

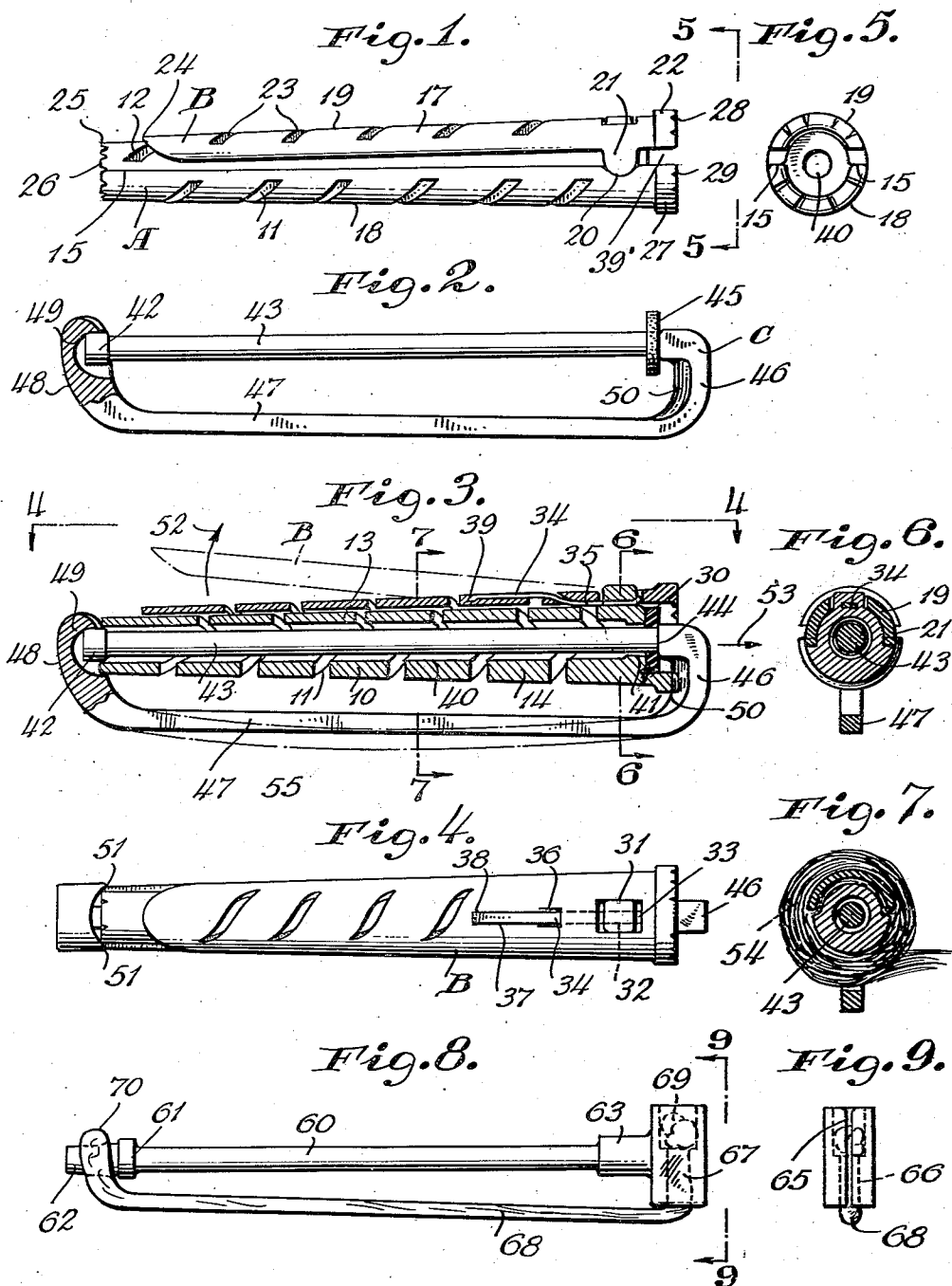
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HAIR CURLER

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HAIR CURLER

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The present invention relates to a curler construction and particularly relates to a woman's curler construction.

Although not restricted thereto it will be particularly described in its application to curlers made of plastic materials.

It is among the objects of the present invention to provide a curler of plastic materials which may be inexpensively manufactured, or molded of relatively few parts, and which will utilize a minimum of plastic material in relation to the effective length of the curler.

With curlers of molded plastic materials, it has been usual to extend the curler substantially beyond the coil of hair to provide for mounts for the curler finger and latch resulting in a waste of plastic material and unnecessarily increased bulk and weight of the curler, and it is among the particular objects of the invention to provide an improved curler of the character described, the effective length of which will not be substantially greater than the coil of hair to be wound thereon, and which at the same time may be readily manipulated, latched and unlatched, in order to permit a beauty parlor operator or the user of such curler to wind a coil of hair thereupon and lock the same in position.

In connection with many types of curlers, it is also found to be quite difficult to provide an effective method of permitting ventilation, or passage of the cooling or heat vapors or liquids, through the coil of hair when upon the curler and it is among the further objects of the invention to provide an improved curler construction which will have enhanced fluid passage means without substantially weakening the construction thereof, and which will permit ingress and egress of fluid such as steam, air, or lotions, through the coil of hair upon the curler.

Still further objects and advantages will appear from the more detailed description set forth below, it being understood, however, that this more detailed description is given by way of illustration since various changes therein may be made by those skilled in the art without departing from the scope and spirit of the invention.

In accomplishing the above objects it has been found most satisfactory to form the curler of a one piece core, of either integrally molded tubular stock or which may be formed of two symmetrical portions welded together.

This core is preferably provided with a plurality of spaced and oblique slots extending through the periphery thereof, and extending an arcuate distance less than 180°. Preferably this

tubular member is shouldered at one side and is provided with a recessed portion which receives a finger member.

The finger member is desirably of such thickness and size as substantially to fill the recess on one side of the curler.

Preferably the finger member is provided with two downwardly extending projections or lugs on the side thereof, which fit into recesses in the base of the curler and serve as pivot connections.

The base member, between such lugs, is desirably formed with a recess which receives a short leaf spring. The other end of the spring projects through an opening in the finger member onto the exterior thereof, and serves to bias said finger member so that it will be closed against the core or mandril.

The latch member preferably consists of a rod, which may also be formed of the plastic material, which fits in a central bore or opening in the core or mandril and has an enlarged end portion or head which must be forced past a reduced diameter portion at the pivot end of the core or mandril.

As a result the rod can only be removed with difficulty from the core or mandril when once inserted or forced past the shoulder in the central opening thereof.

In one form of the invention the central rod of the latch is provided with a return bent extension, extending along the outside of the core and having an enlarged head portion. This enlarged head is recessed at the end of the core or mandril to receive the enlarged head of the central rod or pin.

In an alternative construction, a vinylite or rubber band or a vinylite or rubber rod, or other extensible member, may be caused to fit over the ends of said rod and form the latching construction.

Referring to the drawing which illustrates several of the various possible embodiments of the present invention, but to which the present invention is by no means restricted since the drawing is merely by way of illustration and not by way of limitation:

Fig. 1 is a side elevational view of a curler showing the assembled finger core and mandril without the latch.

Fig. 2 is a side elevational view of the latch element.

Fig. 3 is a transverse side longitudinal sectional view of the combined latch, core, and mandril and gripping finger.

Fig. 4 is a top view of the assembly of Fig. 3 upon the line 4—4 of Fig. 3.

Fig. 5 is an end view of the combined finger and core or mandril taken from the line 5—5 of Fig. 1.

Figs. 6 and 7 are respectively transverse sectional views upon the lines 6—6 and 7—7 of Fig. 3, and

Figs. 8 and 9 represent an alternative construction of the latch element, Fig. 8 being a side elevational view, and Fig. 9 being an end elevational view taken from the line 9—9 of Fig. 8.

Referring to Figs. 1 to 7, the curler has a core or mandril A, a locking finger B, and a latch construction C.

The core A, as shown in Figs. 1 and 3, is formed of a tapered, hollow piece of plastic material 10, having a plurality of oblique slits or slots 11 and 12, upon the upper and lower base thereof, and which extend less than 180° around the periphery of the base 10.

The upper portion 13 of the core 10 is of less thickness than the lower portion 14 by amount equal to the diametrically opposite shoulders 15. The thickness of the portions 17 of the finger B is such that the outside face 18 of the lower portion of the core A and the outside face 19 of the finger 17 will be substantially flush with each other.

The shoulders 15 are recessed, as indicated at 20, to receive the depending lugs 21 at the sides of the head 22 of the finger B, and the lugs 21 and the recess 20 form a pivot means between the finger B and the core A.

The finger B is also provided with the oblique slots 23, which slots 23, together with the slots 11 and 12, permit airing or passage of fluid or liquid through the coil of hair wound around the core or mandril A.

The finger B becomes smaller and is tapered and terminates adjacent the end 24 and the core A extends beyond said end 24 to the terminal portion 25 where it may be notched as indicated at 26.

The semi-circular head portions 22 of the finger B and 27 of the core A are enlarged and also are notched or knurled as indicated at 28 and 29, respectively.

The enlarged head 27 of the core A only extends about 180°, and the core is cut off, as indicated at 30 and has an upwardly projecting knob 31. The knob 31 has a slot 32 receiving the end 33 of the flat spring 34. The flat spring 34 projects through the slot 35 in the upper face of the reduced diameter portion of the core A, and then through an opening 36 in the finger B and finally into a groove 37 in the upper face of the finger B.

The end of the groove 37 is recessed as indicated at 38 to receive the depressed portion 39 of the leaf spring 34. This short length of leaf spring 34 when engaged in the opening 32 in the groove 35 in the core A, and in the groove 37 of the finger B, without other means, will hold the finger tightly against the core A in the position as indicated in Fig. 1.

The open space at 39' permits the head 22 to be pressed toward the head 27, and the finger B to be lifted away from the core A and thus permits insertion of an end of a strand of hair which may then be wound upon the curler.

The interior bore or opening 40, extending axially through the central portion of the core, has a reduced diameter portion at 41, which is

slightly smaller than the diameter of the head 42 of the rod 43 of the latch C.

The head 42 is adapted to be forced past the reduced diameter portion 41, and then will be retained substantially permanently in position inside of the bore 40 of the core A. The rod 43 has a shoulder 44 which receives the rubber or flexible washer or gasket 45 which presses against the end 30 of the core A and acts as a brake member. The end 30 may be roughened or corrugated better to grip the gasket 45.

The latch member is continued by the transverse end portion 46 and continues in the extension 47 to the enlarged head 48 which extends across the end 25 of the core A.

The head 48 has a recess 49 which receives the enlarged end portion 42 of the rod 43, said head 42 snapping into the recess 49.

It will be noted that the web 50 at the inside of the turn 46, and the edges 51 on the sides of the head 48, engage the ridged or corrugated portions 25, 28 and 29 of the core A and finger B, to hold the latch C in fixed position once the coil or hair has been placed upon the core A and locked in position.

In operation, the end of a coil of hair is inserted below the finger B in raised position, as indicated by the arrow 52 in Fig. 3. The finger B is raised by pressing the head portions 28 and 29 together.

During this operation the head 48 is disengaged from the end 42 of the rod 43 of the latch C, and this latch C may be withdrawn to the right in the direction 53, indicated in Fig. 3, with enlarged portion 42 abutting the reduced diameter portion 41.

The head 48 may be latched over the enlarged portion 42 of the rod 43, in the manner indicated in Fig. 3, before the coil of hair is wound up on the core A and the finger B, or the coil of hair may first be wound up on the core A under the finger B before the latch C is engaged, as indicated in Figs. 2 and 3. Preferably, the latch C is withdrawn into the palm of the hand while the forefinger and thumb may be freely used to rotate the core A and finger B upon the end of the rod 43 to wind the strand of hair into the coil 54.

When the coil of hair has been completely formed, as indicated for example at 54, in Fig. 7, the latch whether previously engaged, or engaged at this point, is bowed downwardly as indicated in the dot and dash lines at 55, and the brake disc 45 is tightly pressed against the end face 30, while the edges 50 and 51 engage the notched portions 26, 28 and 29 on the ends of the core A and the finger B.

The curlers with the coils of hair wound tightly thereon may be conveniently worn overnight to give a satisfactory wave. Where permanent waving is desired the curler may be made of metal.

For permanent waving, this coil of hair 54, latched in position, may then be placed in a hair waving pad and treated and steamed in the usual way to give a Croqu Shore wave in connection with other suitable electric clamping or heating devices.

The steam and lotion may readily pass through the coil of hair through the oblique openings 11, 12 and 23 assuring thorough treatment of the coil of hair 54. It will be noted that these oblique openings 11, 12 and 23 permit much more thorough exposure of the coil of hair 54 than rows of small openings.

In the alternative construction shown in Figs. 8 and 9 the latch consists only of a rod 60 having the enlarged portion 61 with a squared extension 62 and the enlarged shoulder portion 63 terminating in an elongated head 64 which is split as indicated at 65 and provided with an opening 66.

In this opening 66 may be forced the end 67 of a rubber band 68, having an enlarged head portion 69.

The other end of the band is provided with an eye portion 70 which may be fitted onto the squared end portion 62 of the rod 60.

The latch, as shown in Figs. 8 and 9, may be of somewhat cheaper construction than that shown in Figs. 1 and 2, and in operation the rod 60, with the enlarged end 61, is forced into the bore 40 with the loop 70 removed from the end 62 and then the rod or band 68 is drawn up and the loop 70 is engaged after the coil of hair has been wound upon the core A and the finger B, as previously described.

It is apparent that the specific illustrations shown above have been given by way of illustration and not by way of limitation and that the structures above described are subject to wide variation and modification without departing from the scope or intent of the invention, all of which variations and modifications are to be included within the scope of the present invention.

What is claimed is:

1. A curler construction comprising an elongated core, a finger pivotally mounted thereon and a latch member to hold a coil of hair thereon, said latch having an outside leg and an inside leg and said inside leg passing longitudinally through the said core, said legs being formed integrally of a molded plastic material.

2. A curler construction comprising an elongated core, a finger pivotally mounted thereon and a latch member to hold a coil of hair thereon, said latch having an outside leg and an inside leg and said inside leg passing longitudinally through the said core, both of said legs being of molded plastic, said legs being integrally connected by said plastic at the pivot mount end of the construction and having a latching connection at the other end of the construction.

3. A curler construction comprising an elongated core, a finger pivotally mounted thereon and a latch member to hold a coil of hair thereon, said latch having an outside leg and an inside leg and said inside leg passing longitudinally through the said core, the outside leg being of rubber and the inside leg being of a plastic, and means at the ends of said inside leg to engage the ends of said rubber outside legs.

4. A curler construction comprising an elongated core, a finger pivotally mounted thereon and a latch member to hold a coil of hair thereon, said latch having an outside leg and an inside leg and said inside leg passing longitudinally through the said core, said inside leg projecting beyond said core and said outside leg having an enlarged integrally recessed head engaging said projecting portion.

5. A curler construction comprising an elongated hollow core, a finger pivotally mounted thereon and a latch member to hold a coil of hair thereon, said latch having an outside leg and an inside leg and said inside leg with an enlarged head passing longitudinally through the

said core, the pivot end of said core having an interior enlargement engaging said head and preventing removal of said inside leg while permitting sliding longitudinal movement of the inside leg.

6. A curler construction comprising an elongated core, a finger pivotally mounted thereon and a latch member to hold a coil of hair thereon, said latch having an outside leg and an inside leg and said inside leg passing longitudinally through the said core, said core having an interior enlargement holding said leg in position therein while permitting sliding longitudinal movement of the leg, said latch when in withdrawn position serving as a handle to enable winding up of the coil of hair on the curler.

7. A curler construction comprising an elongated core, a finger pivotally mounted thereon and a latch member to hold a coil of hair thereon, said latch having an outside leg and an inside leg, and said leg passing longitudinally through the said core, said legs being formed integrally of a molded plastic material, said inside leg being slidable within said core, and being provided with means at the end thereof which prevent withdrawal from said core and also latch with the end of the outside leg.

8. A curler construction comprising an elongated core, a finger pivotally mounted thereon and a latch member to hold a coil of hair thereon, said latch having an outside leg and an inside leg, and said inside leg passing longitudinally through the said core, said legs being formed integrally of a molded plastic material, said inside leg being slidable within said core, and being provided with means at the end thereof which prevent withdrawal from said core and also which latch with the end of the outside leg, said inside leg adjacent said pivot mount carrying a friction disc to be pressed between said latch and said core.

9. A curler construction comprising an elongated core, a finger pivotally mounted thereon and a latch member to hold a coil of hair thereon, said latch having an outside leg and an inside leg, and said leg passing longitudinally through the said core, said legs being formed integrally of a molded plastic material, said inside leg being slidable within said core, and being provided with means at the end thereof which prevent withdrawal from said core and also which latch with the end of the outside leg, the ends of said latch and said core being provided with cooperating means to lock said latch in position in respect to said core and finger.

10. A curler construction comprising an elongated core, a finger pivotally mounted thereon and a latch member to hold a coil of hair thereon, said latch having an outside leg and an inside leg, and said leg passing longitudinally through the said core, said legs being formed integrally of a molded plastic material, said inside leg being slidable within said core, and being provided with means at the end thereof which prevent withdrawal from said core and also which latch with the end of the outside leg, the ends of said latch and the ends of said core being provided with interengaging projections and serrations which engage each other to lock said latch in position in respect to said core.

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