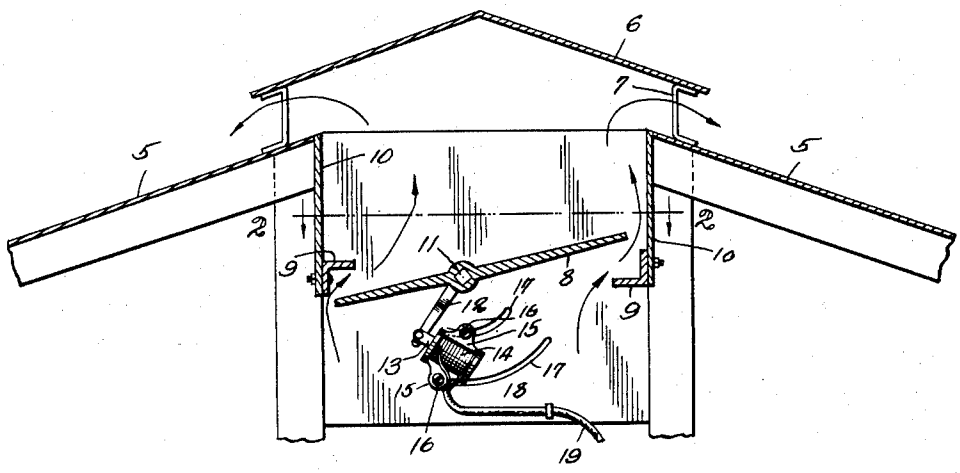
Sept. 4, 1951 H. J. WAFF, JR 2,566,784

VENTILATOR DAMPER CONTROL

Filed Nov. 19, 1948

*Fig. 1.*



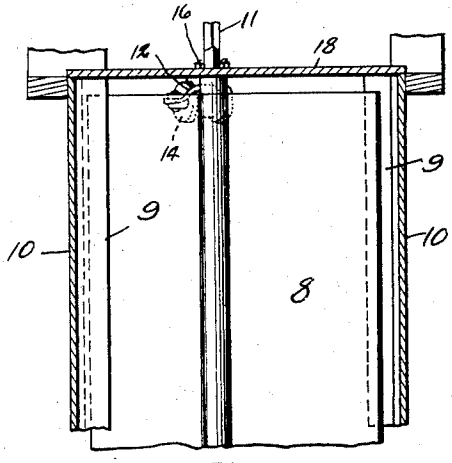




*Fig. 2.*

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Patented Sept. 4, 1951 2,566,784

# UNITED STATES PATENT OFFICE

2,566,784

## VENTILATOR DAMPER CONTROL

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Application November 19, 1948, Serial No. 61,063

1 Claim. (Cl. 98—42)

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This invention relates to a ventilator designed for controlling the degree of humidity in tobacco curing barns.

An important object of the invention is to provide a ventilator of this character which may be actuated by a humidity control mechanism including a time clock, to close the ventilator which is in the form of a pivoted blade damper, to close the damper when the humidity in the curing barn or room falls below a predetermined point for the proper curing of the tobacco undergoing treatment.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts, hereinafter more fully described and pointed out in the claim, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

Referring to the drawing:

Figure 1 is a vertical sectional view through the roof of the tobacco curing barn, illustrating a control device constructed in accordance with the invention, as mounted therein.

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1.

Referring to the drawing in detail, the reference character 5 indicates the roof of a tobacco curing barn, which is provided with the usual ventilator 6, that has its side edges spaced from the roof, by means of the angle irons 7 providing passageways between the roof 5 and ventilator 6, as indicated by the arrows in Fig. 1 of the drawing.

The humidity control damper forming the subject matter of the present invention, comprises a pivoted blade 8 mounted on the shaft 11 at a point in parallel spaced relation with a line drawn longitudinally through the center of the pivoted blade so that the weight of the blade will be so distributed that one side of the blade will tend to overbalance the other side, to the end that under certain conditions the blade or damper will swing to its closed position. Angle bars 9 are secured to the inner surfaces of the plates 10 that form the side walls of the housing in which the blade damper operates. As shown by Fig. 1 of the drawing one of these angle bars 9 is arranged with an upper horizontal inwardly extended flange, while the opposite angle bar is arranged with an inwardly extended lower flange. Both flanges lie in the path of travel of the edges of the plate 10, with the result that

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when the damper is closed, one edge thereof rests against the horizontal lower flange of the angle bar at one side of the device, while the opposite side of the blade damper moves into engagement with the inwardly extended flange formed along the upper edge of the opposite angle bar.

The blade or damper 8 is secured to the shaft 11 on which shaft the arm 12 is secured, the arm 12 being connected with the core 13 of the solenoid 14, so that movement of the core 13 will be transmitted to the arm 12 and damper secured thereto.

The solenoid 14 is provided with laterally extended ears 15 having openings in which bolts 16 extend, the bolts 16 also passing through the curved openings 17, securing the solenoid to the supporting plate 18. Due to this construction it will be seen that by moving the solenoid to various positions with respect to the elongated openings 17, the throw of the arm 12 and movement of the damper 8 may be adjusted to meet various requirements of use.

The reference character 19 indicates the electric wire cable that establishes a circuit between the solenoid and a time clock, not shown, the time clock acting to complete the circuit to the solenoid when the humidity within the curing barn falls below a predetermined point.

When the circuit to the solenoid is broken, the side of the damper 8 at the right of the shaft 11 will fall downwardly, contacting with the flange 9 of the angle bar associated therewith, the damper closing off the barn to prevent the further escape of humidity. It will, of course, be understood that under normal conditions the solenoid will be energized, to the end that the core 13 will be drawn into the winding of the solenoid, which movement will cause the movement of the arm 12 and damper 8, to the positions shown by Fig. 1.

When the circuit is broken the damper will close as described.

It might be further stated that the time clock (not shown) used in connection with the solenoid, is of conventional structure and is controlled by a barometer of conventional structure, in circuit with the clock.

Having thus described the invention, what is claimed is:

In a ventilator control device, a ventilator housing, a pivoted damper mounted within the housing controlling the passage of air through the housing, a horizontal shaft within the housing on which the damper is secured, a solenoid mounted within the housing, ears extending

from the solenoid, one wall of the housing having spaced elongated concentric openings formed therein, bolts extending through the ears and elongated openings, adjustably securing the solenoid within the housing, and an arm secured to the damper connected with the core of the solenoid whereby movement of the core in one direction moves the damper to its open position.

HOWARD J. WAFF, JR.

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