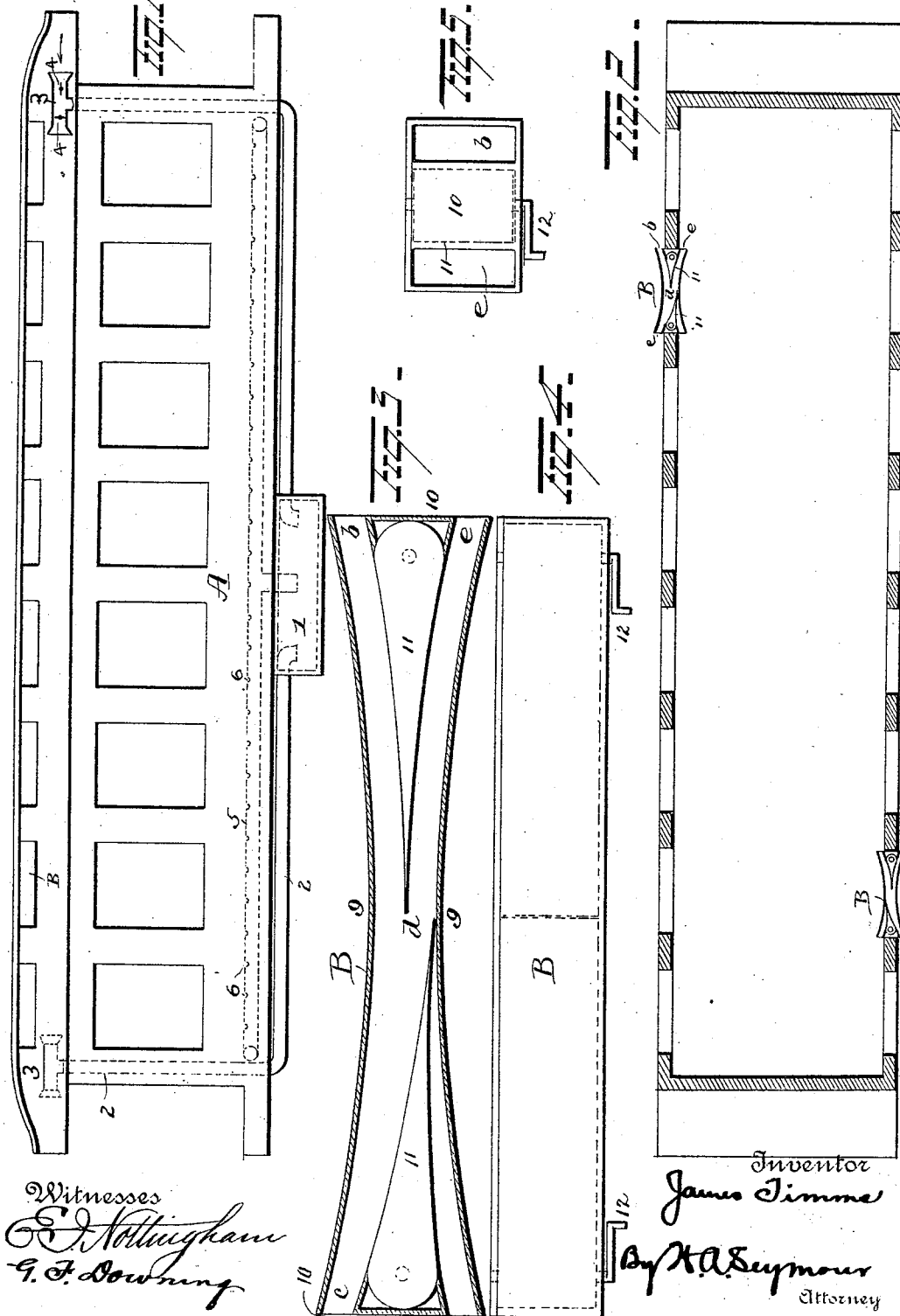


(No Model.)

J. TIMMS.
CAR VENTILATOR.

No. 538,298.

Patented Apr. 30, 1895.



UNITED STATES PATENT OFFICE.

JAMES TIMMS, OF COLUMBUS, OHIO.

CAR-VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 538,298, dated April 30, 1895.

Application filed January 17, 1895. Serial No. 535,256. (No model.)

To all whom it may concern:

Be it known that I, JAMES TIMMS, of Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful

Improvements in Car-Ventilators; 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.

My invention relates to an improvement in car ventilators, it being particularly applicable to passenger and fruit cars, the object being to create a continuous circulation of tempered fresh air through the car and it consists in certain novel features of construction and combinations of parts which will be hereinafter described and pointed out in the claims.

In the accompanying drawings Figure 1 is a view in side elevation of a car equipped with my improved heating and ventilating apparatus. Fig. 2 is a plan view. Fig. 3 is an enlarged plan view of the window ventilator. Fig. 4 is a side elevation of the same, and Fig. 5 is an end view.

A, represents a car, in this instance a passenger car although as above stated my improved apparatus is equally applicable to other cars, especially fruit cars. At some convenient point beneath the car either at the center, or at the sides the air chamber 1 is located, the object of which chamber is to receive a constant supply of fresh air from outside the car and prepare it for regulating the temperature of the car, that is to say, for heating the air in cold weather and cooling it in warm weather. For heating the air steam or hot water coils may be provided or other means, not shown and for cooling the air chamber may be filled or partially filled with ice. To this air chamber 1, a pipe 2 leads from each end of the car and the pipes 2, 2, are provided with hoods 3 at their upper ends as indicated, adapted to catch a continuous supply of air as the car travels forward in either direction. These hoods have funnel shaped openings at each end, whereby to receive air in either direction of the car's motion and to control the passage of the air. A valve 4 is located at each end of the hood, one of which is always open and the other always closed according to the direction of travel of the car. These valves

may be automatic in their operation or they may be controlled in any suitable manner.

One or more pipes, 5, 5, are passed through the floor of the car or at some other convenient point in the car and these pipes are in communication with the air chamber 1 from which they are supplied with air, the air escaping into the car through perforations 6, 6, with which the pipes 5, 5, are provided throughout their length. In this manner a continuous supply of fresh air is taken in, discharged into the air chamber, then cooled or heated as the case may be and thence discharged into the car for regulating the temperature of the latter. Valves (not shown) may of course be provided for controlling this discharge, to insure a proper degree of heat. Foul air is removed by suction, through the ventilator windows at the top of the car, induced by the motion of the car in either direction.

As many of these ventilators may be employed as are required to remove the air and as they are all alike one only will be described.

B, indicates this ventilator. It consists of an outer box or case adapted to fit the ventilating opening at the top of the car. The height of this ventilator corresponds to the height of the opening in which it is placed and in horizontal section it is restricted in width at the center 9 and enlarged or flaring at both ends 10, 10, to take the air from the inside and outside of the car, a valve 11, resembling the frog of a railway switch pivoted centrally at each end constituting a dividing or partition wall between the two inlets at each end and the other valve being always turned to deflect the siphoned air outward. Thus in Fig. 3 the outside air is scooped in at *b* and owing to the position of the valve at the other end, passes out at *c* and in passing the point *d* creates suction therein, drawing air from the car, in at *e* so that a constant outpouring of air is taking place from the car through the ventilators. In going the other way the valves of course are reversed and the same action takes place and for convenience in turning these valves, handles or similar means 12, 12 are provided. Thus it will be seen that no dust, cinders or smoke can be drawn in through the ventilators. It will be noticed also that the ventilators are compact, tak-

ing little space; they are neat and not unsightly; they are simple and not likely to get out of order, and easily manipulated and controlled. With the arrangement of supplying
5 and exhausting the air a complete circulation is kept up and a continuous supply of fresh air is taken in to take the place of the exhausted foul air.

It is evident that slight changes might be
10 resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention and hence I do not wish to limit myself to the exact construction herein set forth, but,

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

1. A ventilator consisting of a box or case open at the ends, having two valves therein

centrally pivoted at the outer ends of the 20 case and extending toward each other whereby air passages are formed on each side of the valves, substantially as set forth.

2. A ventilator comprising a case restricted at the center and open and flaring at the ends, 25 and a valve centrally pivoted at each end, the free ends of said valves terminating in proximity to each other, one of said valves adapted to form a dividing or partition wall while the other serves as a deflector, substantially as set 30 forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES TIMMS.

Witnesses:

D. G. GRAY,
EDWARD S. KING.