(No Model.)

W. B. DUNNING.

VENTILATING WINDOW.

No. 510,009. Patented Dec. 5, 1893.

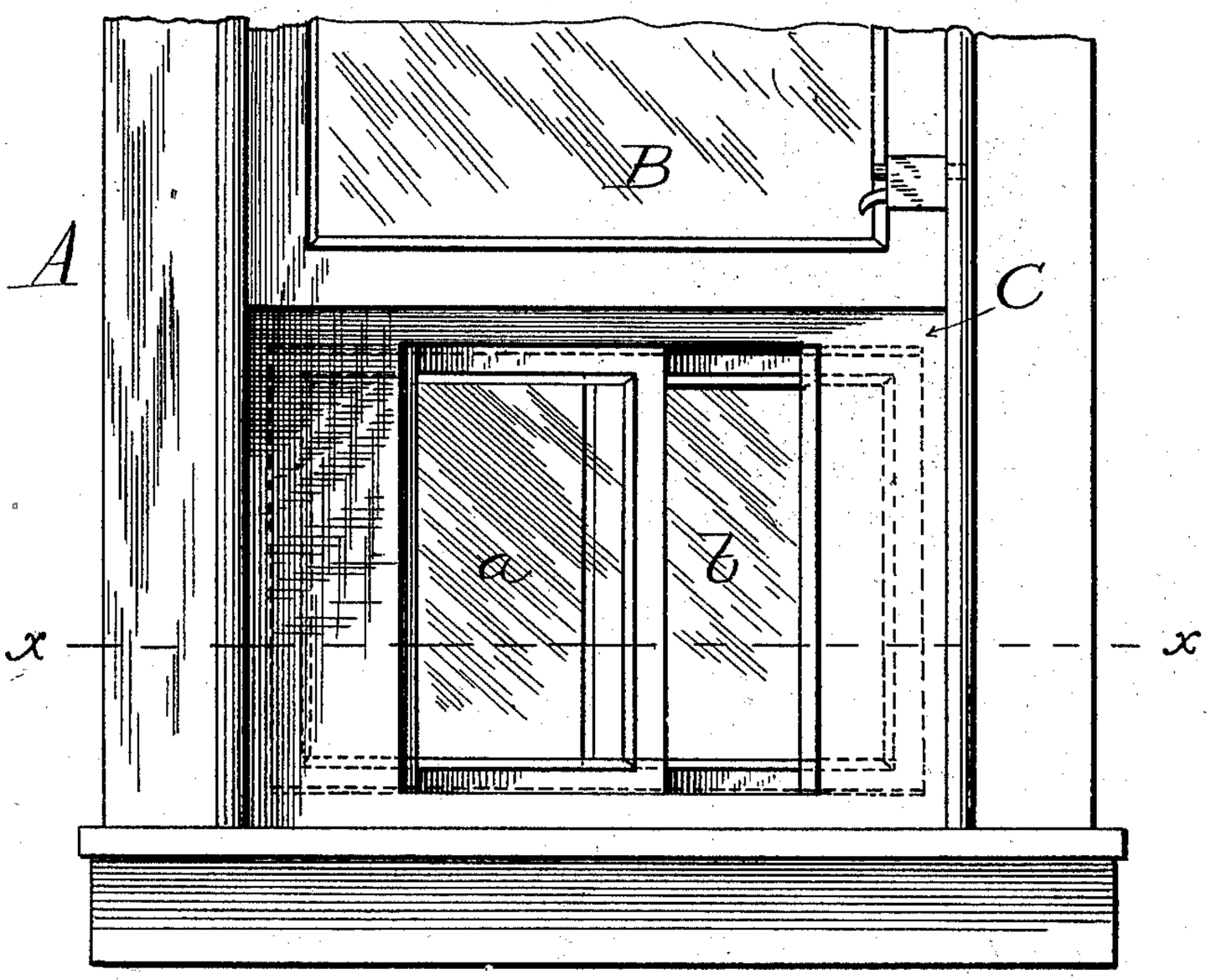

Fig. 1.

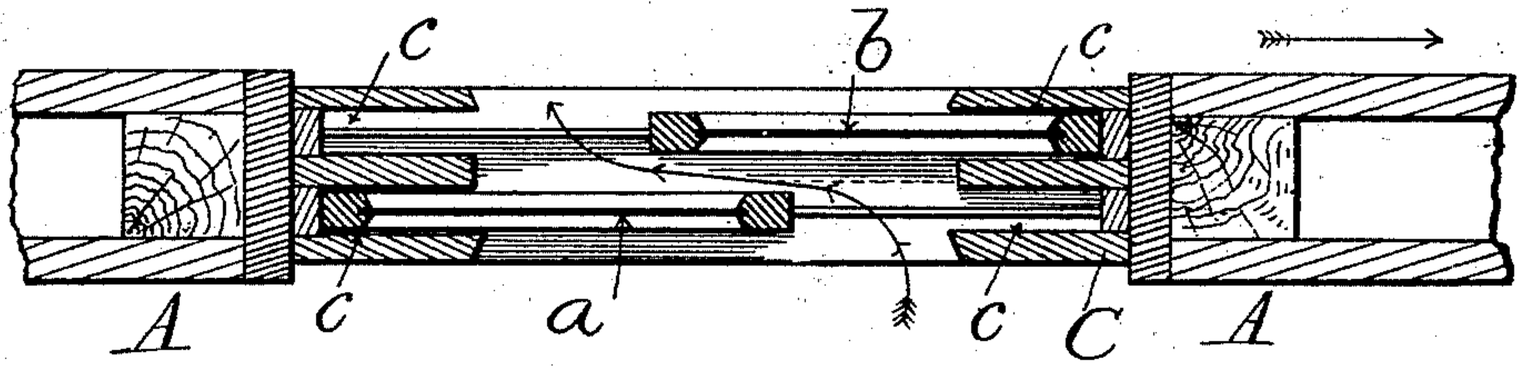

Fig. 2.

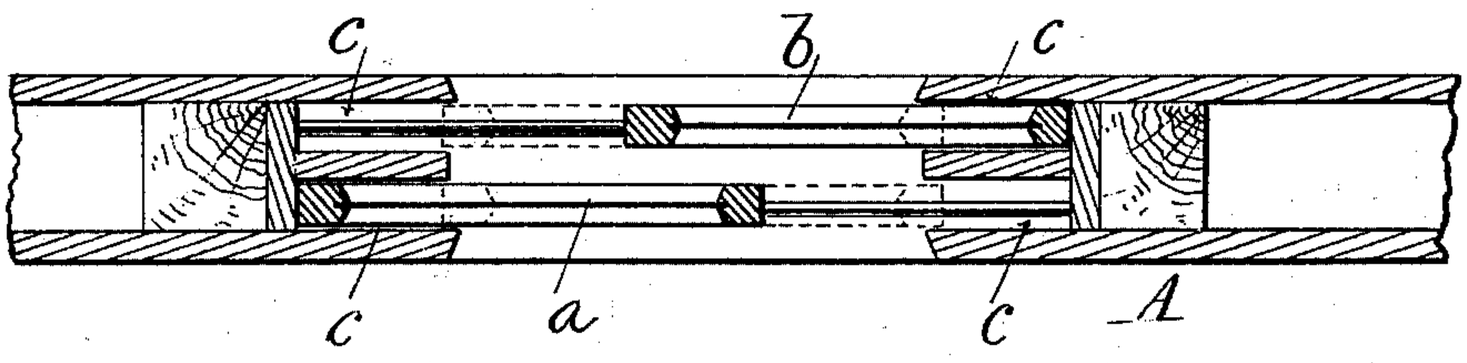

Fig. 3.

Witnesses
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WILLIAM B. DUNNING, OF GENEVA, NEW YORK.

VENTILATING-WINDOW.

SPECIFICATION forming part of Letters Patent No. 510,009, dated December , 1893.

Application filed September 8, 1893. Serial No. 485,047. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. DUNNING, a citizen of the United States, residing at Geneva, in the county of Ontario and State of New York, have invented certain new and useful Improvements in Ventilating-Windows, of which the following is a specification.

My present invention relates to ventilating windows, and the invention consists in so arranging two sashes in their frame that either can be shoved part way into a pocket or recess in the frame, whereby a space is left between the overlapping sash for the passage of air, and at the same time exclude dust and cinders, and so that by properly adjusting the sashes they will form a double window to exclude the cold, all as hereinafter more fully set forth.

Figure 1 is a side elevation of the window made detachable and set under the sash of an ordinary car window, and Fig. 2 is a transverse section of the same, on the line *x*—*x* of Fig. 1. Fig. 3 is a similar sectional view of the window, built into the wall of a car.

The object of this invention is to so construct a window in a car that it can be adjusted to exclude the cinders, dust and smoke, and secure ventilation, and so that when closed, it may form a double window to exclude cold.

If it be desired to use my invention in cars already built, I provide a frame C of the proper size to be set under the raised sash B of an ordinary car window—this frame filling the space under the raised sash, as represented in Fig. 1. As shown in Fig. 2, this frame is made with pockets or recesses *c* at each side, into which the sashes *a* and *b* can be shoved a certain distance, but not far enough to permit the sashes to pass entirely by each other. Each sash is made of sufficient width to entirely close the opening in the frame when brought opposite the same, as indicated by dotted lines in Fig. 1, thus forming a double window to exclude the cold when desired. The sashes *a* and *b* are so arranged in the frame as to leave a considerable space between them, as shown in Figs. 2 and 3, for the passage of air.

Thus far I have described the apparatus as it will be applied to cars already built. In constructing new cars, the removable frame will be dispensed with, and the pockets *c* be formed in the wall of the car, as represented in Fig. 3. In such case the sliding sashes *a* and *b* may be made of the full height of the window, or of the height of the lower sash only, as may be preferred, it being common to use both single and double vertically sliding sashes in cars at the present time.

The manner of using my invention is as follows: Supposing the car to be moving in the direction indicated by the straight arrow in Fig. 2, the outer sash *b* will be shoved forward into its pocket at the front, while the sash *a* will be shoved in the opposite direction into its pocket at the opposite side, as shown in Figs. 2 and 3. When thus arranged, it will be seen that the outer sash *a* overlaps the front edge of the inner sash *b*. The forward motion of the car will create a vacuum or suction which will tend to draw the air outward between the sash, as indicated by the curved arrow in Fig. 2, thereby creating a constant ventilation from within outward. The lapping of the rear edge of the outer sash past the front edge of the inner sash, will at the same time prevent the entrance of cinders, soot and dust, which are the greatest annoyance of railroad travel at the present day.

It is obvious that the sashes may be adjusted so as to overlap more or less, the only limit being that one edge of each sash should just enter the mouth of its pocket, when it is desired to exclude cinders and dust. At the same time, when it is desired, as for instance when the car is standing still, both sashes can be moved into the pockets at one side, and thus leave a direct opening for the admission of air from without. This arrangement also permits of the ventilation of the berths at night in warm weather, and also provides for a double window in cold weather.

In order to render the window tight, and dust proof when closed, I propose to fasten strips of rubber or felt to the sides of the sashes, the best method being to cement a narrow strip of felt in a groove formed in the face of the sashes on both sides, the friction of which will hold the sashes in place wherever adjusted, and also prevent the noise caused by the rattling of the sashes in their frames.

It is obvious that any suitable device may be used to fasten the sashes and hold them fast when closed or open.

Although my invention is specially designed for use in cars, it is obvious that it may be used in buildings also, and that by its use a room can be ventilated without having a draft direct upon the persons occupying the room, and without the use of any adjunct or fixture other than the window itself.

It is obvious that in dwellings, where the object is simply ventilation, the sashes may be arranged to move vertically instead of laterally, it only being necessary in that case to form the pockets at top and bottom, instead of at the sides. It is also obvious that instead of glass, wood or sheet metal panels may be used in the sashes, or that the sashes may be dispensed with and wood or metal slides be used instead, and the effect be the same, so far as the ventilation, the exclusion of cinders and dust, and the closing of the window opening are concerned; but glass will be preferred, especially in passenger cars, for obvious reasons.

Having thus fully described my invention, what I claim is—

1. A ventilating device for windows, consisting of two sashes or slides, each arranged to slide into pockets or recesses at opposite sides, said sashes or slides being arranged to overlap, and leave a space between them for the passage of air substantially as shown and described.

2. In combination with a frame C provided with pockets or recesses *c*, the sliding sashes or slides *a* and *b*, each of sufficient size to close the window opening when properly adjusted, substantially as shown and described.

In witness whereof I hereunto set my hand in the presence of two witnesses.

WILLIAM B. DUNNING.

Witnesses:
S. SOUTHWORTH,
CHAS. E. WILLIAMS.