No. 896,554. PATENTED AUG. 18, 1908.

A. I. D. KYLE.

HEATER.

APPLICATION FILED APR. 14, 1908

Fig. 1.

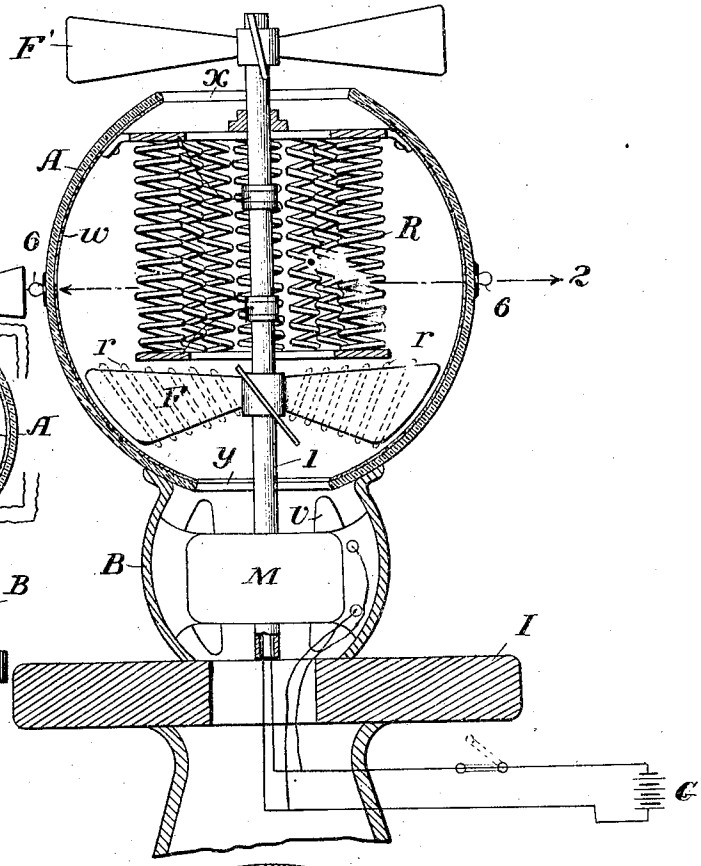


Fig. 3.

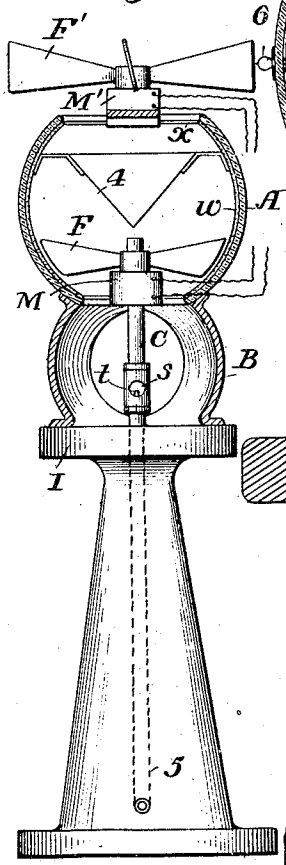
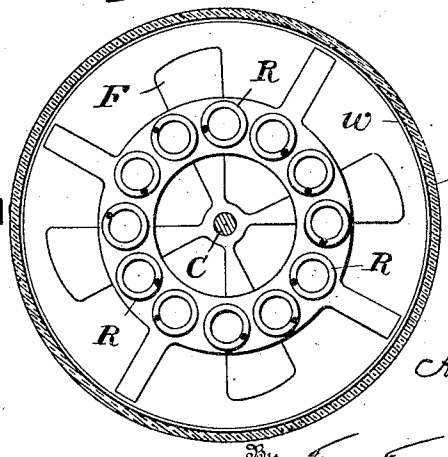


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

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HEATER.

No. 896,554. Specification of Letters Patent. Patented Aug. 18, 1908.

Application filed April 14, 1908. Serial No. 426,984.

To all whom it may concern:

Be it known that I, ANNA I. D. KYLE, citizen of the United States, and residing at Aberdeen, South Dakota, have invented certain new and useful Improvements in Heaters, of which the following is a specification.

This invention relates to apparatus for heating air, and said apparatus consists of a hollow casing provided with an internal heater and with means for directing air currents over the heater and from the casing, as fully set forth hereinafter and as illustrated in the accompanying drawing, in which:

Figure 1 is a sectional elevation of an apparatus embodying my invention; Fig. 2 a sectional plan on the line 2—2 Fig. 1; Fig. 3 is a sectional elevation illustrating a modification.

The apparatus comprises a casing A, which is preferably in the form of a hollow sphere, but which may be of any suitable shape and dimensions, and of metal or vitreous or other material, and with an upper opening x, and lower opening y.

Preferably the casing or sphere A, is mounted upon a spherical hollow support B, with air openings v, and within the support B is supported a motor M which is in circuit with a suitable generator G, and whereby a rotary motion is imparted to a shaft 1, which extends into or through the casing.

Within the casing is a suitable heater which is preferably in the form of resistance coils R, which are also in circuit with the generator and which are heated by the current, and one or more fans F, F′ are arranged so as to drive a current of air across the heater and outward through the upper opening.

As the air passes in contact with the heated surfaces it is heated and then expelled into the room and, as in some cases it is desirable not to heat the casing to any great extent, the latter may be provided with an interior lining w, of any suitable material which is a non-conductor of heat.

The fan F is arranged below the heater so as to drive the air against the heater and across or through the same, while the upper fan F′, when employed, serves to discharge the heated air into the room and disseminate it more rapidly and to a greater extent than if the upper fan was not employed.

The fans may be driven by independent motors, as, for instance, shown in Fig. 3, where the lower motor M drives the lower fan and an upper independent motor M′ drives the upper fan. In this case the heater is in the form of an inverted hollow cone 4, arranged above a Bunsen burner C, the latter consisting of a tube to which air is admitted at the bottom through side openings s, and a jet of gas is directed centrally upward from a nozzle t, at the upper end of a gas pipe 5. The flame from the Bunsen is projected against the apex of the cone and is distributed over the face of the latter, while the fan F drives the air, together with the products of combustion, against the cone.

The sphere or casing A may be, if desired, of an ornamental character so that, suitably supported upon a base I, it may be placed upon a table or elsewhere and it may also serve as a support for electric lights 6.

The fans may be heated by winding resistance coils r about the same as shown in dotted lines, thereby making them parts of the heater.

Without limiting myself to the construction and arrangement shown, I claim:

1. The combination with a hollow casing having upper and lower openings and a heating means therein, of a fan arranged to drive a current of air upwardly through said casing, and a second fan arranged outside of said casing above the upper opening thereof to drive heated air escaping from said opening radially outward.

2. The combination of a hollow sphere having openings at the top and bottom, wire coils arranged within the sphere, means for supplying an electric current to said coils, a shaft extending vertically through the sphere and said openings, means for rotating the shaft, a propelling fan mounted on the shaft within the casing and below said coils and adapted to draw air through the lower opening and force the same over said coils, and a dispersing fan mounted on the shaft above and outside of the sphere.

In testimony whereof I affix my signature in presence of two witnesses.

ANNA I. D. KYLE.

Witnesses:
CHARLES E. FOSTER,
ARTHUR L. BRYANT.