Feb. 5, 1952 J. A. SWENSON ET AL 2,584,760

APPARATUS FOR WAVING HAIR

Filed Sept. 24, 1949 2 SHEETS—SHEET 1

Fig. 1

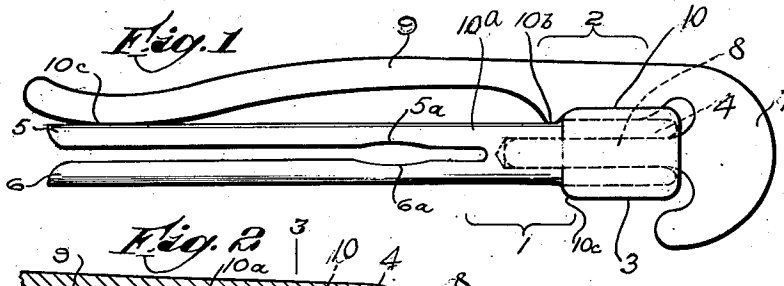


Fig. 3

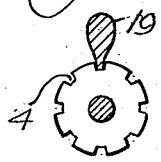
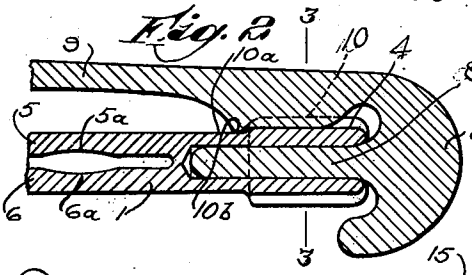


Fig. 2



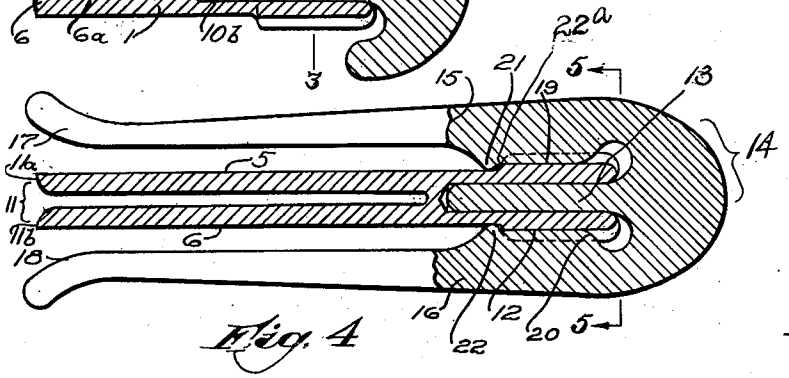


Fig. 4

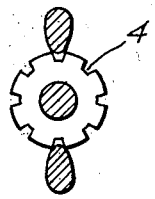


Fig. 5

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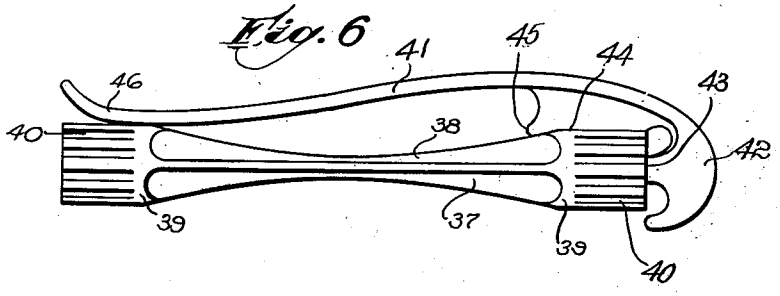
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APPARATUS FOR WAVING HAIR

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Fig. 6



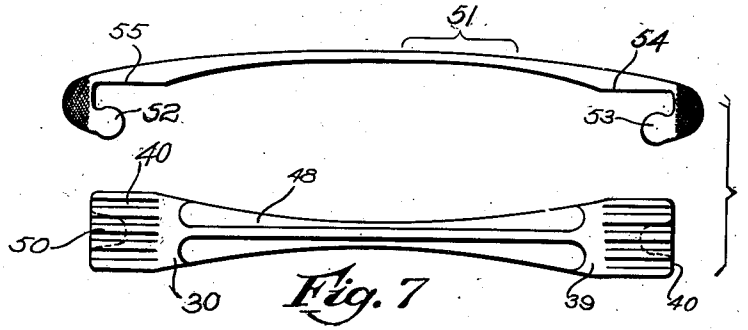


Fig. 7

Fig. 6a

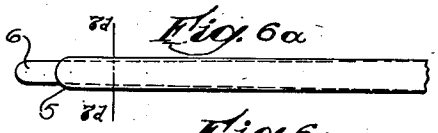


Fig. 6b

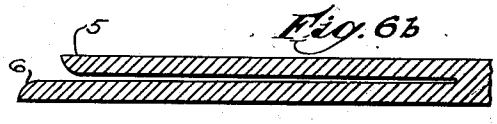


Fig. 6c

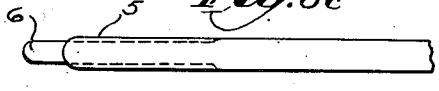


Fig. 6d

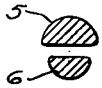
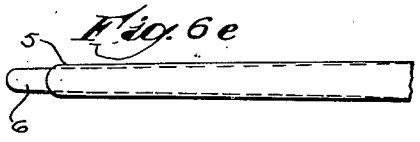


Fig. 6e



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APPARATUS FOR WAVING HAIR

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Application September 24, 1949, Serial No. 117,597

5 Claims. (Cl. 132—33)

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This invention relates to improved apparatus for the waving of human hair and more particularly to apparatus which is intended to impart what is known as a permanent wave to the hair.

In order that the principle of the invention may be readily understood we have disclosed several embodiments thereof in the accompanying drawings wherein—

Fig. 1 is a side elevation of one embodiment of the invention wherein the main or body member is bifurcated throughout the greater portion of its length to provide a so-called clothespin construction;

Fig. 2 is a view in longitudinal section of one end of the construction shown in Fig. 1;

Fig. 3 is a vertical section 3—3 of Fig. 2;

Fig. 4 is a longitudinal view partly in longitudinal section, of a second embodiment of the invention;

Fig. 5 is a vertical section on the line 5—5 of Fig. 4;

Figs. 6*a* to 6*e* represent in plan view and in section, modifications of the constructions shown in Figs. 1 to 5, wherein the two tines or parts of the bifurcated pin-like member contrast with each other in width and desirably in length;

Fig. 6 is a side elevation of still another embodiment of the invention, wherein the main or body member is solid excepting for the head portions, and wherein the removable pin member is similar to that shown in Fig. 1; and

Fig. 7 is a side elevation of still another embodiment of the invention, the two parts of the curler being represented as separated from each other.

All of the embodiments of the invention herein disclosed have a number of advantages over the conventional types of hair curlers. In the invention herein disclosed, as represented in Figs. 1 to 5, no paper is needed for holding the ends of the hair in position when winding begins. Also, the curler can be withdrawn from the hair without unfurling the curl thereof, in the forms represented by Figs. 1 to 5, whereas most other types of curlers with which we are familiar, including those represented by Figs. 6 and 7, require unwinding of the curl in order to remove the curling bar. Moreover, the parts of the curler of our invention are in their functioning position held firmly locked together, thus allowing the curler to be positioned tight to the head or scalp without any slack occurring.

Referring first to the construction shown in Figs. 1, 2 and 3, there is provided a main or body member 1 and a removable pin member 2, the

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said main or body member having at one end a hollow head portion 3 that is exteriorly provided with a series of circumferentially spaced channels or grooves 4 that extend longitudinally of the said main or body member 1, the latter being longitudinally bifurcated to provide two parts 5, 6 that extend parallel and closely adjacent to each other from the said head portion 3, in the general form of a clothespin, but if desired with reentrant curves 5*a*, 6*a* providing a slight enlargement readily found by the user in operating the bifurcated member, thus facilitating the act of opening up the member 1 for use. Such enlargement may be placed wherever desired (for example, more nearly midway the length of said member 1). The removable pin member 2 has at one end a thin portion 7 to be grasped by the thumb and finger, which portion may be roughened and from which extends a short pin-like formation 8, shown mainly in dotted lines in Fig. 1 and in section in Fig. 2. The said pin member 2 is adapted to be inserted in the hollow head portion 3 which is provided with at least one much longer formation 9 extending generally parallel with said short pin-like formation 8 and that, when the removable pin member 2 is positioned in functioning relation, extends generally parallel with the said main or body member 1. Said longer formation 9 has a thin inner edge 10 shaped to be slid lengthwise into any desired one of the said circumferentially shaped channels or grooves 4 upon the said hollow head portion 3, when the short pin-like formation 8 is inserted into the said hollow head portion 3. The channels or grooves 4 provide a fluted surface that enables the device to be readily gripped and thus facilitating the winding operation.

It will be noted, viewing Figs. 1 and 2, that the bottom of each of the channels or grooves 4 is slightly further radially removed from the longitudinal axis of said main or body member 1 than is the remainder of the surface of the said main or body member 1. Also the thin inner edge 10 terminates in a further inwardly extending spring locking formation 10*b*, and the said head portion 3 terminates at its inner end in a well defined shoulder 10*c* down which the said locking formation 10*b* slides to engage the smooth surface of the main or body member 1, as shown in Figs. 1 and 2, thereby serving to lock the said removable pin member 2 in its functioning position shown in Fig. 1. The removable pin member is most aptly defined as a pin lock-stop member. It is a retaining member but it has no clamping action or function whatever. Its function is not to pinch

or clamp the hair to the body member 1, but to stand in the way of the hair as a stop in a direction to prevent the hair from unwinding or unfurling from the body member 1. Actual clamping of the hair is accomplished by or with the parts or tines 5, 6 of the body member 1. The space or opening between the said parts or tines 5, 6, as will be observed in Figs. 1, 2, and 4, extends back very close to the inner end of the hollow head portion 3. The parts or tines 5, 6 thus receive a very substantial strand or group of hairs throughout the entire length of the space or opening between the parts or tines 5, 6, which hairs are effectively clamped by the parts or tines 5, 6 that are pinched together by the thumb and fingers of the user. This pinching or clamping effect extends to and is effective well back toward or actually to the inner end of the space or opening between the parts or tines 5, 6. In normal use, the parts or tines 5, 6 are first pinched together by the operator's or user's fingers and thumb, then the hair is wound around the body member 1 by turning the latter a sufficient number of times about its longitudinal axis. Once the hair is wound around the body member, the hair itself completes the clamping action, and it is no longer necessary for the operator or user to pinch the parts or tines 5, 6.

In order to use the device shown in Figs. 1 to 5, the divided portion of the hair to be curled is placed between the first and second fingers of one hand and just above the fingers and close to the scalp or near the root ends of the hair, and the main or body member 1 is slipped transversely of the said portion of the hair so that such portion of hair is received between the bifurcations or parts 5, 6 of the main or body member 1. The said main or body member 1 is slid sideways down the hair away from the scalp and close to the free ends of the hair, and then the divided parts of bifurcations 5, 6 of the main or body member are pinched together so as to grip the hair ends. Then the main or body member 1 is turned or rolled until the portion of the hair within the said bifurcations or parts 5, 6 is wound into a curl. The pin lock-stop member 2, as shown in Fig. 1, is provided with the longer formation 9 which is inwardly curved so as at least to approach the main or body member 1 near its outer end, it being shown as actually contacting therewith at 10c and slightly upturned to present the hair guiding end. In Fig. 4, where the pin lock-stop member is shown as provided with two opposite elongated members 15, 16, the outer end portions of said members do not actually contact with the body member, but they are each slightly outwardly turned at 17, 18 to provide guides for the hair.

The device shown in said Figs. 1 to 5 is made of some suitable material such as a plastic that is sufficiently flexible to effect or facilitate the results just described.

After the main or body member 1 has been rotated upon its axis sufficiently to wind the portion of the hair completely thereon, the removable pin member 2 is positioned with the short pin-like formation 8 thereof in the said longitudinal or small recess in the head 3 and with the locking edge 10 engaging one of the longitudinally extending circumferential channels or grooves 4 of said head 3, and with the locking formation 10b in the position shown in Figs. 1 and 2. The two parts of the curler are allowed to remain in such cooperating functioning position until a curl is formed in the hair and is sufficiently set.

The structure shown in Figs. 1, 2 and 3 (as well as the forms shown in Figs. 4 and 5 yet to be described) in use grips the hair evenly without the provision of any teeth or other roughening formation upon the main or body member 1 and without the necessity of using paper coverings to collect loose hair ends or in order to bite into or grip the hair before the winding operation begins, as is customary with most other curlers with which we are familiar.

In order better to grip that portion of the hair to be curled, which is distributed toward the inner or head end of the bifurcation, the bifurcation members 5, 6 are so formed as to approach very close to or even to touch each other toward the inner end of the bifurcation even before or as soon as the outer or free ends of said bifurcation members 5, 6 are gripped. This provides a better gripping of the hair in the vicinity of the inner end of the bifurcation when the said members 5, 6 are pinched in the vicinity of the outer end of the bifurcation.

The construction shown in Figs. 4 and 5 does not differ materially with respect to the main or body member (shown at 11, and consisting of the two portions 11a, 11b) from that shown at 1 in Figs. 1 and 2, though the shape of the slot existing between the said portions 11a, 11b may, if desired, be wholly straight, as shown in Fig. 4, instead of being shaped as in Figs. 1 and 2.

The said body member 11 is provided with a hollow headed end 12 that is similar to the headed end 3, shown in Figs. 1 and 2 so as to receive the pin portion 13 of the removable pin member represented generally at 14 in Fig. 4, which removable pin member is provided with two opposite elongated members 15, 16, individually generally similar to the member 9 of the construction shown in Figs. 1, 2 and 3, but which may or may not at their free ends 17, 18 contact with the surface of the main or body member 1. Desirably, however, each of the said elongated members 15, 16 is shaped as not only to provide inner edges 19, 20 to engage the proper channels or grooves 4 of the head, but also with the inwardly extending formations 21, 22 that engage the shoulder 22a formed at the inner ends of the channels or grooves 4 when the parts are positioned as shown in Fig. 4, thereby providing a spring lock similar to that provided at 10b, 10c in Fig. 1, and for the same purpose.

The form of the invention shown in Figs. 4 and 5 is used in a manner similar to that shown in Figs. 1, 2 and 3.

In Figs. 6a to 6e, we have represented slight modifications of the constructions shown in each of Figs. 1 to 5.

In Figs. 1 to 5 the removable pin member is represented as bifurcated or of clothespin form, but the two tines or parts of the pin member 5, 6 or 24, 25 are shown in said figures as identical in shape and in extent. In Figs. 6a to 6e, we have shown several variations from such construction.

In each of Figs. 6a to 6e, the upper tine or part 5 is shown of greater width than the lower tine or part 6. This permits the user (who may be the one whose hair is being self-curled) to separate further the two tines or parts by feel alone, while the curler is being applied to the hair, so as more readily to apply the curler to the hair.

In Figs. 6a to 6e, the bifurcation extends nearly to the head end of the removable pin, as in Figs. 1, 2, and 4, but in Fig. 6c the bifurcation is shorter, as indicated in dotted lines. In Figs. 6a, 6b,

and 6c, both the tines or parts 5, 6 are shown as parallel sided, but in Fig. 6b they are represented as slightly tapering, thus facilitating the removal of the curler from the hair without disturbing the curl of the hair.

It will further be noted that in Fig. 6b the form or structure of the two parts or tines 5, 6 is such that the space between them slightly increases from the inner end outward. The purpose of such construction is to facilitate the gripping of the hair strands.

In Figs. 6a, 6b, and 6c, the parallel construction may extend throughout all or the outer portion only of the pin member, and in Fig. 6c the tapering formation may extend throughout all the length of the tines or for only a portion thereof from the free ends inward.

In the embodiment of the invention shown in Fig. 6, the main or body member is indicated at 37 and desirably has longitudinally extending ridges 38, or is otherwise suitably roughened. In Fig. 6 said body member 37 is of reduced diameter between the ends thereof, but may be of substantially cylindrical form. In Fig. 6, the main or body member 37 is provided with identical opposite head portions 39 having circumferentially-spaced longitudinally-extending channels or grooves 40 similar to those shown at 4 in the embodiments of our invention shown in Figs. 1 to 5. Also, the cooperating member 41 is generally similar to that shown at 9 in Fig. 1, being provided with a thin grasping end 42 which may be roughened and from which inwardly extends a short pin portion 43 that is received in the hollow end of either head portion 39. The said cooperating member 41 is provided with an inwardly extending edge 44 to engage any one of the channels or grooves 40 of either head end, and said edge 44 terminates desirably in a formation 45 to engage the sloping surface of the main or body member 38, as shown. Also, the free end 46 of the cooperating member 41 is so curved or shaped that when the parts are positioned, it engages the outer head end of the main or body member 37.

In the embodiment of the invention shown in Fig. 7, the main or body member 48 is of the general form shown in Fig. 6, and the same numerals are employed with respect to the head portions 39 with their longitudinally extending channels or grooves 40. However, each head portion 39 has only a shallow recess therein. The cooperating member, indicated generally at 51 and shown as separated from the main or body member 48, is of elongated bow-shape or flattened arc-shape with opposite inwardly-extending knobs or enlargements 52, 53 which, when the cooperating members are positioned, engage the shallow recesses respectively in the head portions 39.

Moreover, the cooperating member 51 is provided at both end portions thereof with thin straight edges 54, 55 to engage the longitudinally extending channels or grooves 40 of the head portions 39 in a manner similar to that described in connection with Figs. 1 to 6. Thus the construction permits the cooperating member 51 to be turned end for end if desired.

In using the embodiments of the invention shown in Fig. 7, the hair is wound upon the main or body member 48 and after being completely wound, the cooperating member 51 is positioned with its opposite ends received in the recesses at the ends of the main or body member 48, being held in position, in the case of the embodiment shown in Fig. 7, by the longitudinally extending channels or grooves 40 of the head portions 39, and by the serrations or notches 56, 57 at both ends of the main or body member. The formations 4 (Figs. 1 to 5) and 40 (Fig. 6) are correctly defined as channels or grooves. While the invention is in no wise limited to the shape of the channels or grooves here shown, they are in each instance shown as bounded by three orthogonally related walls joined along generally parallel lines; that is, each is shown as comprising a bottom wall and two generally parallel side walls. In the act of engaging the pin lock-stop member 2 with the main body member 1, an edge 10b of said pin lock-stop member 2 (indicated in Figs. 1 and 2 and at 21 in Fig. 4) matches more or less the transverse cross section of the channel or groove 4 (or 40). Such edge engages the outer end of such channel or groove 4 or 40 and is pushed by the user so as to pass along the channel or groove 4 or 40 until engagement of the pin lock-stop member with the body member is completed. It is not necessary in this invention for such edge to engage the selected channel or groove at more than one cross section thereof.

While the parts of the several embodiments of the invention may be formed of any suitable material, they are desirably formed of some suitable flexible material such as a plastic. Also desirably, in each and every embodiment of the invention herein disclosed, the two parts of the device are made in contrasting colors, such as red, and white, or any other contrasting colors.

It will be noted that in several of the embodiments of the invention, the cooperating member is of bow-shape or elongated-arc shape, to engage the main or body member only at or adjacent to the end portions thereof. In all forms of the invention, the two members are locked or held together with the hair curled between them.

Having thus described several embodiments of the invention, it is to be understood that although specific terms are employed, they are used in a generic and descriptive sense, and not for purposes of limitation, the scope of the invention being set forth in the following claims.

We claim:

1. A hair-waving curler consisting of a main or body member and a removable pin lock-stop member, said main or body member having at one end an enlarged head portion of cylindrical form and having an axially extending end recess, the outer surface of which head is provided with a parallel series of circumferentially spaced, longitudinally extending channels each parallel with the axis of said recess, and each consisting of slightly spaced radially extending walls connected by a bottom wall, said channels extending substantially entirely about said cylindrical head portion; the said main or body member being longitudinally bifurcated to provide two parallel, closely adjacent tines extending from the said head portion; the said removable pin lock-stop member having at one end a thin portion to be grasped by a thumb and finger and from which thin portion extends a short arm of a length and diameter adapting it to be inserted into and to fit the axial recess of said head portion, said removable pin lock-stop member having at least one much longer formation generally parallel with the said arm, and which, when the said removable pin lock-stop member is positioned, extends generally parallel with the said main or body member, the said longer formation having an inner edge shaped to be slid length-

wise into and to fit any desired one of the said circumferentially spaced channels upon the said cylindrical head portion when the said short arm is inserted into the axial recess of said head portion.

2. A hair waving curler in accordance with claim 1, wherein one of said elongated tines of the body member is slightly wider at its outer end at least than the other, to permit it to be grasped and readily further separated from the narrower tine, the said wider tine being shorter than the other, thereby permitting the outer end of the longer tine to be readily grasped in the preparatory manipulation of the curler.

3. A hair waving curler in accordance with claim 1, wherein the said head portion terminates inwardly in a well defined body member-encircling shoulder, and wherein the said inner edge of said pin lock-stop member terminates inwardly in a locking formation, which, when said pin lock-stop member is pushed into its innermost position, snaps down past said shoulder into engagement with the surface of the said main or body member, in advance of said shoulder.

4. A hair-waving curler consisting of a main or body member and a removable pin lock-stop member, said main or body member having at one end an enlarged head portion of cylindrical form and having an axially extending end recess, the outer surface of which head is provided with a parallel series of circumferentially spaced, longitudinally extending channels each parallel with the axis of said recess, and each consisting of slightly spaced radially extending walls connected by a bottom wall, said channels extending substantially entirely about said cylindrical head portion; the said removable pin lock-stop member having at one end a thin portion to be grasped by a thumb and finger and from which thin portion extends a short arm of a length and diameter adapting it to be inserted into and to fit the axial recess of said head portion, said removable pin lock-stop member having at least one inner longer formation generally parallel with the said arm, and which, when the said removable pin lock-stop member is positioned, extends generally parallel with the said main or body member, the said longer formation having an inner edge shaped to be slid lengthwise into and to fit any desired one of the said circumferentially spaced channels upon the said cylindrical head portion when the said short arm is inserted into the axial recess of said head portion.

5. A hair waving curler in accordance with claim 4, wherein the said longer formation of said pin lock-stop member is inwardly curved near its free end so as to contact with the surface of said main or body member and at its extreme free end is slightly outwardly curved to present a hair guiding portion.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
D. 145,456	Natkiel	Aug. 20, 1946
2,073,815	Solomon	Mar. 16, 1937
2,132,500	Visitacion	Oct. 11, 1938
2,157,244	Pisciotta	May 9, 1939
2,218,082	Caldora	Oct. 15, 1940
2,232,776	Dunner	Feb. 25, 1941
2,243,173	Smalley	May 27, 1941
2,295,892	Crotts	Sept. 15, 1942

FOREIGN PATENTS

Number	Country	Date
686,668	France	Apr. 15, 1930
38,490	France	Mar. 9, 1931

(Addition to No. 686,668)