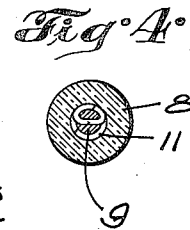
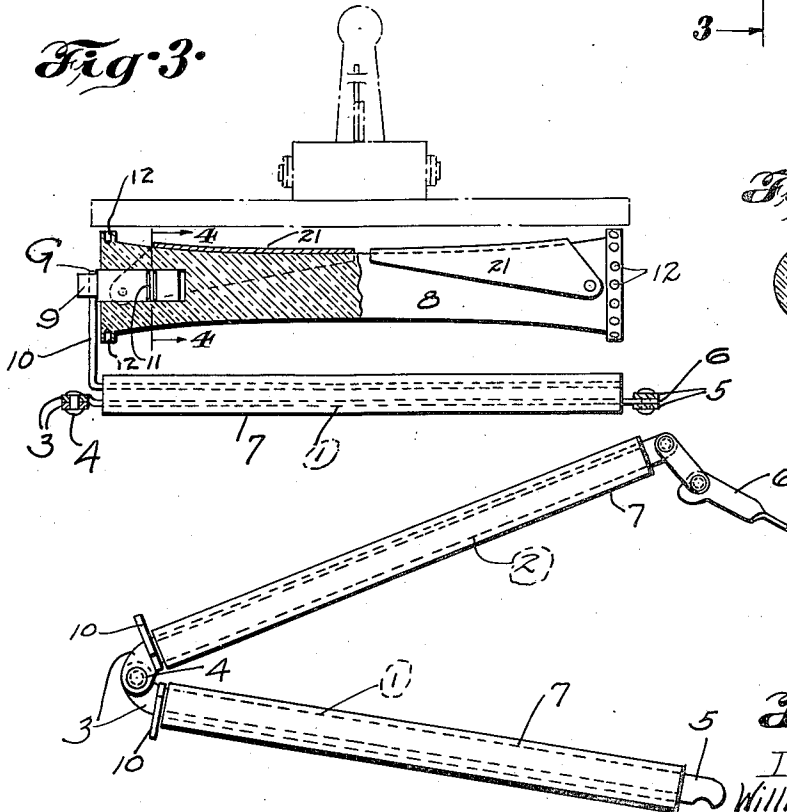
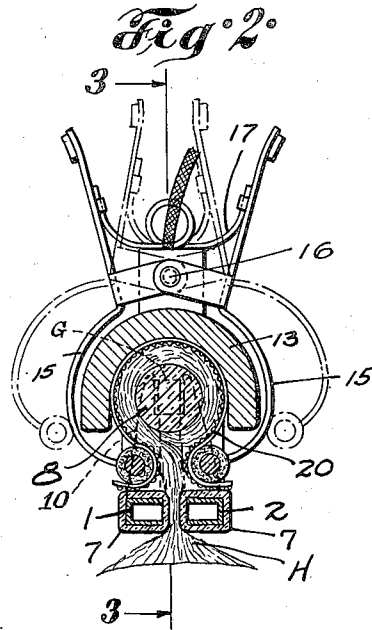
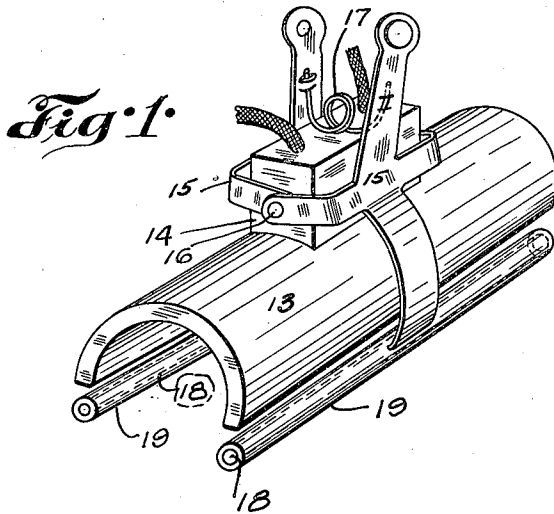


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W. G. SHELTON
HAIR WAVING EQUIPMENT

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1,756,837



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HAIR-WAVING EQUIPMENT

Application filed November 19, 1928. Serial No. 320,325.

My invention relates to devices for use in effecting a permanent wave or curl to the human hair and consists in a novel heater curling rod and clamp arrangement.

5 The objects of my invention are to provide a simple, effective device which may be quickly applied to the hair and may be removed easily and which, when in position, will securely hold the hair in tightly wrapped condition.

10 In the accompanying drawings which illustrate a selected embodiment of my invention—

Figure 1 is a perspective of the heater member and the parts mounted thereon.

Figure 2 is a transverse section through the structure shown in Figure 1 and also illustrating the curling rod, clamp, pad and strand of hair in assembled relation existing during the heating operation.

Figure 3 is a section on the line 3—3 of Figure 2 detailing the curling rod and one of the clamp jaws but omitting the hair and other features shown in Figure 2.

25 Figure 4 is a detail cross section taken on the line 4—4 of Figure 3.

Figure 5 is a top view of the clamp jaws.

The operation of forming a curl or wave is begun by applying the clamp jaws to a strand of hair near the scalp. Each of the jaws comprises a metallic channel member 1—2 having adjacent ends bent towards each other as indicated at 3 and pivotally connected by a pin 4. The opposite ends of the jaws mount suitable eccentric clamp elements 5 and 6. The major portions of metal elements 1 and 2 are covered by heavy rubber tubes 7 which form a yielding surface for engaging the strand of hair H which is gripped by the clamp jaws. By disposing the channel shaped metal elements 1 and 2 so that their backs are on the outer side of the device, the rubber covering is afforded the maximum yielding qualities as it may be pressed in between the flanges.

After the jaws are applied to the strand of hair, the outer end of the strand is applied to the intermediate portion of the curling rod 8 which, at that time, is not attached to any of the other apparatus shown.

Suitable clips 21 are pivoted on each end of rod 8 and may be folded down over the end of the strand of hair to hold it tightly against the rod and the remainder of the strand of hair may be readily wrapped over clips 21.

The rod is rotated between the fingers of the operator until the winding of the hair thereon brings the rod over the clamp jaws. When one end of the rod which is equipped with the square trunnion 9 is adjacent to the upturned flanges 10 provided on the clamp jaws 1, the square trunnion 9 will fit in the groove G. The trunnion 9 has a cylindrical inner portion journalled in the curling rod and this inner portion is provided with an annular groove in which is mounted a spring wire 11 adapted to contact with the inner face of the trunnion receiving opening in the curling rod. This wire, being shaped as shown, will permit the curling rod to rotate on the trunnion in one direction, but will resist rotation in the opposite direction.

The curling rod may be wound upon the strand of hair in the same direction which will permit relative rotation of the curling rod and trunnion. Then, after the trunnion is seated in the groove G, the curling rod may be slightly rotated by inserting a pin in one or more of the holes 12 and using the pin as a crank. This will tighten the strand of hair on the curling rod and also, by means of shortening the unwrapped portion of the strand of hair, hold the curling rod tightly against the jaws of the clamp.

The heater member is then slipped over the curling rod and the strand of hair wrapped thereon and this heater member comprises an arcuate body portion 13 having an electric resistance heating element embedded therein. A block 14 of insulation is attached to the top of the heater member 13 and a pair of arms 15 are pivotally mounted at 16 upon block 14. A suitable spring 17 thrusts the lower ends of arms 15 towards each other. The lower end of each arm 15 mounts a bar 18 which extends along the lower edge of the concave heater member and preferably is covered with an asbestos tube 19.

These bars 18 with their covering are applied to the joints between the curling rod and the clamp jaws as shown in Figure 2 and serve to yieldingly hold the heater in position and also serve to insulate the heater member from the clamp jaws and thereby protect the rubber covering 7 of the metal portions 1 and 2 of the clamp jaws.

Preferably, a pad of gauze, felt or blotting paper is saturated with a "setting" liquid and applied to the strand of hair as it is wrapped upon the curling rod. Such a pad is shown at 20 and it will be understood that pads of this type are old in the art and, in themselves, form no part of my present invention. When such a pad is used, the bars 18 serve to hold the pad in place and also serve to absorb hot water and steam generated by the heating operation which tends to seep down between the curling rod and the clamp jaws and contact with the scalp of the user.

The device described is very simple and is easily applied and removed and avoids the use of more cumbersome and complicated clamps and associated devices previously used in equipment of this type.

It is obvious that any detail of the described structure may be substantially modified and I contemplate the exclusive use of any variations in details which come within the scope of my claims.

I claim:

1. In a clamp for a hair waving device, a pair of clamping jaws each comprising a channel-shaped metal element and a rubber covering stretched over said element, the channel of one of said jaws facing the channel of the other of said jaws whereby the portions of the rubber covering stretched across said channels are opposed to each other and may yield inwardly of their respective jaws.

2. In a device of the class described, a hair clamping structure having an upstanding flange provided with an upwardly opening groove, a curling rod having a trunnion rotatably mounted in one end thereof and having a non-circular projection adapted to fit in said groove, and friction means between said rod and trunnion and inside of said rod for preventing relative rotation of said trunnion and rod in one direction.

3. In a device of the class described, a heater member, an arm pivoted on said heater, means for thrusting the lower end of said arm in one direction and moving it relative to the adjacent portion of said member, and an element on said arm beneath said heater member for engaging a strand of hair.

4. In a device of the class described, a heater member, arms pivoted on said heater member and projecting below the same, means for thrusting the lower ends of said arms towards each other and moving them relative to the adjacent portions of said member, and elements on said arms beneath said heater

member for gripping a strand of hair between them.

5. In a device of the class described, an elongated concaved heater member, arms pivoted on said member and projecting below the edges of the same, and individual bars on the lower ends of each of said arms and extending along the adjacent lower edges of said heater member and movable relative to said edges and adapted to grip a strand of hair between them.

6. In a device of the class described, a pair of pivoted jaws for clamping a strand of hair between them, a curling rod about which said strand may be wrapped, a heater member adapted to fit over said curling rod and a strand of hair wound thereon, and opposed elements movable mounted on said heater member and adapted to grip said strand of hair between said rod and said jaws.

7. In a device of the class described, an elongated semi-cylindrical heater member, a relatively short block on the convex side of said member, arms pivotally mounted on said block and extending on opposite side of said heater member to below the longitudinal edges of the same, bars mounted on the lower ends of said arms and extending adjacent to said member edges, and a spring applied to said arms so as to thrust the lower ends of the same and said bars towards each other beneath said heater member edges.

8. In a clamp for a hair waving device, a pair of clamping jaws, each comprising spaced rigid metal elements and a rubber covering stretched thereover, said jaws being arranged so that spaces between their respective elements are opposed whereby the portions of the rubber covering stretched across the said elements are opposed to each other and may yield inwardly of their respective jaws.

In testimony whereof I hereunto affix my signature this 13th day of November, 1928.

WILLIAM G. SHELTON.