June 16, 1925. 1,542,740

E. T. SPILLMAN

VENTILATOR

Filed May 31, 1924

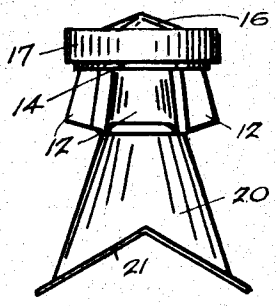


FIG. 1

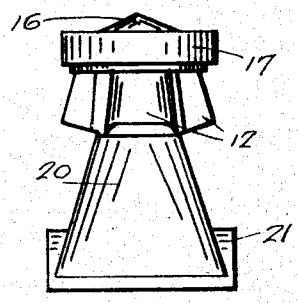


FIG. 2

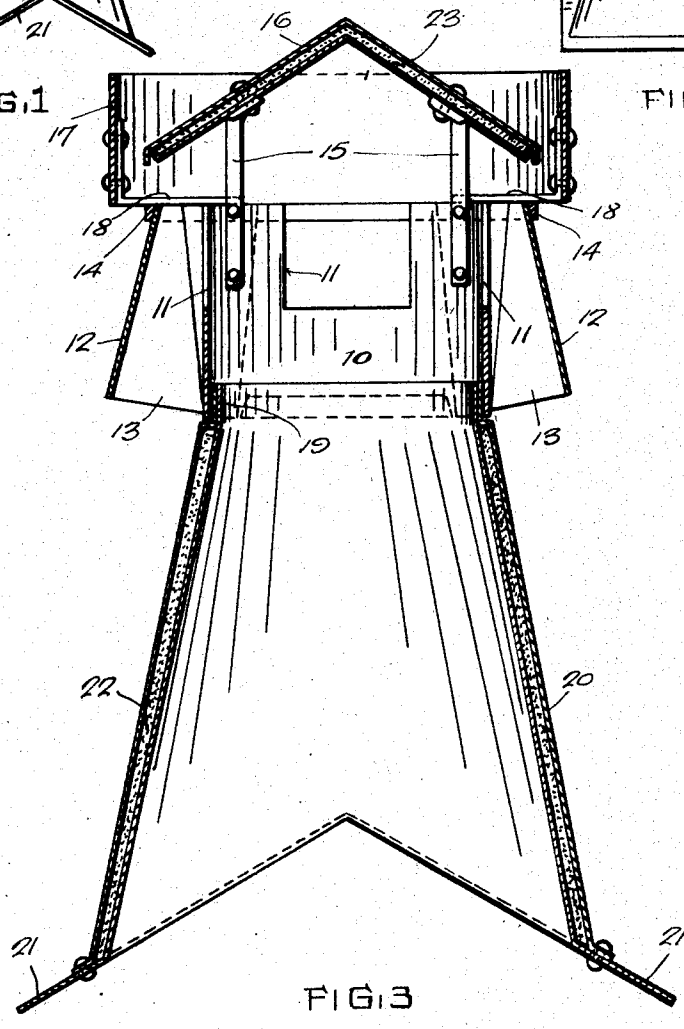


FIG. 3

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UNITED STATES PATENT OFFICE.

EDWARD T. SPILLMAN, OF COLUMBUS, OHIO, ASSIGNOR TO THE V-W VENTILATOR COMPANY, OF COLUMBUS, OHIO.

VENTILATOR.

Application filed May 31, 1924. Serial No. 716,973.

To all whom it may concern:

Be it known that I, EDWARD T. SPILLMAN, a citizen of the United States of America, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Ventilators, of which the following is a specification.

My present invention relates generally to ventilators and more particularly to ventilators of the type described and claimed in my Patent Number 1,497,996, dated June 17, 1924, my primary object being to extend and adapt such a ventilator to use in connection with industrial buildings of various characters, for instance paper mills, power houses, factories, foundries, car shops, glass factories, laundries, round houses, freight houses and the like, and especially those buildings wherein the dripping of condensed water from steam and vapor passing through the ventilators is detrimental to the work carried on within the building.

My present improvements are generally embodied in a ventilator of the type above mentioned, by providing the same with a supporting base and a hood, both arranged and constructed to avoid the condensation of steam and water vapor on the inner surface thereof, together with means whereby to protect the hood and to cooperate in the support of certain of the other parts.

In the accompanying drawing which illustrates my present invention and forms a part of this specification,

Figure 1 is a side view showing my improved ventilator for application to a ridge roof,

Figure 2 is a similar view showing the same for application to a flat sloping roof, and

Figure 3 is a vertical sectional view taken centrally through my improved ventilator on an enlarged scale.

Referring now to these figures, the cylindrical body 10 of my improved ventilator has a circumferential series of openings 11 therearound and extending downwardly therein from its upper edge, so as to provide for the lateral passage of air from the interior of the body 10 into a series of external shields 12 grouped around the body opposite the openings 11. These shields are of U-shape as in my previous application and have side walls 13 tapering from relatively wire lower ends where they are secured to the external surface of the ventilator body 10, to relatively narrow upper portions where these side walls are spaced from the body 10, the shields being secured at their upper ends to a supporting ring 14 around and spaced from the upper end of the body 10.

Supported above the body 10 and spaced therefrom by virtue of vertical supporting arms 15, is a conical hood 16 of such a diameter that its lower outer edge extends beyond the upper edge of the body, this hood being surrounded in spaced relation by an upright circular storm band 17 securely held by virtue of its connection with the upstanding outer portions of angular supporting arms 18, the inner portions of these arms being secured to the body 10 and the intermediate portions thereof being connected to and supporting the ring 14 to which the upper ends of the shields 12 are connected.

At its lower end the body 10 telescopes the upper reduced portion 19 of a tubular tapering supporting base 20 whose lower larger end is cut away to fit a particular roof contour as for instance a ridge roof such as shown in Figures 1 and 3 or a flat sloping roof as shown in Figure 2, the lower larger end of the supporting base 20 being in either instance provided with a surrounding flange 21 affording means whereby the ventilator as a whole may be securely attached to the roof of a building in connection with which it is to be used, around the ventilating opening of the roof.

Thus the air within the building including steam and water vapor if such are present, rise within the tubular base 20 and in this way to the body 10 of the ventilator and it is obviously of great consideration to avoid the collection of condensed water upon the inner surface of the base 20 and the lower surface of the hood 16 which might otherwise drip within the building to the detriment of the work being carried on therein.

It is for the reason just stated that the tubular base 20 is formed with double walls spaced apart as at 22 for insulating purposes, this space being either a dead air space or filled with any suitable insulating wool or other material as may be desired to bring about the result which is sought for.

The hood 16 is likewise constructed with double walls spaced apart for insulating purposes as at 23, the space so formed being either a dead air space or filled with insulating material which by virtue of the provision of apertures or passages opening laterally into external shields, the body 10 is sufficiently insulated for the purposes above stated and my improvements thus bring about the desired results in a construction which is obviously of great strength, efficiency and durability and one which operates automatically and continuously without mechanically working parts to get out of order, bind, rattle or squeak for lack of lubrication. My improved ventilator is simple, strong and silent and will secure the desired results without cost beyond the first cost.

I claim:

1. A ventilator of the type described, including a vertical cylindrical body having apertures in the wall thereof, shields secured externally of the body opposite the apertures and in upwardly and inwardly inclined relation to, and spaced from, the body, having tapering side walls whose upper portions are spaced from the body, a hood spaced above the body, and a tubular supporting base on which said body is disposed, said base and said hood having double walls and insulating spaces between said walls whereby to prevent condensation on the inner surfaces thereof, as described.

2. A ventilator of the type described, including a vertical cylindrical body having apertures in the wall thereof, shields secured externally of the body and into which the body opens through said apertures, said shields being of U-shape and having side walls secured at their lower portions to the body and having their upper ends spaced from the body, a ring to which the upper ends of the shields are connected, a conical hood above the body, a storm band around, and spaced from, the hood, supports upstanding from the body for the support of said band and to which the said ring is connected, and a supporting base on which the body is seated.

3. A ventilator of the type described, including a vertical cylindrical body having apertures in the wall thereof, shields secured externally of the body and into which the body opens through said apertures, a hood spaced above the body, a tubular supporting base on which said body is disposed, said base and said hood having double walls and insulating spaces between said walls whereby to prevent condensation on the inner surfaces thereof, a storm band around and spaced from the hood, a ring around, and connected to, the said shields, and angular supporting members upstanding from the body to which said ring and said band are connected.

In testimony whereof I have affixed my signature.

EDWARD T. SPILLMAN.