Sept. 20, 1955 R. E. REED 2,718,068

HAIR DRYING DEVICE

Filed March 18, 1953

Fig. 1.

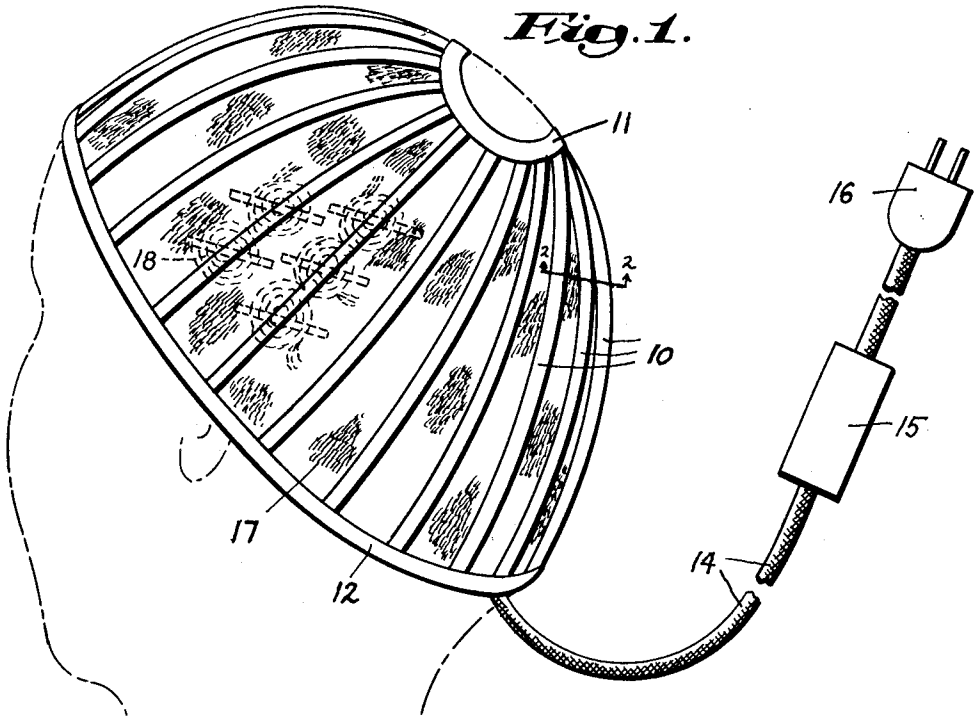


Fig. 2.

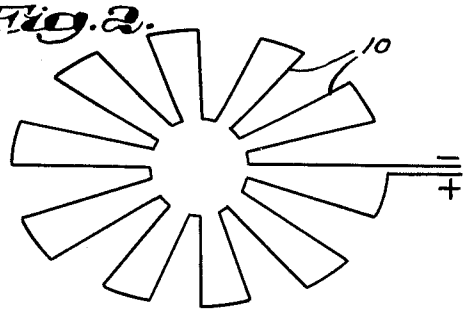


Fig. 3.

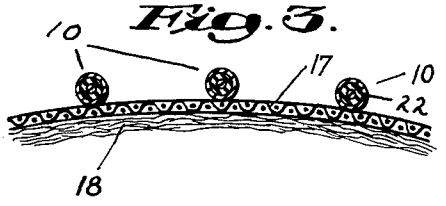


Fig. 4.

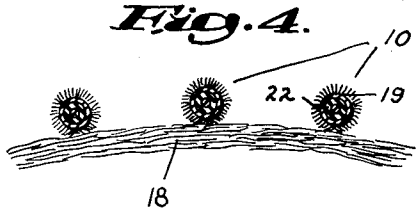
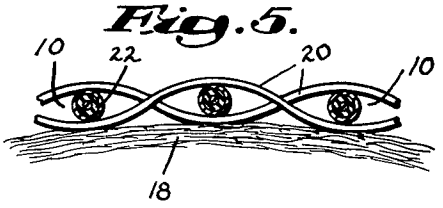


Fig. 5.



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HAIR DRYING DEVICE

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8 Claims. (Cl. 34—96)

This invention relates to a hair drying device and pertains more specifically to such a device embodying in combination an electric resistance heating system together with an obsorbent or adsorbent fibrous material contacting the hair.

One object of the invention is to provide a hair drying device in which a liquid-sorptive fibrous material is disposed in contact with the hair to draw liquid therefrom by absorption or adsorption and in which an electrical heating system having spaced heating elements is provided to accelerate evaporation of the absorbed or adsorbed liquid from the fibrous material.

Another object is to provide a hair drying device including an electric resistance heating system having spaced heating elements provided with a textile fabric member disposed at the inner face of the heating elements and serving to absorb water from the underlying wet hair with which it is in contact, the outer face of the textile fabric member being exposed to the atmosphere throughout most of its extent to facilitate evaporation of the absorbed water.

Another object of the invention is to provide a hair drying device embodying an electric resistance heating system in combination with a fibrous member contacting the hair and having a wicking action to promote evaporation of water.

Another object of the invention is to provide a hair drying device which is readily portable, light in weight, and easily manufactured.

Other and further objects will be apparent from the drawings and the description which follows.

The embodiments shown in the attached drawings are shown by way of illustration and not as a limitation on the scope of my invention.

In the drawings,

Fig. 1 is a view in perspective showing one embodiment of the invention in place upon the head of the user;

Fig. 2 is a schematic view of the wiring diagram showing the electrical circuit employed;

Fig. 3 is a view in section along line 2—2 of Fig. 1;

Fig. 4 is a view similar to Fig. 3 showing another embodiment of my invention; and

Fig. 5 is a view similar to Fig. 3 and showing still a third embodiment of my invention.

As shown in Fig. 1, the device embodies a network of spaced flexible, insulated, electric resistance heating elements 10 extending generally radially from an inner supporting member 11 to an outer supporting member 12, both of which are generally annular in shape. An electrical lead 14 connects the ends of the resistance heating elements to a transformer 15 which in turn is connected through a suitable lead wire to a plug 16, which may be inserted in a conventional electrical outlet providing a source of power for the device.

As shown by the circuit diagram in Fig. 2, the resistance heating elements 10 are arranged in series, the heating being the result of the usual resistance effect.

Disposed beneath the heating elements 10 and in direct

contact with the underlying hair 18 is a close-fitting cap 17 of liquid-sorptive fibrous material, as shown in Fig. 3. A wide variety of fibrous materials may be employed, among which are cellulosic fibers such as cotton, linen, cellulose acetate, regenerated cellulose, cellulose ethers, wood pulp, wool, nylon, glass, asbestos, etc. This fibrous material is preferably in the form of a textile fabric although felt and absorbent paper may also be used. Napped fabrics and pile fabrics, particularly looped pile fabrics such as terry cloth, have been found to be particularly satisfactory. If desired, the hair may be dressed in the form of curls as shown in Fig. 1 before donning the heating device.

Another embodiment of the invention as shown in Fig. 4 employs the fibrous material in the form of a sheath or case 19 for each individual heating element, the fibrous material in this case having a plurality of projecting fibers, as in the case of a napped fabric.

In the embodiment shown in Fig. 5, water-absorbent textile yarns 20 are interwoven with the heating elements so that the elements in this case form in effect a part of a woven textile fabric.

In each case the individual heating elements are provided with a layer of water-impermeable insulating material 22, which may be rubber, synthetic plastic material or other heat-resistant waterproof insulating material. In operation, the water-sorptive fibrous material having an essentially smooth inner face lying in contact with the wet hair substantially throughout its extent absorbs or adsorbs water from the hair by a capillary action or "wicking" effect, the water thus being drawn away from the hair and soaking into the fibrous material to the surface of the fibrous material exposed to the atmosphere and being there evaporated. This evaporation is facilitated by the fact that the heating elements are spaced apart from each other, the spaces between them being open to the atmosphere, and is further accelerated by the heat generated by the heating elements.

The device of the present invention not only provides rapid and effective drying of the hair through the spaces between the heating elements by a combination of heating and capillary effects, but the device also possesses the advantage of being readily portable, inexpensive and noiseless. It is comfortable in use and the fibrous material tends to distribute the heat uniformly over the extent of the hair, particularly when the fibrous material is wet, thus minimizing localized over-heating in the zones adjacent the heating elements.

The device may be of any desired size and shape and may be arranged for example to cover only a marginal portion of the head of hair as in the case of a turban or the like.

Although I have herein described specific embodiments of my invention, I do not intend to limit myself solely thereto but to include all of the obvious variations and modifications within the spirit and scope of the appended claims:

I claim:

1. A hair drying device comprising in combination an electric resistance heating system having spaced apart heating elements covered with water-impermeable insulation and arranged to overlie the hair, and liquid-sorptive fibrous material arranged to lie between said heating elements and said hair in contact therewith to draw liquid from the hair, the spaces between said insulated heating elements being open to the atmosphere to permit evaporation of liquid absorbed in said fibrous material.

2. A hair drying device comprising in combination an electric resistance heating system having spaced heating elements covered with water-impermeable insulation and arranged to overlie the hair, and a water-absorbent fibrous member surrounding the individual insulated heat-

ing elements and arranged to lie in contact with said hair at the inner face of said heating elements to absorb water from the hair, the spaces between said heating elements being open to the atmosphere to permit evaporation of water absorbed in said fibrous material.

3. A hair drying device comprising in combination a cap of water-sorptive fibrous material arranged to overlie the hair in contact therewith substantially throughout its extent, and an electric resistance heating system having spaced heating elements covered with water-impermeable insulation and overlying said cap in contact therewith, the spaces between said elements being open to the atmosphere to permit evaporation of water soaking into said cap from the underlying hair.

4. A hair drying device comprising in combination a close-fitting cap of textile fabric adapted to contact substantially the entire head of hair to absorb moisture therefrom, and an electric resistance heating system having a network of spaced flexible heating elements covered with water-impermeable insulation and overlying said cap in contact therewith, the spaces between said elements being open to the atmosphere to permit evaporation of said absorbed moisture from said cap.

5. A hair drying device as defined in claim 4 wherein said cap includes only a single layer of pile fabric.

6. A hair drying device as defined in claim 4 wherein said cap includes only a single layer of looped pile fabric.

7. A hair drying device as defined in claim 4 wherein said cap includes only a single layer of terry cloth.

8. A hair drying device comprising in combination an electric resistance heating system having spaced heated elements covered with water-impermeable insulation and arranged to fit closely over substantially the entire head of hair, and water-absorbent textile yarns interwoven with said heating elements so that a portion of said yarn underlies said heating elements in contact with said hair to absorb water therefrom, the space between said heating elements being open to the atmosphere to permit evaporation of water absorbed in said yarns from said hair.

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