

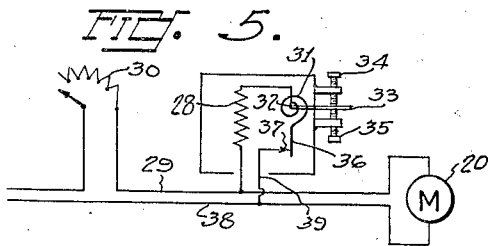
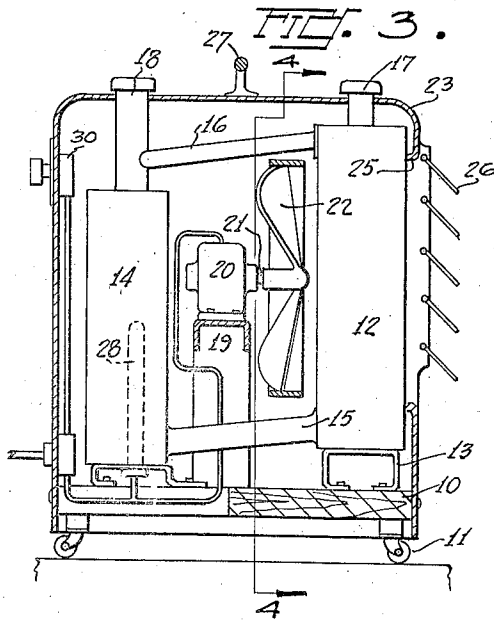
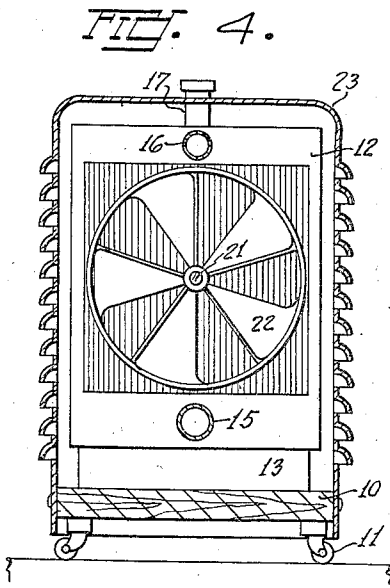
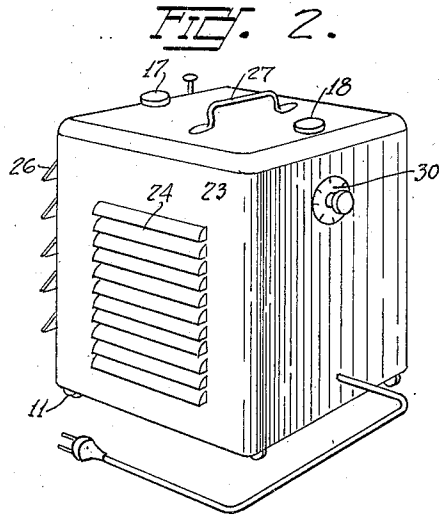
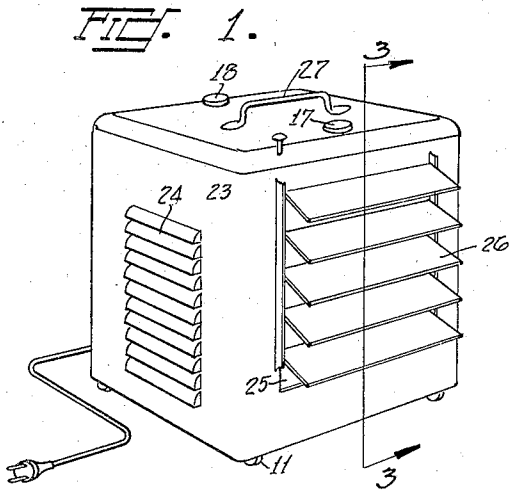
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2,151,140

HEATING UNIT

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2,151,140

HEATING UNIT

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1 Claim. (Cl. 219—39)

This invention relates generally to heat transfer devices, and particularly to a heating unit.

The main object of this invention is the construction of a unitary portable heating unit by means of which large quantities of air may be warmed at a relatively lower temperature than is ordinarily practiced.

The second object is the construction of a heating unit having an exceedingly flexible control for the heat energy delivered thereto and the rate of heat extraction therefrom.

The third object is to so construct the device that it may be permitted to run indefinitely without danger of overheating the device itself and at the same time maintain a reasonable warm temperature within the room.

The fourth object is to construct a device of the class described in which the flow of current to the heating element and to the circulating fan is adjustably governed by means of a single control and in which the operation of the heating element is thermostatically controlled.

The fifth object is to construct a portable hot water heater having a directional air discharge. I accomplish these and other objects in the manner set forth in the following specification as illustrated in the accompanying drawing, in which:

Fig. 1 is a perspective view of the device from the front or air discharge side thereof.

Fig. 2 is a perspective view of the rear of the device.

Fig. 3 is a section taken along the line 3—3 in Fig. 1.

Fig. 4 is a section taken along the line 4—4 in Fig. 3.

Fig. 5 is a diagram showing the control system.

Similar numerals refer to similar parts throughout the several views.

Referring in detail to the drawing, there is shown a base 10, preferably mounted on casters 11 or gliders. On the base 10 is mounted the radiator 12 which rests upon the support 13. The radiator 12 is connected to a supply tank 14 by means of the return pipe 15 and the upper water pipe 16.

Filler pipes 17 and 18 are provided for the radiator 12 and the supply tank 14. Between the radiator 12 and the tank 14 and mounted on the base 10 is a standard 19 upon which is mounted a motor 20 on whose shaft 21 is mounted a fan 22. A casing 23 encloses the radiator 12 and tank 14 and is provided with the lateral louvers 24 and the outlet opening 25 which has mounted therein a plurality of shutters 26 by

means of which the air currents from the fan 22 passing through the radiator 12 may be deflected in any desired vertical direction.

It is desirable to provide a handle 27 on the top of the casing 23 for convenience in moving the heating unit.

Within the supply tank 14 is disposed an electric heating element 28, one side of which is connected to the power wire 29 through the rheostat 30. The heating element 28 is connected to the thermostatic element 31 whose post 32 is provided with a lever 33 which is held between the adjusting screws 34 and 35, the purpose of which is merely to adjust the position of the arm 36 with relation to the contact point 37 which is connected with the power wire 38 by means of a wire 39.

It can be seen that when the rheostat 30 is turned to permit current to flow through the wires 29 and 38, it will operate the motor 20 at a speed proportional to the position of the rheostat 30 and if the arm 36 is in engagement with the contact 37, then a proportional amount of current will flow through the heating element 28 and warm the water within the tank 14. The warmed water will rise and pass through the pipe 16 into the radiator 12.

It can be seen that if, for example, it is desired to use the unit as a cooling fan only, then the screws 34 and 35 are adjusted to hold the circuit of the element 28 open, that is, the fan 22 will be operated but no heat will be generated within the tank 14.

If, however, heat is desired, the element 31 is adjusted with relation to the contact 37 so that current will flow through the element 28 until the desired temperature is reached at which time the thermostat will operate to stop the flow of current to the heating element.

It can thus be seen that a wide range of heating requirements can be easily met since the output may vary from a large volume of cold air to a large volume of warm air.

I claim:

A heating unit of the class described characterized by having a rectangular base, a water cored radiator disposed along one side of said base, an upright water storage tank disposed along the opposite side of said base and connected to said radiator, means for heating the water in said tank, a fan disposed between said radiator and tank, a louver casing mounted on said base surrounding said radiator fan and tank and a handle on the top of said case between said radiator and tank.

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