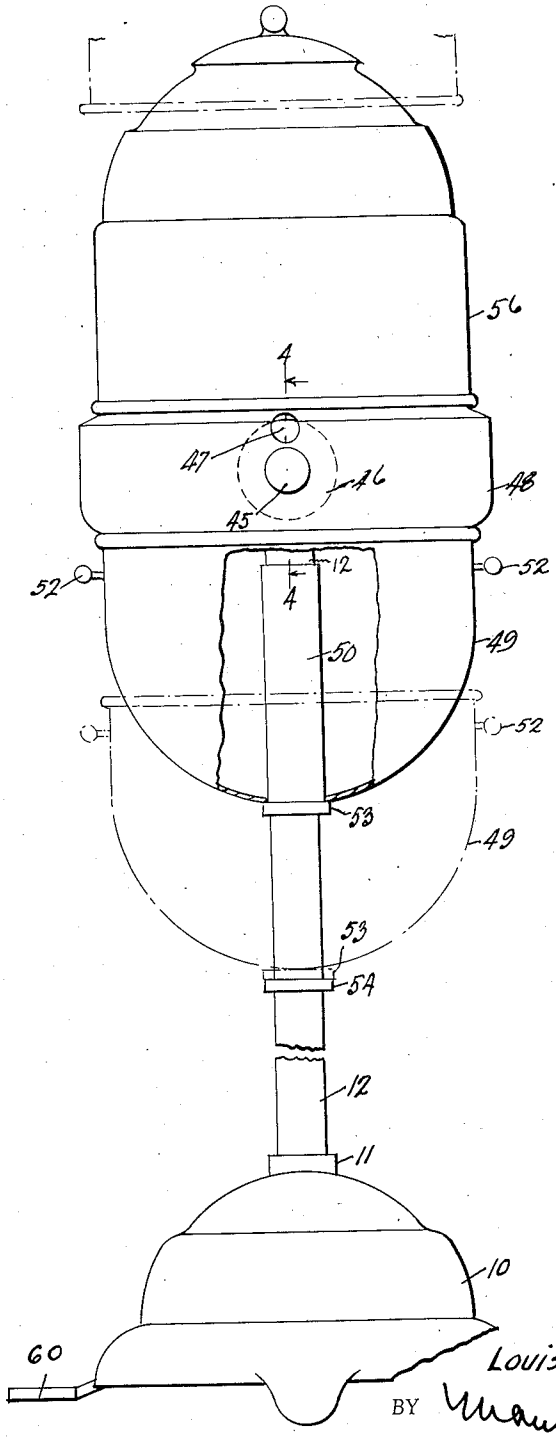
May 19, 1936. L. GOLDENBERG 2,041,409

PERMANENT HAIR WAVING APPARATUS

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Fig. 1



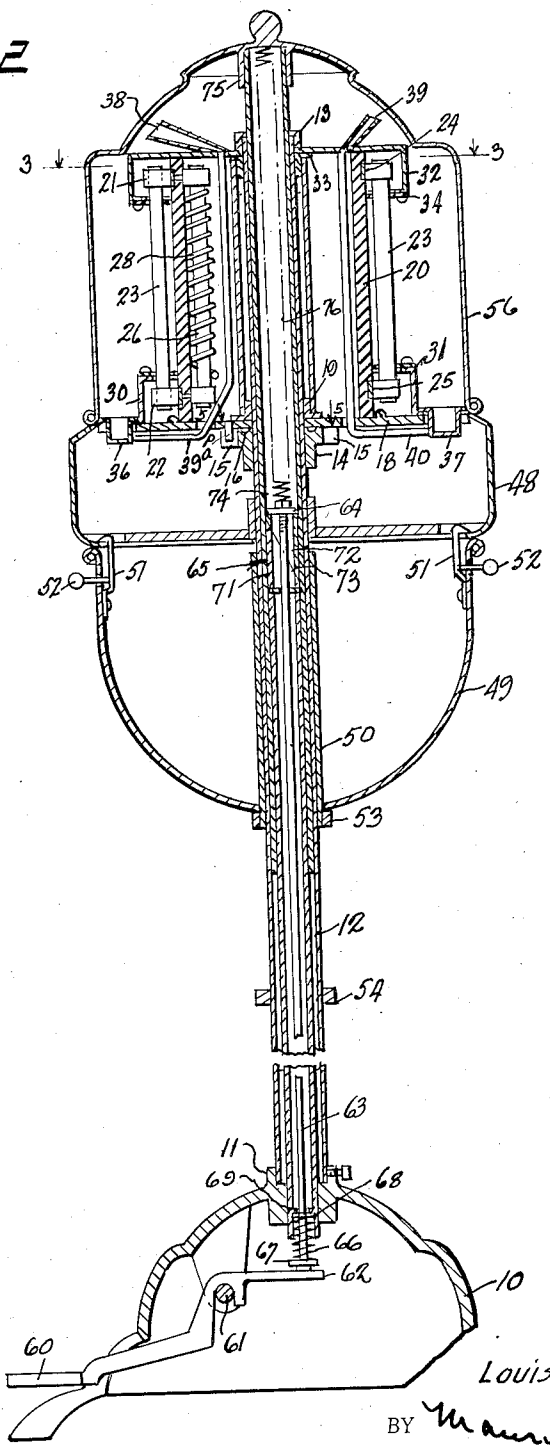
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Fig. 2



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Fig. 3

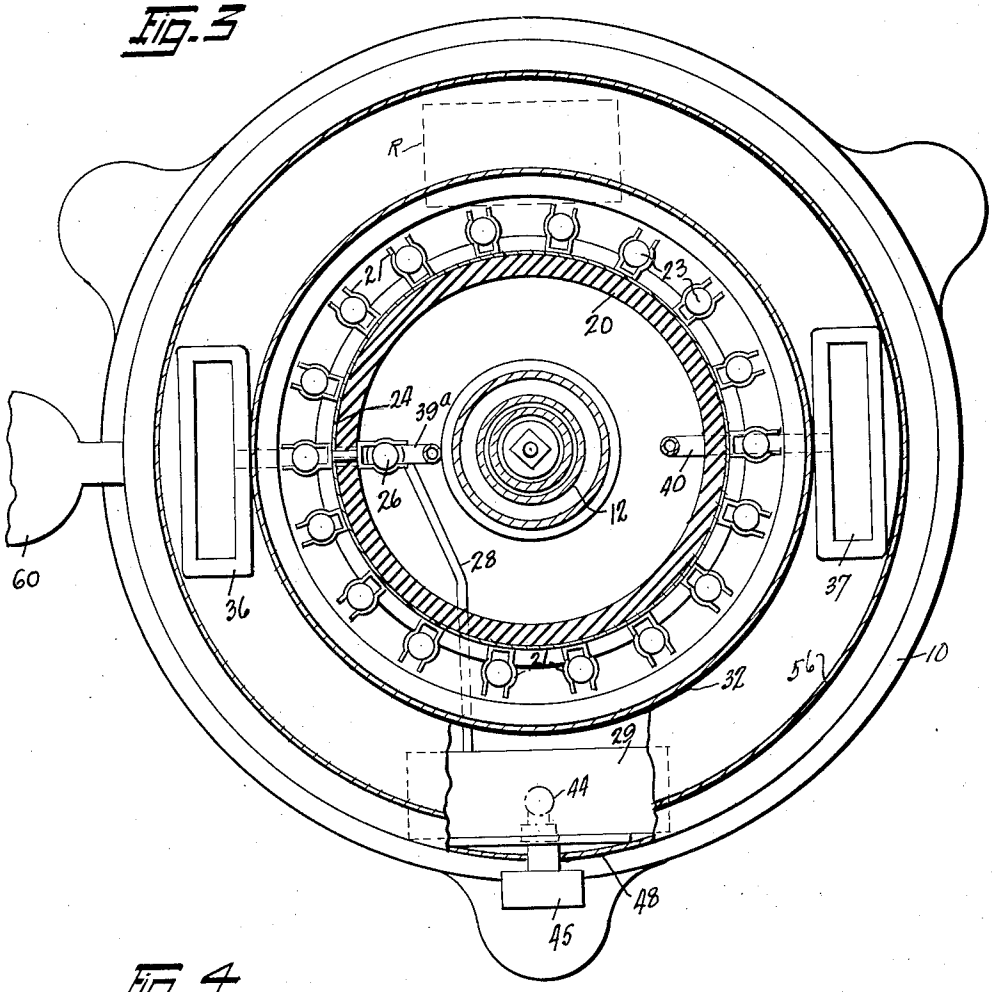
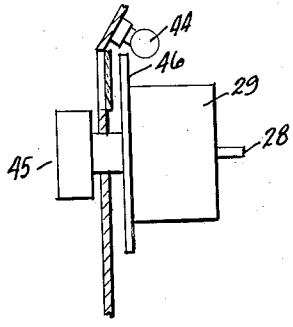


Fig. 4



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PERMANENT HAIR WAVING APPARATUS

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Fig. 5

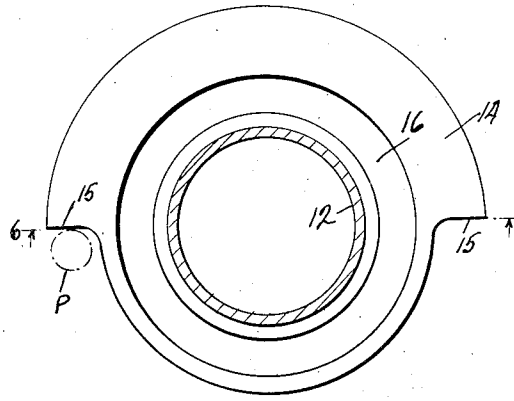


Fig. 6

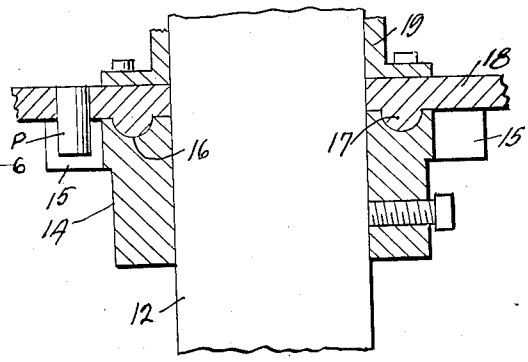


Fig. 8

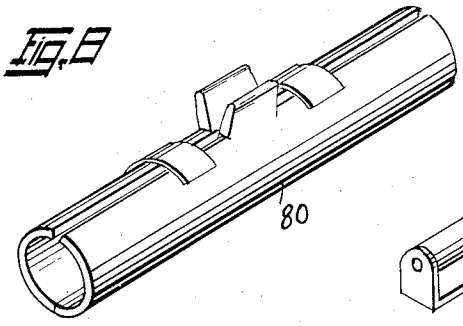


Fig. 9

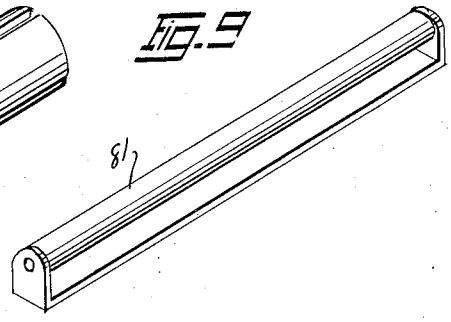
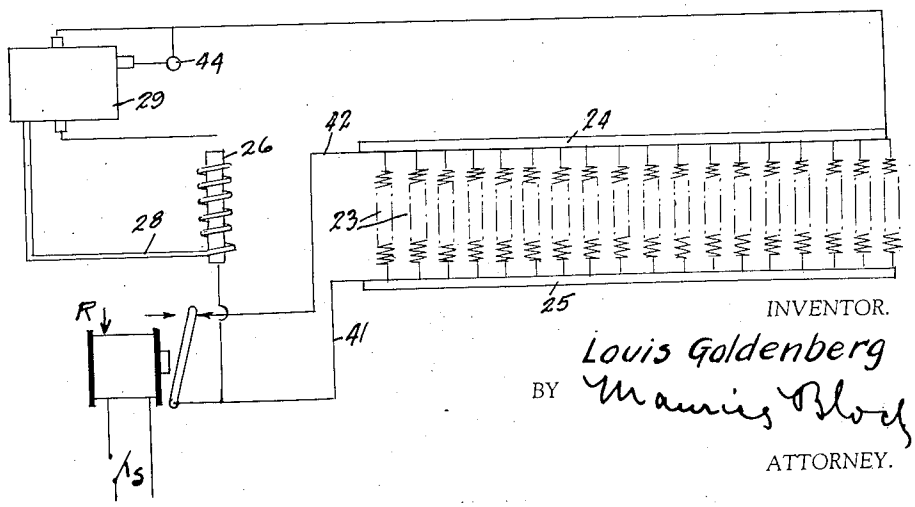


Fig. 7



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Patented May 19, 1936

2,041,409

UNITED STATES PATENT OFFICE

2,041,409

PERMANENT HAIR WAVING APPARATUS

Louis Goldenberg, Brooklyn, N. Y.

Application April 16, 1935, Serial No. 16,562

7 Claims. (Cl. 132—31)

This invention relates to apparatus for use in permanent hair waving and has for one of its objects the provision of a device in which the various implements used for permanent waving may be handily arranged for use when required.

Another object of the invention is the provision of such a device including a rotatably mounted drum for supporting a series of heating elements, the said heating elements being adapted to hold or support for heating, clamps or clips used for setting or waving the hair.

A further object of the invention is to provide an upper casing or cover to normally enclose the heating elements when not in use, together with means for automatically raising the said cover when the device is to be used.

A still further object of the invention is the provision of a central support about which the heating elements may be rotated, the said central support also providing means for supporting a lower housing in which the various hair waving accessories may be handily stored away when not in use.

Another object is to produce a device of the character described in which the maximum simplicity of construction and operation is secured.

Other objects and advantages will appear as the nature of the improvements is better understood, the invention consisting substantially in the novel arrangement and co-relation of parts herein fully described and illustrated in the accompanying drawings, wherein similar reference characters are used to describe corresponding parts throughout the several views, and then finally pointed out and specifically defined and indicated in the appended claims.

The disclosure made the basis of exemplifying the present inventive concept suggests a practical embodiment thereof, but the invention is not to be restricted to the exact details of this disclosure, and the latter, therefore, is to be understood from an illustrative, rather than a restrictive standpoint.

In the drawings accompanying this specification—

Figure 1 is a side view in elevation of my improved apparatus, with portions thereof broken away.

Figure 2 is a longitudinal sectional view thereof.

Figure 3 is a sectional view taken on line 3—3 Fig. 2.

Figure 4 is a fragmental sectional view taken on line 4—4 Fig. 1.

Figure 5 is a fragmental sectional view taken on line 5—5 Fig. 2 showing the stop member for limiting the rotative movement of the heater element carrier.

Figure 6 is a sectional view taken on line 6—6 Fig. 5.

Figure 7 is a diagrammatic view of the electrical connections.

Figure 8 is a perspective view of one type of clip used for hair waving and

Figure 9 is a perspective view of a mandril or rod upon which the hair is coiled or wound and upon or over which the heated clip is clamped.

Referring now to the drawings in detail, 10 indicates a base having an upper boss or hub 11 in which is secured a hollow post or pipe 12 which is provided at the top thereof with a cap 13. Secured to the post 12 intermediate its ends is a plate 14 having stop surfaces 15 spaced approximately 180° apart or in a straight line. The said plate is provided at its upper surface with an annular groove 16 in which is seated an annular bead 17 at the underside of a plate 18 rotatably mounted on the post 12 and provided with a bearing or hub 19.

Centrally resting upon the said plate 18 is a hollow cylinder 20 made of any suitable insulating material. Secured to the said cylinder 20 are a plurality of upper metallic clips 21 and a similar number of such lower clips 22 in alignment with the upper clips in which are removably held cylindrical heating elements 23. The upper clips are all in electrical contact with a metallic ring 24 and the lower clips are in contact with a similar ring 25. An additional heating element 26 located on the inside of the cylinder 20 is directly connected in series to one of the heating elements 23 and has wound thereon a liquid containing coiled tube 28 in communication with and under control of a thermostat 29.

Suitably supported on the plate 18 is a circular or cylindrical casing 30 to which is secured an annular insulating ring 31 through which the heating elements pass. An upper similar casing 32 rests upon a fitting 33 (see Fig. 2) secured to the post 12, the said casing being provided with an insulating ring 34 through which the upper ends of the heating elements pass. The above arrangement insures a central location of the cylinder 20 with respect to the post 12 and prevents lateral movement of the said cylinder and the elements carried thereby.

During the process of permanent hair waving, various kinds of lotions are used which should be maintained at certain temperatures for best

results. To accomplish this, I provide troughs or trays 36 and 37 which are supplied with such lotions through funnel shaped members 38 and 39 in communications with tubes 39a and 40 leading respectively to the troughs 36 and 37. The heat radiated by the elements 23 and 26 is sufficient to maintain the lotions at the required state or consistency. By closing a switch S, electric current is supplied to the heating elements through a relay R and thence through lead wires 41 and 42 which are in electrical connection with the rings 24 and 25. The thermostat 29 in the circuit is of the liquid type and controls the degree of heat generated by the heating elements. A pilot light 44 is utilized for indicating the proper degree of such heat, that is, when the said light goes on the heating elements are fully heated and the circuit supplying current to the said elements is broken. By turning a knob 45 secured to a graduated dial 46 the thermostat is set at the required temperature, the degree to which it is set is visible through a transparent window 47 in a central cover section 48.

Detachably secured to the said central cover section 48 is a lower cover section or housing 49 which is provided with a sleeve 50 slidable on the central post 12. The said housing is provided with a pair of spring latches 51 which are adapted to releasably engage the said central section 48. To disengage the housing 49 from the central section and lower same, handles 52 secured to the latches are pressed inwardy and the housing is then slid down until the collar 53 rests upon the stop collars 54. It is to be understood that the housing 49 contains all accessories and is lowered so as to withdraw the same therefrom.

The upper or heater element section is normally covered by a cover or housing 56 which rests upon the central portion 48. To uncover the said upper section so that work may be performed, the operator depresses the foot lever 60 which is pivotally mounted on a stud 61. The said action causes the free end 62 of the foot lever to actuate a rod 63 which at the top thereof is provided with a washer 64 which bears upon a brake 65. The said washer 64 is normally pulled against the top of the brake by means of a coiled spring 66 which exerts a pressure against a washer 67 secured to the bottom of the rod 63 and against a loose washer 68 on the rod which bears against a stop 69 on a tube 70. The brake comprises two short pipe sections 71 and 72 each provided with an oblique surface 73.

It will be understood that the pressure of the spring 66 causes the brake sections 71 and 72 to tightly hug the inner bore of a tube or sleeve 74 which at its upper end is secured to a hub 75 of the upper casing or cover 56. However, upon the lifting release of the washer 64 the brake sections 71 and 72 will be released from the tension of the spring 66 permitting the housing or cover 56 to be lifted upwardly by a spring 76 to the dot and dash position Fig. 1 to fully expose the upper section of the apparatus.

With the cover in the upper position, clips 80 are snapped over the heating elements, the thermostat is adjusted to the required temperature and the current is turned on. When this temperature is reached, the pilot light 44 lights up and the operator removes the clips 80 from the heater elements 23 and clips them over the mandrils 81 upon which the hair is wound. Prior to placing the clips over the hair a strip of cloth saturated with the lotion from the trays 36 and 37 is wound around the hair. It will be understood that clips 80 may be placed end to end and on each of the heater elements 23, and that after using those directly in front of the operator, he may turn the upper section about the center post 12 to bring the other clips within easy reach. The movement of the said section is limited by a pin P the plate 18 and the stop surfaces 15 in the plate 14.

After the hair waving operation is completed, the foot lever 60 may again be operated and the cover 56 pushed down manually against the center section 48.

From the foregoing, it will be seen that I have provided a compact simple and efficient permanent hair waving apparatus, the use of which will prevent the overheating and burning of the scalp or singeing of the hair now commonly the case with the present day apparatus where the clips are heated directly on the head of the person whose hair is being operated upon.

Having described my invention what I claim as new and desire to secure by Letters Patent is—

1. In a device of the nature described, a hollow central support, a heating element carrying section carried by the said support, a cover normally covering the said section, releasable means in the support for holding the said cover in normal position, and a spring for raising the said cover when the said holding means is released.

2. In a device of the nature described, a hollow central support, a heating element carrying section carried by the said support, a cover slidable on the support for normally covering the said section, releasable brake means in the support for holding the said cover in normal position, and a spring for raising the said cover when the said brake is released.

3. In a device of the nature described, a hollow central support, a heating element carrying section carried by the said support, a cover normally covering the said section, a sleeve depending from the said cover and slidable in the said support, releasable brake means in the support for holding the said cover in normal position, and a spring in the sleeve for raising the said cover when the brake is released.

4. In a device of the nature described, a central support, a stop plate secured to the said support, a second plate rotatable upon the said support and resting upon the stop plate, a heating element carrying drum on the second mentioned plate, and means on the said plates for limiting the rotary movement of the second mentioned plate.

5. In a device of the nature described, a central support, a lower annularly grooved plate secured to the support, an upper plate rotatable about the support, a bead on the upper plate fitting into the lower plate groove, a heating element carrying drum carried by the upper plate, and stop means on the said plates for limiting the movement of the upper plate.

6. In a device of the nature described, a central support, a stop plate secured to the said support, a second plate rotatable upon the said support and resting upon the stop plate, a heating element carrying drum on the second mentioned plate, means on the said plates for limiting the rotary movement of the second mentioned plate, a cover for normally covering the said heating element carrying drum, a sleeve depending from the said cover and slidable in the said support, releasable brake means in the support for holding the said cover in normal position,

and a spring in the sleeve for raising the said cover when the brake is released.

7. In a device of the nature described, a support, a central cover section carried by the said support, a lower cover section slidable on the said support and releasably secured to the central section, a heating element carrying section carried by the support above the central section, an upper cover normally resting on the central section and slidable on the support, releasable brake means in the support for holding the said cover in normal position, and a spring for raising the said cover when the said brake is released.

LOUIS GOLDENBERG.