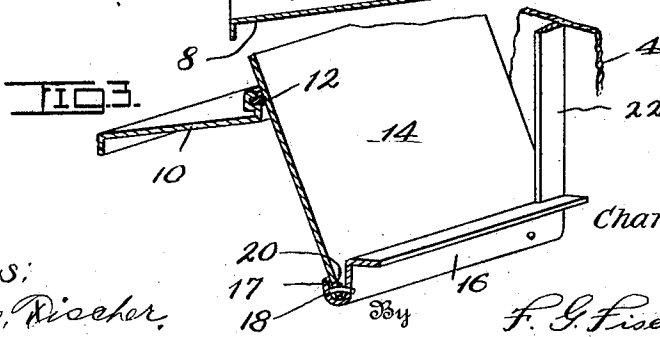
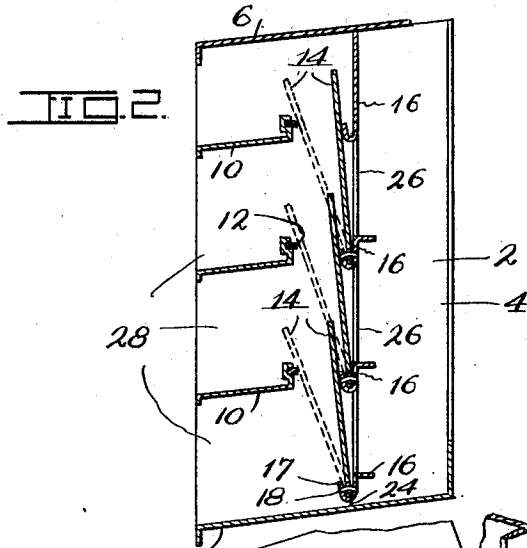
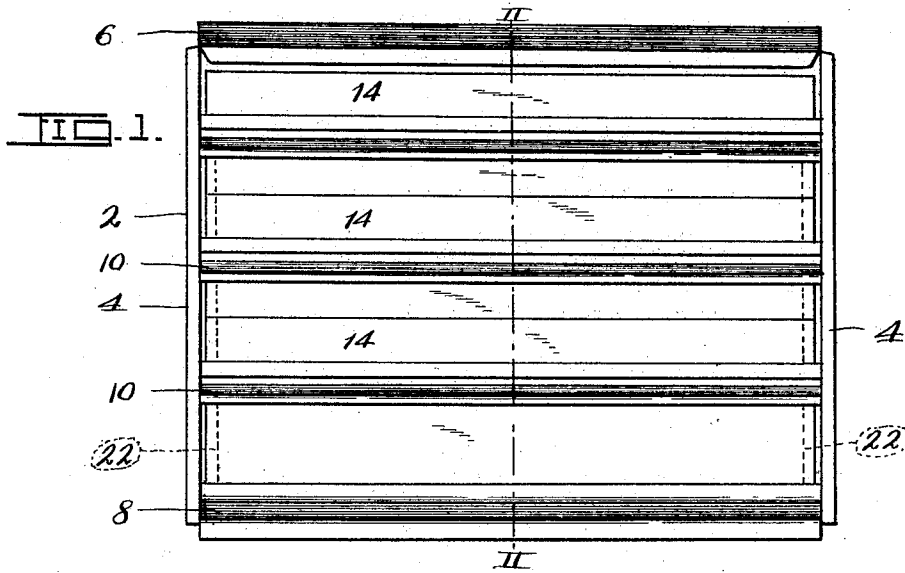


C. P. CALDWELL.
VENTILATOR.
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1,408,441.

Patented Mar. 7, 1922.



Witness:
Fred C. Rischer,

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UNITED STATES PATENT OFFICE.

CHARLES P. CALDWELL, OF KANSAS CITY, MISSOURI.

VENTILATOR.

1,408,441.

Specification of Letters Patent.

Patented Mar. 7, 1922.

Application filed April 4, 1921. Serial No. 458,309.

To all whom it may concern:

Be it known that I, CHARLES P. CALDWELL, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Ventilators, of which the following is a specification.

My invention relates to improvements in ventilators for use on skylights, pent houses, attics, gables, and other structures where it is desirable to install ventilators, and the chief object of the invention is to provide a ventilator which will prevent the passage therethrough of rain, sleet, snow, etc.

In its preferred embodiment the invention embodies a frame in which one or more vanes are so mounted as to be closed by the pressure of the wind during a rain, sleet, or snow storm and thus prevent the elements from passing through the ventilator and entering the structure in which it is installed, said vanes being so mounted as to automatically open for the purpose of ventilation when the velocity of wind falls to a point where there is no danger of blowing the rain, sleet, or snow through the ventilator.

In order that the invention may be fully understood, reference will now be had to the accompanying drawing, in which:

Fig. 1 is a front elevation of the ventilator.

Fig. 2 is a vertical section on line II—II of Fig. 1.

Fig. 3 is an enlarged fragmentary perspective view of a portion of the ventilator.

In carrying out the invention, I employ a frame 2 which is, preferably, rectangular in outline and consists of side walls 4 and top and bottom walls 6 and 8, respectively. As shown more clearly on Fig. 2, the top and bottom walls 6 and 8, respectively, slope downwardly and outwardly to carry off any water that might enter.

The forward portion of the frame 2 is divided horizontally by one or more louver slats 10, which slope downwardly and outwardly to shed any rain which might be blown thereon during a storm. The rear margins of the louver slats 10 are provided with longitudinal strips of rubber or other cushions 12 to deaden the sound which might otherwise occur when struck by the self-opening vanes 14.

The vanes extend from side to side of the

frame 2, but sufficient clearance is left to permit them to rock freely on supporting elements 16, which are horizontally disposed and fixed at their ends to the side walls 4. The lower portion of each supporting element 16 is turned upwardly as indicated at 17 to form a groove for the reception of the lower margins of the respective vanes 14, which are secured against displacement by pins 18 extending loosely through holes 20 in the vanes. The upturned portions 17 also form stops against which the vanes 14 impinge when closed by the wind.

Rain is prevented from entering between the side walls 4 of the frame 2 and the ends of the vanes 14 by flanges 22 fixed to said side walls 4 and extending vertically from one supporting element 16 to the other. The uppermost supporting element 16 extends upwardly against the inner surface of the top wall 6 of the frame 2 to prevent rain from entering over the top of the uppermost vane 14. However, should any rain find its way to the rear of the vanes 14 it will be carried outwardly by the inclined bottom wall 8, a space 24 being left between said bottom wall and the lowermost supporting element 16 for that purpose.

In practice the frame 2 is installed in the usual manner with its front surface flush or substantially flush with the face of the structure in which it is installed. Normally the vanes 14 are in open position as disclosed by dotted lines, Fig. 2, so that the warm air in the building can readily pass upwardly and outwardly through the openings 26 between the supporting elements 16 and the openings 28 between the slats 10 and the top and bottom walls 6 and 8 of the frame 2. Should a storm arise, rain, snow or sleet is prevented from entering the openings 26 by the vanes 14, which are closed by the pressure of the wind. As the upturned portions 17 of the supporting elements 16 are arranged to prevent the vanes 14 from moving to a vertical position when closed by the wind, said vanes 14 immediately swing forwardly to open position when the wind ceases, their opening movement being unaccompanied by noise owing to the cushions 12. If desired the supporting elements 16 may likewise be supplied with cushions, so that the closing of the vanes 14 will be unaccompanied by noise.

In case of rain unaccompanied by wind the vanes 14, of course, will remain open,

but as they extend above the rear portions of the louver slats 10 any rain striking on the latter will be prevented from splashing into the opening 26.

- 5 From the foregoing description it will be understood that I have provided a ventilator possessing the advantages above pointed out, and while I have shown and described the preferred embodiment of the invention, I
10 reserve the right to make such changes in the construction, combination and arrangement of parts, as properly fall within the spirit and scope of the claims.

Having thus described my invention, what
15 I claim and desire to secure by Letters Patent, is:

1. A ventilator consisting of a frame having an opening for the escape of air into the outer atmosphere, said frame having
20 outwardly and downwardly inclined top and bottom walls, supporting elements extending from side to side of the frame and having upturned lower portions, self-opening vanes rockably mounted in the lower

portions of said supporting elements and 25 adapted to close against said upturned portions, and means to limit the opening movement of said vanes.

2. A ventilator consisting of a frame having an opening for the escape of air into 30 the outer atmosphere, said frame having outwardly and downwardly inclined top and bottom walls, supporting elements extending from side to side of the frame and having upturned lower portions, self-opening 35 vanes rockably mounted in the lower portions of said supporting elements and adapted to close against said upturned portions, and downwardly and forwardly inclined louver slats spaced in advance of the sup- 40 porting elements and adapted to limit the opening movement of the vanes.

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

CHARLES P. CALDWELL.

Witnesses:

F. C. FISCHER,
L. J. FISCHER.