Aug. 3, 1954

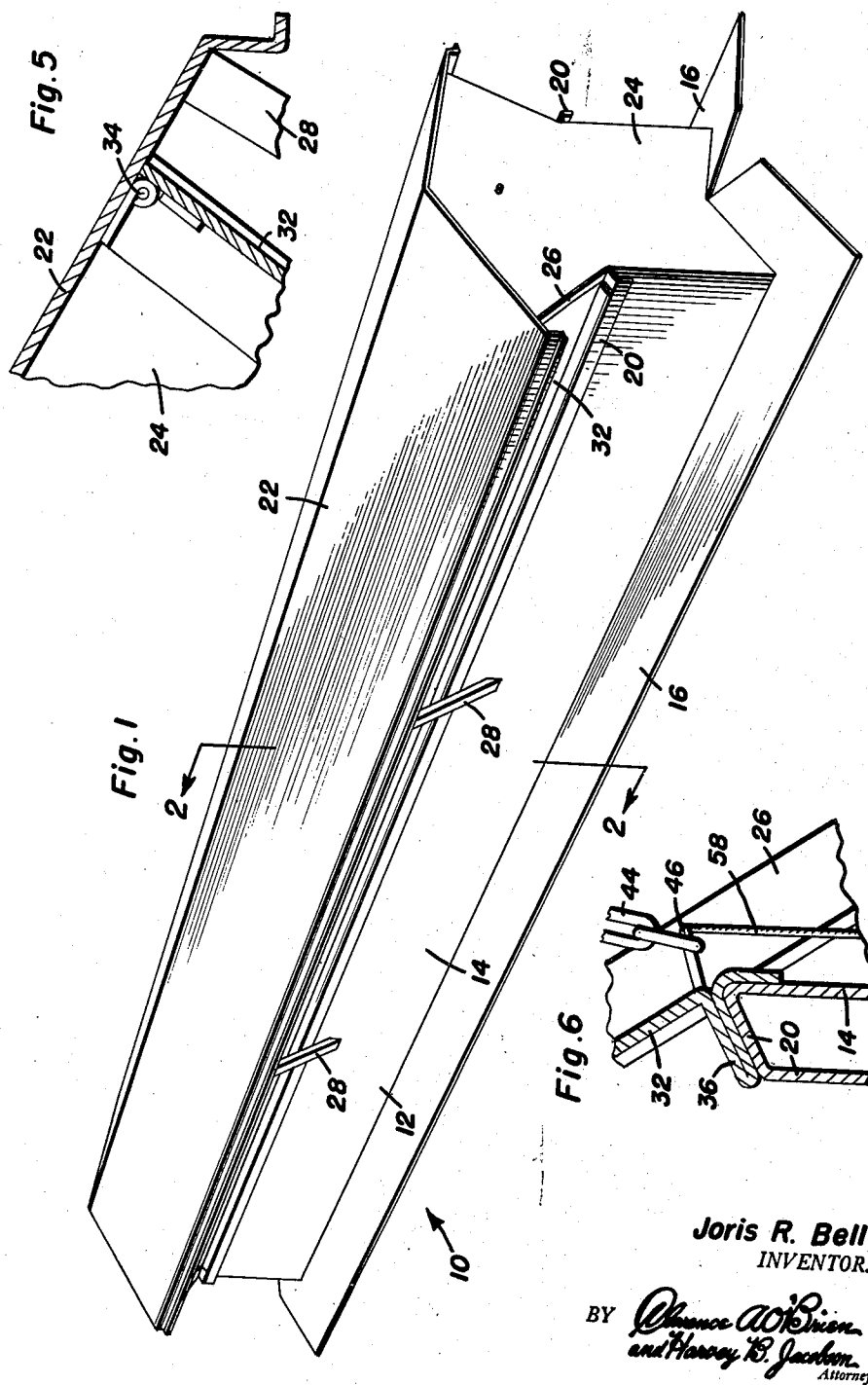
J. R. BELL, JR

2,685,247

DOUBLE-ACTING ROOF VENTILATOR

Filed March 13, 1952

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig.2

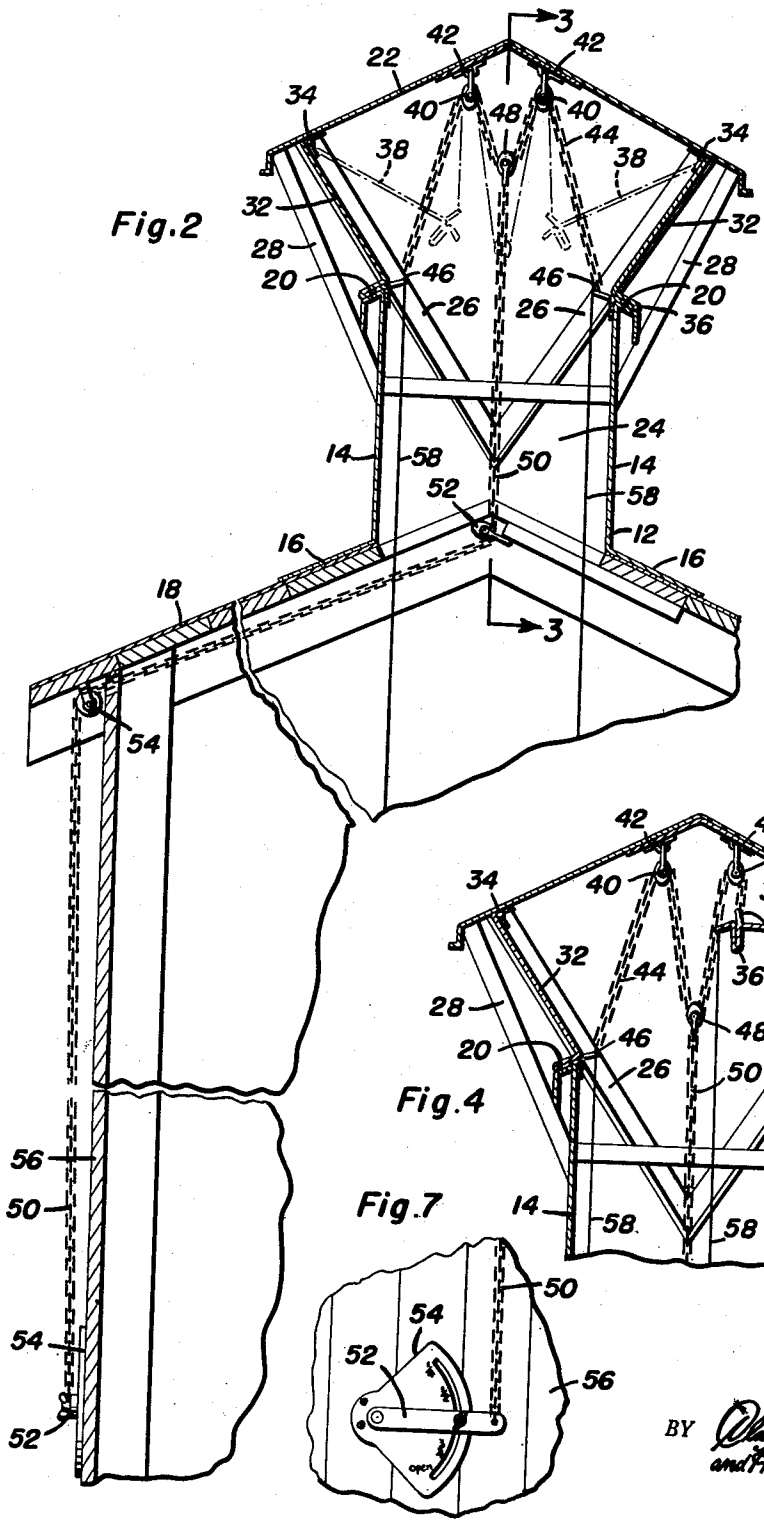


Fig.3

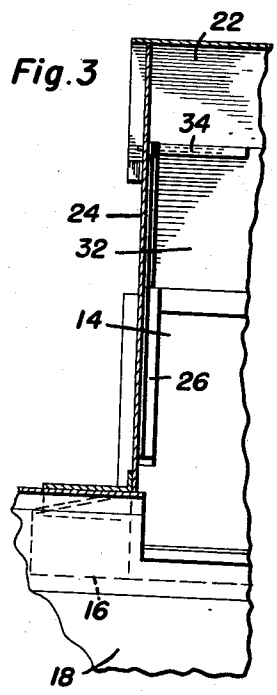


Fig.4

Fig.7

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DOUBLE-ACTING ROOF VENTILATOR

Joris R. Bell, Jr., Wendell, N. C.

Application March 13, 1952, Serial No. 276,322

2 Claims. (Cl. 98—42)

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This invention relates to new and useful improvements and structural refinements in ventilators, particularly ventilators such as may be installed on a roof of a curing barn for tobacco, or the like, and the principal object of the invention is to provide a ventilator of the character herein described which may be quickly, easily and efficiently adjusted to regulate the flow of air therethrough.

An important feature of the invention resides in the provision of twin closure panels for the ventilator openings, together with means for selectively and individually adjusting the closure panels in exact accordance with the requirement of ventilation.

Some of the advantages of the invention lie in its simplicity of construction, in its efficient and dependable operation, and in its adaptability for installation on barns, cribs and other building structures of various types.

With the above more important objects and features in view and such other objects and features as may become apparent as this specification proceeds, the invention consists essentially of the arrangement and construction of parts as illustrated in the accompanying drawings, in which:

Figure 1 is a perspective view of the invention;

Figure 2 is a vertical sectional view, taken substantially in the plane of the line 2—2 in Figure 1 and illustrating the invention installed on a roof;

Figure 3 is a fragmentary sectional view, taken substantially on the plane of the line 3—3 of Figure 2;

Figure 4 is a sectional view, similar to that shown in Figure 2, but illustrating the invention in a different adjusted position;

Figure 5 is a fragmentary sectional detail of the hinge connection between one of the closure panels and the top of the ventilator housing;

Figure 6 is a fragmentary sectional detail showing the attachment of the flexible element and control cord to one of the closure panels, and

Figure 7 is a fragmentary elevational view illustrating the adjustment quadrant for the control cable used in the invention.

Like characters of reference are employed to designate like parts in the specification and throughout the several views.

Referring now to the accompanying drawings in detail, the invention consists of what may be referred to as a double acting roof ventilator, the same being designated generally by the reference character 10 and embodying in its construction an elongated housing 12 including a pair of transversely spaced side walls 14 provided at their lower ends with outwardly and downwardly extending flanges 16 whereby the entire ventilator may be suitably secured to or mounted upon the ridge of a roof 18, as will be clearly apparent.

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The side walls 14 are provided at upper edges thereof with outturned and downturned flanges 20 and the housing 12 also includes in its construction a peaked top 22 which is spaced upwardly from the flanges 20 and extends laterally beyond the side walls 14, as is clearly shown in Figures 2 and 4.

The end walls of the ventilator housing 12 are indicated at 24 and pairs of downwardly convergent braces 26, secured to the end wall, are employed for supporting the top 22 in its position. In addition, the top 22 is supported by downwardly convergent braves 28 which extend from the outside edge portions of the top to the outer surfaces of the side walls 14, as is best shown in Figure 1.

By virtue of the elevation of the top 22 above the flanges 20, elongated ventilating openings 30 exist, and these openings are provided with swingable closure panels 32 which are hinged to the underside of the top 22 by suitable hinges 34. Lower edge portions of the closure panels are provided with angulated flanges 36 to abut the flanges 20 when the closure panels are in their closed position, (see Figure 6) and it is to be noted that the closure panels may be swung inwardly and upwardly in the housing to their open positions, as indicated by the dotted lines 38 in Figure 2.

Means are provided for controlling or adjusting the opening and closing of these panels, these means consisting of a pair of pulleys 40 which are suspended from suitable brackets 42 secured to the underside of the top 22 and accommodate thereon a length of chain 44 or some other suitable flexible element. The ends of this chain are anchored to suitable lugs 46 provided on the respective closure panels 32 adjacent the lower edges of the panels, and a pulley block 48 is positioned on the chain 44 that is, on an intermediate portion of the chain, between the pulleys 40.

A control cable or a chain 50 is connected to this pulley block and extends downwardly through the open bottom of the ventilator housing 12, and after passing around suitable guide pulleys 52, 54, the chain 50 is connected to an

adjustment lever 52 pivotally mounted upon a slotted sector 54 secured to a side wall 56 of the building on which the invention is installed.

In addition to the foregoing, a pair of control cords 58 are connected to the lugs 46 of the respective closure panels 32 and extend downwardly therefrom into the building, as will be clearly apparent.

Assuming the invention to be in operation and the closure panels 32 closed as illustrated in Figure 2, a downward pull exerted upon the chain 50 by means of the lever 52 will draw the pulley block 48 downwardly and, by virtue of the equalizing action afforded by this pulley block and by the pulleys 49, the two closure panels 32 will be opened simultaneously and evenly to any desired extent. Conversely, by moving the lever 52 upwardly, the panels 32 will be closed.

Assuming again that the two closure panels are open, either one of the two panels may be drawn to its closed position by simply pulling downwardly the appropriate of the control cords 58, as shown in Figure 4. Under such circumstances the other closure panel will remain open and the appropriate adjustment of the chain 50 as to its length will be taken up by the pulley block 48 and pulleys 49.

It is believed that the advantages and use of the invention will be readily apparent from the foregoing description and accordingly, further description thereof at this point is deemed unnecessary.

While in the foregoing there has been shown and described the preferred embodiment of this invention, it is to be understood that minor changes in the details of construction and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

Having described the invention, what is claimed as new is:

1. In a double acting roof ventilator, the combination of a housing having an open bottom and including a pair of side walls, a top spaced above said side walls to provide a pair of laterally disposed vent openings and end walls closing the ends of said housing, said top projecting laterally beyond said side walls, a set of downwardly convergent rails extending from the outer edges of said top projecting laterally beyond said side walls to exterior faces of the side walls said rails having the lower ends thereof extending within said side walls and secured together, said lower ends being secured to the inner faces of said end walls, a pair of independent closure panels for the respective openings, said panels being hinged at their upper edges to said top and swingable from a closed position in abutment with said rails upwardly and inwardly to an open position in said housing, a pair of pulleys mounted on the underside of said top above the respective panels, a flexible element connected at the opposite ends thereof to lower edges of the respective panels and passing over said pulleys, a pulley block provided on an intermediate portion of said element between said pulleys, a control cable connected to said block and extending downwardly therefrom, and a pair of independently actuable control cords connected to the respective panels and extending downwardly through the open bottom of said housing whereby said control cords may be selectively actuated to retain a selected one of said panels in closed position as the control cable is actuated to move the other panel to an open position.

2. The device as defined in claim 1 together with flanges provided at upper edges of said side walls and constituting abutments for said panels in their closed position.

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