April 11, 1933. W. L. MARTIN 1,903,427

DRIER

Filed June 25, 1930 2 Sheets-Sheet 1

Fig. 1

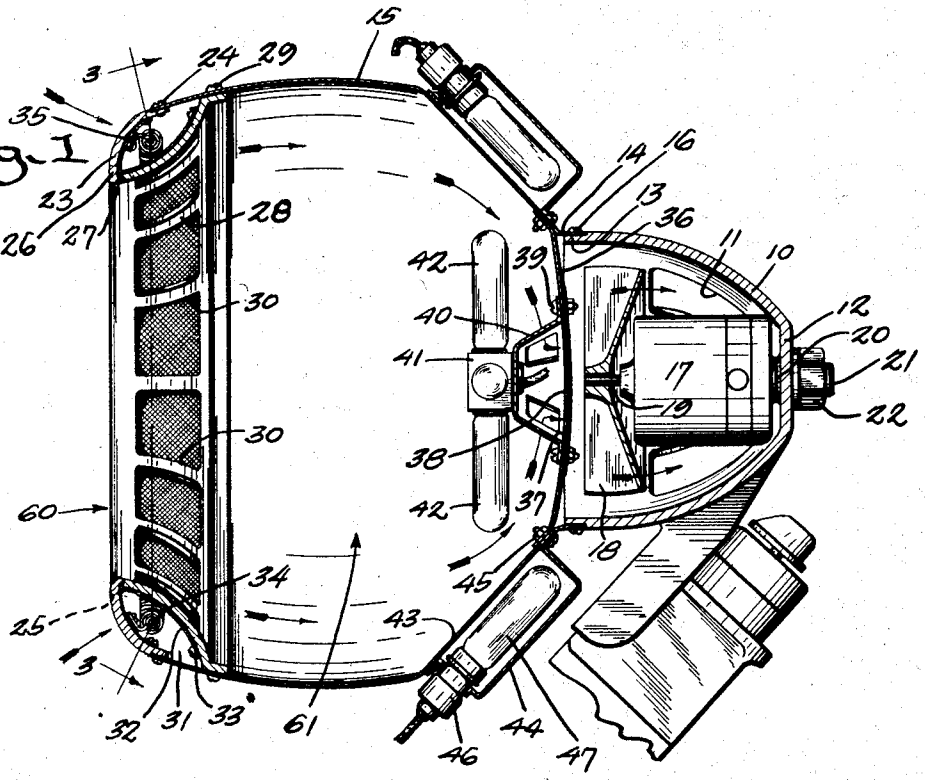
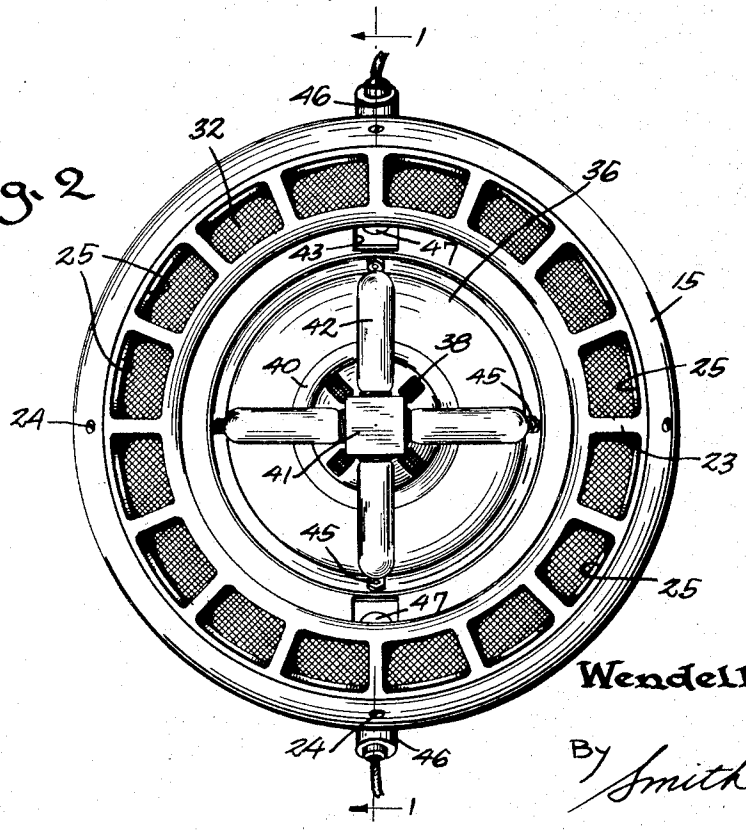


Fig. 2



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Filed June 25, 1930 2 Sheets-Sheet 2

Fig. 3

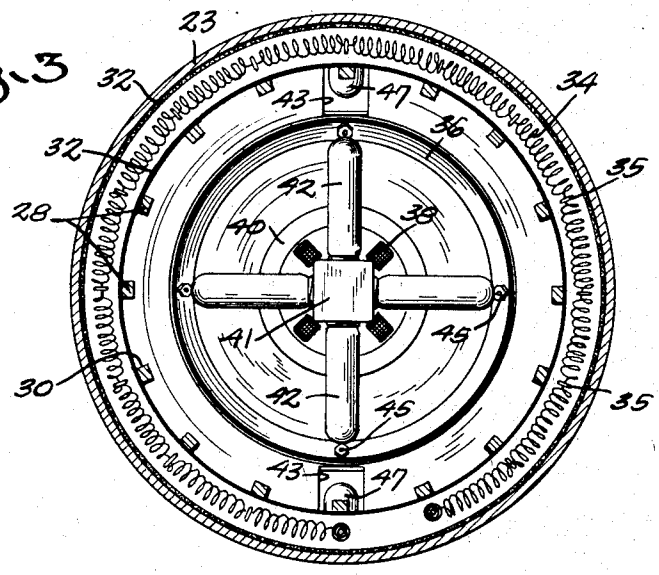
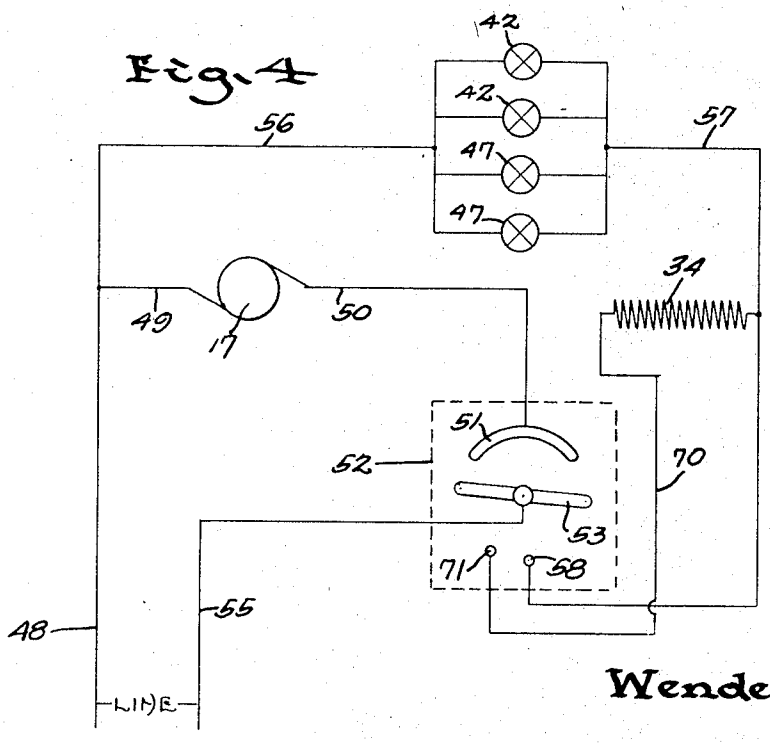


Fig. 4



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Patented Apr. 11, 1933

1,903,427

UNITED STATES PATENT OFFICE

WENDELL L. MARTIN, OF CLEVELAND, OHIO, ASSIGNOR TO THE MARTIN BROTHERS ELECTRIC COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO

DRIER

Application filed June 25, 1930. Serial No. 463,646.

My invention relates to driers and more particularly to driers for the hair, and has for its principal object the provision of a new and improved construction of this type.

In the drawings accompanying this specification, and forming a part of this application, I have shown, for purposes of illustration, one form which my invention may assume, and in these drawings:

Figure 1 is a longitudinal vertical sectional view of one embodiment of the drier, corresponding substantially to the line 1—1 of Figure 2,

Figure 2 is a front elevational view of the embodiment illustrated in Figure 1,

Figure 3 is a transverse vertical sectional view of the embodiment, corresponding substantially to the line 3—3 of Figure 1, while

Figure 4 is a diagrammatic view of the electrical devices utilized in connection with said embodiment.

As illustrated in the embodiment herein shown 10 indicates a skeleton housing having openings 11 in its side walls, a rear wall 12, and a forward edge exteriorly rabbeted as at 13 for the reception of a flange 14 of a casing 15, secured to the housing 10 by screws 16. Mounted in the housing 10 is a motor 17 having a suction fan 18 arranged at its forward end and connected to its armature shaft 19, and also having a block 20 affixed to its opposite end, provided with a threaded stud 21 projecting through the rear wall 12 of the housing 10 and secured by a nut 22, thereby supporting the motor 17 centrally within the housing.

The casing 15 is of substantially parabolical formation, provided at its forward end with an annular transversely curved grating 23, secured to the forward edge of the casing by screws 24, and provided with inlet openings 25; and connected to the inner periphery 26 of the grating 23, by a rabbet joint 27, is a second, interiorly disposed, annular grating 28 secured to the casing 15 as at 29, and having openings 30 leading into the interior of the casing 15. The grating 28 is also transversely curved in a direction opposite to the curve of the grating 23, and forms with the grating 23, and adjacent portion of the casing 15, an annular compartment 31, having a screen 32 therein, extending over the openings 25 and 30, and fastened by screws 33. Arranged in the compartment 31 is an annular heating coil 34, supported in position by brackets 35 carried by the grating member 23. Dividing the casing 15 and the housing 10 is a partition 36 having a central opening 37 leading from the casing 15 into the housing 10, and covered by a screen 38 fastened to the rear side of the partition 36 by bolts 39.

The inlet means, comprising the gratings 23 and 28, compartment 31, and openings 25 and 30, thus define an entrance-way 60 to permit the head of the patient to be inserted well into the operating chamber 61 defined by the interior surface of the casing 15 and the partition 36. Thus when the motor 17, located at a remote point from the entrance-way 60, is energized, air will be drawn into the casing through said inlet means, traverse the operating chamber 61 from front to rear, passing about the head of the patient, finally emerging from the rear of the chamber 61 through the opening 37 in the partition, and into the housing 10, and out of said housing 10 through the openings 11.

At the forward side of the partition 36 is a bracket 40 fastened by the bolts 39, carrying a block 41 provided with radially disposed sockets for the reception of therapeutic lamps 42. The casing 15 is further provided with cut-out portions 43 opening into small enclosure members 44, secured to the housing 15 by bolts 45, and each carrying a bulb socket 46 accommodating a lamp 47. Attention is drawn to the fact that the lamps 42 and 47 are also remote from the entrance-way 60, yet direct their energy toward said entrance-

way, and in a direction opposite to the direction of travel of the air passing through the operating chamber 61, among other advantages overcoming the tendency of the air stream to rapidly dissipate the lamp energy. In all prior structures of which I have knowledge, the energy of the lamps is directed in the same direction as that in which the air is traveling, resulting in rapid dissipation of said energy and lowering of efficiency of the drier.

The electrical circuit for the motor 17, lamps 42 and 47, and heating coil 34, is illustrated in diagrammatic form in Figure 4, and comprises a line wire 48 connected by a branch 49, with the motor 17, a conductor 50 leading from the motor 17 to an arcuate terminal 51 of a switch 52, the movable lever 53 of which is connected with the line wire 55. The lamps 42 and 47 are interposed in a circuit comprising a branch 56 in communication with the line wire 48 and a conductor 57 leading to the switch terminal 58, adapted to be connected with the line wire 55 through the movable lever 53 of the switch. The heating element 34 is connected at one end to the conductor 57, and at its opposite end is connected by a conductor 70 with a switch terminal 71, adapted to be connected with the line wire 55 through the lever 53.

With this arrangement the motor may be run without energization of the heating element 34 and lamps 42 and 47, the circuit in this condition comprising the line wire 48, branch 49, motor 17, conductor 50, terminal 51, and lever 53 of the switch and line wire 55. The lamps 42 and 47, may be thrown in circuit by moving the member 53 of the switch along the arcuate terminal 51, and also into engagement with the terminal 58, in which event the lamps 42 and 47 will be energized as well as the motor 17. The heating element 34 may be included in circuit with the motor 17 and lamps 42 and 47 and by moving the lever 53 farther along the arcuate terminal 51 and also into engagement with the terminal 71, and the heating element 34 will be energized as well as the motor 17 and lamps 42 and 47.

In operation, the head of the person to be treated is inserted well into the casing 15, and assuming that the motor 17, heating element 34, and lamps 42 and 47 are energized, the suction fan 18 and draw air inwardly through the openings 25, into the compartment 31, where it is heated, thence through the openings 30, into and through the operating chamber 61, and about the head of the the person operated upon; the air thence passing through the central opening 37 into the housing 10, and out of the housing 10 through the openings 11.

From the above discussion it will be observed that the air is drawn through the inlet means, and traverses the operating chamber 61 from front to rear, passing over and about the head of the person operated upon, and is then discharged from the housing 10; during this operation the lamps 42 and 47 direct their energy toward the head of the person operated upon, and in a direction toward the entrance-way 60, and in a direction opposite to the direction of travel of the air in traversing the operating chamber 61, the air and the energy from the lamps thereby working in opposite directions and overcoming the tendency of the stream of air to rapidly dissipate the energy of the lamps.

From the above description it will be apparent to those skilled in the art that I have disclosed one embodiment which achieves at least the principal object of the invention; it also will be apparent to those skilled in the art that the invention is susceptible of other uses than those herein disclosed and may be variously changed and modified, all without departing from the spirit of the invention; hence it will be understood that said embodiment is illustrative only, and that my invention is not limited thereto.

I claim:

1. A drier, comprising: a casing having an opening therein disposed in the front of the casing into which an object to be treated is adapted at least partially to project; air inlet means disposed in the front of said casing and spaced laterally from said opening for establishing direct communication between the outer atmosphere and the interior of said casing; air outlet means; and means disposed within said casing for causing a current of air from the outer atmosphere in a zone adjacent said object to flow inwardly through said inlet means, rearwardly through said casing and outwardly through said outlet means.

2. A drier, comprising: a casing having an opening therein disposed in the front of the casing into which an object to be treated is adapted at least partially to project; air inlet means disposed in the front of said casing and surrounding said opening for establishing direct communication between the outer atmosphere and the interior of said casing; air outlet means; and means disposed within said casing for causing a current of air from the outer atmosphere in a zone surrounding said object to flow inwardly through said inlet means, rearwardly through said casing and outwardly through said outlet means.

3. A drier, comprising: a substantially cylindrical casing having an opening in one end thereof into which an object to be treated is adapted at least partially to project; air inlet means surrounding said opening for establishing direct communication between the outer atmosphere and the interior of said casing; air outlet means; and means disposed within said casing for causing a

current of air from the outer atmosphere in a zone surrounding said object to flow inwardly through said inlet means, rearwardly through said casing in a substantially cylindrical stream surrounding the portion of said object that is disposed within said casing, and outwardly through said outlet means.

4. A drier, comprising: a casing having an opening therein disposed in the front of the casing into which an object to be treated is adapted at least partially to project; air inlet means disposed in the front of the casing and spaced laterally from said opening for establishing direct communication between the outer atmosphere and the interior of said casing; air outlet means; means disposed within said casing for causing a current of air from the outer atmosphere in a zone adjacent said object to flow inwardly through said inlet means, rearwardly through said casing and outwardly through said outlet means; and means for heating the air flowing through said casing.

5. A drier, comprising: a casing having an opening therein disposed in the front of the casing into which an object to be treated is adapted at least partially to project; air inlet means disposed in the front of the casing and spaced laterally from said opening for establishing direct communication between the outer atmosphere and the interior of said casing; air outlet means; means disposed within said casing for causing a current of air from the outer atmosphere adjacent said object to flow inwardly through said inlet means, rearwardly through said casing and outwardly through said outlet means; and means in said casing for directing radiant energy toward the portion of said object disposed within said casing.

6. A drier, comprising: a casing having an opening therein disposed in the front of the casing into which an object to be treated is adapted at least partially to project; air inlet means disposed in the front of said casing and spaced laterally from said opening for establishing direct communication between the outer atmosphere and the interior of said casing; air outlet means; and means disposed within said casing for causing a current of air from the outer atmosphere in a zone adjacent said object, to flow inwardly through said inlet means, rearwardly through said casing and outwardly through said outlet means; and means for directing radiant energy toward the portion of said object disposed within said casing in a direction opposite to the direction of flow of said current of air through said casing.

7. A drier, comprising: a casing having an opening therein disposed in the front of the casing into which an object to be treated is adapted at least partially to project; a housing carried by said casing and surrounding said opening and provided with a plurality of apertures therein for establishing direct communication between the outer atmosphere and the interior of said casing; heating means disposed within said housing; air outlet means; and means disposed within said casing for causing a current of air from the outer atmosphere surrounding said object to flow inwardly through the apertures in said housing and past said heating means, rearwardly through said casing and outwardly through said outlet means.

8. A drier, comprising: a substantially cylindrical casing having an opening in one end thereof into which an object to be treated is adapted at least partially to project; air inlet means surrounding said opening for establishing direct communication between the outer atmosphere and the interior of said casing; air outlet means; means disposed within said casing for causing a current of air from the outer atmosphere in a zone surrounding said object to flow inwardly through said inlet means, rearwardly through said casing in a substantially cylindrical stream surrounding the portion of said object that is disposed within said casing, and outwardly through said outlet means; and means carried by said casing without said stream for directing radiant energy radially inwardly toward the object being treated.

9. A drier, comprising: a casing having an opening therein disposed in the front of the casing into which an object to be treated is adapted at least partially to project; air inlet means disposed in the front of the casing and spaced laterally from said opening for establishing direct communication between the outer atmosphere and the interior of said casing; air outlet means; means disposed within said casing for causing a current of air from the outer atmosphere in a zone adjacent said object to flow inwardly through said inlet means, rearwardly through said casing and outwardly through said outlet means; means for heating the air flowing through said casing; and means disposed within said casing in axial alinement with said opening for directing radiant energy toward the object being treated in a direction opposite to the direction of flow of air through said casing.

10. A drier, comprising: a casing having an opening therein disposed in the front of said casing into which an object to be treated is adapted at least partially to project; air inlet means disposed in the front of the casing and spaced laterally from said opening for establishing direct communication between the outer atmosphere and the interior of said casing; air outlet means disposed in the rear of the casing; means disposed within said casing for causing a current of air from the outer atmosphere adjacent said object to flow inwardly through said inlet means, rearwardly

through said casing and outwardly through said outlet means; means in said casing and without said current of air for directing radiant energy inwardly in a radial direction toward the object being treated; and means disposed within said casing in axial alinement with said opening for also directing radiant energy toward said object in an axial direction opposite to the direction of flow of said current of air through said casing.

In testimony whereof I hereunto affix my signature.

WENDELL L. MARTIN.