

# United States Patent

Tomiati

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[54] HAIR CURL SETTING AND DRYING DEVICE

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[30] Foreign Application Priority Data

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[58] Field of Search ..... 132/33 R, 40-42,  
132/39, 9, 7; 34/97

[57]

## ABSTRACT

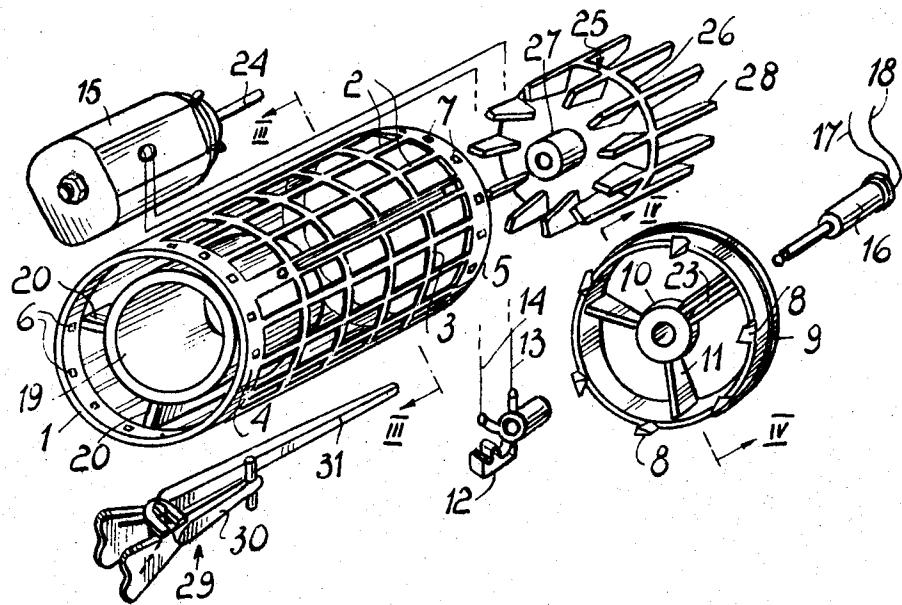
A hair curl setting and drying device comprising a cage-like cylinder around which the hair locks are wound and within which an electric motor is housed which propels a fan therein.

[56] References Cited

1 Claim, 4 Drawing Figures

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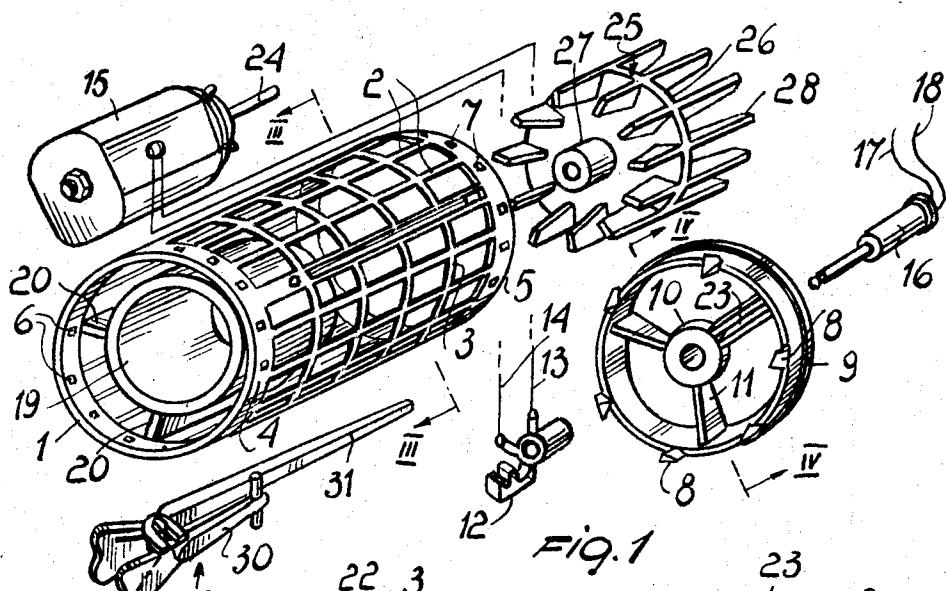


FIG. 1

FIG. 3

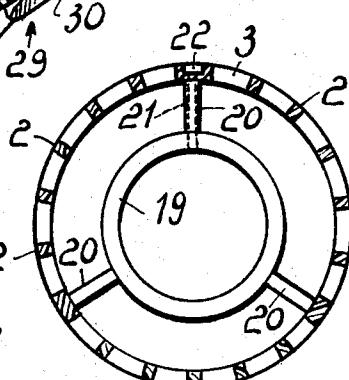


FIG. 4

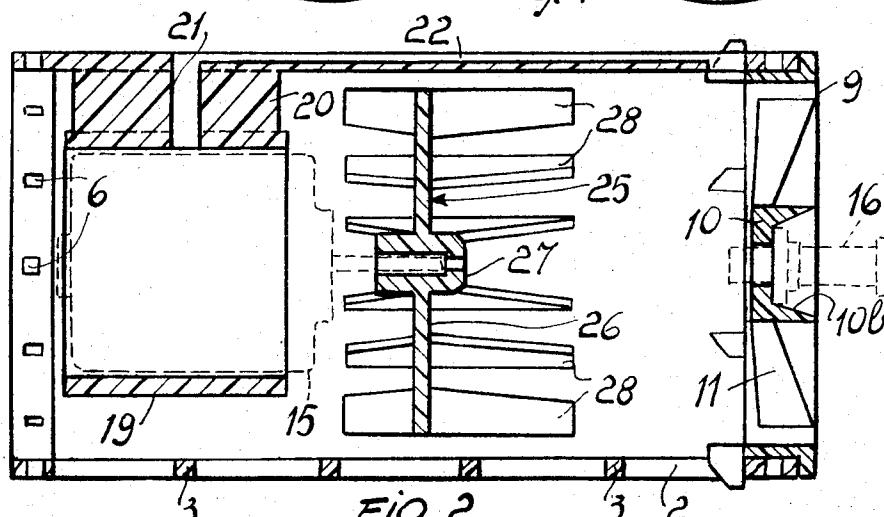
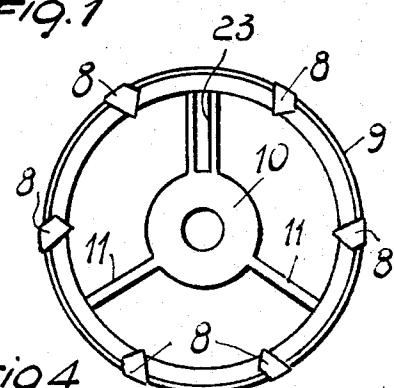


FIG. 2

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**HAIR CURL SETTING AND DRYING DEVICE****BACKGROUND OF THE INVENTION**

This invention relates to a hair curl setting and drying device.

Hair and setting devices are known under the name of hair curlers and are normally formed from a perforated or cage-like cylindrical body around which the locks of hair forming the curl are wound.

A plurality of curlers are normally applied spaced from each other on the hair of a person to form the wanted curls.

For the drying of the hair thus wound in curls a helmet type hairdresser's hairdryer is normally used which puts a current of hot and dry air against the hair wound in curls. Nevertheless, due to the curler devices, the hot air coming from the hairdryer succeeds in surrounding only the external part of the curls, while inside the curlers there is a zone of a still humid atmosphere, which does not contribute to the rapid drying of the hair.

**SUMMARY OF THE INVENTION**

The object of the present invention is to accelerate the drying of the hair wound around the curlers, providing a drying energy from the inside of the curler in addition to that of the hairdresser's hairdryer acting from the outside and to also improve the formation of the curls.

Another object is to achieve the preceding object by means of a simple device, economically convenient, of secure operation, harmless, of long life and of easy application and control. These and other objects which will appear from the following description, are achieved by a hair curl setting and drying device, comprising a perforated or cage-like structure of a cylindrical shape provided for the winding of hair forming the curls around it and retaining means of the curls on the cylindrical structure wherein according to the improvement the device comprises further within the cylindrical structure a forced air current source, supported in said cylindrical structure and creating a radial air current component involving the hair wound around the cylindrical structure and connection means between said source of forced current of air and the external supply of energy feeding said forced air current source.

**BRIEF DESCRIPTION OF DRAWING**

An embodiment of the invention is hereinafter described with reference to the enclosed drawing in which:

FIG. 1 is an exploded perspective view of the component parts of the embodiment according to the invention;

FIG. 2 is an axial section of the device;

FIG. 3 is a cross-section according to the line III-III OF FIG. 1; and

FIG. 4 is a view according to the line IV-IV of FIG. 1.

**DESCRIPTION OF THE PREFERRED EMBODIMENT**

With reference to the drawing the device comprises a cylindrical structure perforated or cage-like generally indicated at 1.

Such a structure is advantageously made of moldable plastics material. The cage-like cylindrical structure comprises longitudinal strips 2 parallel to each other and spaced circumferentially, as well as annular strips 3 spaced in a longitudinal direction to each other, to form with the strips 2 the cylindrical cage-like or perforated structure. The strips 2 advantageously assume the form of fins with a function of a deflector, to direct the air current in a prefixed direction through the cylindrical structure. These fins are shown inclined in a radial direction, but can also be provided with a different inclination to obtain a desired deflecting action. At opposite sides, the cylindrical structure ends with strips or rims 4, 5 a little wider than the above mentioned strips 3.

These rims 4 and 5 have holes or seats 6 and 7 for teeth 8 provided in a head element 9 suitable to be removably engaged in the ring 5.

The head element 9 has centrally a collar support 10 with an external cavity shaped like a cone 10b having the function of facilitating the insertion of the successively described coaxial plug 16. The collar 10 is supported by radial spokes 11 integral with the remaining structure of the head element 9 obtained by moulding with plastics material. In the collar 10 a conventional coaxial socket generally indicated at 12 is placed, from which the electric wires 13 and 14 lead, for the electrical connection with the electric motor 15 of a very low voltage. In the coaxial socket 12 a coaxial plug 16 of the conventional type is removably engaged, connected through wires 17 and 18 to a source of electric current of low tension.

The perforated cylindrical structure 1 comprises, near one of its ends a sleeve support 19 connected to the rest of the cylindrical structure through spokes 20. The sleeve support 19 serves to arrange therein the electric motor 15 in a fixed way. For the passage of the electric wires one of the spokes 20 is provided with a passage 21 and for the same motive one of the longitudinal strips 2, being situated in the same radial plane of the passage 21, is also provided with a groove 22, forming a passage for the electric wires. The same applies for one of the spokes 11 of the head element 9, provided with a passage 23, that allows the passing of electric wires radially towards the coaxial socket 12. On the shaft of the motor 24 a fan 25 of a centrifugal type is forcedly engaged. The fan comprises a support disc 26 having centrally a sleeve shape 27, which is forcedly inserted in the shaft 24 of the motor 15. On the peripheral part of the disc 26 radial blades 28 of the impeller 25 are provided, extending longitudinally with respect to the cylindrical structure 1, from both the sides of the disc 26 in a way to sweep a vast enough area of the cylindrical structure. To hold the hair onto the cylindrical structure a pincer type hair-grip 29 having a short jaw 30 is provided. This jaw 30 is arranged internally to the cylindrical structure 1, in the work position and is shorter than a jaw 31, which is arranged externally to the cylindrical structure 1 and serves to grasp the hair forming the curl wound around the considered cylindrical structure.

The device described operates as follows. Around the cylindrical structure, complete with electric motor and fan as well as with the head element 9 and relative coaxial socket 9, the cock of hair is wound.

The hair is held onto the cylindrical structure by means of one or more hair-grips 29. A plurality of curlers of this type is normally applied on the head of the user. Then the coaxial plugs 16 are engaged into each socket of the relative curler and the normal hairdresser's helmet type hairdryer is applied to the head of the user. The engagement of the plugs 16, joined to the electric source, upon actuation of a single central switch not shown, causes the motor 15 to rotate the impeller 25, which creates a current of air in a radial direction towards the outside, with the axial entrance at the two ends of the curler.

Obviously, depending upon the shape of the impeller and of the polarity of the continuous current the tangential direction of the air current component can vary.

The same applies with regard to the strips having a deflecting function for directing the air current in the desired direction.

The coaxial plugs 16 of the plurality of curlers applied, can be connected in parallel with a common source of low tension, harmless to the user, there being provided a central switch for the contemporary operating of the curlers when the hairdresser's hairdryer is placed in position above the head of the user. A current inverter for the motors can be provided, in the electric circuit and also one or more pilot lamps.

The forced air current provided internally to the hair wound around the curler causes a rapid drying of the

hair and the hot air blown by the rotor against the internal part of the hair affords a more stable formation of curls, besides an accelerated drying.

It is obvious that modified embodiments of the invention as illustrated are possible all falling within the inventive concept.

I claim:

1. A hair curl setting and drying device, comprising a cage-like cylindrical structure provided for the winding of hair forming the curls around it and retaining means of the curls on the cylindrical structure and within the cage-like cylindrical structure a forced air current source supported therein and creating a radial air current component involving the hair wound around the cylindrical structure and connection means between said source of forced current of air and the external supply of energy feeding said forced air current source, said source of forced air current being a blower comprising an electric motor and an impeller fixed on its shaft and wherein said cage-like cylindrical structure comprises on the inside of it and near to one of its ends a support structure for the electric motor, fixed to said cage-like cylindrical structure, said support structure having a sleeve suitable to receive the body of the electric motor and spokes forming a connection between the sleeve and the cage-like cylindrical structure.

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