June 19, 1928.

1,674,195

W. F. DROEGER

INTAKE FOR VENTILATOR SYSTEMS

Filed Oct. 18, 1927

Fig. 1.

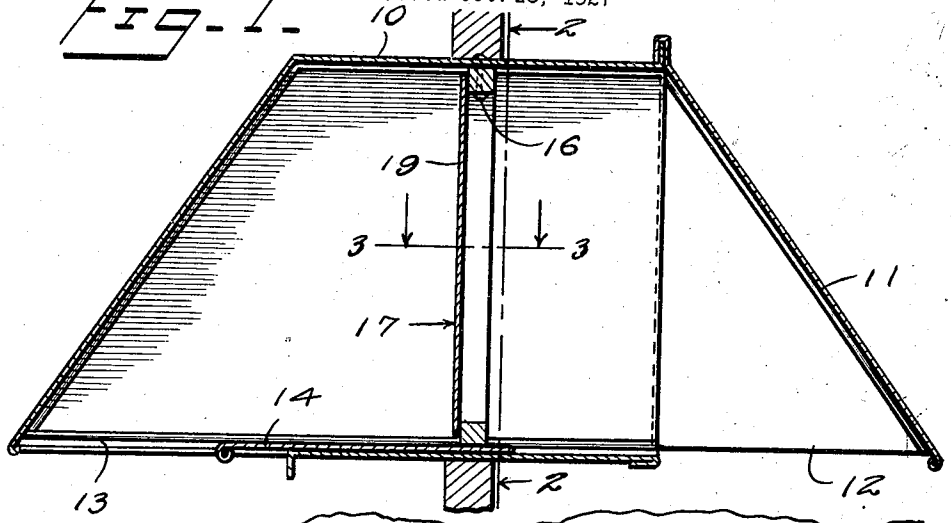


Fig. 2.

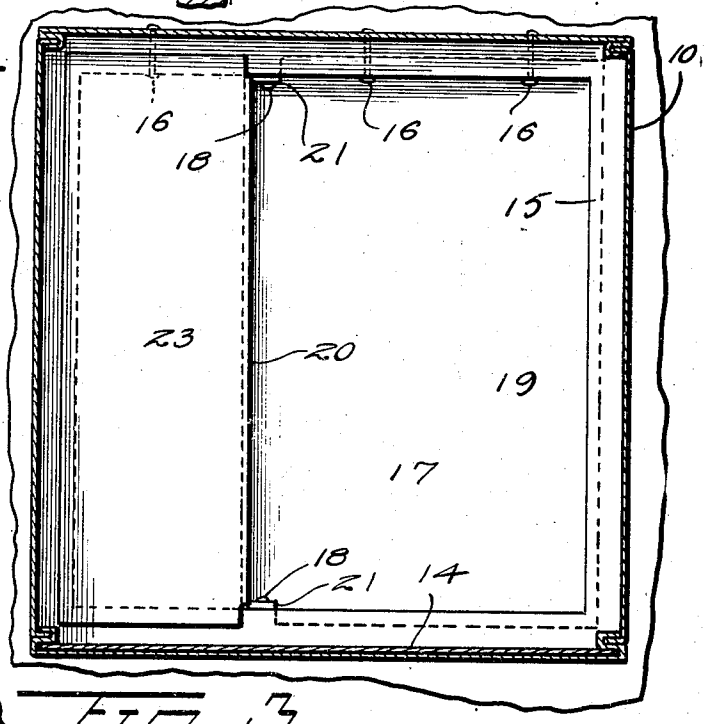
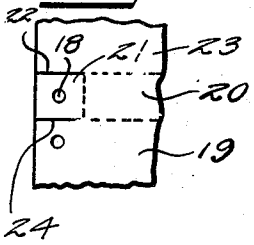


Fig. 4.



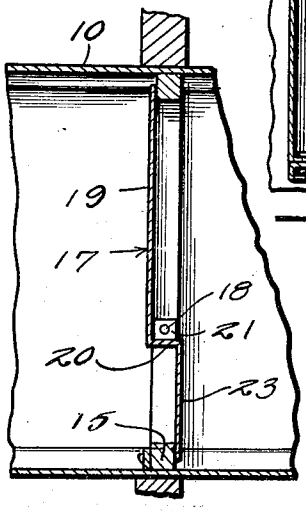


Fig. 3.

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UNITED STATES PATENT OFFICE.

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INTAKE FOR VENTILATOR SYSTEMS.

Application filed October 18, 1927. Serial No. 226,966.

This invention relates to intakes for ventilator systems and more particularly to an intake for siphon ventilating systems preventing reverse movement of air through the system in event of back draft such as might be caused by the opening of doors, windows or the like.

An important object of the invention is to provide a device of this character which may be very readily and cheaply produced and installed, which will be entirely automatic in its operation and which will be durable and efficient in service.

These and other objects I attain by the construction shown in the accompanying drawing, wherein for the purpose of illustration is shown a preferred embodiment of my invention and wherein:—

Figure 1 is a vertical sectional view through an air intake for ventilator systems constructed in accordance with my invention;

Figure 2 is a section on the line 2—2 of Fig. 1;

Figure 3 is a section on the line 3—3 of Fig. 1;

Figure 4 is a fragmentary detailed view showing the manner of forming the valve.

Referring now more particularly to the drawing, the numeral 10 indicates preferably a rectangular conduit adapted to be projected through the wall of the building to be ventilated. At its outer end, this conduit has a hood 11 providing a downwardly opening inlet 12 excluding the entrance of water to the conduit. At its inner end, the conduit is provided with an outlet opening 13, which is preferably likewise downwardly directed and is controllable through a slide 14.

Within the conduit is arranged a hollow frame 15 of the same shape as the conduit and secured thereto by rivets 16 or the like. This frame provides a mounting and seat for a butterfly valve 17 which is pivoted at one side of the center thereof, as generally indicated at 18, so that air entering from the inlet 12 and passing to the outlet 13 will impinge against the larger section 19 and force the valve to the open position, so that air will pass therethrough. If, however, air endeavors to pass from the outlet 13 to the inlet 12, as would occur where back draft was set up by the opening of a door, window or the like, movement of the air through the conduit would engage the section 19 and cause the valve to move to its closed position.

The valve is preferably constructed from a sheet of metal which is offset intermediate its ends, as at 20, for a distance very slightly greater than the thickness of the frame 15. At the bend forming the offset, ears 21 are formed through which the pivots 18 are extended. A convenient manner of forming the valve is to employ a sheet of metal of substantially the same size and shape as the frame. In this sheet, slits 22 are formed in opposite sides thereof spaced from one edge a distance equal to the desired width of the minor segment 23 of the valve. Similar slits 24 are formed spaced from the opposite edge a distance equal to the desired width of the major segment 19 of the valve. The sheet is then folded so that the segments 23 and 19 extend at right angles to and in opposite directions from the portion of the sheet forming the offset bend 20. Ears 21 produced between the notches are then bent, so that they lie parallel to one another and engage with the major segment 19 along one edge where they may be secured.

It will be obvious that a device of this character may be very readily and cheaply produced and may be very readily installed. The proposed use of the ventilator is in connection with barns, poultry houses and the like and the preferred installation with the specific structures mentioned is to insert the ventilator adjacent the ceiling where it is applied to the barn and adjacent the floor where applied to a poultry house. Such installations serve to most efficiently employ the incoming air to dry the buildings mentioned.

Since the construction hereinbefore set forth is capable of a certain range of change and modification without materially departing from the spirit of the invention, I do not limit myself to such specific structure except as hereinafter claimed.

I claim:—

1. In an air inlet for siphon ventilating systems, a conduit adapted to extend through the walls of a building, a frame within the conduit, a butterfly valve pivoted at one side of the center thereof to said frame and having the major and minor segments thereof in engagement with opposite faces of the frame when the valve is in the closed position, the major segment of the valve engaging the face of the frame remote

from the outer end of the conduit, said valve being transversely offset between the major and minor segments thereof to permit flat engagement of the major and minor segments with the edges of the frame.

2. In an air inlet for siphon ventilating systems, a conduit adapted to extend through the walls of a building, a frame within the conduit, a butterfly valve pivoted at one side of the center thereof to said frame and having the major and minor segments thereof in engagement with opposite faces of the frame when the valve is in the closed position, the major segment of the valve engaging the face of the frame remote from the outer end of the conduit, said valve being transversely offset between the major and minor segments thereof to permit flat engagement of the major and minor segments with the edges of the frame, and a slide controlling the inner end of the conduit.

In testimony whereof I hereunto affix my signature.

WILLIAM F. DROEGER.