Feb. 11, 1947. J. GREENSTEIN 2,415,483

AUTOMATIC HAIR CURLER

Filed Jan. 3, 1946

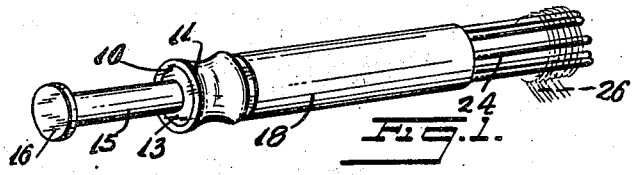



Fig. 1.

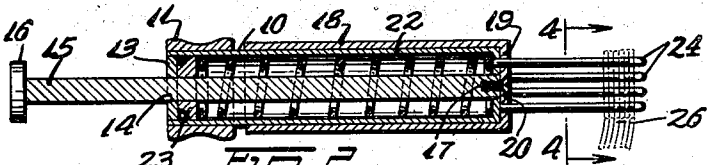



Fig. 2.

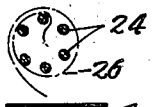



Fig. 4.

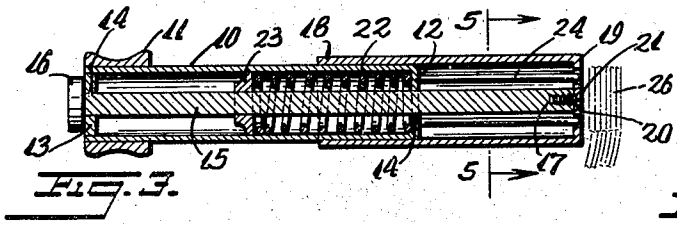



Fig. 3.

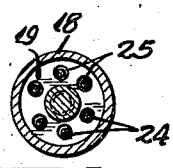



Fig. 5.

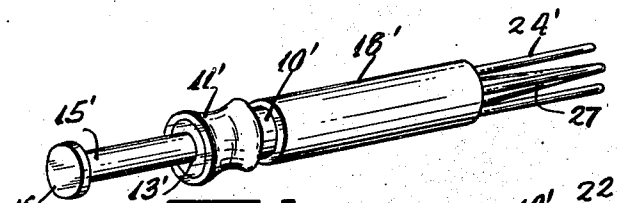



Fig. 6.

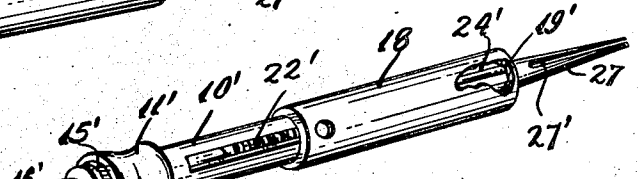



Fig. 7.

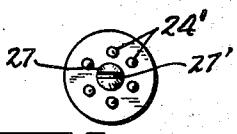



Fig. 8.

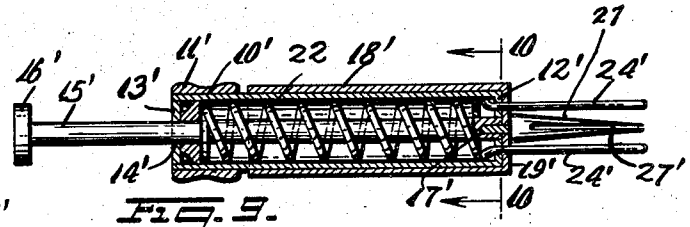



Fig. 9.

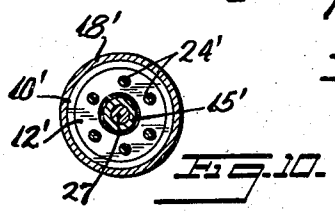



Fig. 10.

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## AUTOMATIC HAIR CURLER

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6 Claims. (Cl. 132—39)

1

This invention relates to new and useful improvements in a hair curler.

More specifically, the present invention proposes the construction of a hair curler having a body covered by a sleeve which is slidable thereon, the body having a circular row of fingers projecting through one end of the sleeve whereby a curl can be wrapped on the fingers and pushed off the fingers by movement of the sleeve.

Another object is to provide a curler as aforesaid in which a plunger bar is reciprocally mounted in the body and connected to the sleeve for operating same.

Still another object is to provide a curler as aforesaid in which the sleeve has a rod normally at the center of the row of fingers, the fingers being retractable in the sleeve to leave a curl of hair wound on the fingers on the rod.

For further compression of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:

Fig. 1 is a perspective view of hair curler constructed in accordance with this invention, hair being indicated in dot-dash lines.

Fig. 2 is an axial section through the curler of Fig. 1.

Fig. 3 is an axial section through the curler with the fingers retracted, the hair curl thus being pushed off the fingers.

Fig. 4 is a section on the line 4—4 of Fig. 2.

Fig. 5 is an enlarged sectional view on the line 5—5 of Fig. 3.

Fig. 6 is a perspective view of a hair curler constructed in accordance with a modification of this invention.

Fig. 7 is a perspective view, partly broken away, of the curler of Fig. 6 with the fingers retracted.

Fig. 8 is an end view, taken from the right, of the curler of Fig. 7.

Fig. 9 is an axial section through Fig. 6, parts being shown in full.

Fig. 10 is an enlarged sectional view on the line 10—10 of Fig. 9.

The hair curler, according to this invention, comprises a body 10 having a hand grip 11. Body 10 is a cylinder having a front closing end wall 12 and a rear closing end wall 13. The grip 11 is preferably of plastic and is secured on the body, which is preferably of metal. Aligned orifices 14 are formed in the end walls, and a plunger bar 15 is slidably disposed therein. A knob 16

2

is secured to the rear end of the bar. A threaded socket 17 is formed in the front end of the bar.

A sleeve 18 is telescoped on the body 10, the rear end of the sleeve being completely open and the front end being closed by a wall 19. The wall 19 is provided with a central countersunk orifice 20 and a screw 21 passes through this orifice and connects the sleeve to the front end of the bar, the screw 21 being threaded in the socket 17.

Inside the body 10, a coil spring 22 is compressed between the wall 12 and a collar 23 secured to the bar. Thus, a person can hold the grip 11 between her index and third finger and push on the knob 16 with her thumb and push the sleeve forwardly against the resistance of the spring, the spring returning the sleeve when the knob 16 is released.

A circular row of six fingers 24 are secured to the body wall 12 and project through orifices 25 in the sleeve front wall 19. When the knob 16 is released, the fingers extend through the orifices 25 as shown in Figs. 1 and 2 and a curl of hair 26 may be wound thereon. The knob 16 then pushes as aforedescribed, the sleeve advancing along the fingers and the curl of hair being pushed off the fingers by the sleeve front wall 19. The knob is then released and while the fingers are still engaging the now flattened curl, a bobby pin or hair pin is inserted between any of the fingers 24 to secure the curl or ringlet in place against the scalp. After the curl is pushed off, the knob 16 is released and the curler is ready for another curling operation.

A curler constructed in accordance with a modification of the invention is shown in Figs. 6–10. In the main, it is like the curler of Figs. 1–6 and like parts are indicated by like references with an accent added and no further description of these parts is deemed necessary. This curler distinguishes from the curler of Fig. 1 in that, instead of the screw 21, a screw 21' is employed having a long frusto conical cylindrical head 27 which forms an extension of the bar 15', and is provided with a longitudinal slot 27' wherein the hair may be inserted before winding it on fingers 24a. Normally this head 27 is at the center of the fingers 24' and is of the same length. However, when the curl is being pushed off the fingers 24', it will land on the head 27 and be supported thereby until it is removed therefrom. This will be easy since the head 27 is much smaller in diameter than the curl of hair will be. This form of the invention is particularly adapted for forming tight curls where it is desired to push the tight curl off the fingers 24' and onto the head 27 before the hair pin is employed.

The construction of the present invention is equally adaptable for use in permanent cold waving, where the lotion would be first applied to the hair before forming the curl as aforedescribed.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by United States Letters Patent is:

1. A hair curler comprising a cylindrical body, a sleeve telescoped over one end of said body for sliding movement thereon, a circular row of fingers extending in an axial direction from said body end, said sleeve having a row of orifices through which said fingers project, a bar slidably disposed in said body and projecting from opposite ends thereof, one of said ends being secured to said sleeve and the other of said ends having a knob secured thereon, a collar secured on said bar in said body and a coil spring compressed between said collar and said end of said body having said fingers whereby a curl of hair may be first inserted between said fingers for gripping the hair firmly, and then wound on said fingers and pushed thereoff by movement of said bar in said body against the resistance of said spring, said spring returning said bar after removal of said curl.

2. A hair curler comprising a cylindrical body, a sleeve telescoped over one end of said body for sliding movement thereon, a circular row of fingers extending in an axial direction from said body end, said sleeve having a row of orifices through which said fingers project, a bar slidably disposed in said body and projecting from opposite ends thereof, one of said ends being secured to said sleeve and the other of said ends having a knob secured thereon, a collar secured on said bar in said body and a coil spring compressed between said collar and said end of said body having said fingers whereby a curl of hair may be inserted between said fingers, then wound on said fingers and pushed thereoff by movement of said bar in said body against the resistance of said spring, said spring returning said bar after removal of said curl, each of said fingers being circular in cross section.

3. A hair curler comprising a cylindrical body, a sleeve telescoped over one end of said body for sliding movement thereon, a circular row of fingers extending in an axial direction from said body end, said sleeve having a row of orifices through which said fingers project, a bar slidably disposed in said body and projecting from opposite ends thereof, one of said ends being secured to said sleeve and the other of said ends having a knob secured thereon, a collar secured on said bar in said body and a coil spring compressed between said collar and said end of said body having said fingers whereby a curl of hair may be inserted between said fingers and wound on said fingers and pushed thereoff by movement of said bar in said body against the resistance of said spring, said spring returning said bar after removal of said curl, and a grip on said body at its end remote from said fingers enabling said body to be gripped between the index and third finger of a person's hand.

4. A hair curler comprising a cylindrical body, a sleeve telescoped over one end of said body for sliding movement thereon, a circular row of fingers extending in an axial direction from said body end, said sleeve having a row of orifices through which said fingers project, a bar slidably disposed in said body and projecting from opposite ends thereof, one of said ends being secured to said sleeve and the other of said ends having a knob secured thereon, a collar secured on said bar in said body and a coil spring compressed between said collar and said end of said body having said fingers whereby a curl of hair may be inserted between said fingers, then wound on said fingers and pushed thereoff by movement of said bar in said body against the resistance of said spring, said spring returning said bar after removal of said curl, said bar projecting beyond said sleeve and being normally disposed in the middle of said row of fingers for receiving said curl when said curl is pushed off said fingers.



5. A hair curler comprising a cylindrical body having end walls provided with aligned orifices, a circular row of fingers extending longitudinally from one of said end walls exteriorly of said body, a sleeve telescoped for sliding movement over said end of said body having said fingers, said sleeve having a row of orifices through which said fingers extend, a bar passing through said end wall orifices and being secured to said sleeve and projecting from said body at its other end, a collar secured to said bar in said body and a coil spring compressed between said collar and said end wall of said body having said fingers whereby a curl of hair may be inserted between said fingers, then wound on said fingers and pushed thereoff by movement of said bar relative to said body.

6. A hair curler comprising a cylndrical body having end walls provided with aligned orifices, a circular row of fingers extending longitudinally from one of said end walls exteriorly of said body, a sleeve telescoped for sliding movement over said end of said body having said fingers, said sleeve having an end wall provided with a row of orifices through which said fingers extend and an orifice at the middle of said row of orifices in line with the adjacent body end wall orifice, a bar passing through said end wall orifices of said body and having a threaded socket in line with said sleeve end wall orifice, a shoulder screw in said sleeve end wall orifice and threaded into said socket, securing said sleeve to said bar, said screw having a slotted frusto conical cylindrical head as long as, and disposed at the center of said row of fingers, a collar secured to said bar in said body, and a coil spring compressed between said collar and said end wall of said body having said fingers whereby a curl of hair can be inserted within said slotted frusto conical head, then wound on said fingers and pushed thereoff onto said screw cylindrical head by movement of said bar relative to said body.

JOSEPH GREENSTEIN.

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