

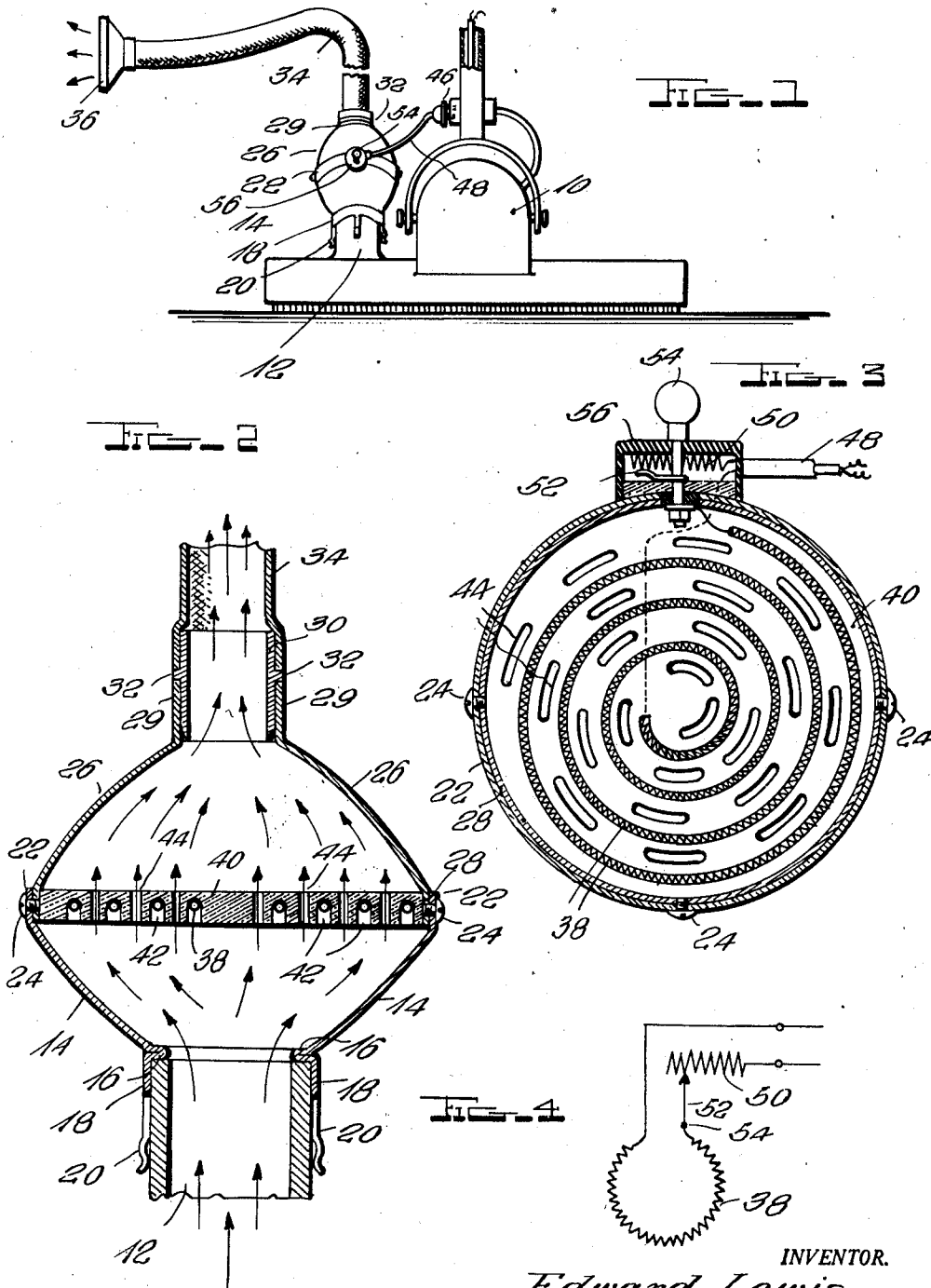
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ELECTRIC HAIR DRIER

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ELECTRIC HAIR DRIER

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2 Claims. (Cl. 219—39)

My invention relates to electric hair driers, and more particularly to a drier of this character which is adapted to be used in conjunction with portable, domestic vacuum cleaners of the general type provided with a motor driven blower drawing air through a mouth piece and discharging it through a tube into a removable bag.

The general object of my invention is to provide an electric heater of the character described which may readily and quickly be attached to and detached from the tube to which the removable bag of the cleaner is normally attached.

A further object of my invention is to provide a heater of this character in which the degree of heat of the heating element may be regulated, thereby controlling the heat of the blown air.

A still further object of my invention is to provide a heater of this character wherein the diameter of the heating chamber is considerably greater than the air inlet and discharge tubes, thus creating a Venturi structure, which insures a more thorough heating of the air and which accelerates the rate of discharge of the heated air through the discharge tube.

A still further object of my invention is to provide a heater of the character described which is strong and sturdy, which can readily be assembled and as readily dis-assembled, which is economical to manufacture and which will not easily get out of repair.

With these and other objects in view, as will hereinafter more fully appear and which will be more particularly pointed out in the appended claims, reference is now made to the accompanying drawing forming a part of this application, in which:

Fig. 1 is an elevational view, showing my improved heater applied to use with a conventional vacuum cleaner;

Fig. 2 is a vertical section view, on an enlarged scale, of my improved heater;

Fig. 3 is a horizontal section view thereof, also on an enlarged scale; and

Fig. 4 is a schematic view, showing the association of the conventional rheostat and the resistance element.

Referring now to the drawing, in which similar reference characters represent similar parts, the numeral 10 designates generally a conventional, portable vacuum cleaner, provided with the usual air discharge tube 12, to which the conventional, removable bag, not shown, is normally attached when the cleaner is being used as such. My improved heater comprises a heating chamber, consisting of a lower bowl-shaped member 14,

of suitable metal or the like, the bottom portion of which is provided with an annular crimped portion 16, skirt 18 and resilient fingers 20. The skirt 18 is adapted to fit over tube 12, through which air is blown to the heater, and the resilient fingers 20 hold the bowl-shaped member 14 securely in place on the tube 12, the end of which rests against the shoulder formed by the crimped portion 16. The upper edge or rim of lower bowl-shaped portion 14 is flattened to form an annular ring 22, which ring is provided with a plurality of circular threaded openings, adapted to receive threaded screws 24. The upper half of the heating chamber consists of an inverted bowl-shaped member 26, of the same material as the lower half. The bottom of member 26 terminates in an annular ring 28 adapted to fit inside of ring 22. Ring 28 is also provided with threaded, circular openings, corresponding to the opening in ring 22, by which the two halves of the chamber are held securely together by the screws 24. The upper end of member 26 terminates in a nipple 29, into which is fitted the lower end of a collar 30, provided with an annular shoulder 32, which fits against the end of nipple 29. One end of a conventional, flexible tube 34 fits over the upper end of collar 30 and rests against the other side of shoulder 32. The heated air is discharged through tube 34, to the other end of which is fitted a conventional nozzle 36.

The resistance element or heating coil 38, of chrome wire or the like, is supported in the heating chamber by an annular disc 40, of porcelain or other suitable non-conducting material, which disc is held securely in place by the screws 24. The disc 40 also serves as a partition to divide the heating chamber and is provided with a spiral groove 42, in which the heating coil is supported, and a plurality of elongated openings 44, which permits passage of the blown air from the lower to the upper half of the heating chamber, the air being heated as it passes through the openings, as well as before and after such passage by contact with the coil and supporting disc.

Electric current is supplied to the heating element or coil 38 from the supply which leads to the motor of the cleaner, by means of a conventional, detachable plug 46 and cable 48, the degree of current being controlled by a conventional rheostat coil 50, provided with the usual rheostat switch 52 and knob 54. The rheostat is housed by annular housing cap 56, of suitable insulating material, affixed to collar 22.

Applicant is aware that electric heating devices have heretofore been used in conjunction

with vacuum cleaners, but none of the devices of the prior art, as far as applicant is aware, possess the advantages of the instant invention, wherein an enlarged heating chamber is provided, which serves to more thoroughly heat the air. Further, this enlarged heating chamber, being fed with air from a comparatively smaller tube, and discharging into a similar comparatively small tube, serves as a venturi and accelerates the velocity of the discharged heated air.

The foregoing features, and the novel means for attaching the heater, whereby the same may be very readily attached and detached, no screws, bolts, etc., being necessary, are considered to be distinct improvements in the art.

While I have illustrated and described the invention in some detail, it is to be understood that the invention is not to be limited to such details, but only by the spirit of the invention and the scope of the appended claims.

I claim:

1. A heater of the character described comprising a cylindrical tube, a bulbous heating

chamber resiliently and detachably secured to said tube, a cylindrical, disk-like partition of insulating material detachably secured transversely of the heating chamber, a spiral groove in one face of said partition, a spiral heating element carried by said groove, a plurality of elongated openings in the partition adjacent the convolutions of the spiral heating element, said openings constituting a venturi for accelerating the passage of air through said chamber.

2. A heater of the character described comprising a separable bulbous heating chamber detachably secured in an air inlet and outlet tube, a flat circular partition disk of insulating material detachably secured centrally and transversely of the said chamber, a spiral groove comprising a plurality of convolutions in one face of said disk, a heating element positioned in said groove, a plurality of openings in said disk, said openings constituting a venturi for accelerating the passage of air through said chamber.

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