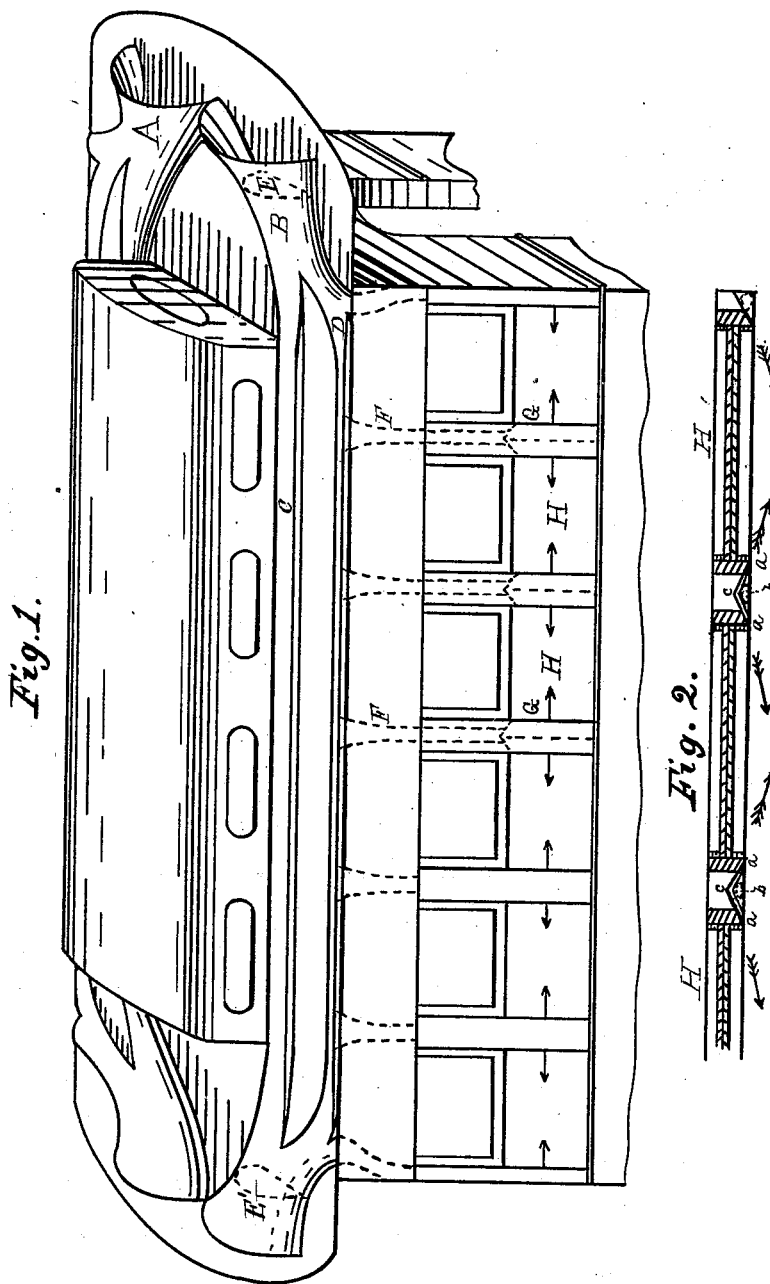


J. E. DRIESBACH.
Smoke and Dust Excluders.

No. 215,896.

Patented May 27, 1879.



Witnesses.

W. H. Newton
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UNITED STATES PATENT OFFICE.

JAMES E. DRIESBACH, OF CLEVELAND, OHIO.

IMPROVEMENT IN SMOKE AND DUST EXCLUDERS.

Specification forming part of Letters Patent No. **215,896**, dated May 27, 1879; application filed November 9, 1878.

To all whom it may concern:

Be it known that I, JAMES E. DRIESBACH, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and Improved Smoke and Dust Excluder; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to certain improvements in ventilating devices for railway-cars, by means of which the admission of dust, cinders, and smoke to the car may be prevented, and at the same time a circulation of pure air be obtained.

It is my intention to so apply a series of pipes to a car, in connection with hoods or cowls upon and at either end of the roof, to obtain a pressure of air within the pipes, and then to allow its escape through long and narrow openings at such an angle in front of the lower sash of the window as that the force of the compressed air escaping through the openings will, when the car is in motion, be sufficient to overcome the draft of air inwardly through the windows, and thus prevent any dust or cinders being carried into the car when the lower sash is raised or a window open entirely or in part.

In the drawings, Figure 1 is a perspective view of the roof and sides of a car having my dust, cinder, and smoke arrester attached. Fig. 2 is a plan of a portion of the side of a car, showing the arrangement of pipes and openings between the windows.

A and B, Fig. 1, are hoods or cowls, attached to the roof of a so-called "Monitor Car," in front of the turret, two of these being at either end, leading to each side of the car by pipes C and D. But I do not limit myself to this particular form of hood, or confine the number of them to two at each end, as shown in the drawings, as only one may be used, extending across the entire width of the roof and branching through pipes to the sides of the car; or more than two may be used, and they may be made in various forms, as best adapted to the style of car, larger or smaller, as the case may require.

As shown by the dotted lines F and G, the air is conducted from the pipe D down between each two windows of the car, through a pipe until it enters the chamber G, which is triangular in form, from whence it is projected through a narrow opening in front of both windows, the slot being in such proportion to the size of the hoods that the air is projected with sufficient velocity to prevent a counter current entering the window from the outside, and the draft, when the windows are opened, is thus outwardly instead of inwardly, as would be the case were my device not employed.

At E E' are valves, (indicated by dotted lines,) opening inwardly into the hood in the direction the car is moving, and closing in the rear, thus confining the air in the pipes C D, and preventing its escape except through the pipes F and openings G. The pipe C extends the entire length of the car, and insures an equal distribution of air to all the windows.

In the plan, Fig. 2, I have shown the construction of the chambers between the windows. I propose to allow the pipe F to enter a chamber, as shown at *b*, the sides of which are constructed so as to form a decreasing space from the point *c* to the two openings *a a*, thus throwing the air at a greater or less angle in front of the windows H H to accomplish the purpose described before, as indicated by the direction of the arrows.

This device can be applied to any style of car, either during its construction or after completion, and may be made of an ornamental appearance in those parts which are visible from the outside, the pipes being concealed within the frame-work of the car.

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

1. The combination of the hoods A B, pipes C D, and their branches F, with the valve E and chambers G, as and for the purposes set forth and described.

2. In a device for arresting sparks, dust, and smoke from entering a car, the chambers G, situated between the windows of the car, constructed in the manner shown, and for the purposes described.

3. The angle-plates *c*, with openings from the chambers at *a a*, as and for the purposes set forth and described.

4. The combination, with a railroad-car having one or more hoods, *A B*, at each end, of the two pairs of pipes *C D*, extending along the roof, one pair on each side, and the pipes *F*, said pipes supplying air to the interior of the car, substantially as described and shown.

This specification signed and witnessed this 18th day of July, 1878.

JAMES E. DRIESBACH.

Witnesses:

J. ALFRED WAY,
EDW. S. TRACY.