

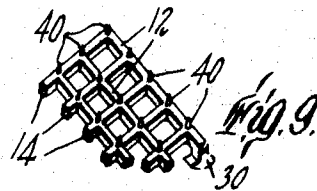
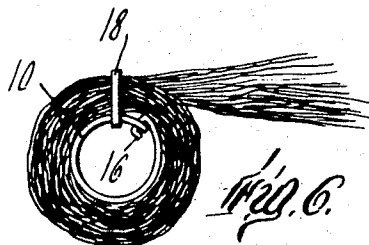
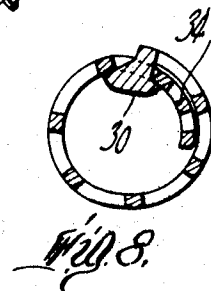
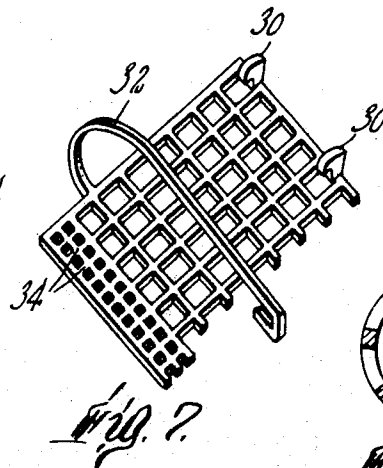
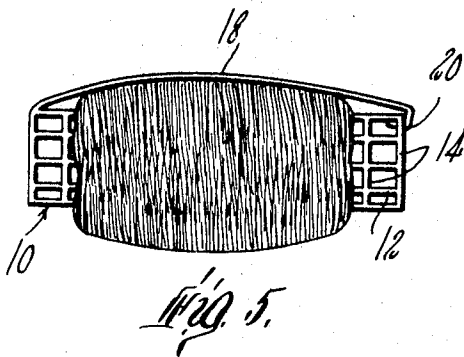
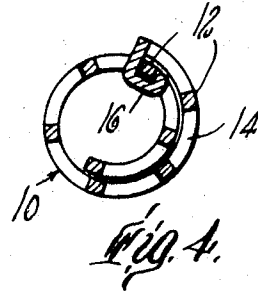
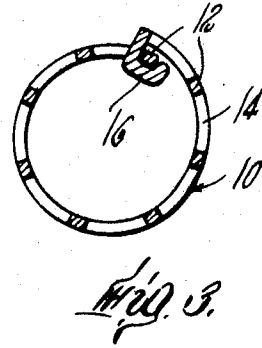
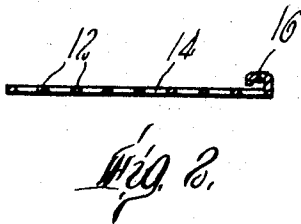
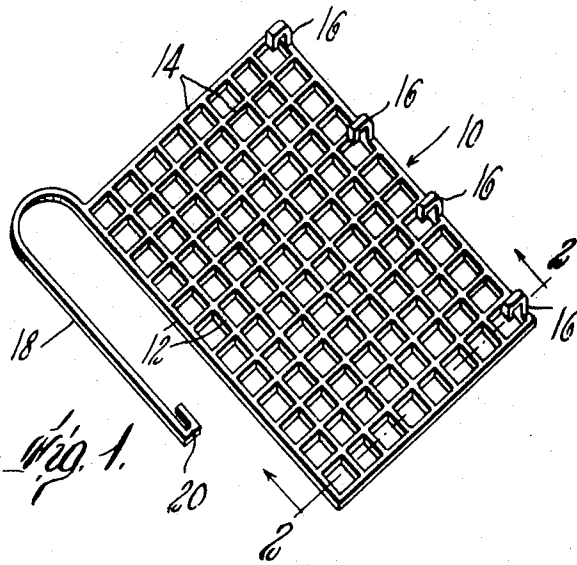
Jan. 3, 1961

L. L. LERNER ET AL

2,966,913

HAIR CURLER

Filed Aug. 18, 1958



1

2,966,913

HAIR CURLER

Louis L. Lerner, Chicago, Stillman R. Goff, Park Ridge, and Albert Safianoff, Chicago, Ill., assignors to The Gillette Company, Boston, Mass., a corporation of Delaware

Filed Aug. 18, 1958, Ser. No. 755,661

13 Claims. (Cl. 132-41)

This invention relates to a hair curler and pertains more specifically to a curler having a winding member which is adjustable in diameter.

In the permanent waving of hair, the customary procedure is to wind the hair upon the winding member of a hair curler for treatment with a permanent waving agent. The diameter of the winding member which is selected (hence the diameter of the wound hair tress) will depend upon the nature of the hair being waved, its previous history (i.e., whether it has previously been waved, bleached, etc.), the location of the particular hair tress upon the head, and the tightness of the wave desired. For these reasons, it has hitherto been necessary to supply curlers in a number of different sizes.

One object of the present invention is to provide a hair curler having a winding member which is adjustable in size, the diameter of which may be adjusted at will over a considerable range and which maintains the selected diameter until it is intentionally changed.

Another object is to provide a hair curler having a winding member of open or foraminous construction permitting ready circulation of a waving agent throughout the wound hair tress during the waving process and of air during the neutralization and drying steps and which is adjustable at will to any one of a number of selected diameters without variation in length.

Still another object is to provide a hair curler having a winding member of simple and inexpensive construction which is adjustable in diameter and which is adapted to be used in styling or setting hair as well as in waving.

A further object is to provide a hair curler of the type described which includes a hasp having a free end which is releasably engageable with the winding member at a variety of positions and which overlies a tress of hair wound on the winding member to maintain the curler in the desired position in the hair.

Still another object is to provide a hair curler of the type described in which the hasp and the winding member are of unitary construction and are molded of resilient, flexible, synthetic plastic material.

Other and further objects will be apparent from the drawing and from the description which follows.

In the drawings:

Fig. 1 is an isometric view of one embodiment of the present invention;

Fig. 2 is a view in cross section taken along the line 2-2 of Fig. 1;

Fig. 3 is a view in cross section showing the winding member secured in its position of maximum diameter;

Fig. 4 is a view in cross section showing the winding member secured in a position of lesser diameter;

Fig. 5 is a view in side elevation showing the winding member with a tress of hair wound upon it;

Fig. 6 is a view in end elevation of the winding member with a tress of hair wound upon it;

Fig. 7 is an isometric view, partly broken away, of a second embodiment of the invention;

Fig. 8 is a view in cross section showing the embodi-

2

ment of Fig. 7 with the winding member secured in spirally rolled position; and

Fig. 9 is an isometric view, partly broken away, of still another embodiment of the invention.

As appears from the drawing, the embodiment of the invention there illustrated comprises a winding member consisting of a flexible grid or reticulate sheet 10 formed of intersecting longitudinal ribs 12, 12 and transverse ribs 14, 14. These ribs preferably consist of a flexible, resilient, synthetic plastic material such as polyethylene, plasticized polyvinyl chloride, or similar material which is inert to the ingredients of a hair waving, setting or treating lotion. Disposed along one longitudinal margin of the grid or reticulate sheet 10 are a plurality of hooks 16, 16 which are preferably molded of the same synthetic plastic material integrally with grid 10 and are of such a size as to be engageable with any of longitudinal ribs 12, 12 when the sheet is rolled upon itself. An elongated hasp member 18 is provided, one end of which is secured to one lateral margin of the grid adjacent a corner of the grid remote from hooks 16, 16 as shown in Fig. 1. The hasp member is preferably molded of synthetic plastic material and may be integral with grid 10. The free end of hasp member 18 carries a hook 20 which is adapted to engage any selected transverse rib 14, 14. Although hasp member 18 is shown having a curved configuration in Fig. 1, it will be understood that because of the flexible resilient material thereof, it may have any desired configuration, either straight or curved.

Although the grid or reticulate sheet 10 is shown in the embodiment of Fig. 1 as being of generally rectangular configuration with the ribs 12, 14 intersecting each other at right angles to form rectangular openings, it will be understood that the sheet may be of triangular or other shape if desired, and that the ribs may intersect each other at varying angles. In addition, transverse ribs 14, 14 may be made smaller in cross section than longitudinal ribs 12, 12 to facilitate rolling sheet 10 as shown in Figs. 3 and 4.

In use of the device, the reticulate sheet 10 is rolled spirally upon itself, as shown in Figs. 3 and 4, to form a winding member which is generally cylindrical in shape and which is of any desired diameter. Hooks 16, 16 are then engaged with the appropriate longitudinal rib 12 of the underlying layer of the spirally wound roll to maintain the winding member in its desired position. The curler is then adapted to be employed in the usual manner by winding a hair tress upon it, whereupon the hook 20 of hasp member 18 may be engaged with the appropriate transverse rib 14 to maintain the tress in wound condition and hold the curler in the hair in the desired position with hasp member 18 overlying the wound tress.

Another embodiment of the invention is shown in Figs. 7 and 8 of the drawing in which hooks 16, 16 are replaced by resilient stud fastening elements 30, 30 which frictionally engage in the interstices between adjacent pairs of ribs 14, 14, 16, 16 to hold the sheet in spirally rolled configuration. In addition, hasp member 32 of this embodiment is secured adjacent to but inwardly spaced from the longitudinal margin remote from fastening elements 30, 30, and supplemental ribs 34, 34 are provided in the narrow zone between the hasp member and the adjacent longitudinal margin to provide additional stiffness in this zone and to facilitate gripping and rolling of the sheet upon this zone as a core.

In the embodiment shown in Fig. 9, a large number of small conical spaced projections 40, 40 are provided on one face of the reticulate sheet, the projections being molded as an integral part of the sheet and preferably being located at the intersections of ribs 12 and 14 at the opposite face of the sheet from that on which fastening elements 30, 30 are disposed. Accordingly, when the

reticulate sheet is rolled spirally upon itself in the manner indicated in Figs. 3, 4 and 8, projections 40, 40 extend radially outwardly, entering into the hair tress as it is wound on the curler and holding the hair fibers more securely in the desired aligned relation.

It will be appreciated that the construction of the present invention makes it possible to select any one of a number of different diameters for the hair-winding member and to adjust the diameter of the winding member at will without varying the length thereof. Furthermore, the unitary, one-piece, integral construction of winding member and hasp ensures an inexpensive construction.

Although specific embodiments of the invention have been herein described, it will be understood that the invention is not limited thereto, but includes any of the obvious variations and modifications within the spirit and scope of the appended claims.

What is claimed is:

1. A hair curler having a winding member of adjustable diameter comprising a flexible grid formed of intersecting ribs and adapted to be rolled spirally upon itself, and means for adjustably securing said grid in rolled form in any one of a plurality of selected diameters, comprising a plurality of engaging members secured adjacent to one longitudinal margin of said grid, said engaging members being of such a size that they are releasably engageable with any of said ribs through the openings of said grid.

2. A hair curler having a winding member of adjustable diameter comprising a flexible reticulate sheet formed of intersecting ribs and adapted to be rolled spirally upon itself and having means for releasably securing the outer margin of the rolled sheet to the underlying layer of the rolled sheet to maintain the sheet in rolled form of selected tightness, said means including a plurality of engaging members secured adjacent to one longitudinal margin of said sheet, said members being of such a size that they are releasably engageable with any of said ribs through the openings of said sheet, an elongated hasp member having one end secured adjacent one lateral margin of said rolled sheet, and means adjacent the free end of said hasp member for releasably securing said free end adjacent the other lateral margin of said rolled sheet and to maintain said hasp member in a position overlying a tress of hair wound upon said rolled sheet.

3. A hair curler as defined in claim 2 in which said reticulate sheet comprises synthetic plastic material.

4. A hair curler as defined in claim 3 in which said hasp member is formed of synthetic plastic material and is integral with said sheet.

5. A hair curler as defined in claim 3 in which a plurality of projections are mounted on one face of said reticulate sheet in position to extend radially outwardly to enter and engage said tress of hair when said sheet is rolled spirally upon itself.

6. A hair curler as defined in claim 3 in which said

hasp member is secured adjacent to and spaced inwardly from a corner of said sheet.

7. A hair curler as defined in claim 6 in which said sheet includes a narrow longitudinal zone of increased stiffness to serve as a core when the sheet is in its spirally wound condition.

8. A hair curler having a winding member of adjustable diameter comprising a generally rectangular flexible reticulate sheet formed of intersecting ribs of synthetic plastic material adapted to be rolled spirally upon itself, hooks along one margin of said sheet of such a size that they are adapted to engage releasably the ribs of an underlying layer through the openings thereof to maintain said sheet in the form of a generally cylindrical roll in any one of a plurality of selected diameters, and an elongated hasp member having one end secured adjacent a margin of said sheet at one end of said cylindrical roll, said hasp member having means adjacent its free end for releasably securing said free end adjacent the margin of said sheet at the opposite end of said cylindrical roll.

9. A hair curler as defined in claim 8 in which said hasp member is formed of synthetic plastic material and is integral with said sheet.

10. A hair curler as defined in claim 9 in which said means adjacent the free end of said hasp member comprises a hook.

11. A hair curler having a winding member of adjustable diameter comprising a generally rectangular flexible reticulate sheet formed of intersecting ribs of synthetic plastic material adapted to be rolled spirally upon itself, stud-fastening means along one margin of said sheet of such a size as to be releasably frictionally engageable through the opening between any adjacent pair of ribs in said sheet to maintain said sheet in the form of a generally cylindrical roll in any one of a plurality of selected diameters, and an elongated hasp member having one end secured adjacent a margin of said sheet at one end of said cylindrical roll, said hasp member having means adjacent its free end for releasably securing said free end adjacent the margin of said sheet at the opposite end of said cylindrical roll.

12. A hair curler as defined in claim 11 in which said hasp member is formed of synthetic plastic material and is integral with said sheet.

13. A hair curler as defined in claim 11 in which a plurality of spaced projections are mounted on one face of said sheet in position to extend radially outwardly when said sheet is in spirally wound condition.

References Cited in the file of this patent

UNITED STATES PATENTS

2,196,438	Hitz	Apr. 9, 1940
2,582,550	Madore	Jan. 15, 1952
2,809,646	Solomon	Oct. 15, 1957