

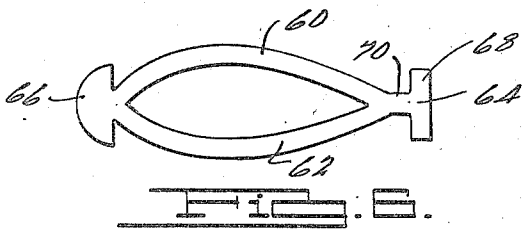
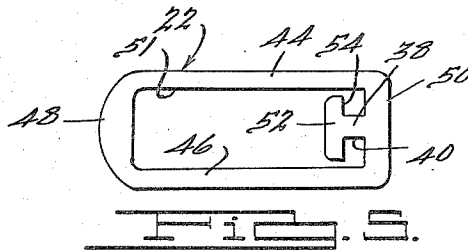
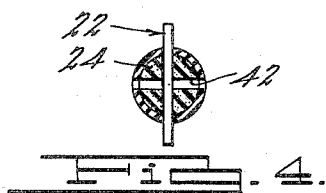
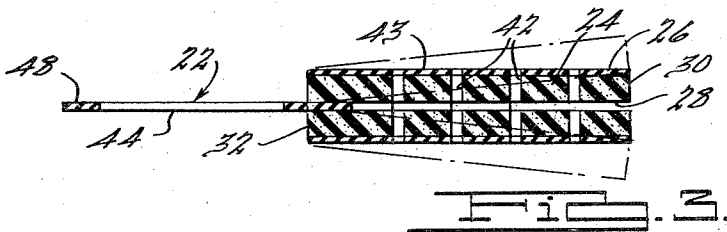
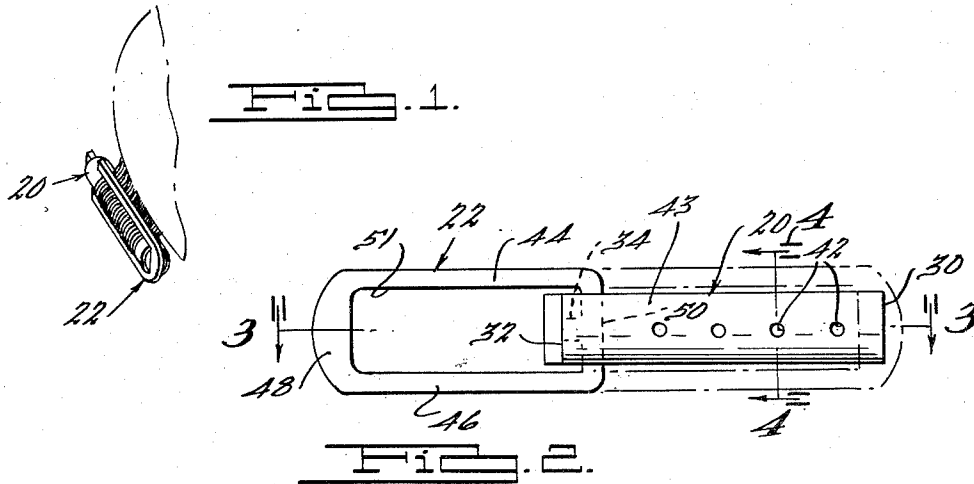
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HAIR CURLER

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2 Sheets-Sheet 1



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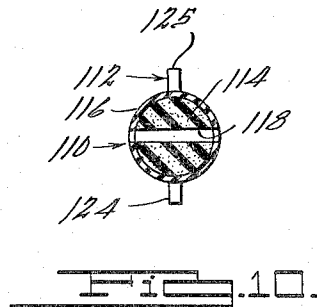
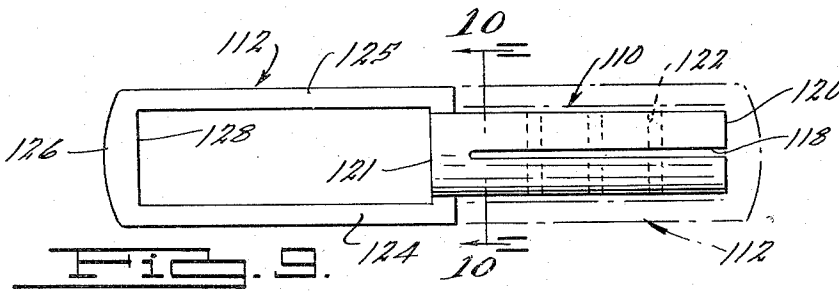
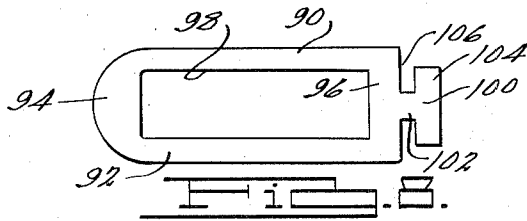
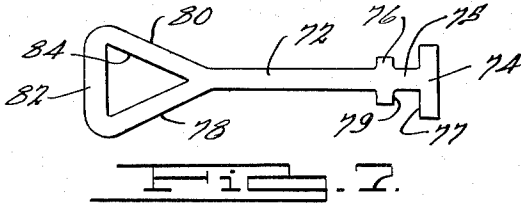
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2 Sheets-Sheet 2



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2,793,645

HAIR CURLER

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11 Claims. (Cl. 132—42)

This invention relates to curling devices and, more particularly, to a novel and improved hair curler.

Heretofore, when using hair curlers, the usual practice has been to wet the hair prior to winding the tresses around the curlers. Since many persons prefer to wet only the portions of the hair that it is desired to curl, as for example, the end portions thereof, such practices have not been entirely satisfactory because of the time and effort that must be expended in carefully wetting the selected portions without wetting the remaining portions of the hair. In order to overcome this disadvantage, some persons wind the tresses around the curlers while the hair is in a dry condition, and then moisten the portions of the tresses that have been wound around the curlers by dabbing the tresses with a moistened applicator. Such practices have also been unsatisfactory since it is difficult to wet the convolutions of the hair thoroughly and evenly, with consequent unsatisfactory results in the final appearance of the curls. In addition, many persons prefer to allow the curls to set overnight while wound around the curlers and prior curlers have been subject to the defect that they are relatively hard and press into the scalp when worn in bed with consequent discomfort to the wearer.

Accordingly, an object of the invention is to overcome disadvantages inherent in prior hair curlers of the indicated character and to provide an improved hair curler which obviates the necessity of wetting the hair prior to winding the tresses around the curler and which enables selected portions of the hair to be wet thoroughly and evenly after the tresses have been wound around the curler.

Another object of the invention is to provide an improved hair curler that is relatively soft and which may be worn comfortably in bed.

Another object of the invention is to provide an improved hair curler that enables the tresses of the hair to be wound easily and quickly around the curler and secured in place with a minimum amount of time and effort.

Still another object of the invention is to provide an improved hair curler that is simple in construction, economical to manufacture and assemble, durable, efficient and reliable in operation.

The above, as well as other objects and advantages of the present invention will become apparent from the following description, the appended claims, and the accompanying drawings wherein:

Figure 1 is a perspective view of a hair curler constructed in accordance with the present invention and showing a portion of a tress of hair wound therearound;

Fig. 2 is an enlarged side elevational view of the form of the invention shown in Fig. 1;

Fig. 3 is a cross sectional view of the structure illustrated in Fig. 2, taken on the line 3—3 thereof;

Fig. 4 is a cross sectional view of the structure illustrated in Fig. 2, taken on the line 4—4 thereof;

Fig. 5 is an elevational view of the fastening element

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of the form of the invention illustrated in Fig. 1, showing the same removed from the body portion of the curler;

Fig. 6 is a side elevational view of a modified form of fastening element;

5 Fig. 7 is a side elevational view of another form of fastening element;

Fig. 8 is a side elevational view of still another form of fastening element;

10 Fig. 9 is a side elevational view of a hair curler constructed in accordance with another embodiment of the invention; and

Fig. 10 is a cross sectional view of the structure illustrated in Fig. 9, taken on the line 10—10 thereof.

Referring to the drawings, one embodiment of the invention is illustrated in Figs. 1 through 5 and includes an elongated, substantially cylindrical body, generally designated 20, and a fastening element, generally designated 22. The body 20 is comprised of an inner cylinder 24 which is preferably made of a resilient liquid-absorbent material, such as sponge rubber or the like, and a sleeve 26 which surrounds the cylinder 24 and which is preferably made of a resilient, relatively stiff material, such as rubber, plastic or the like.

The body 20 defines a slot 28 that is adapted to receive the outer end portion of a tress of hair, as will be described hereinafter in greater detail. The slot 28 is open on opposite sides of the body 20 and at the end 30 thereof, the slot extending longitudinally through the cylinder 24 and the sleeve 26 from the end 30 of the body to a position near, but spaced from, the end 32 thereof.

30 The cylinder 24 also defines an axially disposed opening 34 which is open at the end 32 of the body and which extends through the cylinder 24 so as to communicate with the slot 28. The opening 34 is adapted to receive the leg 38 of a T-shaped portion 40 provided on the fastening element 22 which will be described hereinafter in greater detail.

A plurality of passageways 42 are spaced longitudinally of the body 20 and extend through the sleeve 26 and the cylinder 24 in a direction substantially perpendicular to the plane of the slot 28. The passageways 42 enable fluid absorbed by the cylinder 24 to pass from the cylinder through the sleeve 26 to the exterior surface 43 thereof so as to wet the portions of the tresses of hair wound around the body 20. Fluid may also pass from the cylinder 24 through the open sides of the slot 28 so that, with such a construction, circumferential openings are provided in the sleeve 26 at increments of approximately ninety degrees.

50 In the embodiment of the invention shown in Figs. 1 through 5, the fastening element 22 is of the contour illustrated in Fig. 5 and is preferably made of an elastic material, such as rubber or the like. The fastening element 22 includes a pair of elongated, spaced, substantially parallel side portions 44 and 46 integrally joined at the ends by end portions 48 and 50 so as to define a substantially rectangular opening 51. The T-shaped portion 40 projects from the end portion 50 into the opening 51 intermediate the side portions 44 and 46 and is substantially co-planar therewith. The length of the leg 38 is substantially the same as the length of the opening 34 in the cylinder 24 and leg 38 extends substantially parallel to the side portions 44 and 46 while the transverse portion 52 extends substantially perpendicular to the side portions.

65 In the assembly of this embodiment of the invention, the end 50 of the fastening element 22 is positioned in the slot 28 of the body and the transverse portion 52 of the T-shaped portion is fitted through the opening 34 in the cylinder 24 from the end of the opening 34 adjacent the slot 28 so that when the leg 38 is disposed in the opening 34, the edge 54 of the transverse portion 52 abuts

the end 32 of the body 20. The side portions 44 and 46 then project outwardly from the end 32 of the body as shown in Figs. 2 and 3.

In the operation of this embodiment of the invention, the end portion of the body 20 adjacent the fastening element 22 is preferably grasped between the thumb and one finger of one hand and the body 20 is dipped in water or other liquid that it is desired to apply to the tresses. The body is allowed to remain in the liquid for a short period of time so that such liquid is absorbed by the cylinder 24. The end portion of the body adjacent the fastening element 22 is then pinched so that the portions of the body on the opposite sides of the slot 28 move outwardly in opposite directions, as shown by the dotted lines in Fig. 3. The outer end portion of a tress of the hair is then placed in the slot 28 after which the portions of the body on the opposite sides of the slot are pressed together so as to clamp the end portion of the tress in the slot 28. The body 20 is then rotated and as the body revolves, the tress of the hair is wound tightly around the sleeve 26. When the desired amount of hair has been wound around the sleeve, the convolutions are held in place with one hand while the end 48 of the fastening element 22 is grasped with the other hand and pulled longitudinally over the body toward the end 30 thereof so that the side portions 44 and 46 of the fastening element are return bent and overlie the convolutions of the tresses. As previously mentioned, the element 22 is formed of an elastic material and the element 22 is stretched so that the end portion 48 thereof may be fitted in the open end of the slot 28. When the end 48 is positioned in the slot 28, the side portions 44 and 46 of the fastening element bear against the adjacent portions of the tresses to hold the convolutions securely in place on the body 20. During the time that the tresses are curled around the body 20, the liquid absorbed by the cylinder 24 of the body passes out through the passageways 42 and the sides of the slot 28 to the outer surface of the sleeve 26 so as to thoroughly wet the convolutions of the tresses. The curler is preferably allowed to remain in place until the hair has dried after which the curler may be easily and quickly removed from the tress by removing the end portion 48 of the fastening element from the slot 28 and unwinding the tresses from the body 20.

Another form of fastening element is illustrated in Fig. 6 and is comprised of a pair of elongated, oppositely curved side portions 60 and 62 which are integrally joined at each end. A T-shaped portion 64 projects outwardly from one end of the element while a generally semi-circular portion 66 projects outwardly from the opposite end thereof and facilitates grasping the element. In this embodiment of the invention, the transverse portion 68 of the T-shaped portion is inserted in the opening 34 in the cylinder 24 of the body 20 from the end 32 thereof so that when the leg 70 of the T-shaped portion is disposed in the opening 34, the transverse portion 68 is disposed in the slot 28 while the remaining portions of the fastening element project outwardly from the end 32 of the body 20.

In the operation of this embodiment of the invention, the tress of hair is wound around the body 20 in the manner previously described, after which the end portion 66 of the fastening element is grasped and pulled toward the end 30 of the body 20 so that the portion of the element adjacent the T-shaped portion is return bent while the portions 60 and 62 overlie the convolutions of the tress. The fastening element is then stretched sufficiently so that the portions of the element adjacent the junction of the semi-circular portion 66 with the side portions 60 and 62 may be fitted into the open end of the slot 28. The side portions 60 and 62 then bear against the convolutions of the tress to hold the convolutions securely in place on the body.

Another form of fastening element is illustrated in Fig. 7 and includes an elongated central portion 72 having a transverse portion 74 on one end thereof and a shoulder

76 projecting outwardly from opposite sides thereof at a position spaced from the transverse portion 74, the length of the section 75 between the shoulder 76 and the transverse portion 74 being substantially the same as the length of the opening 34 in the cylinder 24 of the body 20. At the opposite end of the fastening element, a pair of side portions 78 and 80 formed integrally with the elongated portion 72 project angularly outwardly from opposite sides thereon and are integrally jointed at the outer ends by an end portion 82 so as to define a generally triangularly-shaped opening 84.

In the assembly of this form of the invention, the transverse portion 74 is inserted through the opening 34 in the cylinder 24 from the end 32 of the body so that the section 75 of the fastening element is disposed in the opening 34. The edge 77 of the transverse portion 74 abuts the adjacent end of the slot 28 while the edge 79 of the shoulder abuts the end 32 of the body to prevent relative movement between the fastening element 22 and the body 20. In the operation of this form of the invention, the tress is wound around the body 20 in the manner previously described after which the end 82 of the fastening element is grasped and pulled toward the end 30 of the body 20 so that the portion of the fastening element adjacent the shoulder 76 is return bent. The fastening element is then stretched sufficiently so that the portion 82 thereof passes over the end of the body into the open end of the slot 28 while the portion 72 of the fastening element overlies and bears against the convoluted portion of the tress and holds the tress securely in place on the curler.

Another form of fastening element is shown in Fig. 8 and includes a pair of elongated, spaced side portions 90 and 92 integrally joined at the ends by an end portion 94 and an end portion 96 so as to define a substantially rectangularly-shaped opening 98. A T-shaped portion 100, having a leg 102 and a transverse portion 104, projects outwardly from the end portion 96, the leg 102 being integral with the end portion 96. The length of the leg 102 is substantially the same as the length of the opening 34 in the cylinder 24 of the body 20 and the transverse portion 104 is inserted through the opening 34 from the end 32 of the body so that when the leg 102 is disposed in the opening 34, the transverse portion 104 is disposed in the slot 28 while the edge 106 of the end portion 96 abuts the end 32 of the body 20.

In the operation of this form of the invention, the tress of hair is wound around the body 20 in the manner previously described, after which the end portion 94 of the fastening element is pulled toward the end 30 of the body and inserted in the open end of the slot 28. The side portions 90 and 92 of the fastening element then overlie the convoluted portions of the tress and hold such portions securely in place on the body 20.

Another embodiment of the invention is illustrated in Figs. 9 and 10 and includes an elongated substantially cylindrical body portion, generally designated 110, and a fastening portion, generally designated 112. The body portion 110 is comprised of an inner cylinder 114 which is preferably made of a resilient liquid-absorbing material, such as sponge rubber or the like, and a sleeve 116 which surrounds the cylinder 114 and which is preferably made of an elastic material, such as rubber, plastic or the like. The body portion 110 defines an elongated slot 118 which is open on opposite sides of the body and at the end 120 thereof. The slot 118 extends longitudinally of the body through the cylinder 114, and the sleeve 116 to a position near, but spaced from, the end 121 of the body.

A plurality of passageways 122 are spaced longitudinally of the body 110 and extend through the sleeve 116 and the cylinder 114 in a direction substantially perpendicular to the plane of the slot 118. The passageways 120 enable fluid absorbed by the cylinder 114 to pass through the sleeve 116 to the outer surface thereof so as to wet the portions of the hair wound around the body portion 110.

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In this embodiment of the invention the fastening portion 112 is formed integrally with the sleeve 116 and includes a pair of elongated, spaced, substantially parallel side portions 124 and 125, which project outwardly from end 121 of the body and are integrally joined at the outer end by an end portion 126. The side portions 122 and 124 and the end portion 126 are substantially coplanar and lie in a plane substantially perpendicular to the plane of the slot 118 defined by the body 110.

In the operation of this embodiment of the invention, the portion of the body adjacent the end 121 is preferably grasped between the thumb and one finger of one hand and the body 110 is dipped in water or other liquid that it is desired to apply to the tresses, the body being allowed to remain in the liquid until the desired amount of liquid has been absorbed by the cylinder 114. The portion of the body adjacent the end 121 is then pinched so that the portions of the body on the opposite sides of the slot spread apart and the outer end of a tress is then placed in the slot 118 after which the portions of the body on the opposite sides of the slot are pressed together so as to clamp the end of the tress in the slot. The body 110 is then rotated and as the body revolves, the tress of the hair is wound around the sleeve 116. When the desired amount of hair has been wound around the sleeve, the convolutions are held in place with one hand while the end 126 of the fastening portion 112 is grasped with the other hand and pulled longitudinally over the body toward the end 120 thereof. The fastening portion 112 is stretched sufficiently so that the inner edge 128 of the end portion 126 engages the end 120 of the body 110. In this embodiment of the invention the elasticity of the material holds the fastening portion 112 in place on the body portion 110 so that the side portions 124 and 125 prevent the convolutions of the tresses from unwinding. During the time that the tresses are curled around the body 110, the liquid absorbed by the cylinder 114 of the body presses out through the passageways 120 and the open sides of the slot 118 to the outer surface of the sleeve 116 so as to thoroughly wet the portions of the hair wound around the body. After the hair has dried, the curler may be easily and quickly removed by releasing the fastening portion 112 and unwinding the tresses from the body portion 110.

While preferred embodiments of the invention have been shown and described, it will be understood that various changes and modifications may be made without departing from the spirit of the invention.

What is claimed is:

1. A hair curler comprising, in combination, an elongated body formed of a liquid-absorbent material, said body defining a slot open on opposite sides and at one end of said body and extending longitudinally thereof from said one end to a position near the opposite end, said body also defining a longitudinally extending opening communicating with said slot, and an elastic fastening element, said fastening element including a pair of elongated, spaced, substantially parallel side portions integrally joined at the ends by a pair of spaced, transversely extending end portions, said element having a generally T-shaped portion projecting intermediate said side portions from one end portion thereof, said one end portion of said element fitted in said slot and said T-shaped portion projecting through said longitudinal opening in said body whereby said element is secured to said body, the other end portion of said element adapted to fit over said one end of said body into said slot.

2. A hair curler comprising, in combination, an elongated body formed of a liquid-absorbent material, said body defining a slot open on opposite sides and at one end of said body and extending longitudinally thereof from said one end to a position near the opposite end, said body also defining a longitudinally extending opening communicating with said slot, and an elastic fasten-

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ing element, said fastening element including a pair of oppositely curved substantially co-planar side portions integrally joined at the ends thereof and having a generally T-shaped portion projecting outwardly from one end thereof, said T-shaped portion projecting through said longitudinal opening in said body whereby said element is secured to said body, the other end portion of said element adapted to fit over said one end of said body into said slot.

3. A hair curler comprising, in combination, an elongated body formed of a liquid-absorbent material, said body defining a slot open on opposite sides and at one end of said body and extending longitudinally thereof from said one end to a position near the opposite end, said body also defining a longitudinally extending opening communicating with said slot, and an elastic fastening element, said fastening element including an elongated central portion having a transverse portion on one end thereof and a shoulder projecting outwardly from opposite sides thereof at a position spaced from said transverse portion, the other end of said central portion integrally joined to a pair of angularly outwardly extending side portions, the outer ends of said side portions integrally joined by an end portion adapted to fit over said one end of said body into said slot, said transverse portion positioned in said slot and said central portion positioned in said opening whereby said shoulder abuts said opposite end of said body.

4. A hair curler comprising, in combination, an elongated body formed of a liquid-absorbent material, said body defining a slot open on opposite sides and at one end of said body and extending longitudinally thereof from said one end to a position near the opposite end, said body also defining a longitudinally extending opening communicating with said slot, and an elastic fastening element, said fastening element including a pair of elongated, spaced, substantially parallel side portions integrally joined at the ends by a pair of spaced, transversely extending end portions, said element having a generally T-shaped portion projecting outwardly from one end portion thereof, said T-shaped portion projecting through said longitudinal opening in said body whereby said element is secured to said body, the other end portion of said element adapted to fit over said one end of said body into said slot.

5. A hair curler comprising an elongated body, said body including a cylindrical member formed of a sponge-like material and a sleeve surrounding said member, said body having a slot therein open on opposite sides and at one end of said body, said slot extending longitudinally from said one end of said body to a position near the opposite end, said cylindrical member defining an axially extending opening communicating with said slot, said body having a plurality of longitudinally spaced, radially extending passageways therein extending through said sleeve and said cylindrical member and communicating with said slot, and an elastic fastening element, said fastening element including a pair of elongated, spaced, substantially parallel side portions integrally joined at the ends by a pair of spaced, transversely extending end portions, said element having a generally T-shaped portion projecting intermediate said side portions from one end portion thereof, said one end portion of said element fitted in said slot and said T-shaped portion projecting into said axial opening in said cylindrical member whereby said element is secured to said body, the other end portion of said element adapted to fit over said one end of said body into said slot.

6. A hair curler comprising an elongated body, said body including a cylindrical member formed of a sponge-like material and a sleeve surrounding said member, said body having a slot therein open on opposite sides and at one end of said body, said slot extending longitudinally from said one end of said body to a position near the opposite end, said cylindrical member defining an

axially extending opening communicating with said slot, said body having a plurality of longitudinally spaced, radially extending passageways therein extending through said sleeve and said cylindrical member and communicating with said slot, and an elastic fastening element, said fastening element including a pair of oppositely curved, substantially co-planar side portions integrally joined at the ends thereof, said element also having a generally T-shaped portion projecting outwardly from one end thereof, said T-shaped portion projecting through the axial opening in said cylindrical member whereby said element is secured to said body, the other end portion of said element adapted to fit over said one end of said body into said slot.

7. In a hair curler construction, the combination comprising an elongated body, said body including a cylindrical member formed of a sponge-like material and a sleeve surrounding said member, said body having a slot therein open on opposite sides and at one end of said body, said slot extending longitudinally from said one end of said body to a position near the opposite end, said cylindrical member defining an axially extending opening communicating with said slot, said body having a plurality of longitudinally spaced, radially extending passageways therein extending through said sleeve and said cylindrical member and communicating with said slot, and an elastic fastening element, said fastening element including an elongated central portion having a transverse portion on one end thereof and a shoulder projecting outwardly from opposite sides thereof at a position spaced from said transverse portion, the other end of said central portion integrally joined to a pair of angularly outwardly extending side portions, the outer ends of said side portions integrally joined by an end portion adapted to fit over said one end of said body into said slot, said transverse portion positioned in said slot and said central portion positioned in said opening whereby said shoulder abuts said opposite end of said body.

8. In a hair curler construction, the combination comprising an elongated body, said body including a cylindrical member formed of a sponge-like material and a sleeve surrounding said member, said body having a slot therein open on opposite sides and at one end of said body, said slot extending longitudinally from said one end of said body to a position near the opposite end, said cylindrical member defining an axially extending opening communicating with said slot, said body having a plurality of longitudinally spaced, radially extending passageways therein extending through said sleeve and said cylindrical member and communicating with said slot, and an elastic fastening element, said fastening element including a pair of elongated, spaced, substantially parallel side portions integrally joined at the ends by a pair of spaced transversely extending end portions, said element having a generally T-shaped portion projecting outwardly from one end portion thereof, said T-shaped portion projecting through the axial opening in said cylindrical member whereby said element is secured to said body, the other end portion of said element adapted to fit over said one end of said body into said slot.

9. A hair curler comprising in combination, an elongated body formed of a liquid-absorbent material, said body defining a slot open on opposite sides and at one end of said body and extending longitudinally thereof from said one end to a position near the opposite end, said body also defining a longitudinally extending opening communicating with said slot and opening through said opposite end of said body, and an elastic fastening

element, said fastening element including a pair of elongated, spaced, substantially parallel side portions integrally joined at the ends by a pair of spaced, transversely extending end portions, said element having a generally T-shaped portion projecting from one end portion, said T-shaped fastening element being disposed with the central leg thereof extending through said longitudinal opening, said fastening element in its free condition having said side portions extending away from said one end of said body and being deformable to dispose said side portions over a tress of hair wound upon said body and move the other of said end portions over said one end of said body and into said slot.

10. A hair curler comprising, in combination, an elongated body formed of a liquid-absorbent material, said body defining a slot open on opposite sides and at one end of said body and extending longitudinally thereof from said one end to a position near the opposite end, said body defining a longitudinally extending opening communicating with said slot and opening through said opposite end of said body, and an elastic fastening element including a pair of elongated spaced side portions integrally joined at their ends, said fastening element having a generally T-shaped portion at one end thereof and being disposed with the central leg of said T-shaped portion extending through said longitudinal opening, said fastening element in its free condition having said side portions extending away from said one end of said body and being deformable to dispose said side portions over a tress of hair wound upon said body and move the opposite end of said fastening element over said one end of said body and into said slot.

11. A hair curler comprising in combination, an elongated body formed of liquid-absorbent material, said body defining a slot open on opposite sides and at one end of said body and extending longitudinally thereof from one end to a position near the opposite end, said body also defining a longitudinally extending opening communicating with said slot and opening through said opposite end of said body, and an elastic fastening element having a generally T-shaped portion at one end thereof and being disposed with the central leg thereof extending through said longitudinal opening, the opposite end of said fastening element being adapted to fit over said one end of said body and into said slot, said fastening element in its free condition having its opposite end disposed remote from said opposite end of said body and being deformable to extend said fastening element along said body and over a tress of hair wound upon said body and move said opposite end of said fastening element over said other end of said body and into said slot.

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