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D. S. EARHART

1,502,944

VENTILATOR

Filed June 1, 1923.

Fig. 1.

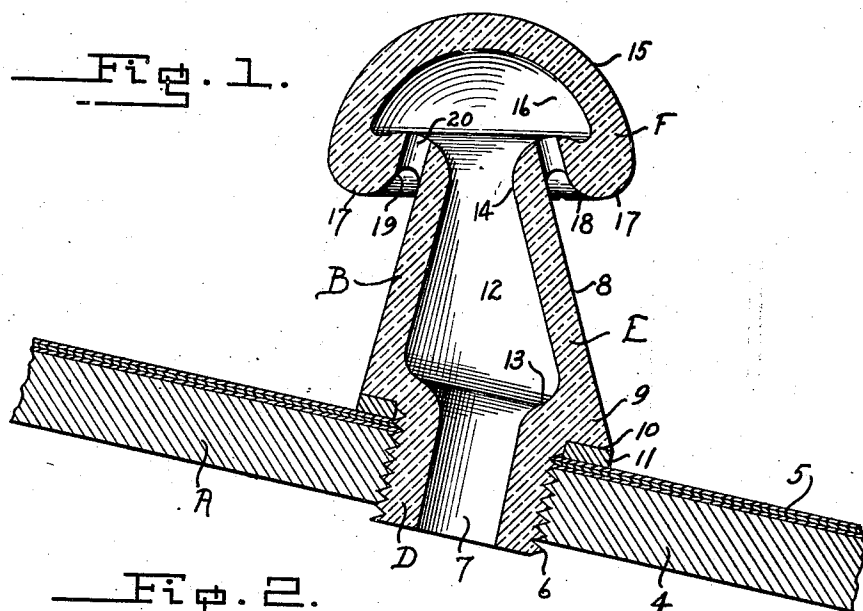


Fig. 2.

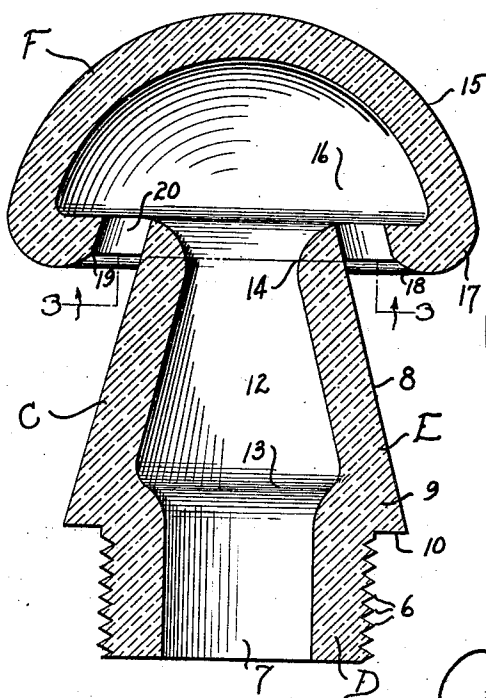
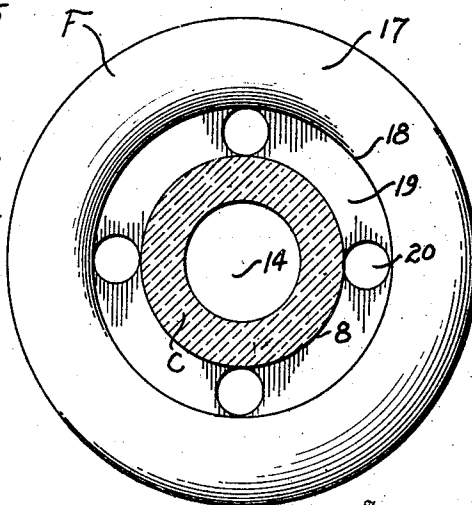


Fig. 3.



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UNITED STATES PATENT OFFICE.

DAVID S. EARHART, OF WAUCHULA, FLORIDA.

VENTILATOR.

Application filed June 1, 1923. Serial No. 642,811.

To all whom it may concern:

Be it known that I, DAVID S. EARHART, a citizen of the United States, residing at Wauchula, in the county of Hardee and State of Florida, have invented certain new and useful Improvements in Ventilators, of which the following is a specification.

This invention relates to ventilators, and more particularly to a ventilator adapted to be positioned upon the roofs of dwellings, barns, or other building structures.

It has been the disagreeable and costly experience of owners of dwellings constructed with roofs of a solid nature, that is, roofs constructed of sheathing and having an exterior surface of tin or roofing paper, and especially of low pitch, to have the roof lifted off by the action of the wind, due to the fact that there is no circulation of air in the chamber beneath, and as the wind strikes the roof it creates a suction, causing the roof to be lifted off. It is therefore an object of this invention to provide ventilators for such solid roofs which will allow the air to enter into and pass out of the chamber beneath a solid roof, thus overcoming the objectionable feature above mentioned.

It is a further object of this invention to provide a ventilator of novel construction which can be conveniently placed upon a roof without having to be "built in"; and which is so constructed that it may be used as a means for leading in telephone or electric light wires into the house.

A still further object is to provide a ventilator of the above character which may be made of some insulating material, such as glass, porcelain, etc., rendering it durable and efficient in use, one that is simple and easy to manufacture, and one that can be put upon the market at a reasonable cost.

Other objects and advantages will appear in the following detailed description, taken in connection with the accompanying drawing, forming a part of this specification and in which drawing:

Figure 1 is a vertical sectional view thru the ventilator showing it placed upon a fragment of a slanting solid roof.

Figure 2 is a vertical sectional view thru a slightly modified form of ventilator and is particularly well adapted for use on roofs where the pitch is very slight.

Figure 3 is a transverse section taken on

the line 3—3 of Figure 2, looking in the direction of the arrows.

In the drawing, where similar reference characters designate corresponding parts throughout the several views, the letter A designates a roof; B, and C indicate ventilators constructed according to my invention and adapted to be carried by the roof A, both ventilators having in common a nipple D, a body portion E, and a head F.

The roof A may be of any desired construction, and in the example shown consists of sheathing 4 with layers of paper roofing 5 thereon to render it waterproof.

Referring now to both forms B and C of my improved ventilator, they preferably each include a nipple D provided with exterior screw threads 6 and a way 7 formed therethrough. The body portion E preferably has its walls 8 of frustro-conical formation, and converging into the head F which will later be described. The base 9 of the body portion E forms an annular shoulder or seat 10 and is adapted to carry a gasket or rubber ring 11, which, when the nipple D is screwed into the roof A will prevent the possibility of leakage. The way 7 of the nipple D communicates with an interior chamber 12 of the body portion E, the chamber 12 conforming substantially to the shape of the body portion E, being enlarged at its base 13 and constricted at its upper portion as at 14.

The head F is formed on the frustro-conical body portion E, and is preferably dome shaped having its outer surface 15 rounded. This dome shaped head also is provided with an inner chamber 16 which communicates with the constricted portion 14 of the chamber 12. The under surface of this head may be convex, defining an annular flange 17, which acts as a rain drip and prevents water from entering through the ventilator into the room beneath the roof. The inner surface 18 of the convex flange 17 extends into an annular groove 19 which is provided with a plurality of port openings 20 leading into the chamber 16 formed in the head F. It is through these ports 20 that air is allowed to enter the ventilator from the outside into the chamber 16 in the head F, down thru the chamber 12 in the body portion E, thru the way 7 in the nipple D and into the chamber or room beneath

the roof A. These port openings 20 may also be used as a means for leading electric light or telephone wires into the house, without impairing the efficiency of the device as a ventilator.

It is to be noted that the ventilator shown in Figure 1 differs from that shown in Figure 2 in that it is well adapted for use on roofs that are disposed at an angle to the horizontal, having its body portion E formed so as to be in an upright or vertical position, while the nipple D is inclined at an angle to the body E, so that it may enter the slanting roof at a right angle thereto and hold the body E in a vertical position. Were the ventilators C to be applied to a roof of any great pitch, the body portion E and head F would be inclined at such an angle, that it would be possible for rain to enter the port openings 20 and thence into the room beneath the roof A.

From the foregoing description it can be seen that a ventilator of novel construction has been provided which will allow air to be admitted beneath a roof, but which will efficiently exclude any dirt, rain or great inrush of air due to its peculiar construction.

Changes in details may be made without

departing from the spirit of the invention or the scope of the claims; but,

I claim:

1. A ventilator comprising a hollow frustro conical shaped body portion, a depending nipple for engagement with a solid roof, and a dome shaped head formed on the body portion having an inner chamber therein communicating with said hollow body portion, said dome shaped head having its under surface convex, defining an annular flange and extending into an annular groove provided with port openings leading into the inner chamber of the head.

2. A one piece ventilator formed with a hollow frustro conical shaped body portion, a depending nipple for engagement with a solid roof, formed on the body portion with the axis thereof extending at an angle to the axis of the body portion, a shoulder formed at the juncture of the nipple and body portion for providing a seat extending at right angles to the axes of said nipple, and a head formed on the upper end of the body portion having port openings therein for communication with the hollow body portion and nipple.

DAVID S. EARHART.