What is claimed is:

1. A hair extension weaving device for attaching welts to a braided track, the hair extension weaving device comprising:

- a needle member;
- an upper body member comprising a securing member for releasably securing said needle member;
- a lower body member releasably engageable with said upper body member, said lower body member comprising:
 - a cavity for holding a spool of thread; and
 - a slot in said lower body member allowing said thread to be dispensed.

2. The hair extension weaving device of claim 1, wherein the upper body member and lower body member are made out of plastic.

3. The hair extension weaving device of claim 1, wherein the needle member is spiral shaped.

4. The needle member of claim 3, wherein the needle member is spiral shaped and has at least one full turn.

5. The hair extension weaving device of claim 1, wherein the needle member is curved.

6. The hair extension weaving device of claim 1, wherein the securing mechanism of said upper body member is a threaded dull screw member.

7. The hair extension weaving device of claim 1 wherein the lower body member includes a cutting member.

8. The hair extension weaving device of claim 1, wherein the upper body member includes a cutting member.

9. The hair extension weaving device of claim 1, wherein the upper body member includes a cylinder portion, and the lower body member includes a cavity.

10. The cutting member of claim 9, wherein the cylinder portion is receivable within the cavity to form a friction fit between the upper body member and the lower body member.

11. A system for attaching wefts to a braided hair track comprising:

- a hair weaving device comprising:
 - an upper body member;
 - a lower body member releasably engageable with the upper body member, the lower body member comprising:
 - a cavity in which a spool of thread may be contained;
 - a slot from which thread may be received and dispensed; and
 - a needle member, said needle member releasably attachable via thread to the lower body member,
- wherein thread is dispensed from said slot of said lower body member and threaded through an eye of said needle member.

12. The system of claim 11, wherein said hair weaving device is worn on the wrist.

13. The system of claim 12, wherein said hair weaving device is attached to a wrist strap.

14. The system of claim 11, wherein said upper body member is a screw top.

15. The system of claim 11, wherein said upper body member is releasably engageable with said lower body member by a friction fit.

16. The system of claim 11, wherein said hair weaving device is made out of plastic.

17. The system of claim 11, wherein said needle member is spiral shaped.

18. The system of claim 17, wherein said needle member has at least one full turn.

19. The system of claim 13, wherein the size of the wrist strap is adjustable.

20. The system of claim 11, wherein the hair weaving device includes a cutting member.

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