

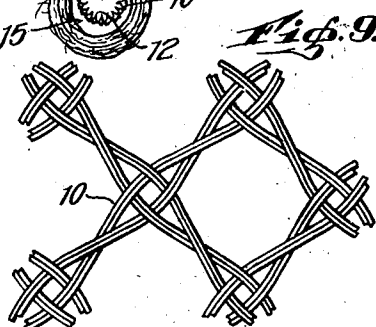
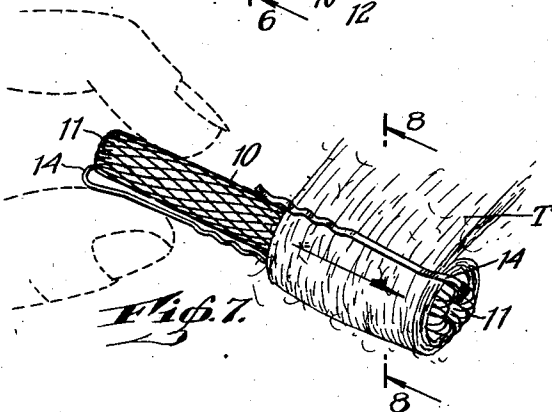
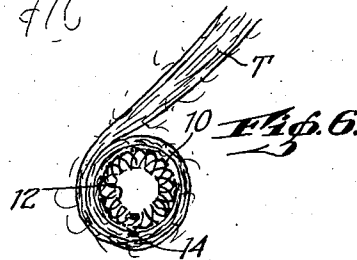
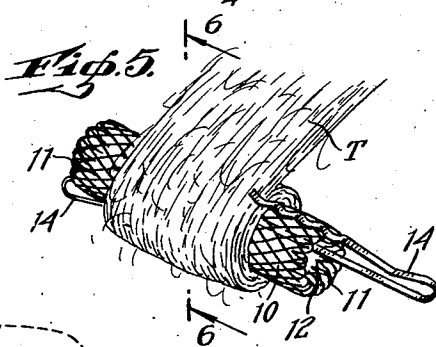
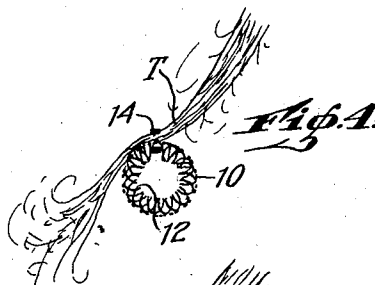
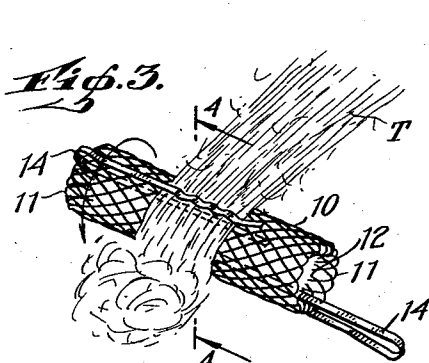
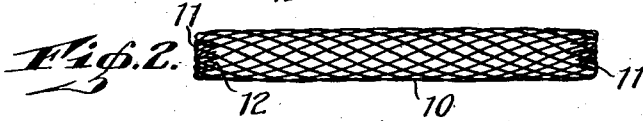
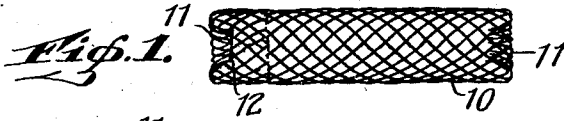
June 15, 1943.

N. L. SOLOMON

2,321,709

FEATHERWEIGHT HAIR CURLER

Filed Oct. 29, 1942



INVENTOR
N. L. SOLOMON

BY

Ed. Palmer
ATTORNEY

UNITED STATES PATENT OFFICE

2,321,709

FEATHERWEIGHT HAIR CURLER

Nathan L. Solomon, Mount Vernon, N. Y.

Application October 29, 1942, Serial No. 463,801

6 Claims. (Cl. 132-31)

This invention is a hair curler and more specifically is directed to a relatively light weight slumber curler. In the past hair curlers usually were made of precious material, such as aluminum and rubber. Today these materials are critical and difficult to obtain. In the case of rubber curlers, they are utilized to dress the hair before retiring and are permitted to stay on the hair during slumber. Metal hair curlers are rarely used as slumber curlers. In either case, metal or rubber curlers are fairly heavy and as a general rule are not adequately ventilated to provide rapid drying. One primary object of the present invention resides in utilizing a netted and relatively thin cylindrical and resilient shell to characterize the mandrel of the curler. An ancillary object of the invention is to provide inwardly curved ends on the cylindrical shell to reinforce these ends and to prevent their fraying. As another object the invention contemplates the utilization of the netted shell to characterize a pliable meshed body serving as a cushion for the curl formed thereon to allow rapid drying thereof. Still another object of the invention is to provide a meshed or interstitial cushion as a curler mandrel wherein the reinforced ends thereof are selectively utilized to be straddled by self closing resilient bobby pins or the like whereby the tress of hair to be curled is initially clasped to the meshed screen or mandrel by one of the bobby pins, and thereafter the tress is wound about this bobby pin to form the desired curl which may be readily removed into a waiting but suspended bobby pin adapted to be conveniently disassociated from the mandrel leaving the curl formed in the previously waiting bobby pin and independent of the mandrel. Further objects and advantages reside in an interstitial screen tubing or mandrel requiring no external support to sustain its desired, original and substantially cylindrical contour and characterizing a meshed curler mandrel adapted to be attenuated and elongated on the removal of a curl therefrom which can be readily achieved in that adequate clearance is provided between the curl formed and mandrel due to the attenuation of the latter. Another object is concerned with the provision of a relatively elastic but meshed curler which is automatically elongated and attenuated upon the application of an outwardly directed manual thrust to the ends thereof and which is automatically retracted to its normally larger diametrical size upon the removal of this manual pressure. Further advantages, functions and aspects of the invention will appear

from the following detailed description taken in the light of the accompanying drawing wherein:

Fig. 1 is a front view of the meshed curler showing the interstitial body normally expanded diametrically.

Fig. 2 is a view similar to Fig. 1 however illustrating the curler elongated and attenuated.

Fig. 3 is a perspective view of the curler showing the tress clasped by a bobby pin at one end of the curler and a waiting bobby pin straddling the curler at another end of the latter.

Fig. 4 is a sectional view on the line 4-4 of Fig. 3.

Fig. 5 is a view similar to Fig. 3, however showing the tress curled about one of the resilient bobby pins, and ready to be received by the waiting bobby pin.

Fig. 6 is a sectional view on the line 6-6 of Fig. 5.

Fig. 7 is a view similar to Fig. 5 but depicting the curl received in the waiting pin and the mandrel of the curler attenuated and elongated.

Fig. 8 is a sectional view of Fig. 7 illustrating in particular the clearance between the attenuated curler and the formed curl, and

Fig. 9 is an amplified view of a portion of the mandrel to illustrate the resilient mesh or screening thereof.

According to the invention the hair curler is a foraminous relatively thin and interstitial shell or tubing characterizing a substantially cylindrical normally diametrically expanded mandrel about which a tress of hair may be conveniently coiled to form a curl. The shell is netted or meshed as shown in Fig. 9 by interlacing synthetic strands of horsehair to provide a relatively thin and resilient tubing adapted to be conveniently attenuated and elongated upon the application of an outward thrust along the body thereof. The netted mandrel is relatively soft and yieldable and pursuant to deforming springs back or retracts to its normally diametrically expanded but foreshortened relation shown in Fig. 1. By reason of this construction the mandrel characterizes a resilient and relatively thin cushion and is very light or so called feather weight although adequately rigid requiring no external or internal support to sustain its normally diametrically enlarged but foreshortened contour.

To prevent fraying, the ends of the mandrel are each provided with rounded and relatively smooth inwardly curved ends or flanges 11 providing slightly tapered hollow and interstitial sockets 12. By this arrangement fraying of the strands constituting the netted but resilient hol-

low mandrel is prevented. These curved ends also characterize lips stiffening or reinforcing the curler to keep the ends of the latter in shape without the aid of internal or external support. The mandrel or screen 10 is of suitable synthetic thermo plastic material. Hence the ends thereof may be softened under adequate heat in a die to provide the desired curvilinear contour of the rounded ends. On removal from the die cooling takes place, and the curved ends including the internal annular flanges or sockets 12 harden in their desired shape and have the same physical characteristics as the meshed body of the mandrel. It follows that an outwardly directed thrust upon the ends of the curler or along the body thereof, the body of the mandrel may be elongated or stretched lengthwise, consequently distorting its original and relatively large cross section shown in Fig. 1 which has been attenuated or reduced to approximately the diameter shown in Figs. 2, 7 and 8. Once however the outward thrust on the mandrel is removed, the inherent elasticity of the mandrel automatically restores the latter to its original diametrically enlarged but lengthwise foreshortened contour due to the character of the lacing of the strands illustrated in Fig. 9.

For hair curling purposes, the mandrel may be utilized with or without the aid of normally closed and resilient bobby pins 14 of the type well known in the art. As shown two bobby pins or hair pins are employed, straddling each end of the curvilinear body of the mandrel and with their respective loop portions outside of the latter.

In Fig. 3, the terminal of a tress of hair to be curled is initially clasped or clamped against the mandrel of the curler by one of the bobby pins that is the non-waiting pin while the other pin is also yieldingly straddling the meshed body but projected therein part way only to avoid interference with the hair as it is about to be coiled. This last mentioned pin may be considered as waiting pin to receive the curl formed.

The clamped tress may now be wound about the mandrel by bodily rotating the latter about its longer axis and about the non-waiting pin, the curl formed or coiled is shown in Figs. 5 and 6. In such case the mandrel is against the innermost coil of the curl formed and supports the latter.

For shifting the curl into the waiting pin, an outward thrust is applied in a direction towards the waiting pin. This is accomplished by holding the mandrel at one end as shown in Fig. 7 and applying a finger thrust against the curl in the direction indicated by the arrow. This action moves the curl bodily into the waiting pin, that is, the curl is straddled by the latter. This action also automatically collapses the meshed mandrel which becomes longer and diametrically smaller, thus providing adequate clearance (Fig. 8) between the curl and mandrel. Consequently the curl may be readily removed from the mandrel. During such removal the waiting pin likewise is bodily removed. Hence the waiting pin becomes disassociated or disconnected from the mandrel with the curl formed straddled thereby and clamped by the shanks thereof. The curl formed is now free and independent of the mandrel and the latter is automatically restored to its original contour.

Of course the curl may be formed about the mandrel without the aid of a pin. However after forming of the curl, a bobby pin may be em-

ployed or inserted into the curler so that its shanks straddle the mandrel to clasp the curl thereagainst. In this way the curl may be left against the head of the user during slumber without any annoying significance on the part of the curler. At any rate upon the removal of the curl formed from the curler, the latter again retracts to its original shape even though during curling operations it adjusts itself to the type of curl formed since it is adequately pliable but amply rigid to provide an effective support for the size of the curl desired and since the mandrel is also relatively soft it characterizes a foraminous cushion concomitantly enhancing rapid drying.

Where two pins are used as shown in Fig. 7, the curl when in the waiting pin is now free of previously nonwaiting pin and the latter may be detached from the curler. Thus the waiting pin may be utilized also to clamp the curl without removing the latter from the mandrel.

Various changes may be made in details of construction and arrangement of parts without departing from the spirit of the invention or sacrificing any of the advantages inherent therein.

I claim:

1. In a hair curler, a one piece relatively thin shell having an interstitial body provided with reinforced ends, said body comprising netted means normally diametrically expanded and relatively foreshortened lengthwise and adapted on application of an outward thrust thereon to attenuate longitudinally and become smaller cross sectionally.

2. In a hair curler, a one piece relatively thin substantially cylindrical resilient shell having an interstitial body provided with reinforced ends, said body adapted to contract cross sectionally upon the application of an outwardly directed thrust along said body and automatically attenuate lengthwise and adapted on removal of said thrust to automatically retract substantially its normally expanded diametrical size and to its original overall length.

3. In combination, a tubular and substantially cylindrical mandrel for curling hair comprising an interstitial resilient and pliable body having inwardly turned interstitial ends, said body being normally expanded cross sectionally and adapted upon rotation thereof about its long axis to form a curl thereagainst, and a hair pin removably straddling one of said ends and adapted to clasp said curl against said mandrel.

4. In combination, a tubular and substantially cylindrical mandrel for curling hair comprising an interstitial resilient and pliable body having inwardly turned interstitial ends, said body being normally expanded cross sectionally and adapted upon rotation thereof about its long axis to form a curl thereagainst, and a resilient hair pin having normally closed shanks removably straddling one of said ends and adapted to clamp said curl against said mandrel.

5. In combination, a tubular and substantially cylindrical mandrel for curling hair comprising an interstitial resilient and pliable body having a pair of spaced and inwardly turned interstitial ends, said body being normally expanded cross sectionally and adapted upon rotation thereof about its long axis to form a curl thereagainst, a clamping hair pin removably straddling one of said ends and adapted to clasp said curl against said mandrel, and a waiting hair pin removably straddling the other end of said pair for straddling said curl upon shifting of the lat-

ter towards said last mentioned end, said curl and said waiting pin adapted to be bodily removed from said mandrel and the latter upon the application of an outwardly directed thrust thereon in shifting of said curl on said waiting pin automatically deforming in contracting cross sectionally and elongating longitudinally.

6. In combination, a tubular and substantially cylindrical mandrel for curling hair comprising an interstitial resilient and pliable body having a pair of spaced and inwardly turned interstitial ends, said body being normally expanded cross sectionally and adapted upon rotation thereof about its long axis to form a curl thereagainst, a clamping hair pin removably straddling one

of said ends and adapted to clasp said curl against said mandrel, and a waiting hair pin removably straddling the other end of said pair for straddling said curl upon shifting of the latter towards said last mentioned end, said curl and said waiting pin adapted to be bodily removed from said mandrel and the latter upon the application of an outwardly directed thrust thereon in shifting of said curl on said waiting pin automatically deforming in contracting cross sectionally and elongating longitudinally, said mandrel on said deforming providing clearance between said curl and body to permit said curl to be conveniently removed therefrom.

NATHAN L. SOLOMON.