

A. & A. VAN HORN.  
Ventilator.

No. 212,287.

Patented Feb. 11, 1879.

FIG: 1.

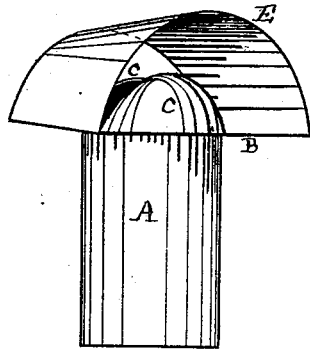


FIG: 2.

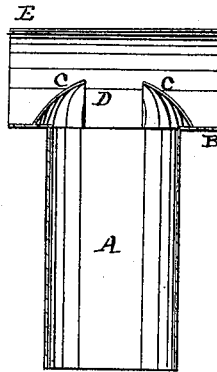
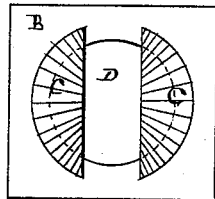


FIG: 3.



Witnesses.  
Henry T. Freeman,  
Charles L. Barrin

Inventors.  
Abner Van Horn  
Andrew Van Horn

# UNITED STATES PATENT OFFICE.

ABNER VAN HORN AND ANDREW VAN HORN, OF BROOKLYN, E. D., N. Y.

## IMPROVEMENT IN VENTILATORS.

Specification forming part of Letters Patent No. **212,287**, dated February 11, 1879; application filed June 22, 1878.

*To all whom it may concern:*

Be it known that we, ABNER VAN HORN and ANDREW VAN HORN, of Brooklyn, E. D., Kings county, and State of New York, have invented certain new and useful Improvements in Ventilators for Chimneys, Railroad - Cars, and other purposes; and do hereby declare the following to be a full description of the same, reference being had to the accompanying drawings, forming a part of this specification, the same letters of reference, wherever they occur, referring to like parts.

Figure 1 is a perspective view of the ventilator. Fig. 2 is a vertical cut-sectional view of the same. Fig. 3 is a plan view of the same through the line *x x*, Fig. 2.

Letter A represents the exhaust-pipe, constructed of sheet metal, of any required length and diameter for the place where the ventilator is to be used. Upon its upper end, and flush with its edges, is solidly secured a cap-plate, B, with an opening in it of the same diameter as the pipe. This cap-plate is nearly square, and of about twice the diameter of the pipe, so as to leave a margin at all sides of it. On this cap-plate is solidly secured, by any suitable means, a dome-like deflector, C, with a slot, D, transversely of it. The width of this slot is about equal to one-half of the diameter of the exhaust-pipe. Through this slot the smoke and gas make their escape. To

promote this result, a hood, E, is arched over the cap-plate, and secured to its outer edges, so as to direct the currents of air through it transversely of the slot in the dome.

The height of the dome is about half that of the arch of the hood, so as to leave a free passage through the hood at the sides and above the dome. By this means the currents of atmospheric air, from whatever direction they impinge upon the hood, cannot produce any back currents down the exhaust-pipe through the slot in the dome, but, on the contrary, will cause a vacuum at either end of the hood to allow of the free escape of the smoke and gases from the chimney or chamber below, to which the ventilator may be attached.

Having now described our invention, we will proceed to set forth what we claim as new and desire to secure by Letters Patent of the United States:

The square cap-plate B, with opening, and provided on the upper side with a dome-like deflector, C, with the transverse slot D, in combination with the exhaust-pipe A and hood E, substantially as and for the purpose set forth.

ABNER VAN HORN.  
ANDREW VAN HORN.

Witnesses:

CHARLES L. BARRETT,  
HENRY V. FREEMAN.