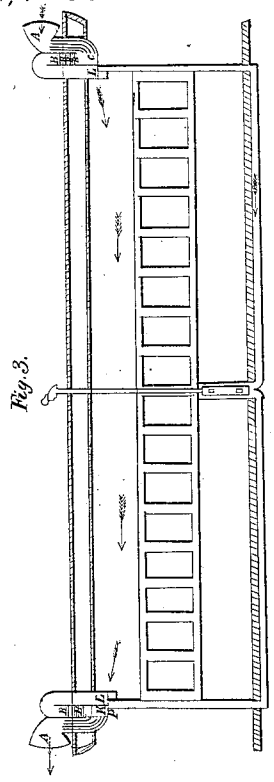
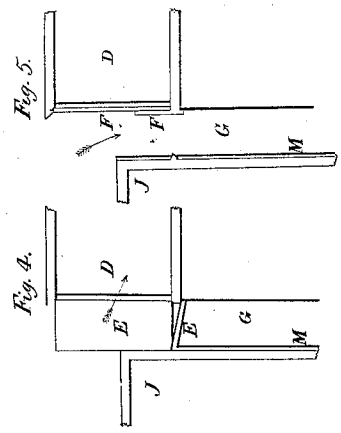
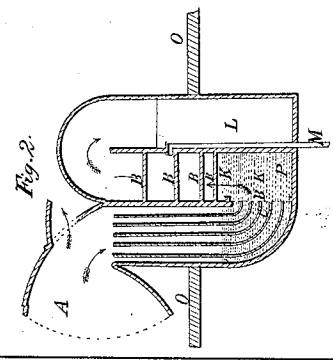
W. H. Medcalfe,

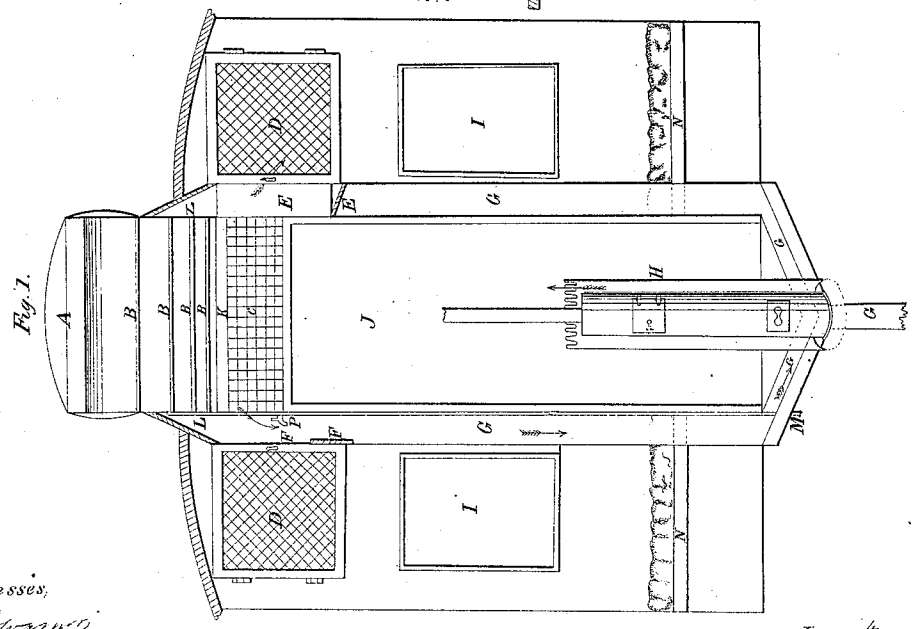
Car Ventilator.

No. 14,139. Patented Jan. 22, 1856.









Witnesses,
C. F. Warner
Charles Medcalfe

Inventor,
William H. Medcalfe

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

W. H. MEDCALFE, OF BALTIMORE, MARYLAND.

METHOD OF VENTILATING RAILROAD-CARS.

Specification of Letters Patent No. 14,139, dated January 22, 1856.

To all whom it may concern:

Be it known that I, WILLIAM H. MEDCALFE, of Baltimore, in the State of Maryland, have invented a new and Improved Mode of Ventilating and Heating Railroad Cars and other Vehicles; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in collecting air as it passes over the cars, and throwing it by tubes into a body of water, there separating dust, cinders, etc., from the air by means of screened wire, the air thus freed from impurities passing through a register directly into the car—or passing by pipes around a stove and then entering the car for consumption, all of which air passes out at the opposite end of said car through a like fixture without the water.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct on the top of a rail road car a self regulating bonnet A, Figures 1, 2, 3. The regulator is attached to the posterior of the bonnet as seen more distinctly, open, in Fig. 2. A properly regulated spiral spring keeps it closed until the current of air should exceed 40 miles or thereabout an hour, when it opens for some of the air to escape, thus allowing a steady current of air to pass down the tubes to their ends or openings at C Figs. 2 and 1. The air thus entering the water K, Figs. 1, 2, 3, in small particles is again broken by a screened wire B, Fig. 2. The water then taking hold of the impurities is prevented from rising, as indicated by the arrow, Fig. 2, with the air by a certain number of sceened wires B, Figs. 1, 2, 3. The air thus freed passes around to the opening L, Figs. 1, 2, 3, and thence immediately to the registers D, Figs. 1, 3. In cold weather the registers D, as shown in Figs. 1, 5, at F, F, is closed which opens the air conductor G, Figs. 1, 3, 4, 5, to the cylinder H around the stove, thus heating the air before entering the car. A like construction I place at the end of a car as shown in Fig. 3, left hand, which being emptied of water previous to starting by the faucet P, Figs. 1, 2, 3, allows the impure air from the car to pass out thus keeping a continued current through the car as seen in Fig. 3.

Figs. 4, 5, show the secret doors E E and F, F. When the door F to the register is closed it opens the door F to the stove and when the register door E, Figs. 1, 4, is open the door E leading to stove is closed. I also place a safety pipe M, Figs. 1, 2, 4, 5, to open into the water box and escape under the car in case the water from rain or dust should rise too high.

Fig. 1, represents the whole end of a car with a sectional view of the apparatus. Fig. 2, is a sectional drawing of the apparatus, the bottom of which rests on the top of the door frame. Fig. 3, represents a car when the whole fixture is attached.

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

The passing of a current of air, the force of which is regulated by the motion of the car and a self regulating bonnet, through a body of water, which water is retained with a certain space, by a certain number of wire screens, placed as shown in the drawings, screened wires; the air thus freed from water, dust, cinders, etc., is carried directly into the car, through registers or by pipes around the stove, and out of the car by a similar apparatus (emptied of water) after the air has been used.

WILLIAM H. MEDCALFE.

Witnesses:
DAVID T. BUZBY,
F. MEDCALFE.