

April 10, 1951

W. E. WIESENTHAL
AIR CONDITIONING APPARATUS

2,548,694

Filed Oct. 28, 1947

2 Sheets-Sheet 1

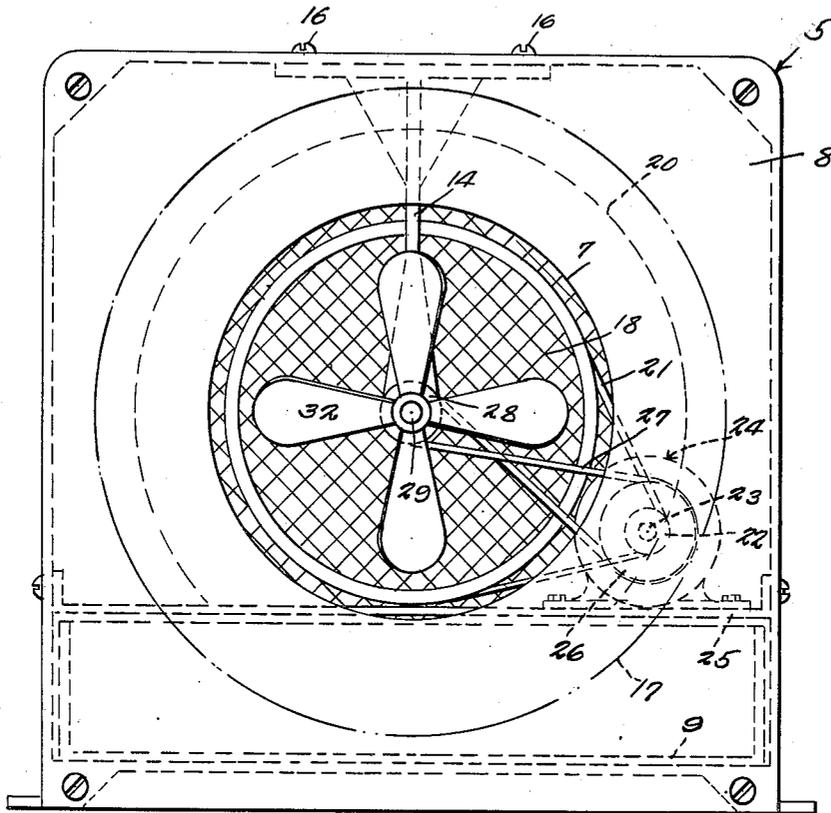


Fig. 1.

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Fig. 2.

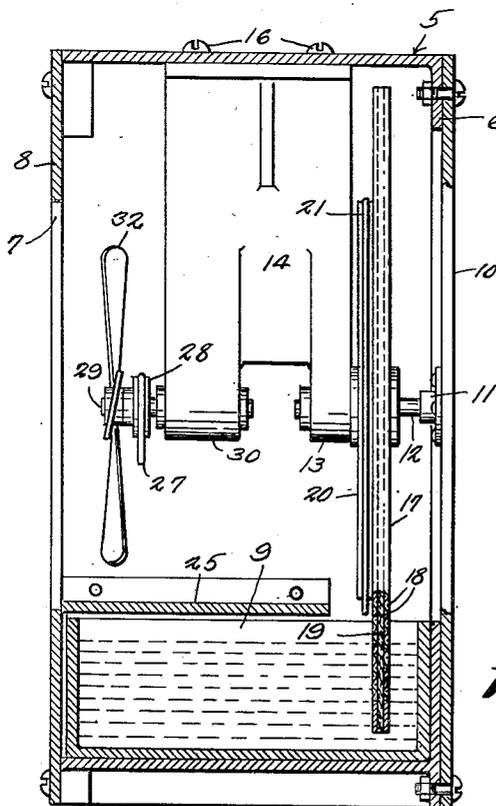
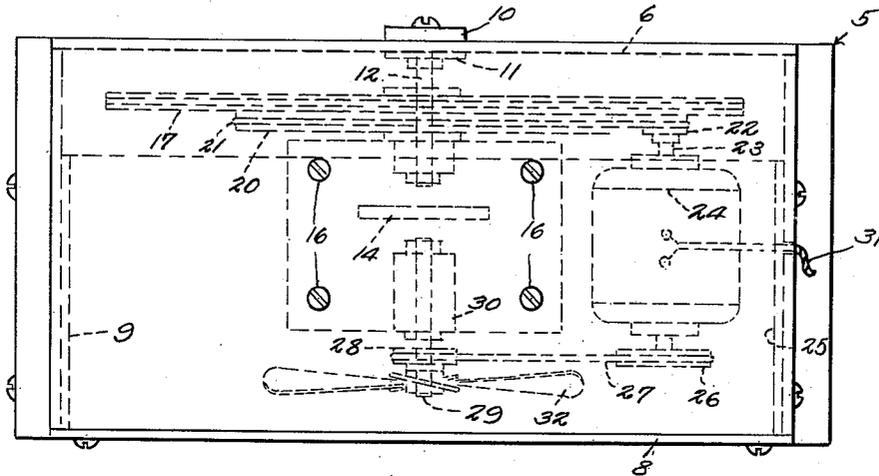


Fig. 3.

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UNITED STATES PATENT OFFICE

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AIR-CONDITIONING APPARATUS

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Application October 28, 1947, Serial No. 782,569

1 Claim. (Cl. 261—92)

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This invention relates to an air conditioning apparatus, the primary object of the invention being to provide a portable air conditioning apparatus which may be positioned in a room, the apparatus operating to humidify and condition the air by means of a fan forcing moisture-laden air into the room.

An important object of the invention is to provide an apparatus of this character wherein a single motor is used in rotating an absorbent member within a housing, and tank to pick up moisture, the absorbent member being constructed of foraminous material whereby the air may be drawn therethrough and distributed into the room area, by a suction fan operated by the motor within the housing.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts, herein-after more fully described and pointed out in the claim, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

Referring to the drawing

Figure 1 is a front elevational view of an air conditioning apparatus, constructed in accordance with the invention.

Fig. 2 is a plan view thereof.

Fig. 3 is a vertical sectional view through the apparatus.

Referring to the drawing in detail, the apparatus comprises a box-like housing indicated generally by the reference character 5, the housing having an opening in the rear wall 6, and an opening 7 in the front wall 8.

Mounted within the housing, is the open tank 9 in which the water used in the apparatus, is contained.

The reference character 10 indicates a vertical bar providing a support for the bearing 11 in which one end of the shaft 12 operates.

The opposite end of the shaft 12 operates in the bearing 13 forming a part of the bracket 14 that is secured to the inner surface of the top of the housing, as by means of the bolts 16.

Secured to the shaft 12 to rotate therewith, is the disc 17 which is of a diameter to extend beyond the edge of the opening in the rear wall 6, in spaced relation therewith, as shown by Fig. 3 of the drawings.

This disc 17 is formed of spaced foraminous members 18 between which absorbent material indicated at 19 is contained, the disc 17 being shown as operating in the open tank 9, to pick up water which is absorbed by the absorbent material, and to carry the water upwardly into the path of travel of air sucked through the housing.

Secured to the disc 17, is a pulley 20 over which the belt 21 operates, the belt 21 also operating over the pulley 22 secured to one end of the motor shaft 23. The motor of which the shaft 23 forms

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a part, is indicated by the reference character 24, and is mounted on the shelf 25 secured within the housing.

On the opposite end of the motor shaft 23, is a substantially large pulley 26 over which the belt 27 operates, the belt 27 also operating over the pulley 28 that is secured to the suction fan shaft 29 that in turn operates in the bearing 30, forming a part of the bracket 14.

The reference character 31 indicates an electric wire that runs from the motor 24, the wire being supplied with the usual plug not shown, whereby the motor may be plugged into the usual house circuit for operating the motor.

Due to the size and arrangement of the pulleys, it will be obvious that the disc 17 will be rotated at a slow rate of speed, while the suction fan which is indicated by the reference character 32, will be rapidly rotated with the result that air will be sucked through the housing, and through the disc 17, where it will become laden with moisture. The air sucked through the housing will now be discharged into the room air through the opening 7 of the housing, with the result that the air in the room will be not only humidified, but conditioned.

Having thus described the invention, what is claimed is:

An air conditioning apparatus, comprising a housing having its front and rear sides open, a vertical bar secured at the rear of the housing, a bearing secured to said vertical bar, a bracket depending from the top of the housing, said bracket having front and rear bearings, the rear bearing aligning with the bearing secured to said bar, a shaft disposed in the aligned bearings, a foraminous disc and pulley secured on said shaft, a water tank supported within the bottom of the housing through which said foraminous disc operates absorbing water from the tank, a fan shaft mounted in the front bearing of the bracket, a fan and pulley secured to the fan shaft, a motor shelf mounted within the housing on which a motor is mounted, said motor including a motor shaft having its ends extended beyond the motor, pulleys secured to the ends of said motor shaft, and belts operating over the pulleys of the motor shaft, pulley on the fan shaft and pulley of the foraminous disc shaft, rotating the fan and foraminous disc.

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