

Nov. 30, 1965

J. F. (DIT ROGER) VAN DROOGENBROEK ETAL

3,220,421

IMPLEMENT FOR SETTING HAIR

Filed March 31, 1961

3 Sheets-Sheet 1

Fig. 1.

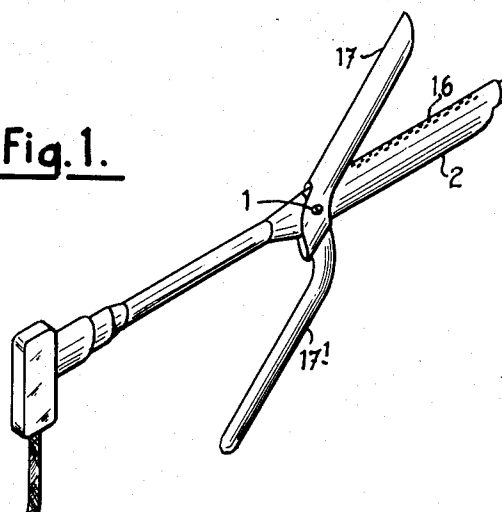
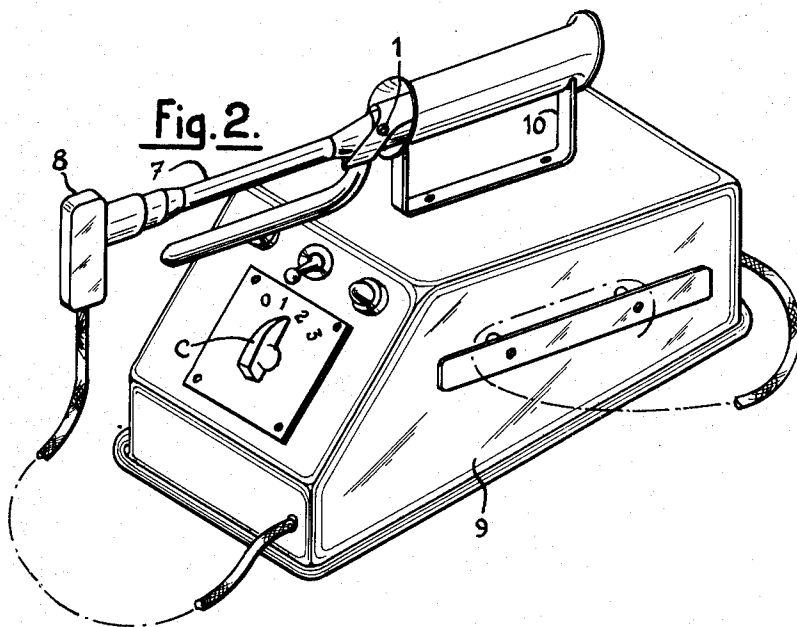


Fig. 2.



Nov. 30, 1965

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3 Sheets-Sheet 2

Fig. 3.

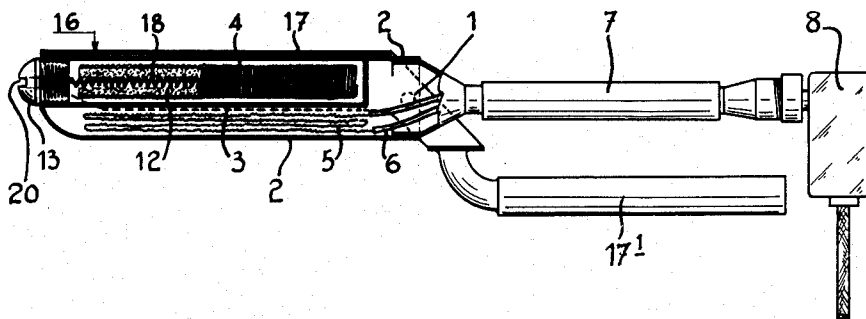


Fig. 4a

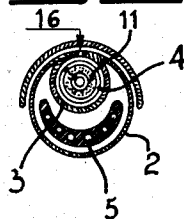
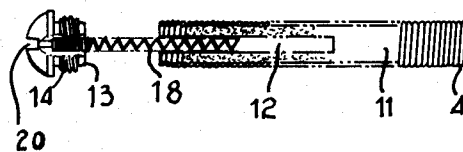


Fig. 4.



Nov. 30, 1965

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3 Sheets-Sheet 3

Fig. 5.

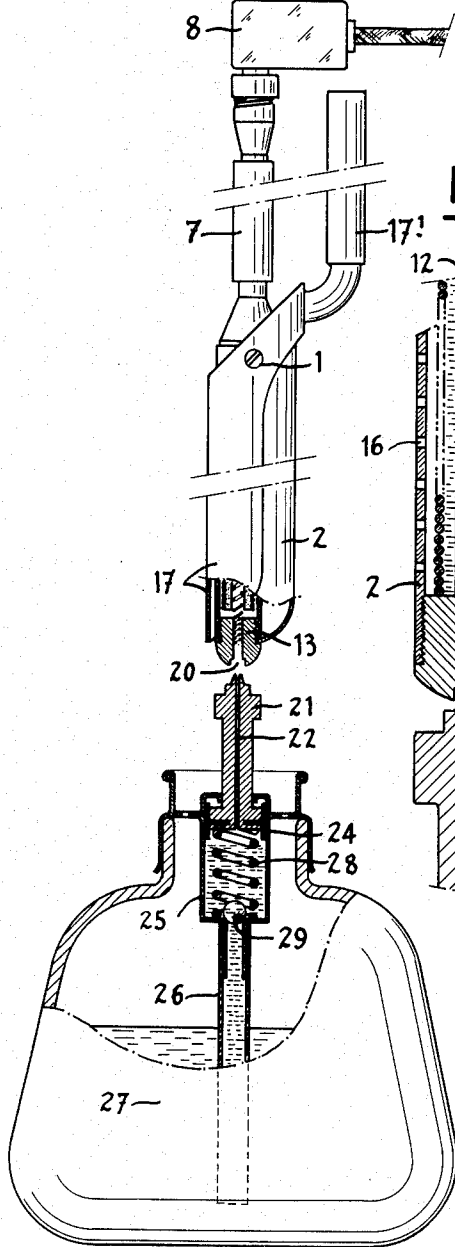


Fig. 6.

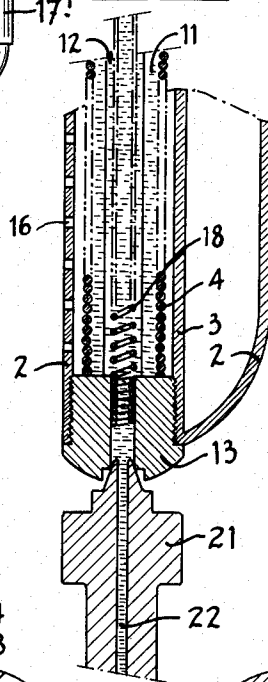
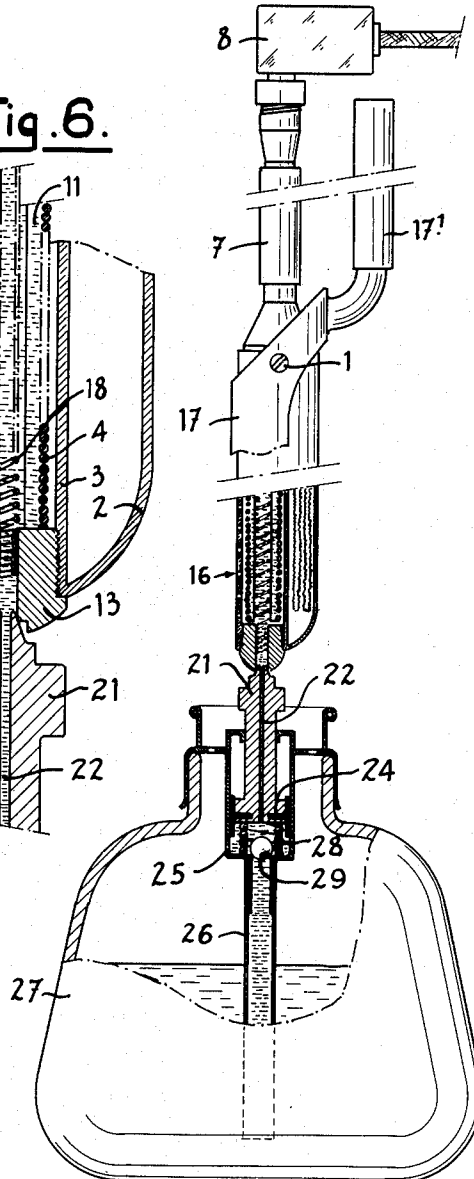


Fig. 7.



1

3,220,421

IMPLEMENT FOR SETTING HAIR

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823,193, Patent 1,253,055

4 Claims. (Cl. 132—32)

This invention relates to apparatus for treating, regenerating and setting hair according to which there is effected simultaneously with a heating of the hair the application to the hair of the vapor of a liquid product which is contained in a chamber formed in the arm of a conventional curling iron or like implement.

It is an object of the invention to provide an implement of the above type having an operative arm, in which is accommodated heating resistances and a chamber housing an element impregnated with liquid, said arm being provided with apertures for the outlet of the vapors produced.

In order to allow the invention to be properly understood, there will now be described by way of example and by no means in a limiting sense, a preferred embodiment of an implement according to the invention.

In the accompanying drawings:

FIG. 1 is a perspective view of the operative implement,

FIG. 2 is a perspective view of the casing for the feeding and adjustment of the implement,

FIG. 3 is a longitudinal cross-section of the implement,

FIG. 4 is a view, partly in section, of the arm adapted to carry the treating liquid, as taken of FIG. 3,

FIG. 4A is a cross-section through the operative arm of the implement of FIG. 3,

FIGS. 5 and 7 illustrate the manner of feeding liquid into the chamber illustrated in FIG. 4,

FIG. 6 is a detail explanatory view corresponding to FIG. 7.

As illustrated in the drawing, the implement forms a curling iron of which one arm is constituted beyond the pivot 1 of said implement by a sheath 2 carrying a container 3 housing an element 4 carrying a liquid adapted to be vaporized under the action of the heat produced by the electric resistances 5 fed with current by wires 6 extending inside the handle 7 and terminating with a jack 8 adapted to be connected with a portable case 9 (FIG. 2) containing a transformer and provided with a switch while a handle 10 of the case serves as a support for the implement.

In the example illustrated, the element 4 is constituted by a spring having joining convolutions and inside which is housed a cylindrical asbestos wick 11 having a bore 12 carrying a spring 18 secured to a sleeve 13 provided with a screw thread 14 and terminating with a head similar to that of a screw and provided with a filling port 20.

The sheath 2 is provided with one or more rows of ports or perforations 16 located at suitable points so as to allow the outlet of the vapors produced by the liquid contained in the sheath and imbibing the asbestos.

The other arm of the implement includes beyond the pivot 1 a semi-cylindrical element 17 adapted to match the shape of the sheath 2 and rigid with the other handle 17' cooperating with the handle 7.

In the operative position illustrated in FIG. 3, the spring 18 has entirely receded inside the bore 12 and the threaded sleeve 13 is screwed into a tapped hole provided at the end of the container 3.

Under the action of the heat produced by the electric

2

cal resistance 5, when current flows therethrough, the liquid is vaporized and escapes through the ports 16.

For filling of the container, the procedure is that illustrated for instance by FIGS. 5, 6 and 7, as shown therein, the implement is set vertically with the sleeve 13 facing downwardly and over a needle 21 provided with a bore 22 and adapted to slide inside a cylinder 25 extending downwardly in the shape of a tube 26 dipping into the treating liquid contained inside a bottle 27.

A force is first exerted on the needle 21 by pressing the implement downwardly to the position illustrated in FIG. 7. During the retractive movement in the opposite upward direction, the ball 29 at the bottom of the cylinder 25 is raised through a suction effect and the liquid rises through the bore 22 and enters through the opening 20 in the head of the threaded sleeve into the bore 12 and round the convolutions of the spring 18, which ensures a proper distribution of the liquid inside the asbestos wick 11.

As will be readily ascertained, it is possible in accordance with the invention to provide a treatment of hair through the simultaneous action of heat and of a regenerating reagent product while particularly providing a speedy and durable setting of the hair.

Mentioned by way of example is a product to be used as a regenerating reagent and the composition of which is as follows:

A	Cetylstearylic sulfonated alcohol (lanette Sx) -----gr--	13
	Oleyl oleate (cutanol G) -----gr--	34
	Golden soya bean lecithin -----gr--	6
	Methyl paraoxybenzoate (nipagin M) -----gr--	2
B	Distilled water -----gr--	432
C	Distilled water -----gr--	500
	Polyvinyl pyrrolidone (luviskol 180) -----gr--	10
	Aldehydic oil 29 -----gr--	74
	Golden yellow dyestuff, 1201 at 1% -----ccm--	1
40	Antifrothing reagent 424, 4 ccm. for -----kg--	10

This mixture is obtained as follows:

The fraction C is prepared one or two days previous to use. To this end, the "luviskol" is cut into small fragments which are dissolved in cold water by stirring preferably inside a sun-and-planet mixer, the dissolving operation being performed very slowly.

When the solution C is ready, the mixer is drained and the solution is stored for instance in a demi-john made of glass, stainless steel or enamelled metal.

The emulsion forming the fraction A is prepared similarly in the same sun-and-planet mixer.

The components of the fraction A are melted and heated to a temperature of about 60° C.; there is then added to said fraction A the distilled water forming the fraction B and which has also been heated to 60° C.; the stirring is continued until complete cooling is obtained and then the solution C is incorporated with golden yellow dyestuff 1201 and antifrothing reagent 424.

The stirring is then continued until complete homogenization is obtained.

It is also possible to resort to other water soluble dyestuffs.

As a novel treating product, it is also possible to resort to a composition containing lecithin, for instance soya-bean oil which may easily impregnate the hair.

It is also possible to obtain with the above-described method and apparatus, a sleeking and glossing effect for the hair.

What we claim is:

1. An implement for treating, regenerating, and setting hair, comprising a pair of engaging arms pivotally con-

3

nected together, each including a handle and an operative section, means defining a container for a treating liquid housed inside the operative section of one of said arms, a spring with joining convolutions supported inside said container, and asbestos wick adapted for being impregnated with said treating liquid and provided with a bore, an electric heating resistance in the operative section of said one arm and adjacent said container, means for feeding electric energy to said resistance to heat the same to cause vaporizing of said treating liquid, means permitting discharge of the vaporized liquid from the operative section of said one arm, a second spring in the bore of the asbestos wick, a threaded sleeve extending through the operative section of said one arm and externally thereof and engaging said second spring, said sleeve being threadably engageable with said one arm to detachably couple said sleeve and said one arm together, said second spring having a maximum depth of penetration into said wick with said sleeve and said one arm threadably engaged, and means for introducing the treating liquid through said sleeve into the asbestos wick.

2. An implement for treating, regenerating and setting hair comprising a pair of hair engaging arms pivotally connected together, each including a handle and an operative section, means defining inside the operative section of one of said arms a container in which a quantity of treating liquid is adapted to be stored, said operative section of said one arm having a free end remote from the handle of said one arm, means at the free end of said operative section of said one arm for filling the said container with the treating liquid, a spring with joining convolutions supported inside said container, means adapted for being impregnated with said treating liquid inside said spring, an electric heating resistance in said operative section of said one arm and adjacent said container, means for feeding electric energy to said resistance, to heat the same to cause vaporizing of said treating liquid, said operative section of said one arm being provided with perforations to allow discharge of the vaporized liquid, the operative section of said one arm being of cylindrical shape, the operative section of the other arm being of hollow semi cylindrical shape and adapted to match the shape of the operative section of said one arm.

3. An implement as claimed in claim 2 wherein said means for filling said container with treating fluid com-

4

prises a sleeve threadably engaged in said operative section of said one arm, said sleeve having a port through which may pass treating fluid, said wick having a bore and a second spring secured to said sleeve and extending in said bore.

4. An implement for treating, regenerating and setting hair, comprising a pair of hair engaging arms pivotally connected together, each including a handle and an operative section, means defining inside the operative section of one of said arms a container in which a quantity of treating liquid is adapted to be stored, said operative section of said one arm having a free end remote from the handle of said one arm, means at the free end of said operative section of said one arm for filling the said container with the treating liquid, a spring with joining convolutions supported inside said container, an asbestos wick adapted for being impregnated with said treating liquid inside said container, an electric heating resistance in said operative section of said one arm and adjacent said container, means for feeding electric energy to said resistance, to heat the same to cause vaporizing of said treating liquid, said operative section being provided with perforations to allow discharge of the vaporized liquid, the operative section of said one arm being of cylindrical shape, the operative section of the other arm being of hollow semi cylindrical shape and adapted to match the shape of the operative section of said one arm.

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