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HAIR WAVING APPARATUS

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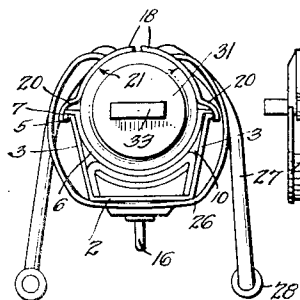


Fig. 2.

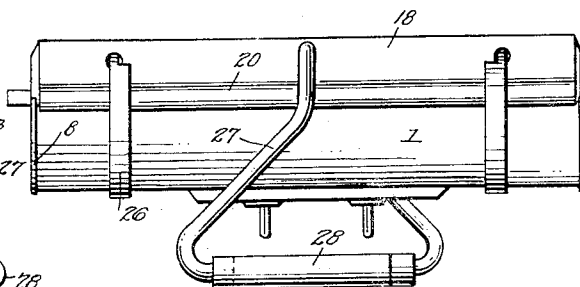


Fig. 1.

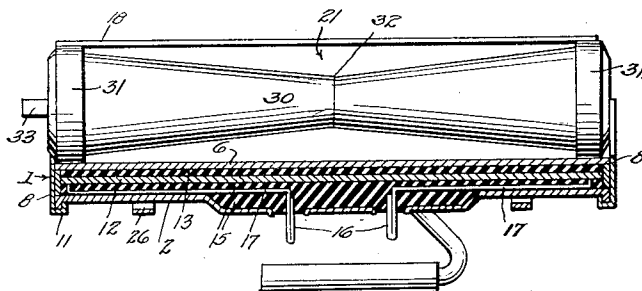


Fig. 3.

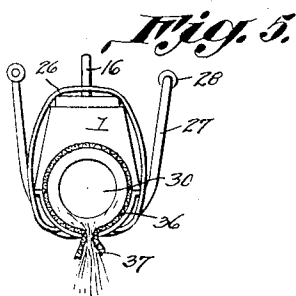


Fig. 5.

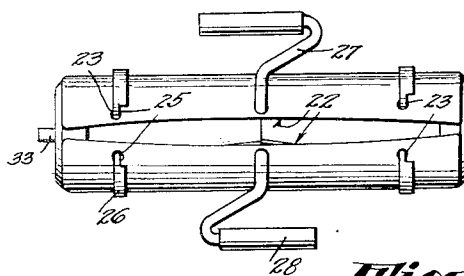


Fig. 4.

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HAIR WAVING APPARATUS

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8 Claims. (Cl. 132—36)

This invention relates to improvements in apparatus for applying permanent wave or curl to the hair.

One of the objects of my invention is to provide a hair-dressers appliance of the class described which is simple in construction, of few parts which may be readily disassembled for cleaning or replacements, and in which the mode of applying heat to the hair is of high efficiency and operative convenience while the hair is fully safeguarded from overheating or scorching while the appliance is in use.

A further object of the invention is the provision of an appliance of general efficiency and convenience including a chambered body containing the heating element and formed with a semi-cylindrical spool-receiving cavity, the spool upon which the hair is coiled having flanged cylindrical ends for support within the cavity, and a pair of plates hingedly connected upon each side of the body of cylindrical contours and arranged for yielding support upon the terminal flanges of the spool to enclose the spool and hair coiled thereon in a substantially closed compartment to be therein subjected to heat and vapor without physical contact or pressure being exerted upon the hair through said clamping plates whereby the hair is permanently curled in smooth and even undulations without the unsightly kinks or sharp bends frequently impressed in the hair by the direct pressure of the clamping plates upon the hair.

Other objects and advantages residing in my invention, and objects relating to details of construction thereof, will be fully set forth in the detailed description to follow.

The accompanying drawing illustrates by way of example a representative form of my invention in which:

Figure 1 is a view in side elevation of an embodiment of my invention, shown somewhat larger than the actual size of the device.

Figure 2 is an end elevational view of the same with the end-wall of the body removed.

Figure 3 is a view in vertical section of Figure 1.

Figure 4 is a top plan view of my invention, shown approximately in full size.

Figure 5 is a view in cross-section on line 5—5 of Figure 4, showing the appliance in operative condition.

Referring to said views, the reference numeral 1 indicates the sheet metal body of my improved hair-waving appliance comprising a bottom wall 2 and, integral outwardly flaring side-walls 3 terminating in outwardly directed flanges 5. A reentrantly semi-cylindrical top-wall 6 is crimped at its side edges about said flanges 5, as at 7. End walls 8 integral with said top-wall enclose the heating chamber 10 by being crimped about the side and bottom walls, as at 11. Said body is thus formed of relatively light material, such

as sheet aluminum and without the use of solder.

Internally of said chamber an electric heating element 12 is insulated from the top end and side plates by mica-sheets 13 and from the bottom by suitable plastic insulating material 15 of low heat-conducting efficiency. A pair of terminal prongs 16 are connected by conducting strips or wires 17 with the ends of said heating element.

A pair of covering plates 18 of sheet metal of approximately the same length as the body are each formed at their lower edges with a rounded groove 20 adapted to be engaged over and hingedly fulcrum upon said crimped side-flanges 7. Outwardly of said groove, the covering plates are formed at 21 in a circular arc in cross section of slightly less than 90 degrees conforming to the radius of the cylindrical top-wall 6. The upper, opposing edges 22 of the plates are slightly curved inwardly along their lengths to admit of the entrance of a tress of hair at the middle portion of the resultant gap without spreading the plates apart.

Apertures 23 are formed through said plates adjacent each end in which the pointed or reduced ends 25 of flat-springs 26 are engaged to maintain the plates in yieldingly closed condition. Said springs are engaged at their opposite ends with the respective plates and at their middle portions extend under in close relation to the body 1. A lever-handle 27 is secured medially of each said plate terminating at its other end in a finger-engageable portion covered by a heat-insulating tube 28.

A solid spool 30 preferably of a light metal, such as aluminum, is formed with cylindrical ends 31, providing bearing faces for the plates 18 of substantially the same diameter as the interior curved surfaces of said plates and conforming to the curvature of the top-wall 6. From such ends the spool tapers inwardly in conical form to a medial restricted portion 32 thus affording a spool-space deepest at its mid-length upon which the hair to be curled is wound. A symmetrically disposed lug 33 projects from one end of the spool whereby the spool may be rotated while within the treating bore of the appliance formed by the wall 6 and the plates 18.

In operation, the appliance of my invention is used in substantially the same manner as the more modern apparatus for the same purpose. The hair is separated into individual tresses which are held together by a clamping device, not shown, positioned relatively close to the scalp and affording protection to the head from excessive heat emitted by the waving appliance.

Beginning with the outer end of the hair each tress is wound about the spool 30. A strip 36 of soft fabric saturated with a suitable waving fluid covered outwardly with a strip 37 of parchment or other close-textured paper is then wrapped

about the core and coiled hair. The plates 18 are opened to their fullest extent by means of the handles 27 and the appliance is slipped over the wrapped spool. The handles being released the plates will yieldingly engage upon the bearing faces of the cylindrical ends 31 and close the treating bore or heating chamber. The ends of the fabric and paper wrapper will protrude through the gap formed by the curved edges 22 of the plates with the hair therebetween, as seen in Figure 5. The pressure of the plates, however, is borne entirely by the ends 31 of the spool and the hair is thus only affected by the relative tightness of the curls wound upon the spool and are not pressed or otherwise subjected to pressure from the surrounding walls of the treating chamber. Such tension or desired tightness of the coils may be effected through the operator turning the spool within the treating chamber by means of the lug 33.

When thus assembled a terminal plug, not shown, of an electrical circuit is connected to the prongs 16 and the heating element energized to supply heat to the hair in the treating chamber. The hair is thus subjected to a proper degree of heat for the duration of time determined by the operator to set the hair in the form of wave or curl desired and as largely consequent upon the amount of tension and tightness of curl of the hair upon the spool. Owing to the support of the plates 18 upon the spool ends, however, and not upon the hair itself, no extraneous incidental bends or kinks will be given the hair by impress of the plates thereon but the hair will emerge from the appliance in smooth-flowing graceful curls in the mode controlled and desired by the operator.

I claim:

1. A hair-waving appliance, comprising in combination, a body having a heating chamber therein and a semi-circular wall, said body being formed with outwardly extending flanges upon opposite sides thereof, an electric heating element contained within said chamber, a pair of covering-plates whose inner surfaces are of circular configuration conforming to said wall of the body and being complementary thereto to form a substantially cylindrical treating chamber, said plates being pivotally and detachably mounted upon said flanges, a spool upon which the hair to be waved is coiled, said spool having cylindrical ends of substantially the diameter of said treating chamber upon which said plates are supported when in closed condition, and means to yieldingly close said plates.

2. A hair-waving appliance, comprising the combination of a body having a heating chamber and a semi-circular wall, an electric heating element contained within said chamber, a pair of covering plates having inner surfaces of circular configuration conforming to said wall of the body and complementary thereto to provide a substantially cylindrical treating chamber, said plates being pivotally mounted on said body, a spool having cylindrical medial portions upon which the hair to be waved is coiled, said ends of the spool being of substantially the diameter of said treating chamber and affording supports for said plate, and springs tending to close said plates.

3. A hair-waving appliance, consisting of an electrically heated body formed with a substantially semi-cylindrical wall, a pair of plates hingedly connected to said body of circular configuration upon their inner faces to form with said

body-wall a cylindrical treating-chamber, springs tending to close said plates, and a spool having cylindrical ends adapted to close the ends of said treating chamber and affording a support for said plates in closed condition.

4. A hair-waving appliance, consisting of an electrically heated body having a substantially semi-cylindrical wall and outwardly extending flanges upon its opposite sides, a pair of covering plates provided with grooves along one edge engaging said flanges to form a detachable hinge together with a pair of flat springs tending to close said plates, said springs extending about said body and bearing at their ends on said plates, said plates having circular contours on their inner sides conforming to the said top wall to provide a substantially cylindrical treating chamber, and a spool formed with cylindrical ends adapted to close the ends of said chamber and to support said plates when in closed condition, and having a medial portion to receive the hair in a coil wound thereon.

5. A hair-waving appliance, consisting of an electrically heated body having a concave semi-cylindrical top wall, a pair of plates hingedly connected upon opposite sides of said body and each having arcuate contours on their inner faces of substantially ninety degrees to form with said top wall a cylindrical treating chamber, a spool having cylindrical ends closing the ends of said chamber and to sustain said plates in their circular relation, and means to yieldingly urge said plates into contact with said spool-ends.

6. A hair-waving appliance, consisting of an electrically heated body formed with a concave semi-cylindrical top wall, a pair of covering-plates hingedly connected upon opposite sides of said body formed with their inner faces curved to conform to the cylindrical curvature of said wall to provide a substantially cylindrical treating chamber for the hair, flat springs encircling said body and bearing at their ends upon said plates tending to close the same, and a spool having bearing surfaces at its ends to maintain said plates in cylindrical relation.

7. A hair-waving appliance, consisting of an electrically heated body formed with a concave semi-cylindrical top wall, a pair of covering-plates fulcrumed upon the lateral edges of said body having their inner faces curved to conform to the cylindrical curvature of said wall to provide a substantially cylindrical treating chamber for the hair, springs encircling said body and bearing at their ends upon said plates tending to close the same, and a spool having cylindrical ends adapted to enter said chamber and maintain said plates in cylindrical relation with said wall, said spool extending from each said end in conical configuration to a restricted medial portion.

8. A hair-waving appliance, consisting of an electrically heated body formed with a concave semi-cylindrical top wall, a pair of covering-plates fulcrumed upon the lateral edges of said body and having arcuate contours on their inner faces of substantially ninety degrees to form with said top wall a cylindrical treating chamber, the outer edges of said plates being reentrantly curved from adjacent their ends, flat-springs encircling said body and bearing at their ends upon said plates tending to close the same, and a spool closely fitting into said chamber having cylindrical ends arranged to support said plates in their cylindrical relation and formed interiorly of said ends in conical portions having a restricted middle.

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