June 22, 1926. 1,589,981

G. W. MOORE

HAIR DRIER

Filed Oct. 20, 1924

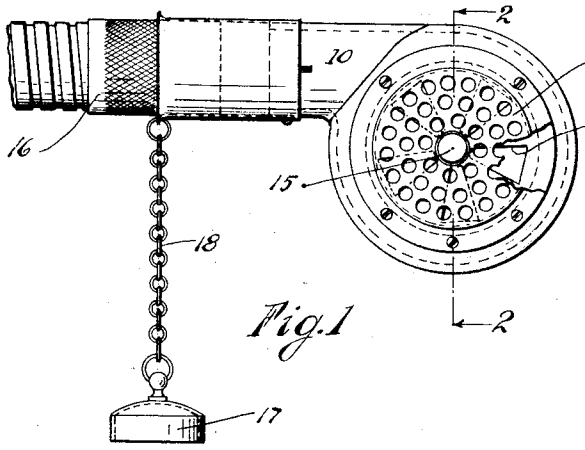


Fig. 1

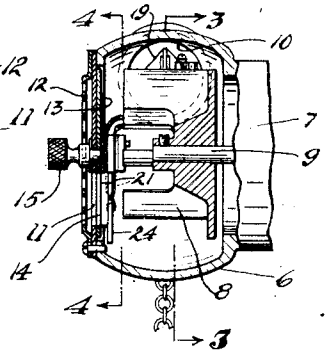


Fig. 2

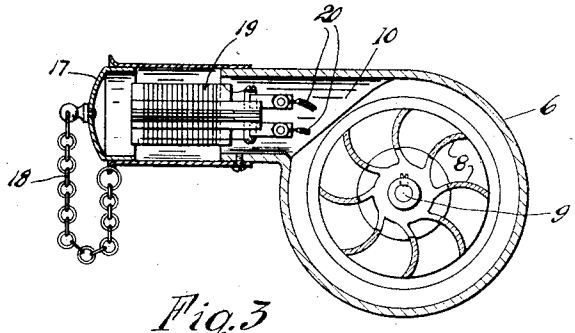


Fig. 3

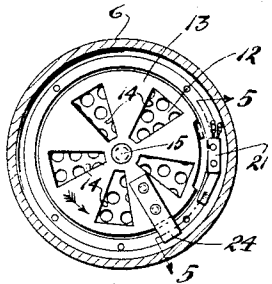


Fig. 4

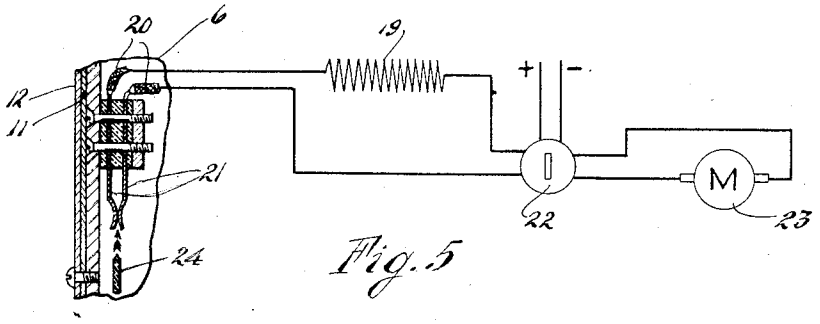


Fig. 5

Witnesses:
W. Schnellbacher
B. S. Richards

Inventor:
George W. Moore
By Joshua R. H. Boone
his Attorney.

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UNITED STATES PATENT OFFICE.

GEORGE W. MOORE, OF CHICAGO, ILLINOIS.

HAIR DRIER.

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My invention relates to improvements in hair driers, and has for its object the provision of an improved construction of this character adapted and arranged to deliver a blast of heated air for drying the hair and equipped with means for silencing or deadening the normal noise of operation thereof when not in actual use.

Other objects will appear hereinafter.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Fig. 1 is a partial side view of a hair drier embodying the invention,

Fig. 2 is a section taken on line 2—2 of Fig. 1,

Fig. 3 is a section taken on line 3—3 of Fig. 2,

Fig. 4 is a section taken on line 4—4 of Fig. 2, and

Fig. 5 is a diagrammatic view illustrating the electric circuits employed in the device, said view including a section taken on line 5—5 of Fig. 4.

The preferred form of construction as illustrated in the drawings comprises a fan casing 6 preferably formed integral with a motor casing 7 and containing a centrifugal fan 8 attached to the motor shaft 9 as indicated. The fan casing 6 is provided with the usual tangential discharge 10 and with a plurality of segmental central inlet openings 11, the said fan operating in the normal usual way to draw air through the openings 11 and discharge it in the form of a blast through the tangential discharge 10. So much of the construction as has already been described is old and well known and constitutes no part of the present invention except in so far as the same co-operates with the parts presently to be described.

The perforated guard plate 12 is placed over the openings 11 to permit of the free entry of air but to prevent the insertion of children's fingers or other foreign and undesirable objects. A closure plate or damper 13 is mounted adjacent the inner face of the outer side of the fan casing 6, said closure plate being provided with segmental openings 14 arranged and adapted to register with the openings 11 to permit entry of air. The closure plate 13 is mounted on a stem or handle 15 whereby the same may be readily adjusted to open or close the openings 11 when desired. By opening and closing the openings 11 the discharge of the fan is controlled, because it is impossible for the fan to discharge air unless it receives it freely. The discharge 10 is provided with a flexible detachable discharge tube 16 for directing the blasts of air discharged by the fan. A removable stopper 17 is mounted on a flexible chain 18 and is arranged to close the end of the discharge 10 when the flexible tube 16 is removed.

An electric heater 19 of any usual or desired construction is arranged in the discharge 10 for heating the blast of air discharged. This heater 19 is supplied with current through the wires 20, said wires being connected in circuit with two spring contacts 21 mounted on the inner wall of the casing 6 and normally resting in contact with each other and thus forming part of the normal circuit. The circuit arrangement is illustrated in Fig. 5 and includes a double switch 22 and the motor 23 as shown, the switch 22 serving to control both the circuit for the motor and the circuit for the heater. A circuit breaking finger 24 of insulating material is secured to the closure plate 13 in position to pass between the spring contacts 21 when the closure plate is rotated to close the openings 11 thus breaking the circuit through the heater 19.

By this arrangement when the fan is not in actual use for hair drying purposes the closure plate 13 may be shifted to close the inlet openings and the stopper 17 inserted in the discharge thus deadening and silencing the normal noise of operation of the fan. However, when the closure plate 13 is thus shifted to close the openings 11 the finger 24 passes between the contacts 21 thus breaking the circuit through the heater 19 which serves to prevent useless waste of current in said heater and also serves to prevent burning out of said heater due to the fact that there is no current of air then passing thereover. In this way the motor may be readily used for other purposes without the annoyance due to the normal noise of operation of the fan.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I,

therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. The combination of a fan having an inlet and a discharge; an electric heater in said discharge and a circuit for operating the same; a switch for said circuit; and means for opening and closing the fan inlet connected to also close and open said switch, substantially as described.

2. The combination of a fan having an inlet and a discharge; an electric motor in said discharge and a circuit for operating the same; a switch for said circuit; means for controlling the amount of air circulated by said fan; and an operative connection between said controlling means and said switch for opening said switch when the circulation of air by said fan is discontinued, substantially as described.

3. The combination of a fan having a central inlet and a tangential discharge; an electric heater in said discharge and a circuit for operating the same; a switch mounted within said casing and consisting of two spring contacts normally resting in contact with each other and connected in series in said circuit; a rotatable closure member arranged to open and close the fan inlet; and a finger of insulating material attached to said closure member and arranged to pass between said spring contacts when said closure member is closed, substantially as described.

In testimony whereof I have signed my name to this specification.

GEORGE W. MOORE.