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(54) HAIR CLIP AND METHOD AND APPARATUS FOR FASTENING HAIR CLIP TO BUNDLES OF HAIR

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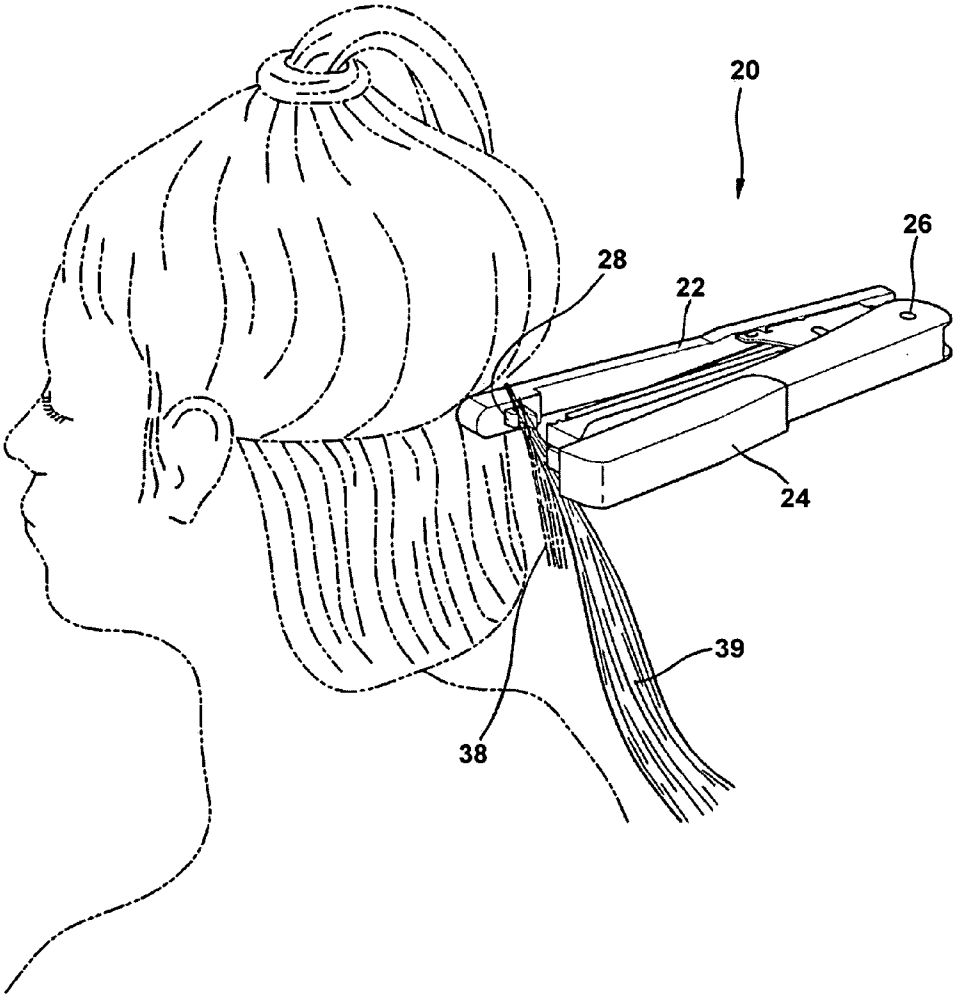
(57) **ABSTRACT**

A bundle of growing human hair is selected. A bundle of supplemental hair is located together with the selected bundle of growing human hair to form a joint at an attachment site. The joint is inserted into an opening between legs of a U-shaped hair clip, and legs of the hair clip are bent and clinched around the joint. Strands in the bundle of supplemental hair may be pre-glued to one another. An apparatus for fastening a bundle of supplemental hair to a bundle of growing human hair includes a base having an anvil. An arm assembly is movably connected to the base. A driver is coupled to the arm assembly for pressing an open hair clip into the anvil to close the clip. A clip for fastening hair bundles has a crown coupled to spaced apart legs. The clip legs are made of a malleable material.



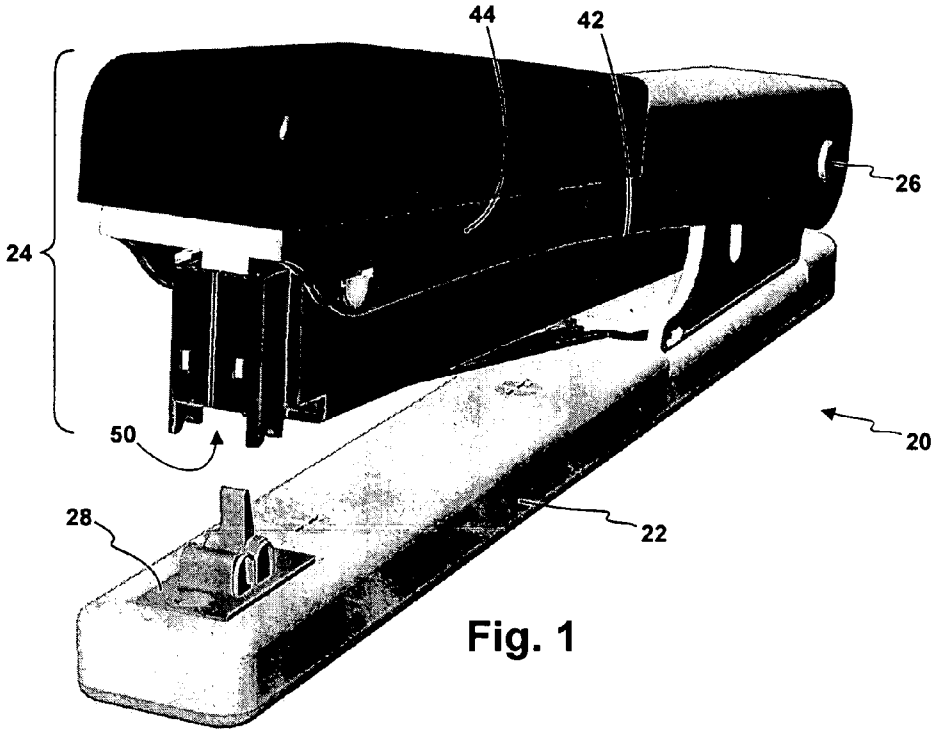


Fig. 1

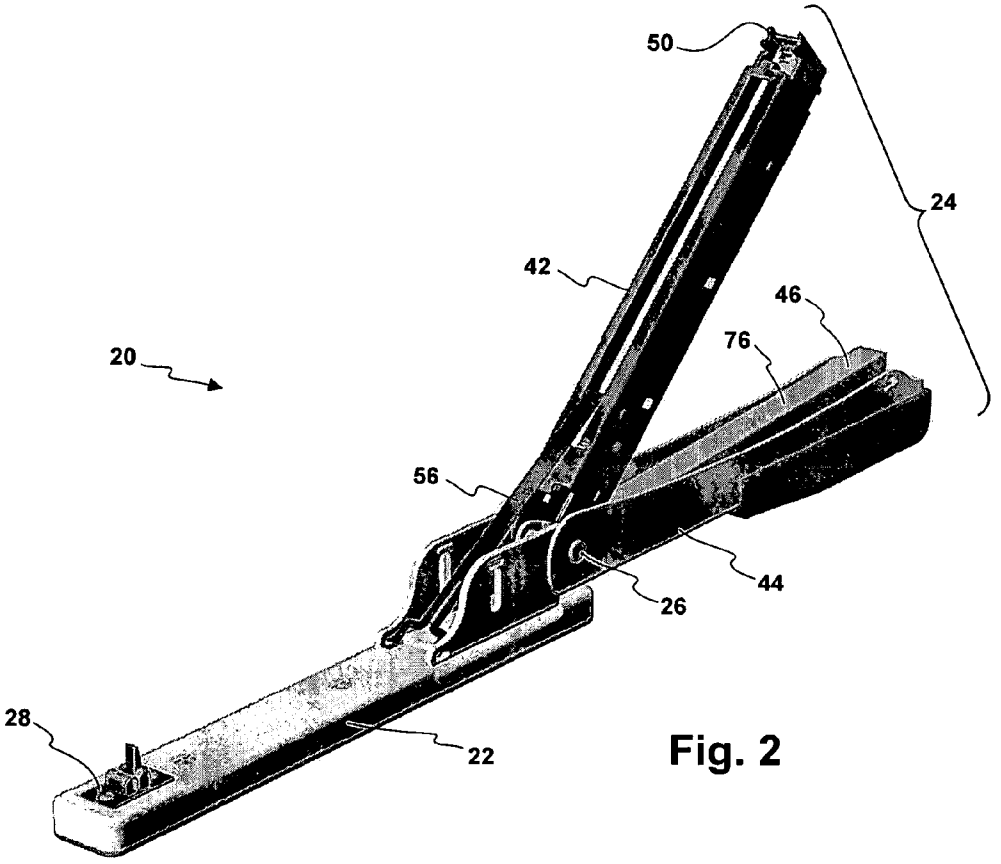


Fig. 2

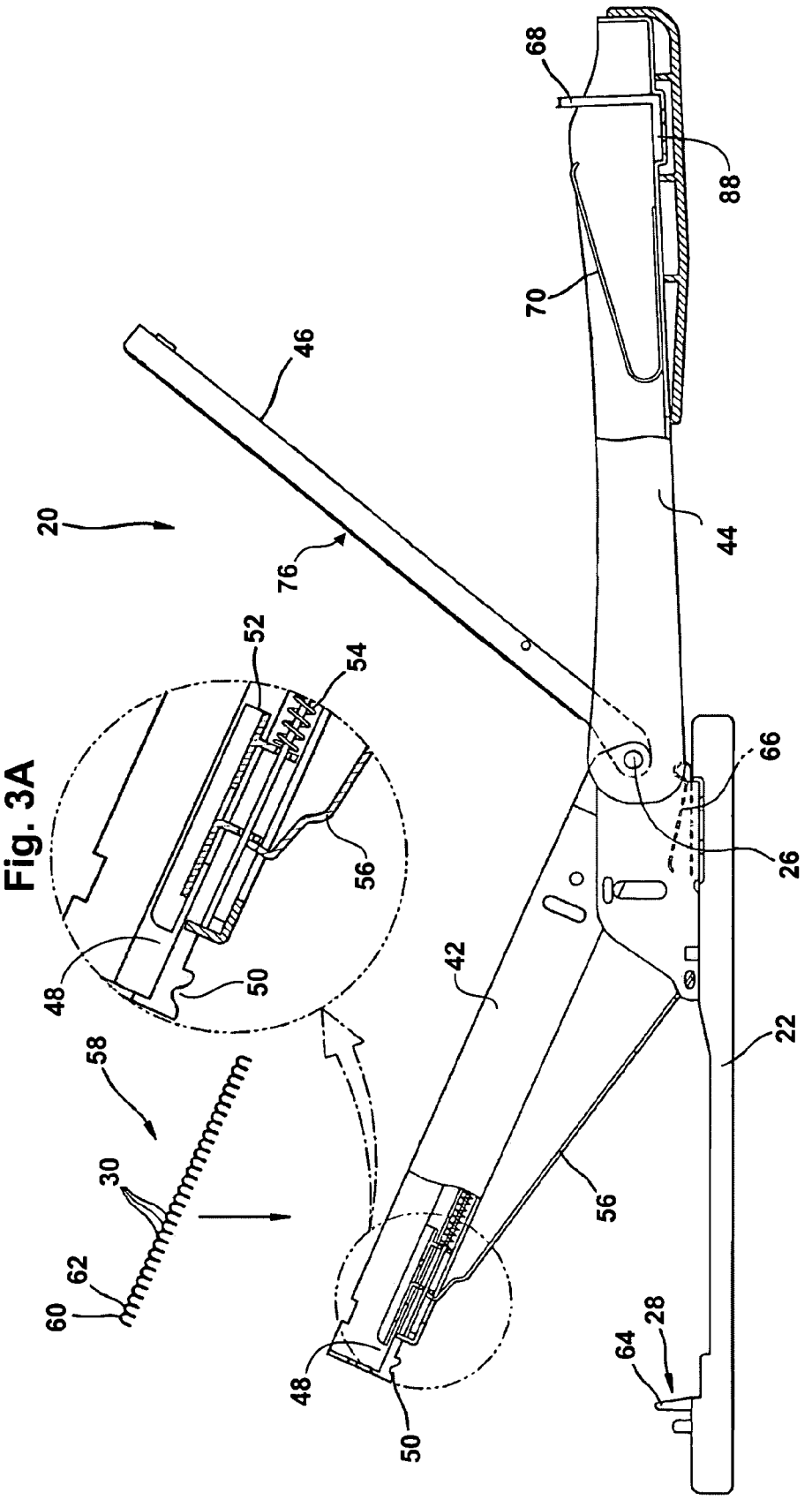

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Fig. 3A

Fig. 3

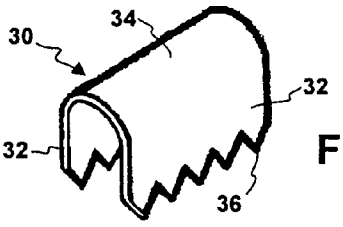
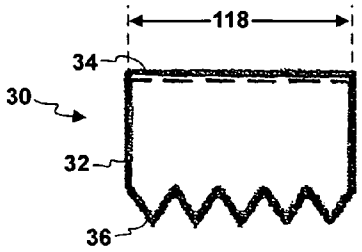


Fig. 4



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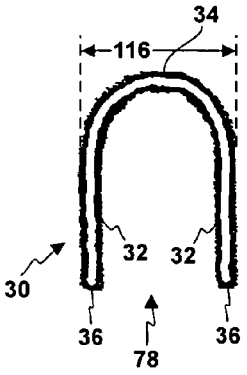

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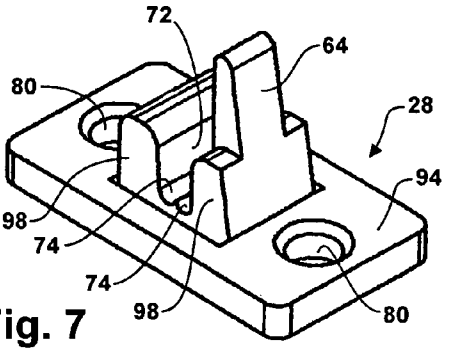

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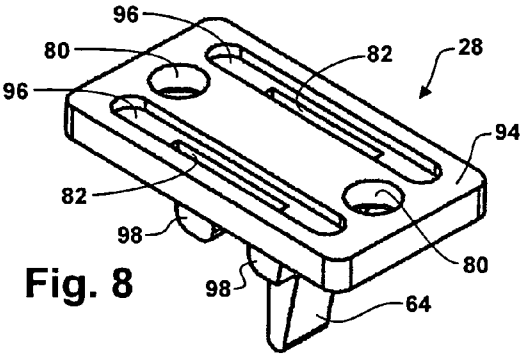
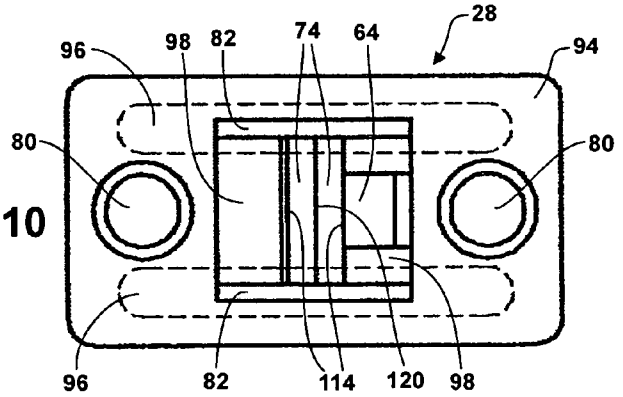


Fig. 8



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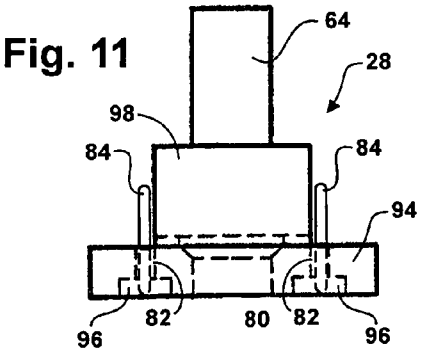
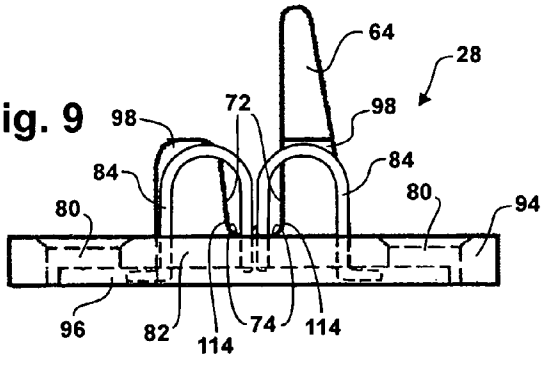


Fig. 11



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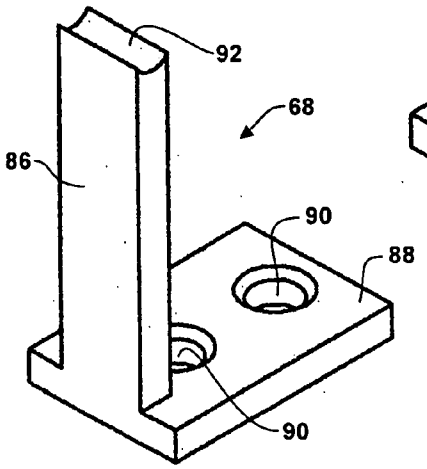

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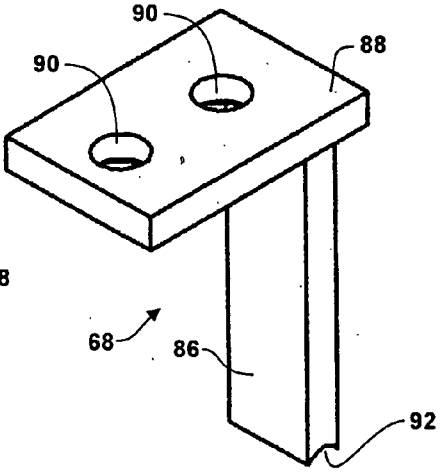


Fig. 13

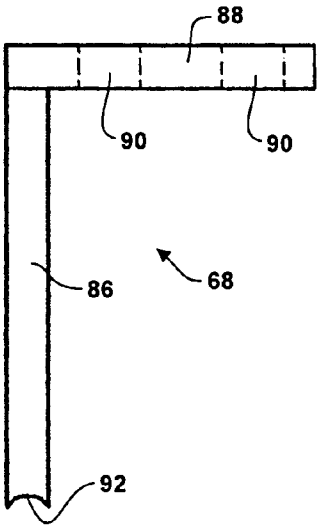


Fig. 14

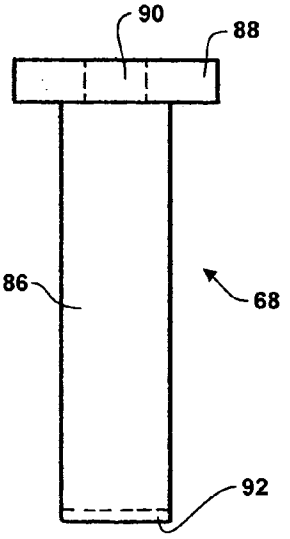
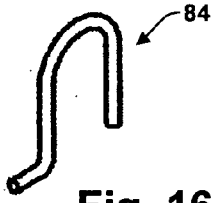


Fig. 15



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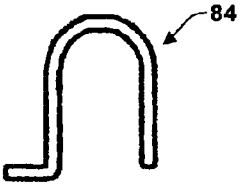
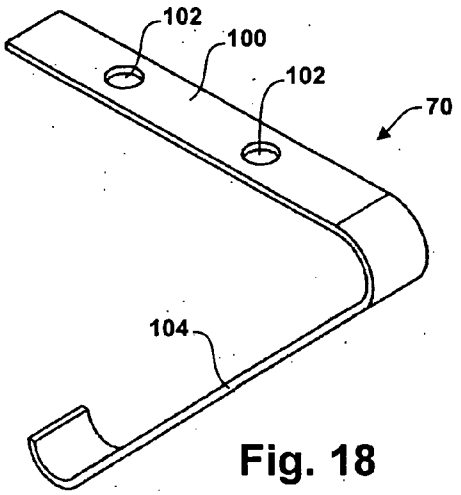


Fig. 17



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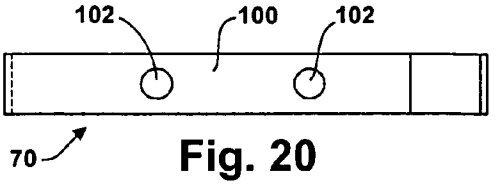
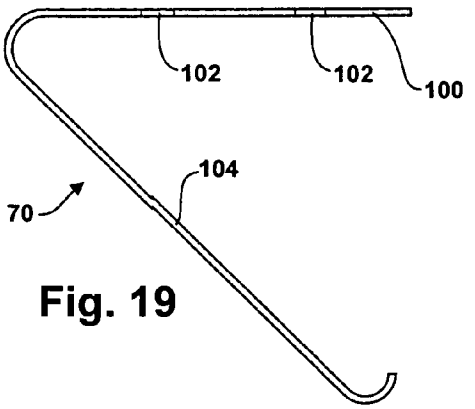


Fig. 20



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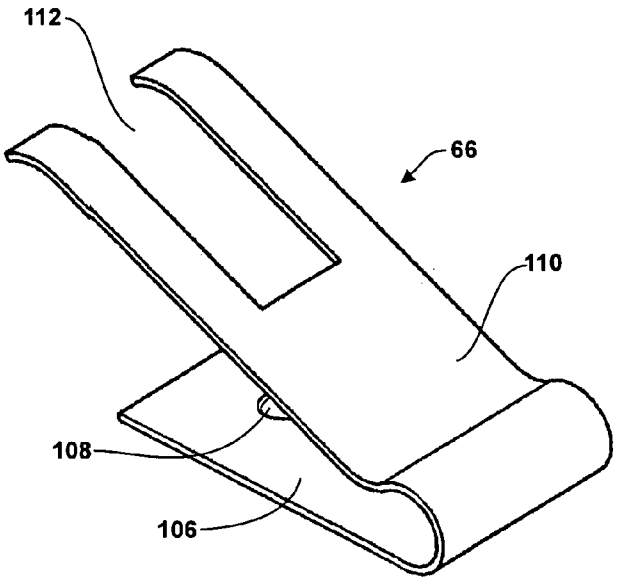

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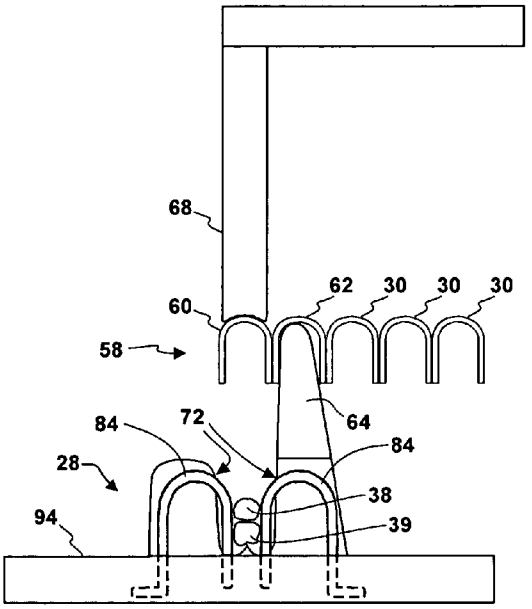

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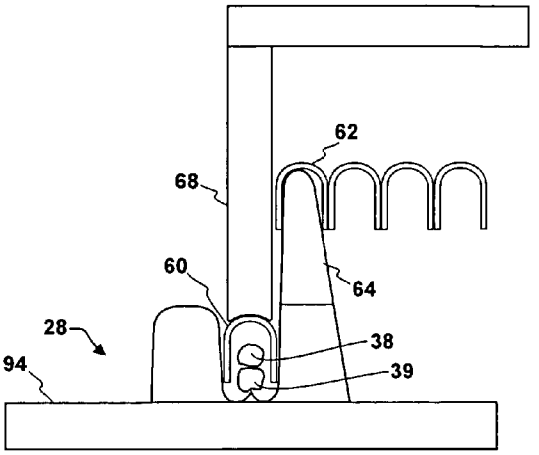

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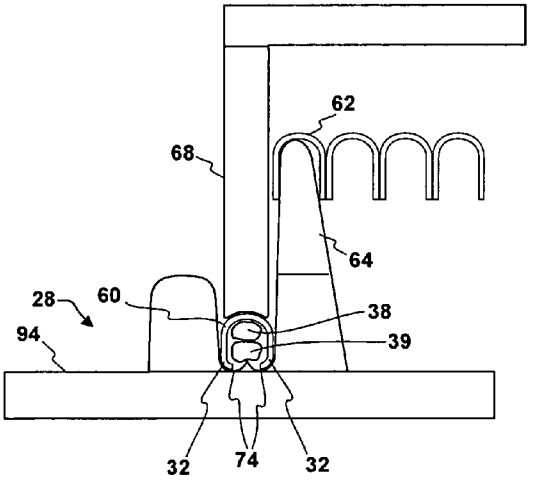
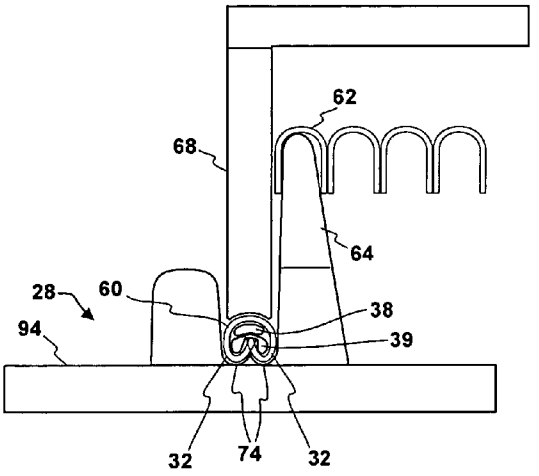


Fig. 24



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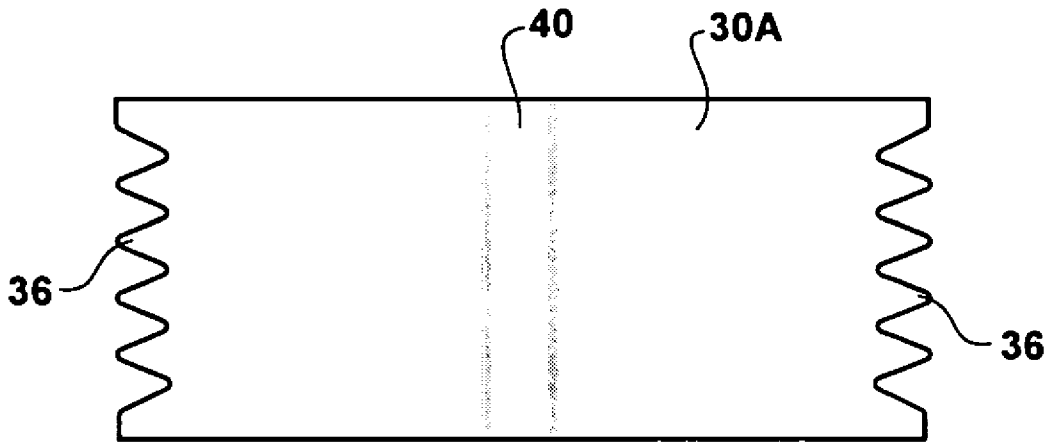

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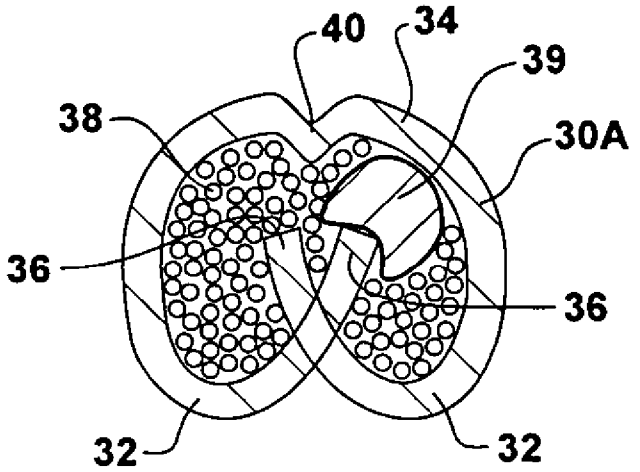

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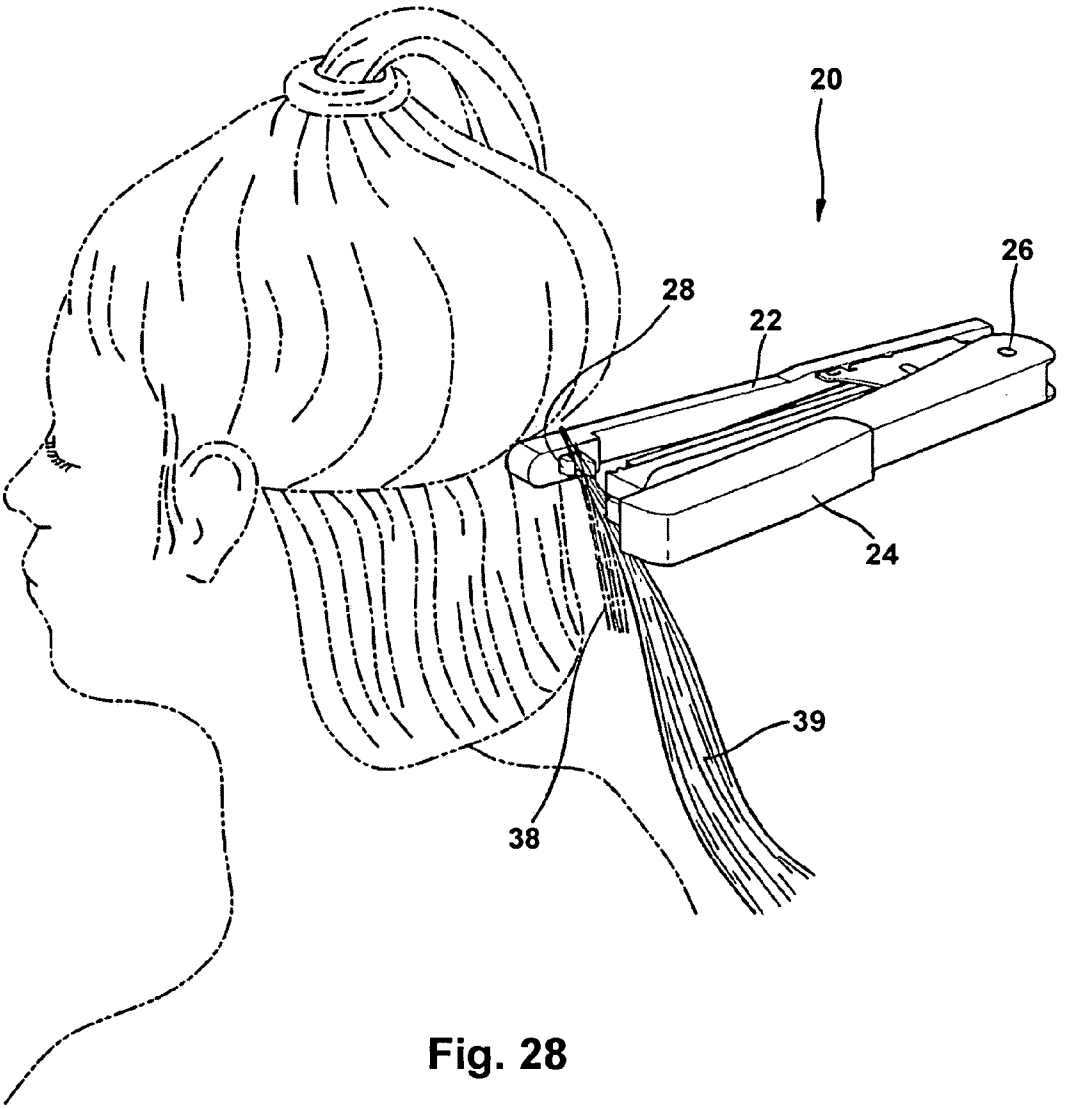
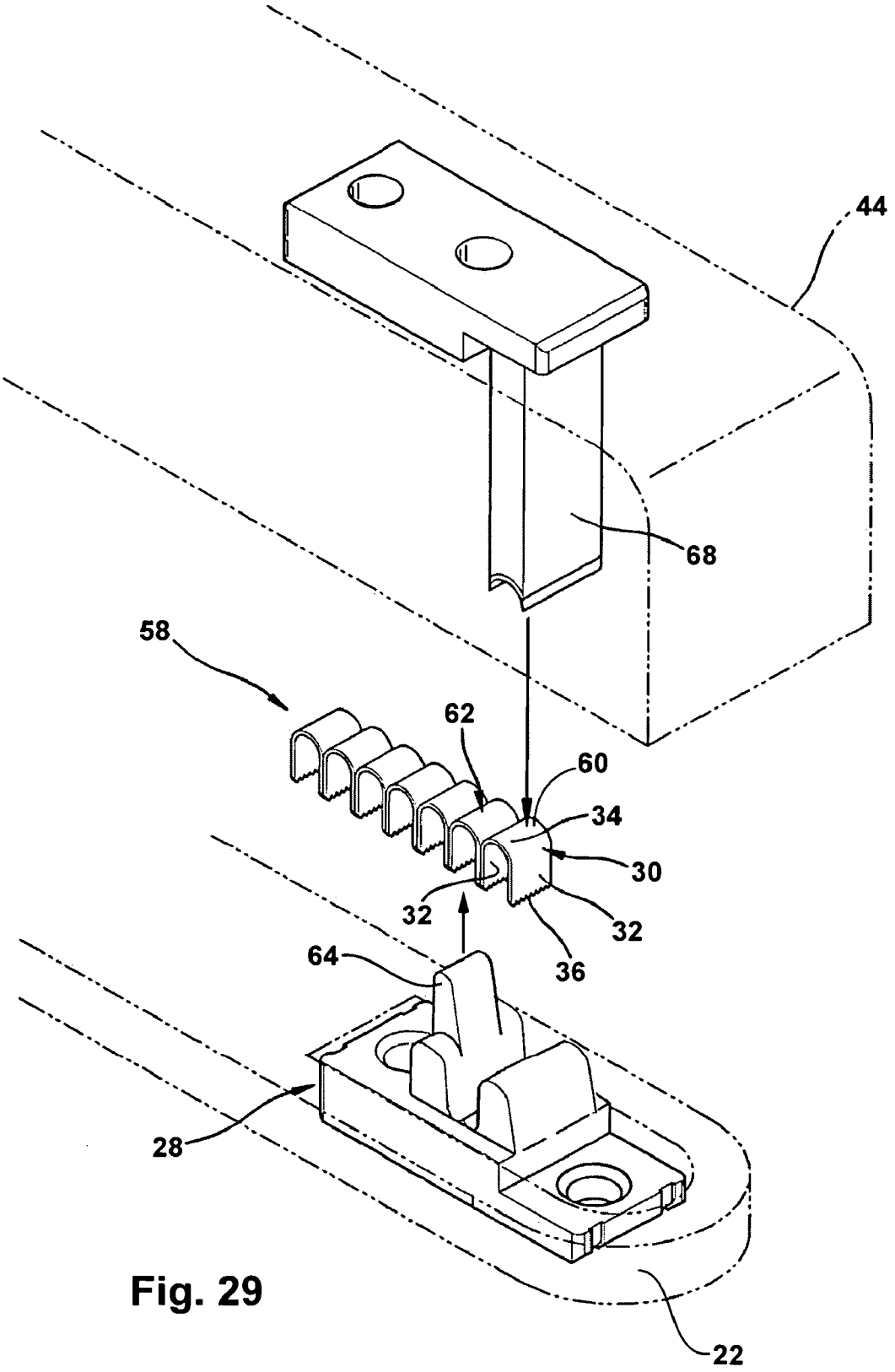


Fig. 28



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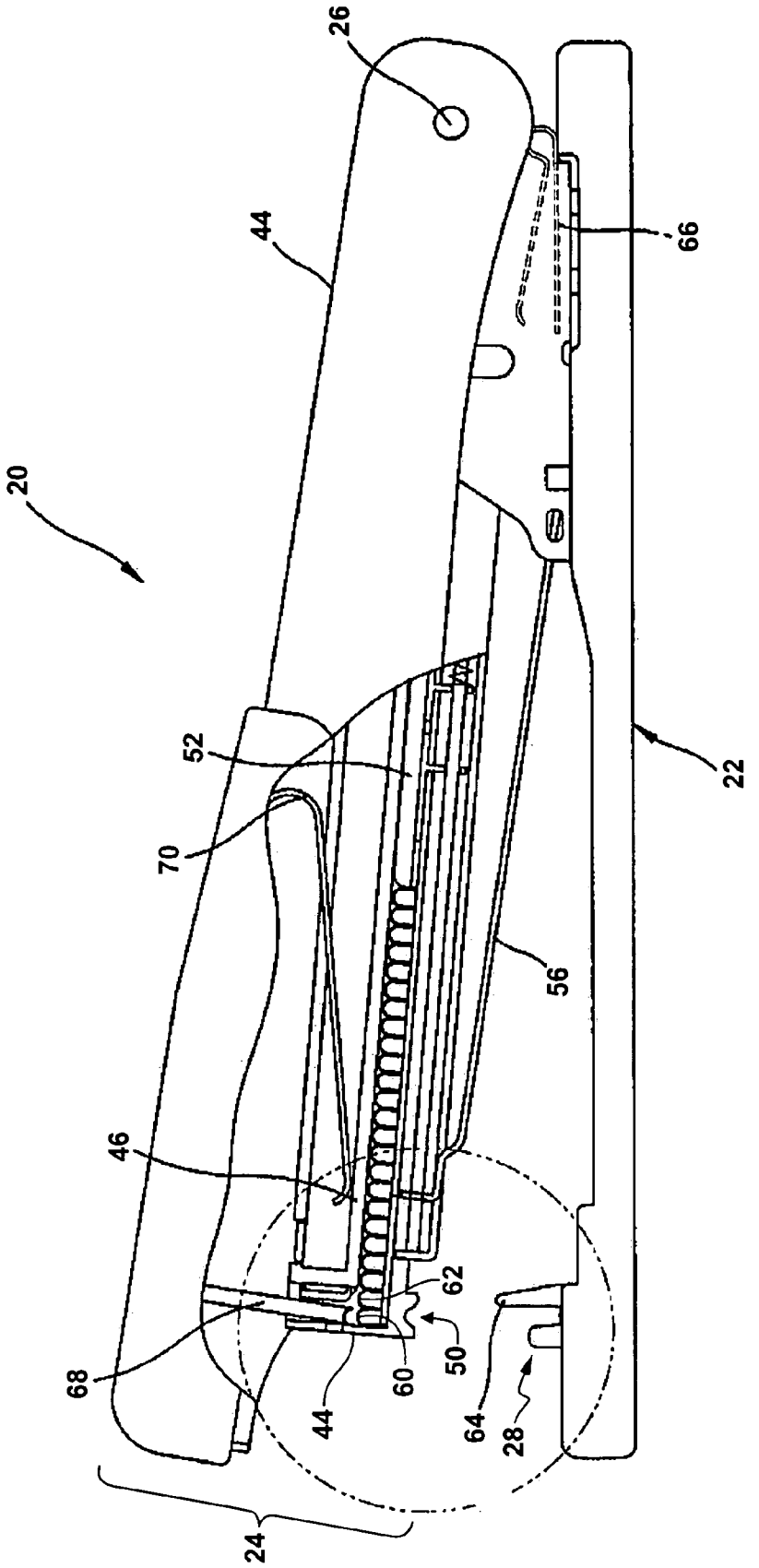

Fig. 30

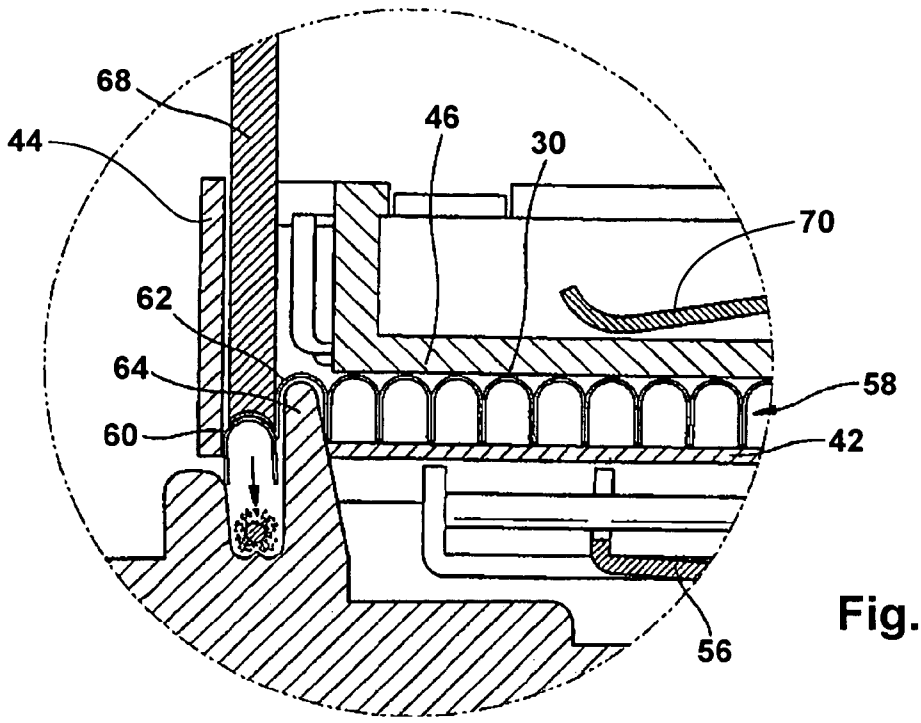

Fig. 31

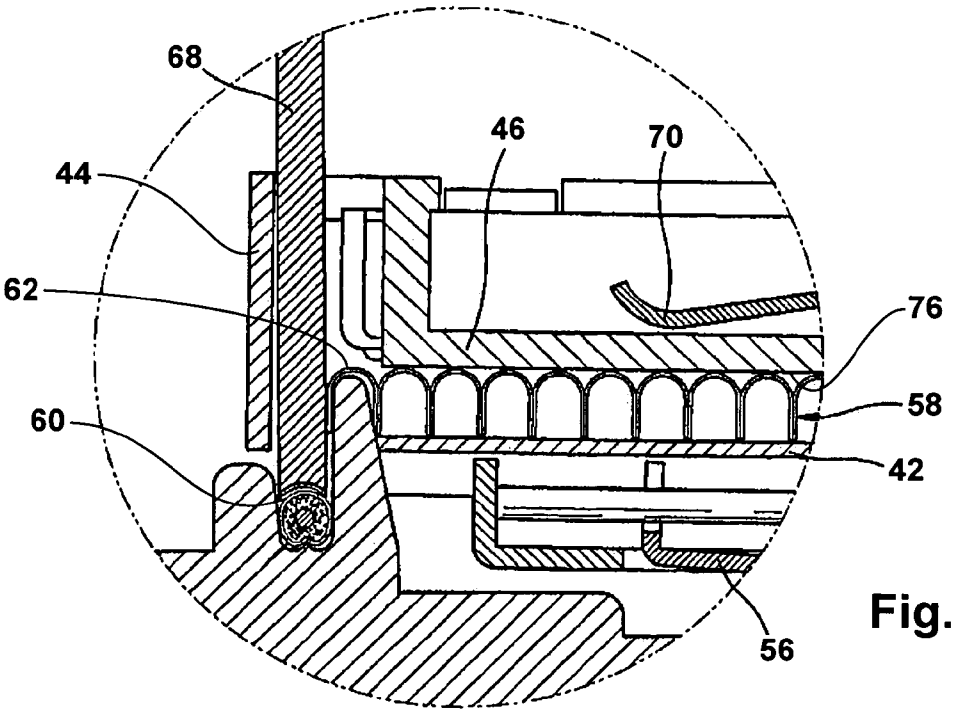

Fig. 32

HAIR CLIP AND METHOD AND APPARATUS FOR FASTENING HAIR CLIP TO BUNDLES OF HAIR

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates generally to hair extension and adornment, and more particularly to a method and apparatus for fastening bundles of hair using a hair clip, wherein a bundle of supplemental hair may be fastened to a bundle of human hair to produce longer hair length, greater hair volume, or a new hair style.

[0003] 2. Description of the Prior Art

[0004] A person may wish to supplement their own natural hair with supplemental hair in order to lengthen or increase the volume of hair to change their appearance or to try a new fashionable hair style. Thus, a person with short hair, or a person with sparse hair, may have a hair style that requires longer hair, or greater hair volume. The supplemental hair may be made of natural human hair or synthetic fibers made to look like natural human hair.

[0005] In the prior art, supplemental hair strands may be attached or bonded to natural hair by several methods, such as tying, weaving, or gluing the supplemental hair to the person's natural hair.

[0006] An example of attaching supplemental hair by weaving or braiding is disclosed in U.S. Pat. No. 4,982,748 issued to Trimarchi. U.S. Pat. No. 4,934,387 issued to Megna discloses a method of attaching supplemental hair to human hair using adhesives.

[0007] Some disadvantages of attaching supplemental hair with adhesives include the need to apply heat to a person's hair and the use of a hot iron near a person's scalp. Given a choice, clients receiving supplemental hair would prefer a method that does not use heat on their hair or near their scalp.

[0008] Another disadvantage is the loosening of the adhesive over time and when exposed to water, shampoo, conditioner, and other hair care and styling products.

[0009] Therefore, there is a need for an improved method and system for applying supplemental hair to natural human hair that provides a secure, easy-to-make fastening between supplemental hair and natural hair that does not use heat and that does not loosen over time with changes in moisture and exposure to chemicals or cleaners.

SUMMARY OF THE INVENTION

[0010] The invention is directed to a clip and a method and apparatus for using the clip to attach supplemental hair to natural human hair. After a bundle of growing human hair is selected, a bundle of supplemental hair is located together with the selected bundle of growing human hair to form a joint at an attachment site. The joint is inserted into an opening between legs of a U-shaped hair clip, and legs of the hair clip are bent around the joint and crimped. Strands in the bundle of supplemental hair may be pre-glued to one another.

[0011] An apparatus for fastening a bundle of supplemental hair to a bundle of growing human hair includes a base having an anvil. Anvil surfaces guide and orient the clip so that the clip legs enter bend-guiding troughs. An arm assembly is movably connected to the base, and may be used to store and dispense clips. A driver is coupled to the arm assembly for pressing an open hair clip into the anvil to close and crimp the clip.

[0012] A clip for fastening hair bundles has a crown and coupled to either side of the crown. The clip may have a length greater than the width spaced apart legs. The clip legs are made of a malleable material.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] For a more complete understanding of the present invention, and the advantages thereof, reference is now made to the following descriptions taken in conjunction with the accompanying drawings, in which like numbers designate like parts, and in which:

[0014] **FIGS. 1 and 2** are perspective views of an apparatus for fastening clips to bundles of hair in accordance with the method and system of the present invention;

[0015] **FIG. 3** is an elevation view of the apparatus for fastening clips;

[0016] **FIG. 3A** is an enlarged elevation view of a portion of the apparatus shown in **FIG. 3**;

[0017] **FIG. 4** is a perspective view of a clip for fastening bundles of hair in accordance with the method and apparatus of the present invention;

[0018] **FIG. 5** is a side elevation view of the clip shown in **FIG. 4**;

[0019] **FIG. 6** is an end elevation view of the clip shown in **FIG. 4**;

[0020] **FIG. 7** is a top perspective view of an anvil used to fasten hair clips in accordance with the method and apparatus of the present invention;

[0021] **FIG. 8** is a bottom perspective view of the anvil shown in **FIG. 7**;

[0022] **FIG. 9** is a side elevation view of the anvil shown in **FIG. 7**;

[0023] **FIG. 10** is a top plan view of the anvil shown in **FIG. 7**;

[0024] **FIG. 11** is an end elevation view of the anvil shown in **FIG. 7**;

[0025] **FIG. 12** is a bottom perspective view of a drive blade;

[0026] **FIG. 13** is a top perspective view of the drive blade shown in **FIG. 12**;

[0027] **FIG. 14** is a side elevation view of the drive blade shown in **FIG. 12**;

[0028] **FIG. 15** is an end elevation view of the drive blade shown in **FIG. 12**;

[0029] **FIG. 16** shows a perspective view of a hair positioning spring;

[0030] **FIG. 17** shows a side elevation view of the hair positioning spring shown in **FIG. 16**;

[0031] **FIG. 18** is a perspective view of a driver arm spring;

[0032] **FIG. 19** is a side elevation view of the spring shown in **FIG. 18**;

[0033] **FIG. 20** is a top plan view of the spring shown in **FIG. 18**;

[0034] **FIG. 21** is a perspective view of an arm assembly spring;

[0035] **FIGS. 22-25** illustrate steps in the process of fastening a clip in accordance with the method and apparatus of the present invention;

[0036] **FIG. 26** is a plan view of an alternative clip design in accordance with the method and apparatus of the present invention;

[0037] **FIG. 27** is a cross-sectional end elevational view of the alternative clip design of **FIG. 26** clinched about hair bundles in accordance with the method and apparatus of the present invention;

[0038] **FIG. 28** is a perspective view of the apparatus of the present invention used to attach a bundle of supplemental hair to a bundle of growing human hair;

[0039] **FIG. 29** is a perspective view showing the relationships between clip strip **58**, anvil **28** and driver **68** within the clip fastening apparatus of the present invention;

[0040] **FIG. 30** is another side elevational view of the clip fastening apparatus of the present invention; and

[0041] **FIGS. 31 and 32** are detailed portions of **FIG. 30** with driver **68** in two different positions in the fastening of a clip in accordance with the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0042] With reference now to the drawings, and in particular with reference to **FIG. 1**, there is depicted an apparatus for fastening a clip to bundles of hair in accordance with the method and apparatus of the present invention. Although apparatus **20** resembles a conventional stapler, and to some degree operates like one, there are important differences because the clip is unique and non-conventional. The fastening of the clip is preferably used to attach, bind, fasten, or join a bundle of supplemental hair, which may be synthetic hair or human hair, to a bundle of human hair growing from a person's scalp for the purpose of creating the appearance of longer or fuller hair, or for creating a new hair style. Alternatively, a clip of the present invention may be used to bundle or fasten strands of hair, synthetic or natural, to create hair pieces, or portions thereof, that may later be attached and worn on a person's head as a part of a new hair style. A clip of the present invention may be used to bind together strands, cords, lanyards, or other objects that fit together within an open clip.

[0043] **FIG. 28** shows how clip fastening apparatus **20** may be used to fasten supplemental hair bundle **39** to human hair strands **38** growing from a person's scalp. As shown in **FIGS. 1, 2, 3, 28**, and **30**, clip fastening apparatus **20** includes base **22**, which is coupled to arm assembly **24** by hinge **26**. Arm assembly **24** pivots about hinge **26** to move arm assembly **24** toward base **22** in a manner similar to a common stapler.

[0044] In a preferred embodiment, clip fastening apparatus **20** stores, dispenses and closes clip **30** to fasten bundles of hair. Clip **30** is shown in **FIGS. 4-6**, which depicts U-shaped clip **30** having two opposing legs **32** connected by a rounded or arched crown **34**. Legs **32** define opening **78**, which may receive strands or bundles of hair for fastening. Although not required, leg ends **36** are preferably serrated in order to more effectively engage or grip stands of hair in the bundles of hair that are fastened to one another. Clip **30** has a length **118** measured along the ridge of crown **34**, and a width **116** measured between points where legs **32** join crown **34**. (See **FIGS. 5 and 6**) In a preferred embodiment, length **118** is greater than width **116**.

[0045] In a preferred embodiment, clip **30** is made from a malleable material so that legs **32** may be bent and curved inward toward one another and back toward crown **34** in order to close the clip and clinch strands of hair in the bundles of hair that are to be fastened to one another. **FIG. 27** shows a cross-sectional end view of a closed clip **30A** that clinches hair strands **38** and a pre-glued hair bundle **39**. Note that when clip **30** or **30A** is closed, legs **32** are curved toward one another, and may be curved back toward crown **34**. Leg ends **36** may cross as alternating portions of the serrations interleave. Ends **36** push into the hair bundles and grip the hair to prevent longitudinal movement of the hair clip along either hair bundle.

[0046] The embodiment of clip **30A** shown in **FIGS. 26 and 27** includes tooth **40** formed in the area of crown **34**. Tooth **40** projects into the area of clinched hair strands **38** in order to provide an additional grip to prevent hair strands **38** from sliding out of the grasp of the closed hair clip **30A**. **FIG. 27** also shows a cross section of hair bundle **39** fastened to hair strands **38**. Hair bundle **39** may include strands of hair, natural or synthetic, that have been pre-glued to one another by an adhesive so that the bundle may be easily handled and placed near a selected bundle of growing human hair to form a joint or attachment site, as shown in **FIG. 28**. For additional detail regarding hair bundle **39** and the method of making same, refer to U.S. patent Ser. No. _____ (U.S. Patent Application Publication No. 20040011372), which is hereby incorporated by reference.

[0047] As shown in **FIG. 26**, which is a plan view of clip **30A** before being bent into a U-shape, tooth **40** is located in the center of clip **30A** in an area that will be along the arch of crown **34**. Tooth **40** may be formed during a die-stamping operation, which may be used to cut the shape of clip **30A** from a flat sheet of material, such as brass or another malleable metal or plastic. The material of clip **30** or **30A** may also be painted or coated or otherwise colored to match hair colors so that clip **30** or **30A** will not be so noticeable in a person's hair. Alternatively, colors may be selected so that colored clips are noticed and become part of a hair style similar to hair styles using colored beads.

[0048] In **FIGS. 2 and 3**, clip fastening apparatus **20** is shown with arm assembly **24** opened to a loading position wherein strips **58** (see **FIG. 3**) of clips **30** or **30A** (note that references herein to clip **30** also refer to clip **30A**) may be inserted in a manner similar to the way staples are loaded into an open channel of a typical paper stapler. Base **22** includes anvil **28**, which, as described in more detail below, is used for temporarily positioning bundles of hair, for assisting in separating a dispensed clip from a next clip in a

glued strip of clips, and for closing a clip around bundles of hair to fasten the bundles of hair to one another. Arm assembly **24** includes three elements pivotally connected by hinge **26**: clip dispenser arm **42**, driver arm **44**, and clip retainer **46**. All such arm elements pivot with respect to base **22** about hinge **26**.

[**0049**] When clip dispenser arm **42** is opened to the loading position, where an angle between clip dispenser arm **42** and base **22** is large and may be obtuse, a strip of clips **58**, which is made of clips **30** glued to one another at legs **32**, may be loaded into clip channel **48** in clip dispenser arm **42**. Clips **30** are stored in clip channel **48** before they are dispensed from dispenser arm opening **50** (see **FIGS. 1, 2, 3, 30, 31**, and **32**). As arm assembly **24** is opened to this wide loading angle, clip feed spring retractor **56** engages clip strip feeder **52** (see **FIG. 3A**), compressing feeder spring **54** and moving clip strip feeder **52** toward hinge **26**. Thus, when clip dispenser arm **42** is opened to the loading position, clip feed spring retractor **56**, which is pivotally coupled at one end to base **22**, compresses feeder spring **54** with the other end by sliding clip strip feeder **52** in clip channel **48** back toward hinge **26**. With clip strip feeder **52** retracted in this manner there is space to load a new strip of clips **58**.

[**0050**] The space in clip channel **48** for storing clips, such as clip strip **58**, may be referred to more generally as a clip chamber. This is a space to hold many clips prior to being dispensed through dispenser arm opening **50**. In other embodiments, clips **30** may be stored and dispensed in different ways. For example, some embodiments may store clips loosely, or individually, where they are not glued or connected to one another.

[**0051**] Because the strip of clips **58** may buckle and rise out of clip channel **48** when the spring pressure behind clip strip feeder **52** is applied to the newly loaded strip, clip retainer **46** may be pivoted, after loading the strip, into a position above clip channel **48** where it will keep the newly loaded strip of clips **58** supported and retained in a straight line within clip channel **48**. Thus, surface **76** (See **FIGS. 2, 3**, and **32**) of clip retainer **46** is positioned slightly above and possibly touching crowns **34** of clips **30** after being loaded in clip channel **48**.

[**0052**] With reference now to **FIGS. 7-11**, various views of anvil **28** are depicted. As illustrated therein, anvil **28** includes anvil base **94** having mounting holes **80** for receiving fasteners that fasten anvil **28** to base **22**. Appropriate fasteners that may be used include screws, rivets, or the like. In a preferred embodiment, anvil **28** includes two guide arms **98**, with one guide arm **98** including next clip support arm **64**. Guide arms **98** extend away from, and substantially perpendicular to, anvil base **94**. Next clip support arm **64** is narrow enough and long enough to extend into dispenser arm opening **50** in clip dispenser arm **42** when dispenser arm **42** is closed toward base **22**. Next clip support arm **64** extends away from, and substantially perpendicular to, anvil base **94**, extending further than guide arm **98**. The function and operation of next clip support arm **64** is described more completely below.

[**0053**] Guide arms **98** have guide surfaces **72**, which are facing each other and positioned adjacent to two bend-guiding troughs **74** (troughs **74**). Guide surfaces **72** are used to guide clip legs **32** into troughs **74**. Troughs **74** are preferably adjoining, concave curved surfaces for guiding and bending legs **32** as clip **30** is bent closed to clinch strands of hair **38**. Troughs **74** may be described as a surface formed by moving an arc or similar conic curve (the generatrix) along a line (the directrix) perpendicular to the curve. An axis of troughs **74** may be located at the center of the arc or conic curve. An axial length of trough **74** may be the length of the axis or directrix.

[**0054**] Troughs **74** are preferably open-ended because surfaces are not needed to bend clip **30** lengthwise, along the axis of the clip, to shorten the length of the clip. Open-ended troughs **74** allows the placement of strands of hair close to, or in, troughs **74**. Troughs **74** have outer edges **114** running parallel to the axis of trough **74** wherein the curved surface of trough **74** joins guide surface **72**. Inner edge **120** also runs parallel to the axis of trough **74** and are preferably touching, as shown in **FIG. 7**.

[**0055**] Guide surfaces **72** are preferably nearly perpendicular to anvil base **94**, with a slight tilt or opening away from the outer edges **114** of troughs **74**. Guide surfaces **72** brace legs **32** of clip **30** so that clip **30** does not rotate around the clip axis, so that legs **32** enter troughs **74** perpendicular to anvil base **94**. Guide surfaces **72** and troughs **74** form a cavity that receives the hair bundles and that forms clip **30** around the hair bundles during the closing or crimping process. The bottom of the cavity is contoured by troughs **74** so as to bend legs **32** of clip **30** more than 90°, thereby causing legs **32** not only to enclose the hair bundles, but to interlock.

[**0056**] Anvil **28** may also include openings **82** for receiving and retaining hair strand retainer springs **84**, which spring is illustrated in **FIGS. 9, 11, 16** and **17**. The purposes of hair strand retainer springs **84** is to temporarily position and hold strands or bundles of hair together to form a joint at an attachment site before clip **30** is pressed into anvil **28** to fasten the strands or bundles of hair together. Hair strand retainer springs **84** are preferably made from a resilient material, such as steel wire. **FIGS. 9 and 11** show hair strand retainer springs **84** installed in openings **82** in anvil **28**, where they can position strands of hair between and slightly away from anvil surfaces **72** so that legs **32** can move past the strands along anvil surfaces **72**. One or more retainer springs **84** may be installed on either or both sides of guiding arms **98** as shown in **FIG. 11**. One end of retainer spring **84** is fastened to anvil base **94** and may extend into recess **96**, while the non-fastened end is free to move in opening **82** when strands or bundles of hair are inserted between hair strand retainer springs **84**.

[**0057**] Referring now to **FIGS. 12-15**, various views of driver **68** are depicted.

[**0058**] Driver **68** is used to press clip **30** into anvil **28**. As illustrated, driver **68** is includes shaft **86** mounted perpendicularly to mounting base **88**. Mounting base **88** includes mounting holes **90** which receive fasteners for fastening mounting base **88** to driver arm **44** (See **FIG. 3**). Appropriate fasteners may include screws, rivets, or the like. Driving surface **92** is located at the end of shaft **86**, and preferably has a concave curvature adapted to match or conform to the curvature of crown **34** of clip **30**.

[**0059**] With reference now to **FIGS. 18-20**, various views of driver arm spring **70** are depicted. As shown, driver arm spring **70** includes a base **100** with mounting holes **102**.

Driver arm spring **70** is mounted to driver arm **44** with fasteners in mounting holes **102**. Appropriate fasteners that may be used include screws, rivets, or the like. Spring arm **104** applies force to clip retainer **46** to retract driver **68** back into dispenser arm opening **50** after a clip **30** is closed. Driver arm spring **70** is preferably made from a springy resilient material, such as steel or plastic.

[**0060**] **FIG. 21** is an illustration of arm assembly spring **66**. As shown, arm assembly spring **66** includes base **106** with one or more mounting holes **108** for receiving fasteners to secure spring **66** to base **22**. Screws, rivets, or the like may be used as fasteners. Spring arm **110** applies force to arm assembly **24** to keep arm assembly **24** open or away from base **22**, ready to receive hair bundles before a fastener is attached, or retracting arm assembly **24** after a clip attachment. Arm assembly spring **66** includes slot **112** so that spring **66** will not interfere with clip feed spring retractor **56** when clip dispenser arm **42** is opened to a loading position as shown in **FIG. 2**.

[**0061**] With regard to the operation of clip fastening apparatus **20**, several steps in the process of dispensing and closing a clip **30** are depicted in **FIGS. 22-25**. To start the operation, an operator places bundle **38** of natural hair in the anvil cavity. The operator then places supplemental hair bundle **39** (i.e. a second hair bundle) in the cavity (or vice versa, so that two or more bundles are in the cavity). The operator may also place hair bundles together, and then place both in the anvil cavity. Once the bundles are in the cavity, the operator squeezes arm assembly **24** and base **22** to force driver **68** toward the cavity. Hair bundles **38** and **39** are shown in the cavity of anvil **28** in **FIGS. 22-25**. Hair retaining springs **84** are only shown in **FIG. 22** for clarity, and in a preferred embodiment they are also used (but not shown) in **FIGS. 23-25** to hold hair bundles **38** and **39** in place while the clip is closed and crimped.

[**0062**] As shown in **FIG. 22**, a strip of clips **58** is in position for dispensing clip **60**, which is the first clip beneath driver **68**. Clips **30**, including dispensed clip **60** and next clip **62**, are glued to one another at legs **32**. Driver **68**, which is carried by driver arm **44**, has been moved toward base **22** and anvil **28** so that next clip support arm **64** on anvil **28** is positioned in opening **78** (see **FIG. 6**) of next clip **62** and contacts next clip **62** on the inside of crown **34**. Next clip **62** is held in place by next clip support arm **64**. When arm assembly **24** moves toward base **22** arm assembly spring **66** (See **FIGS. 3, 21, 26**, and **30**) is compressed. When driver **68** moves toward dispensed clip **60** and out through dispenser arm opening **50** (See **FIGS. 30-32**) driver arm spring **70** is compressed.

[**0063**] Note that **FIG. 22** depicts the position of strip of clips **58**, next clip support arm **64**, and driver **68** at an instant before dispensed clip **60** is broken apart from next clip **62** as it is driven toward anvil **28**.

[**0064**] **FIG. 23** shows dispensed clip **60** after it is has been separated from next clip **62** and pushed downward (with respect to the orientation of the Figs.) by driver **68**. Driver **68**, which is attached to driver arm **44**, has continued to move toward base **22** thereby continuing to compress driver arm spring **70** (See also **FIGS. 30-32**).

[**0065**] At the point in the process shown in **FIG. 23**, legs **32** of clip **30** are beginning to contact and slide along guide surfaces **72**, which surfaces are more clearly indicated in **FIGS. 9 and 22**. Guide surfaces **72** help keep clip **30** in a vertical position as additional force is applied to crown **34** of clip **30** in order to bend legs **32** closed.

[**0066**] As shown in **FIG. 24**, clip legs **32** have entered troughs **74** and are beginning to curve toward one another as legs **32** move along the bend-guiding surfaces of troughs **74**. In **FIG. 24**, driver **68** applies force to crown **34** of dispensed clip **60** as driver **68** continues to move toward base **22**. Force on crown **34** and the directing of the force by the curved surfaces of troughs **74** cause the bending and closing of legs **32**.

[**0067**] In **FIG. 25**, dispensed clip **60** has been closed after legs **32** have followed the curved surface of troughs **74**. Legs **32** are beginning to overlap to further compress any strands or bundles of hair that may be in dispensed clip **60**, as the serrated ends of leg ends **36** interdigitate.

[**0068**] The manufacturing of strip of clips **58** may begin with a flat piece of metal, similar to that shown in **FIG. 26**. The flat metal is then bent to form crown **34** with legs **32** that have flat parallel surfaces. The clips are then joined by an adhesive at the outer flat parallel surfaces of legs **32** of adjacent clips **30**. A mold or channel may be used to hold a series of clips in a straight line, with leg ends **36** coplanar, as the adhesive sets.

[**0069**] Since the clip fastening method and apparatus of the present invention does not require a hot iron to melt adhesive, the present invention has the advantage of securely fastening bundles or strands or hair without using a very hot iron on a person's hair, or near a person's scalp. In addition, the fastening may be used without applying adhesive or other chemicals to a person's hair. In many cases, the joint formed between hair strands using the hair clip of the present invention will last longer, and withstand more shampoos and other chemical treatments for hair, than hair attachments that use adhesives. Use of the present invention is simple and fast. Unlike a conventional stapler, which drives a fastener through the objects being fastened, clip fastening apparatus **20** fastens a clip around objects, which may require less force.

[**0070**] The hair clips of the present invention may be removed by opening legs **32** to loosen the grip of clip **30**.

[**0071**] The foregoing description of a preferred embodiment of the invention has been presented for the purpose of illustration and description. It is not intended to be exhaustive or to limit the invention to the precise form disclosed. Obvious modifications or variations are possible in light of the above teachings. The embodiment was chosen and described to provide the best illustration of the principles of the invention and its practical application, and to enable one of ordinary skill in the art to utilize the invention in various embodiments and with various modifications as are suited to the particular use contemplated. All such modifications and variations are within the scope of the invention as determined by the appended claims when interpreted in accordance with the breadth to which they are fairly, legally, and equitably entitled.

What is claimed is:

1. A method for attaching supplemental hair to growing human hair comprising the steps of:

selecting a bundle of growing human hair; and

locating a bundle of supplemental hair together with the selected bundle of growing human hair to form a joint at an attachment site;

inserting the joint into an opening between legs of a U-shaped hair clip; and

bending the legs of the hair clip around the joint to fasten the bundle of supplemental hair to the bundle of growing human hair.

2. The method for attaching supplemental hair according to claim 1 wherein the step of bending the legs of the hair clip around the joint further includes crimping the legs of the hair clip around the joint, wherein the legs of the hair clip bend toward each other to fasten the bundle of supplemental hair to the bundle of growing human hair.

3. The method for attaching supplemental hair according to claim 1 wherein the step of bending the legs of the hair clip around the joint further includes pressing the legs of the hair clip into bend-guiding troughs of an anvil to bend the legs of the hair clip around the joint, wherein the bend-guiding troughs are curved to direct the legs of the hair clip toward each other.

4. The method for attaching supplemental hair according to claim 3 wherein the step of locating a bundle of supplemental hair together with the selected bundle of growing human hair further includes the step of inserting the joint between guiding arms of the anvil, wherein the guiding arms extend from outer edges of each of the bend-guiding troughs.

5. The method for attaching supplemental hair according to claim 1 wherein the step of inserting the joint into an opening between ends of a U-shaped hair clip further includes the steps of:

dispensing a dispensed hair clip from a clip chamber that holds a plurality of hair clips; and

moving the dispensed hair clip toward the joint.

6. The method for attaching supplemental hair according to claim 5 further including the step of supporting a next clip in a strip of clips while a dispensed clip is separated from the strip of clips.

7. The method for attaching supplemental hair according to claim 6 wherein the step of supporting a next clip in a strip of clips further includes inserting a next clip supporting arm into an opening of the next clip, wherein the next clip supporting arm substantially fills the opening of the next clip.

8. The method for attaching supplemental hair according to claim 1 wherein the step of bending the legs of the hair clip around the joint to fasten the bundle of supplemental hair to the bundle of growing human hair further includes interleaving serrate edges on the leg ends of the hair clip.

9. The method for attaching supplemental hair according to claim 3 further including the step of temporarily holding the joint proximate to the inner edges of the bend-guiding troughs.

10. The method for attaching supplemental hair according to claim 4 further including the step of guiding the legs of the hair clip into the bend-guiding troughs by moving the hair clip along anvil surfaces on guiding arms of the anvil.

11. The method for attaching supplemental hair according to claim 1 wherein the step of locating a bundle of supplemental hair together with the selected bundle of growing human hair to form a joint at an attachment site further includes locating a pre-glued bundle of supplemental hair together with the selected bundle of growing human hair to form a joint at an attachment site, wherein the pre-glued bundle of includes strands of supplemental hair attached to one another by an adhesive.

12. The method for attaching supplemental hair according to claim 1:

wherein the step of locating a bundle of supplemental hair together with the selected bundle of growing human hair to form a joint at an attachment site further includes locating the joint in a cavity defined by guiding surfaces and a contoured base;

further including retaining the joint in the cavity;

wherein the step of inserting the joint into an opening between legs of a U-**8** shaped hair clip further includes driving the clip into the cavity; and

wherein the step of bending the legs of the hair clip around the joint to fasten the bundle of supplemental hair to the bundle of growing human hair further includes driving the legs to follow the contoured base to crimp the joint.

13. An apparatus for fastening strands of hair comprising:

a base having an anvil with a bend-guiding trough, wherein the trough has an axial length greater than a width across the trough, and wherein the trough is open at the ends to be structured and arranged to receive bundles of hair;

an arm assembly movably connected to the base; and

a driver coupled to the arm assembly for pressing an open clip into the

a anvil to close the clip.

14. The apparatus for fastening according to claim 13 wherein the bend-guiding trough includes troughs that meet at inner trough edges.

15. The apparatus for fastening according to claim 13 wherein the anvil includes guiding arms extending from outer trough edges and away from the base, wherein the guiding arms are for guiding the legs of the clip into the trough.

16. The apparatus for fastening according to claim 15 wherein the anvil includes a next clip support arm extending away from the base and beyond the guiding arms for supporting a next clip in a strip of clips as a dispensed clip is pressed by the driver.

17. The apparatus for fastening according to claim 16 wherein the next clip support arm extends into the arm assembly and into the next clip in a strip of clips when the arm assembly is pressing an open clip into the anvil.

18. The apparatus for fastening according to claim 13 further including a hair strand retainer spring coupled to the anvil adjacent to the trough for temporarily holding strands of hair near the trough.

19. The apparatus for fastening according to claim 13 wherein the base is moveably connected to the arm assembly by a hinge.

20. The apparatus for fastening according to claim 13 wherein a driving surface of the driver has a contour that matches the portion of the clip contacted by the driver.

21. A clip for fastening a first bundle of hair to a second bundle of hair comprising:

a crown having a width and a length, wherein the length is at least equal to the width;

legs spaced apart by the width of the crown and extending from the crown along the length of the crown, wherein the legs have leg ends that define a clip opening, and wherein the legs are made of a malleable material.

22. The clip according to claim 21 wherein the leg ends are serrated.

23. The clip according to claim 21 wherein the crown is arched.

24. The clip according to claim 21 wherein the crown includes a tooth extending into the opening of the clip.

25. The clip according to claim 21 wherein the clip is attached to a second clip.

26. The clip according to claim 25 wherein the clip is attached to a second clip by an adhesive between legs of the clips.

27. The clip according to claim 21 wherein the clip is made of brass.

28. The clip according to claim 21 wherein the clip is colored to match a hair color.

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