

Oct. 8, 1929.

L. A. PANKRATZ ET AL
PORTABLE ELECTRIC HEATER

1,730,982

Filed July 9, 1928

Fig. 1.

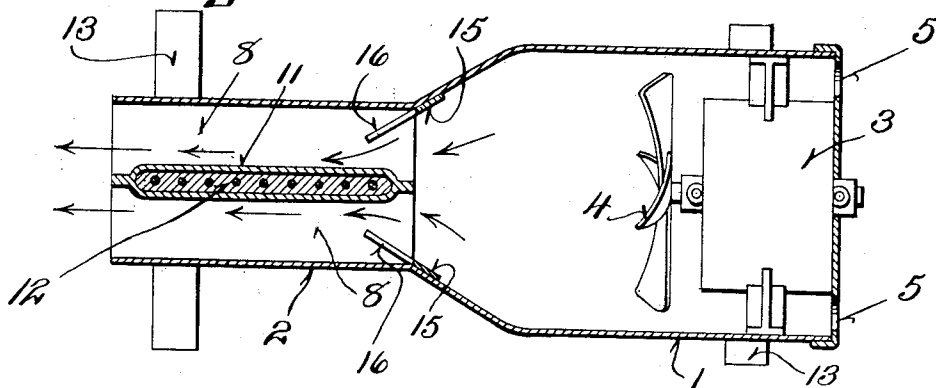


Fig. 2.

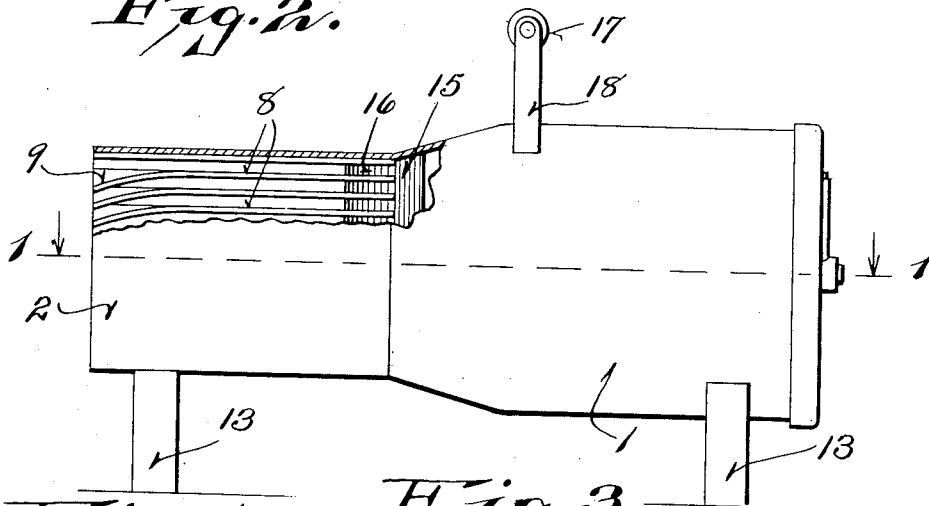


Fig. 4.

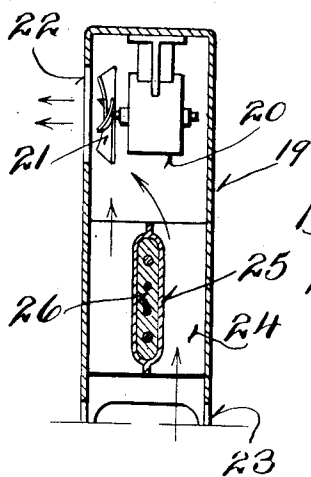
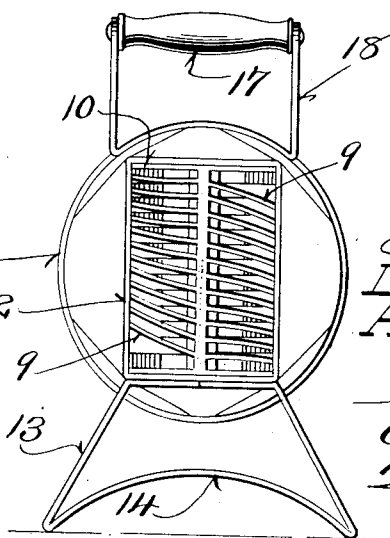


Fig. 3.



Inventors
L. A. Pankratz
A. C. Pankratz
By
W. H. Pankratz
Attorney

UNITED STATES PATENT OFFICE

LEON A. PANKRATZ AND ALEXANDER C. PANKRATZ, OF WAUKESHA, WISCONSIN, ASSIGNORS TO QUALITY ALUMINUM CASTING CO., OF WAUKESHA, WISCONSIN

PORTABLE ELECTRIC HEATER

Application filed July 9, 1928. Serial No. 291,391.

This invention relates to a portable electric heater.

Objects of this invention are to provide a novel form of electric heater for a room or for a similar purpose, which is adapted to quickly heat the air and to diffuse the heated air and cause an adequate circulation of air past the heater and into the room, so that a thorough mixing of the outgoing air with the air in the room is obtained, and the heat is thus uniformly distributed.

Further objects are to provide a novel form of electric heater in which the heating unit is carried in the hollow core of a metal member provided with fins extending laterally from and integral with the hollow core, so that the heat is conducted outwardly by the fins and the fins thus present a large expanse of surface to the air which is forced thereover by means of a fan.

Further objects are to provide a self-contained, unitary, portable electric heater which may be constructed in a simple manner with all of the parts enclosed, and so arranged that there is no danger of injury to any one coming in contact with the portable unit.

Embodiments of the invention are shown in the accompanying drawings in which:

Figure 1 is a horizontal sectional view through the device corresponding to a section on the line 1—1 of Figure 2;

Figure 2 is a side elevation with parts broken away;

Figure 3 is a front view of the device;

Figure 4 is a vertical sectional view of a modified form.

Referring to the drawings, it will be seen that the device comprises a casing having an enlarged portion 1 and a more restricted portion 2. The portion 1 may be cylindrical, if desired, and may converge to the rectangular portion 2. The portion 1 houses an electric motor 3 provided with a fan 4. Preferably, the back of the casing is provided with a plurality of apertures 5 through which air may enter. The motor is supported within the casing in any suitable manner.

Within the rectangular portion 2, a series of guiding vanes or baffle plates 8 are positioned. These baffle plates divide the outgoing

air into a plurality of streams and are provided on one side with downturned lips or ends 9, and on the other side with upturned lips or ends 10. These baffle plates are cast integrally with a central hollow core or body portion 11 which is open from its top to bottom, to provide an opening for the electric heating element 12.

The member forming the core 11 and the integral plates 8 is cast from metal, preferably aluminum, to secure the maximum lightness for the structure. These fins readily conduct the heat outwardly from the central core 11, which is heated by the electric heater, and thus the fins provide an extensive surface across which the air sweeps.

The air is caused to impinge upon the central core by means of fingers 16 carried by the guiding plates 15. In other words, these guiding plates 15 mounted at opposite sides of the device, as shown in Figure 1, are slotted, so that the fingers 16 are thus formed.

The air sweeps inwardly due to the action of the fan and follows along the paths indicated by the arrows in Figure 1. The upturned and downturned outer ends of the vanes or baffles cause the air to impinge upon these portions and also cause a slight whirling motion of the air which aids in its diffusion throughout the air in the room.

The device is supported by means of strap iron legs 13 joined by the arched bracing member 14, as shown in Figure 3. Preferably, a pair of upstanding arms 18 are provided between which a handle 17 is positioned, so that the device may be freely carried from one point to another.

In the modified form shown in Figure 4, substantially the same inventive idea is disclosed. However, the casing 19 is a vertical casing within which the electric motor 20 and fan 21 are positioned. However, the fan is positioned directly opposite an aperture 22 in the upper portion of one of the side walls. The bottom of the casing 19 is open. It is supported by means of legs 23, so that it is spaced from the floor and allows cold air to enter its lower portion and to be sucked upwardly into the casing. This air

passes between the vanes 24 which are integral with the hollow central core 25, a heating unit 26 being positioned within the core. The construction in this respect is similar to that previously described.

It will be seen that a very simple type of apparatus has been provided by this invention which will quickly heat and diffuse the air in a room and which is self-contained and substantially fool-proof.

Although the invention has been described in considerable detail, such description is intended as illustrative rather than limiting as the invention may be variously embodied and as the scope of such invention is to be determined as claimed.

We claim:

1. A device of the class described, legs supporting said casing in spaced relation to a floor, a plurality of metal baffle plates arranged longitudinally of said casing, a central hollow core formed integrally with said baffle plates for receiving a heating unit and guiding fingers for directing air towards said central core, said guiding finger being positioned between successive baffle plates.

2. In a device of the class described, including a casing, a plurality of baffle plates projecting longitudinally of said casing, and having an integral central hollow core for receiving a hollow core for receiving a heating unit, the outer ends of said baffle plates being extended in opposite directions upon opposite sides of the core.

3. A device of the class described, including a casing, a plurality of baffle plates projecting longitudinally of the casing, and having an integral central core for receiving a heating unit, said baffle plates being positioned upon opposite sides of the core with the outer ends of the baffle plates on one side of the core being downturned and the baffle plates on the other side of the core being upturned.

In testimony that we claim the foregoing we have hereunto set our hands at Waukesha, in the county of Waukesha, and State of Wisconsin.

ALEXANDER C. PANKRÄTZ.
LEON A. PANKRATZ.