Aug. 15, 1939. M. CRANDALL ET AL 2,169,942

AIR CONDITIONER

Filed Feb. 18, 1938

Fig. 1.

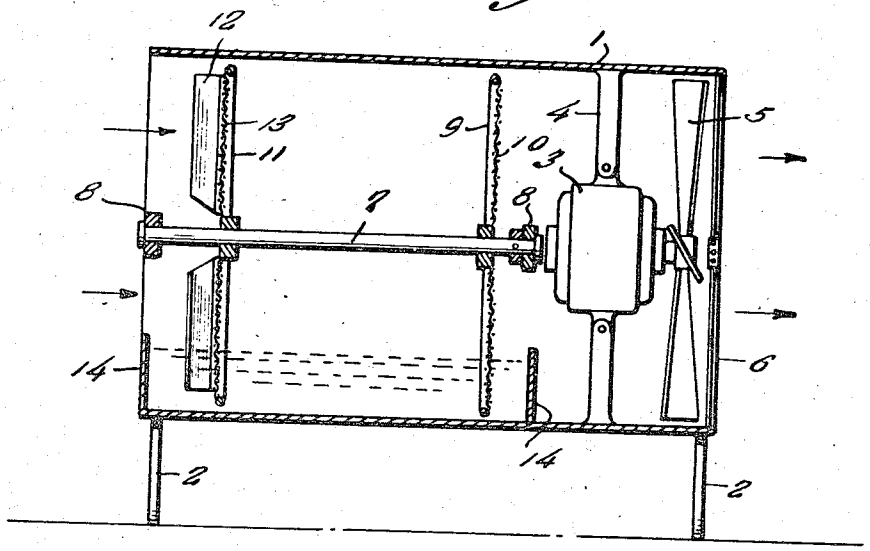


Fig. 2.

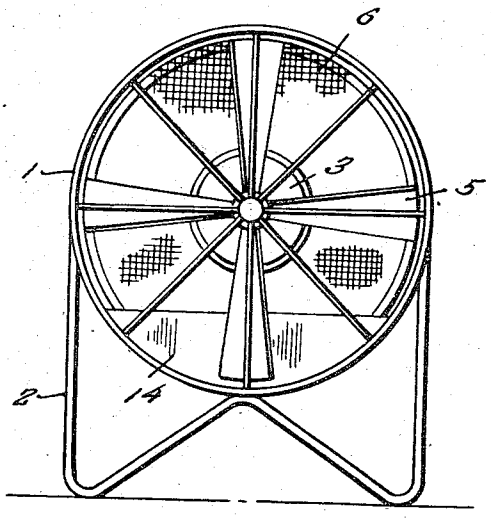
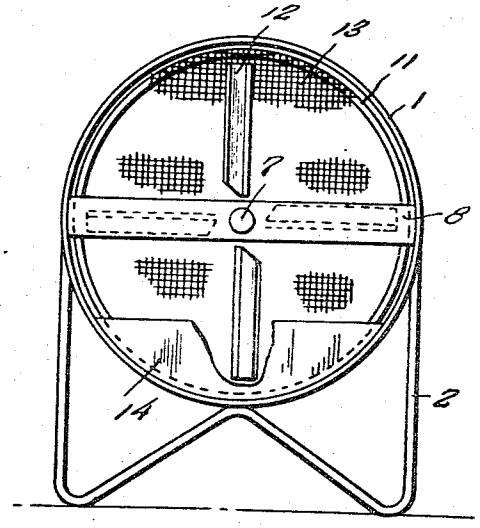


Fig. 3.



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AIR CONDITIONER

Max Crandall and Marsh Sanders,
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Application February 18, 1938, Serial No. 191,325

1 Claim. (Cl. 261—92)

This invention relates to air conditioning means, the general object of the invention being to provide inexpensive means for washing and cooling the air in a building by forcing air through a casing by a fan and causing the air passing through the casing to operate water lifting means, which causes the air to pass through the water so that the air is washed and cooled, the invention eliminating pumps and other expensive means for spraying the water through the air.

The invention also consists in certain other features of construction, combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawing and specifically pointed out in the appended claim.

In describing the invention in detail reference will be had to the accompanying drawing wherein like characters denote like or corresponding parts throughout the several views and in which:

Fig. 1 is a longitudinal sectional view through one form of the invention.

Fig. 2 is a view looking towards the fan end of the device.

Fig. 3 is a view looking towards the other end thereof.

Referring to Figs. 1, 2 and 3, the numeral 1 indicates an elongated casing supported in any suitable manner, such as by the legs 2. A motor 3 is centrally supported in the casing, adjacent one end thereof, by the means 4 and the blades of a fan 5 are attached to the shaft of the motor. A screen 6, preferably covers this end of the casing. A longitudinally extending shaft 7 is centrally supported in the casing, by the cross bars 8, the shaft extending from the motor to the other end of the casing. The shaft has attached thereto the disk 9, the major part of which is composed preferably of fabricated cloth or porous canvas, as shown at 10. The shaft also has attached thereto a disk 11 provided with the inclined blades 12 and this disk also has its major portion composed of porous material as shown at 13. This disk 11 is spaced from the first disk and is located adjacent the end of the casing remote from the fan. Partitions 14 extend upwardly from the bottom of the casing and form a water chamber, into which extend the two disks, so that the porous material of the two disks will be saturated by the water as the disks pass through the chamber.

Thus it will be seen that as the fan rotates it will draw air through the casing and this air acting against the blades 12 will cause the disk 11 to rotate and as said disk is attached to the shaft, said shaft and the other disk 9 will be rotated and as the porous material carried by the disks passes through the water, such material will be saturated with the water and thus the air passing through the material will be washed and cooled by the water in the material and by the water running down the material, as it is lifted thereby.

If desired, the blades may be shortened so they will not extend into the water and furthermore the fan can be made to push the air through the casing, instead of pulling it through the casing, as shown in the drawing.

Thus it will be seen that the invention provides an inexpensive air conditioning means which eliminates pumps and the like as the air forced through the casing by the fan rotates the water lifting means, which causes the water to wash and cool the air passing through the casing.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction, combination and arrangement of the several parts, provided such changes fall within the scope of the appended claim.

What we claim and desire to protect by Letters Patent is:

An air conditioner comprising a horizontally disposed cylindrical casing partially open at its inlet end and fully open at its exit end, a water chamber in the lower portion of the casing terminating short of the exit end thereof, cross bars secured within the casing transversely over the ends of the water chamber, a rotatable shaft mounted in the cross bars axially of the casing, open frames secured to the shaft adjacent its ends and extending into the water chamber, porous material carried by said open frames for taking up water from the water chamber during rotation thereof, radially disposed inclined blades secured to the inlet side of one of the frames adapted to extend into the water chamber and to be rotated by incursion of air into the casing, a motor in the casing beyond the water chamber and in axial alignment with the shaft, brackets supporting the motor from the casing, and a fan of approximately the interior diameter of the casing mounted on the outer end of the motor shaft with its blades extending beneath the level of the water within the water chamber when traversing the lower portion of the casing.

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