A device (10) for styling hair is disclosed. The device (10) includes a flexible elongated body portion (12) having an elongated opening (16) for receiving hair. The main body portion (12) is deformed to create a continuous hair receiving opening. The invention includes a means for securing hair positioned in the opening to the elongated body portion (12) after positioning in the hair receiving opening (16). The elongated body portion also has first and second ends (42, 44).
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DEVICE FOR STYLING HAIR

BACKGROUND OF THE INVENTION

The present invention relates to hair styling devices, namely devices for forming French knots, buns and the like.

Long hair styles are popular with people of all ages, particularly with women. Because of the popularity of long hair styles, several devices have been invented for styling long hair. Examples include barrettes, hair ties, combs and ornamental hair pins.

Of the hair styling devices that are currently known, there are few devices that exist which are useful for styling long hair into a bun, a French knot, or similar style.

There are soft sponge-like rings that are known. The ring is covered with a fine netting material, which can be used by drawing the hair through the opening in the sponge, wrapping the hair around the ring and securing the hair onto the ring by trapping the hair and the netting material together with hair pins. The rings described above can also be formed from a fabric such as woven nylon covered with a nylon netting. Typically, the rings have an outer diameter of approximately four inches and have an inner diameter of approximately two inches.

There are disadvantages in using a soft ring to form a hair bun. It is difficult to wrap smooth, thick hair around the ring, pin the hair down and have the hair remain in place. It is also quite time consuming to wrap the hair around the ring when the hair is long. When the hair being styled is shorter, it may not be possible to wrap the hair completely around the ring.

There are flexible combs that are known having two ends which can be opened to install the comb around hair, and then closed to form a substantially circular ring. Flexible combs have many sharp, pointed edges which can scrape the scalp. Such a comb is also not particularly useful for styling hair into
a bun. The flexible combs described above are primarily intended to be used to form French knots.

There are currently no known hair styling devices which can be used to rapidly and easily form a French knot, bun or similar hair style.

**SUMMARY OF THE INVENTION**

The present invention is a device for styling hair. The invention includes a flexible elongated body portion. The elongated body portion includes a first end, a second end and an elongated opening located between the first and second end for receiving hair. A continuous opening is created by deforming the elongated body. The invention in its broadest sense also includes a means for securing hair positioned in the opening. Examples of a means for securing hair includes an elongated body formed from a material that will deform under force, and either return to its original shape in response to withdrawing the force or in response to application of an opposite force.

**DESCRIPTION OF THE DRAWINGS**

Figure 1 is a perspective view of a first preferred embodiment of the present invention, shown with first and second ends attached.

Figure 2 is a bottom elevational view of a first preferred embodiment of the present invention.

Figure 3 is a side-elevational view of a first preferred embodiment of the present invention.

Figure 4 is a top elevational view of a second preferred embodiment of the present invention.

Figure 5 is a cross-sectional view of a second preferred embodiment of the present invention, taken through line 5 -- 5 as shown in Figure 4.

Figure 6 is a perspective view of a wire of a second preferred embodiment, extending through a plurality of semi-rigid plastic tubes.

**DETAILED DESCRIPTION**

SUBSTITUTE SHEET (RULE 26)
The present invention is a novel device for styling hair. The device of the present invention is particularly suited for use with long hair, and more particularly for forming buns and French knots.

The device of the present invention includes an elongated body portion with a first end, a second opposite end and an elongated opening extending between the first and second ends. A perspective view of a first example of such a device is shown at 10 in Figure 1. The elongated body portion 12 includes a flexible, resilient support strip 14 which in the preferred embodiment is approximately 10-3/8 inch in length, is about 3/4 inch in width and has a thickness of approximately 1/16 inch. Preferably, the elongated body portion is formed of a deformable material which returns to its original shape when the force causing the deformation is removed.

Preferably, the elongated body is formed of a plastic material such as polyvinyl chloride which can be flexed repeatedly and which returns to its original shape. An example of a suitable plastic that can be used to form this support strip 14 is high density polyethylene (HDPE) which is widely available. The elongated body of the first preferred embodiment is high density polyethylene which is available from Primex Plastice Corporation of Richmond, Indiana.

The device of the present invention includes an elongated opening for receiving hair, wherein the main body portion is deformed in order to create a continuous opening for receiving the hair. In the first embodiment, this opening is created by means of a longitudinal slit 16 extending completely through top and bottom major surfaces 18 and 20 (shown in Figure 3). Referring now to Figure 2, in the first embodiment, the longitudinal slit 16 is shorter in length than a length of the support strip 14 and stops short of the first end 22, and second opposite end 24.
so that when the elongated body 14 is deformed, a continuous opening is created. Most preferably, the longitudinal slit 16 has a first end 26 and a second end 28, each end terminating in a substantially circular opening 30, 32. In the first preferred embodiment, the circular openings are approximately 1/8 inch in diameter. The openings 30 and 32 are provided to allow the slit 16 to be opened wide enough to easily insert a strand of hair.

Referring back to Figure 1, at least one of the first major surface 18 or the second major surface 20 has a high coefficient of friction so that hair positioned within the elongated slit 16 and wrapped around the elongated strip 14 does not easily slide out of slit 16. In the first embodiment, a strip of open cell foam 38, having a thickness of approximately 1/4 inch is affixed to the first major surface 18 by means of an adhesive layer 34 as shown in Figure 3. An example of a suitable foam is polyurethane open cell foam available from Future Foam, Inc. of Council Bluffs, Iowa (a Nebraska corporation) under the product designation "30100." The preferred foam strip has a minimum elongation of 125 percent, a maximum compression set of 10 percent at 50 percent C.O.M., an indentation force deflection at 25 percent of 4 inches, a density of 1 pound per cubic foot, plus or minus 1/10, a minimum tensile strength of 10 pounds per square inch and a minimum tear strength of 1.25 pounds per inch. All of the physical characteristics described above are measured in accordance with ASTM-D-3574-88.

The preferred adhesive layer 39 for use with this foam and the high density polyethylene plastic strip 14 is available from Maple Leaf Sales, Ltd. of Plymouth Michigan under the trade name "K-Grip Solvent Cement."
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Preferably, the plastic strip 14 is formed by means of injection molding. The elongated slit 16 and circular openings 30 and 32 are cut into the strips after the strips are released from the mold. The adhesive layer 34 can be brushed or sprayed onto the major surface 18. Preferably, the adhesive is applied in the form of a spray, and the foam is applied to the adhesive.

The foam strip 38 also has a longitudinal cut 40 which extends through the entire thickness of the foam strip 38 and which is aligned with the longitudinal cut 16 of the elongated strip 14. Preferably, the foam strip 38 covers a majority of the first major surface 18, but has ends 42 and 44 which are located far enough from ends 22 and 24 (shown in Figure 2), respectively to allow sufficient clearance for providing a means for removably attaching the first and second ends 42 and 44.

It is to be understood that it would be equally useful to provide a high friction surface on the second major surface 20 or on both the first and second major surfaces 18 and 20.

Preferably, the device of the present invention is equipped with a fastening means for removably attaching the first end 22 to the second opposite end 24. Referring to Figures 2 and 3, a conventional snap 46, 48 is provided to secure the first end 22 to the second end 24 after the device is in place in the hair. Although snaps were chosen as the preferred fastening means, the present invention also contemplates the use of a hook and loop type closure such as a product available under the trade name Velcro, a hook and eye, a button and button hole, an elongated slit and pin with an enlarged head, a hook and loop configuration with a transverse loop to guide the ends together and any other conventional fastening devices.
In operation, the user applies force to the elongated body portion in a manner which creates an opening defined by inner edges of the longitudinal slit 16. The hair to be styled is placed within the opening. Each end 22 and 24 of the device is twisted until the hair is wrapped around the elongated body 12 and positioned in the desired location. At this point, the ends are either drawn together and fastened, forming a "bun" style, or the ends are concealed within the hair and pinned into place, forming a "French knot."

A second preferred embodiment of the present invention is shown at 50 in Figure 4. In this embodiment, the elongated body portion 52 is formed of a flexible, deformable material that lacks an ability to return to its initial shape when a deformation force is removed. The elongated body portion 52 of this example is formed from a cloth material that has a high coefficient of friction. Preferably the elongated body is constructed from woven cotton. Other woven materials such as terry cloth, muslin, wool, netting and fleece would also be suitable.

Preferably, the elongated body portion 52 comprises two substantially identical sleeves 54, 56 which in the preferred embodiment are tacked together at each end 58, 60 by means of end stitching 62, 64. The ends may also be tacked together by means of metal clips (not shown). The construction of the second preferred embodiment of the present invention is shown in more detail in cross-section in Figure 5.

Figure 5 is a cross-sectional view of the second embodiment taken along line 55 -- 55 as shown in Figure 4. Each sleeve 54, 56 is folded to form a first folded edge 66, 68 and a second opposite infolded edge 70, 72. Raw edges of the fabric are infolded, and the edges 70, 72 are stitched together by means of stitching 74, 76. Both sleeves 54 and 56
define the elongated body 52 of the second preferred embodiment.

First folded edges 66 and 68 extending from inner edges 78, 80 of end stitches 62 to 64 define the elongated opening 82 of the second preferred embodiment. Because the elongated body in this example is formed of flexible fabric, it is necessary to add a deformable material to pockets 84, 86 located within sleeves 54 and 56. Preferably, 8 gauge copper wires 88, 90 are positioned within the pockets 84 and 86 and extend beyond end stitching 62 and 64 toward ends 58 and 60, respectively.

Although it is believed that hair to be styled with the device of the present invention is adequately protected from the wires 88 and 90 by the sleeves 54 and 56, in another embodiment, plastic tubing is placed over the wire before insertion into each sleeve 54, 56. As shown in Figure 6, plastic tubing segments 92 can be placed over each wire 88, 90 (not shown) for greater protection of the hair against damage. Flexible tubing can also be used, which would eliminate the need to cut the tubing into segments prior to sliding over the wires 88 and 90. Referring back to Figure 4, after the wires 88 and 90 are inserted into the sleeves 54 and 56, the ends 58 and 60 are infolded and stitched together, forming stitching 94 and 96. The stitching 94 and 96 traps the wires 88 and 90 permanently in the sleeves 54 and 56.

In operation, the sleeves 54 and 56 are drawn apart by the application of force. Hair to be styled is placed in an elongated opening 82 defined by separated edges 66 and 68. Then, force is applied to the wires 88 and 90 in a direction opposite the force applied to create the opening. Each end 58 and 60 is grasped, and then twisted until the hair has reached the desired shape. Then, the ends may be secured
together, in the case of forming a hair bun, or the ends may be turned under and pinned, forming a French knot.

Although no fastening means is shown in Figure 4, it would be desirable to include a fastener at each end such as a hook and loop marketed under the trade name Velcro. The addition of the fastening arrangement in the case of both the first and second embodiments increases the utility of this device. Devices of the present invention with end closures are particularly suited for forming buns.

Although the present invention has been described with reference to the preferred embodiments, workers skilled in the art will recognize that changes may be made in form and detail without departing from the spirit and scope of the invention.
WHAT IS CLAIMED IS:

1. A device for styling hair, comprising:
   a flexible elongated body portion comprising:
     a first end:
     a second opposite end;
     an elongated opening in the elongated body
     portion positioned between the first
     and second ends for receiving hair, wherein the main body portion
     is deformed to create a continuous
     opening; and
     means for securing hair positioned in the
     hair receiving opening to the
     elongated body portion.

2. The device of claim 1 and further comprising
   fastening means for removably attaching the first end
   to the second end.

3. The device of claim 1 wherein the elongated body
   has a first major surface and a second major surface,
   wherein the first major surface has a coefficient of
   friction high enough to prevent hair from slipping out
   of the opening when wrapped around the elongated body
   and is in contact with the first major surface.

4. The device of claim 1 wherein the elongated body
   is formed from a strip of flexible plastic, wherein
   the elongated opening comprises a longitudinal cut
   extending through a thickness of the elongated body
   and is located along a central axis of the body,
   wherein the cut extends to a point near each end.

5. The device of claim 2 wherein the fastening means
   comprises a snap.

6. The device of claim 1 wherein the elongated body
   portion is formed of a flexible material having
memory, wherein the means for securing hair comprises memory in the flexible material.

7. The device of claim 3 wherein a strip of open cell foam is bonded to the first major surface.

8. The device of claim 1 wherein the flexible elongated body portion is formed of flexible cloth, wherein the body portion comprises two longitudinal sleeves extending along at least a portion of a length of the elongated body, wherein each sleeve has a first end and a second opposite end, wherein the first ends are fixedly attached, and the second opposite ends are fixedly attached, wherein the means for securing hair comprises at least one metal wire positioned within each sleeve.

9. The device of claim 7 and further comprising a flexible protective tube surrounding each wire.

10. A method of styling hair, comprising:
    providing a hair styling device having an elongated body, the elongated body having a first and second opposite end, and having a continuous, longitudinal opening in the body created by an application of a force to the body;
    gathering hair together;
    applying a force to the elongated body sufficient to create the longitudinal opening;
    inserting the gathered hair into the elongated opening;
    positioning the elongated body in a desired position between each end of the hair; and twisting the elongated body until the desired style is achieved.

SUBSTITUTE SHEET (RULE 26)
11. The method of claim 10 and further comprising the step of fastening each end of the elongated object to the hair.

12. The method of claim 10 and further comprising the step of fastening together the first and second opposite end of the elongated object.

13. The method of claim 10 wherein the elongated body is positioned on hair near a free end and the elongated body is twisted, forming a bun.

14. The method of claim 10 wherein the elongated body is positioned on the hair near a center and the elongated body is twisted, forming a French knot.
**INTERNATIONAL SEARCH REPORT**

**A. CLASSIFICATION OF SUBJECT MATTER**
- IPC(6): A45D 2/18; 7/00
- US CL: 132/210, 246
- According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**
- Minimum documentation searched (classification system followed by classification symbols)
  - U.S.: 132/200, 210, 222, 246, 247, 273, 275
- Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
  - NONE
- Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
  - NONE

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

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[X] Further documents are listed in the continuation of Box C.  □ See patent family annex.

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| "Y" | document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art |

| "&" | document member of the same patent family |

**Date of the actual completion of the international search:** 04 JANUARY 1996

**Date of mailing of the international search report:** 01 FEB 1996

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