(No Model.)

A. BLACK.

PASSENGER CAR COOLER AND VENTILATOR.

No. 483,710. Patented Oct. 4, 1892.

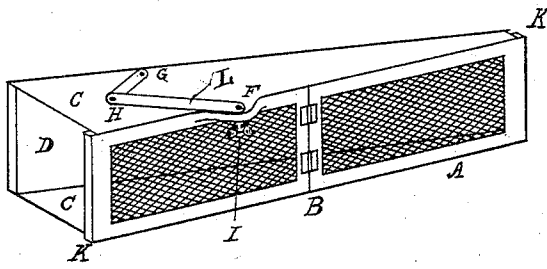

Fig: 1.

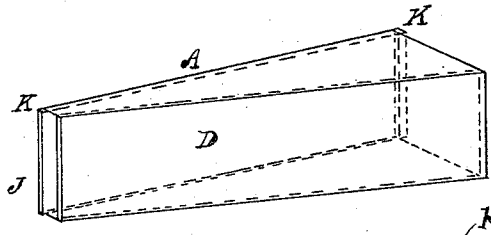

Fig: 2.

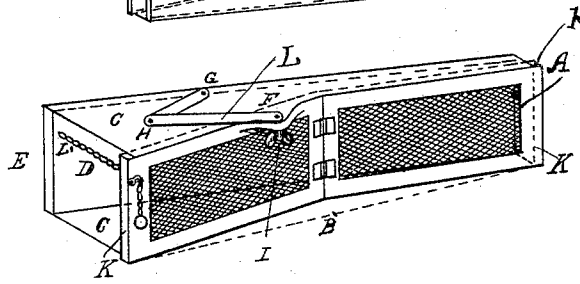

Fig: 3.

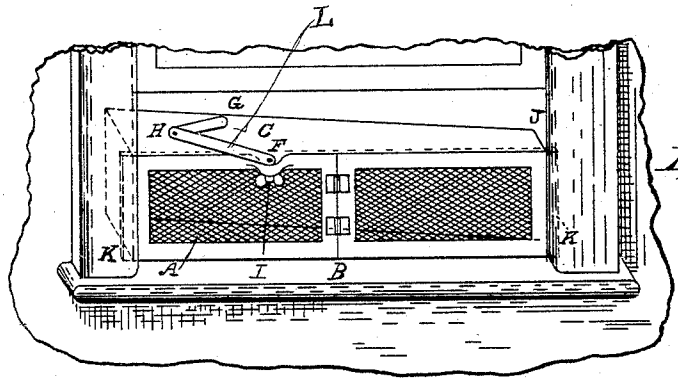

Fig: 4.

WITNESSES.

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PASSENGER-CAR COOLER AND VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 483,710, dated October 4, 1892.

Application filed April 8, 1892. Serial No. 428,277. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER BLACK, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Passenger-Car Coolers and Ventilators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in passenger-car coolers and ventilators of the variety in which mechanism is provided to be used in conjunction with the ordinary car-window; and the objects of my improvements are, first, to provide means for conducting air more freely from the outside atmosphere to the interior of the car; second, to provide means to regulate the quantity of the inflow, and, third, its quality. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the entire mechanism, showing prominently the side which is located within the car. Fig. 2 is a perspective view of the mechanism, showing the side which is located without the car. Fig. 3 is a perspective view of the mechanism like that shown in Fig. 1, but having its screen-sash adjusted in a different position. Fig. 4 is a perspective view of the apparatus located within a car-window and showing the said apparatus as it appears within the interior of the car and in operating position.

Similar letters refer to similar parts throughout the several views.

Referring to the drawings, A in Fig. 1 is a screen-sash made in two parts and hinged at B in such a manner as that it may be adjusted inwardly and outwardly, as shown at B in Fig. 3, the sides C being made in bellows form of any suitable material, gum-cloth being preferred. The side D is formed of rigid material, such as wood, metal, or prepared board. Besides the hinged adjustment shown at B, the said sash A and the side D are by being thus disposed in bellows form adapted to be adjusted toward and from each other by means of the flexible connections C for the purpose of adjusting the size of the end opening E to any desired size or capacity, which adjustment is controlled by means of the knuckle-jointed arm L, which is pivoted to the sash at F and to the side D at G and together at H and adapted to be rigidly locked to the sash A by means of thumb-screws I.

An opening J is provided between the sash A and side D, and the sash A is made longer than the side D and terminates in projecting lugs or extending ends K for purposes hereinafter fully explained.

Having described my invention, its operation is as follows: The sash A is turned upon its hinges B to the position shown in Fig. 3 to allow the lugs K to be inserted within the window-sash ways of the car-window and the sash A straightened upon its hinges by being drawn inward, when it takes the position shown in Fig. 4 and is locked therein by dropping the car-window sash upon it and tightening the thumb-screw I to make rigid the knuckle-joint. The opening E, as before explained, is also adjusted by means of the said knuckle-joint and thumb-screw. In a car with this mechanism attached within a window having the end E disposed toward the front end of the car and its rear end open, as shown at J, beyond the outer line of the exterior side of the car, the ventilation and cooling proceeds as follows: The knuckle-joint lock is adjusted to the extent of opening outwardly the side D, thus regulating the size of the front end opening E, which size controls the quantity of air admitted to the sash A, which sash A is covered with a fine screen of any suitable material adapted to separate cinders and dust from the inflowing air, causing it to pass into the car in a cleansed condition, the said cinders and dust passing to the rear of the mechanism and out into the open atmosphere through the opening J. It is obvious that when the opening E is largest the volume of air admitted to the car will be largest, provided the car is in motion, and that the inflowing volume of air will be augmented with the increasing speed of the car and reduced with the decreasing speed of the car, and that the said opening F may be closed to the extent of cutting off the entire inflowing current of air through this source, and that any desired means may be secured by this mechanism, according to the will of the operator.

A partial substitute for the knuckle-jointed arm L is found in the chain L′ when adapted to adjustably connect the sash A and the side D, though not as desirable as the said joint L.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a car-window ventilator, the screen-sash A, formed in two parts and hinged together in the middle of the ventilator, the side D, and the flexible material connecting the screen-sash with the said side, for the purpose set forth.

2. In a car-window ventilator, the screen-sash A, the lugs K, formed upon each end of the sash, the hinges B, the side D, and the flexible material C, connecting the side with the screen-sash, combined with means, such as shown and described, for adjusting the said sash, for the purpose set forth.

3. In a car-window ventilator, the screen-sash A, the side D, and the flexible connections from the side to the sash, leaving an opening J at one end and an opening E at the opposite end of the ventilator, in combination with the knuckle-jointed arm L, pivoted to the side D and to the sash to regulate the size of the opening E, for the purpose set forth.

4. The combination, with a car-window frame, of a ventilator consisting of an open-ended case comprising the side D, hinged screen-sash A, and the material connecting the said side and sash, and means, such as shown and described, for adjusting and locking the sash to regulate the size of one of the open ends, substantially as set forth.

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

ALEXANDER BLACK.

Witnesses:
R. MARTIN,
J. L. MILLER.