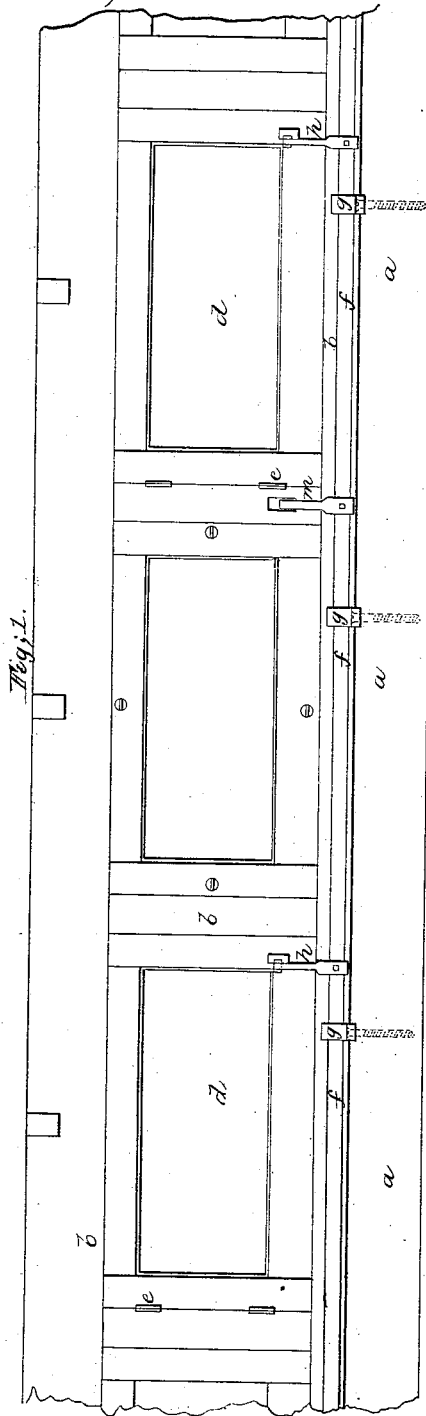


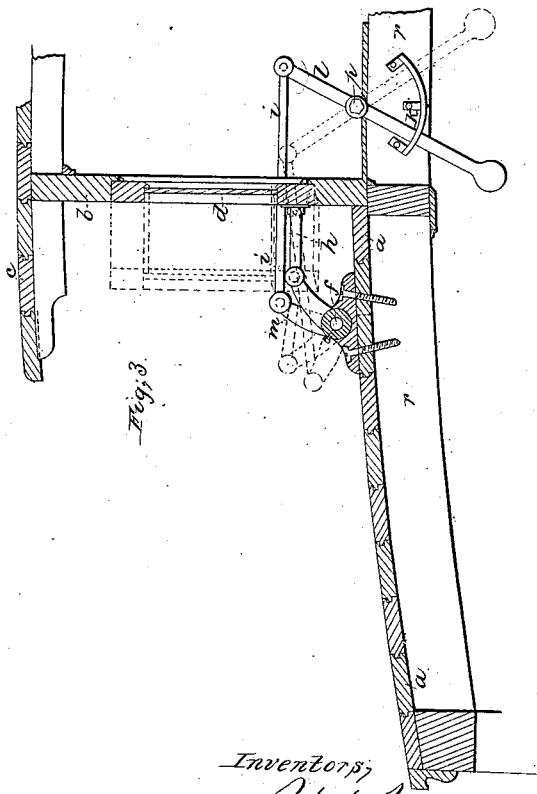
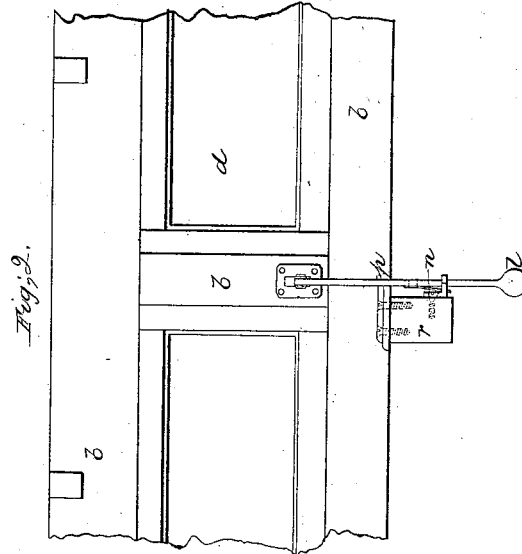
Monroe, Stone & St. John, Car Ventilator.

N^o 5160Y.

Patented Dec. 19, 1865.



Witnesses;
Franklin Smith
Charles L. Fairman



Inventors;
Robert Monroe
or Stone
Edgar St. John

UNITED STATES PATENT OFFICE.

ROBERT MONROE, ER STONE, AND EDGAR ST. JOHN, OF ELMIRA, N. Y.

VENTILATING-WINDOW FOR RAILROAD-CARS.

Specification forming part of Letters Patent No. 51,607, dated December 19, 1865.

To all whom it may concern:

Be it known that we, ROBERT MONROE, ER STONE, and EDGAR ST. JOHN, of the city of Elmira, county of Chemung, and State of New York, have invented a new and valuable improvement in the way or manner of ventilating the elevated section or raised roof in passenger-coaches and other vehicles; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, of which—

Figure 1 is a closed outside elevation. Fig. 2 is a closed inside elevation. Fig. 3 is a closed end elevation, with dotted lines showing its operation.

This invention is an improvement in that class of inventions known as "railway and other coach ventilators;" and it consists of one or more movable deflecting planes or panels, of whatever kind of material, in the elevated section or raised roofs of said coaches, or wherever placed, all operated at once by the same motion, each one being connected by an arm to a rod lying on the roof proper of the coach, or wherever else necessary for its action, and resting in bearings for that purpose, so that when the lever operating said rod is moved the jointed arms connecting said movable deflecting planes or panels to said rod will open all the said planes or panels, or close them, at one and the same time, by which arrangement an opening is made for the escape of the impure and heated air gathered in the vehicle without subjecting the inmates of the vehicle to the annoyance of dust and cinders falling through the openings upon them, all the parts being not only useful but ornamental, and not liable to derangement.

To enable those skilled in the art to make and use our invention, we will now proceed to describe its construction, the same letters in each and all the figures referring to like parts.

a represents the roof proper of the coach; *b*, upright part or frame of elevated section; *c*, roof of the elevated section; *d*, movable deflecting planes or panels; *e*, hinging of planes or panels to the elevated section; *f*, operating-rod lying on the roof proper or wherever else required; *g*, supports for the operating-rod; *h*, jointed arms connecting the movable deflecting panels or planes to the operating-rod; *i*, connecting-rod from the lever to the arm

upon the operating-rod; *k*, guard in which the lever moves; *l*, lever; *m*, arm connecting operating-rod to lever; *n*, spring to hold the lever in any position placed; *p*, fulcrum or center of motion to lever; *r*, rafter of coach proper.

All the figures represent the movable deflecting planes or panels as closed. The operation of all the parts is such that when the lever *l* is moved in the direction of the dotted lines, as shown in Fig. 3, all the movable deflecting planes or panels *d* are pushed outwardly as far as desired in the direction of the dotted lines indicating their motion, thus affording as many openings as there are planes or panels *d* connected to the operating-rod *f* for the escape of heated or impure atmosphere collected in the upper part or elevated section of the coach or vehicle, and as there should be the same number of these movable deflecting planes or panels in both sides and at both ends in the elevated section or vehicle, opening toward the ends of the coach or vehicle, the perfect ventilation of the coach or vehicle is constantly under the complete control of the conductor or any other person simply by moving the levers *l*, which will open and close the movable deflecting planes or panels *d* in the said elevated section, or wherever located, in the direction opposite to that in which the coach or vehicle is moving, the intention being to keep the movable deflecting planes or panels in the forward part of the coach or vehicle closed, to prevent the admission of dust and cinders.

We do not claim any of the parts used as new or of our own invention, because they all are old and used in mechanics.

What we claim as our invention, and for which we desire to secure Letters Patent, is—

The arrangement of the following-named parts, viz: hinges *e*, operating-rod *f*, jointed arm *h*, connecting-rods *i* and *m*, guard *k*, lever *l*, spring *n*, and fulcrum *p*, when used in combination with the movable deflecting planes or panels *d*, substantially for the purposes set forth.

ROBERT MONROE.
ER STONE.
EDGAR ST. JOHN.

In presence of—
N. P. FASSETT,
S. S. HAMLIN.