

- [54] IMPLEMENT FOR SETTING HAIR
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[51] Int. Cl. A45d 2/36
[58] Field of Search 132/31, 36 R, 34,
132/37, 39, 41, 48

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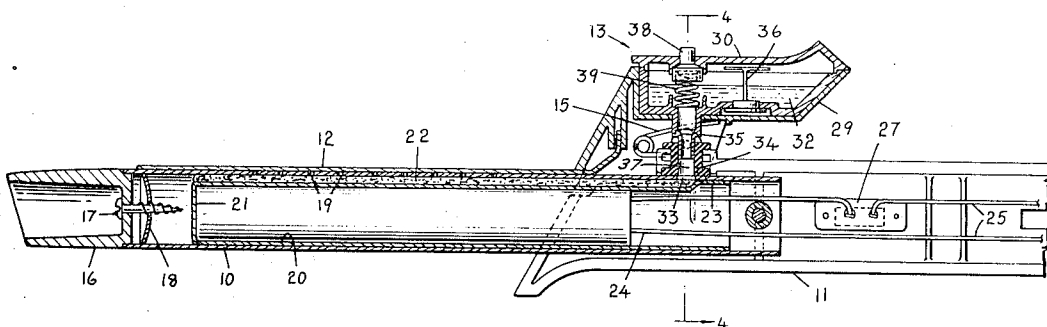
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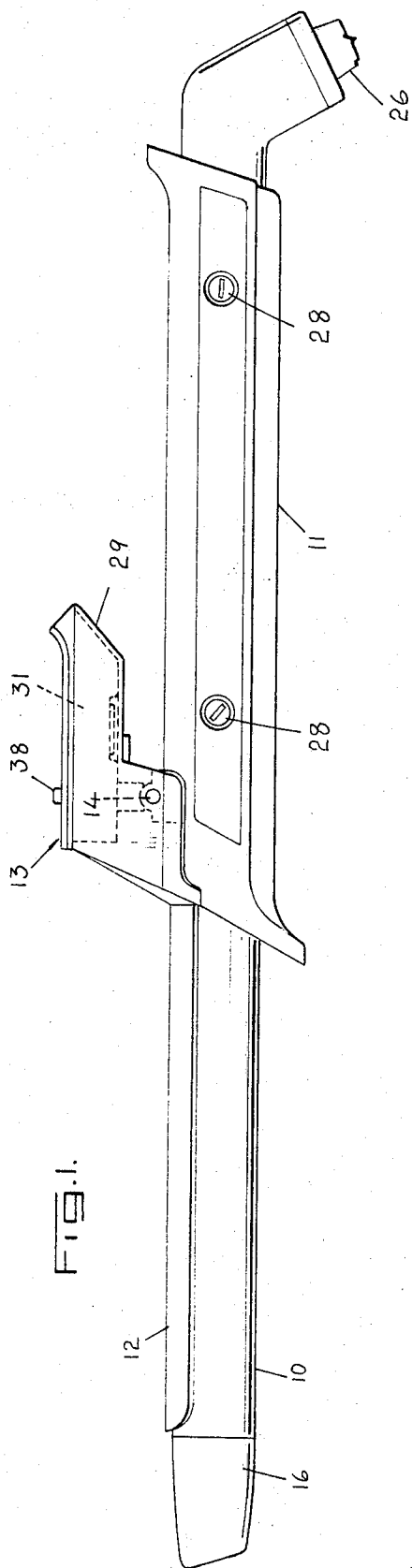
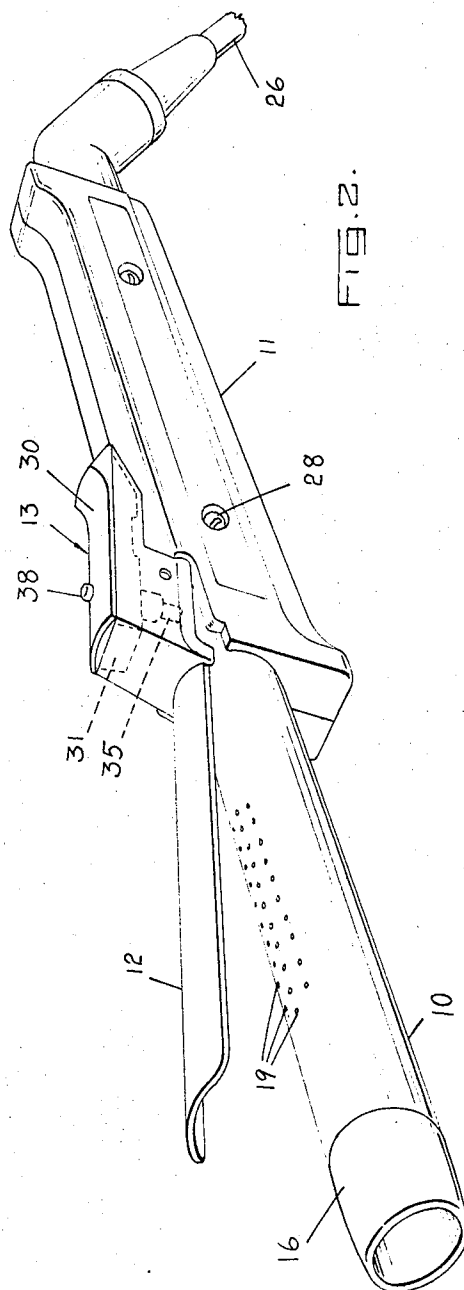
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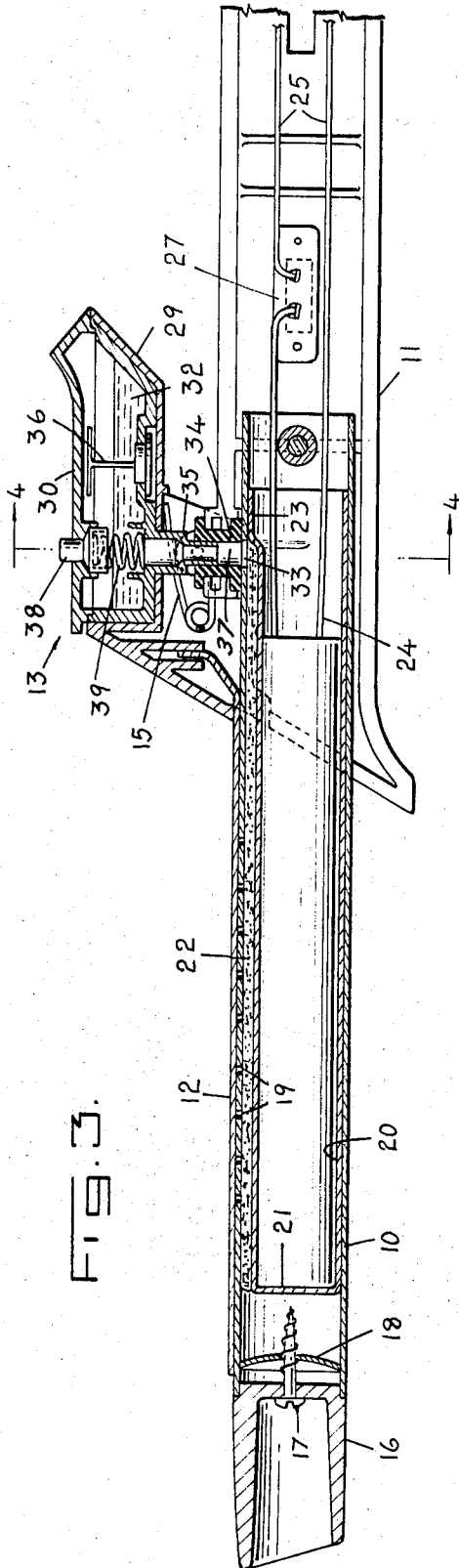
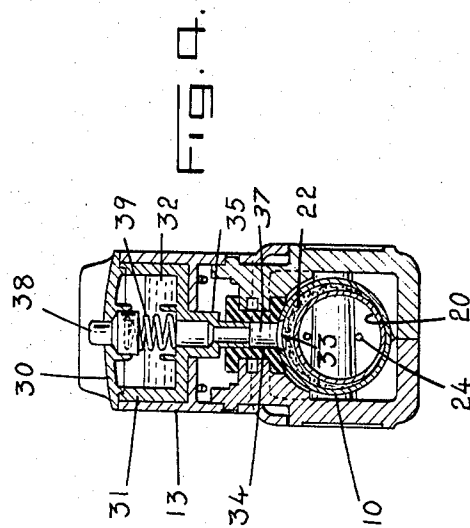
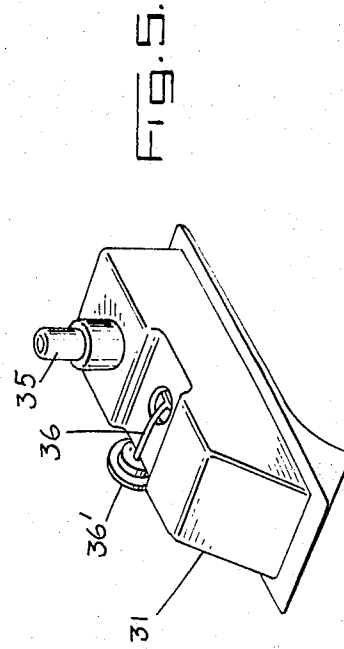
[57] ABSTRACT

An hair treating implement comprises a pair of pivotally connected arms each comprising an operative section and a handle section. One arm section, which includes electric resistance heating means, provides an annular space containing an absorbent wick for receiving treatment liquid from a reservoir mounted in the handle section of the other arm, the flow of liquid being regulated by a manually operable push button valve. Said one arm section is perforated to allow the discharge of vaporized liquid.

7 Claims, 5 Drawing Figures







IMPLEMENT FOR SETTING HAIR

This invention relates to an implement, i.e. a curling iron, for treating, regenerating and setting hair, the implement being of the kind in which simultaneously with the heating of the hair the vapour of a treating liquid is applied to the hair, the treating liquid being stored in a reservoir forming an integral part of the implement.

An implement of this kind is described in U. S. Pat. No. 3,220,421, dated Nov. 30, 1965, in the names Van Droogenbroek et al. The implement described in the above-mentioned patent has an operative arm in which are accommodated heating resistances and a chamber housing an element impregnated with liquid, said operative arm being provided with perforations for the discharge of vaporized liquid from the impregnated element.

It is an object of the present invention to provide an improved implement of this kind having a manually operable valve means for controlling the supply of treatment liquid to the element housed in said chamber.

It is another object of the present invention to provide an improved implement of this kind in which the electric heating resistance and supply conductors therefor are isolated from the chamber in which said element is mounted.

It is still another object of the present invention to provide an implement of this kind in which the component parts can be readily and economically assembled during manufacture.

An implement according to the present invention comprises a pair of hair engaging arms pivotally connected together, each arm having an operative section and a handle section, the operative section of one arm being of hollow cylindrical shape and the operative section of the other arm being shaped to match the shape of the operative section of said one arm, a hollow elongated container located inside the operative section of said one arm, electric resistance heating means located within said container, means for supplying electric current to said electric resistance heating means, an absorbent wick located between said container and the inside surface of the operative section of said one arm, a casing defining a reservoir for hair treating liquid mounted on or carried by the handle section of one of said arms, means defining a passage for the flow of liquid from the reservoir to the absorbent wick, and manually operable valve means mounted on the casing for controlling the flow of liquid from the reservoir to the wick, the operative section of said one arm being provided with perforations to allow the discharge of vaporized liquid from the wick.

In order that the invention may be readily understood, one embodiment thereof will now be described by way of example with reference to the accompanying drawings, in which:

FIG. 1 is a side elevation of the implement with the hair engaging arms closed;

FIG. 2 is a perspective view of the implement with the hair engaging arms open;

FIG. 3 is a longitudinal sectional elevation of the implement, one of the handle sections being broken away;

FIG. 4 is a section on line 4-4 in FIG. 3; and

FIG. 5 shows a detail of the reservoir for treatment liquid, the reservoir being inverted to show its underside.

The curling iron comprises a pair of hair engaging arms, namely a first arm having an operative section 10

and a handle section 11, and a second arm having an operative section 12 and a handle section 13. The arms are pivotally connected together by pivot means 14 defining a transverse pivotal axis and are spring-biased into the closed position by a bent spring 15. The operative section 10 of the first arm is in the form of a hollow cylindrical tube closed at one end by a closure cap 16 secured by a screw 17 which engages a plate 18 located inside the tube near said one end. The cylindrical tube has a longitudinally extending perforated section providing perforations 19 which, when the arms are closed together, are covered by the operative section 12 of the second arm, the latter being part-cylindrical in shape so as to match the shape of the first operative section. Located inside the operative section 10 is a hollow elongated container 20 in the form of a metallic cylindrical tube closed at one end 21, the container 20 defining with the operative arm section 10 an elongated space of crescent-shaped cross section, in which an absorbent asbestos wick 22 is located. The container 20 is provided with a cylindrical enlargement 23 at its open end, which is a friction fit against the inner surface of the operative arm section 10 to provide a waterproof seal, thus isolating the annular space from the interior of the container.

Electric resistance heating elements 24 are housed within the container 20 and are supplied with electric current by conductors 25 which extend through the handle section 11, a power cable 26 being connected to the free end of the handle section. The supply circuit includes an on-off switch 27 connected in series with one of the conductors and mounted in the handle section 11.

The handle section 11 is formed as a moulded plastic casing comprising a pair of complementary half shells secured together by transverse bolts 28. The handle section 13 also comprises a moulded plastic casing attached to the operative section 12 of the second arm, the casing providing a recessed section 29 defining a chamber. Within this chamber a casing member 31 is located, the casing member 31 providing a reservoir for hair treatment liquid 32. The casing member 31 has a moulded plastic cover 30 secured to it by ultrasonic welding. The operative section 10 of the first hair engaging arm is formed with an inlet opening 33 communicating with the elongated crescent-sectioned space, which opening is surrounded by an annular soft rubber boss 34 defining a seating. A tubular nozzle 35 projecting from the base of the reservoir casing 31 and through an opening in the handle section 13 cooperates with the seating to define a flow passage 37 for the flow of liquid 32 from the reservoir to the space containing the absorbent wick 22. The reservoir casing 31 is held in place in the chamber of the handle section 13 by a flexible tie member 36 of polyethylene, the latter having a disc attachment 36 for closing the filling opening on the underside of the reservoir. The flow of treatment liquid from the reservoir to the wick is controlled by a manually operable valve assembly, the valve assembly comprising a push button 38 which is biased towards its neutral, or inoperative, position by a spring 39. When the push button 38 is depressed, air is admitted to the reservoir thus enabling the liquid 32 to drip through the passage 37.

When in use the operative section 10 of the curling iron is heated electrically internally in the conventional manner. In order to apply vapour from the treatment

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liquid to the hair the user depresses the push button 38, thus admitting air to the reservoir and so causing liquid to flow under gravity from the reservoir to the absorbent wick 22. The disposition of the container 20 within the operative arm section 10 is such as to prevent the liquid from reaching the electric resistance heating means or supply circuit therefor. The absorbed liquid becomes vaporized and is discharged through the perforations 19 into contact with the hair.

What I claim is:

1. An implement for treating, regenerating and setting hair comprising a pair of hair engaging arms pivotally connected together, each arm having an operative section and a handle section, the operative section of one arm being of hollow cylindrical shape and the operative section of the other arm being shaped to match the shape of the operative section of said one arm, a hollow elongated container located inside the operative section of said one arm, electric resistance heating means located within said container, means for supplying electric current to said electric resistance heating means, an absorbent wick located between said container and the inside surface of the operative section of said one arm, a casing defining a reservoir for hair treating liquid mounted on the handle section of said other arm, means defining a passage for the flow of liquid from the reservoir to the absorbent wick and manually operable valve means mounted on the casing for controlling the flow of liquid from the reservoir to the wick, the operative section of said one arm being provided with perforations to allow the discharge of vaporized liquid from the wick.

2. An implement according to claim 1, wherein the container is an elongated cylindrical tube closed at one end and open at the other end, the container being positioned relative to the operative section of said one arm so as to define an elongated space of crescent shaped cross section, the absorbent wick being located in said space, the container being sealed to the operative section of said one arm adjacent its open end thereby closing one end of the crescent-sectioned space and isolating the space from the interior of the container and the electric resistance heating means therein.

3. An implement according to claim 2, wherein the

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handle section of said other arm comprises a moulded casing attached to said other arm, the moulded casing defining a chamber wherein the reservoir casing is located.

4. An implement according to claim 3, wherein the operative section of said one arm is formed with an opening defining an inlet to said crescent-sectioned space, said passage for the flow of liquid being defined by a tubular nozzle depending from the reservoir casing and located by a flexible sealing surrounding said opening.

5. An implement according to claim 4, wherein the manually operable valve means comprises a spring-loaded push button projecting from the moulded casing operative to admit air to the reservoir casing to cause treatment liquid to flow through said passage under gravity.

6. An implement according to claim 3, wherein the operative section of said one arm is a cylindrical tube having a removable closure cap at the end remote from the handle section.

7. An implement for treating, regenerating and setting hair comprising a pair of hair engaging arms pivotally connected together, each arm having an operative section and a handle section, the operative section of one arm being of hollow cylindrical shape and the operative section of the other arm being shaped to match the shape of the operative section of said one arm, a hollow elongated container located inside the operative section of said one arm, electric resistance heating means located within said container, means for supplying electric current to said electric resistance heating means, an absorbent wick located between said container and the inside surface of the operative section of said one arm, a casing defining a reservoir for hair treating liquid carried by the handle section of one of said arms, means defining a passage for the flow of liquid from the reservoir to the absorbent wick and manually operable valve means mounted on the casing for controlling the flow of liquid from the reservoir to the wick, the operative section of said one arm being provided with perforations to allow the discharge of vaporized liquid from the wick.

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