W. F. WEGNER.

VENTILATOR.

APPLICATION FILED FEB. 13, 1914.

1,121,542. Patented Dec. 15, 1914.

Fig 1

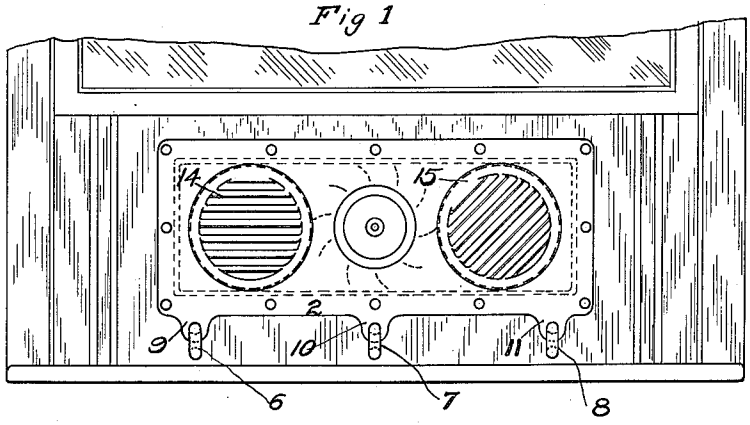


Fig 2

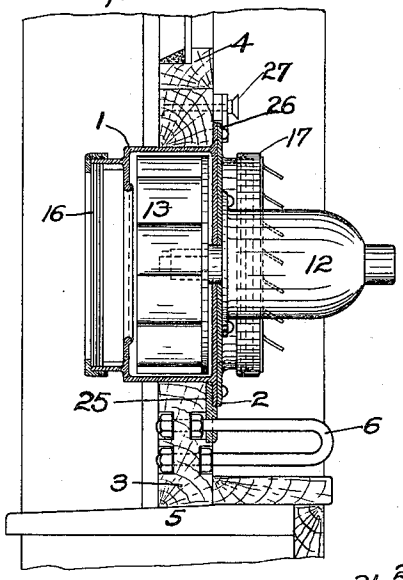
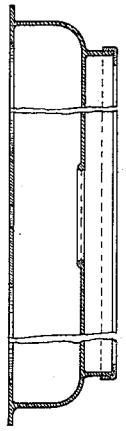


Fig 3



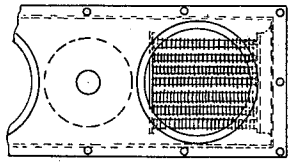


Fig 5

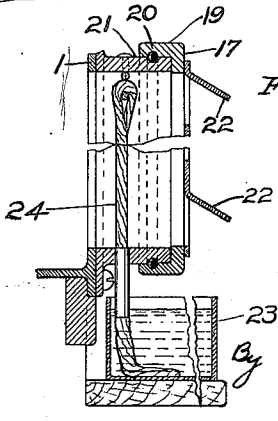


Fig 4

Witnesses
C. M. Baumeister.
V. C. Lindstrom.

Inventor
William F. Wegner.
By Harry Lea Dodson.
His Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM F. WEGNER, OF CHICAGO, ILLINOIS.

VENTILATOR.

1,121,542. Specification of Letters Patent. Patented Dec. 15, 1914.

Application filed February 13, 1914. Serial No. 818,462.

To all whom it may concern:

Be it known that I, WILLIAM F. WEGNER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Ventilators, of which the following is a specification.

My invention relates to that class of devices which are designed to force fresh air into a room. Devices of this character with which I am familiar generally put the screens which are employed to strain the air, as it passes through the ventilating apparatus, on the side of the ventilator which is inside of the room with the result that all of the dirt in the air is drawn into the motor which drives the fan, and this is not a desirable thing for satisfactory operation of the motor and it frequently happens that the force of the air current, driven by the fan, is sufficiently great to cause the dust or dirt to be pushed through the screen into the room or apartment which is being ventilated.

My invention has for its object to provide a screen on the exterior wall of the ventilator so as not only to protect the motor from the dust and dirt in the air, but also to insure clean air to be supplied to the interior of the room.

My invention has for its further object to provide means carried by the ventilator so that the currents of air can be deflected or directed to any given position, and has for its further object to provide means to heat the incoming air and also to provide means to cool it in the summer.

My means of accomplishing the foregoing objects may be more readily understood by having reference to the accompanying drawings which are hereunto annexed and are a part of this specification, in which:

Figure 1, is an elevation of my improved ventilator attached to a window, as seen from the interior of the room. Fig. 2, is a fragmentary sectional view of the same. Fig. 3 is an enlarged sectional view of the ventilating casing. Fig. 4 is a fragmentary detail view showing the means of cooling the entering air. Fig. 5 is a fragmentary detail view showing the heating means.

Similar reference numerals refer to similar parts throughout the entire description.

As shown in the drawings, my ventilator consists of a casing 1, the lower side 2 of which is secured to a board 3, which is adapted to be set inside of the window frame intermediate the sash 4 and the sill 5. The board 3, is provided with a plurality of U-bolts, 6, 7, and 8, which pass through lugs 9, 10 and 11 cast or formed on the lower edge 2 of the ventilator casing 1. This permits the ventilator to be moved inwardly by sliding it on the U-bolts so that the window sash 4, can be closed. The motor 12 is mounted in a casting which is suitably secured to the internal wall of the ventilator casing 1. The centrifugal fan 13, is directly connected to the motor and is provided with vanes adapted to draw the air into the casing 1, and eject it through the openings 14 and 15 into the interior of the room. The air enters the casing 1, through a screen 16, which extends the entire width and length of the casing, and passes into the room through the openings 14 and 15. These openings as shown, are provided with cylindrical covers 17 and 18 which are provided with peripheral flanges 19 which are adapted to fit over a circular bead 20 formed upon the outwardly projecting wall 21 of the casing 1. This bead 20 serves to hold the cover 17 in position but permits it to be rotated freely on the extension 21.

A plurality of angularly inclined baffle plates 22 are provided on the covers 17, and it will be apparent from an inspection of the drawings that by rotating the covers 17, the incoming air current can be directed or deflected to any given place. This feature has been found extremely desirable in hospitals where fresh air is so essential and yet where it is clearly essential that the patient should be shielded from a draft.

Fig. 4 shows the means for cooling the incoming air which is accomplished through the medium of a receptacle 23, which contains water, and has extending upwardly therefrom a wick 24 which extends through the lower wall of the ventilator casing 1 and is located adjacent the openings 14 and 15. It will be apparent that the current of air passing over this moistened wick, which will be kept moistened by capillary attraction, serves to cool the air, as practice has shown that the temperature can be lowered from 7 to 10 degrees by the use of this device.

Fig. 5 shows the means of heating the air and comprises an electrical resistance coil

mounted in the interior of the casing and which can be operated by suitable switches connected in any desirable manner to a source of electrical supply.

Although I have shown and described specific forms of apparatus for heating and cooling, it will be apparent to persons skilled in the art, that many varieties and forms of apparatus may be employed for this purpose and I do not wish to limit myself to the precise form of apparatus shown and described except as such limitations shall appear in the claims.

The operation of the device is as follows: A window sash 4, is raised and the ventilator moved outwardly along the U-bolt until the lugs 9, 10 and 11 are brought into contact with the front wall of the board 3 which may, if desired, be reinforced by a plate 25. When in this position the flange 26 provided on the upper part of the ventilator casing 1, will engage the front of the window sash 4, to which it may be secured by means of screws 27, or any other suitable or convenient manner. The electric current is then turned on to the motor and causes it to revolve and this through the medium of a fan draws the air through the screen 16 and projects it into the room through the openings 14 and 15, the baffles 22, being arranged to deflect the air to the desired position. If it is desired to cool the entering air currents, water can be placed in the receptacle 23 or if it is desired to warm the fresh air, the electric heating coil will be thrown in circuit.

Having described my invention what I regard as new, and desire to obtain by Letters Patent is:

1. A ventilator comprising the combination with an electrical motor and a direct connected fan, of a casing to which said motor is secured, a screen comprising the exterior wall of said casing, there being a plurality of circular openings in the interior wall of the casing, covers rotatably secured to said circular openings said covers having a plurality of angularly disposed plates adapted to deflect the air current in any desired direction, said casing being slidably mounted upon means secured in the window frame whereby the ventilator can be moved into the room so that the window can be closed.

2. A ventilator comprising the combination with an electrical motor and a direct connected fan, of a casing to which said motor is secured, a screen comprising the exterior wall of said casing, there being a plurality of circular openings in the interior wall of the casing, covers rotatably secured to said circular openings said covers having a plurality of angularly disposed plates adapted to deflect the air current in any desired direction, said casing being slidably mounted upon means secured in the window frame whereby the ventilator can be moved into the room so that the window can be closed, means to cool the air, located intermediate its entrance into and discharge from said ventilator casing.

3. A ventilator comprising the combination with an electrical motor and a direct connected fan, of a casing to which said motor is secured, a screen comprising the exterior wall of said casing, there being a plurality of circular openings in the interior wall of the casing, covers rotatably secured to said circular openings said covers having a plurality of angularly disposed plates adapted to deflect the air current in any desired direction, said casing being slidably mounted upon means secured in the window frame whereby the ventilator can be moved into the room so that the window can be closed, means to heat the air, located intermediate its entrance into and discharge from said ventilator casing.

4. A ventilator comprising the combination with an electrical motor and a direct connected fan, of a casing to which said motor is secured, a screen comprising the exterior wall of said casing, there being a plurality of circular openings in the interior wall of the casing, covers rotatably secured to said circular openings said covers having a plurality of angularly disposed plates adapted to deflect the air current in any desired direction, a plurality of U-bolts on which said casing is slidably mounted and means to hold said bolts in position.

5. A ventilator comprising the combination with an electrical motor and a direct connected fan, of a casing to which said motor is secured, a screen comprising the exterior wall of said casing, there being a plurality of circular openings in the interior wall of the casing, covers rotatably secured to said circular openings said covers having a plurality of angularly disposed plates adapted to deflect the air current in any desired direction, a plurality of U-bolts on which said casing is slidably mounted and means to hold said bolts in position, means to cool the air, located intermediate its entrance into and discharge from said ventilating casing.

6. A ventilator comprising the combination with an electrical motor and a direct connected fan, of a casing to which said motor is secured, a screen comprising the exterior wall of said casing, there being a plurality of circular openings in the interior wall of the casing, covers rotatably secured to said circular openings said covers having a plurality of angularly disposed plates

adapted to deflect the air current in any desired direction, a plurality of U-bolts on which said casing is slidably mounted and means to hold said bolts in position, means to heat the air located intermediate its entrance into and discharge from said ventilator casing.

In witness whereof, I have signed the foregoing specification.

WILLIAM F. WEGNER.

Witnesses:
C. M. BAUMEISTER,
V. C. LINDSTROM.