Nov. 24, 1959 Q. W. GOW 2,914,066

SCALP AND HAIR TREATMENT APPARATUS

Filed Dec. 20, 1956 2 Sheets-Sheet 1

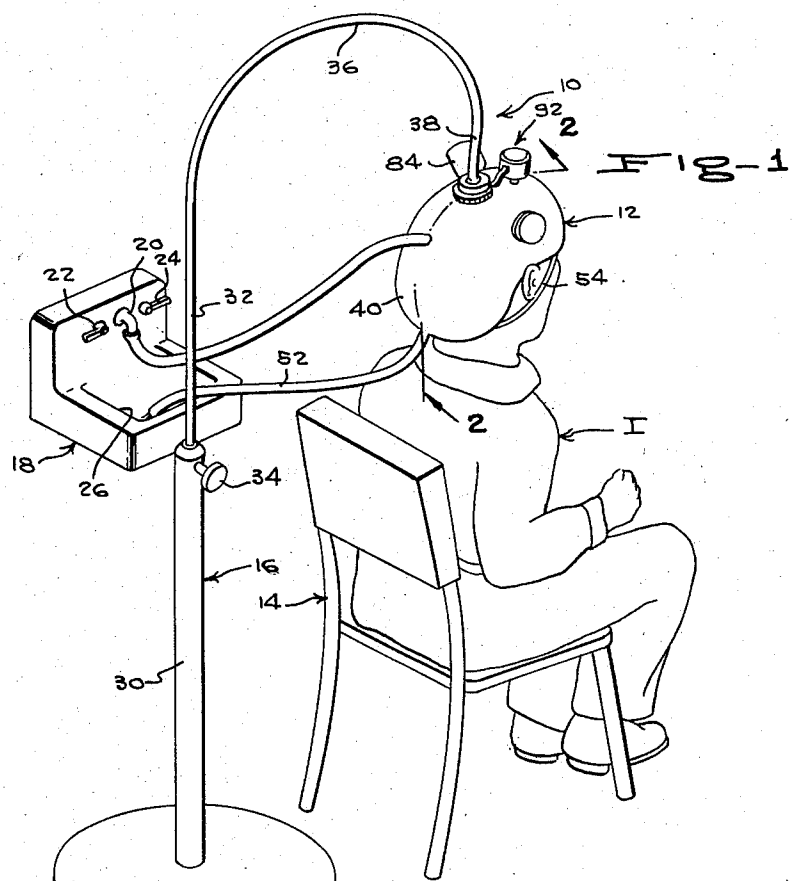


Fig-1

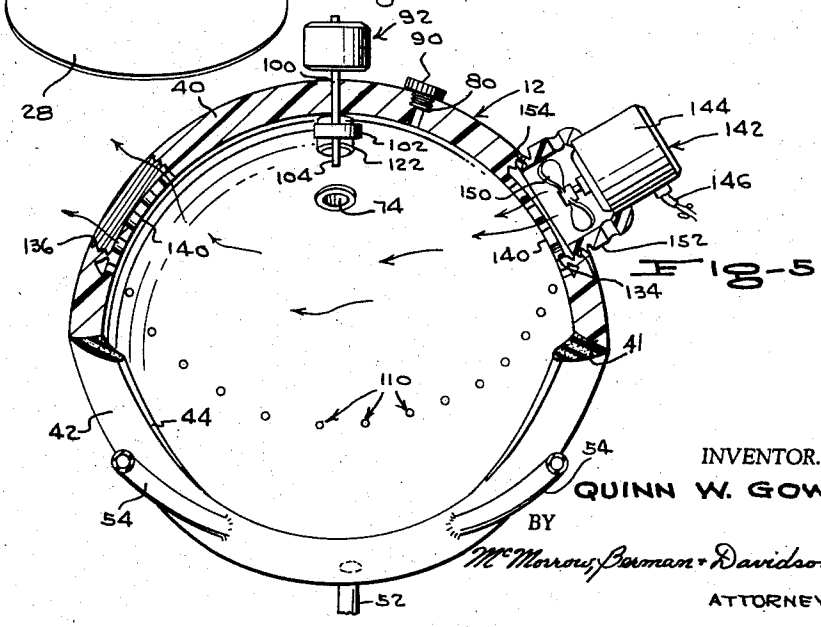


Fig-5

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Fig-3

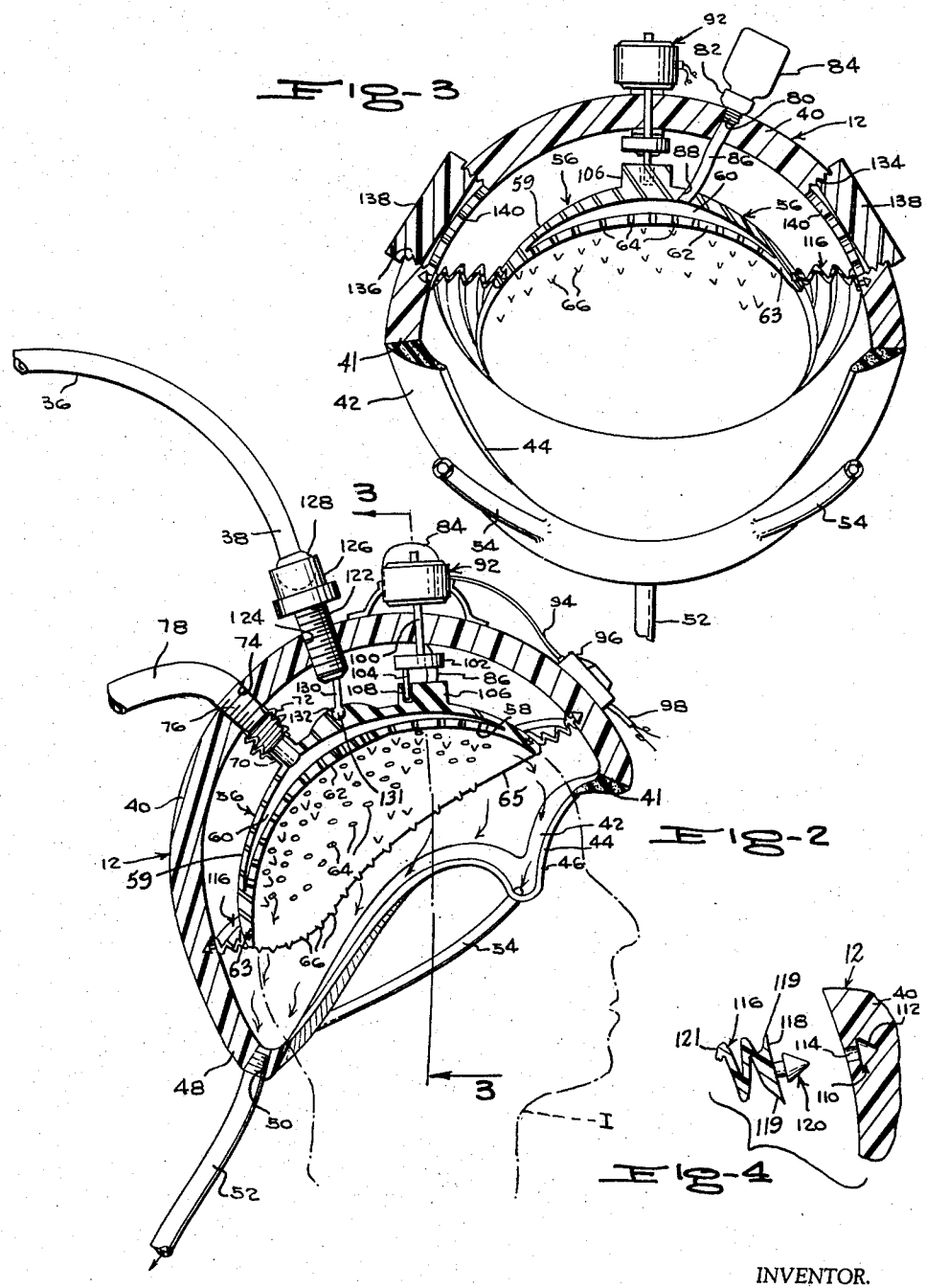


Fig-2

Fig-4

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SCALP AND HAIR TREATMENT APPARATUS

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7 Claims. (Cl. 128—66)

This invention relates to improved apparatus for use in beauty parlors, barber shops, and the like for scalp massaging, and shampooing or washing and drying hair.

The primary object of the invention is to provide a practical and efficient device of this kind which involves a flexible and perforated head-engaging and scalp massaging cap freely suspended within a rigid, relatively stationary head-enclosing hood, motor means for oscillating the cap crosswise within the hood in a scalp-massaging operation, means for controlled introduction into a chamber in the cap of hair-washing or scalp-treating solution, and washing fluid at different times, and forced draft means for drying shampooed or wet-treated hair with the cap removed from the hood.

Another object of the invention is to provide, in a sanitary and sterilizable device of the character indicated above, simple and efficient means for suspending the cap within the hood for free oscillation therein, and a simple sealing ring mounted on the hood for sealing the space between the hood and the cap, while permitting free oscillation of the cap in the hood, so that entry of liquid between the hood and the cap is precluded, the cap and the sealing ring being readily removable for sterilizing thereof, preparatory to re-use thereof with a subsequent individual, the use and operation of the device being characterized by a desirable freedom from necessity for unsanitary and objectionable contact of the hands of the operator with the head, scalp, and hair of an individual being treated.

A further object of the invention is to provide apparatus of the character indicated, which can be made in well-finished and rugged forms at relatively low cost, is easily used and maintained, and is highly satisfactory for the purposes intended.

These together with other objects and advantages which will become apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout the several views, and in which:

Figure 1 is a group perspective view of apparatus of the invention in use;

Figure 2 is an enlarged vertical transverse section taken substantially on the plane of line 2—2 of Figure 1;

Figure 3 is a vertical section taken substantially at right angles to Figure 1, on the plane of line 3—3 of Figure 2;

Figure 4 is an enlarged fragmentary and exploded vertical sectional view showing the means for removably mounting the sealing ring on the hood; and

Figure 5 is a section similar to Figure 3, showing the hair-drying fan in place in the hood, with the cap and the sealing ring removed.

Referring to the drawings in detail, the illustrated apparatus, indicated generally at 10, comprises a substantially hemispherical, concave-convex hood 12, adapted to be engaged over the head of an individual 1 preferably

seated on any suitable chair, stool or the like 14, said helmet 12 having substantially all of the weight thereof carried by a suitable floor stand 16 located near a wash basin 18 having a water faucet 20 operatively connected to hot and cold water valves 22 and 24, and a drain portion 26.

The floor stand 16 incorporates an enlarged suitably weighted base 28 having thereon an upstanding tubular post 30 telescopically receiving in the upper end thereof the lower end of a rod 32 which is lockable in vertically adjusted positions by means of a set screw 34.

The support rod 32 has on its upper end a downturned gooseneck 36 having a terminal end 38.

The hood 12 comprises a dome-shaped body 40 constructed from any suitable material, such as plastic or the like formed to enclose the top and the sides of the head of an individual, and having a lower edge 41, to which is suitably secured a flexible sealing strip 42, having an inwardly extending feathered edge 44 for sealingly engaging an individual's head, as shown in Figure 2. The sealing strip 42 may be of any suitable material, such as sponge rubber or the like, and accommodates the hood 12 to heads of different shapes and sizes. The lower edge 41 of the hood 12 has depending temple-engaging portions 46, and a depending neck-engaging portion 48.

Extending through the lower part of the neck-engaging portion 48 is a threaded bore 50 receiving the upper end of a flexible drain tube 52 whose other end is to be disposed in the drain portion 26 of the basin 18. Leading rearwardly from the interior of the hood 12 at the temple portions 46 of the interior of the hood 12 at the portion 48 are flexible conduits 54, which facilitate drainage of fluid from the temple portions.

Positioned spacedly and substantially concentrically within the hood body 40, and spaced above the lower edge 41 thereof, is a flexible concave convex cap 56, constructed of rubber, plastic, or the like, having a downwardly facing concavity 58 substantially conforming to the top of the head of an individual. The cap 56 comprises spaced upper and lower walls 59 and 62, respectively, which are secured together at their edges, as indicated at 63, and define therebetween a mixing chamber 60. The lower wall 62 has therein perforations 64 which are distributed over the wall 62 and communicate with the chamber 60. On and depending from the peripheral edge 63 and from the underside of the lower wall 62 are scalp-massaging fingers 66.

The upper wall 59 of the cap 56 is imperforate and has on a rear upper portion thereof an inlet nipple 70 communicating with the chamber 60 and having connected thereto a flexible coupling 72 into which is threaded the end 76 of a flexible water pipe or tube 78, which is threaded at one end in an opening 74 in the hood 12, and has its other end connected to the basin faucet 20, so that by operating the central valves 22 and 24 water of desired temperatures may be forced into the mixing chamber 60 and through the perforations 64 of the lower wall 62 of the cap 56 into contact with the head of an individual, and to drain to the basin 18 through the tube 52.

Traversing the hood body 40 is a threaded bore 80 receiving a threaded nozzle 82 of a flexible detergent containing bottle 84, the nozzle 82 having thereon a flexible conduit 86 communicating with the mixing chamber 60 through an opening 88 in the upper wall 59 of the cap 56, so that detergent may be forced into the mixing chamber 60 and mixed with water present in the chamer 60, to form a washing or treating solution. As shown in Figure 5, the detergent bottle 84 together with the nozzle 82 and the flexible tube 86 may be readily removed from the hood body 40 and the opening

80 closed by a plug 90 when the apparatus is utilized for drying hair after a shampoo or other wet treatment.

Mounted on the outer side of the hood body 40 is an electric motor 92 connected by a cord 94 to a switch 96 connected by a cord 98 to a current outlet. The motor 92 has a depending shaft 100 extending through the body 40 and having on its lower end a disc 102. The disc 102 has a depending eccentric pin 104. Preferably integral with the upper wall 59 of the cap 56 is a boss 106 having an upwardly opening blind bore 108 removably receiving therein the lower end of the pin 104, so that when the shaft 100 is rotated by operation of the motor 92, the cap 56 is oscillated or vibrated crosswise of the hood 12 for massaging an individual's scalp, in simulation of manipulation by an operator's fingers during shampooing or rinsing. The flexible coupling 72 and the flexible tube 86 of the inlet conduit 78 and the detergent bottle 84, respectively, permit free vibration of the cap 56 relative to the hood 12.

The lower edge portion 63 of the hood body 40 has in its inward side a plurality of circumferentially spaced sockets 110, as shown in Figure 4, comprising enlarged conical recesses 112 and reduced diameter throat portions 114.

A flexible pleated or accordion ring 116 terminates at its radially outward side in a strip 118, see Figure 4, which has feathered upper and lower edges 119 which, with the outer side of the strip 118, sealingly engage the inside of the hood body 40, with the ring 116 surrounding the lower part of the cap 56. Extending outwardly from the strip 118 are headed lugs 120 of suitable deformable material, having configurations conforming to the sockets 110. The ring 116 terminates at its radially inward side in a bead 121 which bears against the outer side of the edge portion 63 of the cap 56. The ring 116 serves to center the cap 56 in the hood 12 and yields when the cap 56 is oscillated or vibrated. The ring 116 also serves to prevent solvent and the like from passing upwardly between the hood 12 and the cap 56. Furthermore, this arrangement enables removal of the cap 56 and the ring 116 from within the hood body 40 for sterilization prior to use on a next individual or for replacement when worn.

Traversing an upper central portion of the hood body 40 in a bore 124 is a threaded stud 122. On the upper end of the stud 122 is a ball socket 126 receiving a ball 128 on the end 38 of the gooseneck 36 of the support rod 32. Secured to the lower end of the stud 122 and depending therefrom is a swivel pin 130 having a knob 131 on its lower end which is removably secured in a socket 132 in the upper wall 59 of the cap 56.

The cap 56 and the ring 116 can be readily removed from the hood body 40 for sterilizing while a person's hair is being dried.

As shown in Figure 3, the hood body 40 has in opposite sides thereof relatively large threaded openings 134 and 136 which are to be closed by plugs 138 while a shampooing operation is in progress. If desired, suitable screens 140 may be secured across the openings 134 and 136. After the cap 56 and the ring 116 have been removed from the hood body 40, preliminary to a hair-drying operation, removal of a plug 138 from the opening 136 provides an opening at one side of the hood body, and forced draft creating means can be engaged in the other opening 134, after removal of the related plug 138. The draft creating means may comprise an electric fan 142 having a cord 146 connectible to an electrical outlet. Secured around the fan housing 144 and surrounding the fan blades 150 is a perforated sleeve 152 having a threaded lower end 154 removably threaded into the opening 134, so that operation of the fan 142 produces a current of air across the interior of the hood body 40 for drying hair after a shampoo or other wet treatment.

The foregoing is considered as illustrative only of the principles of the invention. Since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, as fall within the scope of the appended claims.

What is claimed is:

1. Apparatus of the character described comprising a concave-convex substantially rigid head-enclosing hood having a lower edge and a central portion, a flexible concave-convex head-engaging cap having a concave underside and a lower edge, said cap being smaller in diameter than said hood and positioned spacedly within the hood, suspending means flexibly mounting said cap within the hood for transverse movement relative to the hood, and motor means acting between the hood and the cap for oscillating the cap relative to the hood.

2. Apparatus according to claim 1, wherein said cap comprises spaced upper and lower walls secured together at their edges and defining a mixing chamber therebetween, said upper wall being imperforate and said lower wall having perforations therein, detergent injecting means on said hood and communicating with said chamber, and pressure water inlet conduit means on the hood and communicating with said chamber.

3. Apparatus according to claim 1, wherein said cap comprises spaced upper and lower walls secured together at their edges and defining a mixing chamber therebetween, said upper wall being imperforate and said lower wall having perforations therein, detergent injecting means on said hood and communicating with said chamber, and pressure water inlet conduit means on the hood and communicating with said chamber, a flexible sealing ring secured to the hood and surrounding said cap, said sealing ring closing the space between the hood and the cap and having an inner side portion bearing against the cap.

4. Apparatus according to claim 1, wherein said suspending means removably mounts the cap in the hood and said motor means is separably connected to the cap.

5. Apparatus according to claim 1, wherein said suspending means removably mounts the cap in the hood and said motor means is separably connected to the cap, said hood having openings therein at opposite sides of said central portion of the hood, one of said openings serving as an air outlet, and forced draft creating means mounted on the hood for forcing drying air through the other opening and across the interior of the hood when the cap is removed from the hood.

6. Apparatus according to claim 1, wherein said hood has an inwardly projecting head-engaging sealing strip on its lower edge, and drain means communicating with the interior of the hood above said sealing strip.

7. Apparatus according to claim 1, wherein a floor stand has a gooseneck having a downturned end swivelly connected to said central portion of the hood for suspending the hood over the head of an individual.

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