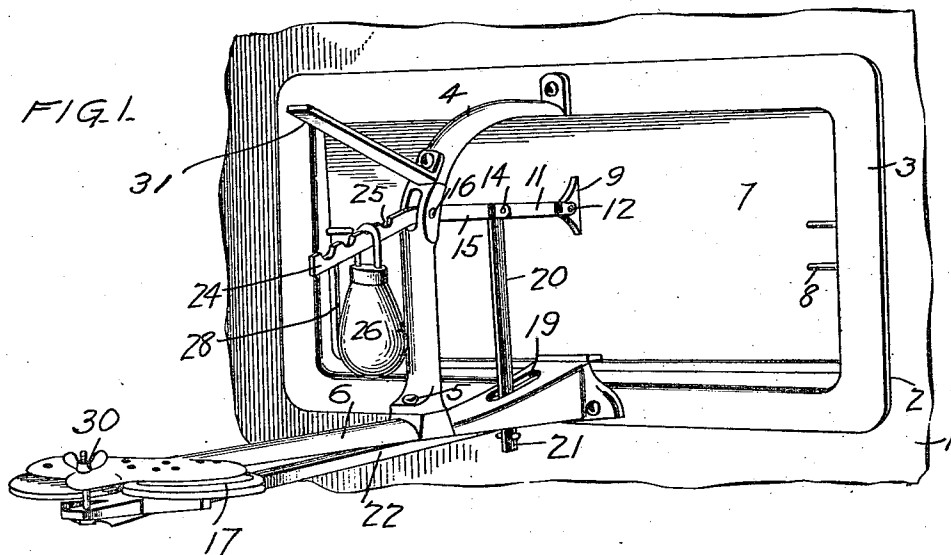
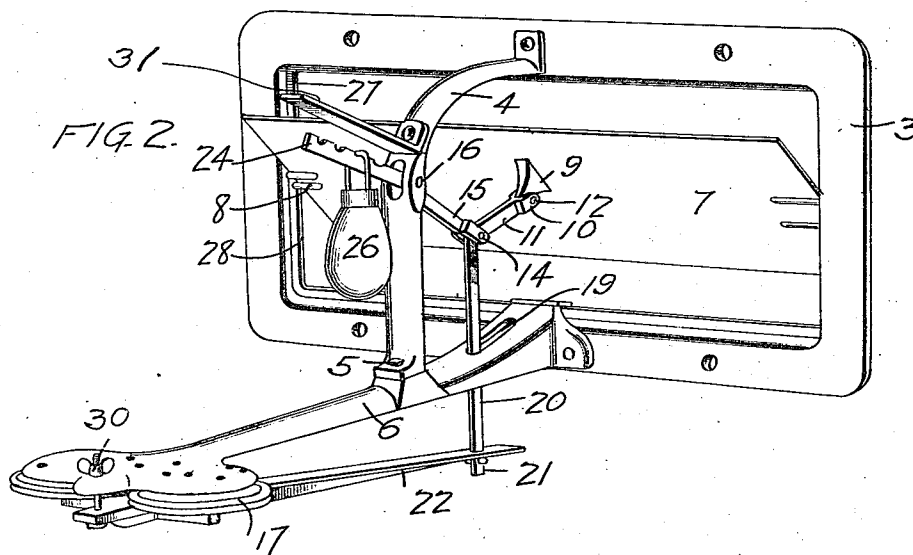
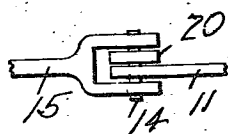


C. V. HILL.
VENTILATOR.
APPLICATION FILED MAR. 17, 1916.

Patented June 11, 1918.

1,268,973.



Inventor

Clarence V. Hill

By Edwin S. Clarkson
his Attorney

UNITED STATES PATENT OFFICE.

CLEMENT V. HILL, OF TRENTON, NEW JERSEY.

VENTILATOR.

1,268,973.

Specification of Letters Patent. Patented June 11, 1918.

Application filed March 17, 1916. Serial No. 84,831.

To all whom it may concern:

Be it known that I, CLEMENT V. HILL, a citizen of the United States of America, residing at Trenton, in the county of Mercer and State of New Jersey, have invented certain new and useful Improvements in Ventilators, of which the following is a specification.

My invention relates to automatic ventilators for regulating the temperature in rooms, and the object of the invention is to provide a device of this character which can be easily and quickly installed in any room and which operates automatically and without expense.

Another object of my invention is to provide a damper which is connected to a thermostat to be automatically controlled thereby, and so constructed as to be very sensitive to changes in temperature, no matter how great or small such changes may be.

A further object of my invention is to produce a generally improved ventilator of this class which will be exceedingly simple in construction, cheap to manufacture, efficient in use, and which enables accurate and positive regulation of the temperature.

While my invention is especially adapted for use in brooder and chicken houses it is to be understood that it can be effectively used in any room or building wherein perfect ventilation is required. With the use of this ventilator the temperature in the room, in which the same is installed, is maintained at a predetermined degree without requiring any attention by the poultryman.

With these and other objects in view my invention comprises the parts and combination of parts as hereinafter described, shown in the accompanying drawings, and specifically pointed out in the claims.

In the drawings:

Figure 1 is a perspective view of a ventilator embodying my invention.

Fig. 2 is a similar view of my ventilator, showing the same in open position.

Fig. 3 is a detail sectional view.

In the drawings, the reference numeral 1 designates the wall of a room or building having an opening 2 therethrough.

The ventilator comprises a rectangular frame 3 which is secured to the wall within and around the opening 2 by means of screws or the like. Extending rearwardly from this frame 3 is an arm 4 which is se-

cured at 5 to the thermostat frame 6. A damper 7 is provided with a shaft 8 by means of which it is pivotally mounted in the frame 3 and is provided with a lug 9, which is adapted to receive and be pivotally connected by the pin 12 to the forked end 10 of the link 11.

The other end of the lever 11 is provided with a flat end which is connected by a pin 14 to a lever 15 which is pivotally mounted on the arm 4 at 16.

The end portion 24 of the lever 15 is provided with a series of notches 25 which are adapted to hold a counterweight 26 which will normally hold the damper in closed position, as clearly shown in Fig. 1. When it is desired to change the normal temperature of the room the weight 26 may be moved in any of the notches 25, so as to counterbalance the weight of the damper, whereby any temperature can be easily and quickly had. This weight also facilitates the closing of the damper when the thermostat is contracting.

The thermostat frame 6 is provided with an elongated opening 19 through which passes a connecting rod 20 which is fastened at one end 21 to the thermostat lever 22 and at the other end to the pin 14 at the joint between lever 15 and the link 11, whereby operative connection is maintained between the thermostat and damper. The lever 22 is adjustably secured to the thermostat frame 6 by means of a set screw 30. A suitable thermostat 17 is positioned between the outer enlarged ends of the frame 6 and lever 22.

In order to prevent a draft in the room I provide the frame with upper and lower stops 27 and 28, which serve to limit the swinging movement of the damper. 31 is a stop.

When in operation and the damper and thermostat properly adjusted to the desired temperature, the damper will be closed as shown in Fig. 1 under normal conditions.

However, as the temperature in the room rises the heat will cause the thermostat to expand which will cause the thermostat lever to pull the lever 15 and the link 11 downwardly and break the joint 14, which operation causes the damper to swing in open position, as shown in Fig. 2. After a sufficient amount of cool air has entered the room to reduce the temperature the thermostat will

contract which will move the lever 15 and the link 11 upward and thus close the damper.

The weight 26 hanging in one of the notches 25 in the outer end of the lever 15, will facilitate the closing of the damper and thus the ventilator will be positive in operation, and insures a snug joint between the strips 27 and 28 and the damper.

It will of course, be understood that the inventive idea involved is capable of receiving a variety of mechanical expressions and that the particular expression of the idea herein shown and described is merely used for illustration and that the claims are intended to cover all of the various mechanical embodiments of the idea of which it is capable.

By this construction it can readily be seen that any of the parts, should they become worn or otherwise damaged, can be easily removed and a new one put in its place at a slight expense. It will also be seen that my ventilator can be readily disassembled for shipping purposes and assembled for operation in a short time.

The particular type of thermostat shown forms the subject matter of another application for patent.

What I claim is:

1. In a ventilator, the combination with a frame having an opening therethrough, of a damper pivotally mounted in the opening of said frame, an arm secured to and extending rearwardly from said frame, an operating lever mounted on said arm back of said opening, a link connected at one end to said lever and at its other end to said damper and temperature responsive means for operating said lever, whereby the damper is operated.

2. In a ventilator, the combination with a frame, a damper pivotally mounted in said frame, an arm extending rearwardly from said frame, a lever pivotally mounted on said arm, a link connected at one end to the inner end of said lever and at its other end to said damper, a thermostat supported from said arm and frame, and an operative connection between said thermostat and the said lever at the joint between the lever and link.

3. In a ventilator, the combination with a frame, a damper pivotally mounted in said frame, an arm extending rearwardly

from said frame, a lever pivotally mounted on said arm, a link connected at one end to the inner end of said lever and at its other end to said damper, a thermostat frame, a thermostat carried by said thermostat frame and supported from said arm and first mentioned frame, an opening in said thermostat frame, a connecting rod extending from the thermostat lever and adapted to pass through said opening in said thermostat frame, said connecting rod being fastened to said operating lever at the joint between the lever and link.

4. In a ventilator, the combination with a frame, adapted to fit around an opening in the wall of a room, stops in said opening, a damper pivotally mounted in said frame, an arm extending rearwardly from said frame, a lever pivotally mounted on said arm, a link connected at one end to the inner end of said lever and at its other end to said damper, and means for operating said lever.

5. In a ventilator, the combination with a frame, adapted to fit around an opening in the wall of a room, stops in said opening, a damper mounted in said frame, an arm extending rearwardly from said frame, a lever pivotally mounted on said arm, a link connected at one end to the inner end of said lever and at its other end to said damper, a thermostat supported from said arm and frame, and an operative connection between said thermostat and the said lever.

6. In a ventilator, the combination with a frame adapted to fit around an opening in the wall of a room, stops in said opening, a damper pivotally mounted in said frame, an arm extending rearwardly from said frame, an operating lever pivotally mounted on said arm, a link pivotally connected to the inner end of said lever and to said damper, a series of notches on the outer end of said lever adapted to hold a weight, a thermostat supported from said arm and frame, and an operative connection between said thermostat and the said lever at the joint between the lever and link.

In testimony whereof I affix my signature in the presence of two witnesses.

CLEMENT V. HILL.

Witnesses:

WILLIAM J. PIERREPONT,
HOWARD F. TOMLINSON.