

(No Model.)

H. H. REYNOLDS.

WINDOW VENTILATOR FOR RAILWAY CARS.

No. 275,271.

Patented Apr. 3, 1883.

Fig. 1

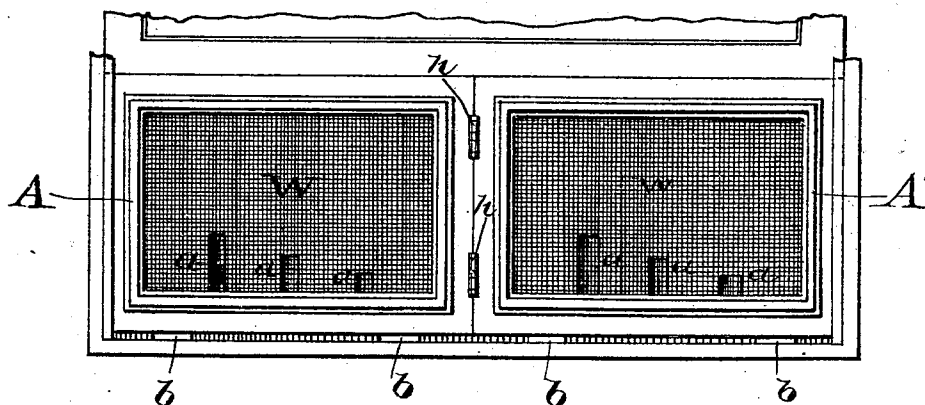


Fig. 3

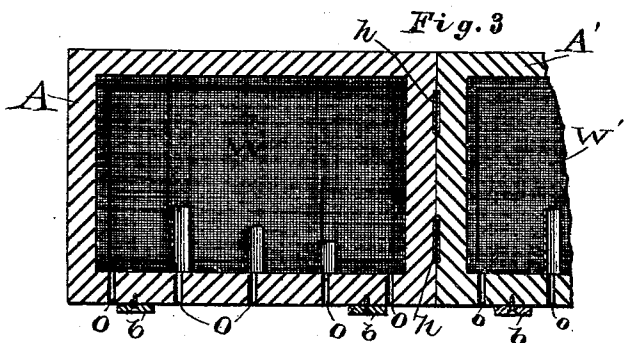


Fig. 4

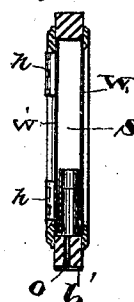


Fig. 5

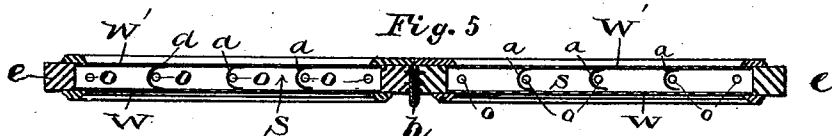
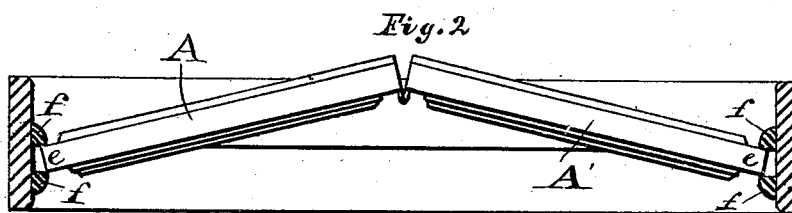


Fig. 2



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# UNITED STATES PATENT OFFICE.

HUMPHREY H. REYNOLDS, OF MINNEAPOLIS, MINNESOTA.

## WINDOW-VENTILATOR FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 275,271, dated April 3, 1883.

Application filed May 9, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, HUMPHREY H. REYNOLDS, a citizen of the United States of America, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Window-Ventilators for Railway-Cars, of which the following is a specification.

My invention relates to improvements in window-ventilators, particularly adapted for railway-cars.

The object of my invention is to provide a simple and inexpensive device to be placed under the sash of a window for the purpose of thoroughly ventilating the car without causing a draft and without the admission of cinders, gnats, &c.

To this end my invention consists in a novel construction and arrangement of parts, as hereinafter fully set forth.

In the accompanying drawings, Figure 1 is an elevation of my improved ventilator in place. Fig. 2 is a plan view of the same, showing the manner of putting it in position. Fig. 3 is a longitudinal sectional elevation, Fig. 4 a cross-sectional elevation, and Fig. 5 a horizontal sectional view, of the device removed.

Similar letters of reference refer to similar parts throughout the several views.

In the drawings, A and A' are frames, of wood or other suitable material, hinged together by hinges *h h*, and are of such a length that when opened out, as shown in Fig. 5, the combined length is just equal to the width of the sash under which it is to be placed. These frames A and A' are covered outside and inside with wire-cloth W' and W, leaving a space, *s*, between. (See Fig. 5.) The wire-cloth W on the outside is comparatively coarse, while that W' on the inner surface is very fine. Through the bottom of the frames A and A', and opening into the space *s*, between the wire-cloths W and W', are a series of small openings, *o o*, around which are placed semi-cylindrical deflectors *a*, of progressive heights, as shown in Fig. 3. On the bottom of the frames are small pieces *b b*, of rubber or other suitable material, to prevent the frame from coming down on the window-sill when in position and closing the openings *o*, &c. The thickness of the frames at the ends *e e* and at the bottom *b'* corresponds to the thickness

of the sash in the window in which it is to be used.

The device is placed in position and operates in the manner described as follows: The sash is first raised and the ends *e e* inserted between the window-strips *f f* by turning the frames A and A' on the hinges *h h* in the position shown in Fig. 2. The frames are then turned straight and pressed down between the window-strips until the pieces *b b* rest on the window-sill, the lower edge of the frames coming below the strip or ledge thereon. The sash is then lowered until it rests on the upper edge of the frame, holding it firmly in position.

If desired, a strip of rubber or other suitable material may be placed on the top edge of the frame or on the bottom of the sash to insure a tight joint.

The device is to be placed in the window with semi-cylindrical deflectors *a*, over openings *o*, facing in the direction in which the train is going. The coarser or outside screen, W, arrests all cinders, &c., and partially stops the draft which enters into the space *s*, and by reason of the forward movement of the train strikes the deflectors *a* and creates a current through the openings *o* and space left below the bottom of the frames by reason of the pieces *b b*, while the cool, refreshing air therefrom is diffused through the fine screen W' into the car free from cinders, dust, and such impurities.

The device, it will be observed, is very simple and may be readily applied or removed, and adds greatly to the comforts of travelers. It is adapted for use on all classes of railway-coaches, including parlor, dining-room, and sleepers, and when not in use may be folded together and occupies but little space.

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

1. In a window-ventilator, the combination, with the hinged frames, of the wire screens of different degrees of fineness, substantially as set forth.

2. In a window-ventilator, the combination, with the frame A, of the screens W W', with meshes of different sizes, and the space *s*, inclosed between said screens, substantially as shown and described.

3. In a window-ventilator, the combination,

with the frame A, having openings *o* in its lower edge, of the screens W W' and air-space *s*, substantially as shown and described.

4. The combination of the frames A and A',  
5 hinged together and covered on the inside with a fine wire screen, W', and on the outside with a coarser one, W, forming between a space, *s*, the openings *o*, and pieces *b*, substantially as described and shown.

10 5. In a window-ventilator, the combination, with the frame A, having openings *o*, deflectors *a*, and cushions *b*, of the screens W W', of different degrees of fineness, and the space *s*,

formed between said screens, substantially as shown and described.

6. The combination of frames A A', hinges  
15 *h h*, coarse and fine wire screens W W', having space *s* between, openings *o*, deflectors *a*, and pieces *b*, substantially as described and shown, and for the purpose set forth.

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

HUMPHREY H. REYNOLDS.

Witnesses:

P. A. STALEY,  
FRANK JOHNSON.