

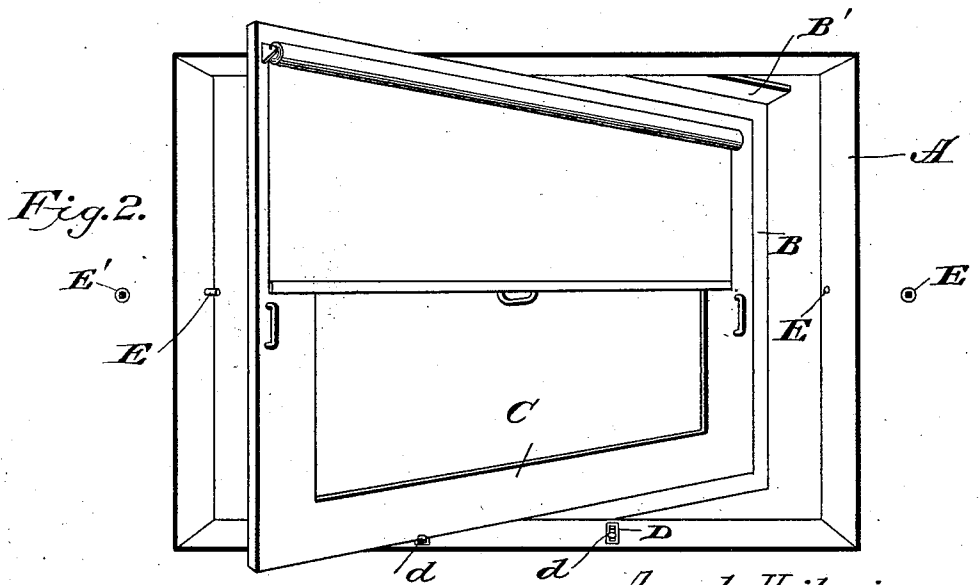
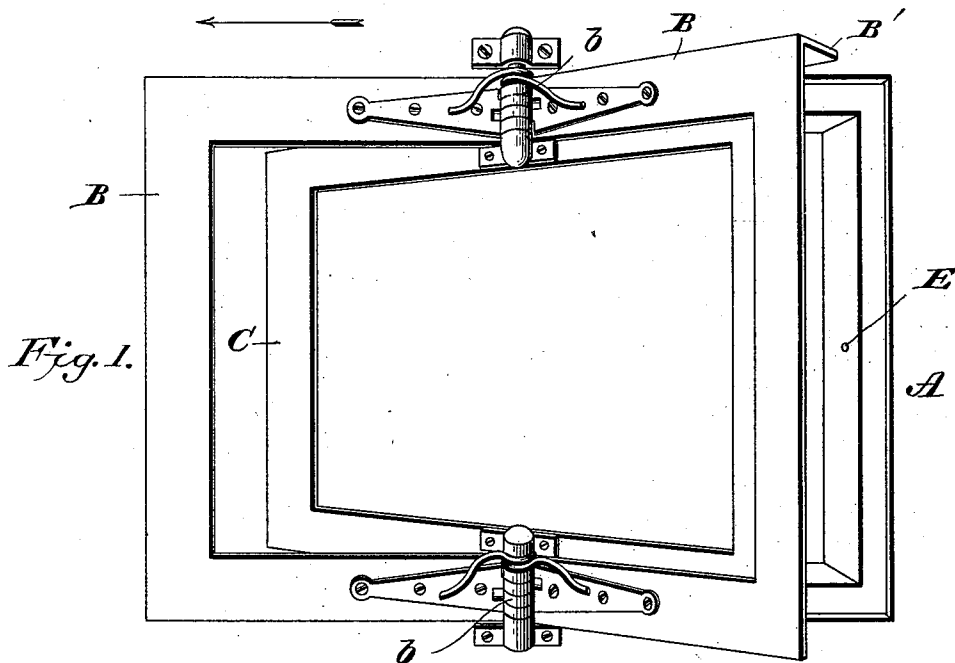
(No Model.)

2 Sheets—Sheet 1.

A. HEILPRIN.
VENTILATING CAR WINDOW.

No. 558,387.

Patented Apr. 14, 1896.



WITNESSES

L. S. Elliott
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Angelo Heilprin
INVENTOR

by *[Signature]* Attorney

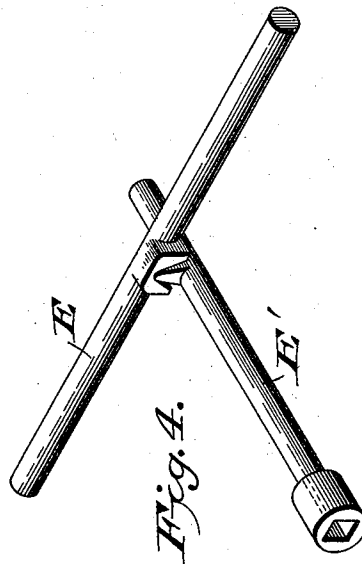
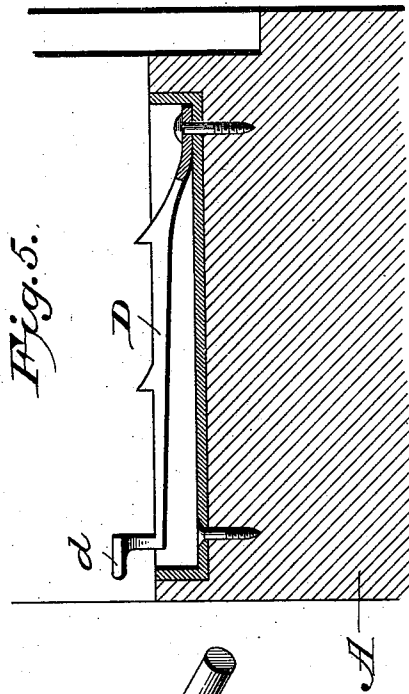
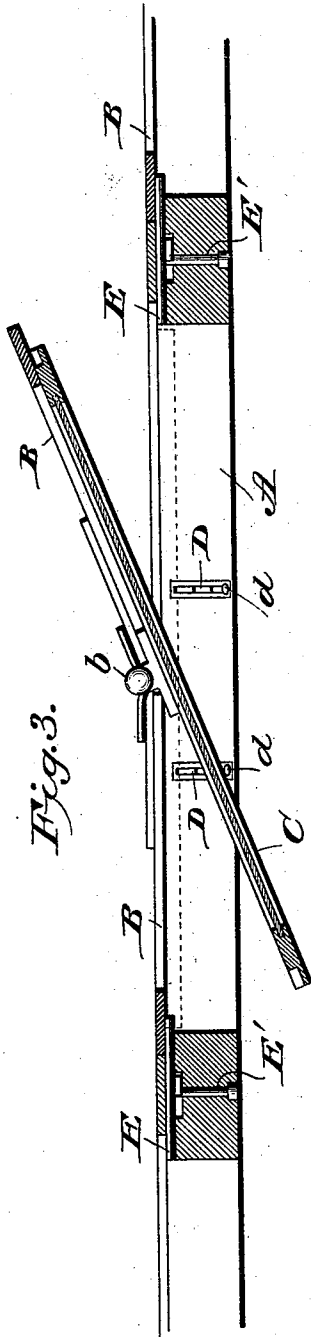
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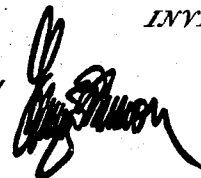
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INVENTOR

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UNITED STATES PATENT OFFICE.

ANGELO HEILPRIN, OF PHILADELPHIA, PENNSYLVANIA.

VENTILATING CAR-WINDOW.

SPECIFICATION forming part of Letters Patent No. 558,387, dated April 14, 1896.

Application filed December 19, 1895. Serial No. 572,624. (No model.)

To all whom it may concern:

Be it known that I, ANGELO HEILPRIN, a citizen of the United States of America, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Ventilating Car-Windows; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a window of improved construction which embodies a divided sash-casing and a centrally-pivoted sash, whereby the sash may be swung or turned upon its pivot at an angle with respect to the window-frame or side of the car for the purpose of ventilation, the sash carrying a part of the sash-casing with it.

The invention further embodies improved means for governing the movement of the sash, all as will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of the device, looking from the outside of the car. Fig. 2 is a view from the interior of the car, the parts being broken away to better show the construction of the fixtures. Fig. 3 is a longitudinal sectional view. Fig. 4 is a detail view of sliding bolt, and Fig. 5 is a sectional view of the catch.

A designates the window-frame, to which is pivoted, on a line with the vertical center of the opening therein, a two-part sash-casing B, the parts of which are attached to the leaves of hinges *b*, carried by the window-frame. The pintles of the hinges are provided with suitable springs, either torsional, helical, or other approved style, which act upon the parts of the sash-casing to hold them normally against the window-frame. The parts of the sash-casing are each provided at their upper ends with an inwardly-projecting ledge B', which may enter a recess therefor in the upper part of the window-frame.

C designates the sash, which is centrally pivoted to the pintles of the hinges *b*, or otherwise centrally pivoted to the window-frame.

This sash may carry the usual curtain-shades, which can be attached to the upper part of the same in the usual manner. The sash is located on the inner side of the sash-casing B, so that when swung or turned upon its pivots the part that extends outward will carry the adjoining part of the sash-casing with it, and will therefore be acted upon by the spring-hinges, for the purpose hereinafter set forth.

To the sill of the window-frame are secured spring-catches D, having upwardly-projecting ratchet-teeth, with which the lower edge of the sash engages to hold said sash in an adjusted position against the action of the spring-hinges. The operating ends *d* of the catches project upward in the path of the sash to prevent excessive movement of the same. Two catches are employed and are located on either side of the center of the window-frame, so as to hold the sash when it is swung or turned in either direction.

The swinging of the sash in the direction to secure the proper ventilation of the car is provided for by means of sliding bolts or stops E, which are let into the partitions between the window-frames, and when one of these bolts is moved to the limit of its movement in either direction one end of the same will be brought into the path of one end of one of the sashes, while the other end of the bolt will be retracted out of the path of the adjoining sash, so that by properly manipulating these bolts the sashes can be swung upon their pivots only in one direction. These bolts may be operated in any suitable manner, preferably by means of a stem E', having a lug at its inner end which engages a recess in the bolt and provided at its outer end to receive a key, and this key is kept in the possession of an attendant who operates the bolts, so that the sashes can only be swung in the direction to secure proper ventilation.

The details of construction hereinbefore described may be readily modified within the spirit and scope of my invention, as the particular manner of connecting the sash-casing and sash to the window-frame, as well as the construction of the catches and sliding bolts, could be varied to attain the same end.

The devices herein shown and described are especially designed for railway-cars,

though it is obvious they could be used in buildings, the direction of the wind serving to induce a draft in the same manner as the movement of cars.

5 When applied to cars, the invention operates as follows: The arrow in Fig. 1 indicates the direction in which the car is moving, and in this case the bolts E are moved so as to free the forward end of the sash and prevent
10 an inward movement of the rear end of the same. Now when the parts are in this position and a passenger should desire to open the window he could only swing the sash to move the rear end thereof outward, and in
15 doing this the part of the sash that moves inward will engage one of the spring-catches D and hold said sash in position, the sash being held firmly against the catch, to prevent rattling, by means of the part of the sash-casing which is carried outward by the outer end
20 of the said sash, the ledge B' preventing any dirt or cinders falling into the open window.

The sash-casing overlies the edges of the sash, so that when the parts are closed a tight
25 joint is provided.

I am aware that it is not broadly new to provide a window or ventilator for railway-cars and dwellings with a centrally-pivoted sash which can be swung so as to project one
30 end of the same at an angle beyond the window-frame, and my invention does not therefore consist, broadly, in the use of a centrally-pivoted sash; but

What I claim as new, and desire to secure
35 by Letters Patent, is—

1. In combination with a window-frame, of a divided sash-casing pivoted to the window-frame, and a sash pivoted to the window-frame in such manner that when swung it will en-
40 gage with one or the other of the parts of the sash-casing.

2. The combination with a window-frame, of a divided sash-casing the parts of which are hinged at their inner ends, and a sash
45 centrally pivoted.

3. The combination with a window-frame, of a two-part sash-casing, spring-hinges connecting the parts of the casing, and a sash pivoted on a line with the hinges.

50 4. A window or opening carrying a divided sash-casing, means for connecting the sash-casing to the window-frame so as to permit an independent movement of each part of the same; together with a sash centrally pivoted

on a line with the connections of the sash- 55 casing to the window-frame, substantially as shown, whereby one of the parts of the sash-casing can be projected beyond the window-frame with an end of the sash while the other end of the sash extends inward, for the pur- 60 pose set forth.

5. In combination with a window frame or opening, a divided and pivotally-attached sash-casing which carries a rigid sash, spring connections for holding the sash-casing nor- 65 mally against the window-frame, and sliding bolts carried by the frame for engagement with the sash, substantially as shown and for the purpose set forth.

6. In combination with a window-frame, a 70 sash and divided sash-casing, of spring-catches carried by the window-frame for engagement with the sash, said catches limiting the movement of the sash and providing for holding the same, substantially as set forth. 75

7. The combination with a series of window-frames provided with centrally-pivoted sashes and two-part sash-casings connected to spring-hinges which hold them closed against the window-frame, of sliding bolts E 80 carried by the partitions between the window-frames and adapted to be moved in and out of the path of the ends of the sashes, substantially as shown and for the purpose set forth.

8. In combination with a window frame or 85 opening, of a two-part sash-casing connected to the center of the window-frame by spring-hinges, the upper ends of the parts of the casing having inwardly-projecting ledges, and a sash centrally pivoted to the pintles of the 90 spring-hinges; together with spring-catches for holding the sash in an adjusted position, substantially as shown and for the purpose set forth.

9. In combination with a window-frame, of 95 a centrally-pivoted sash, springs for normally holding the sash in a closed position, and catches which engage with the lower edge of the sash; together with sliding bolts adapted to be moved in and out of the path of the 100 ends of the sash, substantially as shown and for the purpose set forth.

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

ANGELO HEILPRIN.

Witnesses:

MAX LEVY,

E. L. WOODWARD.