

Jan. 20, 1942.

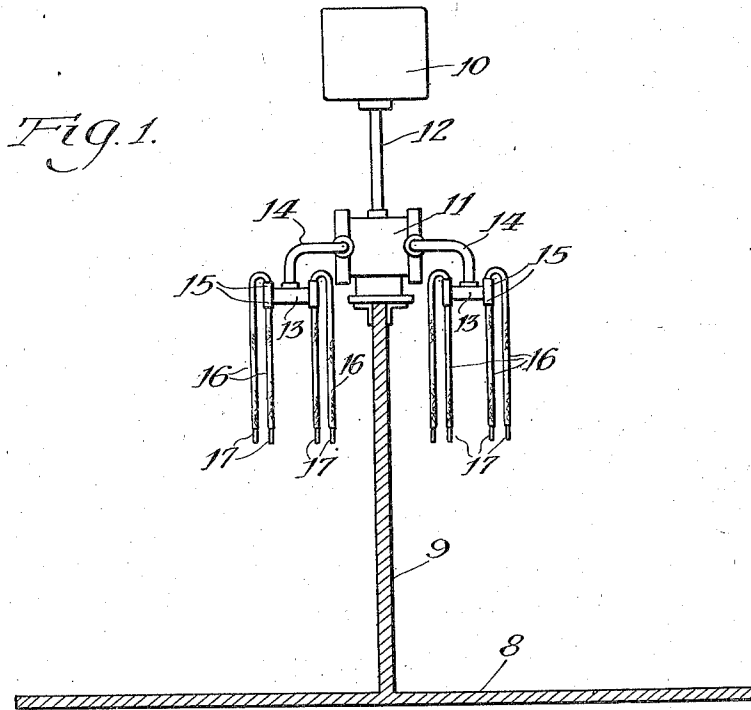
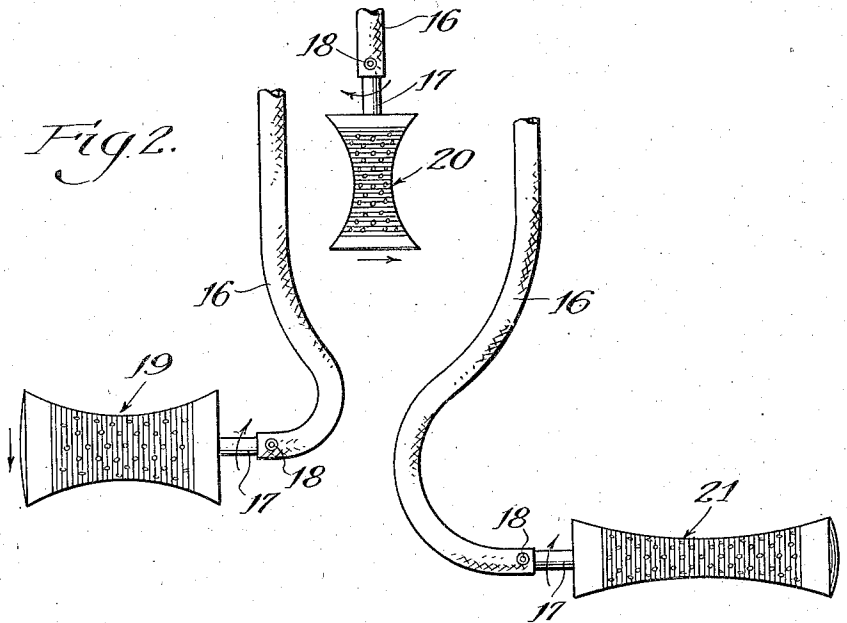
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2,270,429

HAIRDRESSING APPARATUS AND METHOD

Filed Nov. 7, 1940

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 3.

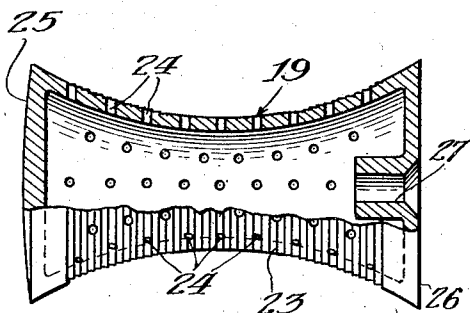


Fig. 4.

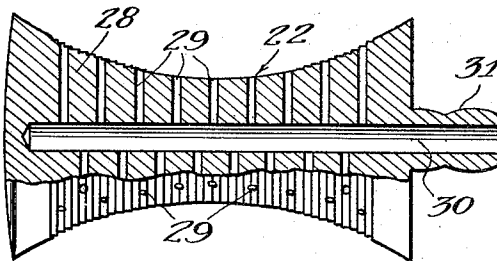


Fig. 5.

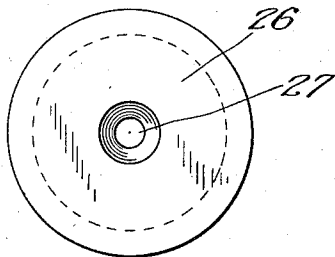


Fig. 6.

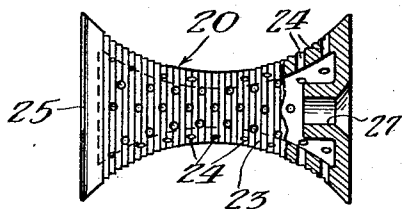
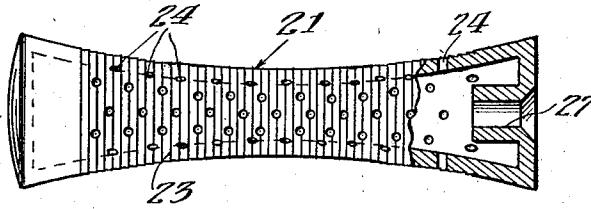


Fig. 7.



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UNITED STATES PATENT OFFICE

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HAIRDRESSING APPARATUS AND METHOD

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Application November 7, 1940, Serial No. 364,618

7 Claims. (Cl. 132—33)

This invention relates to hair dressing apparatus and to a novel method of dressing hair.

Heretofore, hair has been shampooed, dried and then curled by means of a curling iron heated to relatively high temperatures, that is, sufficiently high to burn human skin and to injure the hair if applied thereto for more than a few seconds.

It has also been customary to shampoo or wet the hair and to form tresses of wet hair into small coils which are pinned in position close to the scalp and then dried under a hot or warm air drier. Such a drying operation usually requires forty-five minutes, and apart from the expenditure of time is objectionable because exposed parts of the hair are subjected to excessive drying while the inner portions of the hair or coils are drying more slowly. This method is also objectionable because of the film formed on the hair by the slow drying of the water or curling fluid on the hair. Furthermore, currents of air directed at the scalp of the person whose hair is being dressed render the subject uncomfortable and unduly dry the scalp, causing dandruff.

The main object of my invention is to curl and dress hair without the use of highly heated curling irons and without directing currents of air at the scalp.

Another object is to curl and dry the hair simultaneously in a very short time, namely, only a few minutes longer than is required for forming the curls.

Another object is to provide means for easily and quickly forming curls in the hair being dressed and drying them in such manner that the curled hair will not be disarranged during the drying operation, and will retain its dressed appearance.

The apparatus is designed to produce various types of curls, including sculpture curls, which are small coils wound from the free ends of the hair toward the scalp and intended to lie close to the scalp. Heretofore no devices have been provided for this purpose, it having been customary to wind the small tresses on the finger of the operator, starting at the scalp and winding until the free ends are coiled, and then to hold the coiled hair by means of pins. By using my devices, curls axially parallel to the scalp and curls axially at right angles or other angles to the scalp can be produced.

Another object is to reduce the cost of and the space now occupied by hair drying apparatus in places designed for hair dressing.

It should be noted that this invention is not

related to permanent waving and that devices used to receive tresses of hair wound thereon in permanent wave processes are not suitable for my purposes.

In the drawings:

Fig. 1 is an elevational view, partly diagrammatic, of apparatus which is a part of the hair dressing apparatus embodying my invention.

Fig. 2 is an elevational view, on an enlarged scale, of additional parts of the apparatus attached to air conveying tubes also shown in Fig. 1.

Fig. 3 is a sectional view, partly in elevation, on an enlarged scale, of one form of cylindrical member embodying my invention, adapted to have hair wound thereon as hereinafter described.

Fig. 5 is an end elevation of the member shown in Fig. 3.

Figs. 4, 6 and 7 are views similar to Fig. 3, showing other forms of hair-receiving members used in my apparatus.

In that embodiment of the invention disclosed herein, I have shown in Fig. 1 equipment arranged for use by two operators but it is to be understood that the number of units to be connected to a source of compressed air supply may be varied, and the number of air conveying tubes in each unit need not be four in number, as shown, but may be varied according to the skill of the operator, or other conditions attending the hair dressing operation.

In the drawings, 8 indicates a floor and 9 a partition wall. An air compressor 10 may be located wherever desired. The compressor is connected to an air heating unit 11 by an air line 12. Preferably the heating unit is located near the operator, for example, on the partition 9 between two or more operating booths. One heating unit may serve a plurality of hair dressing units. The compressed air passes through the heating unit 11 to one or more headers 13 through conduits 14, and each header 13 has a plurality of nipples 15 to which are attached tubes 16. Four tubes 16 are shown for conveying air from each header 13, but the number may be varied as will appear from the following description of operation of one of the hair dressing units.

Each of the air conveying tubes 16 is provided with a tip 17 and a valve 18. The valve may be of any conventional type which will automatically open when the tip 17 is connected to one of the hair-receiving members 19, 20, 21 or 22, and will automatically close when the tip is disconnected from said member.

Various shapes of hair-receiving members have been shown in the drawings and still others will come within the scope of my invention. The shape and size may be varied to produce curls of different types and to accommodate hair of different thicknesses. The members 19, 20 and 21 are of the hollow or shell form, comprising a concave cylindrical wall 23 provided with apertures 24 located closely together and only in that part of the wall intended to be covered by a tress of hair wound thereon, a closed end wall 25 and an end 26 having a flanged intumed portion 27 providing an air intake port. In the form indicated as a whole at 22, the concave cylindrical body 28 is solid instead of shell-like and the transverse bores 29 communicate with the longitudinal bore 30 which extends through the tip 31 to near the opposite closed end of the member. The closed ends may be externally flat or slightly convex, as shown, to accommodate the members to various positions on the scalp. The apertured walls 23 and 28 preferably are ribbed to aid in holding the hair in place. The degree of concavity of the hair receiving members, that is, the arc of the concave surfaces 23 and 28, is such that uniform tension will be placed on all the hairs in a strand or tress being wound, beginning with the free ends, on the hair receiving member.

My hair dressing apparatus is used in the following described manner: The person whose hair is to be dried and dressed is seated, preferably, near or beneath the air conveying tubes 16 which depend from a header unit 13. The operator chooses a cylindrical member 19, 20, 21 or 22, suitable for the kind of curl to be formed, and winds a tress of hair, starting with the free ends, on the member. The hair is wet or moist and is wound under slight tension until the cylindrical member lies close to the scalp. Then one of the tubes 16 is connected to the hair-receiving member, either by inserting the tip 17 in the port 27 as indicated in Fig. 2, or by placing the tip 17 over the tip 31 of a member such as that indicated at 22 in Fig. 4. To retain the hair under slight tension on the hair-receiving member, the tube 16 is given a slight turn in the direction opposite to that in which the member has been turned or rolled to receive the hair, as indicated by the arrows in Fig. 2. The result is that there is a tendency on the part of the tube 16 to turn in the direction in which said member was turned, thus continuing to urge the member toward the scalp or in the direction which holds the hair under tension and prevents unwinding of the hair.

The act of connecting the tube 16 to a member 19, 20, 21 or 22 results in opening the valve 18 as is well known in other arts, allowing compressed air, preferably warmed to drying temperatures of 110-120° F., to pass to the apertured body 23 or 28 and through the hair wound thereon, from the interior of the coil.

Only a very short time, i. e. a few minutes, is required to dry a tress of hair by this method and to form and set the hair in a curl. The concentrated streams of compressed air emerging from the apertured portion of the hair holding member blow the moisture off the hair and thus dry it in much less time than has been required heretofore. While this is taking place, the operator repeats the operation described, using another tube 16 and another hair-receiving member as explained. Usually it is most desirable to employ about four such tubes and mem-

bers in a unit. When four tresses have been wound on hair-receiving members and are being subjected to the compressed air, the first tress will have dried and become set, and the first applied tube 16 may be disconnected from the first member, automatically cutting off the air supply, and may then be connected to a member on which a fifth tress has been wound, and so on, until all the hair to be dried and curled has been treated. The number of hair-receiving members and the number of air conveying tubes to be used as an operating unit depends on the skill of the operator, namely the time required for winding the hair on the members, and also on the thickness of the tresses which affects the drying time required. Whatever the number of members employed in a unit, the first tress should be dry and set when the last member has had hair wound thereon.

When the tube 16 is disconnected from the member on which the hair has dried and become set, it is easy to release the tension of the wound hair slightly and to remove the coil from the member without disarranging the curl.

The time for drying and curling the hair by my apparatus and method is reduced to about fifty per cent of the time required by present methods, and the results are superior in appearance and lasting effect.

Limiting the air ducts to the cylindrical wall area actually covered by the wound hair is an important feature of my invention and essential to successful operation of the apparatus.

Changes in the form of the hair-receiving members, their number, the number of members constituting a unit, the number of units connected to a heater and air compressor, as well as changes in details of construction, may be made without departing from the scope of my invention.

I claim:

1. Apparatus for hair dressing, comprising a compressed air holder, a plurality of tubes connected to the holder, means for automatically controlling the passage of compressed air from each of said tubes, and a plurality of closed cylindrical members, each having an air chamber therein, an air inlet port communicating with the air chamber and an apertured cylindrical wall portion between the ends of the member, the apertures in the wall portion also communicating with the air chamber, said apertured wall portion being limited to the area intended to be covered by hair wound on said member, said tubes being adapted for detachable connection to the air inlet ports of said cylindrical members, and said means for automatically controlling the passage of compressed air from each of said tubes being operable by connecting said tube to one of said cylindrical members.

2. The apparatus set forth in the first claim, in which said tubes are non-rotatively connected to the compressed air holder and each tube has rotatable frictional engagement with a cylindrical member, and when said tube is torsionally twisted and connected to its cylindrical member after hair has been wound on said member, said tube resists said torsional twist and holds the cylindrical member closely against the scalp of the person whose hair is being dressed.

3. Apparatus for hair dressing, comprising an air compressor, a heater through which passes air compressed by said compressor, a plurality of headers connected to the heater to receive said air, a plurality of tubes leading from each header,

means for controlling the passage of compressed air from each of said tubes, and a plurality of closed cylindrical members, each having an air chamber therein, an air inlet port communicating with the air chamber and an apertured concave cylindrical wall portion between the ends of the member, the apertures in the wall portion also communicating with the air chamber, said apertured wall portion being limited to the concave area intended to be covered by hair wound on said member, said tubes being adapted for detachable connection to the air inlet ports of said cylindrical members.

4. In hair dressing apparatus of the character described, a hair-receiving member consisting essentially of a closed cylindrical body having an air chamber therein, an air inlet port at one end, a concave, apertured wall portion between the ends of the member, the apertures in said apertured portion being limited to its median portion removed from the ends, and communicating with the air chamber, and means on the apertured surface for holding hair in predetermined position thereon by preventing slipping of the hair on said surface, the arc of the concave wall portion being such that uniform tension is exerted on all the hairs of the strand or tress being wound, beginning with the free ends, on said hair receiving member.

5. A method of dressing hair which comprises wetting the hair to be dressed, winding a tress of said hair on a cylindrical member, maintaining the wound hairs under uniform tension, passing compressed air through the wound tress from the interior of the winding until said tress is dry, repeating the aforementioned steps with respect to successively wound tresses with the

use of additional cylindrical members while a limited number of previously wound tresses are drying, then cutting off the air supply to a dried tress, relieving the tension on said dried hair, removing the cylindrical member, and continuing the cycle of steps with respect to subsequently dried tresses.

6. The apparatus set forth in the first claim, in which each cylindrical member has tube entering means at its air inlet end, and the means for controlling the passage of air from each of said tubes consists of a valve in the tube automatically actuated by said entering means when the tube is connected to one of said hair receiving cylindrical members.

7. A method of dressing hair which comprises wetting the hair to be dressed, winding a tress of said hair on a cylindrical member, maintaining the wound hairs under uniform tension, passing compressed air through the wound tress from the interior of the winding for a few minutes, repeating the aforementioned steps with respect to a limited number of successively wound tresses while previously wound tresses are drying, cutting off the compressed air supply to the first wound dried tress, removing the cylindrical member, and thereafter alternately winding an additional tress on a cylindrical member followed by the aforementioned tensioning and passing of compressed air through the tress, and cutting off the compressed air supply to a previously dried tress and removing the cylindrical member, and repeating the alternate steps of winding a tress and releasing another until all the hair has been dried in successive stages.

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