

J. LOUGHIN.
VENTILATING CARS.

No. 183,405.

Patented Oct. 17, 1876.

Fig. 1

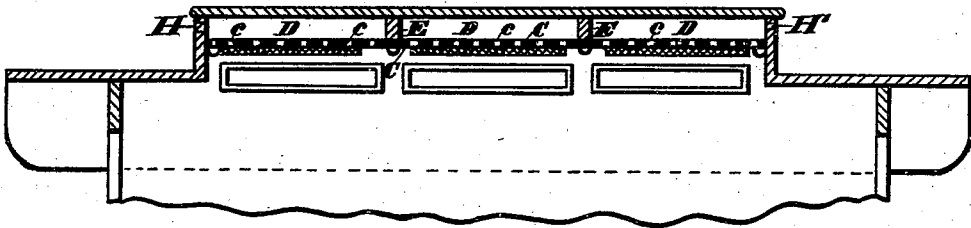
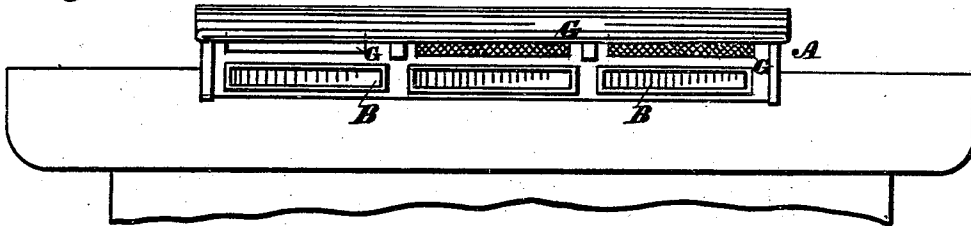
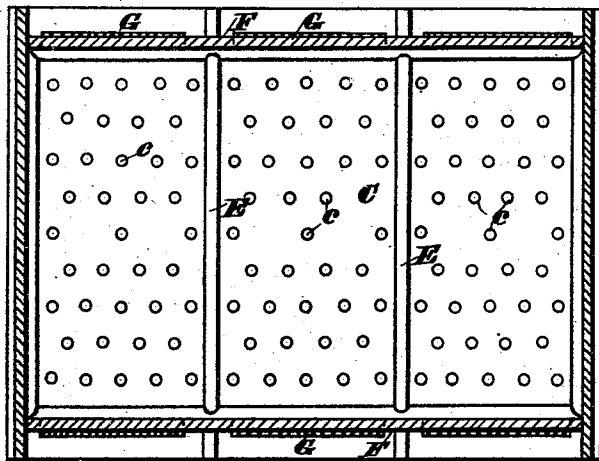


Fig. 2

Fig. 3



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN LOUGHIN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN VENTILATING CARS.

Specification forming part of Letters Patent No. **183,405**, dated October 17, 1876; application filed September 27, 1876.

To all whom it may concern:

Be it known that I, JOHN LOUGHIN, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Ventilating Cars; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a broken elevation of an upper part of a car with my improvement applied. Fig. 2 is a broken section of the same. Fig. 3 is an inverted plan of my invention.

My improvement has for its object to provide means for ventilating a car by the provision of an air-chamber in the roof or below the latter, the bottom of said chamber constituting the ceiling of the car, being numerous perforated for the passage of the air, the sides being also open or furnished with suitable openings for the same purpose.

Referring to the accompanying drawing, A designates the roof of a car, and B the ordinary side windows for ventilating purposes. C is a false ceiling, some distance below the roof, forming an air chamber, D, which has open sides for the free lateral passage of air-drafts. Said sides may on steam-railways be covered with wire-gauze, to prevent the admission of cinders. The ceiling C has numerous perforations *c c*, through which the foul air arising from the inside of the car will pass, and be carried away by the lateral drafts

through the open sides or wire gauze. E E represent ribs or girders extending from the side framings F or sills of the car, and serving to divide the chamber D into several apartments or passages, with a window or opening, G, at the end of each.

By means of this subdivision the drafts or air-currents may be better controlled and regulated than if said chamber were one unbroken space.

I prefer that the openings G should be on the sides, so as to cause the currents of air to pass laterally from the car, and avoid the inwardly and downwardly descending drafts incident to a front opening. Still, if desired, openings may be made at H and H', either or both, corresponding openings being made in the girders E E for the passage of the air.

What I claim as my invention is—

1. A car provided with a false ceiling, C, below the roof, forming an air-chamber, D, said ceiling being perforated or formed with openings *c c* for the passage of air, substantially as shown and described.

2. The chamber D, having foraminated bottom, divided into separate compartments by the ribs or girders E E, and having also side openings G G, to permit the passage of lateral air-currents.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of September, 1876.

JOHN LOUGHIN.

Witnesses:

SAML. J. VAN STAVOREN,
CHAS. F. VAN HORN.