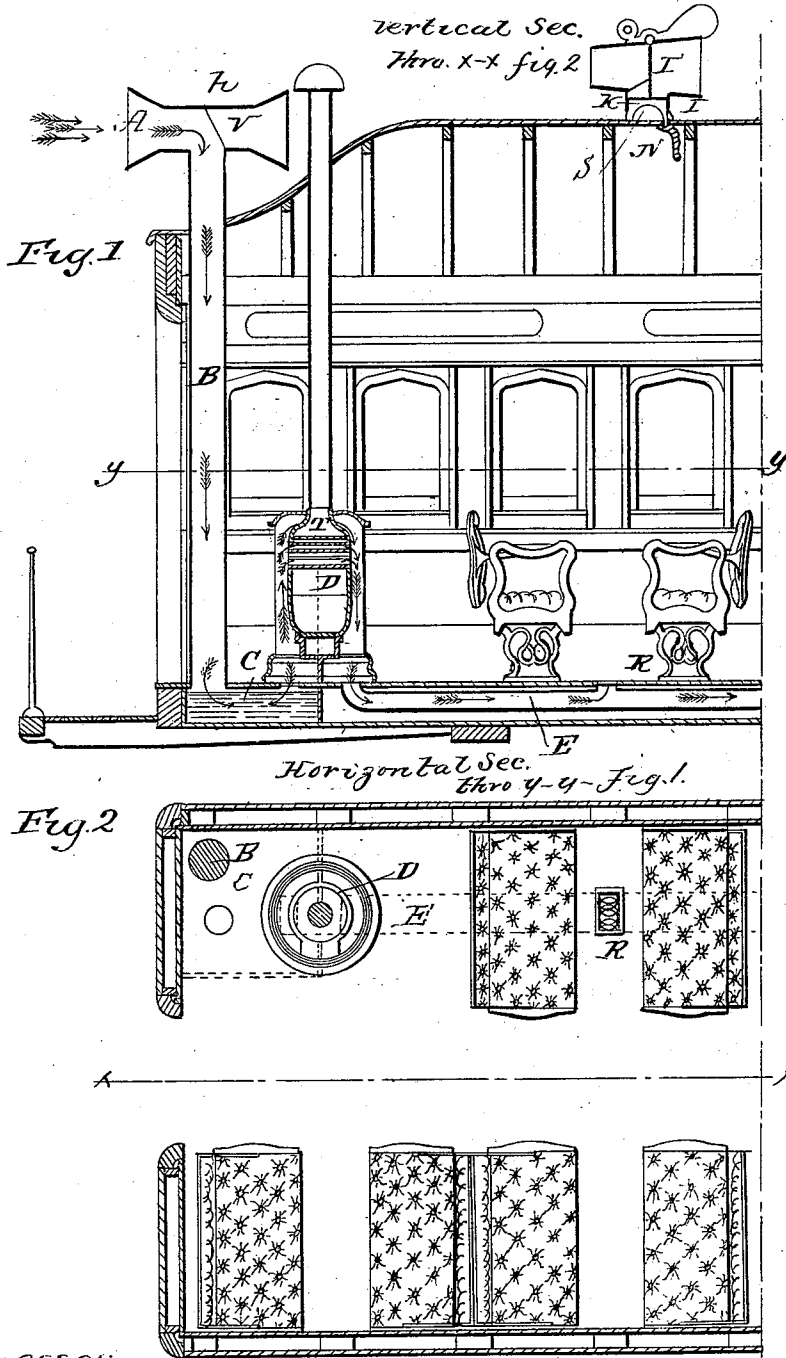


I. DRIPPS.

Railroad Car Heater.

No. 82,810.

Patented Oct. 6, 1868.



Witnesses
 W. A. Driggs
 J. H. Meyer

Inventor
 Isaac Driggs

United States Patent Office.

ISAAC DRIPPS, OF FORT WAYNE, INDIANA.

Letters Patent No. 82,810, dated October 6, 1868.

IMPROVEMENT IN RAILROAD-CAR HEATERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ISAAC DRIPPS, of Fort Wayne, in the county of Allen, and State of Indiana, have invented a new and useful Improvement in the Mode of Heating and Ventilating Railroad-Cars; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being made to the annexed drawings, making part of this specification, in which—

Figure 1 is a vertical section through the line *x x*, fig. 2, and

Figure 2 is a horizontal section through the line *y y*, fig. 1.

The same letters are employed, in both figures, in the indication of the same parts.

My improvements relate to an arrangement of parts for heating and ventilating railway-cars by means of a current of air, which, being brought in from the top of the car, is carried, first over or through a body of water, and thence passed around over a stove or heater, is carried into the car, passing out through ventilators in the top. The arrangement of parts for conveniently effecting this purpose will be set forth herein.

In the annexed drawings, A is a double-funnelled hood, placed over the top of the car, and connected with a pipe, B, leading downwards through the floor of the car. In the hood, suspended immediately over the centre of the pipe B, at *h*, is an oscillating valve, V. The lower end being free, will swing to either side, as it may be pressed against by a current of air entering the funnel towards which the car is moving. There are seats for this valve, placed diagonally on each side of the pipe B, so that the pressure of the current against one or the other side of the valve will force it against one of the seats, so that by stopping the flow of the current through the hood, it will be diverted downwards, and forced through the pipe B. When the car is stationary, the valve will hang perpendicularly, and permit a free current into the mouth of the pipe through both funnels.

The pipe B terminates in the top of a tank nearly filled with water, and placed immediately underneath the car-floor. The current of air entering through the pipe B will be forced through this water, which, being agitated by the motion of the cars, will allow the air to pass, but collect the particles of dust, sparks, &c., from the air, which, thus purified, will flow through an opening in the floor of a car, to the heater.

This heater I prefer to construct in the form set forth in an application for Letters Patent, filed herewith, in which I particularly describe a heater especially adapted for such use, and to which I make reference for more particular description.

D is the stove, around which is a casing, divided by the partitions extending from the floor nearly to the top of the stove, so that a current of air passing in must flow up over the stove, or through the transverse pipes T, and, descending on the opposite side, escapes in a heated state through the pipe E, under or upon the floor of the car, to registers, R, from whence it is discharged into the car.

Ventilators are also placed above the roof of the car, one form of which I show in the drawings, being the ventilator described in an application for Letters Patent filed at the same time with this. This ventilator has a valve in the pipe, by which the upward flow of air from the cars may be regulated as required. Any form of ventilator may be used, but I prefer the one shown herein.

One of these heaters should be placed in each end of a car. The same arrangement may be used for introducing cool air into the cars in the summer-time, and at the same time excluding dust, the window being kept closed when the car is in motion, a sufficient circulation being effected through the induction-pipe and the ventilators.

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

An apparatus for heating and ventilating railroad-cars, combining the following elements, viz, a double-funnelled hood, A, with a centrally-suspended oscillating valve, V, pipe B, water-tank C, heater D, with enclosing casing, arranged as described, a pipe, E, and registers R, and a ventilator so constructed as to create an outward draught, substantially as described.

ISAAC DRIPPS.

Witnesses:

W. A. DRIPPS,

THOS. MEEGAN.