A. T. HANSON.

VENTILATOR.

APPLICATION FILED FEB. 26, 1919.

1,369,099. Patented Feb. 22, 1921.

FIG. 1.

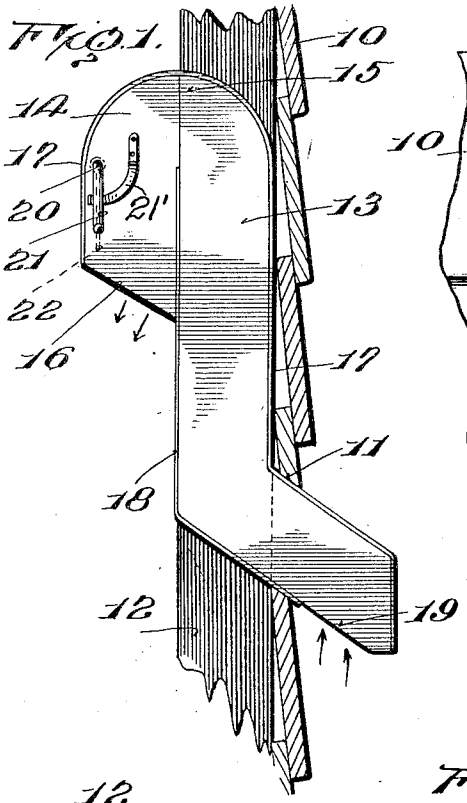


FIG. 2.

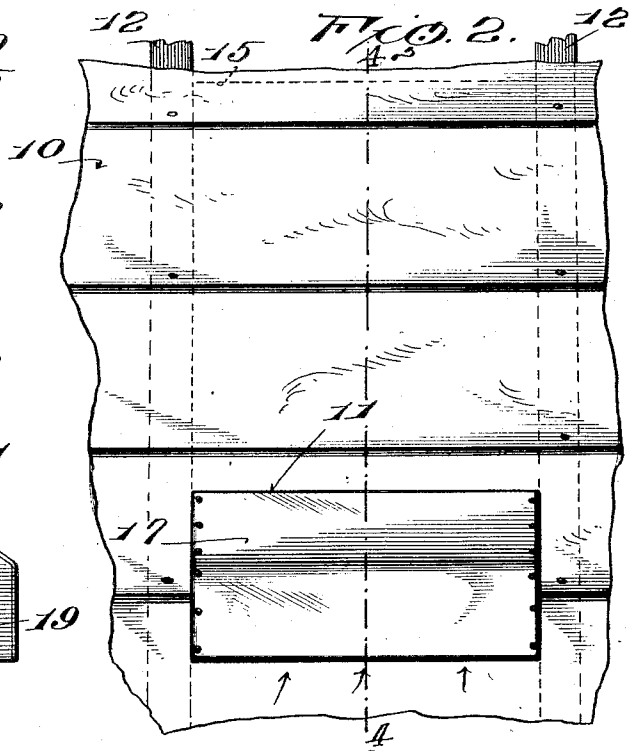


FIG. 3.

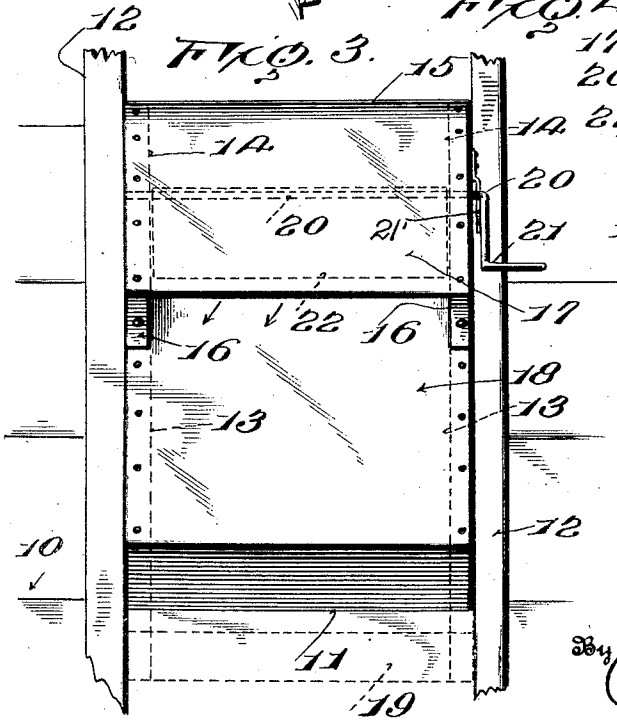
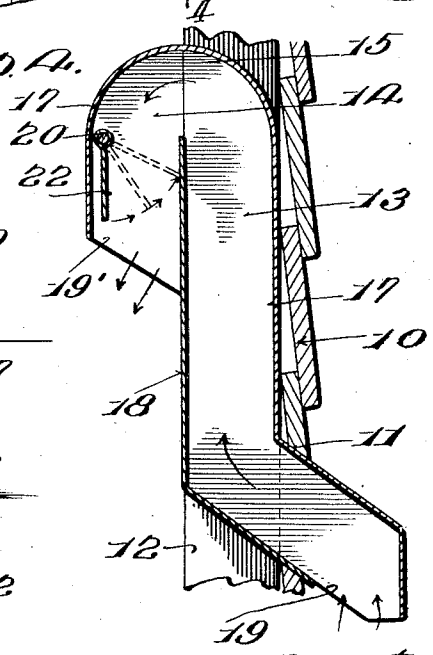


FIG. 4.



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VENTILATOR.

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Application filed February 26, 1919. Serial No. 279,300.

To all whom it may concern:

Be it known that I, ALBERT T. HANSON, a citizen of the United States, residing at Kindred, in the county of Cass, State of North Dakota, have invented certain new and useful Improvements in Ventilators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in ventilators and particularly to ventilators for use in barns, chicken-houses, pig-sties, and the like.

One object of the present invention is to provide a ventilator by means of which a free circulation of air can be brought into the building without danger of drafts on the animals.

Another object is to provide a novel and improved ventilator which can be easily and quickly installed in buildings now in use without interference and with economy of space.

A further object is to provide a novel and improved ventilator wherein the admission of air to the building can be easily and effectively regulated and controlled.

Other objects and advantages will be apparent from the following description when taken in connection with the accompanying drawing.

In the drawing:

Figure 1 is a side elevation of my improved ventilator in position in the wall of a barn, the said wall being shown in section.

Fig. 2 is an elevational view from the outside of the barn.

Fig. 3 is a view looking from the inside of the barn.

Fig. 4 is a vertical sectional view taken on the line 4—4 of Fig. 2.

Referring particularly to the accompanying drawing, 10 represents the wall of a barn, in which is formed the opening 11 for the reception of the outer end of the ventilator, and 12 represents the upright beams or studding of the said wall.

The ventilator includes the side members 13, the lower portions of which are extended downwardly at an obtuse angle and disposed through the said opening 11 in the barn wall. Secured to the inner vertical edge of each of the side members, and at the upper portions thereof, are the members 14, the upper ends of said members and the side members 13 being upwardly bowed, as shown at 15 to form a semi-circular outline. The lower end of each member 14 is cut off obliquely, as shown at 16. The outer ends of the lower portions of the side members 13 are cut off on vertical lines, and secured to the outer edges of the side members 13, the vertical faces 16, and extended upwardly and over the curved upper ends of the sides of the device, is a sheet of metal 17. Secured to the inner faces of the above-named members of the frame of the ventilator is another sheet of metal 18, the lower end of which terminates approximately midway of the length of the obliquely extending lower portions of the side members 13, whereby the entrance opening 19 is formed in the lower end of the ventilator for the admission of air into the ventilator. The upper end of the metal sheet 18 terminates short of the upper curved portion of the sheet 17, so as to permit the air to pass thereover and enter the building. Between the sheet 18 and the inner end of the sheet 17 there is formed the opening 19 from which the air issues when entering the building. Extending transversely through the members 14, near their inner vertical edges, is a shaft 20, on one end of which is formed a crank handle 21 by means of which the same may be turned, a spring keeper 21′ being mounted on one of the members 14 for engagement by said handle to retain the same in different positions, and maintain the blade 22 at various angles. Carried by the shaft, between the inner end of the sheet 17 and the upper portion of the sheet 18, is a plate 22, which is adapted to be swung into engagement with the sheet 18 to prevent air issuing through the opening 19. By properly manipulating this plate the opening can be controlled to regulate the amount of air which it is desired shall enter the building, or the air completely cut off, as desired by the operator or upon the conditions in the building.

It will be noted that the vertical portion of the side members and the sheet 17 are disposed against the inner face of the barn wall and between the studding thereof, the thickness of the upper portions of the sides of the ventilator being practically the same as the thickness of the studding, thereby

disposing the ventilator in such position that it does not project into the building and be in the way. Furthermore, the downwardly extending portion of the upper end of the sheet 17 directs the currents of air downwardly within the building, so that there will be no direct draft on the animals, while at the same time there will be a proper circulation of fresh air within the building. Also, by turning the regulating plate 22 the amount of air entering the building can be easily and properly controlled.

Attention is called to the position of the entrance opening 19 which is directed downwardly so that the air which enters said opening moves in a vertical direction. Thus there will be no direct downward flow of extremely cold air into the ventilator.

What is claimed is:

A ventilator comprising a chute including a vertical portion, an obtuse-angularly extending lower end portion having an opening in the lower side thereof, a downwardly extending portion joined to the upper end of the vertical portion by a curved passage, the lower end of the downwardly extending portion being open, a swinging valve mounted in the downwardly extending portion, one wall of the vertical portion extending vertically between the vertical and downwardly extending portions and terminating a distance from the juncture therebetween, said valve being arranged to control the opening through the downwardly extending portion, a handle mounted on the valve externally of the chute, and a spring keeper carried by the chute for engagement by said handle to maintain the handle and valve at different positions.

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

ALBERT T. HANSON.

Witnesses:

JOHN OTTIS,

S. E. TRUEBLOOD.