

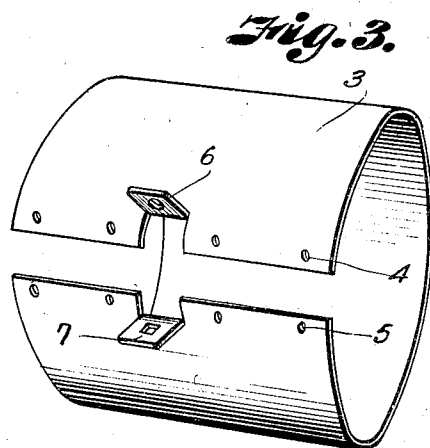
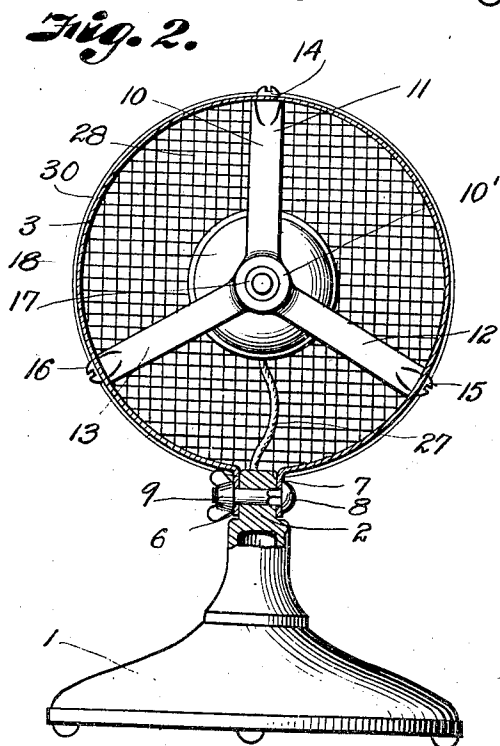
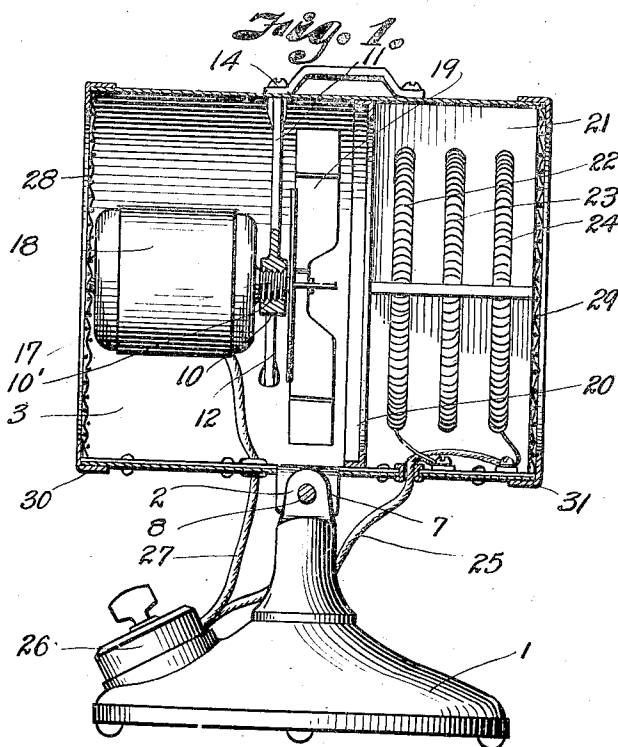
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S. M. CARMEAN ET AL

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ELECTRIC HEATER

Filed April 11, 1924



INVENTORS
Samuel M. Carmean
James H. Carmean
BY
Arthur L. Brown
ATTORNEY

UNITED STATES PATENT OFFICE.

SAMUEL M. CARMEAN AND JAMES H. CARMEAN, OF KANSAS CITY, MISSOURI.

ELECTRIC HEATER.

Application filed April 11, 1924. Serial No. 705,773.

To all whom it may concern:

Be it known that we, SAMUEL M. CARMEAN and JAMES H. CARMEAN, citizens of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Electric Heaters; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to electric heaters in which a resistance wire or similar element furnishes the heat when the electric current is passed through it and in which an air impeller is utilized for flowing air over the heating element or elements and directing it into the room or atmosphere to be heated.

The generic principles involved have already been patented by us in numerous prior patents, but this invention has to do more particularly with a novel inexpensive adaptation of the invention in the form of a cheap assembly. The invention therefore contemplates a novel form of casing for the impeller and the heating element together with a base to support it, and means for assembling the impeller and the heating element in the casing.

In the drawings,

Fig. 1 is a vertical, longitudinal, sectional view through a casing showing the heating elements and the air impeller installed, the casing being supported upon a base.

Fig. 2 is an end view of the heater, part of the base being shown in section, and

Fig. 3 is a perspective view of the casing sheet with its continuous edges spaced apart.

Referring now to the drawings by numerals of reference—

1 designates a base of appropriate construction having an upstanding lug 2 to which the casing 3 is secured. The casing may consist of a sheet. The sheet is bent into cylindrical form and its edges are riveted by passing rivets through openings 4 and

5. Intermediate the ends of the sheet are two struck out clamping fingers 6 and 7 which embrace opposite sides of the lug 2, there being a bolt 8 for fastening the fingers 6 and 7 to the lug 2, the bolt 6 being tightened by a wing nut 9. Within the cylinder 3 is a spider 10 preferably formed with three arms 11, 12 and 13, the ends of which abut against the inner surface of the cylindrical casing, the ends being fastened in place by screws 14, 15 and 16. The spider is formed with a threaded hub 10' into which is fastened the threaded portion 17 of a motor 18 on the drive shaft of which is an impeller or fan 19. In front of the impeller or fan is a ring 20 to serve as a stop for the heating element which may consist of a winged member 21 having heating coils 22, 23, and 24 passing through them, the coils being energized from a conductor 25 controlled by a switch 26, the switch also controlling current to the conductor 27 which controls the motor 18.

The base 1 may be cast of appropriate metal, the casing 3 may be formed of sheet metal and fastened on to the lug 2 as above described. The spider may be of rough casting fastened in the casing and a motor casing devoid of finish may be screwed into the hub. The blades of the impeller may not be burnished. The heating elements may be introduced from the front end of the casing against the ring and the ends of the casing may be closed by screens 28 and 29, held in place by the flanged rings 30 and 31. The casing 3 may be painted or otherwise finished as may also the base.

It will be apparent that the device may be constructed and assembled in a very inexpensive manner so that the production cost will be materially reduced below that necessary where all of the parts must have finished surfaces and this with the assembly is really the important part of our invention.

What we claim and desire to secure by Letters-Patent is:

An electric heater consisting of a base having a lug, a casing formed of sheet metal and having struck out portions lying on opposite sides of the lug, means for fastening the lug and struck out portions together so

that the casing will be supported upon the base, a spider within the casing, the outer ends of the arms of which are fastened thereto, a motor secured to the hub of the spider, a fan on the motor shaft, a stop ring in front of the fan carried by the casing, a heating element within the casing bearing

against the stop ring and screens on the respective ends of the casing.

In testimony whereof we affix our signatures.

SAMUEL M. CARMEAN.
JAMES H. CARMEAN.