

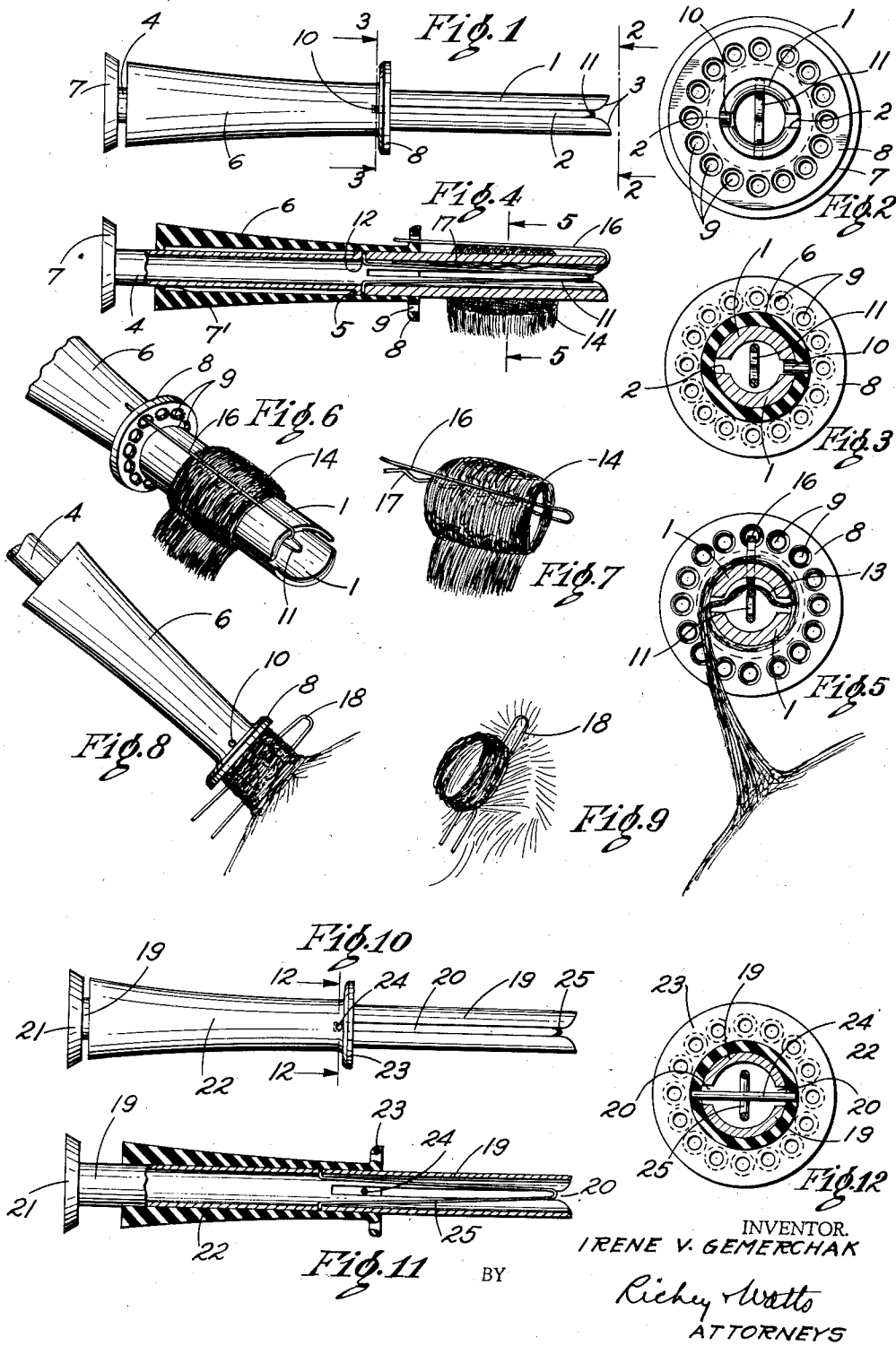
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HAIR CURLER

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HAIR CURLER

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This invention relates to hair curling and more particularly to an improved hair curling device whereby the user may easily and conveniently form curls and retain the curls in position on the head after the curler is withdrawn.

A common operation in the hairdressing art is the formation of so-called "pin curls," in which the operator winds a strand of the customer's hair around her finger, winding from the scalp outwardly, and then slides the curl off of her finger and holds it against the customer's scalp while securing it in place by hair-pins. This operation is usually done while the hair is wet with a curling solution and it is difficult for one to form curls in one's own hair in this manner.

It is among the objects of the present invention to provide a curling device whereby the user can form pin curls quickly and uniformly in her own hair. Other objects of my invention include:

The provision of the hair curling device whereby a curl can be formed and held in position with the axis of the curl lying substantially parallel to the scalp as distinguished from a pin curl in which the axis of the curl is generally perpendicular to the scalp when the curl is pinned in position; the provision of a curling device which facilitates the winding of a curl thereon and the clipping of a hairpin in position over the curl to retain same in position; the provision of a lightweight, easily operated curler having a minimum of moving parts and which is particularly susceptible to economical manufacture; and the provision of a curling device which can be successfully used without any particular skill on the part of the user and which will produce results equal to or better than those obtained by skilled hairdressers.

The above and other objects of my invention will appear from the following description of several forms thereof, reference being had to the accompanying drawing in which,

Figure 1 is a side elevational view of my improved hair curling device, drawn substantially full size.

Figure 2 is an enlarged end elevation of the device shown in Figure 1, taken substantially on line 2—2 of Figure 1.

Figure 3 is a cross sectional view, on the same scale as Figure 2, taken on line 3—3 of Figure 1.

Figure 4 is a vertical cross sectional view of the curler shown in Figure 1 with a curl wound on the spindle thereof and a bobby pin in place to hold the curl in position.

Figure 5 is a vertical cross sectional view taken

on line 5—5 of Figure 4 and illustrating how the strand of hair is retained in the slot in the spindle.

Figure 6 is a fragmentary perspective view of the slotted end of the spindle of my curler with a curl wound thereon and a retaining bobby pin in position.

Figure 7 is a view showing the curl illustrated in Figure 6 as it appears after being removed from the curling spindle by the sliding sleeve.

Figure 8 illustrates the manner in which a pin curl is removed from the spindle and secured in position by a standard hair pin.

Figure 9 is a view of the pin curl shown in Figure 8 after my curler has been removed.

Figure 10 is a side elevation, generally similar to Figure 11 but illustrating a slightly modified form of my invention.

Figure 11 is a longitudinal sectional view of the curler shown in Figure 10.

Figure 12 is an enlarged cross sectional view, taken on line 12—12 of Figure 10.

Referring to Figure 1, it will be seen that my curler includes a curling spindle or rod 1 of tubular form having oppositely disposed slots 2 extending inwardly from one end for a part of its length. The outer ends of the slots 2 are flared or rounded at 3 to facilitate the entry of a strand of hair as will be fully explained later.

The tube 1 has a portion 4 of reduced diameter, a flange 5 being formed where the portion 4 joins the curling spindle 1. The curl removing sleeve 6 has a sliding fit on the curling spindle 1 and has an inwardly extending flange 7' which is adapted to engage the flange 5 and prevent the sleeve from being removed from the spindle 1. An enlarged head or handle member 7 may be secured to the end of the spindle portion 4 in any suitable manner and serves as a grip for the operator and may also prevent removal of the sleeve 6 from the handle end of the curler (the left hand end in Figures 1 and 2). A flange 8 extends outwardly from the end of the sleeve 6 which is remote from the flange 7' and is formed with a plurality of holes 9 which are flared or counterbored as seen in Figure 4 to facilitate entry of one leg of a bent double-ended hair pin as will be described later. These holes are rather closely spaced around the flange 8, and the sleeve 6 is preferably limited in its retracting movement and prevented from rotating relative to the spindle 1 by means of a pin 10 which projects into the slot 2 in the spindle 1. The sleeve 6 is so proportioned and the flanges 5 and 7' so disposed that, when the sleeve 6 is in its extreme extended position,

the outer face of the flange 8 will be substantially in alignment with the end of the spindle 1. The pin 10 may limit the retracted position of the sleeve 6, as indicated in Figure 1 or the slots 2 may be extended to permit the sleeve 6 to abut against the flange 7'. Preferably the sleeve 6 and handle 7 are made of "Bakelite" or other suitable light weight plastic material.

A hair pin shaped spring wire loop 11 has its inner ends secured to the sleeve 1 in any suitable manner, as by fitting into holes in the sleeve as seen at 12 in Figure 4. The plane of the loop 11 is substantially at right angles to a plane passing through the slots 2, and when the outer end of a strand of hair is slipped into the slots 2, it will be forced to take a kinked or bent position as shown at 13 in Figure 5. Thus the spring loop 11 provides an extremely simple and effective means for offering resistance to pulling of the end of the strand of hair out of the slots 2 in a radial direction after it has been slid into the slots in an axial direction.

Assuming that it is desired to form a round curl of the type shown in Figure 7, the operation is as follows:

The sleeve 6 is retracted into the position shown in Figure 1, and the end of a strand of hair is slid into the slots 2, the spring 11 imposing sufficient friction to prevent the hair from pulling out of the slot while the winding operation is being started. Next the spindle 1 is rotated to wind the hair around it as indicated at 14 in Figures 4, 5 and 6. The user next takes a common bobby pin or other suitable U-shaped type of hair pin, and slips the pin over the end of the tubular sleeve 1 so that the end of the outer prong or leg 16 of the pin passes into and through one of the holes 9. By providing a plurality of holes 9 closely spaced around the flange 8 and by flaring the outer ends of these holes, the outer prong 16 of the bobby pin will automatically pass through one of the holes and the operator is relieved of the problem of attempting to pass the end of the pin through a hole which cannot be seen when the user is curling her own hair.

The curl and curler now appear substantially as shown in Figure 6, and the next operation is simply to slide the sleeve 6 toward the open ends of the slots 2 until the curl 14 is pushed off of the end of the spindle 1 whereupon the prongs 16 and 17 of the bobby pin will spring together retaining the round curl in position as shown in Figure 7. Preferably the corrugated or crimped prong 17 of the bobby pin is inserted into the inside of the tubular spindle 1 as this results in the flat side of the pin being disposed on the outside of the finished curl.

When it is desired to form a flat or "pin curl" the end of the strand of hair is inserted into the slots 2 in the manner described above, and the curl is wound upon the spindle 1. Then the end of the spindle 1 is positioned adjacent the user's head and the sliding sleeve 6 pushed down into the position shown in Figure 8 thus compressing the curl and pushing it against the user's scalp. While in this position an ordinary hair pin 18 is pushed through the curl in a direction generally parallel to the head and then the curler is withdrawn, leaving the curl secured in position with its axis substantially perpendicular to the head, as shown in Figure 9.

In Figures 10, 11 and 12 I have illustrated a modified form of my curler which employs a curling spindle 19 of uniform diameter throughout its length. Diametrically opposed slots 20 extend

from the right hand end of the spindle 19 inwardly and are rounded off at their outer ends in the same manner as described above in reference to Figure 1.

The handle flange 21 is also similar to flange 7, and the sliding sleeve 22 and its curl removing flange 23 correspond to and perform the same functions as the sleeve 6 in flange 8 previously described. In this embodiment of my invention, however, the sleeve 22 has a sliding fit on the uniform diameter spindle 19 and a pin 24 extends across from one side of the sleeve 22 to the other through the slots 20. This is clearly shown in Figure 12 and, from Figure 11 it will be observed that the pin 24 passes through between the opposite legs of the hair retaining spring loop 25.

When the sleeve 22 is moved toward the outer end of the spindle 19 to remove a curl therefrom, it will be prevented from moving beyond the end of the sleeve 19 by engagement of the pin 24 with the closed end of the spring loop 25. The pin 24 also prevents relative rotation of the spindle 19 and sleeve 22, and thus the strand retaining spring 25 and the pin 24 coact to perform the functions of the shoulders 5 and 7', and the pin 10 of the form of my invention shown in Figures 1 to 5.

From the above description of two embodiments of my improved curler it will be observed that my device is extremely simple in construction and in operation. It is equally adaptable to the formation of "pin curls" and the type of curl shown in Figure 7 and may be operated by the user to curl her own hair without the necessity of extensive practice or great skill.

Although I have described the illustrated forms of my invention in considerable detail, it will be understood by those skilled in the art that variations and modifications may be made in the particular arrangement of parts without departing from the spirit of my invention. I do not therefore wish to be limited to the particular forms herein shown and described but claim as my invention all embodiments thereof coming within the scope of the appended claims.

I claim:

1. A hair curling device adapted to form a round curl and secure same by a bobby type hair pin comprising a tubular spindle having oppositely disposed slots extending inwardly from one end thereof, and a sliding sleeve disposed on said spindle and adapted to slide toward said end thereof over said slots, said sleeve including a flange portion having a plurality of circumferentially disposed holes extending therethrough and positioned at one end of said sleeve to engage hair wound around the slotted portion of said spindle, said holes being closely spaced and having enlarged outer end portions whereby the end of a hair pin will automatically be guided into one of said holes when moved toward said flange.

2. A hair curler adapted to form round curls and secure same by bobby type hair pins including a tubular spindle member having oppositely disposed slots extending inwardly from one end thereof, a sleeve slidably mounted on said spindle, means for restricting sliding movement of said sleeve on said spindle whereby removal of said sleeve from said spindle is prevented, and a flange on said sleeve at the end thereof adjacent said one end of said spindle, said flange having a plurality of closely spaced holes extending around said spindle in close proximity thereto whereby

the end of a hair pin will pass into one of said holes when moved over said tubular sleeve.

3. A hair curler comprising a slotted tubular spindle and a sleeve member slidably mounted thereon, said sleeve member having a flange at one end thereof and said flange being formed with a plurality of circumferentially spaced holes extending axially therethrough, said holes being adapted to permit one leg of a U-shaped hair pin to project therethrough when the other leg of the hair pin is disposed within said tubular spindle.

4. A hair curling device comprising a tubular spindle having a slot extending inwardly from

one end, a sleeve slidably mounted on said spindle, spring means for retaining a strand of hair in said slot comprising a wire loop having its closed end disposed toward the slotted end of said spindle, a stop member secured to said sleeve and extending into said slot in said sleeve and said loop whereby engagement of said stop with the closed end of said loop will limit movement of said sleeve in one direction, and a flange on said sleeve and having a plurality of radially spaced hair-pin receiving apertures formed therein.

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