

July 17, 1962

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3,044,183

HAIR DRIER AND METHOD OF MANUFACTURE

Filed July 28, 1958

3 Sheets-Sheet 1

Fig. 1.

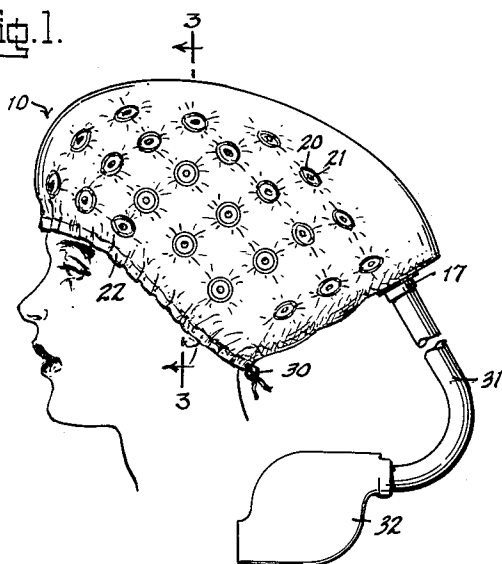


Fig. 2.

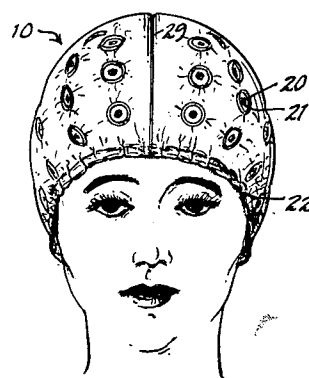


Fig. 4.

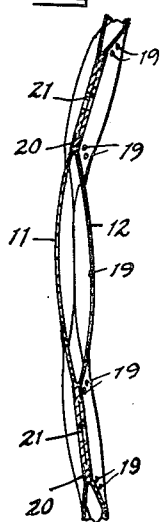


Fig. 3.

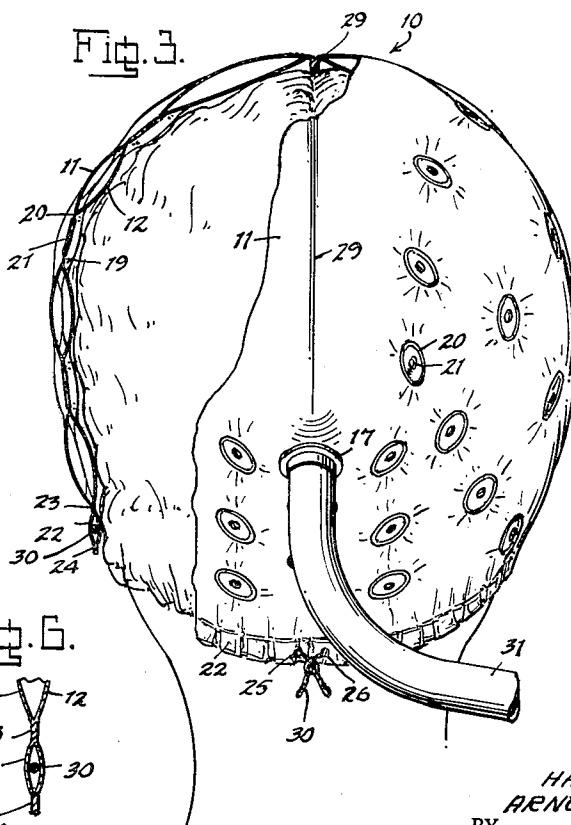
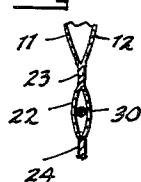


Fig. 5.



Fig. 6.



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Fig. 7.

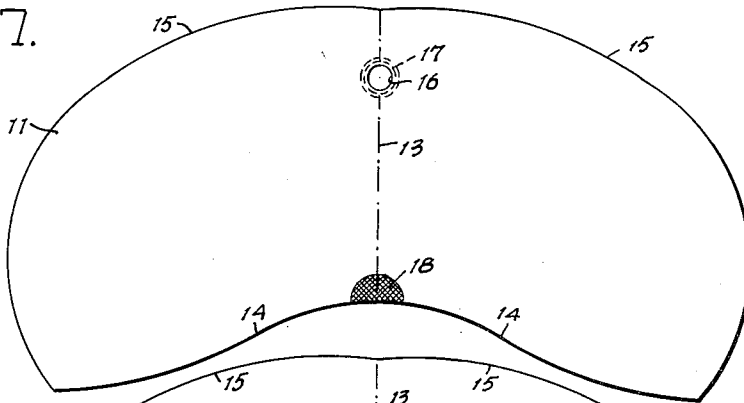


Fig. 8.

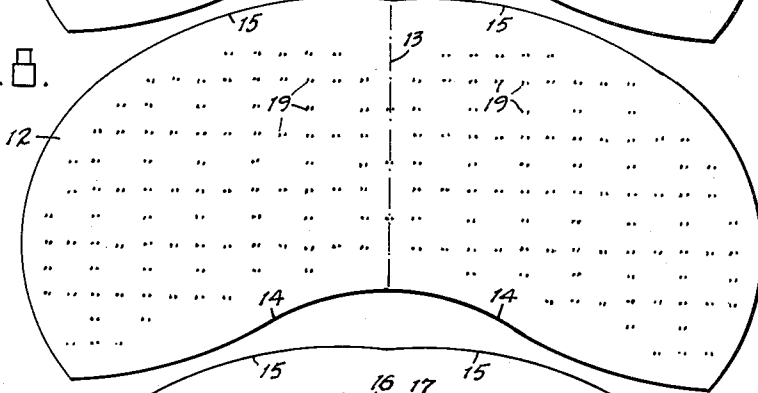


Fig. 9.

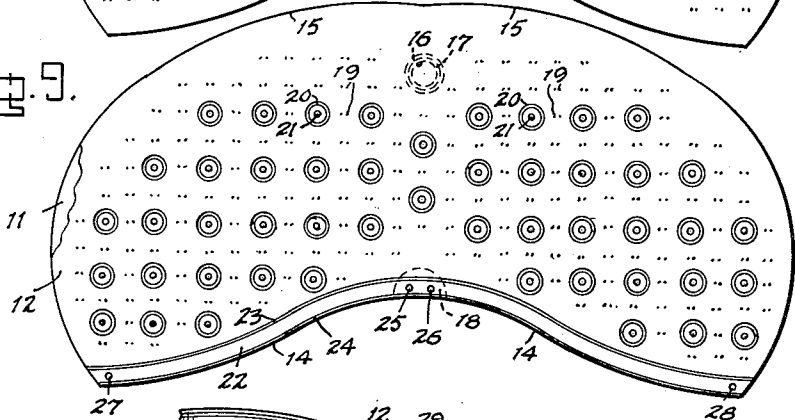
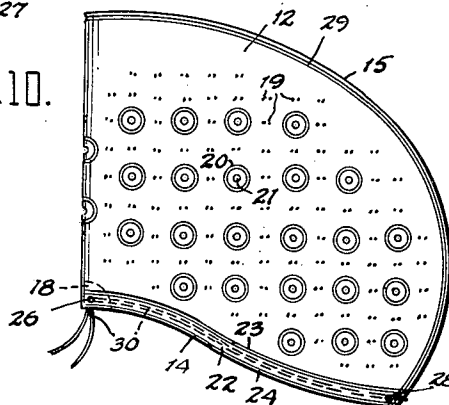


Fig. 10.



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HAIR DRIER AND METHOD OF MANUFACTURE

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3 Sheets-Sheet 3

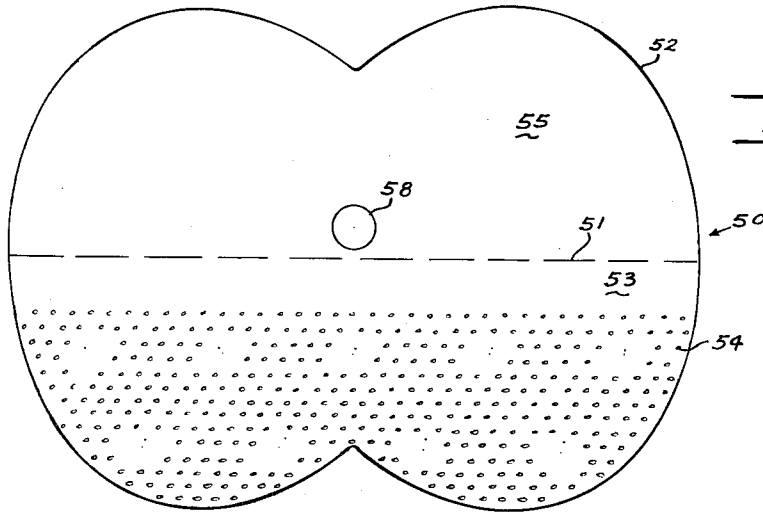


Fig-12

Fig-13

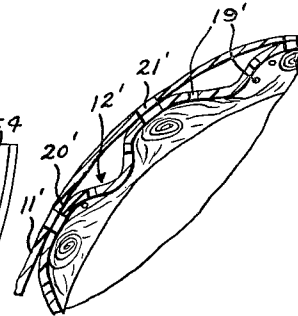
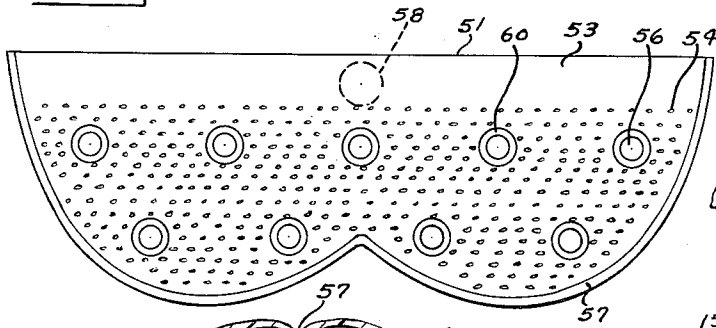


Fig-11

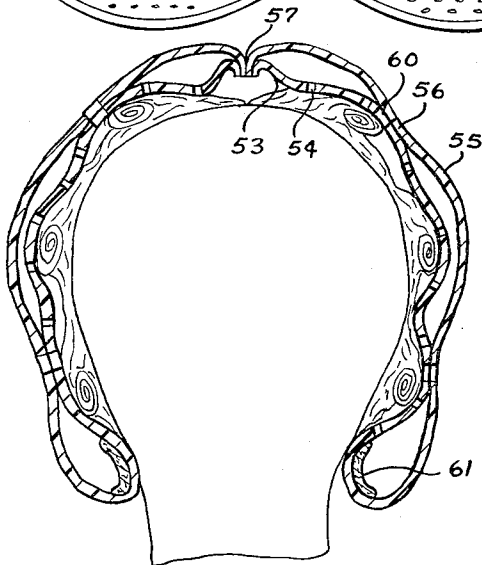


Fig-15

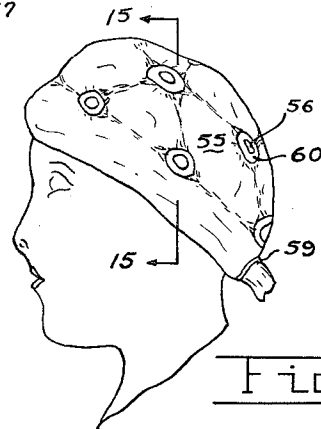


Fig-14

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HAIR DRIER AND METHOD OF MANUFACTURE
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16 Claims. (Cl. 34-99)

This invention relates to hair dryers and more particularly to a portable hair dryer of an improved nature.

Conventional hair dryers have proven to be relatively inefficient, cumbersome, expensive and relatively uncomfortable to use. A step in the right direction was effected by development of a portable drying hood fabricated of light weight material. This, however, did not solve all the problems in the art. A major problem remaining is evidenced by the fact the prior devices do not dry the hair in a uniform manner.

A further problem in use of prior art dryers is that it is necessary to wear a hair net to hold a "set" in place. Without a net, the hair is blown about quite violently, which disturbs any wave that has been set in the hair.

For optimum results, a hair dryer must dry the hair uniformly. This means that the completion of the drying process must be simultaneously effected over the entire head. When hot dry air is blown against the wet hair to initiate the drying process, evaporation occurs, the water in the air absorbing the heat and turning to steam. As long as the evaporation process continues, there is a complete absence of a sensation of heat on the scalp, but if one section of the air dries prior to the rest of the head, the scalp in that one section becomes subject to direct attack by the high temperature drying air being circulated. This can not only cause discomfort but creates a possibility of injury to the scalp.

The present invention was developed with solution of the problems of the prior art in view. It provides a light weight, inexpensive yet efficient hair dryer of an improved nature which is equally safely adapted for professional or home use. It affords a flexible cap so designed to enable a head of hair to be uniformly dried in complete comfort, the first sensation of heat signalling that the whole head of hair is completely dry. Invention embodiments avoid unnecessary circulation of saturated steam by providing an improved circulation and venting system for hair dryers, thereby attaining maximum operating efficiency and avoiding localized drying and hot spots in use. The invention further provides embodiments capable of being effected simply and economically.

A primary object of the invention is to provide improvements in hair dryers rendering them easy and economical to fabricate, more efficient, safe and satisfactory in use, adaptable to a wide variety of applications and unlikely to have functional difficulties.

Another object of the invention is to provide an improved hair dryer in the form of an envelope type plastic cap inherently adapted to enclose the hair and apertured to direct jets of drying air to the hair in a manner to produce an optimum uniform drying action with complete protection to the skin and scalp of the wearer in the process.

A further object of the invention is to provide an improved hair dryer which avoids uncomfortable hot spots in use.

An additional object of the invention is to provide an improved light weight hair dryer having means effecting a jet drying system enabling simultaneous uniform drying of a head of hair.

Another object of the invention is to provide a simplified method of and means for effecting a flexible cap type hair dryer which affords minimum disturbance of the hair in the drying process.

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Another object of the invention is to provide an improved ventilating hood for drying hair producing optimum air flow therethrough and avoiding hot spots on the head and attendant discomfort in the process.

A further object of the invention is to provide a hair dryer possessing the advantageous structural features, the inherent meritorious characteristics, and the means and mode of operation herein described.

With the above primary and other objects in view as will more fully appear in the specification, the invention intended to be protected by Letters Patent consists of the features of construction, the parts and combinations thereof, and the mode of operation as hereinafter described or illustrated in the accompanying drawings, or their equivalents.

In the drawings, wherein are illustrated preferred but not necessarily the only forms of embodiment of the invention,

FIG. 1 is a side elevation of a hair dryer in accordance with the invention in operative position upon a women's head;

FIG. 2 is a front elevation of FIG. 1;

FIG. 3 is an enlarged view taken partially in rear elevation and partially in vertical section along line 3-3 in FIG. 1;

FIG. 4 is a further enlarged detail sectional view of a central side portion of the hair dryer of FIG. 1;

FIG. 5 is an enlarged detail sectional view of the top central seam structure of the device of FIG. 1;

FIG. 6 is a detail enlarged sectional view of the hem and drawstring structure at the bottom edge of the device of FIG. 1;

FIG. 7 is a plan view of the outer layer blank employed in the construction of the hair dryer of FIG. 1;

FIG. 8 is a plan view of the inner layer blank;

FIG. 9 is a plan view showing the inner layer blank superimposed on the outer layer blank, and having vent holes and draw string hem provided therein, the two layers being partially secured by heat welded areas defining the vent holes and the draw string hem;

FIG. 10 is a plan view showing the assembled structure as seen in FIG. 9 folded upon itself and secured along its top and forward edges by heat welded seam, the completed hood being shown in inside-out relation with the inner layer at the outer side;

FIG. 11 is a fragmentary cross-sectional view of a preferred form of the hair dryer of the nature illustrated in FIGS. 1-10;

FIG. 12 shows the one piece pattern employed in effecting the preferred embodiment of the invention;

FIG. 13 is a plan view of the pattern of FIG. 12 folded and showing the inner side to be provided the hair dryer cap in accordance with the invention;

FIG. 14 is a side elevation view of the embodiment fabricated from the pattern of FIG. 12 as applied to a woman's head; and

FIG. 15 is a vertical cross-sectional view taken on line 15-15 of the device of FIG. 14;

Referring to FIGS. 1-10 of the drawings, a cap 10 is shaped to fit loosely about the hair of the user with a peak portion projecting rearwardly, the lower edge being gathered by an elastic draw string in snugly engaged relation about the head beneath the hair line. The cap 10 consists of outer and inner layers 11 and 12 of flexible air-impervious sheet material, preferably polyethylene film. As shown clearly in FIGS. 7-10, the outer layer 11, FIG. 7, consists of two identical half sections disposed to either side of a central fold line indicated by the dot-and-dash line 13, the lower edge 14 of each half section extending from the fold line in a downward and outwardly inclined direction with a slight reverse curve to produce in the finished hood a substantially head con-

forming hem line, as will hereinafter more fully appear, the upper edge 15 being extended in a curve from the upper end of the fold line to the outer end of the lower edge 14. Along the fold line 13 near its upper end there is provided an air inlet opening 16, about which there is secured by heat welding a hose attaching flanged ring or bushing 17, preferably formed of a suitable thermoplastic material adapted for convenient heat welding to the plastic material of the outer layer 11. At the lower end of the fold line a reinforcing patch 18, preferably of woven fabric material, is secured by heat welding to the inner side of sheet 11 for the purpose of receiving draw string threading holes. The inner layer 12 is identical in outline shape to the outer layer 11 being similarly provided with a central fold line indicated at 13, lower edges 14 and upper edges 15. Groups of perforations 19 are spaced over the entire area of the inner layer 12, arranged in a uniform pattern. The perforations 19 constitute air jet openings in the completed hood for directing air inwardly to the hair enclosed by the hood. In practice these jet openings are circular and have a diameter of the order of about $\frac{1}{32}$ inch.

As seen in FIG. 9, the inner perforated layer 12 is superimposed in registered relation to the outer layer 11. The layers are then secured together at spaced points within spaced confining groups of apertures 19 by a series of ring-shaped welds 20, produced by suitable high frequency or electronic heat welding dies. These welds are arranged in a predetermined pattern so that they are substantially evenly distributed over the entire area of the hood. In the example illustrated, the welds 20 are equally spaced along transverse and perpendicular lines to form a squared pattern, the distance between the centers of adjacent rings being on the order of about 2 inches, and the inside and outside diameters of each ring being respectively $\frac{1}{16}$ inch and $\frac{7}{16}$ inch. Centrally of each welded ring 20 the superimposed layers are provided with a circular vent hole 21 which is on the order of about $\frac{7}{32}$ inch diameter.

The air jet holes 19 preferably are arranged in a pattern wherein pairs of such holes spaced about $\frac{1}{4}$ inch apart are provided centrally in each square of the squared pattern of the vent holes and also centrally along the sides of each square. Additional air jet holes may also be provided beyond the outer vent holes as illustrated. While practice has shown that the pattern arrangement illustrated is a satisfactory and efficient one, it is understood that other suitable pattern arrangements may be employed.

The lower marginal edge portion of the superimposed layers is provided with a draw string hem 22 by a pair of spaced parallel heat welded strips 23 and 24, the latter strip being substantially contiguous to the lower edge. The strip 24 provides a contiguous seal along the lower margin of the superimposed layers. A pair of draw string threading holes 25 and 26 are provided in the hem contiguously at each side of the central fold line, these holes extending through the reinforcing patch 18 secured to the inner side of the outer layer. Additional draw string threading holes 27 and 28 are provided adjacent the respective ends of the hem.

The construction of the hood is completed by folding it upon itself along the central fold line 13 with the inner layer 12 disposed outwardly as seen in FIG. 10. Then the four thicknesses of the folded over superimposed outer and inner layers are secured along the upper edges 15 by a heat welded seam 29 extending from the fold line to the ends of the bottom edge, thus completing the sealing of the space between the inner and outer layers. An elastic draw string 30 is placed in the hem 22, its two ends being first threaded through the holes 27 and 28 at each side of the seam 29 where the latter closes the hem, and being then carried through the hem at each side with its ends carried out through the holes 25 and 26 provided

in the reinforcing patch secured to the outer layer 11 at each side of the fold line.

As seen in FIG. 10 the hood is in inside-out relation. By reversing this relation the seam 29 is in-turned, the inner layer 12 with the jet holes 19 is disposed inwardly, and the outer layer 11 with the inlet opening 16 is disposed outwardly, as shown in FIGS. 1-3. When not in use the hood will lie flat substantially in the position as shown in FIG. 10 with the layers in flat contacting relation to each other.

In use the hood is placed upon the user's head as shown in FIGS. 1-3, and its lower edge is drawn into gathered relation about the head below the hair line by the tightening and fastening the elastic draw string 30. A flexible air hose 31 is coupled at one end to the fitting 17 of the inlet opening 16 and its other end is connected to an electric air heating and blowing unit 32. Through operation of the unit 32 air under pressure is admitted between the layers of the hood, causing it to inflate or billow out in the areas between the vent holes 21, as shown in FIG. 3.

It will be observed that the central seam 29 seals off one side of the hood from the other side from the forward center point of the hem resting upon the forehead to the rearward end of the seam where it forms a peak with the fold, and that along the fold the spaces between the outer and inner layers of each side are in communication. It will also be observed that the pattern of the vent holes provides an extended spacing to either side of seam 29, the layers establishing extended unsecured areas contiguous to each side of the seam 29. As heated air is introduced through the inlet 16 it divides and flows through main channels along the respective sides of the seam to the front, simultaneously flowing laterally and substantially uniformly through the areas between the vent holes. The arrangement of the entrance hole 16 in the rearward peak portion of the hood removed from the hem line results in a rapid and uniform distribution of the heated air to all parts of the hood and avoids a hot spot in the vicinity of the air inlet. As air under pressure is admitted between the layers, the billowing out of the layers produces a series of pockets or air chambers between the inner surface of the hood and the head of the user, each of these pockets having a vent hole 21 at its center. As pressure is built up between the layers, the heated air is ejected through the jet openings 19 into and around these pockets in the form of high velocity air jets, and because of the curved contour of the inner surface of the hood these jets are directed in diverse paths through the hair and in the pockets in a manner to set up a turbulence in each of the areas contiguous to the vent holes. The hot air rapidly takes up moisture, heating steam forming a layer over the head preventing hot sensations and as the turbulence is maintained through the continued flow of the hot air, the saturated steam is vented through the nearest vent holes 21. This action takes place substantially uniformly and simultaneously over the entire area of the head. Thus, the hair is rapidly dried in the local areas related to each vent hole, without necessity for the moisture laden air from the local areas being carried through other and remote areas of the hair before it is vented. Moreover, the pattern of the vent holes prevents the cap from forming an uncomfortable insulating retainer of hot air.

A modification of the hair dryer of FIGS. 1-10 is shown in FIG. 11 of the drawings which produces the invention embodiment in a preferred form. The construction of the dryer cap, shown in fragmentary cross-section, is essentially the same as in the previously described instance with the following exceptions. Here the pattern of the closely paired air jet holes 19' in layer 12' is arranged so that they are grouped closely about each weld 20'. Also, the inner layer 12' has a material formation so as to cause it to be relatively slack within its boundaries and with respect to the outer layer 11'.

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The net result of these modifications is that upon introduction of the hot air between the layers 11' and 12' of the cap the portions of the layer 12' between the welds 20' will billow to a greater degree than the comparable portions of the outer layer 11'.

Hair is usually set in curls before the use of a hair dryer. This means that the scalp will have a much thinner layer of hair between the curls than in the areas of the curls. If the hair dryer does not have some means of emphasizing the application of hot drying air to areas of the concentrated moisture laden curls, uniformity of the drying process is not as readily effected. With the modifications of FIG. 11 of the drawings the relatively slack inner layer 12' of the cap will tend to mold itself more readily to the peripheral contour of the hair on the head of the user. On hot dry air being introduced within the cap the layers will billow and the air jets 19' will be disposed in optimum angularity to the curls on the head of the user. This is enabled by the relative slackness of inner layer 12' and position of the air jets which cause a discharge of the drying air at more acute angles to the head. The air jets are more effectively applied to the wet curls by the angle of their inclination to filter therethrough. The dry air thus moves tangentially to the scalp rather than perpendicular and minimizes the direct impingement of the hot air on the scalp. This is important as a safety factor, particularly in the areas intermediate the curls. If the air jets are generally perpendicular to the head, the area between the curls will get an undue amount of dry air directly thereon. This is avoided in each instance of embodiment of the invention and particularly in the present instance. Hence, the advantage of the modification of the invention of FIGS. 1-10 to insure optimum tilt of the air jets relative the head surface is readily apparent. It might be commented that the method of effecting the inner layer 12' to be slack relative the outer layer 11' is not limited as long as its relative character permits it to readily shape to the real surface of the hair on flow of air through the cap. Such a hair dryer provides optimum drying efficiency and affords maximum comfort and safety in use.

A preferred simplified form of the invention is shown in FIGS. 12-15 of the drawings. This embodiment of the invention is basically effected from a single flexible sheet 50 having a symmetrical outline to either side of a central longitudinal axis 51. The peripheral contour of sheet 50 is that of a modified figure "8," formed by intersecting arcs 52 curving out from the ends of axis 51 and converging inwardly to the center of the axis 51 to intersect in substantially spaced relation thereto identically to either side thereof. The half section 53 of the sheet 50 to one side of the axis 51 has groupings of small jet apertures 54 in uniformly spaced relation bounded by a substantial aperture free margin at its boundaries. As will be obvious, on folding the sheet 50 on axis 51 in the manner indicated in FIG. 13 of the drawings, the double curved peripheral portions of the half sections 53 and 55 may be welded together to form a single envelope. A free fold is thus provided at the axis 51. The half sections of the sheet 50 are then welded together at locations uniformly spaced within groupings of apertures 54 in section 53 to provide welds 60 confined by groups of apertures 54. The welds 60 are provided with central apertures affording vent holes 56. The sheet 50 is of material elastically stretchable under pressure. It is noted the inner layer is given more slack by having fewer welds.

The envelope thus provided is folded centrally at right angles to the axis 51 to dispose the jet apertures of section 53 to the outside. The peripheral portions of the half sections of the envelope defined by the peripheral intersecting curves thereof are then heat welded forming a cap with a projecting seam 57. By turning the cap inside out, this seam and the jet apertured section

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53 of the cap are disposed inside. An aperture 58 provided centrally of the extremities of section 55 of sheet 50 adjacent fold axis 51 is provided with a defining plastic tube connector 59 and is now disposed externally of the cap and to its rear.

A felt insulating strip 61 is connected to section 53 of sheet 50 adjacent fold axis 51 to be disposed within the peripheral portion of the cap as fabricated, to its inner side adjacent the skin of the wearer. Thus, on introduction of hot dry air, the peripheral portion of the cap sealing to the neck of the wearer affords a protective insulating layer adjacent the skin.

As may be seen from FIG. 14 of the drawings, the cap is placed over the head of the wearer in immediate containing relation to the hair, the tube connector 59 being disposed at the nape of the neck immediately under the hair to the back. The substantial marginal displacement of welds 60 from fold axis 51, as provided in the section 53 of the cap, insures a substantial air channel at and fully about the cap periphery which is disposed at the periphery of the hair of the cap wearer. Suitable tubing from a blower is connected to adapter 59 for supplying heated air within the cap. Upon introduction of the hot dry air through the adapter 59, in this instance the air will be channeled oppositely in the peripheral portion of the cap directly from the rear to the front of the forehead. The elasticity of the cap material will cause the periphery of the cap to expand on introduction of the hot air through adapter 59 to the main peripheral air channel. This seals the cap to the wearer immediately at the hair periphery, the jet apertures 54 thus being disposed in co-extensive spaced relation over the hair. The air flow is completely controlled and has a minimum distance to travel from its entrance. The drying air is uniformly metered from the peripheral channel into the passages between welds defining the vent holes. The billowing of the cap between welds 60 causes air to be vented through the jet holes 54 at acute angles to the hair and generally tangential to the scalp. The elastic stretchable nature of the sheet material of the cap and the fact there are fewer welds provides a general molding thereof to the curls projecting from the head and the acute angle of the jets will channel the air through the compacted curl portions to a greater degree. Since the air will be generally directed in acute angle fashion to the head there will be a minimum of direct application in the areas of the thinner hair. The air turns to steam in localized areas as it entrains the moisture and is jetted through the adjacent vent holes in a manner believed obvious.

This form of the invention is exceedingly simple to fabricate, safe to use and highly economical. Minimum skill and machinery is required in its fabrication and optimum efficiency results. The air has minimum distance to travel in its channeled form and the localized emphasis of air jets on the curls produced by the angularity of the jet holes results in a uniform drying action and a fast evacuation of saturated steam from adjacent the scalp. The first sensation of heat will be substantially uniform over the entire head indicating that the drying action is completed.

It will be readily seen that the various illustrative embodiments of the present invention not only introduce functional improvements in dryers but safety features as well not within the capability of the devices of the prior art. Also, exceedingly simple means and methods of fabricating such devices have been disclosed. The invention has been illustratively presented in various forms but it will be recognized by those versed in the art that the illustrative forms anticipate certain other modifications and applications which are considered to lie within the scope of the present invention.

A particular feature of the invention to be kept in mind is that while thorough and uniform drying action is rapidly effected there is actually a minimum of displacement or disturbance of the hair in the drying process. The ad-

vantage of this feature will be readily obvious to those particularly versed in the hairdressing art.

From the above description will be apparent that thus provided a device of the character described possessing the particular features of advantage before enumerated as desirable, but which obviously is susceptible of modification in form, proportion, detail construction and arrangement of part without departing from the principles involved or sacrificing any of their advantages.

While in order to comply with the statute the invention has been described in language more or less specific as to structural features, it is to be understood that the invention is not limited to the specific features shown but the means and construction herein disclosed merely comprise modes by way of example of putting the invention into effect.

Having thus described our invention, we claim:

1. A hair drying hood in the form of a cap having a lower marginal edge portion for fitting about the user's head below the hair line comprising, outer and inner substantially co-extensive superimposed layers of flexible material joined along their edges to provide an enclosure, said outer and inner layers each consisting of matching half sections foldable upon each other along a central fold line, said layers having a lower edge extending from opposite sides of one end of the fold line and a top and forward edge extending from opposite sides of the other end of the fold line to the outer ends of the lower edge in arcuate fashion, the superimposed top and forward edges of the half sections of the inner and outer layers being folded and sealed together throughout their length to provide a central seam in said hood, said layers being joined at selectively spaced areas, means defining an air inlet in one of said layers for admitting air between the layers whereby billowing takes place intermediate said joined areas, vent means in said joined areas and means defining air jet openings in said enclosure selectively arranged with respect to each of said vent means within the hood for jetting air to the inner side of the hood in localized relation to said joined areas.

2. The structure as set forth in claim 1, said air inlet means being located to communicate directly with areas within said enclosure to either side of said seam, said joined areas of said hood being in uniformly spaced groups to either side of said seam, the spacing of the groups of joined areas to either side of said seam being less than the spacing of said respective groups from said seam whereby to provide a main air channel to either side of said seam in direct communication with said air inlet means for quickly and uniformly distributing air throughout the hood simultaneously to either side of said seam.

3. A hair dryer comprising an envelope including inner and outer layers of flexible impermeable material in cap form, air inlet means in said cap for introduction of air between said layers, means providing groups of jet apertures in the inner layer of said envelope uniformly spaced over and generally coextensive therewith, means defined in said cap affording communication between the interior thereof and the atmosphere when it is on the head of a user, the inner layer of said cap envelope being relatively slack whereby on introduction of air within said envelope it will mold to the contour of the hair of the user to dispose the jet apertures so the drying air introduced in the cap discharges relatively tangential to the head of the user.

4. A hair dryer including, superimposed identical layers of impermeable material peripherally connected to form a cap of envelope form, means defining an inlet in one of said layers for introducing drying air in said cap, one of said layers being formed to be slack relative the other and providing the inner layer of said cap, means defining spaced jet apertures in said one layer having their axes directed generally tangential to the head of the wearer of the cap in operating position, said cap having means for venting moisture saturated air from within said cap.

5. A method of fabricating a light weight flexible hair dryer including the steps of cutting a sheet of flexible material to provide identical sections to either side of a longitudinal axis having boundaries defined by identical arcs curving outwardly from the extremities of said longitudinal axis and inwardly in convergent relation to intersect at points equally spaced from the center of said longitudinal axis, punching groups of jet apertures in said sheet to one side of said longitudinal axis, and substantially spaced therefrom, folding said sheet on said longitudinal axis and welding together the peripheral portions of its half sections, welding said half sections together at spaced intervals within their boundaries and forming vents in said spaced welds and folding said folded sheet on a line defining the intersections of said identical arcs and welding together the welded arcuate peripheral portions of said half sections to form a cap.

6. A method of fabricating a flexible hair dryer including cutting flexible sheet material to provide matching half sections, punching spaced groups of jet apertures in one of said sections, punching an air inlet aperture in the other of said sections, superimposing said sections and peripherally sealing them to form an envelope, welding said sheet sections together at uniformly spaced positions bounded by jet apertures in said one section, punching apertures in said welded portions, folding said envelope on itself and welding a peripheral portion thereof to form a cap.

7. A method of fabricating a light weight hair dryer including the steps of cutting identical sections of sheet material, cutting jet apertures in uniformly spaced groups in one section, cutting an air inlet aperture in the other section, superimposing said sections and sealing them together peripherally to form a double walled envelope, welding said sections together at spaced locations so as to be surrounded by jet apertures, punching vent holes in said spaced welded locations, folding said envelope on itself and connecting together portions of its periphery to form a cap for drying hair.

8. A hair dryer comprising a pair of superposed layers of flexible material, including similar arcuate edge portions, peripherally sealed to effect a closure and form an envelope thereby, said envelope being folded on a line terminating centrally of said arcuate edge portions and having said arcuate edge portions connected to form a cap, said arcuate edge portions providing a seam disposed to the inner side of the cap extending from its fore part to one end to a point spaced from its rear part at its other end, means for introducing air within said envelope to the rear part of said cap adjacent said other end of said seam, welds connecting said layers having vent holes therethrough affording communication between the interior of said cap and atmosphere, the layer of material to the inner side of said cap having air jet holes therein uniformly disposed relative said welds, said welds being grouped to be substantially spaced to either side of said seam to form air channels in said cap directly in communication with said air introducing means.

9. A hair dryer comprising a sheet of flexible material, having the general outline of a figure 8, folded on a line through its center and sealed at its arcuate peripheral portions, which are superposed thereby, to effect a closure providing an envelope, said envelope being folded at right angles to said line and further sealed at said arcuate peripheral portions to form a cap and a seam over the crown of the cap, said seam being disposed within said cap to extend rearwardly from its fore part short of its rear, means defining an inlet to said envelope rearwardly of said seam at the peripheral portion of said cap, the relatively folded portions of said sheet having welds connecting them at substantially uniformly spaced locations, said welds having vent holes therethrough affording communication between the interior of said cap and the atmosphere, the portion of

said folded sheet to the interior of said cap having air jet holes therein disposed about said welds, said welds being grouped to be substantially spaced from the fold in said sheet on said line through its center to form a main peripheral air channel in said cap directly communicating with the inlet to said envelope for rapid and substantially uniform distribution of air throughout said cap simultaneously to either side of said seam.

10. A hair dryer comprising a sheet of flexible material having the general outline of a figure 8 folded on itself on a line through its center to superpose its arcuate peripheral portions, said peripheral portions being sealed together to effect a closure providing an envelope, said envelope being folded at right angles to said line and having said arcuate peripheral portions connected to form a cap and a seam centrally of its crown, means defining an air inlet to said envelope in line with said seam and communicating with either side thereof, means defining connections between the relatively folded portions of said sheet defining vent holes in said cap affording communication between its interior and the atmosphere, and means defining jet openings in the portion of said sheet disposed within said cap in surrounding relation to each of said connections defining vent holes in said cap.

11. A flexible lightweight hair dryer comprising an envelope structure in the form of a cap including an inner and an outer wall having means defining a main air inlet therein for introduction of air between said inner and outer walls on a diametral axis over the crown of said cap, said envelope having said walls joined at spaced intervals to define a main air channel within said cap peripherally thereof, means providing passages in said cap affording communication between the interior of said cap and atmosphere and means defining jet apertures in the inner wall of said envelope structure whereby introduction of air between the walls of said cap will cause at least the inner wall to billow and contour to the hair of the user, disposing the jet apertures in acute angular relation thereto whereby optimum uniform drying conditions obtain.

12. A hair dryer comprising an envelope in cap form including an inner and an outer wall, said inner and outer walls being sealed together at their periphery, means defining a further seal between said inner and outer walls on a line extending over the crown of said cap from its fore part, said cap walls being connected at generally uniformly spaced intervals to either side of said further seal, means defining vent holes in the connected portions of said walls affording communication between the interior of said cap and the atmosphere when the cap is on the head of a user, means defining jet apertures in said inner wall of said cap selectively positioned adjacent the vent holes and means defining an air inlet to said envelope for simultaneously introducing drying air in said cap to either side of the further seal between said inner and outer walls thereof.

13. A flexible lightweight hair dryer comprising an envelope structure in the form of a cap including a plurality of generally coextensive peripherally connected layers of material, means providing spaced connections between said layers defining main air channels in said cap oriented on lines extending over its crown, directed from its fore part to its rear, at least a portion of said spaced connections being arranged to provide for communication between said channels and the space between said

layers to respectively opposite sides of said channels, air inlet means defined in said cap to mutually communicate with said main air channels and the space between said layers to either side thereof, the layer of said cap providing its interior surface having uniformly spaced jet apertures therein and means provided in said cap for sealing its peripheral edge about the head of a user.

14. A drying hood comprising a sealed flexible envelope including inner and outer layers formed to define a cap, means connecting said layers on a line over the crown of said cap, means defining jet apertures in the inner layer of said cap to either side of said connecting means, means providing connections between said layers defining vents through said envelope spaced in areas intermediately of the jet apertures in the inner layer of said cap, means defining an air inlet arranged for simultaneous introduction of a drying medium in said envelope to either side of said first mentioned connecting means and said cap being formed to provide it with a peripheral channel which inherently seals about the head of the wearer on introduction of the drying medium therein.

15. A hair dryer comprising, an envelope including inner and outer layers of flexible material in cap form, welds connecting said layers at substantially uniformly spaced locations defining apertures therethrough, a portion of said welds being located to bound and define a main air channel in said envelope, air inlet means connected with said main air channel in said envelope for injecting air to uniformly flow therethrough and disperse naturally through said envelope around said welds to cause said envelope to billow between said welds, and means defining jet apertures in said inner layer adjacent said welds positioned by the billowing of said envelope to discharge air therefrom at acute angles to the head of the wearer of the envelope.

16. A hair dryer including, a cap structure of envelope form having inner and outer layers of material respectively defining its interior and exterior and having means defining a main inlet thereto at its peripheral boundary, welds connecting the layers of said envelope at spaced positions within its peripheral boundary and defining apertures therethrough, the inner layer of said cap envelope having jet apertures therein about said welds, the peripheral portions of said cap and the welds most adjacent thereto defining a substantially free passage therebetween whereby hot dry air may be peripherally introduced to said cap causing an extended billowing at its periphery to inherently seal the cap to the head of the user and provide uniform distribution of air between said welds to be jetted from said jet apertures, and an insulating layer in the peripheral portion of said cap sealing to the head of the user.

References Cited in the file of this patent

UNITED STATES PATENTS

2,227,262	Kleine	Dec. 31, 1940
2,472,873	Woodrum	June 14, 1949
2,481,407	Fluegel	Sept. 6, 1949
2,488,227	Nelson	Nov. 15, 1949
2,791,168	Mauch	May 7, 1957
3,006,079	Jepson	Oct. 31, 1961

FOREIGN PATENTS

644,763	Great Britain	Oct. 18, 1950
901,940	Germany	Jan. 18, 1954