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APPARATUS FOR THE TREATMENT OF HAIR

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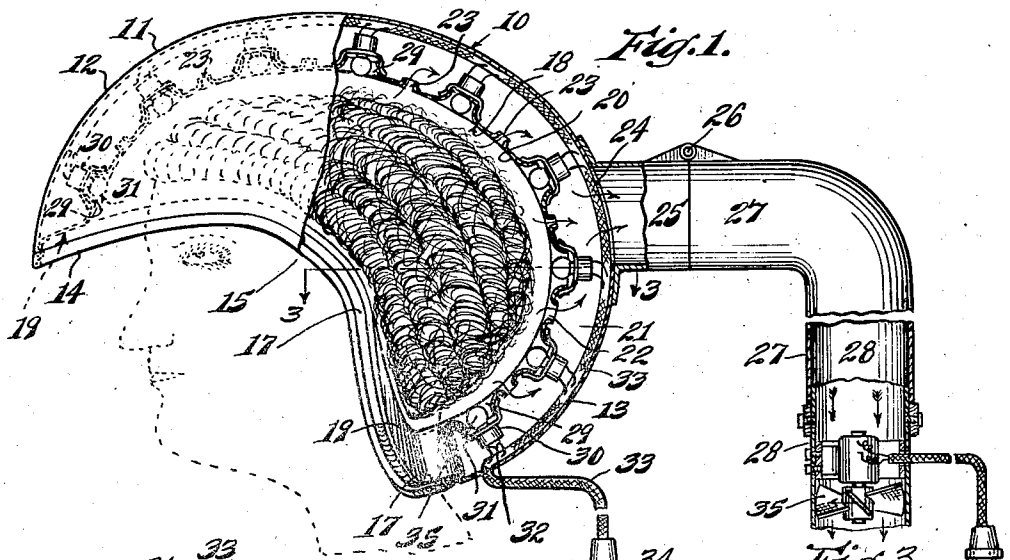

Fig. 1.

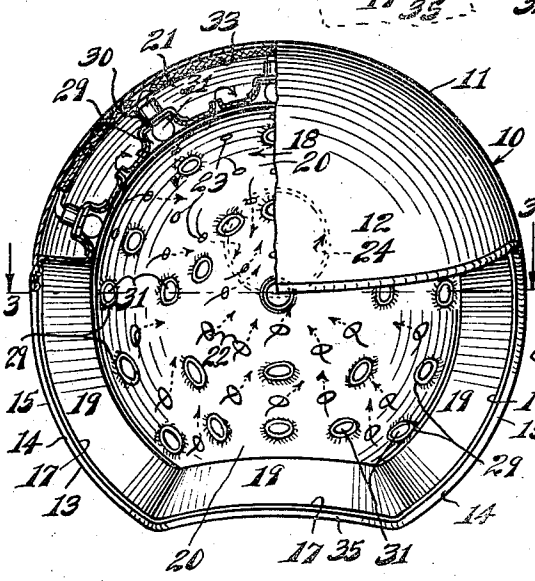

Fig. 2.

Fig. 3.

Fig. 4.

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APPARATUS FOR THE TREATMENT OF HAIR

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7 Claims. (Cl. 34—99)

This invention relates to improvements in apparatus for the treatment of hair. More particularly, it has for an object the provision of an improved apparatus for drying hair in the beauty treatment of hair.

An object of my invention among others has been to dry hair which has been set in the course of a beauty treatment more rapidly and more uniformly.

Another object among others has been to increase the permanency of waves in beauty treatments.

Still another object has been not only to eliminate the disadvantage of the long periods which it has been necessary to wait for hair to dry, but also to eliminate disadvantages such as hot blasts of air blown across the face of the person being treated.

The disadvantages of the systems and devices now in use are common knowledge. There exists not only the disadvantage of the person being treated having to sit under a drier for long periods but there is also the further disadvantage that this waiting is extremely objectionable on warm or hot days, particularly in view of the fact that hot blasts of air are continually blown in the area of the face. Well-known is the further disadvantage that the hair is commonly not uniformly dried, that is, the top of the head, on which there is usually less hair, may be baked while the hair on the back of the head may not be satisfactorily dried.

One of the features of my invention is the provision of a hood for a hair drier of unique design which is adapted to conform to the hair line to cover the hair portion of the head instead of merely the crown. It is well-known that there is more hair to be dried as a general rule on the back of the head than on the crown and I have provided a hood adapted to encase not only the hair on the crown, but also the hair on the back of the head and the advantage of increasing the rate of evaporation will be at once manifest.

Another feature of my invention is the provision of infra-red ray lamps to increase the rate of evaporation and the advantage of this feature will be manifest to those skilled in the art over the system heretofore used where heated air is used with the air heated at a more or less remote point by electricity, gas or other heating element. A further feature is the provision of the lamps in such a position that the rays may act directly on the hair.

Another feature of my invention is the method of withdrawing the air in the hood by suction instead of blowing hot blasts of air against the head and the face. Water or other liquid rises naturally by capillary action through the hair as it is evaporating and according to the principle of my invention, the naturally rising vapors are drawn up and exhausted. That is, they are exhausted naturally to leave the hair instead of being forced down against the hair and scalp contrary to their natural tendency.

Another feature of my invention has been the arrangement of the infra-red ray lamps in greater number preferably, although not necessarily, adjacent the back of the head, particularly the lower portion thereof where the hair is usually the thickest, with a lesser number of lamps preferably arranged in the area of the crown of the head. In the form shown the exhaust apertures have been similarly arranged and this arrangement has the advantage of applying more rays and more exhaust means where evaporation is more needed.

Another object of my invention has been the provision of such a drier in such form as will be highly efficient and comfortable and easy to manufacture and assemble besides being economical in cost.

These and other advantages I have accomplished according to the principles of my invention.

Other objects and advantages will become apparent and be brought out more fully in the following specification, reference being had to the accompanying drawing, wherein:

Fig. 1 is a side elevation partly in section;

Fig. 2 is a front elevation partly in section;

Fig. 3 is a plan section taken on the lines 3—3 of Figs. 1 and 2; and

Fig. 4 is an enlarged section on the line 4—4 of Fig. 3.

Referring more particularly to the drawing in which I have selected a preferred form for illustrating the principle of my invention, there is shown a drier having a hood 10. This includes an outer shell 11 formed on a spiral or eccentric curve having a crown covering portion 12 extend downwardly to the forehead and an extension 13 at the back of greater curvature for containing the lower portion of the back of the head. The shell 11 terminates in a curved turned in edge 14 providing an opening 15 for the insertion of the head. The shell 11 has provided, paralleling the curved edge 14, a bead 16.

A clamping bead 17 may be provided upon an inner shell 18 for clamping said inner shell to the outer shell as will be readily understood, without

further explanation, by those skilled in the art. The inner shell 18 has a spacing wall 19 and a supporting wall 20 which generally has the same curvature as the shell 11 thereby forming a chamber 21 extending substantially entirely therebetween and of substantially uniform thickness or cross section throughout its area. The spacing or marginal wall 19 closes the space or chamber 21 between the walls of the shells 11 and 18 around the opening 15 and thus around the head and face of the person being treated.

The supporting wall 20 in the form shown has a plurality of large air vent openings 22 and smaller air vent openings 23 flared toward the shell 11. In view of the fact that most of the hair to be dried is on the back of the head and in view of the fact that there is a relatively small amount of hair on the top of the head to be dried, I have preferably provided the smaller vent openings in the crown of the inner shell and, preferably, I have arranged fewer openings in the crown portion and a larger number of openings in the area of the extension 13. Experience has shown that it is common for hair on the crown of the head to be dried too much and on the contrary, for the hair on the back of the head to fail to get dried satisfactorily. By the principle of my invention, the requisite amount and size of vent openings will be applied to evenly dry all the hair at the same time and it will be understood that the arrangement of openings and other features may be varied to carry out this principle.

The air may be removed from the shell by suction through the vent openings, or by pressure through the vent openings. Preferably suction is desirable as by this means, the air is not drawn over the face, but is drawn directly from the hair through a suitable duct. Common objection to the pressure type of withdrawal of the air is that it causes a hot blast of the air to be drawn over the face and the resulting disadvantage particularly on warm or hot days will be manifest. By the use of suction, this disadvantage is entirely eliminated.

In connection with means for withdrawing the air from the hood, there may be provided an air vent opening 24 in the shell 11 and adapted to be secured to the outer shell 11 about the opening 24 is a flanged outlet pipe 25 hinged at 26 to an adjustable air conduit 27 on a standard 28 connected to a source of suction or pressure, if pressure is desired for any reason. This source may be a fan or other suitable means.

I have arranged in the form shown a plurality of flanged openings 29 in the wall 20 of the inner shell 18 forming depressed compartments, pockets or recesses extending or outpressed into the area of the chamber 21, with the flange directed toward the outer shell 11. Adapted to be supported in the flanged openings in the chamber 21 are a plurality of sockets 30 supporting lamps 31, which are preferably of the infra-red ray type. The sockets may be provided with the usual current wires 32 to a common cord or conduit 33 having a suitable plug 34.

The extension 13 may be provided with a suitable cut-out 35 for conforming to the neck.

It will be understood that the entire hood may be generally in the form of a part of the surface of a sphere or ellipsoid or modification thereof.

By the device of my invention, it will be seen that all the hair will be contained within the hood. It will also be understood that a larger number of lamps may be provided in the area of the greatest amount of hair so as to cause uniform heating and drying of the hair and in the form shown I have shown a larger number of lamps in the area of the extension for the back of the head where the hair is usually thickest. It will also be understood that lamps of greater heating value may be used in the area where the hair is thickest. In operation, my invention will have the advantage of causing greater evaporation where it is most needed with larger openings and a greater number of them located in the area where evaporation is most needed. It will be understood that the suction may be greater or as great as desired depending upon the arrangement of the openings found most expedient.

Thus, the invention will have the advantage of creating uniform evaporation as needed and the vapors may be drawn through the openings by means of suction through the air conduit, or the vapors may be removed by pressure through the duct and openings.

The advantage of the direct application of the infra-red rays on the matter to be dried, in respect of radically increasing the rate of evaporation will be readily understood by those skilled in the art.

In accordance with the method or process of my invention, the method or process of giving a permanent or finger wave is distinctly improved as will be readily understood by those skilled in the art without further explanation.

In giving a permanent and finger wave, the hair is first washed with soap and water to remove dirt and then strands are taken together in bunches. These strands are then wrapped around curlers and are moistened with a common permanent wave solution to retain moisture. This may be a solution of five percent ammonia and ninety-five percent water saturated with borax and oils and starches may be added. The moistened strands on the curlers have a felt pad wrapped around them to retain the moisture. The hair in the wrapped curlers is steamed usually for about six to fifteen minutes and then the strands are removed and the hair may be washed to remove the permanent wave solution.

A mucilaginous solution may then be applied to the hair, which may be made of two ounces of gum arabic in a gallon of water, to retain the set of the hair and to retain the hair in place. The hair may then be set in waves and held with the usual hair pins.

The hair may then be subjected to treatment in the drier of my invention. In accordance with the principle outlined heretofore, it will be understood that all the hair will be encased within the hood. It will also be understood that on account of the direct application of the infra red rays and their distribution and the action of the rays on the matter to be dried, the rate of evaporation will be radically increased in addition to the evaporation being uniform and effected in relation to the need for evaporation.

It will also be understood that the design of my hood with its extension for the hair on the back of the head will be advantageous also in connection with the systems heretofore employed. That is, the systems that utilize remote heat produced by electrical or other means under pressure or other such systems.

The means employed in accordance with the principle of my invention are particularly advantageous in that they cooperate with the natural rising vapors in the drying process. The vapors are drawn up naturally along the hair as for example by capillary action and by the use

of my means, in combination with suction, this natural drawing up or out of the vapors is assisted and increased instead of the vapors being forced down against the hair and scalp.

A further result of the application of the means and method of my invention is that the waves are baked and their permanency is greatly increased, which will be readily understood by those versed in this art.

It will be understood that lamps of suitable electrical value may be employed. It will also be understood that while I prefer infra red ray lamps, the invention is not limited to such, but other lamps may be found useful especially in combination with the design of the drier of my invention.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a hair drying device, a hood in which the hair to be dried is adapted to be inserted, said hood being in the form of a shell having spaced inner and outer walls forming an interior chamber all formed on a spiral curve, the inner wall having outpressed portions forming pockets extending into the area between the walls and opening into the interior chamber, heating means in said pockets communicating with the interior chamber, holes in said inner wall between the pockets, said interior chamber adapted to cover all the hair on the head and means for withdrawing moisture laden air through the holes in the inner wall.

2. In a hair drying device a hood in which the hair to be dried is adapted to be inserted, said hood including a shell conforming to the hair portion of the head and adapted to cover all the hair of the head, said shell being double walled throughout its area with the inner wall having outwardly projecting compartments communicating with the interior of the hood and provided with apertures between said compartments, a head entrance opening in said hood, and means for evaporating moisture, said means including lamps seated in said compartments and projecting inwardly toward the head, there being a larger number of lamps in the area where there is the greatest amount of hair at the back and sides to cause uniform heating and drying of the hair all over the head, and means for withdrawing moisture laden air from the hood through said apertures.

3. In a hair drying device, a hood, said hood having inner and outer walls throughout its area to form a corresponding chamber between said walls, and a hair receiving chamber within the inner wall in which the hair to be dried is adapted to be inserted, said inner wall having outlets distributed throughout its area, infra-red ray radiating means supported and distributed in said hood entirely within said outer wall and in open communication with the hair receiving chamber for evaporating moisture, and means for withdrawing the vapors from within the hood and through the outlets in the inner wall thereof and through the chamber between the walls throughout the area thereof.

4. In a hair drying device, a double-walled hood with an imperforate marginal wall between the walls at the front and forming a head entrance opening within said wall, there being a chamber of substantially uniform thickness entirely over the head between the walls, the inner wall being perforated, the interior of the hood communicating with the chamber through the perforations in the inner wall, said perforations being of greater area at the back and sides than at the top and front, a plurality of heating means carried by the inner wall and arranged between the perforations to direct heat directly against the head, and means connected with the chamber for creating suction in the chamber through the spaces between the hood and the interior of the wall to give greater circulation through the perforations at the back and sides than on the crown and front.

5. In a hair drying device, a hood having inner and outer walls and having the shape of an ellipsoid with a chamber between said walls and an inner chamber in which the hair to be dried is adapted to be inserted, said hood having a portion to cover all the hair on the crown of the head and an extension to cover all the hair on the sides and back of the head and adjacent neck, suction means supporting the hood and communicating with the chamber between the walls at the back, there being air vent openings distributed in the inner wall, and infra-red ray radiating means distributed inside said hood for heating and evaporating moisture, said means including infra-red ray lamps supported within said outer wall and between the air vent openings and in open communication with the inner chamber, said lamps being distributed in the hood in capacity relative to the need for evaporation, of greater capacity and heating value where there is more hair and of less capacity and heating value where there is less hair.

6. In a hair drying device, a hood in which the hair to be dried is adapted to be inserted, said hood being formed of a shell conforming to the hair portion of the head and adapted to cover all the hair of the head, a head entrance opening in the said hood, said hood having an outer shell and an inner shell conforming generally in shape to the outer shell, flanged openings in the inner shell with the flanges thereof projecting into the space between the shells forming compartments, lamps in said compartments communicating with the interior of the inner shell and adapted to radiate rays directly upon the matter to be dried for evaporating moisture, the lamps in the back portion of the shell being of greater electrical value than the lamps in the crown portion of the shell, air vent openings in said inner shell and means for removing the air from the hood, said means communicating with the air vent openings in the inner shell, said air vent openings being more numerous and larger in the back portion of the inner shell than in the crown portion.

7. In a hair drying device, a double-walled hood substantially in the shape of an ellipsoid with an imperforate marginal wall between the walls at the front and forming a head entrance opening, there being a chamber of substantially uniform thickness entirely between the walls, the inner wall having depressed pockets and perforations therebetween within the area of the chamber, ray radiating heating means in said pockets and means for creating suction in the chamber to give greater evaporation at the back and sides than on the crown between the hair and inner wall and through the latter and chamber.

SINCLAIR G. STANLEY.