J. R. McNEILLE.

AUTOMATIC CAR-FAN.

No. 187,033. Patented Feb. 6, 1877.

Fig. 1.

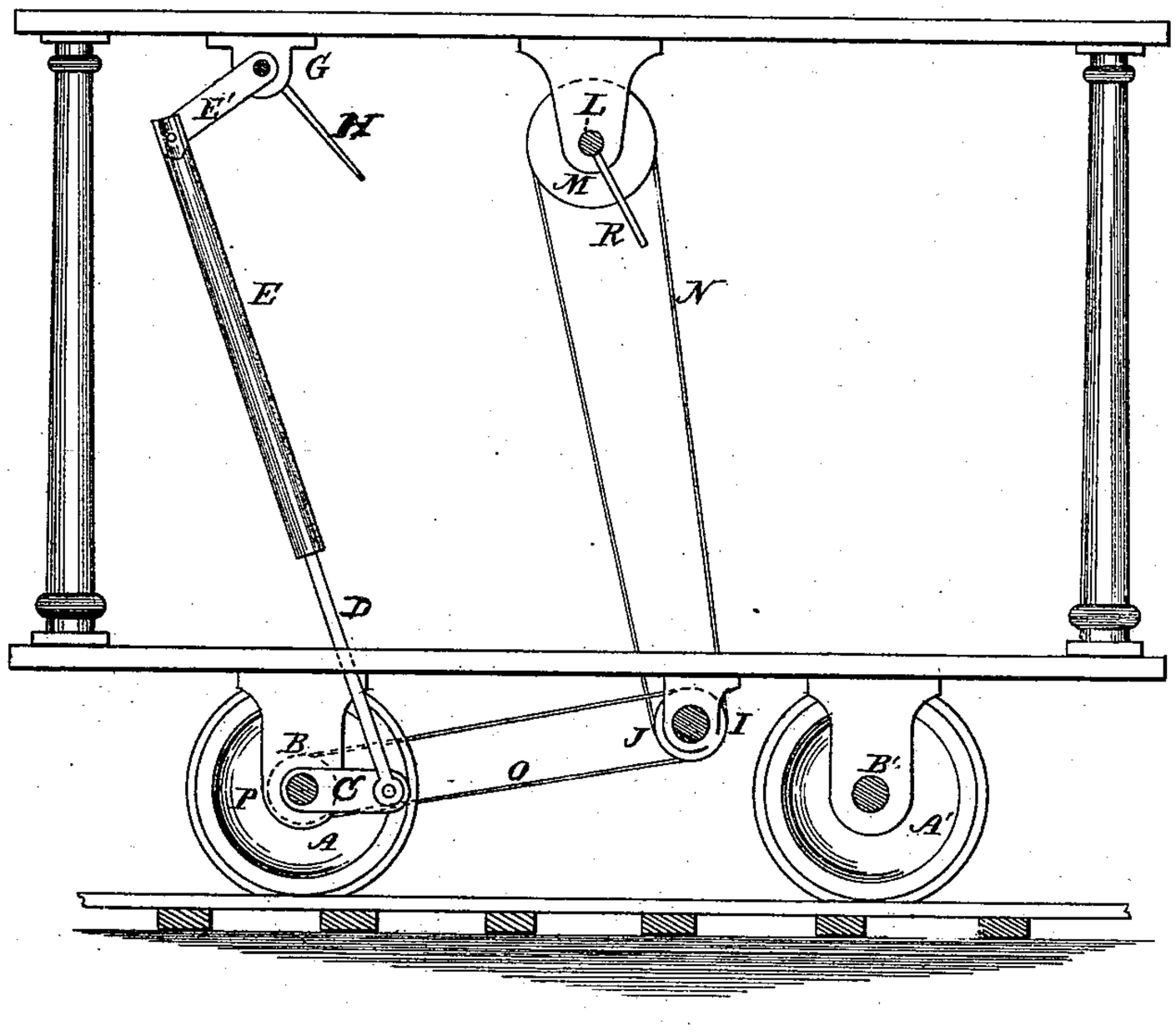
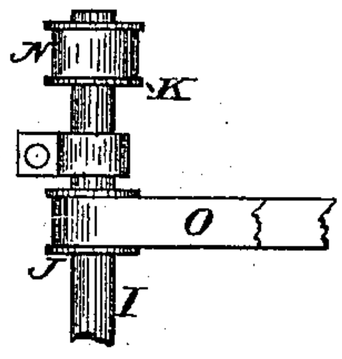


Fig. 2.



WITNESSES

Nat. E. Oliphant.

Geo. R. Porter.

INVENTOR

John R. McNeille

per George E. Buckley,

Atty.

UNITED STATES PATENT OFFICE.

JOHN R. McNEILLE, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN AUTOMATIC CAR-FANS.

Specification forming part of Letters Patent No. **187,033**, dated February 6, 1877; application filed June 19, 1876.

To all whom it may concern:

Be it known that I, JOHN R. McNEILLE, of Philadelphia, Pennsylvania, have invented certain new and useful Improvements in Automatic Car-Fans; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part hereof.

My invention consists of the combination of a fan, a sleeve, a rod to work in said sleeve, and a crank upon an axle, substantially as and for the purposes hereinafter described; also, of the combination of a compensating-lever, formed by a sleeve and a rod, a crank to drive said lever, and a fan receiving its motion from the lever, all arranged substantially as hereinafter set forth.

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

In the drawings, Figure 1 is a side elevation of a car with my device attached thereto. Fig. 2 is a detached view, showing the arrangement of the belts.

A A′ are the car-wheels; B B′, the shafts or axles of wheels A. C is a crank rigidly attached to axle B. D is a rod, pivoted at one end to crank C, the other end of which rod rests and slides in sleeve E. Sleeve E is rigidly attached to crank E′, which, in turn, is rigidly attached to shaft G. This latter has dependent from it the oscillating fan H. J K are pulleys on shaft I. M is a pulley on shaft L. P is a pulley on axle B, all connected by rubber belts N and O. Fan R is dependent from shaft L, and is revolving.

As the wheel A revolves it turns the pulley P, and continuous motion is transmitted to belt O, pulleys J K, belt N, pulley M, and this rotates the fan R. The ends of shafts L and G are supported by trunnions from the top of the car. The motion of fan R sustains a cool circulation of air in the car.

The fan H is set in motion as follows: Either by a bent axle, or by means of the crank C on the end of the axle, a motion is communicated upward and downward, and to and fro, to the bar D, which slides in sleeve E. This gives a swinging motion to sleeve E. The sleeve E, being rigidly jointed to crank E′, raises and lowers this crank, thus giving a partial revolution backward and forward to shaft G and fan H.

The degree of the motion of fan H is regulated by the distance from the shaft end of crank E′ at which E is jointed. If the end of sleeve E is jointed to crank E′ nearer to the shaft G, the motion is greater, as the same lift is given by the sleeve to the point where it is attached as is given when it is attached to the end; consequently the rapidity and degree of speed in the motion of the fan is increased. And the reverse is true as the point of juncture is moved away from contiguity to the shaft G. Thus, if the train to which the car is attached is to run at a great speed—in other words, if it is for a steam-road—the crank E′ is lengthened, so as not to give too great speed to the fan, as the wheel A revolves rapidly. If, on the contrary, the car is for a horse-road, the crank E′ is shortened to give enough motion to the fan.

The two fans, acting in the same car, will produce opposite and various currents, and keep the air in the interior of the car in a state of healthful action and coolness.

The belt O is of rubber, so as to give and take by its elasticity as the car rises and falls on its springs; and the action of rod D in sleeve E provides for the same difficulty.

The lower end of rod D might be attached to the surface of wheel A.

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

1. The combination of fan H, sleeve E, rod D, and crank C upon axle B, substantially as and for the purposes described.

2. The combination of a compensating-lever, E D, formed by sleeve E and rod D, a crank, by which motion is imparted to the lever, and a fan, H, which receives its motion from the said lever, all arranged and operating substantially as described.

JNO. R. McNEILLE.

Witnesses:

ALBERT E. ZACHERLE,

W. W. DOUGHERTY.