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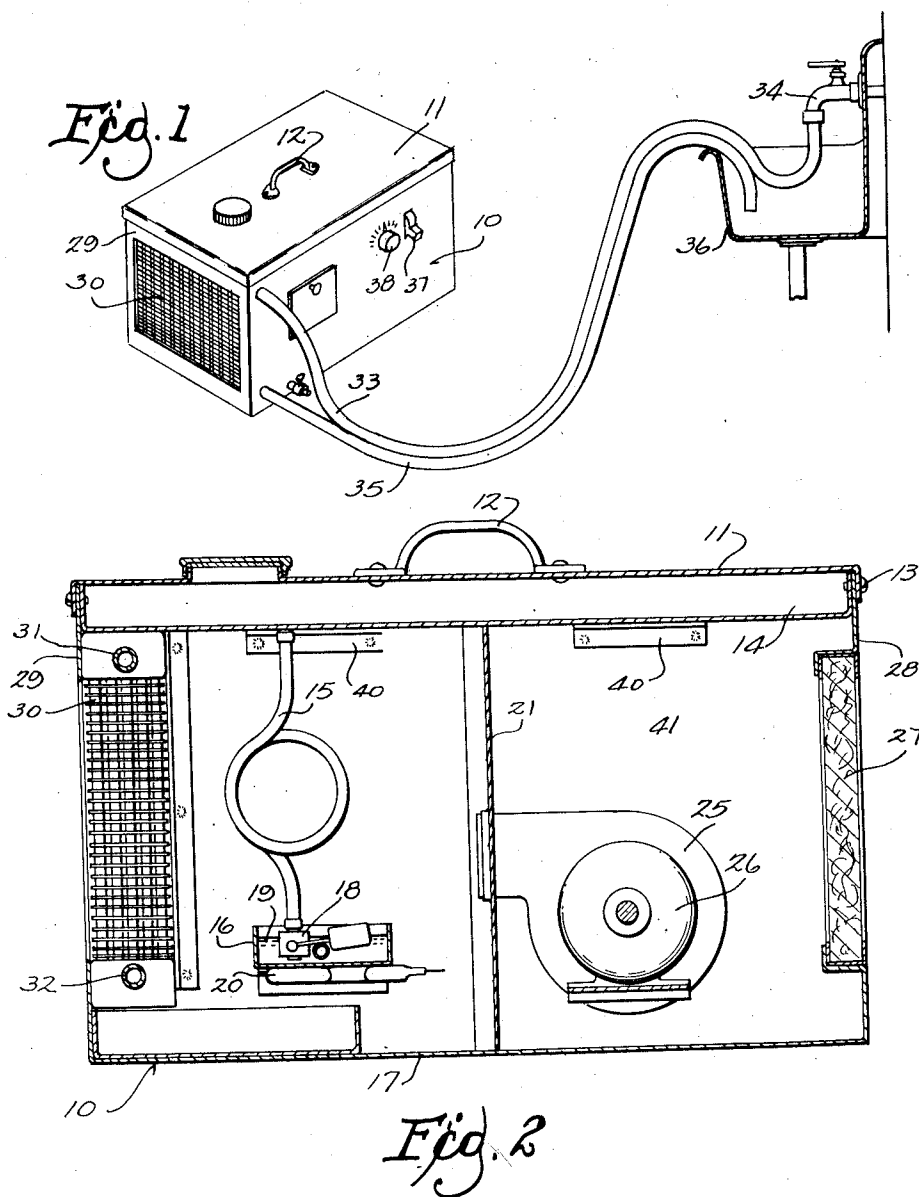
C. J. KALMADGE

2,585,132

AIR CONDITIONER AND HUMIDIFIER

Filed Sept. 29, 1949

2 SHEETS—SHEET 1



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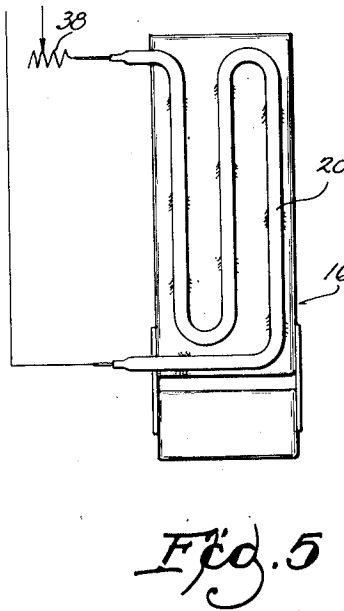
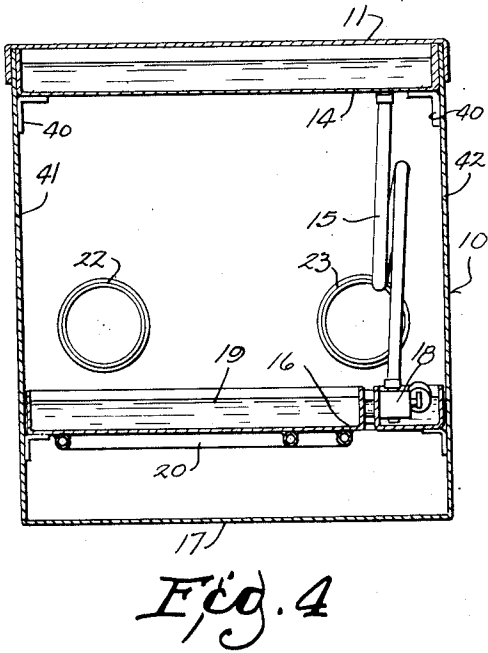
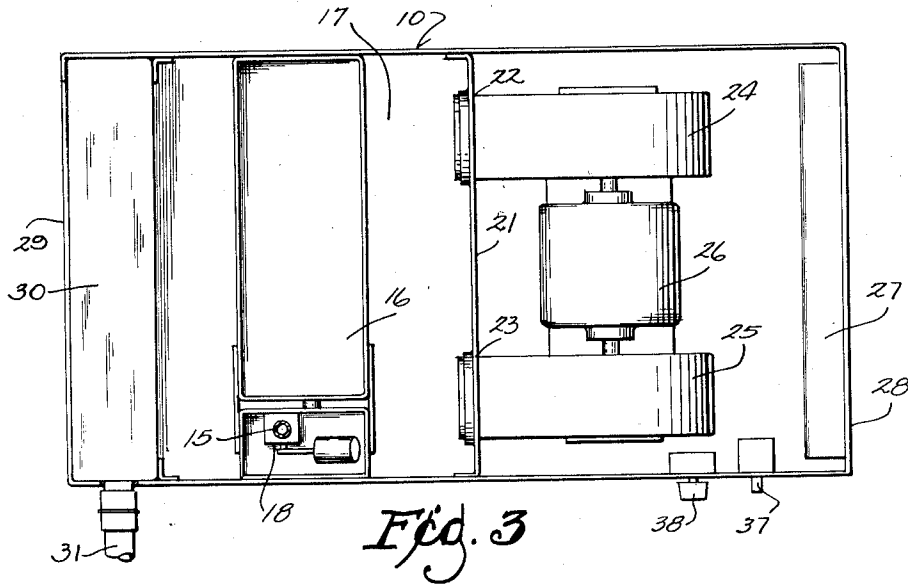
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2 SHEETS--SHEET 2



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UNITED STATES PATENT OFFICE

2,585,132

AIR CONDITIONER AND HUMIDIFIER

Charles J. Kalmadge, Milwaukee, Wis.

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3 Claims. (Cl. 219-39)

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This invention relates to improvements in portable air conditioners, and more particularly to a novel air conditioner and humidifier.

An object of the invention is to provide a compact device of the type having means for conditioning the air and, at the same time, functioning as a humidifier and serving other purposes.

Another object of the invention is to provide a device of the type which will be economical of manufacture, easily portable, and highly efficient in use.

Another object of the invention is to provide a device having humidifying means interposed in a filtered air stream.

Other and further objects of the invention will appear as the description proceeds, reference being had to the accompanying drawing, in which:

Fig. 1 is a view in perspective showing an air conditioner embodying the invention properly coupled up with the washer system for operation.

Fig. 2 is a vertical sectional view of the same.

Fig. 3 is a plan view of the device with the cover removed.

Fig. 4 is a vertical sectional view of the device.

Fig. 5 is an inverted plan view of the auxiliary tank showing the heating element subjoined thereto.

Referring more particularly to the drawings, the numeral 10 refers to a casing, provided with a cover 11 with a carrying handle 12. Threaded means 13 are provided for normally securing the cover 11 to said casing 10. A horizontal tray tank 14 is held within the top of the casing 10. A tube 15 communicates with the tray tank 14 and an auxiliary tray 16 spaced from the bottom 17 of the casing 10. An automatic float valve 18 maintains the water 19 at the proper level within the tray 16. A heating element 20 is disposed horizontally immediately under the auxiliary tray 16. The casing 10 is provided with a central transverse partition 21 apertured at 22 and 23 to accommodate a pair of blowers 24 and 25 driven by the electric motor 26. Air is admitted into the casing 10 through a filter 27 in a wall 28 of the casing 10. The opposite wall 29 is fitted with a water radiator 30 having an inlet port 31 and the outlet port 32 adapted for connection with an intake tube 33 to be connected with a conventional water faucet 34 and the drain tube 35 adapted to lead into a sink or the like 36. A pair of switches 37 and 38 are provided to operate the motor 26 and the heating element 20, respectively. The tray tank 14 is supported by a plurality of brackets 40 secured to the side walls 41 and 42 of the casing 10.

In use, the intake tube 33 is connected with a cold water faucet 34 and the drain tube 35 is led into a sink 36 or other appropriate drain. The switch 37 is turned on to actuate the blowers 24 and 25, whereupon air will be drawn through the filter 27 and forced through the radiator 30, thus cooling the same by action of the cold water, or the intake tube 33 may be connected to a hot water faucet for the desired effect. If it is de-

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sired to raise the humidity in a room in which the device is placed, the rheostat switch 38 is turned on to energize the heating element 20 and regulate the degree of heat, thus heating and evaporating the water 19 in the auxiliary tank 16. As the water is evaporated, the float valve 18 will admit more water through the tube 15 from the tray tank 14. The cover 11 may be removed by release of the threaded means 13 in order to add more water to the main tank 14.

It will be understood that the device is capable of many modifications in structure and design, without departing from the spirit of the invention, within the scope of the appended claims.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent of the United States, is:

1. A portable air conditioner and humidifier including a casing, a radiator for connection with a water supply, a main tank for water, an auxiliary tank at a lower level for a relatively smaller quantity of water, means for conducting water from the upper to the lower tank, means for vaporizing the contents of the lower tank within the casing, and blower means for forcing air through said casing and said radiator.

2. A portable air conditioner and humidifier including a casing, a radiator in said casing for connection with a water supply, an upper main tank for water, an auxiliary tank at a lower level for a relatively smaller quantity of water, means for conducting water from the upper to the lower tank, means for vaporizing the contents of the lower tank within the casing, means for regulating the water level in said lower tank, an electrical heating element for vaporizing the contents of the lower tank, and blower means for forcing air through said casing and said radiator.

3. A portable air conditioner and humidifier including a casing, a radiator in said casing for connection with a water supply, an upper main tank for water, an auxiliary tank at a lower level for a relatively smaller quantity of water, means for conducting the water from the upper to the lower tank, an electrical heating element under said lower tank for vaporizing the contents thereof within the casing, a float valve for regulating the water level in said lower tank, and blower means for forcing air through said casing and said radiator.

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