

C. F. BRIDGMAN.

CAR WINDOW VENTILATORS AND DUST SHIELDS.

No. 175,918.

Patented April 11, 1976.

Fig. 1.

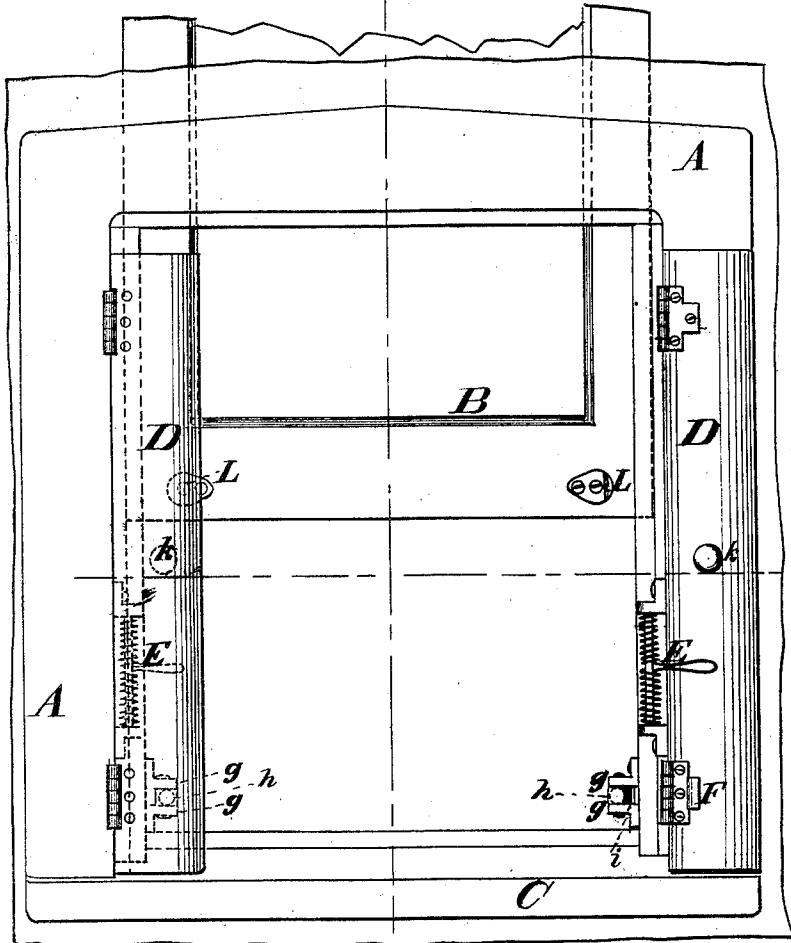


Fig. 2.

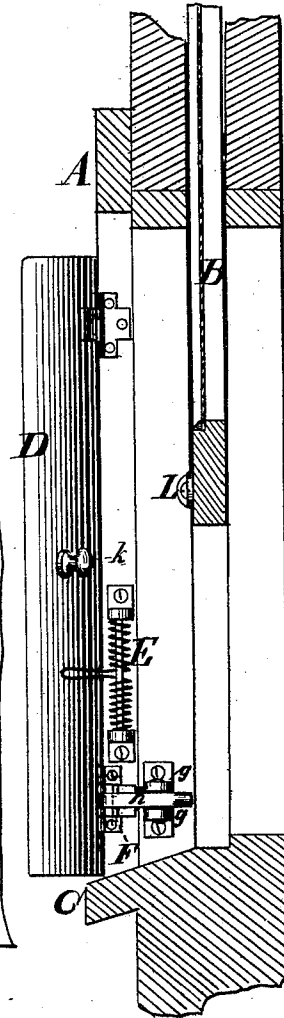
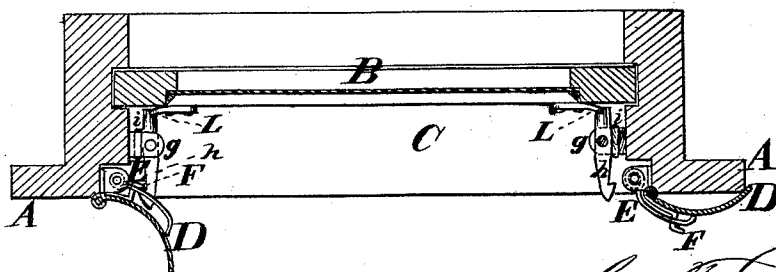


Fig. 3.



Witnesses
John Becker
J. H. Haynes

C. F. Bridgman
By his Attorney
Brown & Allen

UNITED STATES PATENT OFFICE.

CHARLES F. BRIDGMAN, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN CAR-WINDOW VENTILATORS AND DUST-SHIELDS.

Specification forming part of Letters Patent No. **175,918**, dated April 11, 1876; application filed March 1, 1876.

To all whom it may concern:

Be it known that I, CHARLES F. BRIDGMAN, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Car-Window Ventilators and Dust-Shields; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification.

My invention relates to screens for preventing dust from entering the windows, and at the same time causing an outward flow of air from opened windows of railway-cars. It consists, partly, in a combination of an air-deflecting screen, hinged to the window-frame, and a spring whereby the said screen is, when uncontrolled by other mechanism, made to close down against the side of the window-frame to which it is hinged; and the invention consists, further, in mechanism whereby, when the window is opened, the screen may be held in proper position to keep dust from entering the window, and force the air outward when the car is in motion, and whereby, when the window is closed, the screen is automatically released, and permitted to obey the action of the spring which closes the screen down against the side of the window-frame, as aforesaid.

Figure 1 in the accompanying drawing represents a side view of a window of a car supposed to be moving in the direction indicated by the arrow, and having my invention attached to it. Fig. 2 is a vertical section through the window and window-frame. Fig. 3 is a horizontal cross-section through the window, window-frame, and screens attached thereto.

Similar letters refer to like parts in all the figures.

A represents the window-frame, in which the sash B slides in the usual manner. C represents the window-sill. To the said window-frame A are hinged the dust-shield and air-deflecting screens D, one on each vertical side of the said frame. The screens D are, preferably, made of sheet metal, with curved horizontal cross-section, as shown in Fig. 3, the convex surface of said screens being turned outward when the same are not in use, and

are closed back against the side of the window-frame. The hinges of the screen are let into recesses in the window-frame to bring the inner edge of the screen close to the edge of the window-frame, and to avoid a crevice through which dust might otherwise pass. A spring, E, attached to the window-frame, acts to force the hinged screen outward and backward against the side of the window-frame when the said screen is not restrained from moving under the action of said spring by other mechanism hereinafter described. To that side of each screen which faces outward when the screen is turned outward and backward against the window-frame is attached a stop, F. To lugs *g*, attached to the window-frame, are pivoted catches *h*, which are caused, by springs *i*, to engage the stops F when the screens D are turned toward the sash B, the knobs *k* being a convenient means for pulling the said screens toward the window from the inside of the car. Upon the sash B, preferably near the lower corners, are fastened tappets L, the ends of which nearest the window-frames are rounded to cause them to force the inner ends of the pivoted spring-catches *h* toward the sides of the window-frame, the outer ends of the said catches being forced in the opposite direction to release the stop F from the said catches when the sash descends in closing the window, and to allow the free passage of the said tappets by the said pivoted spring-catches when the sash is raised.

In use, the screen D on that side of the window toward which the car is moving is turned outward and backward toward the windows till the stop F is engaged by the pivoted spring-catch *h*, which holds the said screen at an angle of about forty-five degrees (45°) with the window. When the screen is so placed and held, and the car is rapidly advancing, the said screen deflects the air against which it impinges and forces the air with the dust suspended therein away from the side of the car and the window, thus preventing the entrance of the air and the dust into the window when the latter is opened, and preventing the inconveniences to passengers caused by drafts and dirt. Moreover, the inclined screens act to cause an outward draft of air from the interior of the car, and thus assist in the ventila-

tion of the car. When the sash descends in closing the window, the tappet L acts upon the catch *h*, as above described, and releases the screen D. The spring E then automatically turns the screen D outward from the window and closes the said screen back against the window-frame, where it is held by the said spring E till its employment is again required.

I claim—

1. The combination of the screen D, hinged

to the window-frame, and the spring E, substantially as and for the purpose described.

2. The combination of the screen D with a catch, *h*, and a tappet, L, attached to the window-sash, substantially as and for the purpose herein specified.

C. F. BRIDGMAN.

Witnesses:

BENJAMIN W. HOFFMAN,
FRED. HAYNES.