March 12, 1935. N. FULTON 1,994,099

HAIR CURLER

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Fig. 1.

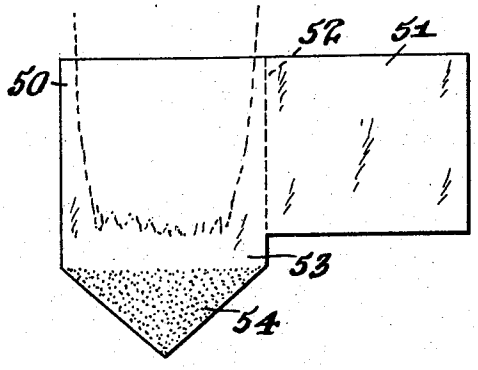


Fig. 2.

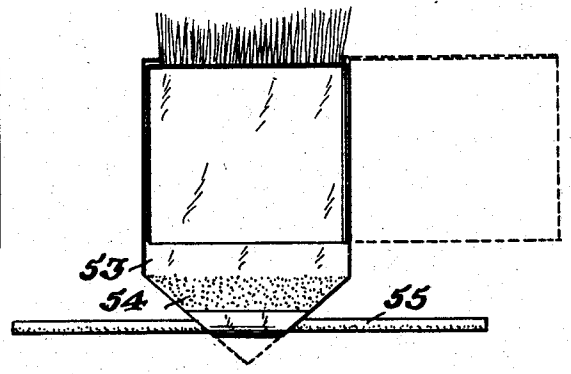


Fig. 3.



Fig. 4.

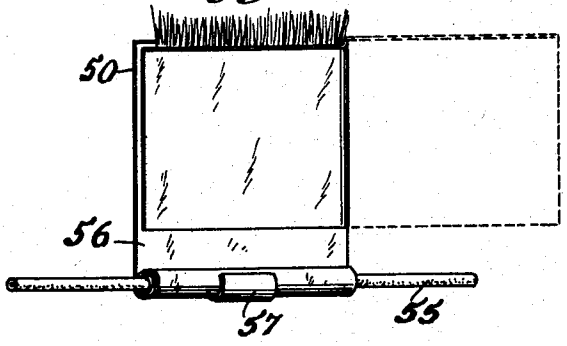


Fig. 6.



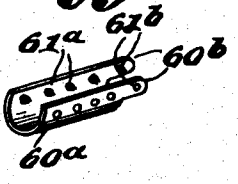
Fig. 5.



Fig. 7.



Fig. 8.



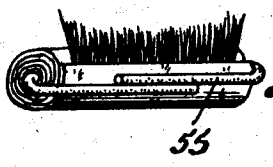


Fig. 9.

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HAIR CURLER

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Fig. 10.

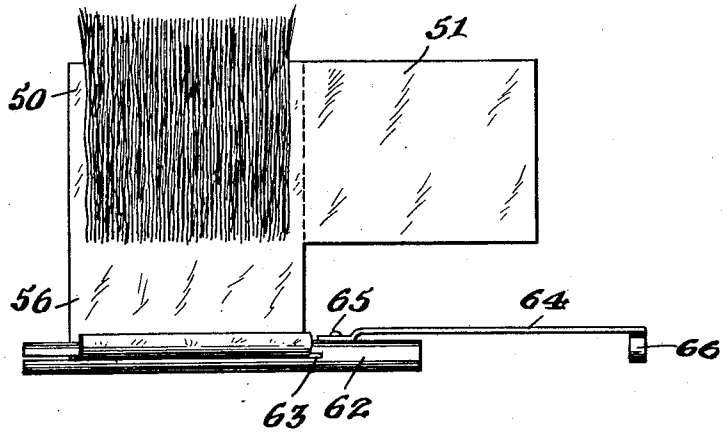


Fig. 11.

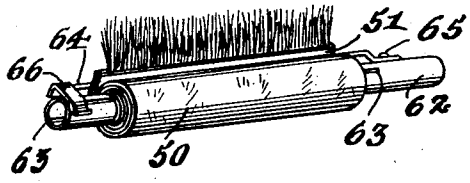


Fig. 12.

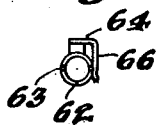


Fig. 13.

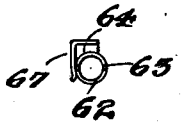


Fig. 14.

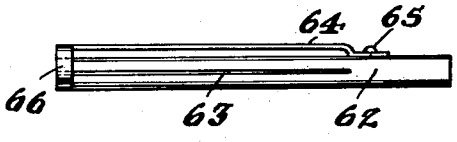


Fig. 15.

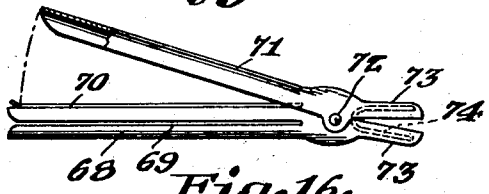


Fig. 16.

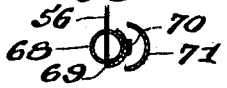


Fig. 17.

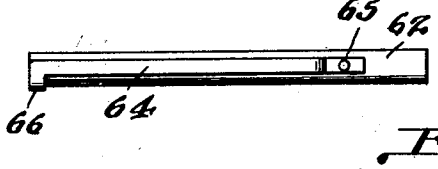
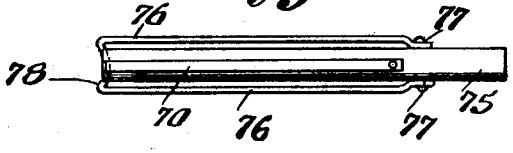


Fig. 18.



Fig. 19.



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Fig.20.

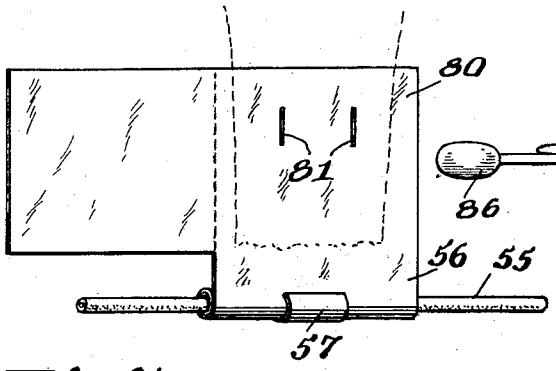


Fig.22.

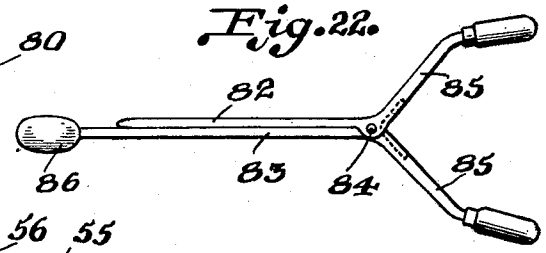


Fig.21.

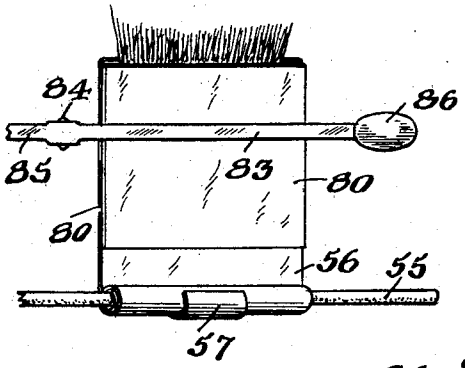


Fig.23.

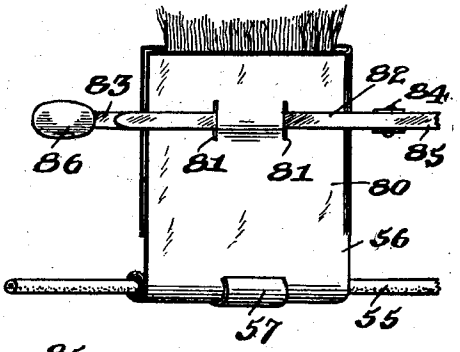


Fig.24.

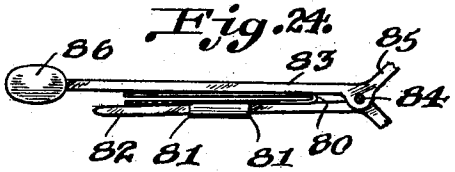


Fig.25.

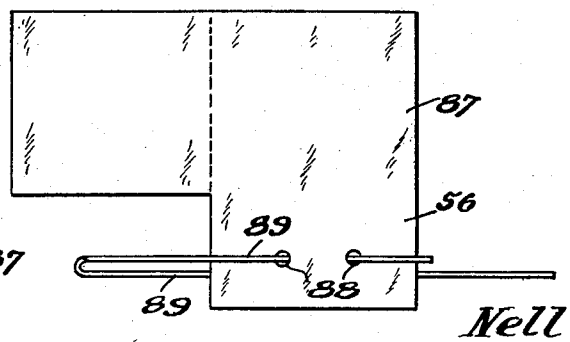
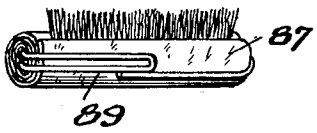


Fig.26.



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Fig. 27.

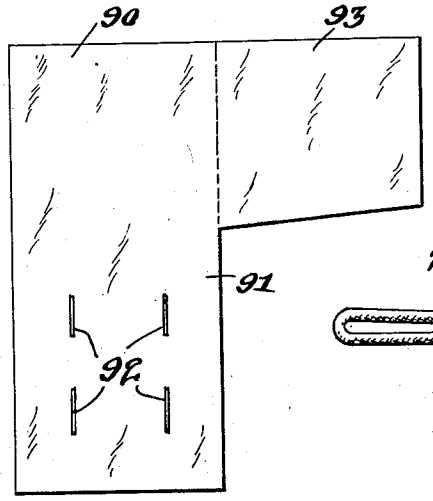
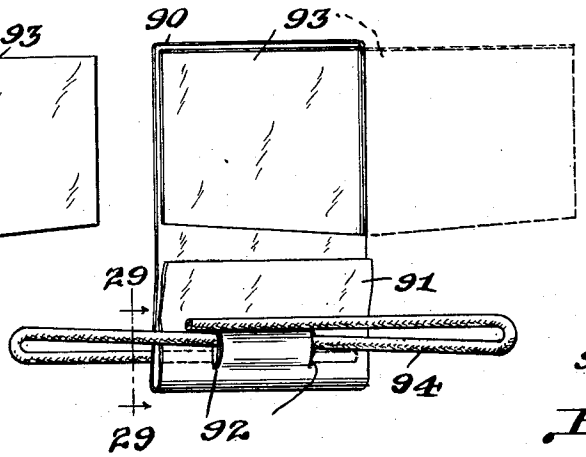


Fig. 28.



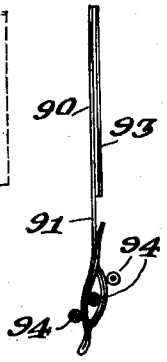


Fig. 29.

Fig. 30.



Fig. 31.

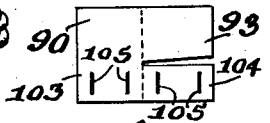


Fig. 32.

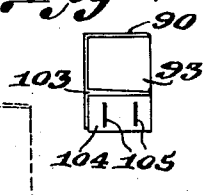


Fig. 33.

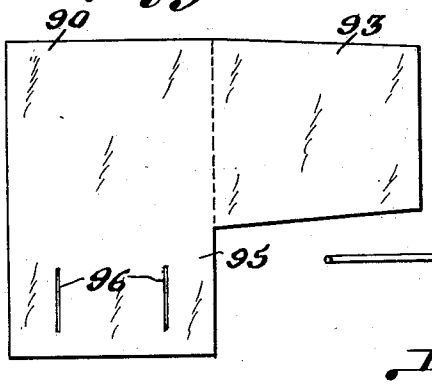


Fig. 34.

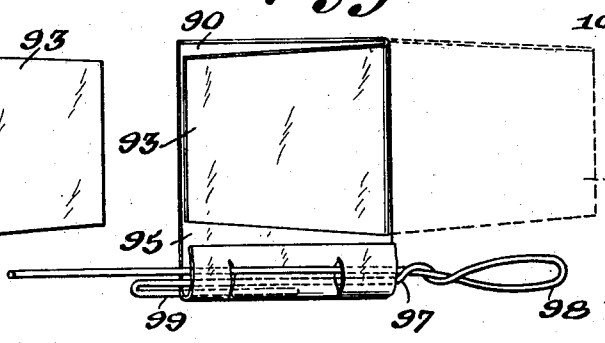
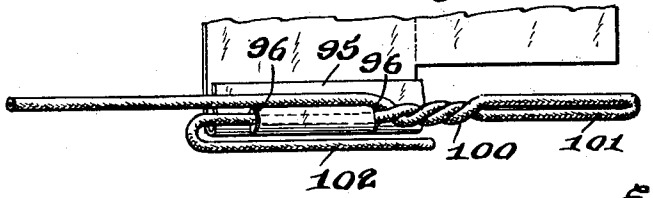


Fig. 35.



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Attorney

Patented Mar. 12, 1935 1,994,099

UNITED STATES PATENT OFFICE

1,994,099

HAIR CURLER

Nell Fulton, New York, N. Y.

Application December 27, 1932, Serial No. 649,028

10 Claims. (Cl. 132—38)

The present invention relates to hair curler, and has for an object to provide certain improvements in this type of device wherein the body portion thereof may be flexible and is made independently of the securing device for holding it in rolled position, so that the flexible body portion may be made of paper or other suitable substance which is relatively cheap and may be thrown away after each use.

Another object of the present invention is to provide a hair curler with a detachable or separate body portion which may be made of absorbent material so as to assist in the drying of the hair by absorbing moisture therefrom when the curler is in rolled or packed position.

The invention further aims to provide a hair curler which may be used by professional hair dressers, or for individual private use and wherein the flexible body portions may be supplied in multiple, such as in pad form, and to provide a body portion which may be produced from a single blank in one piece and provided with the necessary means not only of enclosing a lock of hair, but also with the necessary cooperating means for the temporary attachment of the rolling and holding device which is used so that these rolling or holding devices may be purchased in relatively small quantities and used continuously with any desired number of flexible body portions.

The invention also provides improved means for not only rolling the body portions with the lock of hair therein, but also of improved means for securing these devices temporarily to the body portion and for subsequently securing the device in rolled position in place whether the curler is rolled inwardly or outwardly with reference to the side of the head.

Another and important object of this invention is to provide a separable flexible body part and rolling device and holder by use of which the curler may be rolled with a lock of hair therein and held in rolled position for a desired period of time to set the hair when the rolling and holding device may be removed by sliding it endwise from the rolled curler; the set hair and body part having sufficient stiffness to substantially remain in rolled position. The rolling device may be removed at any time after the rolling operation.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views,

Figure 1 is a plan view of a flexible body portion comprising the major part of the curler, the dotted lines showing a lock of hair placed with reference thereto and before the curler is closed.

Figure 2 is a similar view showing the curler closed on the lock of hair and showing the rolling and holding device in position on the lower end of the body part, the dotted lines showing the initial position of the body part before being folded.

Figure 3 is a perspective view of one of the rolling or holding devices employed.

Figure 4 is a view similar to Figure 2 but showing a modification in the attachment of the holding device to the body portion.

Figure 5 is a detail perspective view of the spring clip illustrated in Figure 4.

Figure 6 is a slight modification of the clip of Figure 5.

Figure 7 is a detail perspective view of a further modification of the clip.

Figure 8 is a like view of a further modified form of clip.

Figure 9 is a perspective view of the curler in rolled position on a lock of hair and showing the holding device in securing position.

Figure 10 is a plan view of a curler constructed according to this invention, showing a modified form of rolling and holding device therefor.

Figure 11 is a perspective view of the same in rolled and secured position on a lock of hair.

Figure 12 is an outer end view of the holder.

Figure 13 is a similar view but showing a slight modification in the spring tongue employed.

Figure 14 is a detail side elevation of the rolling and holding device of Figure 10.

Figure 15 is a similar view showing a further modification in the holding device.

Figure 16 is a transverse section through the same.

Figure 17 is a top edge view of the modified form of the holding device shown in Figure 14.

Figure 18 is a similar view of another form of the holding device.

Figure 19 is a side view of the same taken at right angles to the showing of Figure 18.

Figure 20 is a plan view of a modified form of the flexible body portion of the curler, the dotted lines showing a lock of hair in relation thereto.

Figure 21 is a like view showing the body portion folded on the lock of hair, and showing the

application of a temporary clamp for the body portion.

Figure 22 is a detail edge view of the clamp shown in Figure 21.

Figure 23 is a side elevation of the device shown in Figure 21 but discloses the opposite side thereof.

Figure 24 is a top edge view of the same.

Figure 25 is a plan view of a modified form of the flexible body part and a modified construction of the rolling and holding device applied thereto.

Figure 26 is a perspective view of the modification of Figure 25 in rolled and secured position upon a lock of hair.

Figure 27 is a detail plan view of a further modified form of the flexible blank.

Figure 28 is a side elevation of the same in folded position and showing a modified construction of holding and rolling device applied thereto.

Figure 29 is a longitudinal edge view of the same, showing a section on the line 29—29 of Figure 28 through the holding device.

Figure 30 is a perspective view of the curler of Figure 28 in rolled and secured position.

Figure 31 is a plan view of a modified form of the flexible body part.

Figure 32 is a side elevation of the same folded ready for use.

Figure 33 is a detail plan view of a modified form of the flexible body part of the curler.

Figure 34 is a side elevation of the same folded, and showing a further modified form of holding device applied thereto, and

Figure 35 is a fragmentary enlarged view of the lower end of the body part of Figure 34 showing another modified form of holding device applied thereto.

Referring now to the drawings, and first to Figures 1, 2 and 3, the curler comprises a body portion 50 which is preferably constructed of paper or other suitable absorbent and inexpensive material which may be used but one time only and then discarded. The body portion 50 is substantially rectangular in form and has at one side a wing part 51 adapted to be folded over on substantially the line 52, and which is preferably disposed intermediate the ends of the body portion so as to provide two equal side sheets or parts for receiving therebetween the free end of a lock of hair, as shown in Figures 1 and 2. The main body of the body portion 50 is provided at its lower edge with a tongue extension 53 which is of a width corresponding to substantially half the length of the body portion 50 and is thus defined between one end of the body portion and the fold line 52. The lower end of this tongue 53 may be tapered and provided upon either one or both sides with a coating 54 of an adhesive adapted to engage a preferably cloth covered bendable wire 55.

As shown in Figures 2 and 3, the wire 55 is of a length which may more or less correspond to that of the body blank 50 but which is offset from one end of the blank so as to engage the intermediate portion of the wire 55 with the lower pointed end of the gummed or adhesively coated tongue 53.

The gummed surface is adapted to be moistened and the wire 55 engaged with the gummed surface and rolled into the tongue 53 so as to securely attach the wire 55 to the tongue. As is usual in this type of curler, the wire 55 is employed as a rolling means which is adapted to roll up the body portion into the form shown in Figure 9 after a lock of hair has been engaged between the folded sides of the body portion, as shown in Figure 2. After the hair has sufficiently set, and the absorbent body portion 50 has dried out the hair to a more or less extent, the curler may be released by bending back the free ends of the wire 55 and unrolling. The body portion may then be stripped or otherwise suitably removed by tearing or the like from the wire 55 and the wire 55 may be used any number of times desired with successive new body portions 50.

With reference now to Figures 4 and 5, the body portion 50 may be provided with a depending tongue 56 of rectangular construction, as shown by the dotted lines in Figure 4. This tongue 56, instead of having an adhesive coating 54 or the like thereon, may be initially rolled about the wire 55 and secured thereto by means of a spring clip 57.

The spring clip 57 may comprise a rolled blank of yieldable material with its edge portions slightly spaced apart so as to snap over the rolled end of the tongue 56 and to bind and lock the same upon the holding wire 55. After the curler is used, the spring clip 57 may be quickly and easily removed so as to free the wire 55 for further use while the body portion 50 may be destroyed.

In Figure 6 a slight modification of the spring clip is shown wherein the body part 58 of the clip has along its free edges a plurality of inturned teeth or serrations 59 adapted to bite into the material of the tongue 56 to insure the retention of the tongue on the wire 55.

In Figure 7 the spring clip 60 is further modified by providing in its opposite side walls inwardly pressed indentations 61 which form projections adapted to engage into the material of the tongue 56 and thus insure the attachment of the tongue to the holding wire 55.

As shown in Figure 8, the lower end of the tongue 56 may be secured to the wire 55 by a spring clip 60*a* which is preferably of substantially tubular form but with its free edges spaced apart a short distance to admit the rolled portion of the tongue 56 to pass therethrough. The spring clip 60*a* is provided in opposite sides with indentations or projections 61*a* adapted to engage in the tongue 56 and hold it in clamped position upon the wire.

The clip 60*a* has at opposite sides and at one end a pair of opposed extensions or lugs 60*b* preferably provided with registering indentations 61*b* for engaging the rolled tongue 56, and which provide a ready means for releasing and positioning the clip as these tongues are relatively yieldable and may be initially flexed to open the jaw portions of the clip.

In Figures 10 to 15 and 17, the modified form of rolling and holding device comprises a preferably hollow tube 62 having a diametrical slot 63 extending from one end of the tube 62 to a point adjacent its opposite end, the slot 63 being of sufficient size to receive slidably therein the free end of the tongue 56 of the flexible body 50.

The inherent resiliency of the hollow tube 62 is adapted to clamp the tongue 56 to the tube and the tube may then be rolled in the same manner as is the wire 55 so as to finally dispose the curler in the applied condition shown in Figure 11.

After the curler has been rolled into position, the same is held in place by a pivoted arm or holding device 64 which, in the present instance may comprise a length or strip of flat metal piv-

oted at 65 upon the tube 62 beyond the slot 63, as shown in Figure 10 and with the strip 64 offset outwardly from the tube to an extent sufficient to accommodate the rolled body portion 50 with the lock of hair therein. The free end of the arm 64 is provided with a spring tongue 66 of sufficient length to snap over the free slotted end of the tube 62, as shown in Figure 11, when the arm 64 is swung about its pivot 65 to hold the curler from unrolling. It will be noted that during the rolling operation the arm 64 is turned on its pivot so as to extend lengthwise of the tube 62 and the arm 64 will thus be out of the way of the body portion 50 when the latter is folded over on the lock of hair. The arm 64 takes the place of the free ends of the wire 55 which are adapted to be bent into overlapping position upon the outside of the rolled body portion, as shown in Figure 9.

After the curler has been used, the tube 62 is merely slipped from the end of the tongue 56 so that the body portion 50 may be discarded and a fresh body portion inserted in lieu thereof.

As shown in Figure 13, the arm 64 may be provided with the tongue 67 on the opposite side of the arm for use with a curler which may be rolled inwardly toward the head instead of outwardly, as shown in Figure 11. Thus, right and left rolling holders may be used without any modification in the structure of the body portion.

The modification shown in Figures 15 and 16 shows a hollow tube 68 having a diametrical slot 69 for receiving the lower end of the tongue 56, and also shows a spring finger 70 lying against one of the unslotted sides of the tube 69 for engaging over the free end of the tongue 56 after the latter has passed through the slot 69 to insure the clamping of the tongue on the tube 68.

The holding device for use after the curler is rolled into place comprises an outer jaw or arm 71 which is of suitable transverse curvature to conform generally to that of the rolled curler, as shown in Figure 16.

One end of the arm 71 is mounted at opposite sides upon a pivot 72 disposed transversely through the inner end of the tube 68. The tube 68 and the arm 71 are provided with handle portions 73 between which is disposed a flat spring 74 adapted to urge the handles 73 apart and thus urge the arm 71 into closed position toward the tube 68. The arm 71 takes the place of the arm 64.

In the modified form of rolling device shown in Figures 18 and 19, the slotted tube 75 has a modified form of holding device comprising a spring wire bail 76 pivoted at its free ends upon a rivet 77 or the like with the arms of the bail extending in spaced relation along the opposite sides of the tube 75 to the outer end thereof, and the closed end of the bail is preferably arched inwardly to a slight extent to provide a spring indentation 78 adapted to snap into the flared or beveled seat 79 formed in the outer or free end of the tube 75. This bail 76 may be swung entirely around so as to extend lengthwise of the tube in the manner in which the arm 64 of Figure 10 is positioned during the rolling action, and the bail 76 may be swung either to the right or left, depending upon the direction in which the curler is rolled.

In Figure 20 the flexible body portion 80 is of the same construction, as shown in Figure 4, with the exception that the main part thereof is provided with a pair of spaced apart longitudinal slots 81 adapted to lie at one side of the curler when it is overturned and applied to a lock of hair.

The purpose of the slots 81 is to receive therethrough in threaded relation the preferably pointed end of a clamping jaw 82 of a clamp, the clamp having an opposite jaw 83 and the jaws adapted to engage across the opposite sides of the folded body portion, as shown in Figures 21, 23 and 24 to clamp the body part on the lock of hair. The jaws 82 and 83 are connected together at one end by a pivot 84 and are provided with handles 85 extending beyond the pivot. To counterbalance the handles 85 when clamped upon and suspended from the folded device and the lock of hair, the outer jaw 83 is provided with a counterweight 86 so that the device may hang true against the head. The slots 81 are located near the upper edge portion of the curler body 50 so that the lower part of the curler may be rolled evenly and smoothly without the necessity of holding the curler folded during the rolling operation. As soon as the curler is rolled into place, the clamp may be readily opened and withdrawn from the slots 81. This clamp is merely used for holding the curler temporarily while it is properly rolled.

In Figure 25 is shown a slightly modified form of flexible body part 87 which is similar in shape to the body part shown in Figure 20 with the exception that in the tongue 56 is provided a pair of spaced apart apertures 88 adapted to receive in threaded relation therethrough the free end of a bendable wire holder 89 which is preferably overturned upon itself with one end shorter than the other. The shorter end is adapted to be threaded through the openings 88 so as to anchor the tongue 56 to the holder. After the holder 89 is rolled with the tongue 56 over upon the body portion, as shown in Figure 26, the free ends of the holder are then bent over the exterior of the curler to hold it in rolled position as shown in Figure 26.

When the curler has remained in rolled position on the hair, as shown in Figure 26, for the desired length of time to set the hair and the flexible body of the holder, the ends of the wire holder 89 may be bent out into straight position and slipped out of the rolled body portion for further use. The body portion may remain on the hair without the wire holder for a longer period and be finally stripped from the hair when the hair dressing operation is completed.

In Figures 27 to 30, the flexible body part 90 has as an extension of its main portion a tongue 91 which is relatively long and provided with pairs of spaced apart longitudinal slots 92 adapted to register by the overturning of the lower portion of the tongue, as shown in Figure 28. The free end of the body portion 90, providing the flap 93, is preferably inclined at its lower edge from the tongue 91 outwardly so as to leave sufficient room for the overturned tongue to roll without puckering or distorting the body portion when in use.

The overturned tongue 91 is adapted to receive through both of its thicknesses the intermediate part of a relatively long bendable wire holder 94 which may be of cloth covered wire or the like and which is threaded through the registering slots 92 to provide a double thickness of the tongue 91 at opposite sides of the holder.

The free ends of the wire holder 94 are overturned upon the body part of the holder, as shown in Figure 28, to provide a desired thickness and evenness to the opposite sides of the

tongue and thus prevent the tearing or destruction of the tongue when in use. After the curler is rolled into position, the free ends of the holder 94 are merely bent over about the outer side of the rolled curler, as shown in Figure 30.

Figures 31 and 32 show a modification of the tongue carried by the flexible body 90. The tongue 103 is provided with a flap or extension 104 which is preferably of similar width to that of the tongue 103, and spaced longitudinal slots 105 are provided in both the tongue and the flap and are adapted to register when the flap 104 is folded over on the tongue into the position shown in Figure 32. This provides a suitable reinforce similar to the showing in Figures 27 and 28 but with the overlap of the tongue disposed at one side thereof so as to condense the blank from which the body portion is made.

In Figure 33 the body portion 90 is provided with a shorter tongue 95 having a pair of longitudinal spaced apart slots 96 which are of sufficient length to register at their opposite ends when the tongue 95 is overturned upon itself into the position shown in Figure 34. A wire holder 97 is employed which comprises a length of wire overturned upon itself and twisted near its overturned end to provide a handle 98. One end of the wire holder 97 is threaded through the slots 96 and the tongue 95 overturned with the other free end of the wire therein, and the free extremity of the latter end of the holder 97 may be overturned as at 99 against the outer side of the tongue 95 to hold the parts in place.

As a slight modification of this form, Figure 35 shows the holder 100 comprising an overturned wire which is twisted together near one end providing a handle 101 at one end of the holder by means of which the free ends of the wire may be threaded through the folded tongue 95 and the slots 96.

The free end of the holder 100 which is threaded through the slots 96 may be overturned, as at 102 upon the tongue 95 to retain the holder in place. The unbent free ends of the holders 97 and 100 are adapted to be bent over upon the outer side of the body portion 90 of the curler when it is rolled into position.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims:

What is claimed is:

1. A hair curler comprising a flexible body portion adapted to be engaged about a lock of hair, and a readily removable rolling device connected to the body portion for rolling the same with the hair therein into rolled position, said rolling device being removable from the body portion for subsequent use with other body portions whereby a single rolling device may be used for individually applying a stack of the body portions to the hair.

2. A hair curler comprising a flexible body portion adapted to be engaged about a lock of hair and having a depending tongue, and a readily removable rolling device connected to the tongue for rolling the body portion with the hair therein into rolled position, said rolling device adapted to be slipped out of the rolled body portion for subsequent use and to leave the body portion in rolled position with the hair.

3. A hair curler comprising a flexible body part adapted to be engaged about a lock of hair, and a rolling device removably connected to the body portion for rolling the same with the hair therein, said rolling device adapted to be slid from the end of the rolled body portion to leave the same in engagement with the hair.

4. A hair curler comprising a flexible body portion adapted to envelop a lock of hair and having a depending tongue, and a rolling device detachably secured to the tongue for rolling the body portion with the hair therein into rolled position, said device adapted to be withdrawn lengthwise from the rolled body portion and tongue.

5. A hair curler comprising a flexible body portion adapted to envelop a lock of hair and having a depending tongue with spaced openings therein, and a removable rolling and holding device threaded through the openings in the tongue for rolling the body portion with the hair therein.

6. A hair curler comprising a body portion having a flap at one edge adapted to be folded over the body portion to enclose a lock of hair therebetween, said body portion having a depending tongue with spaced openings therein, a single length of wire overturned upon itself with a long end and a short end, the short end of the wire adapted to be threaded through said openings in the tongue for connecting the wire to the tongue for rolling the same and the body portion with the flap and enclosed hair into rolled position, the projecting ends of said wire being bendable upon the rolled curler to hold the same in position and adapted to be straightened out whereby the wire may be withdrawn lengthwise from the rolled curler.

7. A hair curler comprising a flexible body portion adapted to envelop a lock of hair and having a depending tongue, and a detachable rolling and holding device carried by the tongue and comprising a split hollow tube for receiving the lower end of the tongue therethrough, and an arm pivotally mounted on the side of the tube near one end adapted to be swung into position over the tube after the body portion has been rolled on the tube, and a spring catch carried by said arm for releasably holding it in position.

8. A hair curler comprising a flexible body portion adapted to envelop a lock of hair, a split tube frictionally engaging the lower end of the body portion for rolling the same with the lock of hair, and a pivoted arm carried on the side of the tube beyond the split portion thereof and adapted to be swung over the tube to hold the body portion and the lock of hair in rolled position, said arm having a spring clip on its free end for snapping engagement over the tube to hold the arm in place.

9. A hair curler comprising a flexible body portion having a lateral flap adapted to be folded over on the body portion to enclose a lock of hair, said body portion having a depending tongue with spaced slots therein, and a wire holding device adapted to be threaded through said slots and overturned upon itself for rolling the tongue and body portion.

10. A hair curler comprising a flexible body portion having a side flap adapted to be overturned to encase a lock of hair, said body portion having a depending tongue with an overturning portion and the tongue and overturning portion having registering slots therein, and a wire rolling device adapted to be threaded through said slots to provide a double thickness of material at the connection of the rolling device and the tongue.

NELL FULTON.