H. E. FINNEY.

CAR-VENTILATOR.

No. 193,235. Patented July 17, 1877.

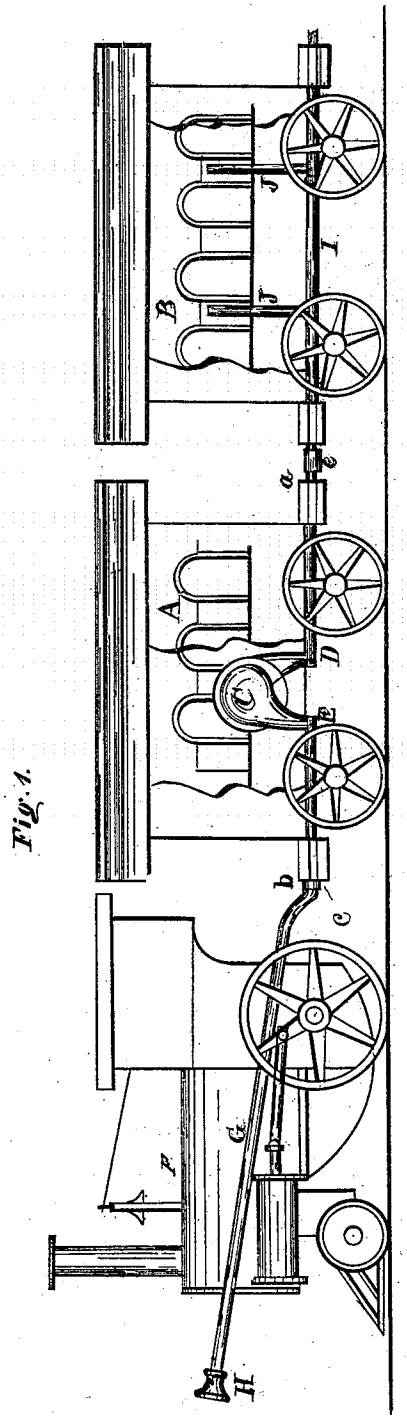


Fig. 1.

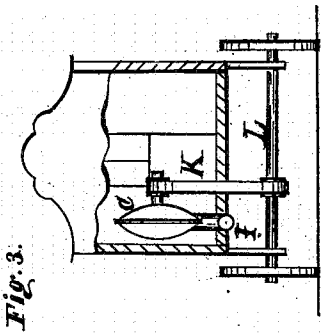


Fig. 3.

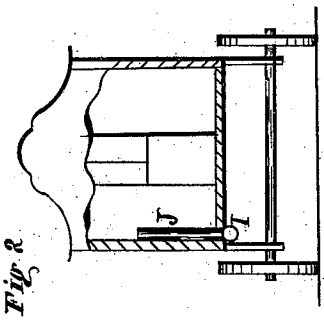


Fig. 2.

Wilnesses.

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UNITED STATES PATENT OFFICE.

HENRY E. FINNEY, OF YOUNGSTOWN, OHIO.

IMPROVEMENT IN CAR-VENTILATORS.

Specification forming part of Letters Patent No. **193,235**, dated July 17, 1877; application filed March 3, 1877.

To all whom it may concern:

Be it known that I, HENRY E. FINNEY, of Youngstown, in the county of Mahoning and State of Ohio, have invented a certain new and Improved Railway-Car Ventilator; and I do hereby declare that the following is a full, clear, and complete description thereof, reference being had to the accompanying drawings, making a part of the same.

Figure 1 is a side view of cars having applied thereto the ventilating device. Figs. 2 and 3 are vertical transverse sections.

Like letters of reference refer to like parts in the several views.

The purpose of this invention is to ventilate railway-cars and to exclude therefrom smoke, dust, &c., by taking air from the front of the engine and conducting the same to each car of the train by means of pipes or conduits through which the air is drawn and impelled into the cars by a fan or blower, all of which is constructed, arranged, and operated substantially as herein shown and described.

In the drawing, A and B represent two railway-cars, which are or may be like those in ordinary use. In the car A is a fan or blower, C, to which is connected a tube, D, extending lengthwise along the under side of the floor of the car to the end of the platform, at which place it terminates, as will be seen at *a*, Fig. 1.

E is also a pipe extending in the opposite direction along the under side of the floor of the car, and terminating at the end *b* of the platform.

F represents the locomotive, to the side of which is secured a pipe, G, provided with a wide open mouth, H. Said pipe G is attached to the pipe E of the car A by a flexible detachable coupling, *e*, thereby making a continuous line of pipe from the mouth H to the fan or blower C.

Along the under side of the floor of the car B is secured a pipe, I, the ends of which respectively terminate at the ends of the platforms. Said pipe I is put in connection with the pipe D of the car A by a flexible detachable coupling *e*.

Each car in the train is alike provided with a pipe, I, and which, on making up the train, are coupled to each other by a flexible coupling, as are the pipes above described, thereby making a continuous pipe from the front of the engine to the extreme end of the train, be the number of cars more or less.

From each of the pipes I attached to the cars project upward into the cars one or more pipes J, and open therein at any described distance above the floor. Said vertical pipes may be arranged against the wall between the windows, or they may be placed in the wall, out of sight, and open into the cars through vents or registers.

The fan or blower C, above referred to, is driven by a belt, K, Fig. 3, passing over a pulley secured to the axle L of the car B, connected therewith by the coupling *e*.

The impelled current of air passes from the pipe I into the car through the vertical induction-pipes J, thereby supplying the car with fresh pure air from the front of the engine, free from dust, smoke, &c.

The pressure of the air thus conveyed into car or cars produces an outward current therefrom through the ventilators in the sides and roof of the car, thereby carrying out whatever dust, &c., that may be therein, and at the same time preventing the dust, smoke, &c., from entering the car through the open ventilators and windows, in the event some of said windows are open, the most of which, however, should remain closed, as cool fresh air will be constantly supplied by the induction-pipes J.

It will be obvious that by the above-described means the annoyance and discomfort usually experienced in railway-cars in consequence of the dust, cinders, smoke, &c., finding their way therein are avoided, and a commensurate degree of comfort realized.

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

The pipe G, extending in front of the locomotive and under the floors of the cars, in combination with the fan-blower, operated by the rotation of the wheel-axle and induction-pipe J, rising vertically from the floor-pipe G′, whereby ascending currents are induced and a circulation of fresh air maintained from the lower to the upper parts of the cars.

HENRY E. FINNEY.

Witnesses:
SAML. SUMMERS,
F. M. SIMON.