March 4, 1924. 1,485,983

S. HUDSON

HAIR DRYING APPARATUS

Filed Oct. 2, 1922

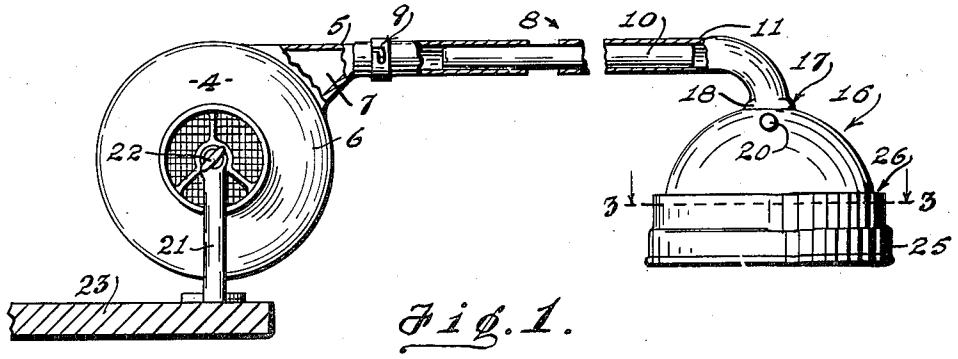

Fig. 1.

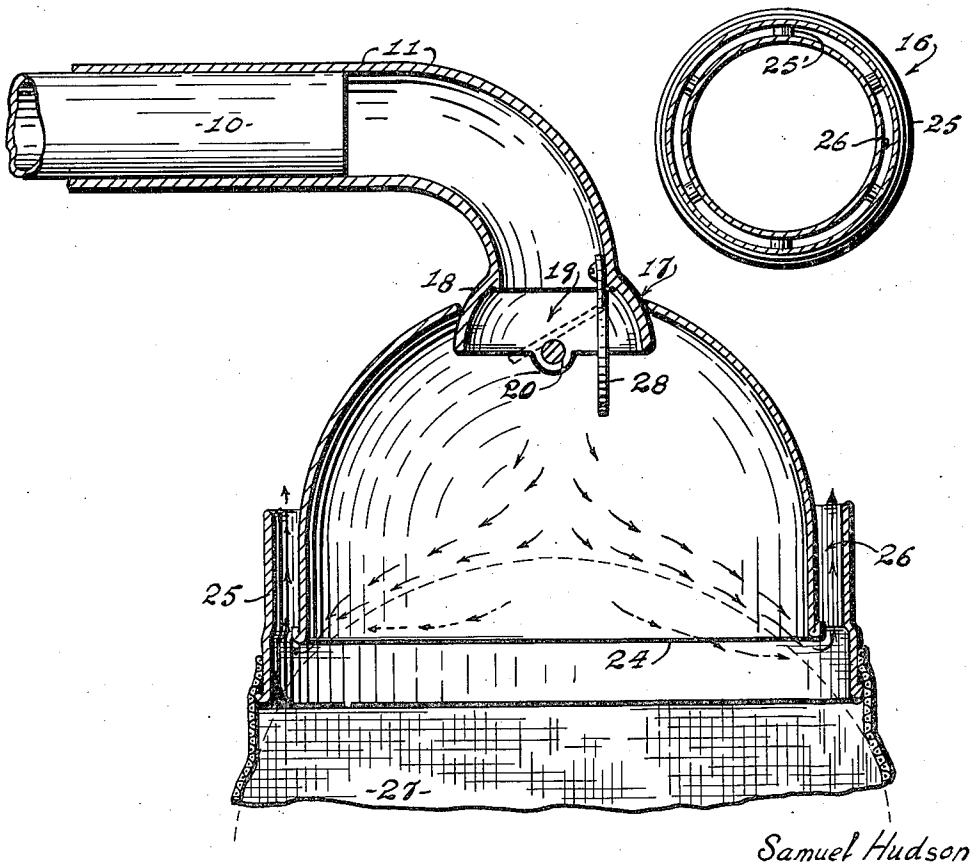

Fig. 2.

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UNITED STATES PATENT OFFICE.

SAMUEL HUDSON, OF LOS ANGELES, CALIFORNIA.

HAIR-DRYING APPARATUS.

Application filed October 2, 1922. Serial No. 591,828.

To all whom it may concern:

Be it known that I, SAMUEL HUDSON, a citizen of the United States, and a resident of Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Hair-Drying Apparatus, of which the following is a specification.

This invention relates to hair drying apparatus and has for its principal object to provide for increased efficiency of operation while providing for greater comfort to the subject.

While my invention is applicable to use under all conditions for drying the hair, particular consideration is given to providing an apparatus which may be used under conditions where the hair to be dried is held in wavers, curlers or the like, as in the art of producing semi-permanent waves. It is obvious that in the above instance the strands of hair are not free to be acted upon by the air currents in the usual manner, and it is therefore important, and it is one of the primary objects of the invention, to quite positively direct and distribute the air currents employed.

It will be understood in the consideration of the invention that the usual hair drying apparatus consists of a blower capable of supplying warm air, and a flexible hose for directing the warm air. The usual procedure is to secure a towel or the like around and over the subject's hair, and to tie this towel to the flexible tube in such a manner that the towel receives all the air and holds it pocketed adjacent the subject's head until said air can escape through the interstices of the towel fabric. The most satisfactory type of blower used is the centrifugal type, which displaces a large volume of air but at a necessarily low pressure. Hence the difficulty with which the air can escape under the conditions of the above described procedure, sets up a back pressure and appreciably lowers the efficiency of the apparatus. Also a pocket of air forms adjacent the subject's hair and scalp, while the fresh warm air simply flows over the inert pocketed air and escapes without accomplishing its purpose. Obviously the pocketed air becomes fully saturated and can absorb no more moisture from the hair. I have also found the flexible hose to be cumbersome to handle, and at times inconvenient to the subject. It is usually necessary to maintain a higher air temperature in the above procedure, to the subject's discomfort.

In view of the foregoing it is another object of the invention to provide a hair drying apparatus capable of setting up a flow of heated air over the subject's head and hair in a manner to quickly absorb and carry away the moisture therefrom without subjecting the blower to a back pressure and in a manner to insure even drying effect throughout all parts of the head subject to the device.

Another object of the invention is to provide a device of the above character capable of readily being adjusted in elevation and in which the parts are rigid and self supporting.

Another object of the invention is to provide a hair drying apparatus in which due consideration is given to sanitation by providing for any part of the apparatus coming in actual contact with the subject being removable for washing and sterilization.

Other objects and advantages of my invention will appear hereinafter and will be better understood by virtue of their occurrence in the specification.

I have illustrated by the accompanying drawings a preferred embodiment of my invention, and it is conceived by me that numerous changes in construction and arrangement of parts and other embodiments will suggest themselves to the minds of those skilled in the art, and I do not limit myself to any specific construction or arrangement of parts, but may alter same as I desire, without enlarging the scope of my invention, and without departing from the spirit thereof, within the appended claims.

In the said drawings,

Figure 1, is a view mainly in elevation of my improved hair drying apparatus.

Figure 2, is a view in enlarged detail vertical section of a part of the apparatus hereinafter termed the hood.

Figure 3, is a view in section seen on a line 3—3 of Fig. 1 looking in the direction indicated by the arrows.

More specifically, reference being had to the accompanying drawings and the figures and numerals thereon, indicating respective

parts, 4 indicates a blower operable by an electric motor, or other suitable drive, disposed on the inapparent side of the blower. Said blower may be of any suitable construction so long as it is capable of setting a relatively large volume of air in motion, and is here shown as being of the usual centrifugal type and having a discharge spout 5 formed substantially integral with a casing 6 of the blower, and extending tangentially therefrom. The spout is provided with an interior space 7 of decreasing area outwardly, and through this space air is discharged from the blower. Blowers of this type for delivering warm or cold air are well known and need not be specifically described or illustrated herein.

To the spout is affixed an air conduit 8 as by a bayonet lock 9, whereby it is readily detachable. In keeping with the objects of the invention said conduit is preferably rigid, but for the purpose of increasing or decreasing its effective length, it is here shown as made up of a plurality of relatively telescoping sections 10, 11, etc.

Now it will be apparent that upon the blower being put in operation and the heating element energized, volumes of warm air will flow through said conduit.

One of the salient features of my invention resides in an air directing hood 16, which is formed of a rigid material, such as sheet metal, and impervious so that air cannot escape therefrom except in the manner hereinafter explained. Said hood is of substantially inverted bowl shape and is formed with an air admission aperture as at 17. Said aperture is slightly elliptical in form and is partially closed by a shield 18, which forms an integral portion of a section 11 of said air conduit. Said shield is formed with an aperture 19, whereby air flowing through said conduit may enter said hood. The hood is secured pivotally to the conduit section 11 by a pin 20, which passes through both the hood and the said section. It will be apparent now that the hood may be moved to various angular positions relative to the major axis of the hood, while the shield 18 will serve to keep the joint between the hood and the conduit suitably air tight.

The blowers of the type shown are generally mounted so as to be oscillatable about their centers for adjustment purposes, and in the embodiment shown, said blower is shown as mounted on an arm 21 directly at its center, and said blower may be held in any adjusted position by tightening a thumb screw 22 which co-acts with the arm and blower casing in the usual manner to promote frictional engagement between the two. Thus by the provision of the adjustment provided for the blower, and the provision for swinging the hood relative to the conduit, and by the provision of a telescoping air conduit, the hood may be adjusted to any vertical and forward position with respect to a surface or other fixed element 23, to which arm 21 is attached.

Air entering the hood and having the usual velocity, or the usual pressure behind it, will be forced downward in, and will spread out and fill, all portions of the hood as indicated by the arrows in Fig. 2, and will be compelled to flow to the lower edge 24 thereof before it can escape. Extending around and preferably below, while being spaced from the outer surface of the hood, an annulus 25 is provided. Said annulus also extends upwardly a suitable distance above the lower edge of the hood. Thus a vertically rising air discharge space 26 is provided which extends annularly around the lower portion of the hood. Thus a counter-flow of air is set up. The air rising in space 26 flowing contrary to the air descending within the hood serves to keep the hood and annulus at practically the same temperature so that the tendency of moisture to precipitate, immediately the air leaves the hood, is substantially reduced. Another purpose of the annulus is to provide for a flexible skirt 27 being supported thereby so that air cannot flow downward around the subject's face, and said skirt of course serves to retain the hair of the subject within areas swept by the warm air currents. Said skirt is preferably of a pliable material and capable of being removed for washing and sterilizing, although it is conceived that a common towel may be temporarily bound around the subject's head and the annulus jointly in place of said skirt.

Interiorly of the conduit, at the end where it discharges to the hood, a baffle 28 is secured to the conduit; said baffle is made of a soft metal so as to be capable of being bent into dotted line position, and may be employed to redirect the air currents should the curved portion of the conduit cause the air to distribute unevenly in the hood.

While the operation and application of the device is practically apparent from the foregoing it may be better understood from the following: The hood is positioned suitably over the subject's head, as indicated in Fig. 2, and the flexible skirt or a towel secured around the annulus as shown to place the subject's hair in substantially direct communication with the interior of the hood. Air entering the hood will flow in the direction indicated and will thus be compelled to actually contact with the subject's head and hair. The drying effect of heated and expanded air in constant motion and constantly renewed is well known, and it will be apparent now that I have pro-

vided an efficient hair drying apparatus by allowing the air to enter and escape freely, and without setting up a back pressure on the blower, while being quite accurately and positively directed. Any of the well known means common to warm air distributing apparatus may be employed for controlling the temperature of the air.

While I have shown and described a specific embodiment of my invention, I do not limit myself thereto, but may alter the construction and arrangement of parts as occasion requires, and may otherwise modify the apparatus within the limits of the appended claims.

I claim;

1. A hair drying apparatus, including a blower, a rigid air conduit carried by said blower, the latter being oscillatably mounted so as to be adjustable to raise or lower the discharge end of said conduit and an air directing hood carried at the discharge end of said conduit; said hood being angularly adjustable on said conduit.

2. A hair drying apparatus, including an air conduit and a hood affixed to the discharge end of said conduit; said hood being provided with a discharge aperture disposed adjacent the lower edge for the purpose set forth.

3. A hair drying device for receiving and directing air over the human head, including a rigid hood having an air inlet adjacent the upper end, and an air discharge aperture adjacent the lower end.

4. A hair drying device for receiving and directing air over the human head, including a hood formed with an air inlet, and further formed with an annular vertically rising discharge space in communication with the interior of the hood whereby air is compelled to flow downwardly and traverse the full depth of the hood before escaping.

5. A hair drying device, including a hood formed with an air inlet at the upper end, and an annulus spaced from and extending around the lower end of said hood and extending below said lower end to provide a vertically rising discharge space in communication with the interior of said hood.

6. A hair drying device, including a hood formed with an air inlet at the upper end, and an annulus spaced from and extending around the lower end of said hood and extending below said lower end to provide a vertically rising discharge space in communication with the interior of said hood, and a flexible element depending from said annulus to provide a flexible extension thereto.

7. In a hair drying apparatus, a blower, a rigid telescoping conduit attached to said blower; the latter being oscillatably mounted so that the outer end of said conduit may be elevated or lowered, and an air directing hood carried by the discharge end of said conduit into which said conduit discharges.

8. A hair drying apparatus as in claim 7, and further including, an annulus in axial alignment with said hood and of larger diameter, held in spaced relation thereto to provide an annular discharge space communicating with the interior of said hood; said annulus extending below the lower edge of said hood, and a flexible extension to said annulus, said annulus also extending appreciably above the lower end of said hood.

9. In a hair drying apparatus, a conduit, an enlarged shield at one end of said conduit, an air directing hood into which said conduit discharges; said hood formed with an opening larger than said conduit and smaller than the largest portion of said shield; the shield being of substantially hemispherical outline, and the lower end of the shield extending into the interior of said hood whereby the margins of the opening in said hood, and the outer surface of said shield, coact with each other to provide a substantially air tight joint, and a pin passing through said hood and shield jointly whereby the hood is angularly adjustable relative to said shield.

SAMUEL HUDSON.