T. W. Emery,

Car Ventilator.

No. 41,911. Patented Mar. 15, 1864.

Fig. 1.

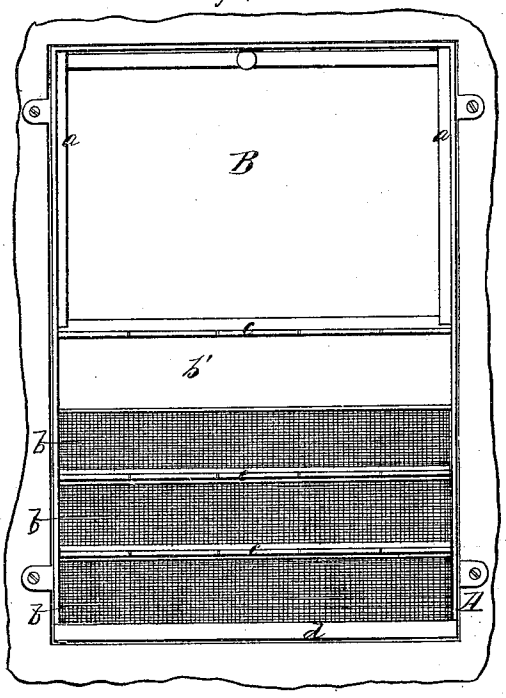


Fig. 2.

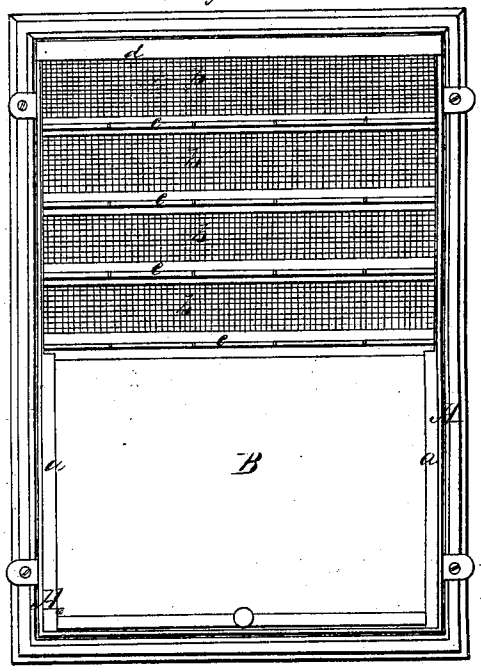


Fig. 3.

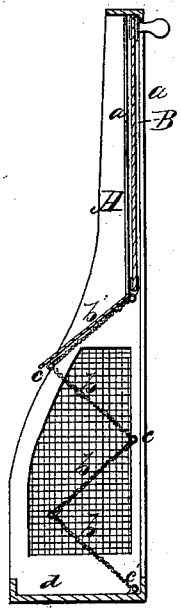
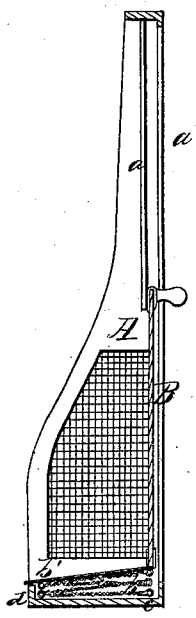


Fig. 4.



Witnesses,
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UNITED STATES PATENT OFFICE.

THOMAS W. EMERY, OF BUFFALO, NEW YORK.

IMPROVEMENT IN RAILROAD-CAR WINDOWS.

Specification forming part of Letters Patent No. **41,911**, dated March 15, 1864.

To all whom it may concern:

Be it known that I, THOMAS W. EMERY, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Insect and Dust-Excluding Ventilators for the Windows of Cars, Dwellings, &c.; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is an inside elevation of my improved ventilator, applied to one of the windows of a railroad-car; Fig. 2, a similar view of the same, applied in the place of a single pane or light of the window of a dwelling; Fig. 3, a transverse vertical section of Fig. 1, showing the ventilator-screens unfolded as when in use; Fig. 4, a similar section, but showing the ventilator-screens folded as when not in use.

Like letters of reference indicate corresponding parts in all the figures.

My invention consists in a set of horizontally-hinged screens, made of wire-cloth or equivalent, connected with a sliding pane, light, or equivalent, in such a manner as to be folded or unfolded, as the pane is raised or lowered, and providing the said screens with a cover at the top, which protects them from rain when folded, the whole being arranged in a frame applicable to the position in which it is to be placed, as hereinafter described.

As represented in the drawings, A is a rectangular frame, in the form and of the proper size to fit into the open space of a car-window, or in the place of a single pane of glass of an ordinary window of a dwelling-house, the same being secured in place by means of projecting ears at the sides, through which pass screws, or in any equivalent manner.

In the frame A is fitted a sliding pane, light, or other equivalent, B, occupying a portion of the space and being held in place by means of suitable guides, *a a*. One end of this pane is provided with a suitable knob for raising or lowering, and to the opposite end is jointed a set of screens, *b b b*, made of fine wire cloth or perforated sheet-metal, or equivalent material. The screens occupy the relative positions indicated, being jointed at the points *c c c*, in the manner substantially as shown. The opposite end of the set of screens from the sliding pane is rigidly secured to the frame A by a stationary joint, as shown at *c'*. By this arrangement it will be seen that when the screens are unfolded, or in use, they are of zigzag or angular form, as shown in Fig. 3; but when folded, or not in use, they shut up closely together, one over another, thus occupying but little space, as in Fig. 4. When folded, they rest in a shallow receptacle or box, *d*.

I make the top section, *b'*, of the set of screens a separate and unbroken plate, projecting at the lower edge sufficiently to form a cover or roof to shed the rain from the screens proper, when the same are folded, as represented in Fig. 4.

If desirable, the sides of the frame A may be provided with openings covered by wire-cloth, or equivalent, in order to secure a more perfect ventilation; but this is more particularly applicable to cars, though it might also sometimes be used to advantage in ordinary dwellings.

As applied to the window of a car, the left-hand side in Figs. 3 and 4 is the outside, and the right-hand the inside. In this use I prefer that the screens should fold and unfold from the bottom, as the apparatus is thus most convenient to be operated; but for dwellings it may be reversed—folding and unfolding from the top. When used near the top of a window, out of reach, they may be operated by a cord passing over a pulley.

Among the advantages of this arrangement are the following: The screens are arranged and operated in a very convenient manner—forming a perfect ventilator when unfolded or expanded, and at the same time excluding dust, cinders, and all insects. Being jointed in the manner described, unfolding together, the extent of ventilating-surface can be adjusted exactly as desired by raising or lowering the pane B. When not in use, the screens fold compactly out of sight, in the end of the frame, and are thus not only out of the way, but are removed from danger of injury.

I am not aware of any arrangement of screens jointed together and folded compactly as in this device. When thus folded, the cover *b'* serves as a roof to throw off the rain, thus shielding the screens from exposure to the weather, and preventing them from rusting.

In addition to this, the frame being portable allows the device to be applied in any window to which it is adapted, and inserted or removed at pleasure, so that the necessity of a special construction to each window is avoided, which is a great advantage. In this manner the frames may be manufactured in quantities all ready to be applied without further trouble.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the jointed screens *b b b* with the pane B, or its equivalent slide, and a frame A, the whole so arranged that when unfolded the screens serve as a ventilator and dust-excluder, but when folded they are in compact form and out of the way, substantially as herein specified.

2. In combination with the folding screens *b b b*, the cover or roof *b'*, arranged and operating substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

T. WM. EMERY.

Witnesses:
R. EMERY,
R. F. OSGOOD.