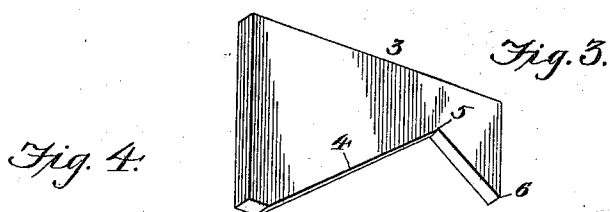
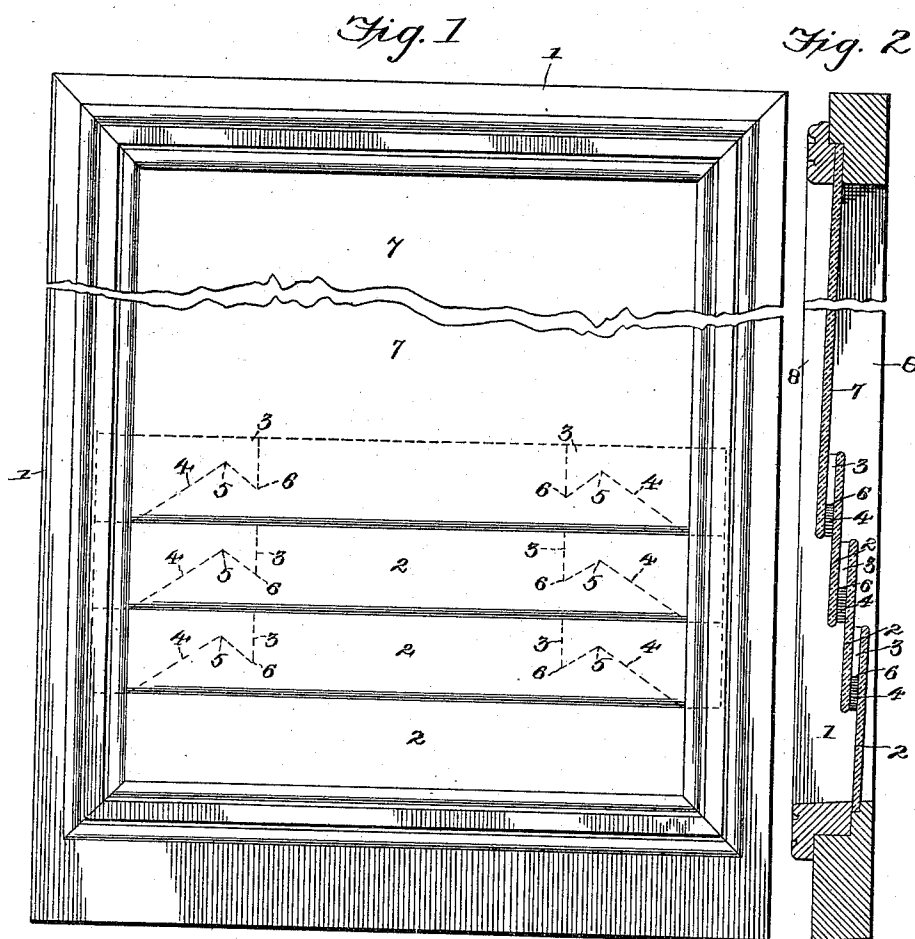


(No Model.)

F. D. GLOVER & A. H. SMITH.
CAR VENTILATING WINDOW.

No. 572,979.

Patented Dec. 15, 1896.



Witnesses

N. Lloyd Mochaber.

R. M. Smith.

By *their* Attorneys,

Inventors
Fred D. Glover.
Albert H. Smith.

CA Snow & Co.

UNITED STATES PATENT OFFICE.

FRED D. GLOVER AND ALBERT H. SMITH, OF DULUTH, MINNESOTA.

CAR-VENTILATING WINDOW.

SPECIFICATION forming part of Letters Patent No. 572,979, dated December 15, 1896.

Application filed February 11, 1896. Serial No. 578,893. (No model.)

To all whom it may concern:

Be it known that we, FRED D. GLOVER and ALBERT H. SMITH, citizens of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented a new and useful Car-Ventilating Window, of which the following is a specification.

This invention relates to car-windows; and the object thereof is to improve the construction illustrated and described in a former patent granted to F. D. Glover July 28, 1891, No. 456,561.

The principal object of the invention is to prevent back draft or the passage of the wind between the slats or louvers of the window from the outside to the inside of the car and at the same time to accomplish this without in any way interfering with or obstructing the vision of a passenger occupying a seat at such window. These and other objects will appear in the course of the subjoined description.

The invention consists in certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of the improved car-window, the transparent deflecting-pieces being shown in dotted lines. Fig. 2 is a vertical cross-sectional view of the same. Fig. 3 is an enlarged detail perspective view of one of the deflectors. Fig. 4 is a detail horizontal section through one of the stiles of the sash and the lapped edges of two slats, also through one of the deflectors.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the accompanying drawings, 1 designates a window-sash, which for the purpose of illustrating the present invention is shown in the form of an ordinary car-window sash, the improvement being especially designed for use upon passenger-coaches. This sash may be mounted in the car-body in the usual or any preferred manner, but owing to the peculiar nature of the invention it is not necessary to mount the sash so that it will

slide and effect an opening of the window-space, as the window is capable of affording the necessary ventilation without the same being lifted.

2 designates a series of horizontally-disposed louver-slats formed each of a separate piece of glass or other transparent material. These slats extend across the sash and rest at their opposite ends against the stiles thereof, and their upper and lower edges are rounded or ground to prevent injury to the hands. The slats 2 are also arranged in such manner that their adjacent edges overlap each other, as clearly shown in Fig. 2, and such overlapping edges are held separated to an extent sufficient to allow the heated and vitiated air of the car to pass outward therebetween. Deflectors 3 are inserted between the overlapping edges of the slats and are arranged at opposite ends of the intervening space between the slats, as shown in dotted lines in Fig. 1. These deflectors are made from material similar to the slats 2 and form the spacing means by which the slats are held apart.

Each of the deflectors is formed in its lower edge with an angular cut which comprises a long inclined edge 4, inclining from the outer edge and lower corner of the deflector inward and upward to a point 5, from which point the lower edge of the deflector is reversely inclined in an inward and downward direction to the vertex 6 at the inner lower corner of the deflector. The function of these deflectors is to arrest the inward rush of the air between the slats caused by the concussion of the air against the rear stile of the window-frame when the car is in motion. Such current of air as it passes between the slats is caught by the rear set of deflectors and directed into the angles 5, and thereafter is deflected by the inwardly and downwardly inclined edges of the deflectors and caused to pass outward and downward again, where the current is caught up by the rush of air at the side of the car and carried rearward. Inward draft is thus obviated, while the air within the car may pass freely outward. The uppermost slat (indicated at 7) is of considerably greater extent than the remaining slats, the object being to present a clear and un-

obstructed view to the passenger. The front and rear stops 8, which hold the slats in place, are ratcheted upon their inner adjacent edges to correspond to the irregular outline of the slats.

It will be understood that any number of slats may be employed, and in lieu of the extended upper slat a number of smaller ones may be employed. It will also be apparent that the material of which the slats are formed may be varied to suit the manufacturer and the conditions to which the window is to be adapted.

The window may of course be made of any size, and the slats may be disposed at any suitable angles, and other changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new is—

1. The combination with a window-sash, of a series of horizontal slats having their edges overlapped and separated, and deflecting-pieces arranged between such lapping edges

adjacent to the ends of the slats, substantially as and for the purpose described.

2. The combination with a window-sash, of a series of slats of glass or other transparent material having their edges lapped and separated, and air-deflectors of similar material arranged between the slat edges and adjacent to the ends of the slats, substantially as and for the purpose described.

3. In a window-sash, the combination with the frame of a series of slats having their edges overlapped and separated, and a number of spacing-pieces located between the slats and having their edges inclined to form air-deflectors, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

F. D. GLOVER.

ALBERT H. SMITH.

Witnesses as to F. D. Glover:

GEO. W. TAGGART,

JULIUS SCHENDEL.

Witnesses as to Albert H. Smith:

M. J. MULLIN,

C. F. WIBERG.