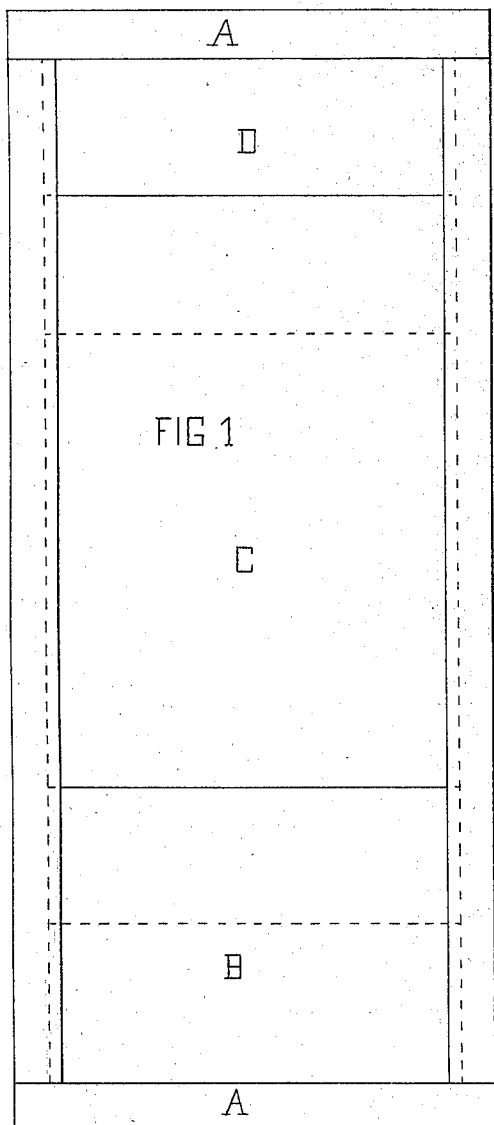


(No Model.)

J. BRUDON.
WINDOW.

No. 499,008.

Patented June 6, 1893.



A

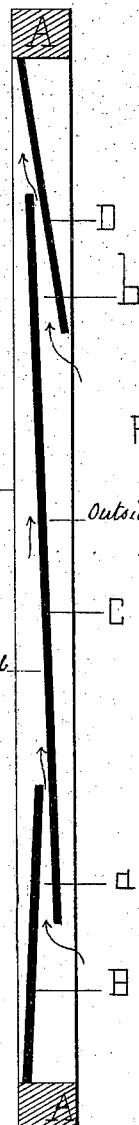


FIG 2

Inside of glass or cab.

Outside of glass

WITNESSES

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UNITED STATES PATENT OFFICE.

JOSEPH BRUDON, OF CAMDEN, ASSIGNOR OF ONE-HALF TO RICHARD S. DOUGHTY, OF GLASSBOROUGH, NEW JERSEY.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 499,008, dated June 6, 1893.

Application filed July 12, 1892. Serial No. 439,834. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH BRUDON, a citizen of the United States, residing at Camden, in the county of Camden and State of New Jersey, have invented a new and useful Improvement in Windows, of which the following is a specification:

The clouding and frosting, or translucency, of the windows of a locomotive-cab, is usually occasioned by steam, vapor of rain leaking in between the cab and boiler, and the leakage of the various boiler cocks located within the cab, which condenses on the inside of the panes of glass.

The invention consists in the peculiar construction and arrangement of parts as will be hereinafter fully pointed out and claimed.

On reference to the accompanying sheet of drawings making part of this specification: Figure 1 is a front elevation of a locomotive-cab front-window sash, showing the means, preferably, employed for directing a current of air upward against the inside of a pane of glass, intervening between it and the cab atmosphere; and, Fig. 2 is a transverse section of Fig. 1, the pane of glass and deflectors being shown in heavy black instead of sectional lines.

Similar letters refer to similar parts in the several views.

The sash, A, of the front-window of a locomotive-cab, for putting my invention into practice, has its light space composed, preferably, of three parts, viz: the bottom one or air-current-deflector, B; the middle one or pane of glass, C, through which the engineer sights; and the top one or air-current-deflector, D. The sight-pane, C, is in this instance inclined inwardly from the bottom to the top of the sash, A, and overlaps the bottom deflector, B, which inclines toward it, a space or air-channel, *a*, intervening. The top deflector, D, which overlaps the pane, C, at its top end on the outside, is inclined toward the pane, a space or air channel, *b*, intervening as below. The space, *a*, serves to direct a current of air from without upwardly and against the entire pane, while the space, *b*, directs a current of air above said pane, which assists the inside current by drawing and suction.

The pressure and force of the outside air in its passage through the spaces or channels, *a*, *b*, is proportioned to the velocity of the locomotive-engine. Its direction, as shown by the arrows, is given to it by the deflectors B, D, as it is forced up along the inside of the pane, C, intervening between it and the atmosphere of the cab. The upper air-space or channel, *b*, serves to draw a current of air along the outside of the pane, and direct it above the inside current through the space, *b*, which it aids by suction, in its passage over the surface of the glass.

I have illustrated and described my invention as applied to the front windows of a locomotive-cab. It is applicable to any window which is so located that a current of air can be had, which will intervene between the inside of the glass, and the atmosphere of the room or place of the window, making the temperature alike on both sides of the glass.

I do not confine myself to the sash A, deflectors B, D, and sight-pane C, for putting my invention in practice; modifications may be made, and other devices used which will apply with equal effect. The intervening air-current can be directed in any other possible direction over the inside of the sight-glass or pane C.

I claim—

1. In a window, the combination with a frame and a sight pane carried by the frame, of a deflector arranged within the frame, beyond one end of the sight pane, and laterally separated from said pane to form a passage through which air can pass in contact with the surface of the sight pane, substantially as described.

2. In a window, the combination with a frame and a sight pane secured to the frame, of a deflector arranged within the frame below the sight pane therein and having its upper end extending above and to one side of the lower end of said pane whereby a passage is formed between the sight pane and deflector through which air can pass in contact with the surface of the sight pane, substantially as described.

3. In a window, the combination with a frame and a sight pane secured within the

frame, of a deflector secured in the frame above the sight pane, said deflector being separated from the sight pane and extending slightly below the upper edge thereof where-
5 by a current of air can pass between the deflector and sight pane in contact with the surface of the plane, substantially as described.

4. A window consisting of a frame, a sight pane fitted within the frame, and two re-
10 versely inclined deflectors secured within the frame above and below the sight pane, said deflectors extending beyond the upper and lower

edges of the sight pane and being so inclined as to form spaces or passages between themselves and said pane, through which air can
15 pass in contact with the sight pane, substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH BRUDON.

Witnesses:

FRANCIS D. PASTORIUS,
JOHN C. ROBERTS.