(No Model.)

T. PASCHKE.

Ventilating Window for Railway Carriages.

No. 242,148. **Patented May 31, 1881.**

Fig. 2.

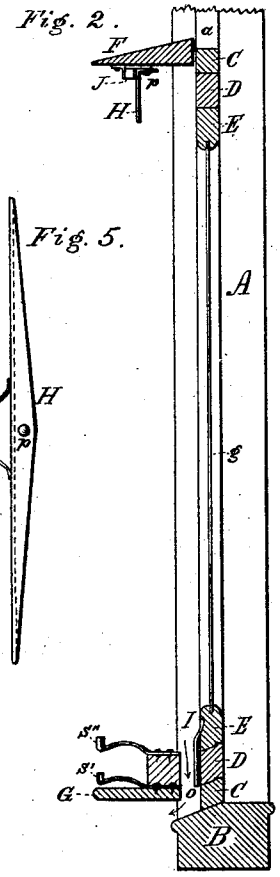


Fig. 5.

Fig. 1.

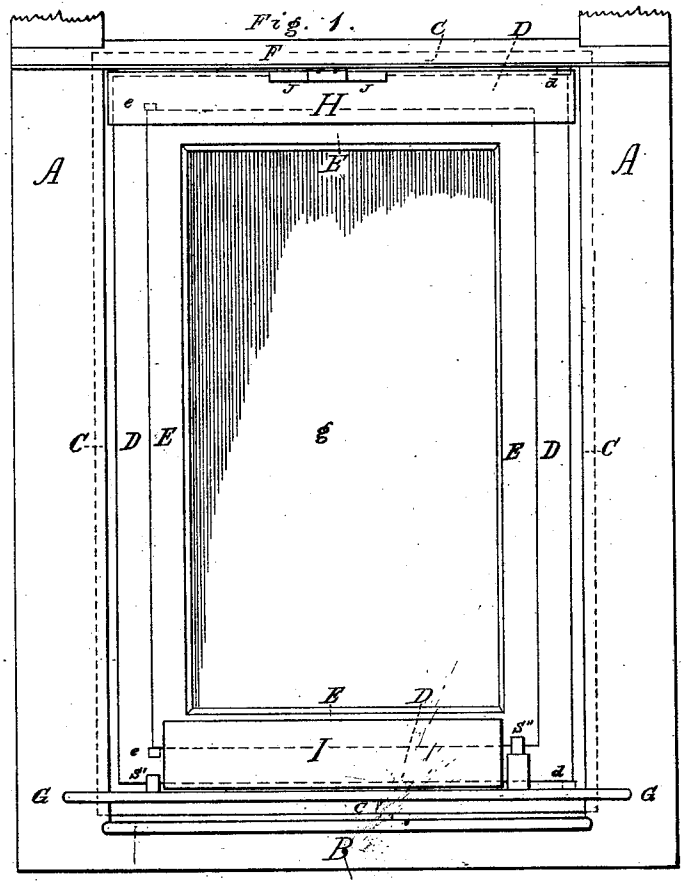


Fig. 6.

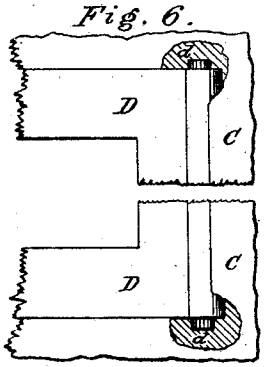


Fig. 7

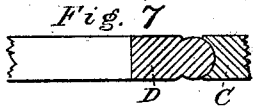


Fig. 3.

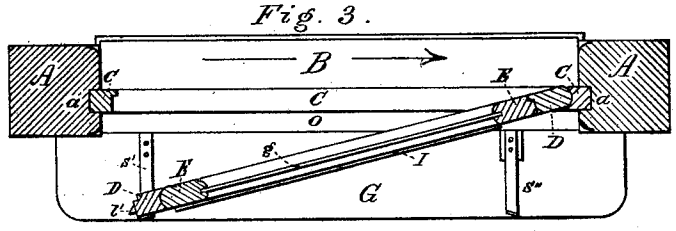
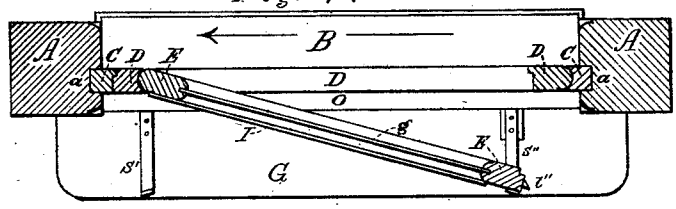


Fig. 4.



Witnesses:

P. B. White

John G. VanHomes

Inventor:

Theodore Paschke

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

THEODORE PASCHKE, OF NEW YORK, N. Y.

VENTILATING-WINDOW FOR RAILWAY-CARRIAGES.

SPECIFICATION forming part of Letters Patent No. 242,148, dated May 31, 1881.

Application filed October 11, 1880. (No model.)

To all whom it may concern:

Be it known that I, THEODORE PASCHKE, a citizen of the United States, residing at new York, in the county of New York and State of New York, have invented some new and useful Improvements in Ventilating-Windows for Railway-Carriages and other Purposes, of which the following is a specification.

My invention relates to certain improvements in ventilating-windows, in which an inner sash is fitted and hinged at one side thereof in a second or outer sash in such a manner as to be free to swing open at the other side, and this second or outer sash is again fitted in a frame and hinged in a like manner, but at the side opposite to the hinged side of the first or inner sash, so as to permit the window to swing open outwardly from either side alternately, and this frame containing the two sashes is fitted in the main frame-work of the window in such a manner as to be free to slide vertically; and the objects of my improvements are, first, to afford facilities for swinging a window open outwardly from either side alternately, as may be desired; second, to afford facilities in the window of a railway-carriage for swinging the window open outwardly from the rear, no matter in which direction the carriage may be moving, thereby allowing a free circulation of air, and at the same time shutting out all sudden drafts of cold air, all dust, smoke, cinders, and gases; third, to effect these objects without interfering with the sliding of the closed window vertically, as in any common window now in use; fourth, to afford facilities for governing the distance to which the window may be swung open outwardly, and for holding it in place when open; fifth, to provide self-adjusting guards on the outside of the window, to prevent the ingress of dust, smoke, or cinders when the window is swung open during the movement of the carriage. I attain these objects in the manner shown in the accompanying drawings, forming part of the specification, in which—

Figure 1 is a front view of the window from the outside when closed; Fig. 2, a vertical sectional view of the same; Fig. 3, a horizontal sectional view, showing the window swung open outwardly from one side; Fig. 4, a horizontal sectional view, showing the window swung open outwardly from the side opposite to the one shown in Fig. 3; Fig. 5, a plan view of the self-adjusting dust-guard and spring on the outside and upper part of the window; Fig. 6, an enlarged front view, showing the manner of hinging the sashes; and Fig. 7, a horizontal section of the same.

Similar letters refer to similar parts throughout the several views.

The sill B and the uprights A A, with the grooves *a a*, constitute the main frame-work of the window, and are intended to represent the frame-work of a window such as is commonly used at the present time, that shown in the drawings forming no part of my invention.

Frame C C C C is fitted to slide in the grooves *a a* of the uprights A A. In the inside of this sliding frame the outer sash, D D D D, is fitted, and hinged at one side by means of the two circular pins, *d d*, Fig. 1, which turn in corresponding depressions in the sliding frame C C C C. The manner of fitting the hinged side of the outer sash, D D D D, in the sliding frame C C C C, I prefer to carry out as shown in Figs. 6 and 7, and consists in rounding the outer edge of that side of the sash which is to be hinged to the dimensions of a circular arc whose radius corresponds to half the thickness of the sash. This rounded edge is fitted closely into a corresponding groove in the inside of the sliding frame C by placing the centers of the circular pins *d d* in the same vertical plane as the center of the rounded edge of the sash. The objects of this manner of hinging the sash are, first, to give the sash-work of the window a flush surface on both sides when the same is closed, in order to leave it free to slide vertically in a closely-fitting frame; second, to provide a weather and dust tight joint when the window is swung open. The side of the sash which is opposite to the hinged side of the same is provided with a flush spring-latch, *l'*, Fig. 3, which is let into the side of the sash so as to be flush on the outside with the same, for the purpose of locking it when it is desired to have the window closed.

The inner sash, E E E E, which holds the pane of glass *g*, is fitted in the outer sash, D D D D, and hinged at the side opposite to the hinged side of the outer sash, D D D D, and

the fitting and hinging of the inner sash, E E E E, for the same reasons, are done in a similar manner to the fitting and hinging of the outer sash, D D D D, in the sliding frame C C C C, which is shown in Figs. 6 and 7.

The projecting weather-molding F, Figs. 1 and 2, can be made of wood or any other suitable material, and is to be secured on the outside and at the upper part of the window to the uprights A A in such a manner as not to offer any obstacles in the way of sliding the window vertically.

The dust-guard H, of which a front view is shown in Fig. 1, a sectional view in Fig. 2, and a plan view in Fig. 5, can be made of sheet metal or any other suitable material, and is to be fastened to the under side of the weather-molding F in such a manner by the pin or rivet *p*, Fig. 2, as to let it turn freely, as on a pivot. This pivot *p* is to be fastened on the under side of the weather-molding F on a line corresponding to the middle of the window, and at such a distance therefrom that when either of the sashes, in being swung open, comes in contact with the dust-guard H it will be turned on the pivot *p* until the sash, after it has been swung open to its full limit, shall have turned the dust-guard H to the same angle as the opened window stands at, touching it in its entire length, and thereby, in conjunction with the aforementioned weather-molding F, prevent the rain or dust and cinders from being beaten in from above through the aperture made by the open window.

The spring J J, Fig. 5, consists of a strip of metal or any other suitable material, and is secured to the under side of the weather-molding F, in front of the dust-guard H, preferably as shown in the drawings, and presses against the dust-guard H from the outside at two points equidistant from the pivot *p*, thereby preventing the dust-guard H from clattering, and also holding the same parallel to and clear of contact with the window, thus preventing the window-sashes from being defaced when raising or lowering.

The guard-sill G can be made of wood or any other suitable material, and is to be secured on the outside to the uprights A A, and in such a position opposite the lower part of the window as to be below the swinging plane of the outer sash, D D D D, and as shown in Figs. 1 and 2. The manner of fastening this guard-sill also is to be such as to leave an open space, O, Fig. 2, in front of the window, for the free escape of water which may be beaten against the window during rains, as indicated by the arrows in Fig. 2.

On the guard-sill G are fastened the metal springs S′ S″, of which a plan view is shown in Figs. 3 and 4 and a sectional view is shown in Fig. 2; and the office of these springs is, first, to govern the distance to which the window may be swung open; second, to hold the window securely in place while swung open. For this reason the spring S″ is raised, as shown in Figs. 1 and 2, to bring it in the swinging plane of the lower side of inner sash, E E E E.

The dust or weather strip I, of which a sectional view is shown in Fig. 2, consists of a strip of rubber or any other suitable material, and is to be fastened on the outside and to the lower side of the inner sash, E E E E, in such a manner that its upper edge is let into the sash the exact thickness of the strip, the object of which is to offer a flush surface to water running down the window, so that no water shall be retained between the strip and the sash. The lower edge of this dust or weather strip I is to reach down to the top of the guard-sill G, for the purpose of forming, in conjunction with the guard-sill G, a deflector of drafts of cold air, cinders, dust, and the like.

I will now give a brief description of the manner of manipulating the window for purposes of ventilation when fitted in the sides of a railway-carriage.

Let the arrow-head in the horizontal sectional view which is shown in Fig. 3 indicate the direction in which the carriage is moving, and let the window be closed. Unlock the outer sash, D D D D, toward the rear end of the carriage by means of the spring-latch *l′* and swing the window open outwardly until it has caught upon the extreme end of the spring S′, as shown. Now, the window, as it stands open outwardly to the rear, will form, with the self-adjusted dust-guard, dust-strip, and all its fittings, as described above and shown in the drawings, a complete deflector of all passing dust, cinders, smoke, drafts of cold air, and the like, at the same time allowing a free circulation of air through the opening made in the manner described. In Fig. 4, let the movement of the carriage be in the opposite direction, as indicated by the arrow-head; then open the inner sash, E E E E, toward the rear end of the carriage by means of the spring-latch *l″* and swing the window open outwardly until it again has caught upon the extreme end of the spring S″, as shown, and the window will perform precisely, the same office as described in the first instance. If it is desired to have the window raised vertically, close the sash, and the window is in condition to be raised in the same manner as the ordinary window in present use.

I am aware that prior to my invention windows have been made of which the sash was hinged at one side, so that it could be swung open at the other side. I therefore do not claim such a device, broadly; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. In the window of a railway-carriage, the combination of the inner sash, E E E E, hinged at one side in the outer sash, D D D D, said outer sash being hinged at the side opposite to the hinged side of the inner sash, E E E E, in the sliding frame C C C C, in which the window may be swung open outwardly from

either side alternately, with the projecting weather-molding F, holding the self-adjusting dust-guard H, and spring J J, all substantially as described and shown, for the purposes specified.

2. In the window of a railway-carriage, the combination of the inner sash, E E E E, hinged, at one side in the outer sash, D D D D, said outer sash being hinged at the side opposite to the hinged side of the inner sash, E E E E, in the sliding frame C C C C, in which the window may be swung open outwardly from either side alternately, with the guard-sill G, leaving the opening O between it and the window, and having the springs S′ S″ secured to it, all substantially as described and shown, for the purposes specified.

3. In a window in which the inner sash, E E E E, is hinged and fitted in the outer sash, D D D D, said outer sash being hinged and fitted in the sliding frame C C C C, the dust-strip I, fastened on the outside of and to the lower side of the inner sash, E E E E, substantially as described and shown, for the purposes specified.

4. In a window in which a sash is hinged or otherwise hung at one side in a surrounding frame, the combination of the rounded outer edge of the hinged side of the sash, fitted into the correspondingly grooved inner edge of that side of the surrounding frame to which the sash is hinged or otherwise hung, with the circular pins *d d*, placed so as to have their centers in the same vertical plane as the center of the rounded edge of the sash, all substantially as described and shown, for the purposes specified.

THEODORE PASCHKE.

Witnesses:
J. B. WHITE,
JACOB DU BOIS.