Oct. 10, 1950 F. V. SCHLEIMER 2,525,274

ELECTRIC PREHEATER FOR HAIR WAVING

Filed June 28, 1948

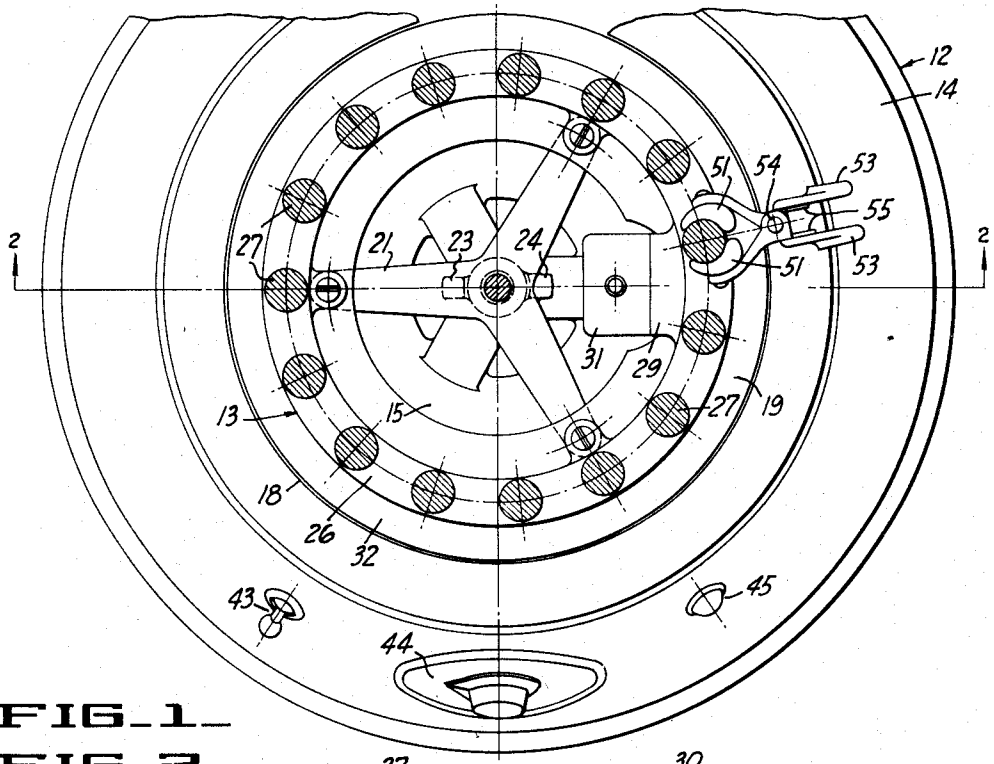


FIG_1_

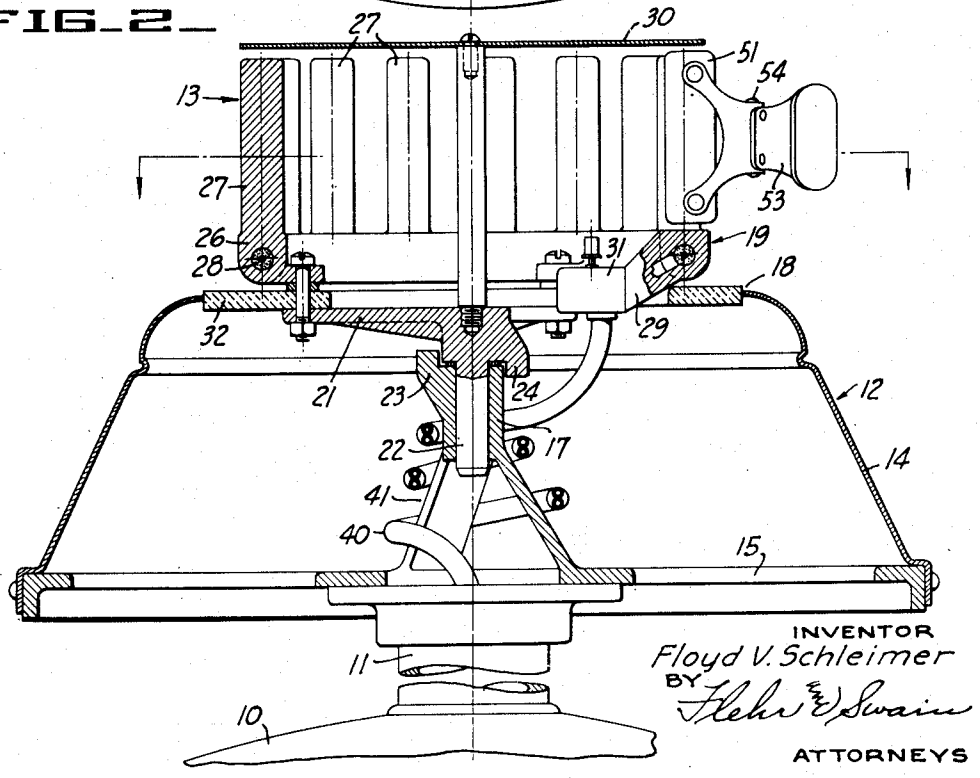


FIG_2_

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Patented Oct. 10, 1950 2,525,274

UNITED STATES PATENT OFFICE

2,525,274

ELECTRIC PREHEATER FOR HAIR WAVING

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Application June 28, 1948, Serial No. 35,697

3 Claims. (Cl. 219—24)

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This invention relates generally to apparatus for the waving of human hair, where heat is employed to render the wave permanent or durable. More particularly it relates to apparatus of the preheat type such as disclosed and claimed in Patent No. 2,161,202, issued June 6, 1939.

In apparatus of the preheat type, heat storage devices or heaters are used in which a sufficient amount of heat is stored to carry out a hair waving operation.

In the conventional waving of hair, it is common practice to utilize clamping devices called protectors which are clamped upon the strands of human hair adjacent the scalp. In Croquignole waving each protector consists generally of a pair of elongated parts hingedly connected together which can be tightly clamped together by suitable clamping means. Protectors usually perform two important functions, namely, to protect the scalp from undue heating during the steaming or baking operation and to grip the hair strands sufficiently tightly to prevent pull being transmitted to the scalp when the hair is tensioned on the overlying curler. As is well known to those skilled in the art, after the hair has been clamped by the protector, it is moistened with hair waving solution and then wound, from its extremity toward the scalp, upon a curler or mandrel. Heat is then applied to the wound hair by any one of several conventional methods.

As is shown in my Patent No. 2,161,203, I have provided a heat storage device which is adapted to be clipped over the wound hair to perform the heating or steaming operation.

It is an object of the present invention to provide an improved preheating apparatus by means of which these devices or heaters can be heated to a predetermined temperature before they are applied to the wound hair.

It is a further object of the present invention to improve particularly upon the construction of the preheating means employed whereby this part of the equipment is greatly simplified, made more compact, and is more conveniently adapted to be used by beauty parlor operators.

It is a further object of the present invention to improve particularly upon the preheating unit itself whereby the failure of the same is reduced to a minimum and whereby the construction of the same is simplified to the greatest possible extent.

Further objects of the invention will appear from the following description in which the preferred embodiment of the invention is set forth

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in detail in conjunction with the accompanying drawing.

Referring to the drawing:

Figure 1 is a cross-sectional view of a machine incorporating my invention.

Figure 2 is a cross-sectional view of the machine taken along the line 2—2 of Figure 1.

The apparatus as illustrated in the drawings consists generally of a supporting means consisting of a base 10 and a pedestal 11. At the upper end of the pedestal 11 I have provided a metal housing 12 within which certain electrical apparatus such as thermostats, etc. is placed and above which there is mounted the heating apparatus 13.

As shown in Figure 2 the housing member 12 consists generally of a housing 14 and a casting 15. Casting 15 is adapted to be secured to the pedestal 11 by any suitable means and is provided with a centrally disposed tubular member 17.

It will be noted that the housing 12 provides a circular opening 18 within which is disposed a rotating assembly 19. The rotating assembly 19 consists generally of a spider 21 which is secured to a stud 22 which is adapted to cooperate with the tubular extension 17 and to rotate with respect thereto. The lower end of the spider 21 cooperates with the upper surface of the tubular member 17 to form a bearing surface upon which the member 19 revolves. The tubular extension 17 is provided with an outwardly extending stud 23 as shown, which extends above the upper surface of the tubular extension 17 and which is adapted to engage a similar downwardly extending stud 24 on the spider 21. As indicated studs 23 and 24 are adapted to engage and limit the rotation of the rotatable member 19 with respect to the housing 12.

Mounted above the spider 21 I have provided a single casting 26 which is provided with a plurality of integral upstanding vertical heating means 27.

Cast integrally with the member 26 I have provided an electrical heating element 28 of the type generally known as a "Calrod." Heating element 28, being cast directly with and consequently in close cooperative relationship with the casting 26 imparts heat thereto and also to the heating means 27.

Also cast together with the element 26 I provide a stud 29 which is likewise integral with and adapted to be heated by the member 26 upon which a suitable thermostat means 31 may be mounted.

Immediately below the member 26 I have provided an annular ring 32 of non-heat conducting material whereby the heat radiating from the member 26 will be prevented from radiating downwardly and heating the housing 12. Likewise immediately overlying the upper ends of the heating means 27 I have provided a hood of non-conducting material 30 which prevents the direct upward radiation of heat from the heating means 27 and which also serves as a safety guard whereby the hand of the beauty parlor operator will be prevented from coming in contact, accidentally, with the heating means 27.

The entire ensemble is adapted to be connected to a suitable source of electricity by means of a suitable conductor 40 which extends upwardly through the pedestal 11 and through a suitable opening 41 in the casting 15. The electrical conductor 40 is adapted to be loosely coiled one or two times about the tubular member 17 and is ultimately secured to the thermostat 31. The thermostat 31 is likewise in electrical contact with the terminals of the "Calrod" unit 29. By winding the electrical conductor 40 loosely two or three times about the member 17 sufficient slack is permitted therein that the rotatable member 19 may be rotated within the limits permitted by studs 23 and 24 without unduly stretching or straining the conductor 40.

It will be noted that the heating means 27 are circumferentially disposed about the rotatable member 19 and are therefore readily accessible for the application of electrical preheat heaters previously described. In conformance with conventional practice the electrical circuit connected to this apparatus can include an off-and-on switch 43, a time switch 44 and a pilot light 45.

A suitable type of heat storage device for use with the apparatus above described is shown and described in my Patent No. 2,161,203. Briefly each device consists of a pair of members 51 formed of suitable metal and having a sufficient mesh to enable a proper amount of heat to be stored in the same when heated to a temperature of approximately 600° F. Members 51 are connected to arms 53 which are hinged together at 54 and normally urged together by spring 55. The heating means 27 are only of sufficient height that one heat storage device can be clipped upon the same. It is apparent however that the heating elements could be made longer so that two or more heat storage devices can be clipped upon the same.

It will be obvious to those familiar with devices of this character that in the carrying out of a permanent hair waving operation a sufficient number of heat storage devices for carrying out the waving of a complete head of hair, may be attached to the means 27 and current applied. In this connection the operator can rely upon the time switch 44 which can be set for a preheating operation of a given period of time. After the heat storage devices have been preheated to a predetermined temperature of approximately 600° F. they are detached from the means 27 and applied to the wound hair which has been prepared to receive them.

It is obvious that, since the heating means and their integrally cast heating element 28 are in effect one unit, each of the heating means will operate at all times. In the past, one of the difficulties with devices of this character was that when each of the heater means 27 carried its own electric heater element that one or more of the heater elements would fail without affecting the other heating means. The failure was not noticeable until the heat storage device had been removed from the heating means and placed about the wound hair with the result that no heat was imparted thereto. Furthermore utilization of this type of device eliminates the complicated wiring required by a plurality of heating elements and reduces the wiring to the absolutely irreducible minimum. Furthermore, when the base to which the thermostat 31 is mounted is cast integrally with the heating means, it is obvious that the same is adapted to be more efficient and that all of the heater means 27 will attain the same temperature, no more, no less.

My invention reduces the manufacturing costs of devices of this character by eliminating all but one heating element. In addition this invention insures that all of the heat storage devices will be heated to exactly the same temperature whereby a better wave is obtained in that a uniform heat is applied to all of the wound hair. Repair costs are reduced to the minimum inasmuch as there is only one heatng element which can fail and the entire assembly, members 26, 28 and 29, may be replaced as a unit.

I claim:

1. A hair waving preheater for use in conjunction with a plurality of heat storage devices, said devices each being adapted for application to wound hair, a base support, a substantially circular casting of uniform cross-section carried by said support, means serving rotatably to mount the casting on said support whereby the casting can be rotated about its vertical axis with respect to the support, an electric heating element cast in a substantially circular manner in said casting, a plurality of solid cylindrical fingers cast integral with said circular casting, said fingers being uniform in size and having their longitudinal axis parallel to the vertical axis of said circular casting and uniformly spaced circumferentially about said casting, the ends of said electric heating element cast together at one point upon the inner circumference of said circular casting in such a manner as to form an electrical connection block for connecting said heating element to a suitable thermostatically controlled electric current.

2. A hair waving preheater for use in conjunction with a plurality of heat storage devices, said devices each being adapted for application to wound hair, a substantially circular casting of uniform cross-section, an electric heating element cast in a substantially circular manner in said casting, a plurality of solid cylindrical fingers cast integral with said casting, said fingers being uniform in size and having their longitudinal axes parallel to the vertical axis of said casting and uniformly spaced circumferentially about said casting.

3. A hair waving preheater for use in conjunction with a plurality of heat storage devices, said devices each being adapted for application to wound hair, a substantially circular casting of uniform cross-section, an electric heating element cast in a substantially circular manner in said casting, a plurality of solid cylindrical fingers cast integral with said circular casting, said fingers being uniform in size and having their longitudinal axes parallel to the vertical axis of said circular casting and uniformly spaced circumferentially about said casting, the ends of said electrical heating element being cast together at one point upon the inner

circumference of said circular casting in such a manner as to form an electrical connection block for connecting said heating element to a suitable thermostatically controlled electric current.

FLOYD V. SCHLEIMER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,680,718	Abbott	Aug. 14, 1928
1,972,186	Davis	Sept. 4, 1934
2,108,964	Freudenberg et al.	Feb. 22, 1938
2,133,573	Rifle	Oct. 18, 1938
2,161,202	Schleimer	June 6, 1939
2,165,552	Johnson	July 11, 1939
2,455,839	Walton	Dec. 7, 1948
2,491,939	Tasho	Dec. 20, 1949

FOREIGN PATENTS

Number	Country	Date
526,813	Great Britain	Sept. 26, 1940