Jan. 12, 1937. J. T. TENNISON 2,067,303

PORTABLE AIR CONDITIONER

Filed Jan. 29, 1936 3 Sheets-Sheet 1

Fig. 1.

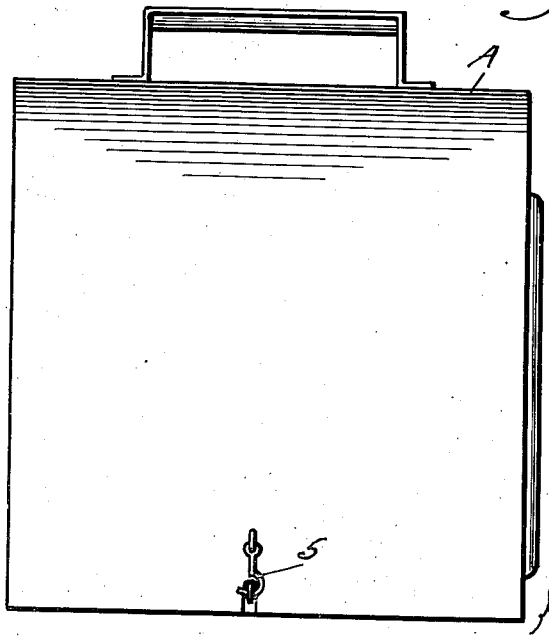


Fig. 2.

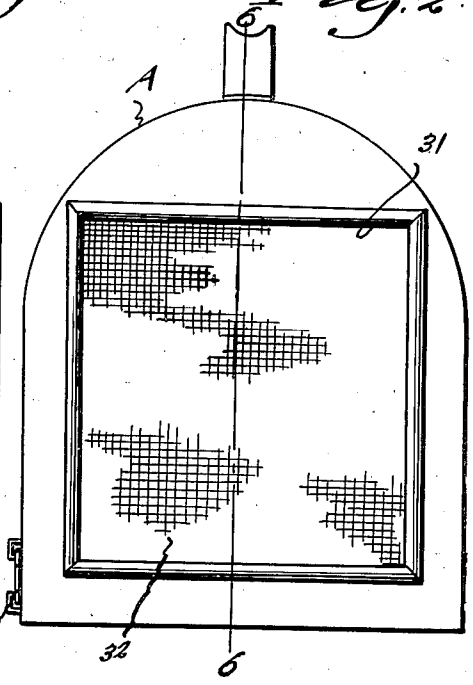


Fig. 3.

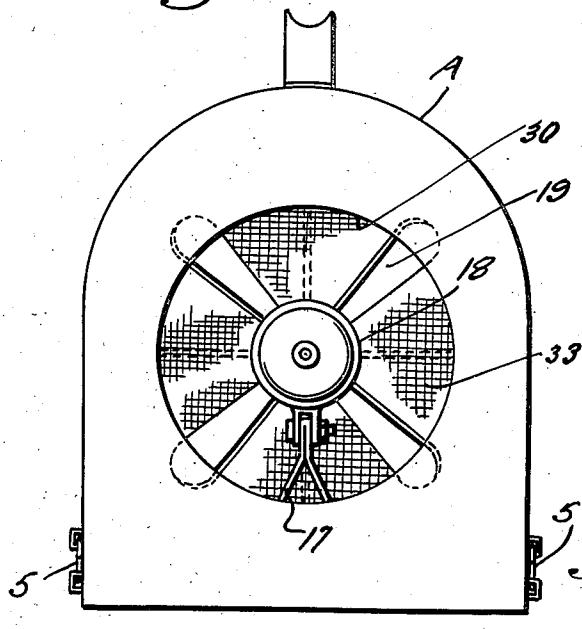
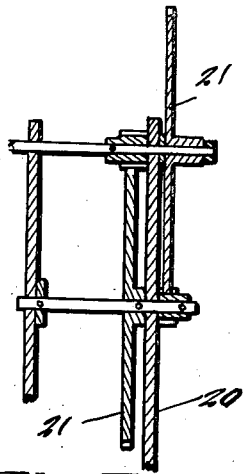


Fig. 10.



Inventor

John T. Tennison

By Clarence A. O'Brien and Hyman Berman Attorneys

Jan. 12, 1937. J. T. TENNISON 2,067,303

PORTABLE AIR CONDITIONER

Filed Jan. 29, 1936 3 Sheets-Sheet 2

Fig. 4.

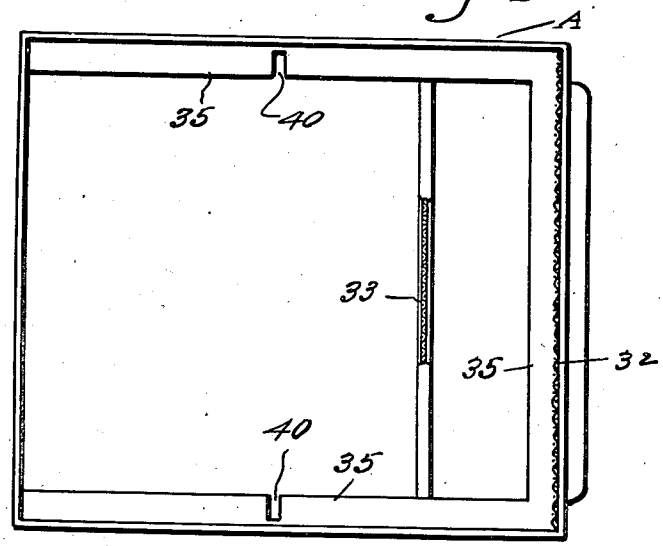


Fig. 5.

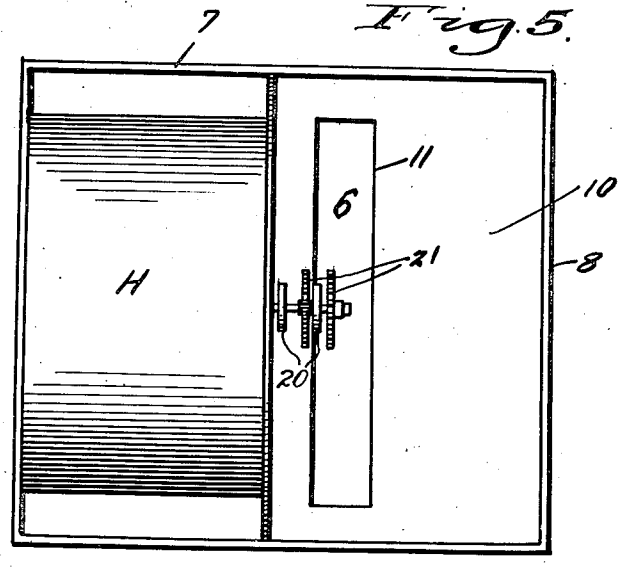
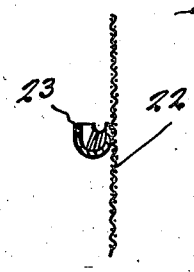


Fig. 9.



Inventor

John T. Tennison

By Clarence O'Brien and Hyman Berman. Attorneys

Jan. 12, 1937. J. T. TENNISON 2,067,303

PORTABLE AIR CONDITIONER

Filed Jan. 29, 1936 3 Sheets-Sheet 3

Fig. 6.

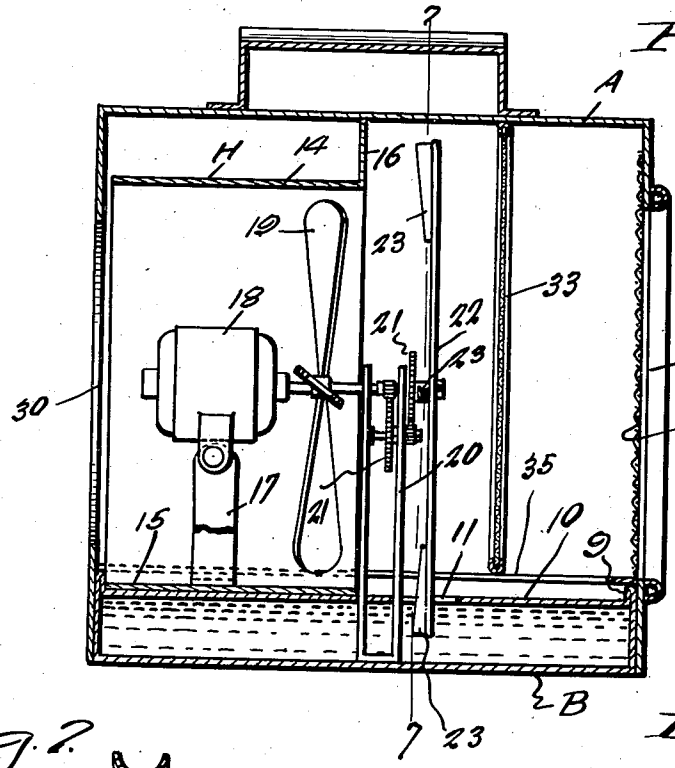


Fig. 7.

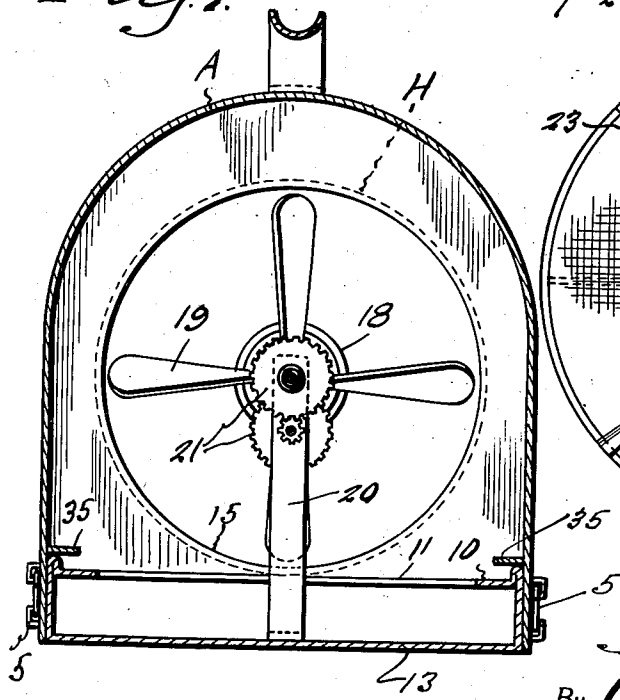
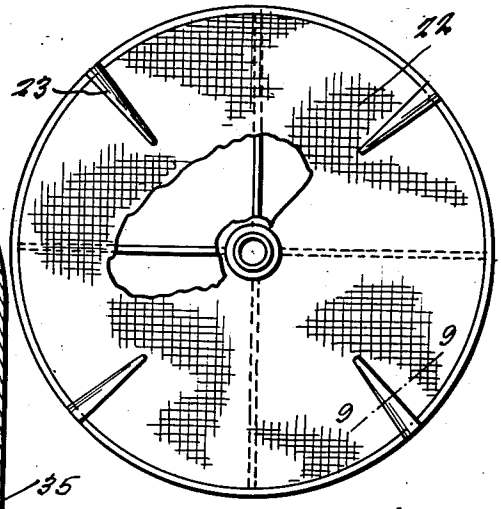


Fig. 8.



Inventor

John T. Tennison

By Clarence A. O'Brien and Hyman Berman Attorney

3

Patented Jan. 12, 1937 2,067,303

UNITED STATES PATENT OFFICE

2,067,303

PORTABLE AIR CONDITIONER

John Thomas Tennison, Enid, Okla.

Application January 29, 1936, Serial No. 61,425

4 Claims. (Cl. 183—12)

The present invention relates to an air conditioner and has for its prime object to provide one which is readily portable, simple in construction, inexpensive to manufacture, compact and convenient in construction, thoroughly efficient and reliable in use and otherwise well adapted to the purpose for which it is designed.

With the above and numerous other objects in view as will appear as the description proceeds, the invention consists in certain novel features of construction, and in the combination and arrangement of parts as will be hereinafter more fully described and claimed.

Figure 1 is a side elevation of an apparatus embodying the features of my invention.

Figure 2 is an end elevation thereof.

Figure 3 is another end elevation thereof taken opposite to that shown in Figure 2.

Figure 4 is a bottom plan view of the casing.

Figure 5 is a top plan view of the pan.

Figure 6 is a vertical longitudinal section taken substantially on the line 6—6 of Figure 2.

Figure 7 is a vertical transverse section taken substantially on the line 7—7 of Figure 6.

Figure 8 is a perspective view of the agitating rotor, a portion of the screen being broken away.

Figure 9 is a detail sectional view taken substantially on the line 9—9 of Figure 8.

Figure 10 is a fragmentary detail sectional view taken substantially on the line 10—10 of Figure 5.

Referring to the drawings in detail it will be seen that the letter A denotes generally a casing or hood and the letter B a pan. The lower end of the casing or hood A telescopes over the pan and is engaged therewith by suitable latch means 5.

The pan B comprises a bottom 6 side walls 7 rising therefrom and end walls 8, rising therefrom. These walls have formed integrally therewith inwardly disposed down turned flanges 9 merging into a top panel 10 having a transverse elongated slot 11 formed therein. A partially cylindrical housing H is mounted on the top of panel 10 rising therefrom and includes a partially cylindrical hood portion 14 and a flat bottom 15. The hood is open at both ends and at its inner end is provided with an outwardly directed flange 16. A bracket 17 supports the motor 18 on the armature shaft of which is a plurality of fan blades 19. A U-shaped bracket 20 has the outer end of the armature shaft of the motor 18 journaled therethrough and suitable reduction gearing 21 associated therewith for causing the rotation of a circular screen 22 having pockets 23 mounted therein in a radial manner adjacent the periphery thereof and these pockets are of channel-shaped formation as disclosed to advantage in Figure 3, in cross-section. These pockets taper inwardly. The disk 22, of course, rotates at a much slower speed than the fan 19 and extends downwardly so as to protrude through the slot 11 into the water provided in the pan B.

Now referring to the casing or hood A. The lower portion of this casing or hood A telescopes over the walls of the pan as previously specified. The hood is open at both ends as indicated at 30 and 31. A fine screen 32 is disposed over the opening 31. A partition screen 33 is disposed in the casing or hood A between the disk 22 and the screen 32. The periphery of the flange 16 abuts the inner surface of the hood or casing A. A ledge 35 is provided in the hood of casing A immediately above the pan and prevents any water from getting in between the walls of the pan and the lower wall structure of the hood or casing A.

The mesh of the screen 31 is finer than that of the screen 33. With water in the pan and the motor 18 energized it will be seen that the fan will force air through the apparatus sucking it in from the opening 30 and forcing it out through the opening 31. This air will be washed by the spray of water caused by the disk 22 with its pockets 23 and the air will be demoistened to the desired extent by the screen of the disk 22, the screen 33 and the screen 31. Notches 40 in the ledges 35 are provided for the accommodation of the disk 22.

It is thought that the construction, operation, utility and advantages of this invention will now be clearly understood without a more detailed description thereof.

The present embodiment of the invention has been described in considerable detail merely for the purposes of exemplification since in actual practice it attains the features of advantage enumerated as desirable in the statement of the invention and the above description.

It will be apparent that changes in the details of construction, and in the combination and arrangement of parts may be resorted to without departing from the spirit or scope of the invention as hereinafter claimed or sacrificing any of its advantages.

Having thus described my invention, what I claim is:—

1. An air conditioner of the class described comprising a pan, a hood the lower end of which is telescoped over the pan, a fan, means for mounting the fan on the pan and in the hood, a water agitator operatively connected with the

fan to rotate at a slower speed, said hood being open at both ends, one end having a screen, and a second screen interiorly of the hood between the agitator and the first mentioned screen, the pan having a top disposed below the upper edges of the walls and provided with a slot through which the agitator extends, said hood having an interior ledge disposed over the upper edges of the walls of the pan and extending inwardly thereof.

2. An air conditioner of the class described comprising a pan, an imperforate top panel on the pan equipped with a slot and forming a water impervious cover for the pan, a fan casing carried by the panel, a motor-operated fan mounted in the fan casing, a water agitator having a portion thereof extending through the slot, and means operatively connected with the fan for continuously moving the water agitator.

3. Apparatus for treating air or other gases by water or other liquids of the kind comprising an enclosure having walls forming a liquid vessel in its lower part and equipped with gas inlet and outlet openings for the flow of gas above the liquid and a fan for maintaining a continuous flow of gas through the enclosure from the inlet to the outlet openings; such apparatus characterized by a partly immersed water agitating wheel within the enclosure mounted to be rotated with its exposed part occupying the gas passage, said wheel constructed of a reticulated web of material, and imperforate channel-shaped pockets carried by the outer margin of the wheel whereby water is passed over that portion of the web that is exposed.

4. An air conditioner of the class described comprising a pan, a top panel on the pan equipped with a slot and being otherwise imperforate to form a water impervious cover for the pan, a fan casing carried by the panel, a motor operated fan mounted in the fan casing, a water agitator having a portion thereof extending through the slot, a hood open at one end and mounted on the pan enclosing the pan, fan casing and water agitator, and means operatively connected with the fan for continuously moving the water agitator.

JOHN THOMAS TENNISON.