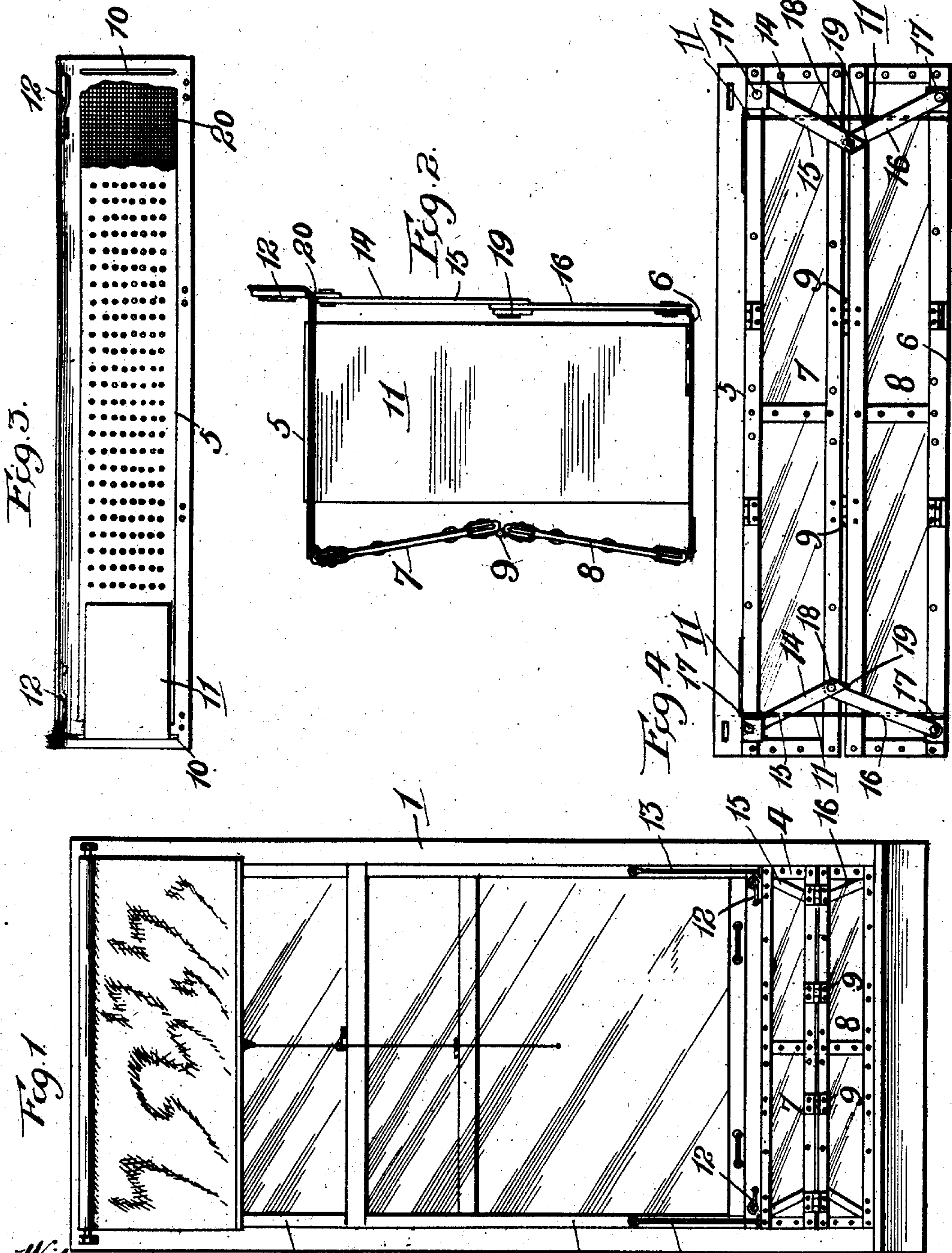


No. 846,722.

PATENTED MAR. 12, 1907.

M. H. BERRY.  
WINDOW VENTILATOR.  
APPLICATION FILED AUG. 30, 1906.

2 SHEETS—SHEET 1.



Witnesses:  
W. P. Bond  
A. Nelson

Inventor:  
Milton H. Berry  
by Harry Lea Dodson  
Att'y.

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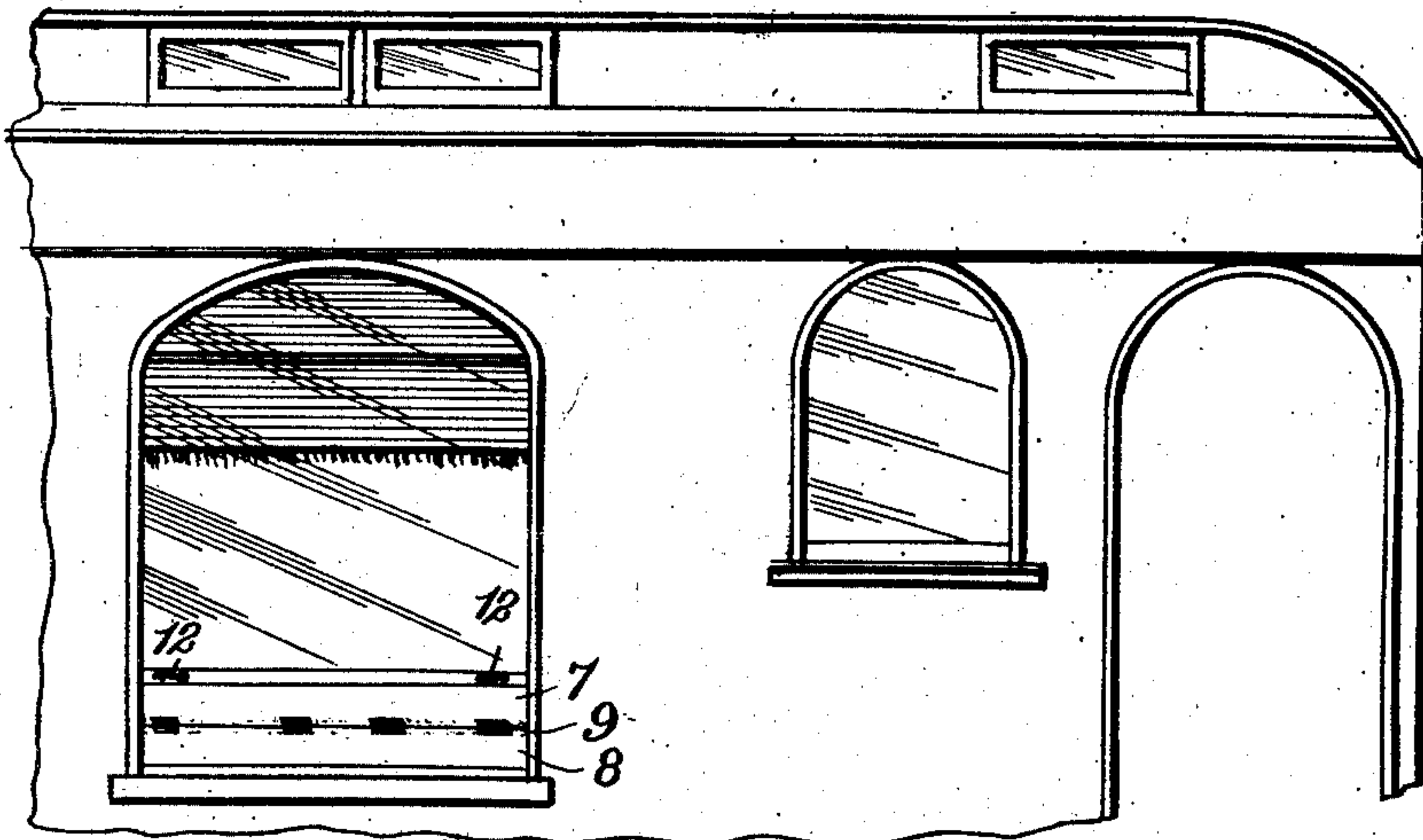


Fig. 5.

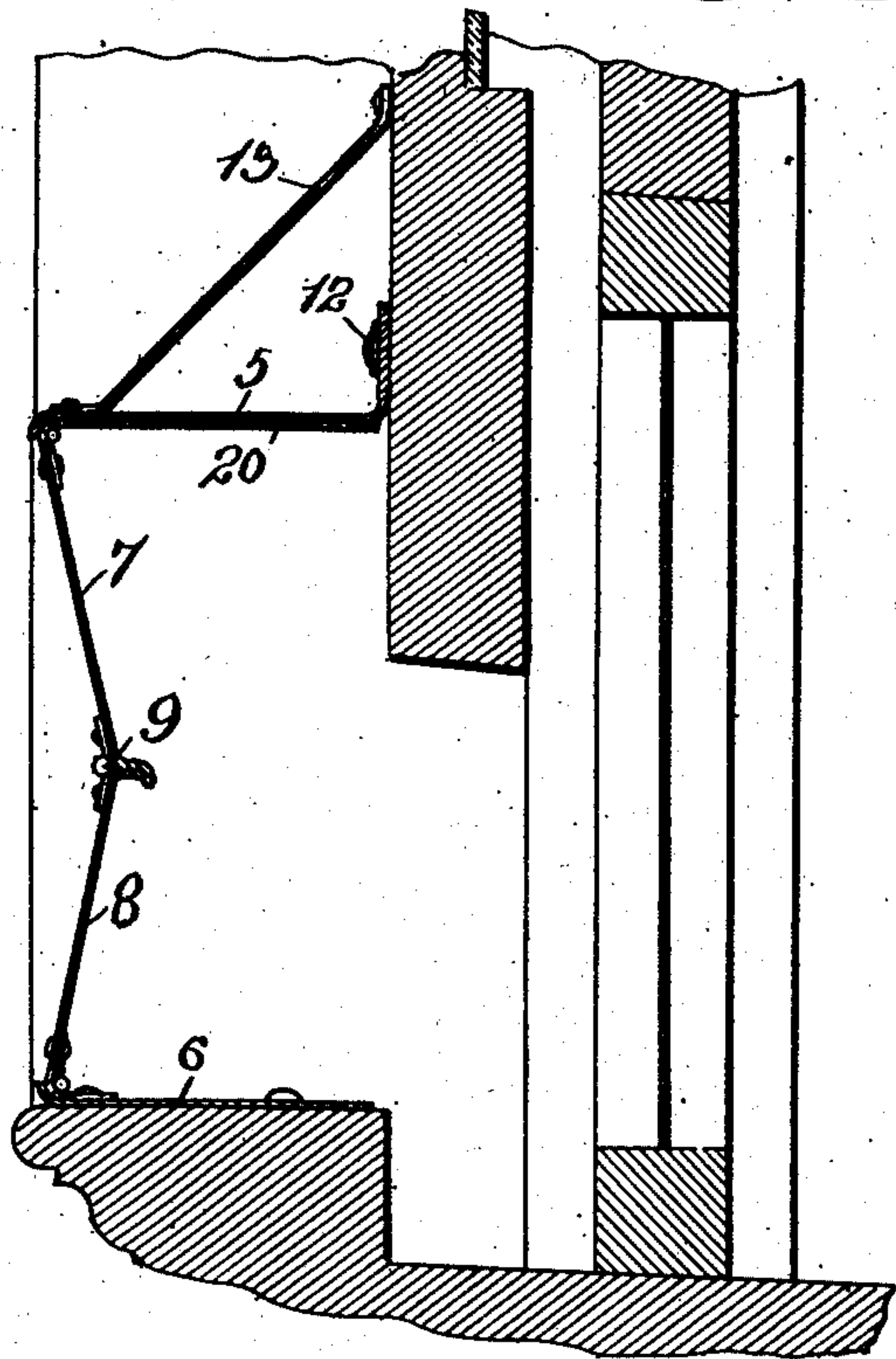


Fig. 6.

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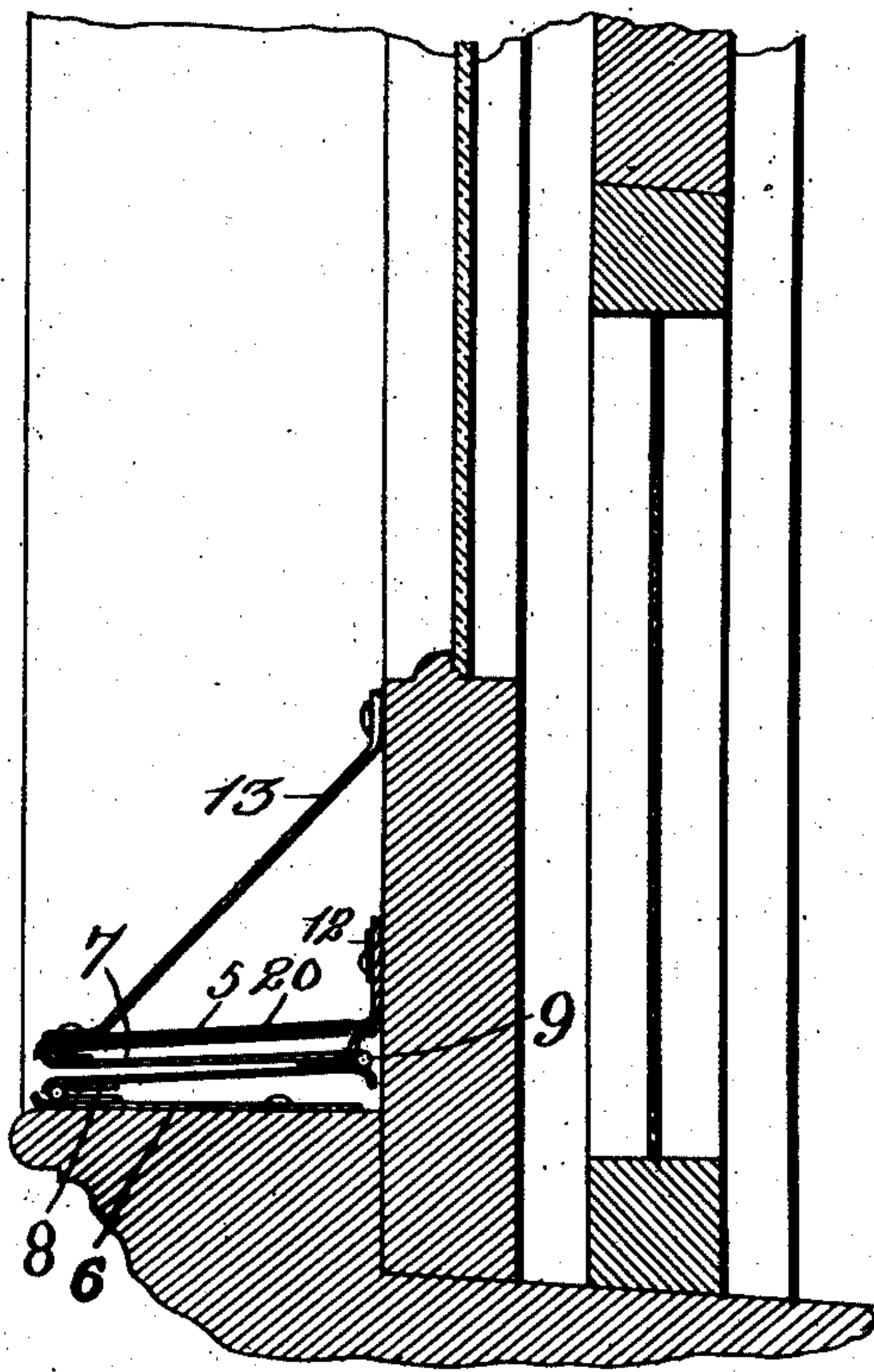


Fig. 7.

Inventor:  
Milton H. Berry  
by Harry Lea Dodge  
Att'y



# UNITED STATES PATENT OFFICE.

MILTON H. BERRY, OF CHICAGO, ILLINOIS, ASSIGNOR TO BERRY VENTILATOR COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF MAINE.

## WINDOW-VENTILATOR.

No. 846,722.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed August 30, 1906. Serial No. 332,585.

*To all whom it may concern:*

Be it known that I, MILTON H. BERRY, a citizen of the United States, residing in Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Window-Ventilators.

My invention relates to that class of devices which are intended to permit of the raising of a window without subjecting the room to a direct draft caused by the opening.

The invention is designed as an improvement upon my invention described in my application Serial No. 304,611, and has for its object to provide means to prevent the weight of the window-sash from coming on the ventilator and to provide means for shutting off the air at the ends of the ventilator, and has for its further object to construct a ventilator which may be used in Pullman or other cars and which will permit of the ventilation of the car without the admission of dirt, cinders, &c.

My method of accomplishing the foregoing may be more readily understood by having reference to the accompanying drawings, which are hereunto annexed and are a part of this specification, in which—

Figure 1 is an elevation of a window frame and sash having my improved ventilator attached thereto. Fig. 2 is an end elevation of the ventilator proper. Fig. 3 is a top view of the same. Fig. 4 is a rear elevation. Fig. 5 shows one end of a car containing a window having my improved ventilator attached thereto. Fig. 6 is a cross-section showing the window opened. Fig. 7 is the same showing the window of the ventilator closed.

Similar reference-numerals refer to similar parts throughout the entire description.

As shown in the drawings, my invention is designed so that it may be attached to the sash of the window and remain attached at all times, it being so constructed as to be automatically adjusted by the raising and lowering of the sash.

Fig. 1 shows a window-frame having sashes 2 and 3 movable therein. In Fig. 4 the ventilator is shown attached to the sash 3, although it is obvious that it may be attached to either the upper or lower sash. It is constructed, as better seen in the detailed view of Fig. 2, of a top and bottom 5 and 6, the top 5 being provided with a large number of minute perforations, as shown in Fig. 3, to permit of the entrance of the air. The side is formed of two members 7 and 8, which are joined together at their center by hinges 9. Slots 10 are provided at each end of the ventilator and adapted to receive a strip of metal 11, which may be used to shut off the end opening of the ventilators when desired. The top 5 is further provided with catches 12, which in this instance are hooks adapted to engage screw-eyes inserted in the sash, although it is obvious that any other form of fastening may be used for this purpose. Braces 13 extend from the outer corners of the top 5 to the sash 3 and are secured thereto by any of the usual means of fastening. These braces may be omitted without departing from my invention. They are designed for use where the ventilator is subjected to considerable pressure and needs added strength.

One of the difficulties of providing a ventilator adapted to open and close with the opening and closing of a window is caused by the fact that if the window is raised to a height equally to the two sides 7 and 8 they will assume a vertical position, and when the window is closed they must either be pushed inwardly or are liable to be broken by the pressure exerted on the sash. I prevent this by means of stops 14, which are composed of two members 15 and 16, which are attached to the top and bottom of the ventilator by pins or pivots 17 at their extremities. These strips are pivotally attached to each other by means of a pin or pivot 18. The upper member 14 is further provided with a shoulder 19, this shoulder being adapted to engage the member 16 as the window is raised, with the result that when the window has been open sufficiently to bring the members 7 and 8 into the position shown in Fig. 2 the shoulder on the member 15 prevents its opening any farther by engaging the member 16. The result is that the members 7 and 8 never can assume a vertical position, and consequently it is impossible for them to be in such a position as to be subjected to the weight of the window when it is being closed or to require any movement before being in position to close with the window.

Where the ventilator is to be used in trains, a screen 20 may be placed underneath the



top 5 and covering the perforations therein, the mesh of the screen being small enough to prevent the admission of cinders without excluding the air. When the window is raised and it is desired to close the openings at the end, the metal strip 11 may be inserted in the slot 10 and will then assume the position shown in Fig. 2, in which it is apparent that all the end is closed with the exception of a small portion at the point of union between the members 7 and 8 and the top and bottom, respectively. When the window is closed, the strip 11 is automatically ejected from the slot 10 and assumes the position shown in Fig. 3.

An inspection of the drawings discloses the fact that the ventilator is to be at all times on the interior of the window and when closed, as shown in Fig. 7, lies entirely within the window, and is consequently easy to get at at any and all times. The members 7 and 8 may be provided with glass panels, if a transparent ventilator is desired, or they may be formed of metal plates.

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

1. The combination with a window having movable sashes, of a ventilator adapted to open and close with the opening and closing of the window-sash, said ventilator being foldable and having a horizontal perforated plate attached to the sash, the whole ventilator setting inside of the sash, said horizontal perforated plate being covered with a fine screen, for the purpose set forth, substantially as described.

2. The combination with a window having movable sashes, of a ventilator adapted to open and close with the opening and closing of the window-sash, said ventilator being foldable and having a horizontal perforated plate attached to the sash, the whole ventilator setting inside of the sash, said horizontal perforated plate being covered with a fine screen, an adjustable or movable device adapted to close the opening at the ends of the said ventilator for the purpose set forth, substantially as described.

3. The combination of a window-casing having slidable sashes mounted therein, of a ventilator connected to one of the said sashes, said ventilator arranged to open and close with the said sash, its inner wall being formed of hinged sections, means to prevent said hinged sections assuming a vertical position, for the purpose set forth, substantially as described.

4. The combination of a window-casing having slidable sashes mounted therein, of a ventilator connected to one of the said sashes, said ventilator arranged to open and close with the said sash, its inner wall being formed

of hinged sections, means to prevent said hinged sections assuming a vertical position, said means consisting of a stop formed of members pivotally attached to each other, one of said members being provided with a shoulder to prevent the said stop from assuming a vertical position.

5. The combination with a window having movable sashes, of a ventilator adapted to open and close with the opening and closing of the window-sash, said ventilator being foldable and having a horizontal perforated plate attached to the sash, the whole ventilator setting inside of the sash, said horizontal perforated plate being covered with a fine screen, the inner wall of said ventilator being formed of hinged sections, means to prevent said hinged sections from assuming a vertical position.

6. The combination with a window having movable sashes, of a ventilator adapted to open and close with the opening and closing of the window-sash, said ventilator being foldable and having a horizontal perforated plate attached to the sash, the whole ventilator setting inside of the sash, said horizontal perforated plate being covered with a fine screen, the inner wall of said ventilator being formed of hinged sections, means to prevent said hinged sections from assuming a vertical position, said means consisting of a stop formed of members pivotally attached to each other, one of said members being provided with a shoulder to prevent the said stop from assuming a vertical position, for the purpose set forth, substantially as described.

7. The combination with a window having movable sashes, of a ventilator adapted to open and close with the opening and closing of the window-sash, said ventilator being foldable and having a horizontal perforated plate attached to the sash, the whole ventilator setting inside of the sash, said horizontal perforated plate being formed with a fine screen, the inner wall of said ventilator being formed of hinged sections, means to prevent said hinged sections from assuming a vertical position, said means consisting of a stop formed of members pivotally attached to each other, one of said members being provided with a shoulder to prevent the said stop from assuming a vertical position, detachable braces extending from the outer corners of said ventilator to the window-sash, for the purpose set forth, substantially as described.

8. The combination of a window having movable sashes, of a ventilator adapted to open and close with the opening and closing of the window-sash, said ventilator being foldable, its side being formed of hinged sections and its top being formed of a horizon-



tal plate, attached to the sash, there being perforations in said plate, the whole ventilator setting inside of the sash, said horizontal perforated plate being covered with a fine  
5 screen, an adjustable or movable device adapted to close the opening at the ends of said ventilator, means to prevent said hinged sections from assuming a vertical position,

for the purpose set forth, substantially as described. 10

In testimony whereof I have hereunto set my hand.

MILTON H. BERRY.

Witnesses:

A. NELSON,

J. H. CARROLL.