(No Model.)

J. C. HENDERSON.

Chimney Ventilator.

No. 232,642. Patented Sept. 28, 1880.

Fig. 1.

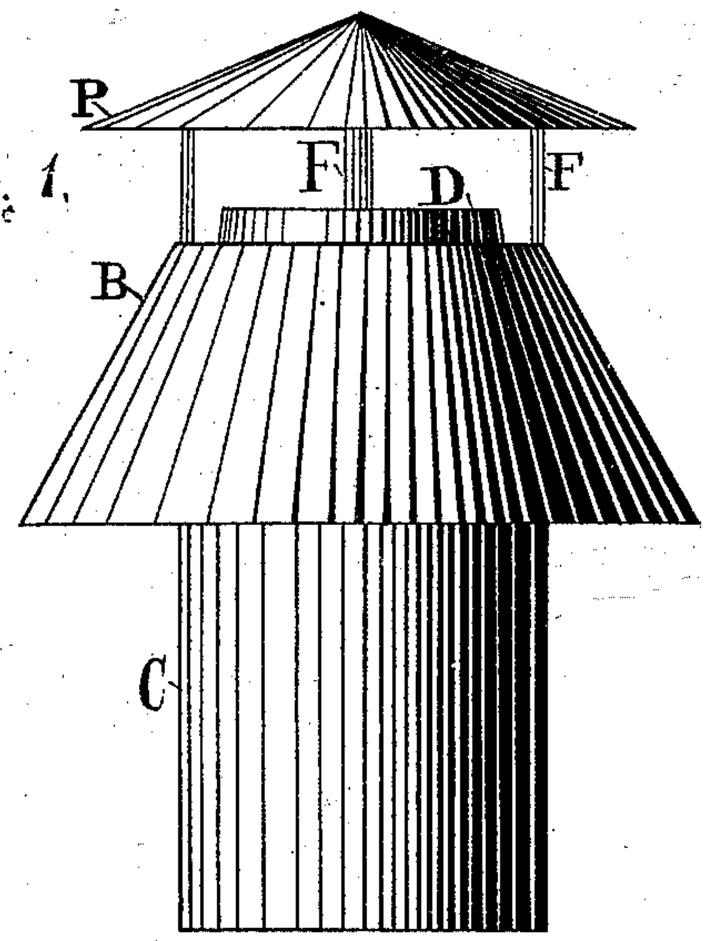


Fig. 2.

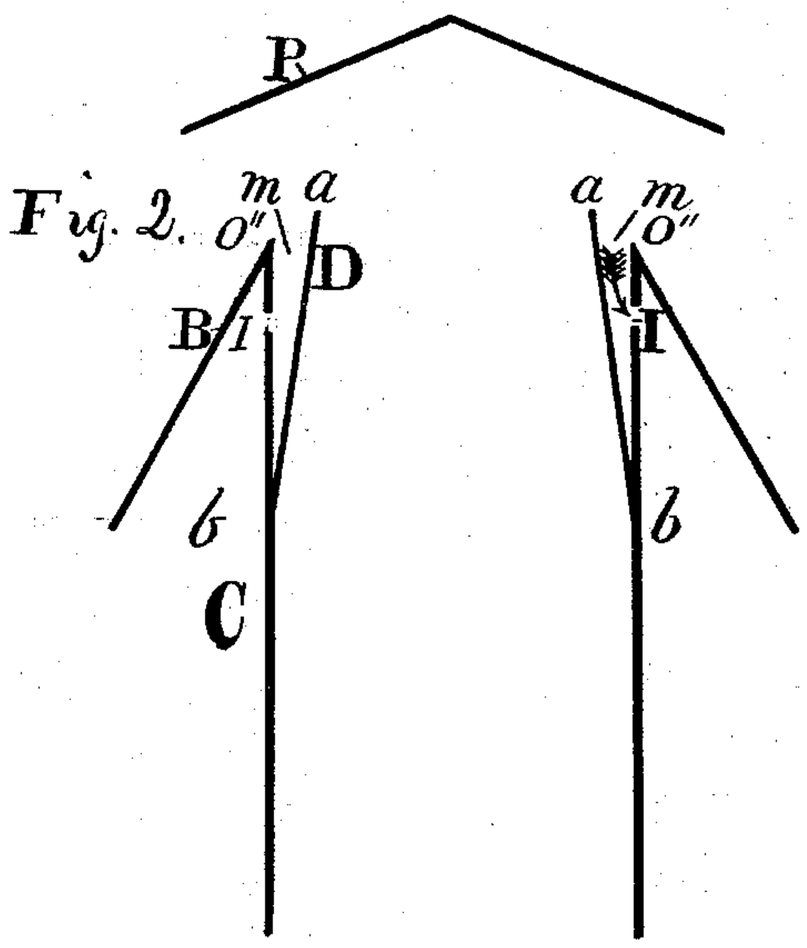
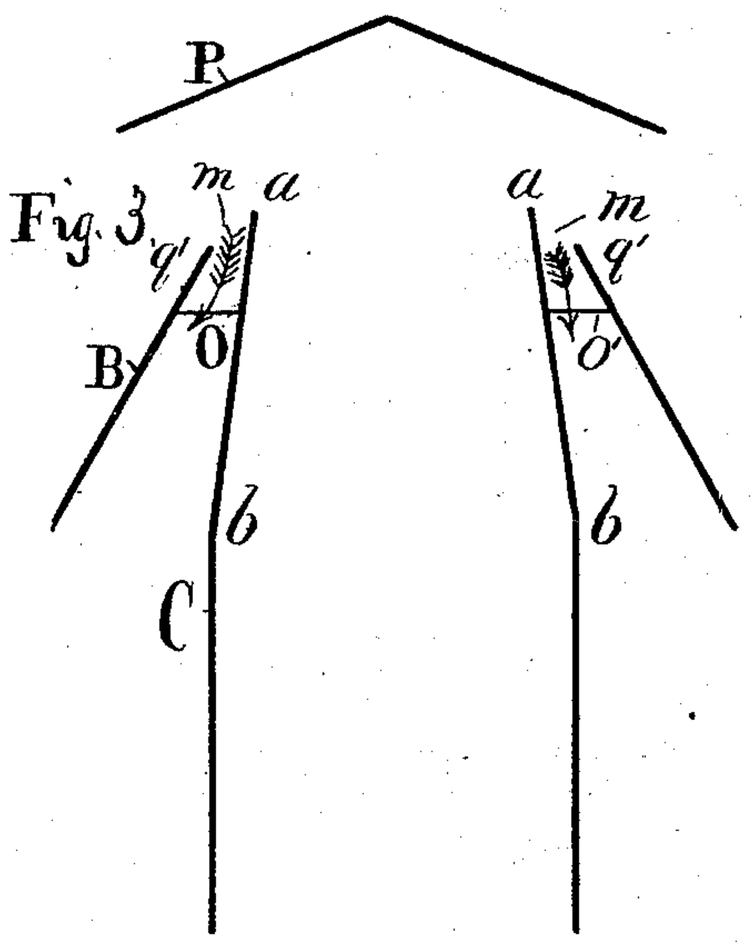


Fig. 3.



Witnesses:
David Henderson.
James W. Greene.

J. C. Henderson.

UNITED STATES PATENT OFFICE.

JOSEPH C. HENDERSON, OF TROY, NEW YORK.

CHIMNEY-VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 232,642, dated September 28, 1880.

Application filed March 23, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH C. HENDERSON, of the city of Troy, county of Rensselaer, and State of New York, have invented a new and useful Improvement in Ventilators, and of which the following is a specification.

My invention relates to improvements in that class of ventilators which is used upon chimney-tops and the exterior ends of flues and ventilator-pipes; and it consists, as hereinafter described, in a manner of combining with the ordinary deflecting-apron surrounding the egress top opening of the ventilator-pipe an interior pipe, which, at its egress end, is contracted to taper inwardly, so as to form around the end thus contracted and between its exterior surface and the top edge of the tapering apron an annular current-deflecting passage.

The object of my invention is to provide a passage-way between the rim of the egress-opening at the top of the deflecting-apron and the top edge of the ventilating-pipe, so that the eddying current produced upon and over the edge of the latter by the exterior wind force will curl down into the annular passage instead of into and against the egress-current of the ventilating-pipe, as it does where the latter and apron unite in an acute angle around the top of the pipe.

In the accompanying drawings, forming a part of this specification, there are three figures illustrating my improvement, in all of which the same letters are employed upon the same parts of the device.

Figure 1 shows an elevation of a ventilator to which my improvement has been added, and exteriorly illustrating the position of the inner contracted egress end of the exit-pipe and its position relatively to the top of the apron. Fig. 2 shows a section taken vertically through the center of the ventilator, with the contracted end of the egress-pipe formed within the inside of the apron-top rim and also inside of the vertical continuation of the straight side of the pipe, so as to form an annular opening between the contracted egress-pipe and the top rim of the apron, showing, also, by arrows the direction of the eddy current produced by the lateral wind force against and over the upper rim of the deflecting-apron. Fig. 3 shows a modification of the same ventilator, in which the annular opening is formed in the same manner by contracting the exit-pipe at its egress-top, but with the vertical extension of the straight part of the pipe from where the contraction commences, as shown in Fig. 2, removed, and the apron connected with the contracted pipe by transversely-arranged connecting-braces.

The several parts of the device are designated by letter reference and described as follows:

The letter P indicates the cap, having the usual form of a flattened cone, and if desired this may be made flat.

B designates the apron, which is of the ordinary deflecting form employed in ventilators of the class to which my invention is applicable.

C indicates the straight portion of the ventilator-pipe, to which, as usually made, the deflecting-apron is attached at the top on an angle, as shown at O″ O″.

The letter D designates a contracted outlet-pipe, which tapers inwardly and upwardly, as shown, and so as to form between its top rim and the top rim of the deflecting-apron the annular passage or opening *m m*.

At I I are shown apertures for the passage of the curling eddy current coming over the rim of the apron-top.

The letters F F indicate the vertical supports connecting the cap with the apron.

While I have shown the pipe D as projected a little above the top rim of the apron, I do not desire to make its upward extension in this respect an arbitrary condition of my invention, for the annular opening will perform the same office in the same manner whether the top of the pipe be slightly above the apron-rim or on a level with it.

When the wind is blowing laterally against the ventilator side the current deflected upwardly by the apron forms an eddy current, which curls over its edge into the annular opening; but were the apron-rim, at its top, connected with the top of the pipe this eddy would curl over the edge of the latter and into the emerging ventilating-current, to interfere in a measure with its delivery-passage.

I am well aware that my invention is lim-

ited to an improvement upon an older device, in which, by reconstruction and form, a new factor (the annular opening) is added, by which a defect existing in the older device is removed.

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

In a ventilator, the combination of the cap P, suspended deflecting-apron B, ventilator-pipe C, and exit-pipe D, the latter being smaller in its diameter at the top than the top diameter of the apron-rim, with the annular openings *m* arranged between the top of the egress-pipe and top rim of the apron, substantially as and for the purposes described.

Signed at Troy, New York, this 20th day of March, A. D. 1880.

J. C. HENDERSON.

Witnesses:
CLARENCE B. CUTLER,
GEO. TIMMINS.