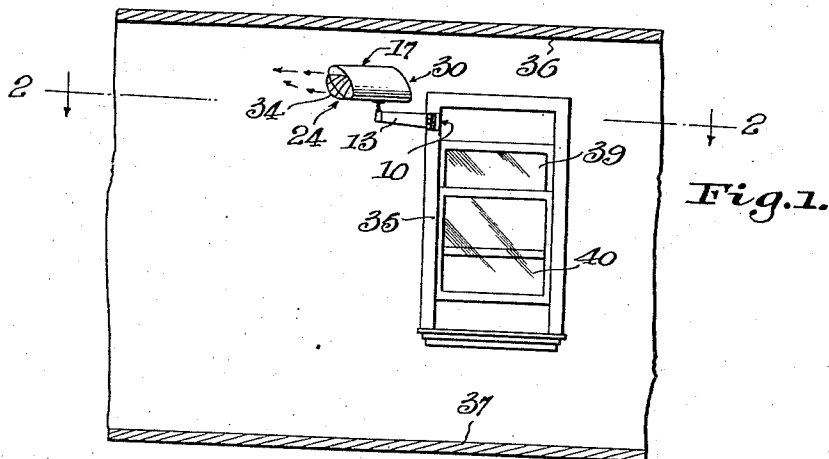
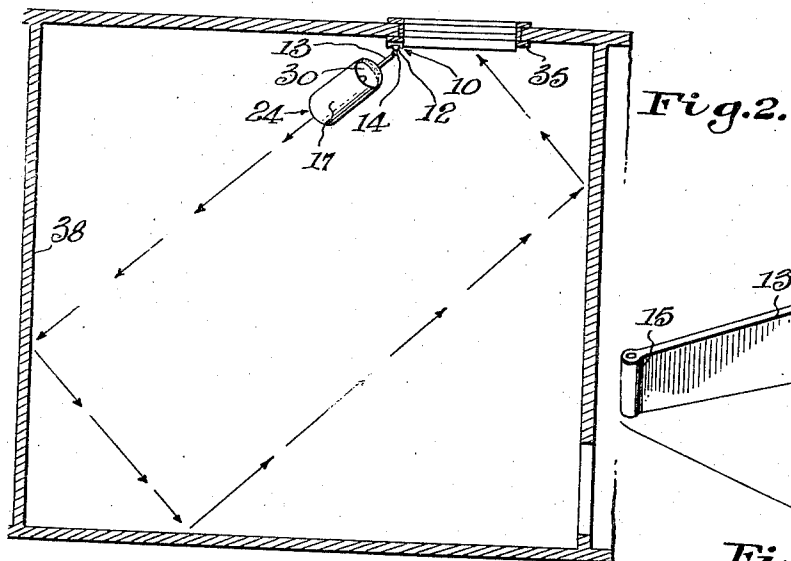
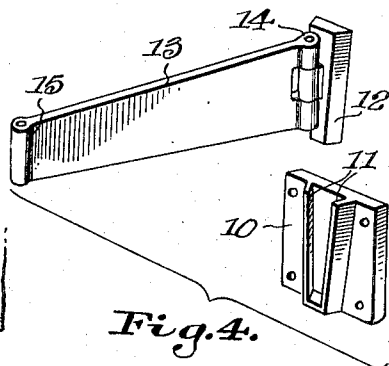
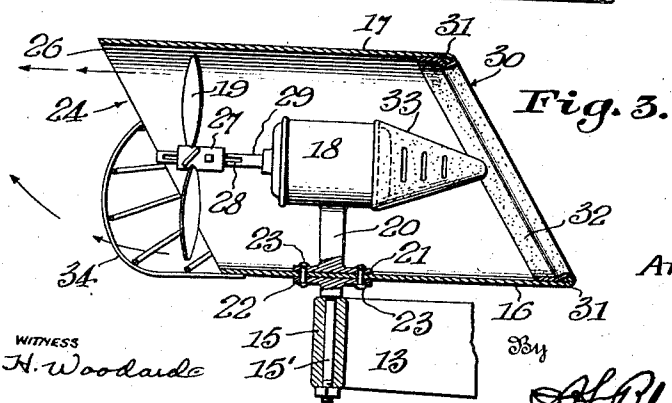


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A. E. GUTH
AIR CIRCULATING DEVICE
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Inventor

Arthur E. Guth

WITNESS
H. Woodard

A. B. Wilson & Co.
Attorneys

UNITED STATES PATENT OFFICE

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AIR CIRCULATING DEVICE

Arthur E. Guth, Bangor, Maine

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6 Claims. (Cl. 230—120)

The invention aims to provide a new and improved device for circulating the air in bedrooms and various other rooms, in such manner that summer air may be conditioned for complete comfort, without draft.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, description being accomplished by reference to the accompanying drawing.

Figure 1 is a vertical sectional view through a portion of a room showing the invention supported in an operative position therein.

Figure 2 is a horizontal sectional view on line 2—2 of Fig. 1.

Figure 3 is a longitudinal section partly in elevation.

Figure 4 is a disassembled perspective view showing the supporting bracket.

The drawing above briefly described illustrates a preferred form of construction and while that construction will be rather specifically explained, it is to be understood that within the scope of the invention as claimed, variations may be made.

I have shown a plate 10 for attachment to a wall or a window frame and forming part of a bracket for supporting the device in an operative position. One side of the plate 10 is provided with converging undercut flanges 11 which detachably hold a tapered block 12 against said plate, a horizontal arm 13 being hinged at 14 to said block for horizontal swinging to any desired position. The free end of the arm 13 is provided with a vertical bearing 15. This bearing receives a short stub shaft 15' which projects downwardly from the bottom 16 of a horizontal sleeve 17. Within this sleeve is a horizontal driving motor 18 for a rotary fan 19, said motor having a supporting pedestal 20. This pedestal is provided with a flange 21 resting on the bottom 16 of the sleeve 17, and the stub shaft 15' is provided with a similar flange 22 contacting with the lower side of said bottom. Rivets or other fasteners 23 pass through the two flanges 21 and 22 and through the bottom 16 to secure all of these parts in fixed relation with each other.

The sleeve 17 is of cylindrical form and its outlet end 24 is cut in an inclined plane which intersects the plane of rotation of the fan 19, said end 24 being so related with said fan that the upper portion 26 of the sleeve 17 overlies and extends beyond the fan but the lower portion 16 of said sleeve does not underlie said fan,

leaving the lower portion of the latter always operating in the free air in front of the sleeve. By this arrangement, the air leaving the upper portion of the sleeve 17 will be horizontally directed whereas that leaving the lower portion of said sleeve will be directed outwardly and upwardly. The proportion of horizontally and upwardly moving air currents may be varied by adjusting the fan 19 longitudinally of the sleeve 17, for which purpose the fan hub 27 is adjustably mounted at 28 on the motor shaft 29. The nearer the fan 19 is to the lower front portion of the sleeve 17, the less upward air current, and vice versa.

The inclined outlet end 24 of the sleeve 17 is preferably cut at a sixty degree angle to the axis of said sleeve. Preferably the inlet end 30 of this sleeve is also cut in an inclined plane parallel with the outlet end 24, and by so doing, less resistance is offered to the air entering the sleeve, and noise is reduced. The rear edge of the sleeve is preferably rounded as shown at 31 and the rear portion of said sleeve may well be lined at 32 with the so-called waffle felt to still further reduce noise. The rear end of the fan motor 18 is preferably provided with a slotted cone 33 to direct the air properly around said motor and still further reduce noise. A suitable guard 34 is preferably carried by the front end of the sleeve 17, below and in front of the fan 19.

Obviously, an appropriate time switch and rheostat can be used to provide automatic regulation of running time and speed, and as such equipment is well known and forms no part of the present invention, it has not been illustrated.

In Figs. 1 and 2, I have shown the device mounted on the upper corner portion of a window frame 35, near the ceiling 36 of a room, the device being preferably six feet or more above the floor 37. With the bracket arm 13 swung to the proper position, the sleeve 17 and associated parts are positioned to direct the air currents not only upwardly but obliquely against one wall 38 of the room, the result being that these currents will be deflected diagonally from this wall to the next and so on, as illustrated by the arrows in Fig. 2. With the fan operating, the upper window sash 39 lowered slightly and the lower sash 40 somewhat raised, a continuous circulation of air in the entire room is effected without drafts, the circulation being so efficient that a person may sleep under bed clothes even in the hottest summer weather. By making use of a suitable time switch and rheostat, the device may be operated at desired speed and cut off about the time when

the room should be cooled to a comfortable extent. Moreover, by using the rheostat to control the speed of the fan, substantially silent operation may be attained which will not interfere with sleeping.

As excellent results may be obtained from the general construction shown and described, it is preferably followed. However, within the scope of the invention as claimed, variations may be made.

I claim:

1. An air circulating device comprising a horizontal sleeve open at both ends, and a rotary fan mounted in said sleeve near its outlet end for rotation in a vertical plane to create a current of air longitudinally through said sleeve, the outlet end of said sleeve being so shaped that it overlies said fan but does not underlie the same, whereby the air leaving the upper portion of the sleeve will be directed horizontally and the air leaving the lower portion of said sleeve will be directed upwardly.

2. An air circulating device comprising a horizontal sleeve open at both ends, and a rotary fan mounted in said sleeve near its outlet end for rotation in a vertical plane to create a current

of air longitudinally through said sleeve, the outlet end of said sleeve being cut in an inclined plane which intersects the plane of rotation of said fan, said inclined sleeve end being so related with said fan that the upper portion of the sleeve overlies said fan and the lower portion of said sleeve does not underlie said fan.

3. A structure as specified in claim 1; together with means for adjusting said fan longitudinally of said sleeve to vary the proportion of horizontally and upwardly moving air.

4. A structure as specified in claim 2; together with means for adjusting said fan longitudinally of said sleeve to vary the proportion of horizontally and upwardly moving air.

5. A structure as specified in claim 2; the inlet end of said sleeve being also cut in an inclined plane which is substantially parallel with the plane in which said outlet end is cut.

6. A structure as specified in claim 2; the inlet end of said sleeve being also cut in an inclined plane which is substantially parallel with the plane in which said outlet end is cut, said inlet end being provided with a yieldable lining which muffles the sound of the ingoing air.

ARTHUR E. GUTH.