United States Patent

Scott

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[54] HAIR DRYER AND FACIAL SAUNA

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[73] Assignee: **Sunbeam Corporation,** Chicago, Ill.

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[52] **U.S. Cl.** **34/60,** 34/91, 34/99

[51] **Int. Cl.** **A45d 20/24**

[58] **Field of Search** 34/72, 83, 98–100, 34/90, 91, 60; 132/9; 128/156; 4/165

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Primary Examiner—Frederick L. Matteson
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[57] **ABSTRACT**

A hair dryer of the type having a rigid hood within which a person's head is positioned in order to dry the hair by means of heated air discharged through perforations on the inner wall of the hood toward the hair to be dried. Means are provided to circulate steam into the helmet and out through the perforations whereby the steam fills the volume under the hood. A detachable extension is provided on the hood to extend the lower edge of the hood downwardly to horizontal plane thereby providing an enclosure within which the entire head may be received for the purpose of treating the hair and face with steam. Control means on the enclosure permit adjustment of the level of steam enclosed within the hood and the extension.

11 Claims, 5 Drawing Figures

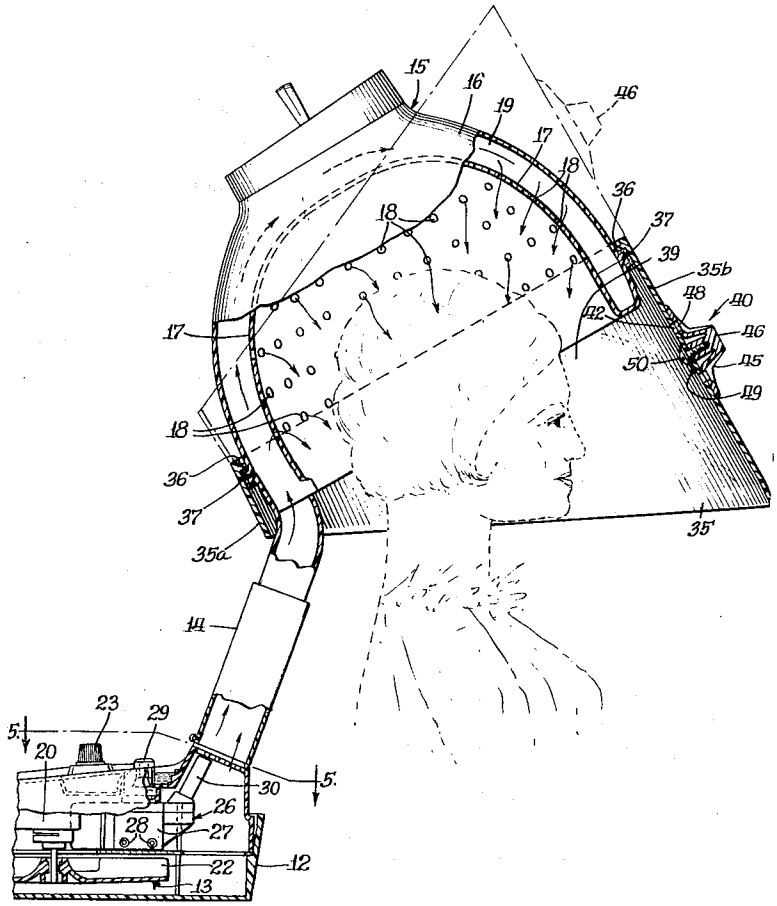

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Fig. 1.

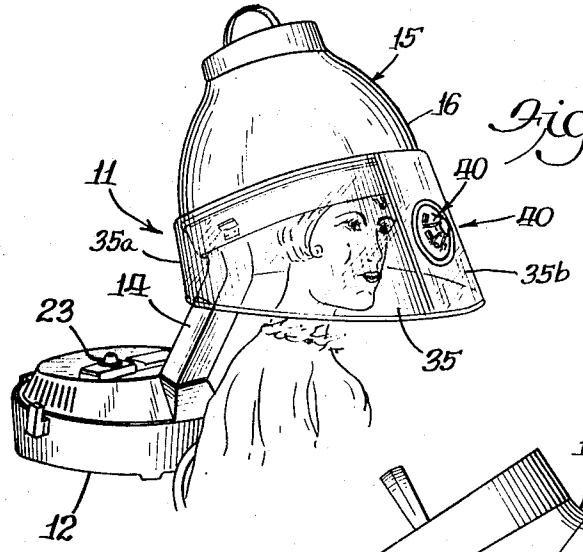

Fig. 2.

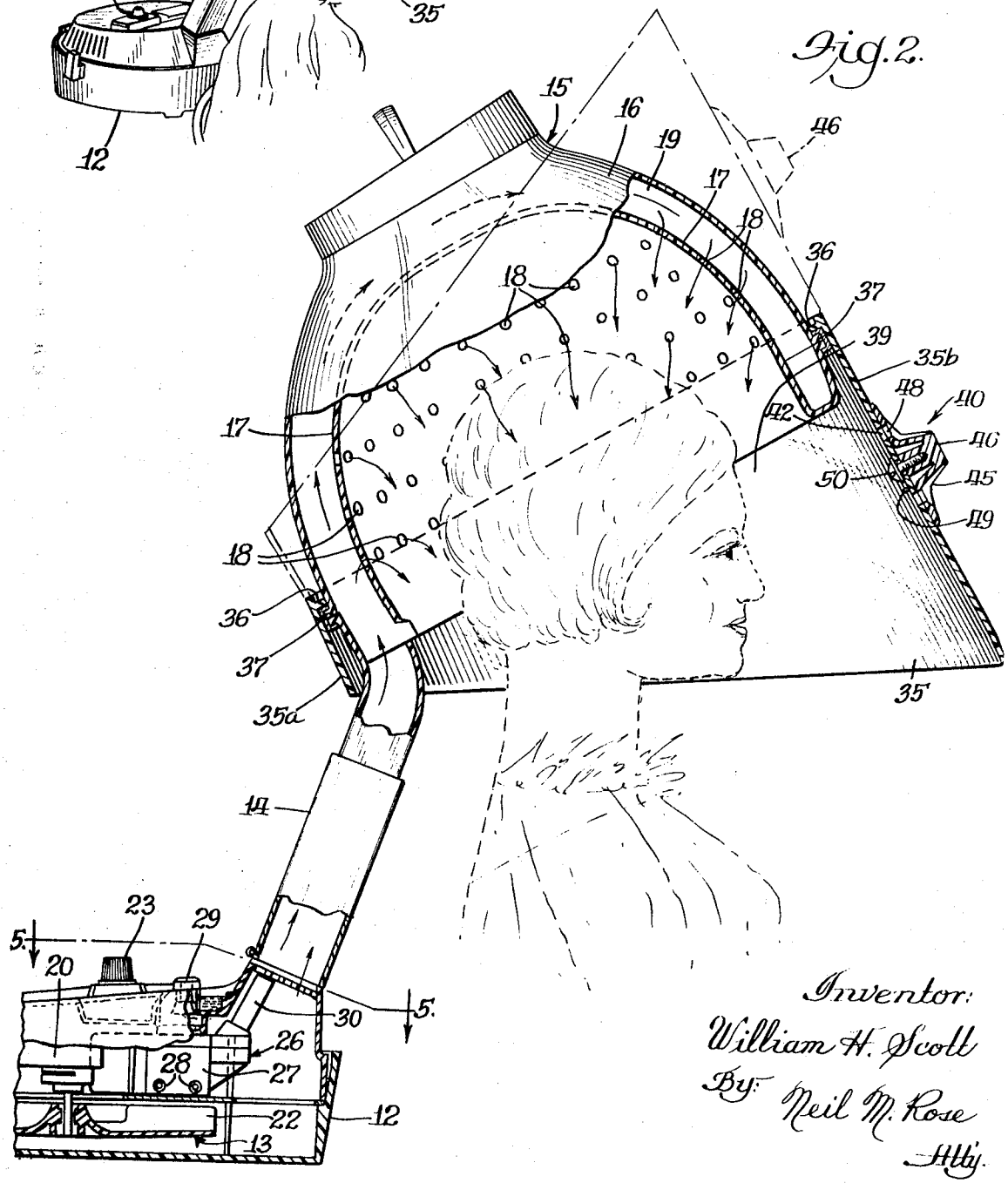

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Fig. 3.

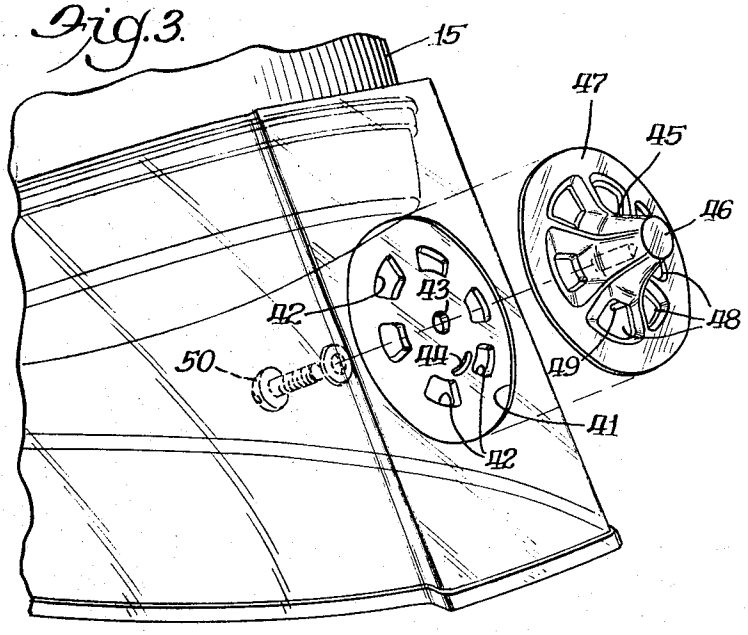


Fig. 4.

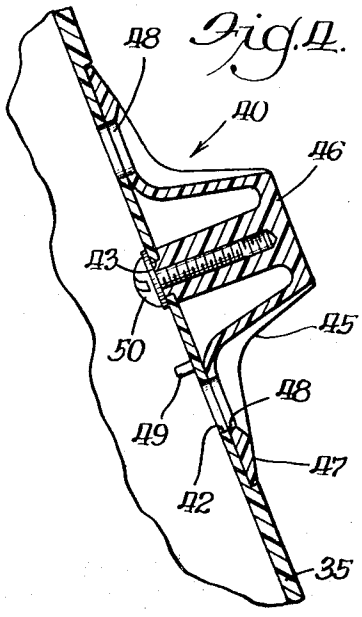
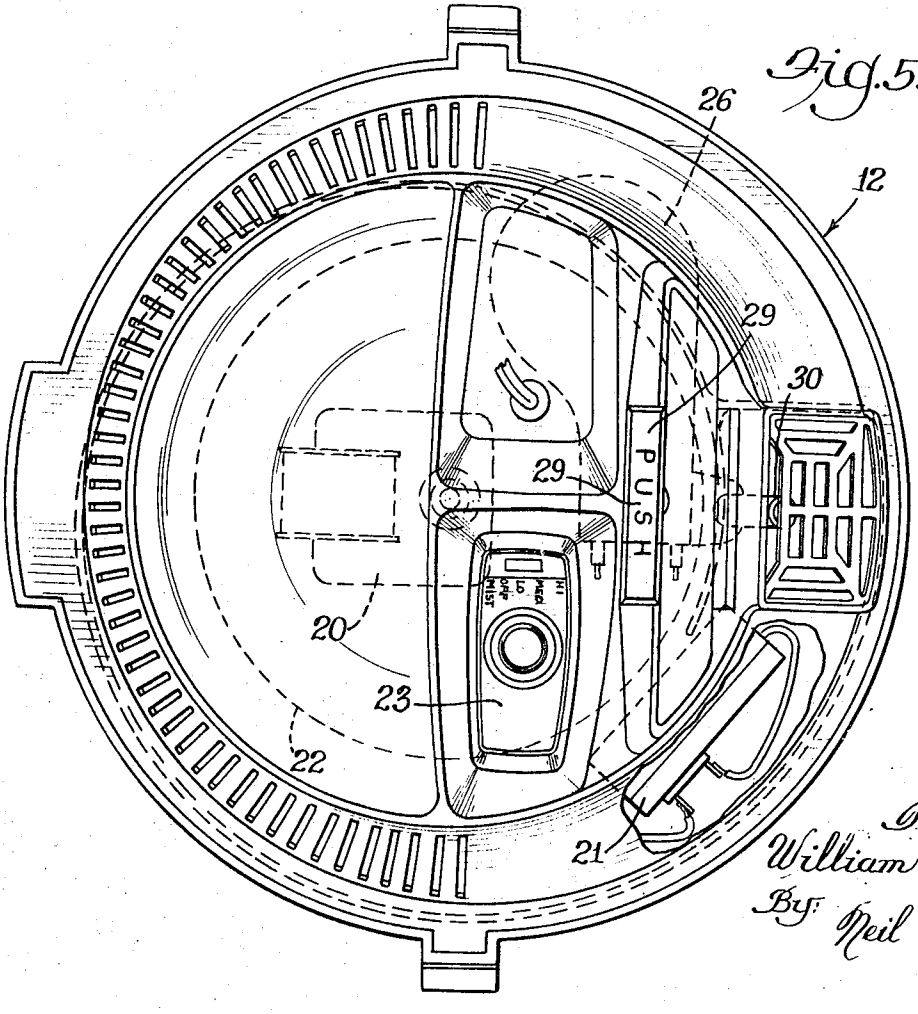


Fig. 5.



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HAIR DRYER AND FACIAL SAUNA

BACKGROUND OF THE INVENTION

In connection with the care and treatment of women's hair, it has been well known to provide hair dryers having hoods or bonnets which serve to direct heated air against the hair and scalp for drying purposes. The means for accomplishing the delivery of the heated air to the helmet or bonnet which encloses the head of the user has varied considerably depending on whether or not the equipment was of a professional type for use in a beauty parlor or portable, lightweight equipment for use in the home. In any event, this equipment is characterized by including some type of motor driven blower which supplies heated air through a hose or conduit to the helmet or bonnet. The term helmet is usually used to describe a rigid hemispherical member having a double-walled construction with air discharge perforations on the inner wall. The soft bonnet type construction is characterized by having a double-walled fabric or flexible plastic hat which completely encloses the hair of the user and serves as a manifold to conduct the heated air to various areas of the head where it is discharged through perforations in the inner wall of the hat.

The above described equipment is used principally to dry women's hair after it has been washed. Much of this equipment is designed or adapted to not only dry the hair but also treat it with steam or other materials. The steam treatment is particularly useful if one desires to set curls in the hair without going through the procedure of washing the hair preliminary to setting it. The hair is set in curlers and then subject to a hot steam treatment and then dried to provide a reasonably long lasting hair set.

Another appliance which has become popular in the beauty care field is the facial sauna. This is an appliance which includes means for generating steam and for directing such steam against the face usually by means of a funnel-shaped conduit. The steam thus discharged on the face is useful in cleaning the skin by opening the pores. In addition, the steam also softens the face and opens the pores so that certain softening creams may be more effectively applied to the skin.

SUMMARY OF THE INVENTION

The invention comprises a combined hair dryer and sauna which essentially performs all the functions of the prior art hair dryers and facial saunas and is relatively simple is design and construction. The conventional hard hat or helmet type of hair dryer is provided with an attachment or extension which extends downwardly from the lower edge of the hair dryer helmet to a common horizontal plane thereby providing an enlarged enclosure within which the entire head and face of the user may be received.

Connected to the helmet is a motor driven blower and a steam generator arranged to supply either heated air or steam to the helmet of the hair dryer. When steam is supplied to the helmet, it discharges through the perforations on the inner wall against the head and hair of the user. If it is desired to treat the face with steam, the sauna attachment is employed to create an enlarged enclosure for steaming the face. As the steam is discharged into the helmet and the enclosure formed by the attachment or extension, the steam has a tendency to rise because it is lighter than air. As the steam rises, it fills up the enclosure driving the air out until the entire enclosure is filled with steam. With the entire head and face of the user positioned within this enclosure, the steam is effective to treat both the hair and face. Since there is sometimes difficulty experienced in breathing within such a steam filled enclosure, control means are provided on the attachment or hold extension to enable the user to periodically bleed off some of the steam to facilitate breathing. In this manner, it is possible to treat all parts of the hair and face completely with steam while maintaining comfortable conditions for breathing.

The hood extension may also be useful in connection with the normal drying or treating the hair. Although the hood or helmet has been designed to accommodate the head of the user when the hair has been set in curlers, women have recently begun using hair curlers of from 2 to 3 inches in diameter and the conventional helmet is not large enough to accept the head when the hair is set with such curlers. The hood extension of my invention provides a larger enclosure which will receive a head having hair set with the larger curlers and which will dry such hair satisfactorily.

Accordingly, it is an object of the present invention to provide an improved hair dryer which includes a facial sauna.

It is another object of the present invention to provide a hair dryer of the type adapted for steam treatment of hair with a shield or extension which adapts the hair dryer for use as a facial sauna.

Another object of the present invention is to provide a hair dryer attachment which adapts the hair dryer for use as a facial sauna.

It is a further object of the present invention to provide a generally conical extension for a hard hat hair dryer which adapts the hair dryer for use as a facial sauna by providing an enlarged enclosure, the lower edges of which lie on a substantially horizontal plane.

Another object of the present invention is to provide a hair dryer attachment that increases the helmet capacity to accommodate larger hair curlers and styles.

It is still another object of the present invention to provide an attachment for a hard hat hair dryer which telescopes over the rigid hood in either of two positions. In one of these positions, the attachment provides an extension to the lower edge of the hood whereby an enlarged enclosure is formed for use in connection with facial saunas. In the other position, the attachment is stored in a convenient manner telescoped around the rigid helmet of the hair dryer.

Further objects and advantages of the present invention will become apparent as the following description proceeds, and the features of novelty which characterize the invention will be pointed out with particularity in the claims annexed to and forming a part of this specification.

BRIEF DESCRIPTION OF THE DRAWINGS

For a better understanding of the present invention, reference may be had to the accompanying drawings in which:

FIG. 1 is a perspective view of a hair dryer and facial sauna embodying my invention;

FIG. 2 is an enlarged side elevational view of the hair dryer of FIG. 1 with portions thereof cut away for illustrative purposes;

FIG. 3 is a fragmentary enlarged exploded view of the control means for the facial sauna positioned at the forward portion of the appliance;

FIG. 4 is an enlarged fragmentary vertical section through the facial sauna control means; and

FIG. 5 is an enlarged sectional view taken substantially along line 5—5 of FIG. 2, assuming that FIG. 2 shows the complete appliance.

BRIEF DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings, there is shown in FIG. 1 a hair dryer and facial sauna **11** which includes a base housing **12** within which is enclosed a motor driven heater and blower assembly **13** which is adapted to supply hot air through an upwardly extending air supply conduit **14**, as is best shown in FIG. 2. The upper end of the conduit **14** is connected to a rigid helmet or hood **15** which is formed by an outer imperforate wall **16** and an inner wall **17** which is formed with a plurality of spaced perforations **18**. The outer wall **16** and inner wall **17** are spaced to provide an air conducting channel or manifold **19** by means of which the air is delivered from the conduit **14** to the perforations **18**.

Under normal circumstances, when the appliance **11** is used for drying hair, the head is positioned within the hood **15**, as shown in FIG. 1, and the motor driven heater and blower as-

sembly 13 is energized to supply heated air through the conduit 14, the manifold 19, and through the perforations 18 where it is discharged against the hair.

As is shown in FIG. 5, the assembly 13 includes a motor 20, a heater 21, and fan 22. A control means 23 is provided to selectively energize the motor 20 and the heater 21 in a manner which is well known in the art.

Also enclosed within the base housing 12 is a steam generator 26 which is adapted to be selectively actuated by the control 23. The steam generator 26 consists of a boiler housing 27 which is heated by an electrical, cast in, sheathed heating element 28. Measured quantities of water are admitted to the boiler 27 by means of a push button control 29, as is evident from FIGS. 2 and 5. The steam generated within the boiler 27 is discharged through an outlet 30 upwardly into the conduit 14 from which it passes into the helmet manifold 19 and through the perforations 18 into the interior of the helmet 15. Hair dryers of the type having the rigid helmet 15 and the means for supplying hot air or steam to the helmet in the manner described above are known in the art. My invention involves the combination with such a hair dryer of novel elements which adapt the hair dryer for use as a facial sauna in addition to performing the functions normally associated with the prior art hair dryers. These novel elements include a cylindrical or frustoconical member 35 which is formed at its upper edge with a shoulder or rim 36 which is supported on a corresponding shoulder 37 formed on the rigid helmet 15, as is best shown in FIG. 2. The member 35 is telescoped over the rigid helmet 15 and seats with the shoulder 36 merely resting against the shoulder 37 on the helmet. The inner diameter of the rim 36 corresponds to the outer diameter of the helmet at the point immediately above the shoulder 37. As may be seen in FIG. 2, the height of the member 35 varies from its narrowest point at the rear of the hair dryer, designated by reference numeral 35*a* in FIG. 2, to its greatest height at the forward part of the hair dryer, as designated by reference numeral 35*b*. This difference in height of the member 35 is an outgrowth of the fact that the lower edge of the helmet 15 is inclined to the horizontal a substantial amount when the hair dryer is in its conventional use position. The member 35 is so designed that when assembled to the hood 15, it provides an extension of the lower edges of the hood or helmet so that the mouth of the opening into the enclosure defined by the helmet and extension lie in a horizontal plane. In addition, it should be noted that the member 35 extends down sufficiently far from the lower edge of the helmet 15 so that the entire head and face of the user are received within an enclosure 39 which is formed by the helmet 15 and the member 35.

When the appliance 11 is used to give a facial sauna, the control 23 is set to the steam or mist position, as it is shown in FIG. 5, thereby energizing the heating element 28 in the steam generator 26. A suitable quantity of water has been placed in the boiler 27 to provide steam which with the heating element 29 energized will issue from the discharge 30 and pass upwardly through the conduit 14 into the manifold 19 and then into the enclosure 39. As was stated above, steam is lighter than air and, accordingly, tends to remain at the upper portion of the helmet 15 with the result that the enclosure 39 fills with steam starting at the top and filling downwardly. With the lower edge of the cylindrical member 35 lying along a common, horizontal plane, the enclosure 39 fills up completely with steam before the steam begins spilling around the edge and then passing upwardly around the outsides of the member 35 in the helmet 15. This arrangement assures that the head and face of the user will be completely enveloped in the steam produced by the generator 26 and discharged into the enclosure 39.

Although the complete filling of the enclosure 39 with steam produces the optimum results in treating the face, it is necessary that means be provided to permit air to enter the enclosure for the user to breathe. For this purpose, the member 35 is provided on its forward portion a control means 40 which serves to allow steam to escape from the enclosure 39 and for air to enter into the enclosure for breathing purposes. As is best shown in FIG. 3, the control means 40 consists of a generally circular recessed area 41 on the front wall of the cylindrical member 35. A plurality of inlet holes 42 are positioned around a central bearing hole 43. A limit slot 44 is also formed in the recessed area 41 between the bearing opening 43 and the inlet openings 42.

For the purposes of regulating the flow through the inlet openings 42, there is mounted in the recessed area 41 a control knob 45 which includes a central, manually actuable portion 46 and a peripheral flange 47. The peripheral flange 47 is formed with spaced openings 48 which are positioned to correspond to the location of the inlet holes 42. In addition, the control knob 45 includes a stop pin 49 which extends through the slot 44 to limit the amount of movement possible in the control knob 45. As assembly screw 50 extends through the bearing opening 43 into threaded engagement with the central portion of the control knob 45 to retain the control knob assembled to the recessed area 41 and mounted for rotatable movement thereon. The stop pin 49 is positioned so that when engaged with one end of the slot 44, the inlet holes 42 and the flange openings 48 are in alignment to permit steam to issue therethrough. When the stop pin 49 is positioned at the other end of the slot 44, the flange openings 48 are out of registry with the inlet holes 42 with the result that the control means 40 is closed preventing any steam or air from passing or bleeding off through the front wall of the cylindrical member 35.

In actual use of the appliance 11 in connection with facial saunas, it has been found that individuals have different tolerances or requirements with respect to breathing during the facial sauna. In some instances, the user may feel it is necessary to move the control means 40 to the full, open position so that steam issues through the openings 42 thereby permitting air to pass upwardly into the mouth and nose of the user. This, of course, lessens somewhat the effectiveness of the steam sauna. In some instances, therefore, the user will operate the control means to some intermediate position to allow the entrance of a limited amount of air for breathing or will actuate the control means to the full open position only periodically at which time a breath of air may be inhaled. It is also well known that many people prefer to inhale the steam feeling that it is healthful and desirable and that it tends to eliminate nasal and bronchial congestions. Accordingly, the amount and manner in which the control means 40 will be employed by the user will vary considerably.

In view of the fact the appliance 11 will often be used simply as a hair dryer and not in connection with a facial sauna, it is desirable to remove or displace the member 35 to a position where it will not obstruct the use of the helmet 15 for hair drying. Because of the substantial size of the member 35, it would provide a substantial storage problem if completely removed from the helmet 15. The abutting portions of the member 35 and the helmet 15 have been constructed so that the member 35 may be lifted from the position shown in FIGS. 1 and 2 and replaced in an inverted position in which the member 35 extends upwardly from the rim 36, as is shown in dotted lines in FIG. 2. In this position, the reverse side of the rim 36 is positioned in engagement with the helmet shoulder 37. In this storage position, as shown by the dotted lines in FIG. 2, the cylindrical member 35 is positioned so that it interferes in no way with the use of the helmet 15 in drying the hair. The head of the user may be easily inserted and removed from the interior of the helmet 15, and the member 35 will no longer present an obstruction to the user's reading or engaging in other activities which are not possible in a more limited use type of hair dryer.

Although the hood extension of member 35 is intended for use primarily in steam treating the face and neck, there are instances in which it would be desirable to use member 35 in connection with the normal drying or treating of the hair. The helmet 15 has been designed so that it is large enough in its internal dimensions to accept the head of the user when the hair is set with conventional curlers. In recent years, there has been

a trend toward many unusual hair styles which require very large curlers or, in some instances, have the hair extending substantially away from the head. Some of the curlers used in this connection are as much as 2½ or 3 inches in diameter when the hair is set with such large rollers and the user may find it difficult, if not impossible, to position her head far enough within the helmet **15** to achieve satisfactory drying results. In such instances, the member **35** effectively increases the helmet capacity or the size of the enclosure so that a woman having her hair styled even with the large rollers may obtain satisfactory drying results. The member **35** is of large interior diameter and serves to direct the drying air inwardly against the hair in the case of a woman who is not able to position her head entirely within the helmet **15**.

While there has been shown and described a single embodiment of the present invention, it will be apparent to those skilled in the art that various changes and modifications may be made without departing from the invention in its broader aspects and it is, therefore, contemplated in the appended claims to cover all such changes and modifications as fall within the true spirit and scope of the present invention.

What is claimed as new and desired to be secured by Letters Patent of the United States is:

1. A hair dryer and facial sauna comprising a rigid helmet having an opening through which the head of the user is inserted whereby the helmet may receive and enclose the entire head including the face of the user, said helmet being formed by an inner perforate wall and a spaced outer imperforate wall which provides therebetween an air distribution manifold, said inner perforate wall enclosing only the top of the head including the hair, said outer imperforate wall extending downwardly beyond said inner perforate wall to enclose the lower portion of the head including the face, air supply means including a motor driven blower and heater which delivers heated air to said manifold, steam generating means connected to supply steam to said manifold, control means for said air supply means and said steam generating means permitting selective alternative operation of either said air supply means or said steam generating means to deliver heated air or steam to the head of the user, and means mounting said helmet with the walls defining said opening lying on a common horizontal plane whereby said helmet may be filled completely with steam before said steam begins to discharge from said opening, said helmet being formed with a bleed hole in the side wall thereof, said bleed hole extending from the interior of said helmet to the exterior thereof whereby steam discharged into said helmet interior through said inner perforate wall may discharge through said hole, closure means for varying the size of said bleed hole to regulate the level of steam within said helmet, said bleed hole is situated in said side wall up from said opening as to be located in closely spaced relation to the nose and mouth of the user in said portion of said imperforate wall extending downwardly beyond said perforate wall.

2. A hair dryer and facial sauna comprising a rigid helmet having an opening through which the head of the user is inserted whereby the helmet may receive and enclose the entire head including the face of the user, said helmet being formed by an inner perforate wall and a spaced outer imperforate wall which provides therebetween an air distribution manifold, said inner perforate wall enclosing only the top of the head including the hair, said outer imperforate wall extending downwardly beyond said inner perforate wall to enclose the lower portion of the head including the face, air supply means including a motor driven blower and heater which delivers heated air to said manifold, steam generating means connected to supply steam to said manifold, control means for said air supply means and said steam generating means permitting selective alternative operation of either said air supply means or said steam generating means to deliver heated air or steam to the head of the user, and means mounting said helmet with the walls defining said opening lying on a common horizontal plane whereby said helmet may be filled completely with steam before said steam begins to discharge from said opening, said walls defining said manifold terminate above said opening, said helmet including a generally cylindrical rigid member which is detachably secured to said walls and extends downwardly from the lower terminal edges of said manifold walls, said member being removable when said hair dryer and facial sauna is to be used for drying or treating hair and being assembled to said manifold walls when said hair dryer and facial sauna is to be used for facial saunas.

3. The combination of claim **2** wherein said member is formed with a steam discharge means in the wall thereof, said steam discharge means being located adjacent the nose and mouth of the user and comprising a plurality of wall openings disposed in a generally circular pattern beneath a rotary shutter mounted on the outer wall of said member, said shutter having openings corresponding in size and location to the openings in said member, and said shutter being rotatable to align said wall openings and shutter openings or to obstruct said wall openings.

4. The combination of claim **2** wherein said lower edge of said manifold walls and the upper edge of said member are formed with abutting flanges which support said member in telescoped relation to said manifold walls extending downwardly from the lower edge thereof.

5. The combination of claim **4** wherein said member is formed to mount in either of two alternative positions, one of said positions being a use position extending downwardly from the support flange on said helmet and the other being a storage position extending upwardly from the support flange on said helmet.

6. An attachment for use with a rigid helmet type of hair dryer of the type having a heated air and steam supply means for delivering either hot air or steam through a supporting conduit to a rigid helmet which is adapted to receive and partially enclose the head of the user, comprising a rigid frustoconical extension which detachably mounts on the lower edge of said helmet, said extension forming with said helmet an enclosure of sufficient size to receive the entire head and face of the user, the side walls of said extension being greater in the front of said helmet than in the rear, the lower edges of said extension being in a common horizontal plane to permit said helmet to be completely filled with steam to treat the face of the user, said extension is provided with a bleed hole in the front side wall thereof, said hole being positioned in closely spaced relation to the nose and mouth of the user whose head may be received within said helmet.

7. The combination of claim **6** including adjustable shutter means for said bleed hole to vary the effective size of said hole, a manually adjustable control on the front of said attachment for varying the setting of said shutter.

8. In a hair drying appliance of the type having a rigid helmet within which the head is partially received to dry the hair, a base which supports said appliance and includes a motor driven blower and a heater for heating the air circulated by said blower, a combined support and air conduit extending between said base and said helmet, said helmet as supported by said conduit being positioned with the entrance opening thereto inclined to the horizontal to facilitate inserting of the head therein and to leave the face exposed when the hair is being dried, a rigid detachable helmet attachment which extends downwardly from said entrance opening to increase the size of the head receiving enclosure formed by said helmet and said attachment attachment, said attachment extending completely around said entrance opening and being of substantially greater diameter than said entrance opening, said attachment has sidewalls of varying height with the greater height wall being at the front of the helmet, the lower edges of said attachment walls lying in a single horizontal plane and extending down to such an extent that the enclosure formed by said helmet and attachment encloses the entire head and face of the user.

9. The combination of claim **8** wherein said base includes means for generating steam which is delivered through said

conduit to said helmet where it is discharged into the hair of the user, said steam filling said entire enclosure to provide steam treatment of the head and face of the user.

10. In combination of claim 8 wherein said attachment comprises a frustoconical member which is telescopically received over said rigid helmet, said helmet and said attachment having cooperating assembly means which support said attachment in either of two alternative positions on said helmet, in a first position said attachment is positioned with the walls thereof providing a downward extension of the walls of said helmet, and in a second position the walls of said attachment surround said helmet.

11. In a hair drying appliance of the type having a rigid helmet within which the head is partially received to dry the hair, a base which supports said appliance and includes a motor driven blower and a heater for heating the air circulated by said blower, a combined support and air conduit extending between said base and said helmet, said helmet as supported by said conduit being positioned with the entrance opening thereto inclined to the horizontal to facilitate inserting of the head therein and to leave the face exposed when the hair is being dried, a rigid detachable helmet attachment which extends downwardly from said entrance opening to increase the size of the head receiving enclosure formed by said helmet and said attachment, said attachment extending completely around said entrance opening and being of substantially greater diameter than said entrance opening, said base including means for generating steam which is delivered through said conduit to said helmet where it is discharged into the hair of the user, said steam filling said entire enclosure to provide steam treatment of the head and face of the user, said attachment includes an adjustable steam bleed means at the side thereof adjacent the face of the user, said bleed means including means for controlling the flow of steam from said enclosure.

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