

[54] HAIR DRYER PARTICULARLY ADAPTED TO THE DRYING OF LONG HAIR	3,190,012	6/1965	Gray .....	34/151
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[75] Inventor: Bruno P. Morane, Paris, France	1,764,462	6/1930	Mosier .....	34/90
	921,476	5/1909	Soles .....	34/96

[73] Assignee: L'Oreal, Paris, France

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[30] Foreign Application Priority Data

May 21, 1971 France ..... 7163200

[52] U.S. Cl. .... 34/99, 34/239

[51] Int. Cl. .... A45d 20/00

[58] Field of Search ..... 34/3, 90, 91, 96-101,  
 34/239; 132/9; 138/120-122

[56] References Cited

UNITED STATES PATENTS

3,335,503 8/1967 Genger ..... 34/100

[57] ABSTRACT

Hair dryer is provided with an accordion-pleated duct at its head-receiving opening and means for locating a head centrally of the free end of said duct, so that hot air flows outwardly near the periphery of the duct but the hair on said head is drawn inwardly near the axis of said duct.

5 Claims, 3 Drawing Figures

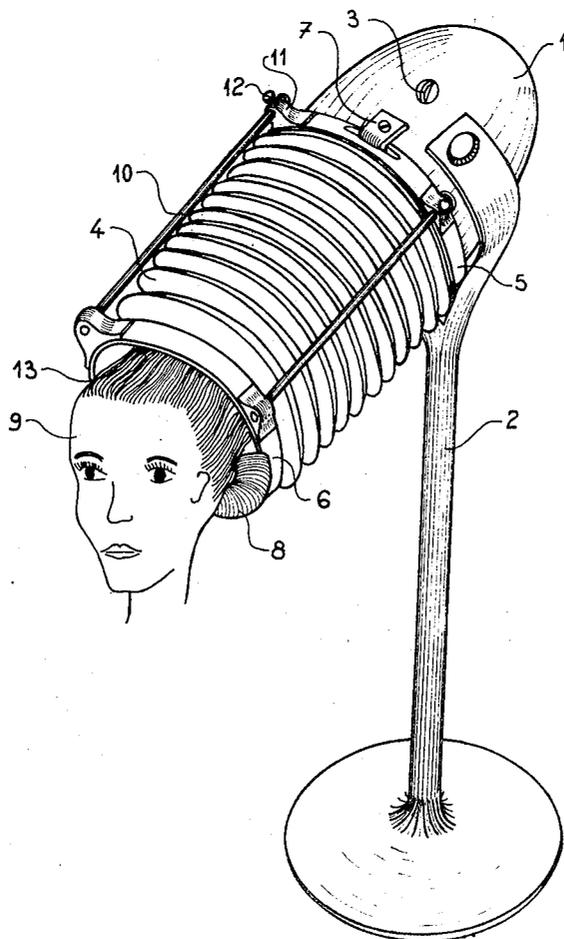


FIG. 1

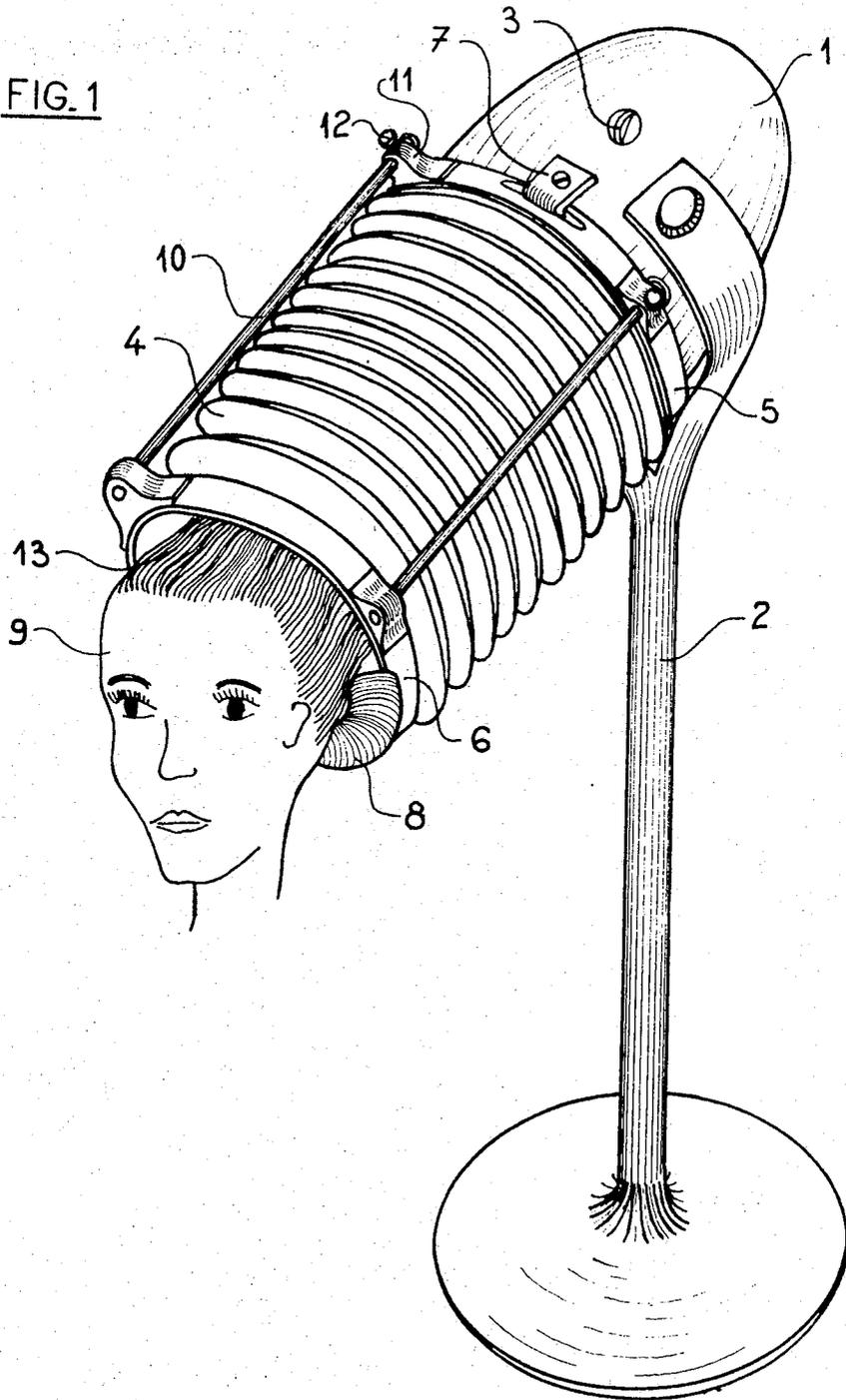


FIG. 2

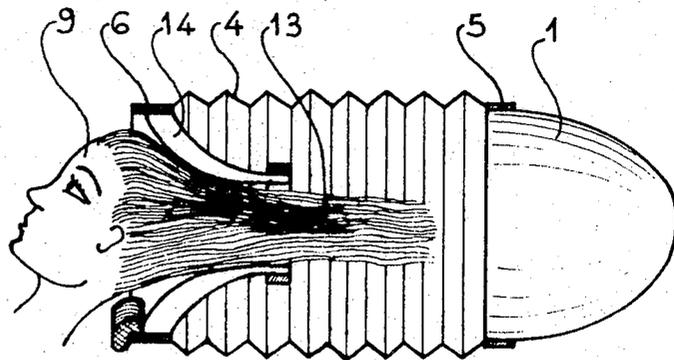
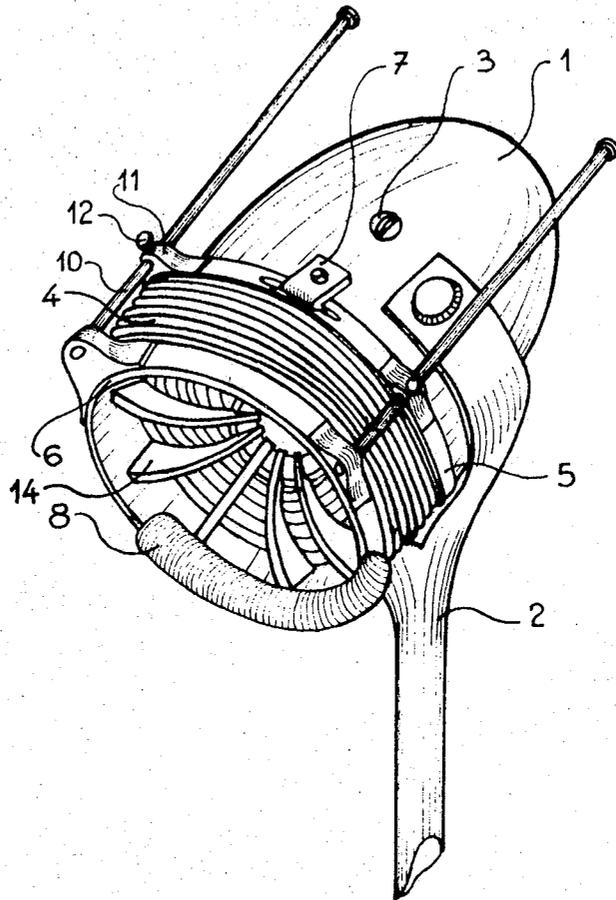


FIG. 3

# HAIR DRYER PARTICULARLY ADAPTED TO THE DRYING OF LONG HAIR

## SUMMARY OF THE INVENTION

After treatments which involve wetting of the hair, it is customary to dry the hair in a dryer to reduce its moisture content sufficiently to permit it to be set. The dryers conventionally used for this purpose comprise an apparatus for blowing air which blows a certain volume of air over the surfaces of electrical heating resistances, the flow of air being projected onto the moist hair of the user, which is positioned in a hood constituting the casing of the dryer proper. The time spent by the user under such a dryer is always relatively uncomfortable because the hot air, which becomes charged with moisture as it passes over the moist hair, surrounds the head of the user and produces a disagreeable impression on her. Attempts have been made to reduce the time spent under the drying hood in so far as possible, but it is scarcely possible to substantially increase the temperature because of the discomfort which results for the user. The dryer of long hair requires a particularly long time beneath the dryer, and it is in this case that the discomfort is greater for the user.

It is the purpose of the present invention to mitigate the foregoing disadvantages by providing an improved dryer which, particularly in the case of long hair, makes it possible to dry the hair rapidly without increasing the temperature of the air supplied, by simply measuring a good distribution of the hair to be dried through the steam of hot air.

It is accordingly the object of the present invention to provide an improved hair dryer which is particularly useful in drying long hair, said dryer comprising a device for generating hot air and blowing it in the direction of the hair to be dried, which device is positioned within a drying hood. The dryer is characterized by the fact that the opening of the drying hood is provided with a substantially cylindrical duct at the free end of which the head carrying the hair to be dried is positioned, with the head of the user obstructing only the central part of the free end of the said cylindrical passage.

In a preferred embodiment of the invention the cylindrical duct attached to the drying hood is adjustable in length, and consists of a tube of plastic or elastic material which is accordion-pleated. The free end of the tube attached to the drying hood is supported by members fixed to the support for the dryer and is provided with a head rest for supporting the head of the user. The free end of the duct also supports internal means for guiding streams of air. The guide means for the streams of air are supported by the free end of the duct attached to the drying hood and consist of vanes having a tapered shape, the smaller ends of which are pointed toward the inside of the duct.

It has been found that when the dryer according to the invention is used the flow of hot air for drying the moist hair leaves through the free end of the duct by passing between the edge of this free end and the head of the user. This peripheral flow provokes behind the head of the user a sub-atmospheric pressure which draws the hair of the user inside the duct substantially along the axis of said duct toward the dryer hood. In the case of long hair, the hair forms a substantially cylindrical volume positioned in the central part of the duct between the heat of the user and the drying hood. This

distribution of the hair inside the duct makes it possible to obtain much more rapid drying than if the hair were piled on the head of the user, because the stream of hot air can pass more easily through the mass of the hair along its entire length, instead of striking a compact mass which is difficult to penetrate.

It is obvious that the dryer according to the invention may be made from dryers of a conventional type by attaching to the front opening of the hoods thereof, by means of hooks or the like, an accordion-pleated duct for use in accordance with the invention. The duct may be, in accordance with the invention, set to a length which is dependent upon the length of the hair to be dried. It also may be folded up completely against the opening of the hood and kept in this position by means of suitable fasteners so that a dryer equipped with the flexible duct then approximates a dryer of a conventional type.

In order that the invention may be better understood two embodiments thereof will now be described, purely by way of illustration and example, with reference to the accompanying drawings, on which:

FIG. 1 is a perspective view showing a dryer according to the invention with an unfolded accordion-pleated duct;

FIG. 2 is a perspective view showing the dryer of FIG. 1 with the duct folded up against the opening in the hood of the dryer; and

FIG. 3 is a sectional view taken along the axis of the duct adapted to be attached to the drying hood in one embodiment of the invention.

Referring to the drawings it will be seen that reference numeral 1 indicates the hood of a dryer of a conventional type, supported by a vertical rod 2. The hood 1 comprises an internal fan blowing the air over heating electrical resistances. The amount of air supplied and its temperature is regulated by means of adjusting button 3. Adjacent the opening of the drying hood 1 is a duct 4 consisting of a cylindrical tube of circular section and accordion-pleated so that the tube may be elongated along its axis. At each end of the tube 4 is an end ring. Reference numeral 5 indicates the ring which fits onto the opening of the hood 1, and reference numeral 6 the ring which corresponds to the free end of the duct 4. The ring 5 is attached to the hood 1 by means of fasteners 7. The ring 6 carries a headrest 8 which permits the head 9 of the user to rest on the ring 6. The ring 6 is supported by rods 10 substantially parallel to the axis of the duct 4 and to the axis of the opening in the drying hood 1. The rods 10 are supported by the hood 1 and are slidable with respect thereto so as to permit displacement of the ring 6. The rods 10 slide in sleeves 11 carried by the hood 1. The position of the rods 10 in the sleeves 11 may be fixed by screws 12. When the head 9 of the user is resting on the headrest 8 there is between this head and the end ring 6 an unobstructed annular zone through which the hot air supplied by the flower of the hood 1 flows. It will be appreciated that if the user has long hair 13 there is provided behind the head of the user, at the moment at which the hot air is blown out, a suction such that the hair 13 floats backwardly from the head 9 along the axis of the duct 4. The separation of the hair and its distribution throughout the central zone of the cylindrical volume defined by the duct 4 makes it possible to produce very rapid drying of a hairdo comprising long hair without

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increasing the temperature of the air supplied, this is to say without increasing the discomfort to the user.

BY way of illustration, it may be indicated that a moistened head of hair having hair approximately 30 cm long may be dried in about 3 minutes utilizing a dryer according to the invention, whereas with the said drying hood, but in the absence of the duct 4, the same head of hair takes about 20 minutes to dry.

FIG. 3 shows a variation of the embodiment of the dryer according to the invention. In this variation the end ring 6 is attached to vanes 14 inside the duct 4 distributed around the entire periphery of said duct. These vanes 14 are tapered with their smaller ends pointed in the direction of the ring 5. The vanes 14 constitute guide means for the flow of air and may, in certain cases, improve the aspiration of the hair 13 in the duct 4. The vanes 14 may be replaced by a funnel-shaped member having a discontinuous wall.

It will of course be appreciated that the embodiment which has just been described has been given purely by way of illustration and example and may be modified as to detail without thereby departing from the basic principles of the invention, as defined by the following claims.

What is claimed is:

1. Improved hair dryer especially for drying long hair,

said dryer comprising a hood having an opening therein, means for generating a flow of hot air within said hood in the direction of said opening, a substantially cylindrical duct for receiving the hair to be dried, said duct being adjustable in length and having one end connected to said opening, means for locating the head carrying said hair at the end of said duct remote from said opening so that said head obstructs only the central portion of said remote end, and adjustable means for rigidly supporting said remote end of said duct at any one of a plurality of selected distances from said opening.

2. Dryer as claimed in claim 1 in which the cylindrical duct consists of a tube of plastic or elastic material which is accordion-pleated.

3. Dryer as claimed in claim 1 in which said locating means comprising a headrest for supporting the head of the user.

4. Dryer as claimed in claim 1 in which the free end of the duct attached to the drying hood supports there-within peripheral guide means for streams of air.

5. Dryer as claimed in claim 4, in which the guide means for the streams of air are tapered members the smaller ends of which are pointed toward the inside of the duct.

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UNITED STATES PATENT OFFICE  
CERTIFICATE OF CORRECTION

Patent No. 3,782,002 Dated January 1, 1974

Inventor(s) BRUNO P. MORANE

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

[30] Foreign Application Priority Data

May 21, 1971 Luxembourg.....63 200

Signed and sealed this 16th day of July 1974.

(SEAL)  
Attest:

McCOY M. GIBSON, JR.,  
Attesting Officer

C. MARSHALL DANN  
Commissioner of Patents