J. M. KEATING.

Ventilating Railway-Cars and Ships.

No. 199,554. Patented Jan. 22, 1878.

Fig 1.

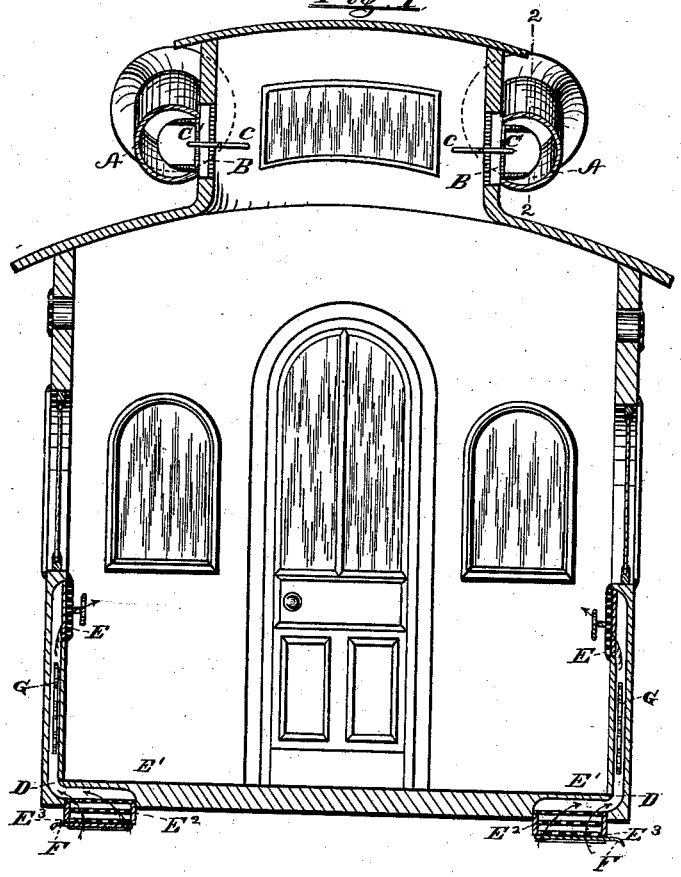


Fig 1a.

Fig 2.

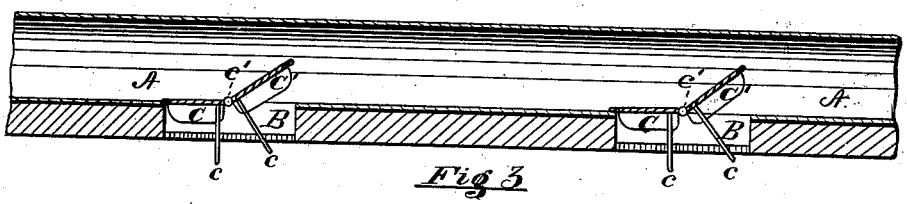
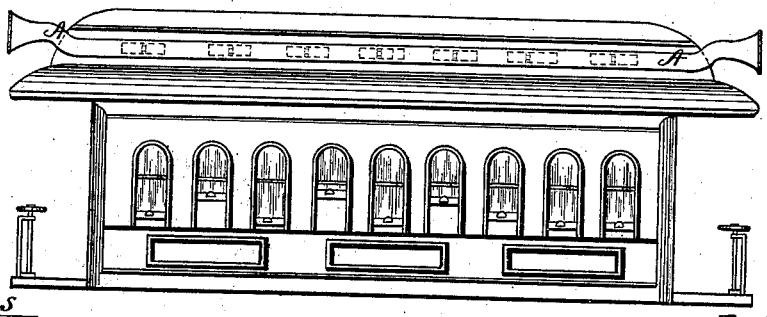


Fig 3.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN M. KEATING, OF MEMPHIS, TENNESSEE.

IMPROVEMENT IN VENTILATING RAILWAY-CARS AND SHIPS.

Specification forming part of Letters Patent No. **199,554**, dated January 22, 1878; application filed November 19, 1877.

To all whom it may concern:

Be it known that I, JOHN M. KEATING, of Memphis, in the county of Shelby and State of Tennessee, have invented a certain new and Improved Method of Ventilating Railway-Cars and Ships, of which the following is a specification:

My invention relates to a system of ventilating railway-cars, steamboats, and other vessels by the agency of longitudinal pipes applied to the dome or upper portion of the car, with trumpet-shaped ends, to produce a forcible current by the motion of the car, and discharging the vitiated air through openings communicating with the trunks, and furnished with adjustable deflectors, so constructed that they may be set to open in either direction, according to the way in which the car is moving, and to cause forcible induced currents by the motion of the air in the longitudinal pipes or trunks.

The fresh air is supplied to the car through openings protected by a series of gauze screens of different fineness, the inlets being furnished with registers. Heating-coils are applied within the inlet-passages, when desired.

In the accompanying drawings, Figure 1 is a vertical transverse section of the body of a car, illustrating the invention. Fig. 1ª is a face view of a suitable inlet-register. Fig. 2 is a horizontal section on the line 2 2, Fig. 1, of a portion of one of the longitudinal trunks, showing the outlet-passages and the deflectors. Fig. 3 is a side elevation of the car on a smaller scale.

A A represent longitudinal trunks or pipes, which may be located in any suitable manner in or upon the upper part of the car. They are provided with funnel or trumpet shaped hoods at the ends, so that by the rapid motion of the car a large volume of air will be forced through the trunks or pipes, being gathered by the trumpet-shaped hood at one end and discharged by that at the other end.

B B represent outlets from the upper part of the car, communicating with the interior of the trunks, and protected by deflectors C C′, pivoted at *c′*, as shown in Fig. 2, and furnished with handles or levers *c*, projecting within the car, to admit of the ready adjustment of the deflectors.

A number of the deflectors and outlets are indicated by dotted lines in Fig. 3, showing their location and arrangement from end to end of the car.

The outlet-passages may be covered with gauze or perforated metal, as shown in Figs. 1 and 2, if desired.

D D represent inlet-ducts, communicating with registers E E, which may be turned by handles in customary manner, so that the passengers, especially in sleeping-coaches, may regulate the ingress of air, as convenience may dictate.

The inlet-ducts are protected by a number of gauze screens, E^1 E^2 E^3, of increasing fineness, so as to sift out dust and other impurities from the air. The screens are made to slide, so as to remove them for cleansing.

The ducts are further controlled by external shutters F F, so that they may be closed or opened from the outside, when desired.

G G represent heating-coils, which may be applied within the inlet air-ducts, for use in the winter season.

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

1. The combination of the longitudinal trunks A, outlets B, and the inlet-passages covered with wire-gauze.

2. The combination of the longitudinal trunks and deflectors, for producing induced currents to exhaust the air from the car or cabin, as explained.

J. M. KEATING.

Witnesses:
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