

No. 724,948.

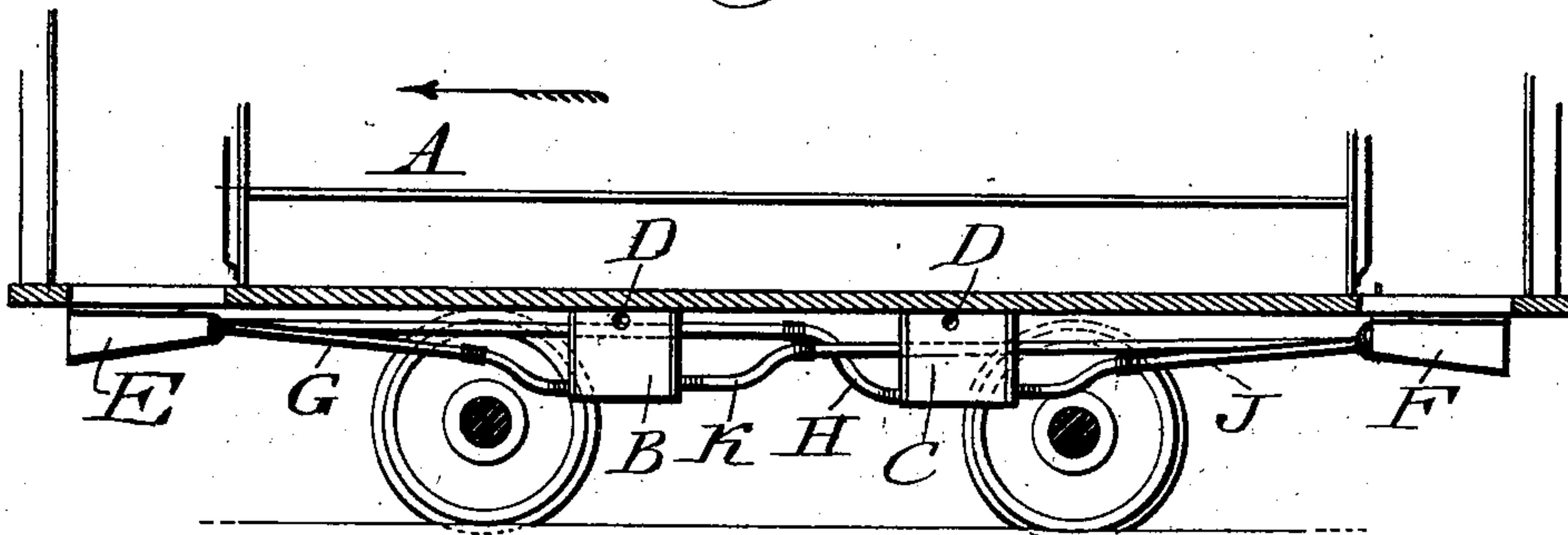
PATENTED APR. 7, 1903.

H. B. ROWLAND.  
VENTILATOR FOR ELECTRIC MOTORS FOR CARS.

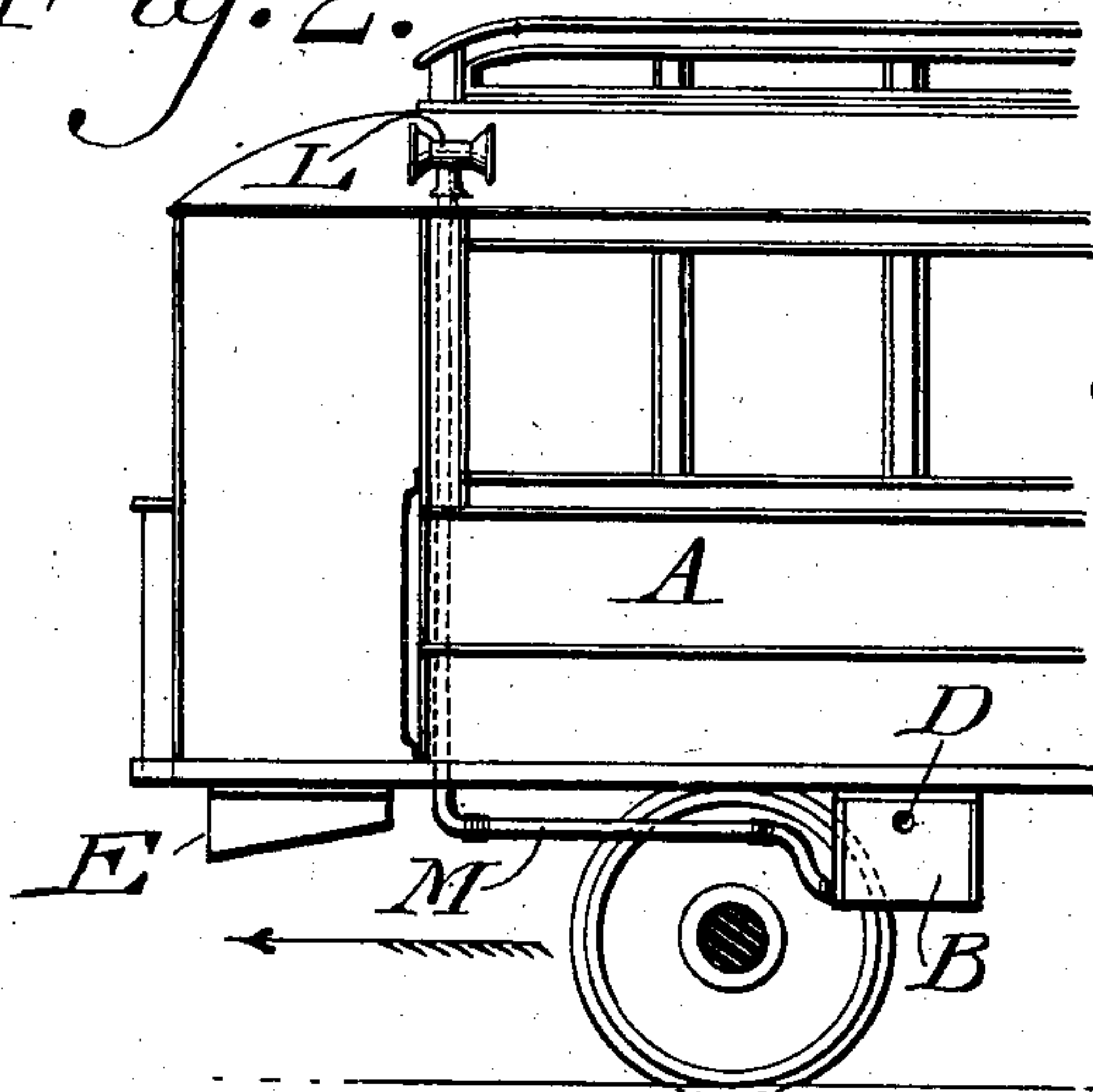
APPLICATION FILED MAR. 25, 1902. RENEWED FEB. 3, 1903.

NO MODEL.

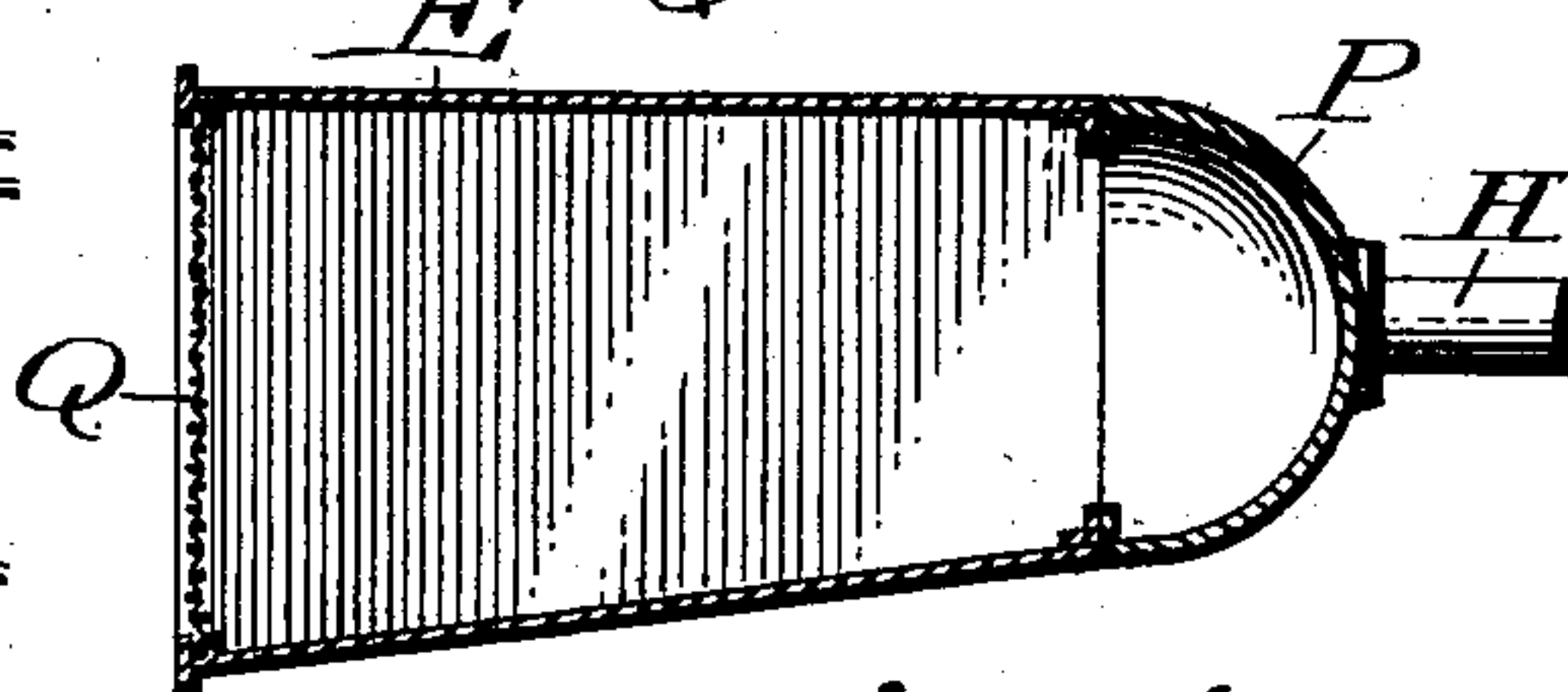
*Fig. 1.*



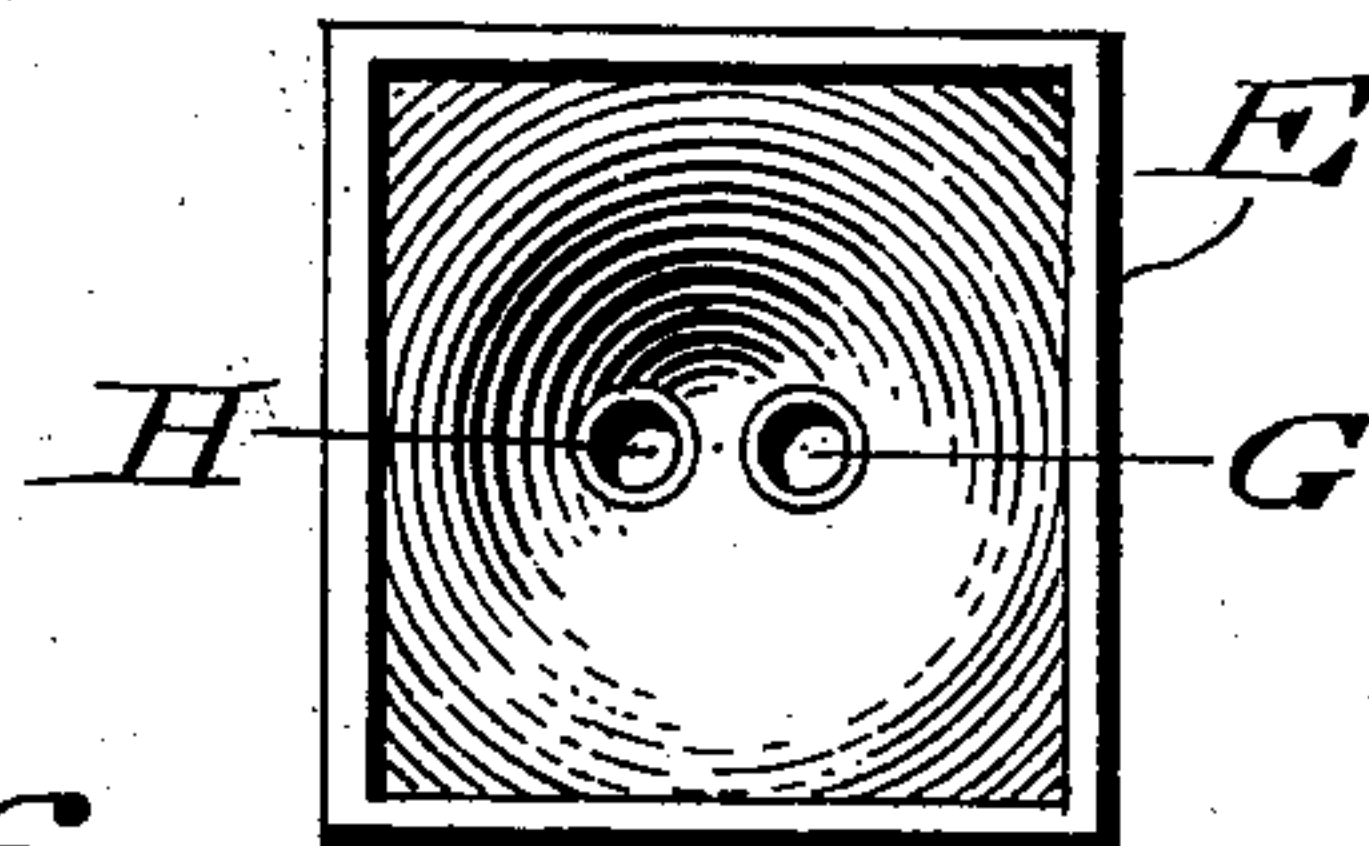
*Fig. 2.*



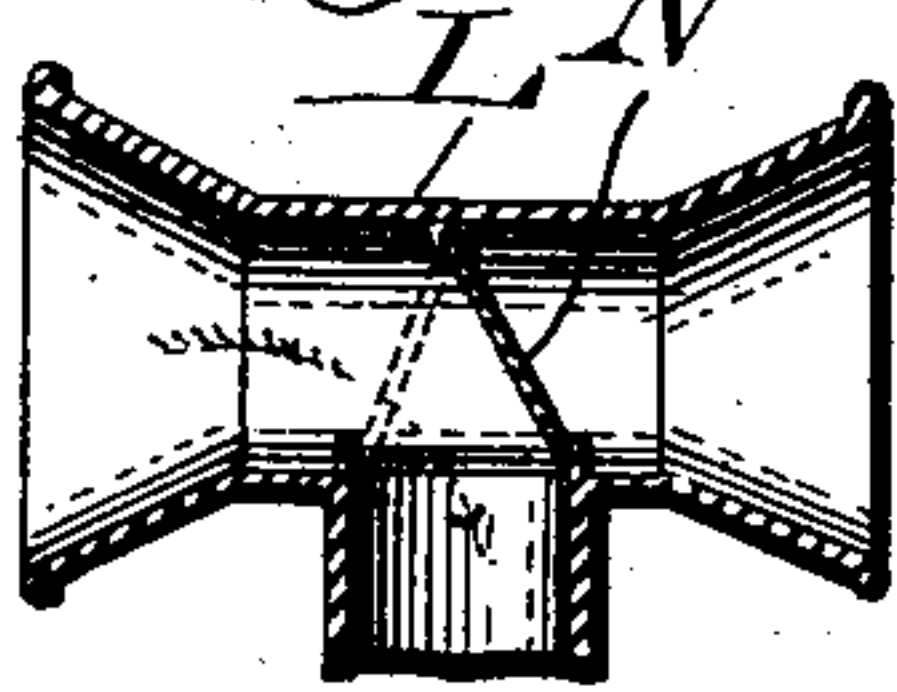
*Fig. 3.*



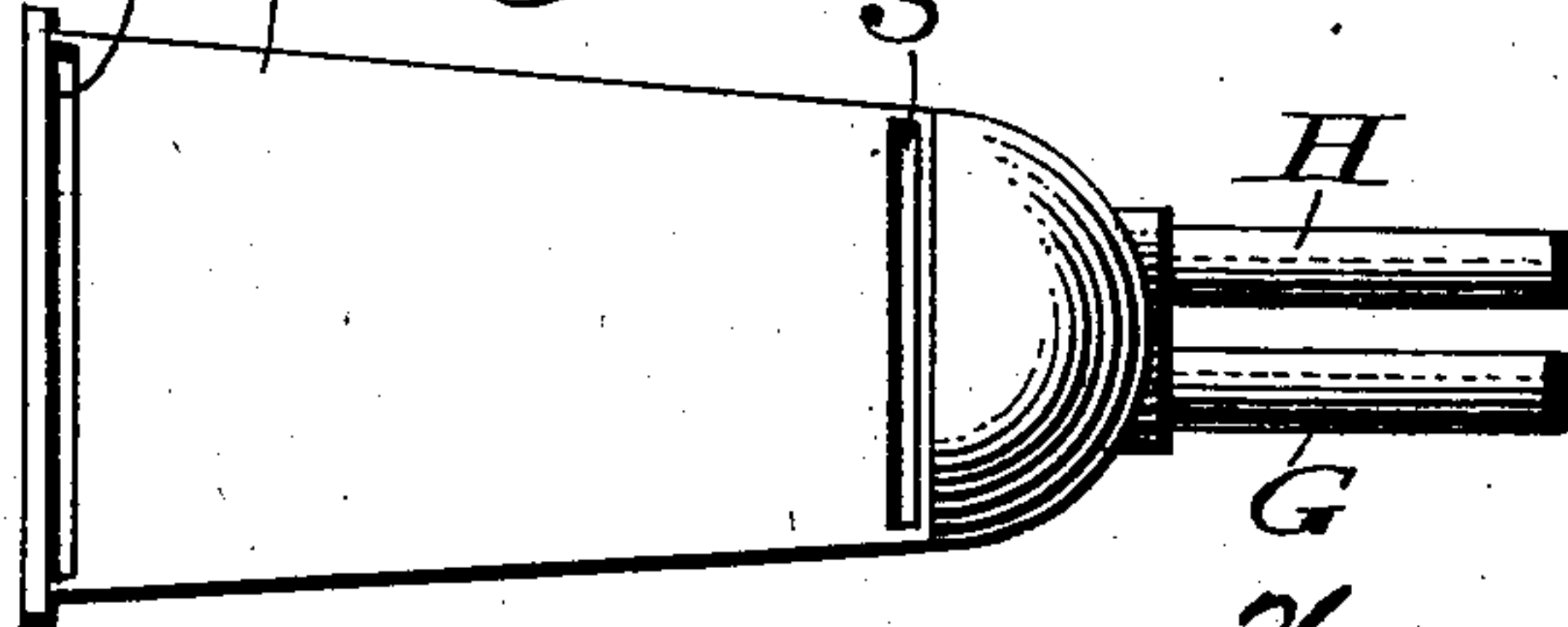
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



Witnesses

*Q. J. Tragle.*  
*L. D. Dwyer.*

Inventor

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# UNITED STATES PATENT OFFICE.

HORACE B. ROWLAND, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO  
ELECTRIC MOTOR AND GENERATOR VENTILATING COMPANY, A COR-  
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## VENTILATOR FOR ELECTRIC MOTORS FOR CARS.

SPECIFICATION forming part of Letters Patent No. 724,948, dated April 7, 1903.

Application filed March 25, 1902. Renewed February 3, 1903. Serial No. 141,701. (No model.)

*To all whom it may concern:*

Be it known that I, HORACE B. ROWLAND, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Ventilators for Electric Motors for Cars, of which the following is a specification.

My invention consists of an improved ventilator for motors or generators of cars which is simple and efficient in its action and is provided for cooling the motors or generators and for keeping the same clean.

It further consists of novel details of construction, all as will be hereinafter set forth.

Figure 1 represents a side elevation of a portion of a car, showing a motor-generator ventilator embodying my invention applied thereto. Fig. 2 represents a side elevation of a portion of a car, showing a motor-generator ventilator applied thereto in a slightly-different manner from that shown in Fig. 1. Fig. 3 represents a sectional view of a hood employed. Fig. 4 represents an end view thereof. Fig. 5 represents a horizontal sectional view of a hood employed, showing a valve therein. Fig. 6 represents a plan view of a hood employed of a slightly-different construction.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a car, to which is applied in any suitable or well-known manner motors around which are the casings B and C, which cover the same, said casings having openings D therein. Secured to the car at a suitable point, in the present instance beneath the body thereof, are the hoods E and F, the hood E being connected or communicating with the interior of the casing B by means of a pipe G and being connected or communicating with the interior of the casing C by means of the pipe H, while said hood F is connected or communicates with the interior of the casing C by a pipe J and communicates with or is connected with the interior of the casing B by a pipe K.

In Fig. 2 I have shown a construction where a hood L is secured to the top of the car and is connected with the interior of the casing

B by a pipe M, said hood L having a valve N therein and being open at both ends.

The hoods E and F are preferably made conical and having the rounded or curved end P, to which pipes are attached, and in the forward or open end of the hood is situated a screen Q, adapted to catch the dirt or other particles which might be injurious to the motor.

In Fig. 6 I have shown a construction where the hood R is provided with a screen Q and is also provided with a screen or mesh S at the rear thereof in order to catch any finer particles of dirt which might sift through the screen Q.

The operation is as follows: As the car moves forward the air will enter one of the hoods. For example, if the car is going in the direction indicated by the arrow in Fig. 1 the air will enter the hood E and will pass through the pipe G into the casing B, cooling and keeping the motor therein clean, the air from the casing being exhausted through the opening D. Air will also pass through the pipe H, leading from the hood E, and pass into the casing C, through which it will be exhausted through the opening D. Should the car be going in the opposite direction, the same operation will take place, excepting the air will enter the hood F and pass through the pipes J and K into the various casings. In the construction shown in Fig. 2 if the car is going in the direction indicated by the arrow in said figure the valve in the hood L will be held in position seen in full lines in Fig. 5 and the air will pass through the hood and into the pipe M and into the casing B and be exhausted through the opening D, and should the car be going in the opposite direction the valve N will be in position seen in dotted lines, Fig. 5, and the operation will be as before, it being noted that in this case it is not necessary to pass the air to the other motor, as in a similar device as described, which will be at the other end of the car. By thus introducing air into the casing which surrounds the motor the latter is kept cool and clean, and at the same time any arcs on the commutators are duly broken.

It will be evident that various changes may

be made by those skilled in the art which will come within the scope of my invention, and I do not, therefore, desire to be limited in every instance to the exact construction  
5 as herein shown and described.

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

1. In a car a plurality of motors, a casing  
10 surrounding each of said motors, exhaust-openings in said casings, a hood and pipes leading from said hood to each of said motor-casings.

2. In a car a plurality of motors, a plural-

ity of hoods, means for connecting each of  
said hoods with each of said motor-casings. 15

3. In a car, a plurality of motor-casings, a hood and pipes leading from said hood to each of said motor-casings.

4. In a car, motors therefor, a casing sur- 20  
rounding each of said motors, pipes terminating at and discharging into said motor-casings whereby air is conducted thereinto, and connections between said casings.

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Witnesses:

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