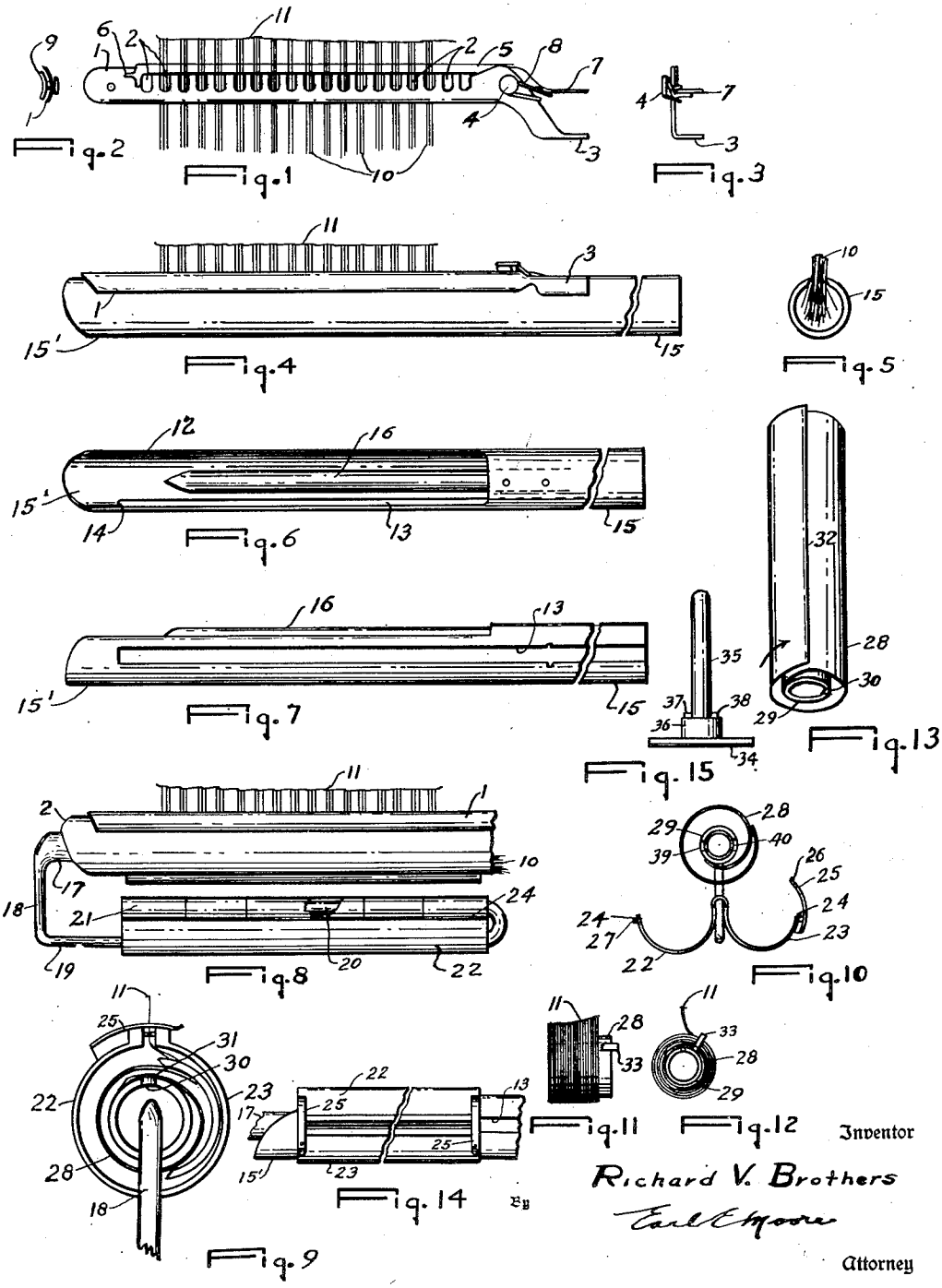
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HAIR CURLING DEVICE

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HAIR CURLING DEVICE

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1

This invention is a continuation-in-part of pending application Serial Number 777,077, filed September 30, 1947, now abandoned, entitled "Hair Curling Devices," therefore, this invention belongs to that same general class in that it still relates to hair curling devices.

The invention has among its objects the production of a means for curling hair that is simple, durable and compact in structure, inexpensive to make and manufacture, one that is dependable and efficient in use and service, and always convenient; and a device that is pleasing and attractive in appearances and very satisfactory for use whenever and wherever found applicable.

One of the principal objects is to present a hair curling device that forms an even cylinder and taut lock of hair by a simple manipulation which requires no particular training and/or experience.

Another object is to provide a curler that is very efficient in wrapping and winding the main shaft of the hair tress including the long and short lengths and do it in a manner that the hairs, all of them, are wound with equal uniformity and tension; awkward hand wrapping of the hair is entirely avoided and time wasting operations unnecessary in order to form a perfect curl.

Other objects, advantages and features of this particular invention will appear from a careful perusal of the accompanying drawing, the subjoined detailed description, the preamble of this specification, and the claims appended hereto.

Below, applicant describes one of the preferable forms of his invention in order to teach the art thereof and show how to make and use the same, but it is to be understood that the drawings and description thereof are not to limit the invention in any sense whatsoever except as the same is limited by the prior art. Language employed herein is not to be construed as giving any unauthorized person or organization the right to make, use and/or sell the invention herein disclosed.

In the drawings:

Figure 1 is a side elevational view of just the combing device showing it in position upon a lock of hair, the first step in using the hair curler;

Figure 2 is an elevational view of the combing device at one end thereof;

Figure 3 is an elevational view of the other end of the combing device;

Figure 4 is a side elevational view of the combing device showing it attached to the curling

2

rod, the outer end of the curling rod being broken away as this part thereof is the handle and its length is a matter of choice, this is the second step in using the device;

Figure 5 is an elevational view of the handle end of the curling rod;

Figure 6 is an elevational view of the curling rod rotated to a different position to that shown in Fig. 4;

Figure 7 is still another elevational view of the curling rod which has been rotated to another position;

Figure 8 is a side elevational view of a portion of the curling rod with its combing device and shown positioned upon or attached to the encasing device, the encasing device being shown in open position, this is the third step in using the device;

Figure 9 is an end elevational view of that shown in Fig. 8, but with the wings of the encasing device closed; this being the fourth step in using the device;

Figure 10 is an end elevational view of the encasing device itself with its wings in open position;

Figure 11 is an elevational view of a portion of the mandrel employed in the device with the lock of hair neatly wound thereon, this being the fifth step after the curling rod is first removed from the encasing device and then the encasing device opened and it removed from the mandrel;

Fig. 12 is an end elevational view of that shown in Figure 11;

Figure 13 is a perspective view of the elastic roll upon which the hair is wound,

Figure 14 is a top plan view of the device with parts broken away,

Figure 15 is a plan view of a key employed in conjunction with the mandrel to expand or contract it.

The particular form of the invention, as illustrated, has a combing device or unit consisting of a main body portion 1 provided with a plurality of alined comb openings 2 and a thumb engaging end 3, all configurated and arranged as shown in Fig. 1. A pivot rivet 4 is provided to which is pivoted a swingable closure element 5 which may be termed a gate, this gate having the stop element 6 and the forefinger engaging end 7. A wire type spring 8 is provided to constantly urge the gate into engagement with the body portion 1, which gate is stopped when the stop element 6 enters a cutout portion of the body so as to position the gate in the manner

shown in Fig. 1. A spacer rivet with a groove indicated at 9 is provided and this will presently be explained. Various strands of hair are indicated by the reference character 10 which extend from a person's head along the line 11. Note, that the lock of hair passes over the gate and through the openings and thence to the under part of the combing device.

The curling rod is a tube having the forward cutaway portion 12 and an elongated slot 13 that is closed at its forward end 14 but open to the very end of the handle portion 15. The rod is configurated as shown and has extending from the tubular handle portion 15 a cantilever tine 16 that is designed to enter a tubular portion of an encasing member to be explained later. The combing device is fitted onto this curling rod by feeding the spacer rivet 9 forwardly therealong after starting the grooved portion of the spacer rivet 9 at the open end of the slot 13, the combing device being pushed along the tube until stopped by the end 14 of the slot. The bottom edge of the end 7 of the combing device rides in the slot 13.

The next device is the casing device which comprises a tube 17 that is adapted to receive the tine 16, a downwardly directed structural rod 18 from which extends the laterally directed rod 19 and at its other end it is curved and extended, as at 20, to support a piano-like hinge 21, this hinge having elongated side portions which are integral with their respective curved wings 22 and 23. In Fig. 9 the wings 22 and 23 are shown in closed position, but in Figures 8 and 10, these wings are shown in open position. The top edge of each wing is provided with an elongated grooved portion wherein is cemented or otherwise affixed an elongated resilient element of neoprene or rubber 24 which are designed to be clamped together when the wings are in closed position about the lock of hair. The wings are held closed by the latch comprising an extended arm 25 which has an opening 26 at its end and this opening is adapted to snap onto a short stud 27 on the other wing, as shown.

The lock of hair is wound upon a resilient curved plate 28 which should be of a high grade spring steel or of a spring type of plastic material so as to withstand numerous expansions and contractions, that is, flexings so as to maintain its cylindrical form but contractible to smaller cylindrical sizes or expansible to larger cylindrical sizes. This kind of elasticity is necessary for the proper working of the device. The inner edge of the elastic plate or roll 28 is securely fixed to an elongated tube 29 and this tube has a bore which is sized to neatly slip over the tube 17. The forward edge of the tube 29 has a recessed portion 30 which is adapted to engage the stud 31 on the tube 17 and thus hold the inner portion of the roll 28 in proper position. The roll 28 is, therefore, of spiral formation and has the free elongated edge 32 which has a definite useful purpose in the manipulation of the device.

Operation.—The first thing to do is to see that the curling rod 15 has the casing and mandrel attached thereto so as to be ready, that is, these parts are assembled as shown in Fig. 8. The first unit employed is the comb device 1. The hair is preferably wetter before starting and the selected lock of hair combed. The comb 1 is then placed upon the lock of hair near the scalp. To apply the comb, the ends of the comb, 3 and 7, are pressed together so as to open the comb, that is, spread the arms apart, so that the lock of hair

can be neatly spaced between the teeth of the comb. The wire spring 8 automatically returns the comb arms together so as to hold the hair as shown in Fig. 1.

The curling rod 15 is now brought to the comb and the comb placed thereon in the manner previously explained allowing the hair strands to enter the hollow handle and slide therein as the hair is fed about the mandrel 28. The curved wings of the encasing device are then closed and latched as indicated in Fig. 9. The handle 15 is then rotated counterclockwise as viewed from the distal handle end, or clockwise as viewed in Fig. 9.

As the handle is rotated, the hair is fed from the chamber in the handle onto the mandrel 28 and also onto the rod or tube 15′ as well as the comb 1, the direction of rotation being that indicated by the arrow in Fig. 13 so that the tube end 15′ does not pass between the convolutes of the spiral shaped mandrel. For instance, the hair passes through the teeth spaces of the comb which is close to the scalp while the hair strands lay in the chamber of the tube 15. As the tube is manually rotated, the hair is wound around the outer surface of the mandrel, the hair ends eventually passing through the tube chamber and therefrom via slot 13 until the hair is snugly and neatly wrapped onto the mandrel.

When all the hair has been curled over the mandrel, the handle end 15′ is reversed in rotation so that the wrapping portion of curling rod 15 and comb passes under the free mandrel edge 32 and into the first convolute toward center of mandrel and the wrapping end of handle with comb still attached is removed intact by disengaging the tine 16 from the tube 17; that is, the curling rod is pulled away from the mandrel and casing. The casing is now opened and the mandrel 28 removed with the curl thereon and held tightly until a suitable clamp is placed onto the mandrel over hair. The hair is now ready for its proper solution for the hair setting function. Thus, the curl is made and later released for its combing and washing operations. The steps of procedure are quite simple, but some instruction is advisable. The curl is made perfectly even and uniform and the short lengths of hair are just as neatly handled as the long ones. Note, that there is a scrolling and curling of the outer strands of hair upon the inner strands and that the action forms convolutions toward the long axis of curl being formed. A clamp 33 is indicated in Figs. 11 and 12, but this clamp may be any suitable type as no particular clamp is necessary in order to practice the invention.

After the mandrel is removed with the curl of hair thereon, it can be expanded to tighten the curl by use of the key shown in Fig. 15, this key having the handle 34, stem 35, spacer 36, and the two opposite feathers or ribs 37 and 38 which are adapted to engage the pair of oppositely arranged slots 39 and 40 in the tube 29 as shown in Fig. 10.

It is, of course, understood that various changes and modifications may be made in the details of form, style, design, and construction of the whole or any part of the specifically described embodiment of this invention without departing from the spirit thereof in that such changes and modifications are considered as being within the scope of the following claims.

1. In a device for curling hair which comprises a rotary tube having an elongated open section at one end portion and an elongated

axially arranged slot extending along its wall from near one end thereof to another end thereof, a comb-like element having teeth with openings between and which element is attached to the tube and the openings of the comb being registered with the slot, a hinged casing enveloping the tube about its open section and also enveloping the comb-like element, the casing having an offset attachment element which is supported by a means extending from a portion of the tube, and a spirally formed mandrel latched to the attachment element and within the confines of the open section of the tube.

2. The device recited in claim 1 wherein the comb-like element consists of a pair of hinged elements, one of the hinged elements constituting the base portion, and means extending from the underside of the base portion which is adapted to engage the slot of the rotary tube.

3. The device recited in claim 1 wherein the means extending from a portion of the tube consists of a tine, and wherein that portion of the tube toward one end thereof from the open section thereof constitutes a handle.

4. The device recited in claim 1 wherein the mandrel consists of a sheet of elastic material rolled spirally around a tube and which has a notched edge, and a stud on the offset attachment element adapted to receive the notch of the tube within the mandrel.

5. The device recited in claim 1 wherein the casing consists of a pair of oppositely opening wings attached to a common elongated hinge, said wings having free edges which are provided with pliable contacting elements, and means upon the free edges of the wings which cooperate to form a latch.

6. In a device for curling hair which comprises a rotatable tube having an elongated open section at one end and a knurled elongated handle portion at the other end, the wall of the tube having an axially arranged slot which extends from one end thereof at the handle to almost the other end thereof, a comb-like element having teeth with openings between and

means upon the element for attaching it to the slot of the tube for sliding therealong, the openings of the element having registration with the slot, a tine extending from the handle portion of the tube axially along the open section thereof, a hinged casing having an offset sleeve portion supported by the tine, and a mandrel consisting of a spirally formed elastic sheet upon a second sleeve which is supported by the first mentioned sleeve.

7. In the device recited in claim 6 wherein the comb-like element includes a base portion with an extended thumb lever and an arm pivoted thereto adapted to close the openings of the element, and a forefinger lever extending from the arm in a spring urged spaced away and alined position with the thumb lever.

8. In a device for curling hair which comprises a rotary tube having an elongated open section between its ends and an elongated axially arranged slot extending along its wall, a comb-like portion having teeth with openings between and which portion is combined with the tube and the openings of the comb registered with the slot, a pivoted casing enveloping the tube about its open section and also enveloping the comb-like portion, the casing having an offset portion which is supported thereby, and a convoluted mandrel supported by the offset portion and within the confines of the open section thereof.

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