

W.M.K. Thornton, 2. Sheets. Sheet. 1.

Car Ventilator.

No. 101,787.

Patented Apr. 12. 1870.

Fig. 1.

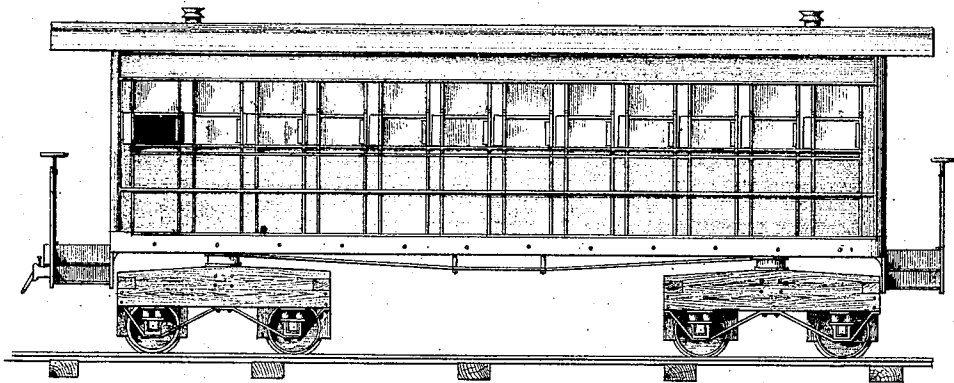


Fig. 2.

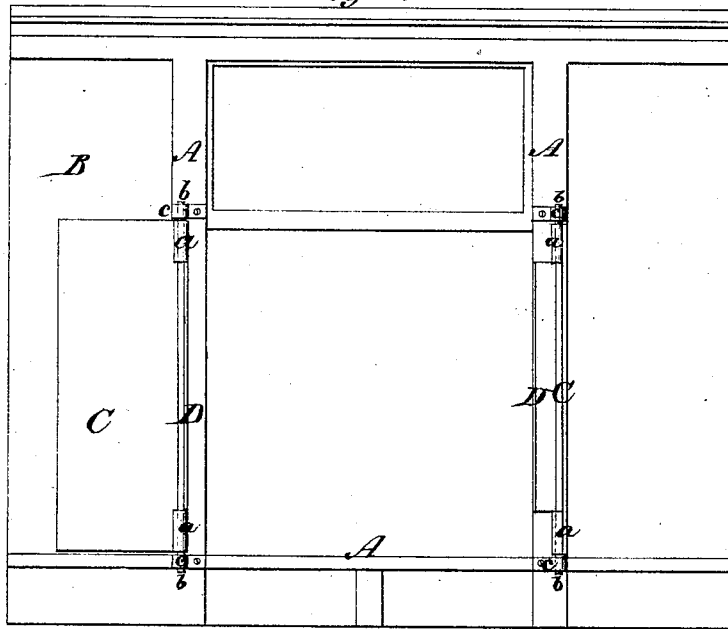
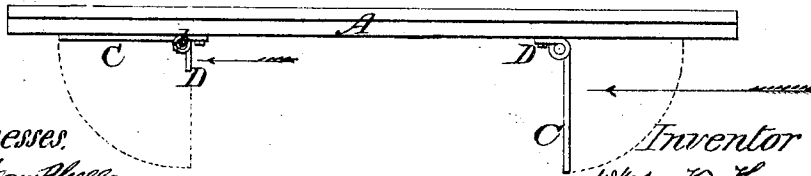


Fig. 3.



Witnesses

N. H. Campbell  
J. N. Campbell

Inventor

W. M. K. Thornton  
by  
M. L. Smith & Lawrence

W. M. K. Thornton,

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Fig. 4

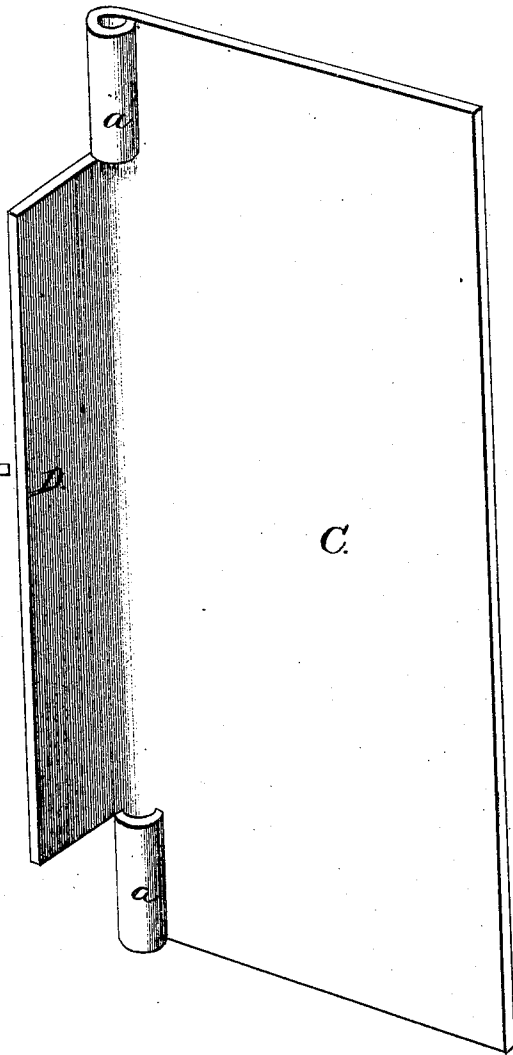
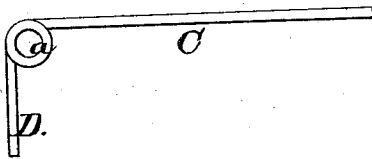


Fig. 5



Witnesses.

R. T. Campbell  
J. W. Campbell

Inventor

W. M. K. Thornton  
by  
Mason. Fausch & Stearns

# United States Patent Office.

WILLIAM M. K. THORNTON, OF ROLLA, MISSOURI.

Letters Patent No. 101,787, dated April 12, 1870.

## DUST-ARRESTER FOR RAILROAD-CARS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, WILLIAM M. K. THORNTON, of Rolla, in the county of Phelps and State of Missouri, have invented a new and improved Dust and Cinder-Arrester for Railroad-Car Windows; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1, plate 1, is a side elevation of a passenger-car having my improved arrester applied to the windows thereof.

Figure 2, plate 1, is an enlarged view of a window and arresters.

Figure 3, plate 1, is a top view of fig. 2.

Figures 4 and 5, plate 2, are enlarged views of the arresters.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improvement on the guard-plates or shields, which have been hitherto applied to car-windows for the purpose of preventing the entrance into the car of dust and cinders when the window-sashes are up.

The object of my invention is to improve window-shields or guards by constructing upon their hinged edges wings or blades, which shall serve a two-fold purpose, to wit, to make the shields self-adjusting, and also to hold the shields on those sides of the windows in the direction of movement of the train perpendicularly to the sides of the car, or in operating position, as will be hereinafter explained.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings—

A represents a window-frame of the car-body B.

To each vertical side of the frame A, on the outside of the car, one of my improved double-acting shields is applied. The shield on the two sides of the window are so applied that only one of them will operate at a time.

The shield C is a flat plate, of a rectangular form, or of any other suitable form, and of a length somewhat greater than the height of the opening left when the car-window is fully open.

The shields has constructed on one edge two eyes, *a*, and an intermediate right-angular wing, D, as clearly shown in figs. 2, 3, 4, and 5.

By means of the two eyes the shield and its wing can be readily connected to the side of the car, for

which purpose a pintle, *b*, and two eye-pieces, *c c*, are employed. The pintle *b* is in an upright position, that is to say, it is parallel to the vertical sides of the window-frame; consequently the shields and its wing will swing horizontally.

In the construction of the shield and wing it is essential that the relative proportions of the parts should be observed, and that the shield be made to present such a superficial area to the wind as will cause the currents impinging against it, when it is perpendicular to the side of the car, to adjust the shield to said position.

As above stated, I employ two arresters for each window, and so arrange them that when one is moved out of operation by the force of the currents of air acting on the shield of this one, the other one will be instantly moved into operation by currents acting on its wing, and thus starting its shield from a position parallel to the side of the car.

I am aware that shields have been hinged to car-windows for arresting cinders and dust before my invention, but such contrivances were not made self-acting or self-adjusting by means of wings D, formed on their hinged edges, as above described.

The wing D being arranged at right angles to the shield C, it is obvious that the former will also operate as a stop or brace to keep the shield perpendicular to the side of the car, in operating position.

I am aware that, in a patent granted to Edwin Norton, December 21, 1869, and also in an application which is pending before the United States Patent Office and ordered to issue January 6, 1870, car-ventilators are shown and described which have stops applied to their hinged edges in such manner as to hold the ventilator-plates, when in working position perpendicular to the sides of the car. But these stops differ from mine in that they do not serve the purpose of wings and operate as above described. I do not, therefore, claim as my invention the contrivances above referred to.

Having described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

A self-acting dust and cinder-arrester, consisting of a shield, C, a wing, D, and eyes *a a*, constructed to operate substantially as described.

WM. M. K. THORNTON.

Witnesses:

WM. W. SOUTHGATE,  
MILTON SANTEE.