

W. S. ANDREWS.
VENTILATING CARS, &c.

No. 181,240.

Patented Aug. 22, 1876.

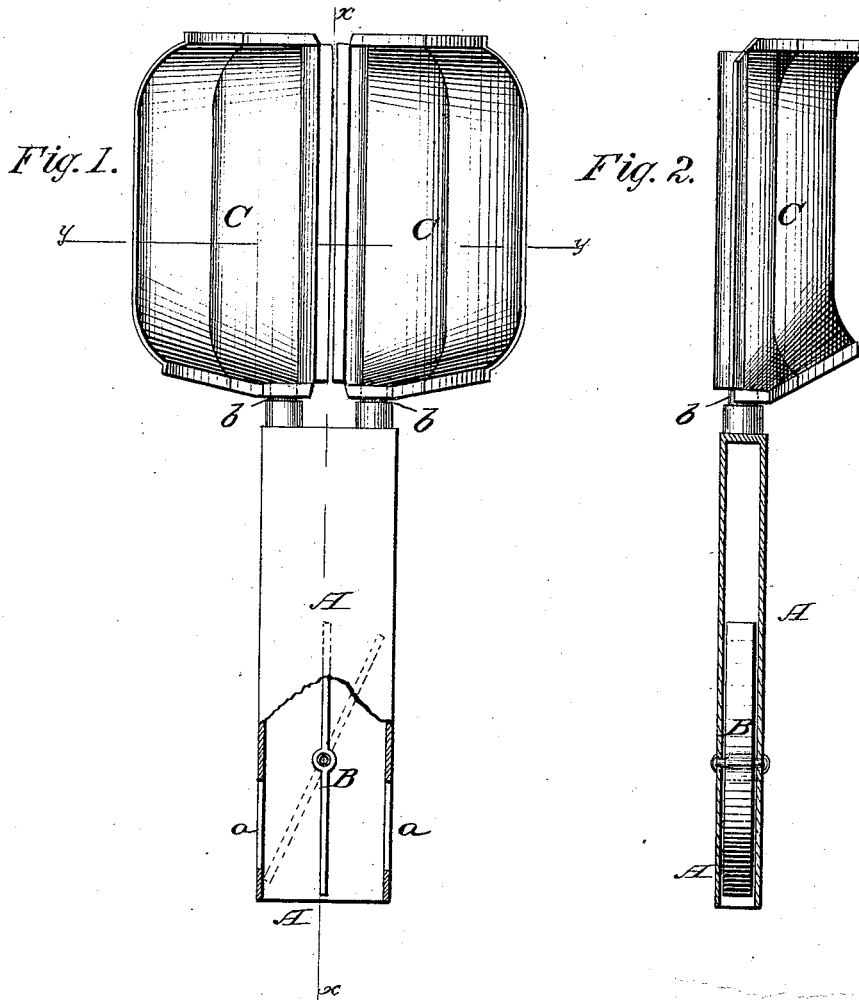
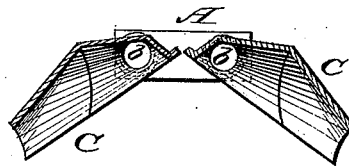


Fig. 3.



Witnesses:
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Per: *C. H. Watson & Co* Attorneys.

UNITED STATES PATENT OFFICE.

WRIGHT S. ANDREWS, OF GALVESTON, TEXAS.

IMPROVEMENT IN VENTILATING CARS, &c.

Specification forming part of Letters Patent No. **181,240**, dated August 22, 1876; application filed July 12, 1876.

To all whom it may concern:

Be it known that I, WRIGHT S. ANDREWS, of Galveston, in the county of Galveston and State of Texas, have invented certain new and useful Improvements in Device for Keeping Ashes and Cinders from Railroad-Cars and Ventilation; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a device for ventilating cars and vessels, and for preventing cinders and ashes from entering cars, as will be hereinafter more fully set forth.

In the annexed drawing, Figure 1 is a side elevation of my invention. Fig. 2 is a transverse vertical section through the line *x x*, Fig. 1; and Fig. 3 is a horizontal section through the line *y y*, Fig. 1.

A represents a flat tube, which is to be placed in a vertical position between the windows of a car on the inside, with its upper end nearly on a level with the window-sills. This tube is to extend from one to two inches through and below the bottom of the car, or enough to be sufficient for openings *a a*—one on each side to let the air pass out from the hoods or blowers on top. At the bottom of the tube A is a centrally-pivoted self-acting valve, B, which opens and closes according to the motion of the car, leaving a free vent for the cinders and air to pass out toward the rear. C C represent two hoods or blowers, constructed substantially as shown in the drawing, which are

provided with small tubes *b b* at their bottoms, to be inserted in the top of the flat tube A. These hoods or blowers are arranged so that their outer edges will come close up to the two adjacent windows, and will catch all the dust, cinders, and ashes, and carry them by the draft of air through the tube A to the outside of the car.

When a car is in motion the cinders entering the window will seldom extend over two inches from the side of the car until they get to the next window and meet the current entering through it, when they are scattered more into the car, and every window they pass they are blown that much more through the car.

By arranging my invention between all the windows of the car the cinders are caught when they first come in.

My invention may also be used as a ventilator for railroad-cars and vessels by arranging the hoods or blowers C C above in the open air, and having the openings *a* within the car instead of below the bottom.

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

The combination of the flat tube A, with bottom openings *a a* and self-acting valve B, and the hoods or blowers C C, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WRIGHT S. ANDREWS.

Witnesses:

J. M. COLVIN,
CHAS. SOMMER.