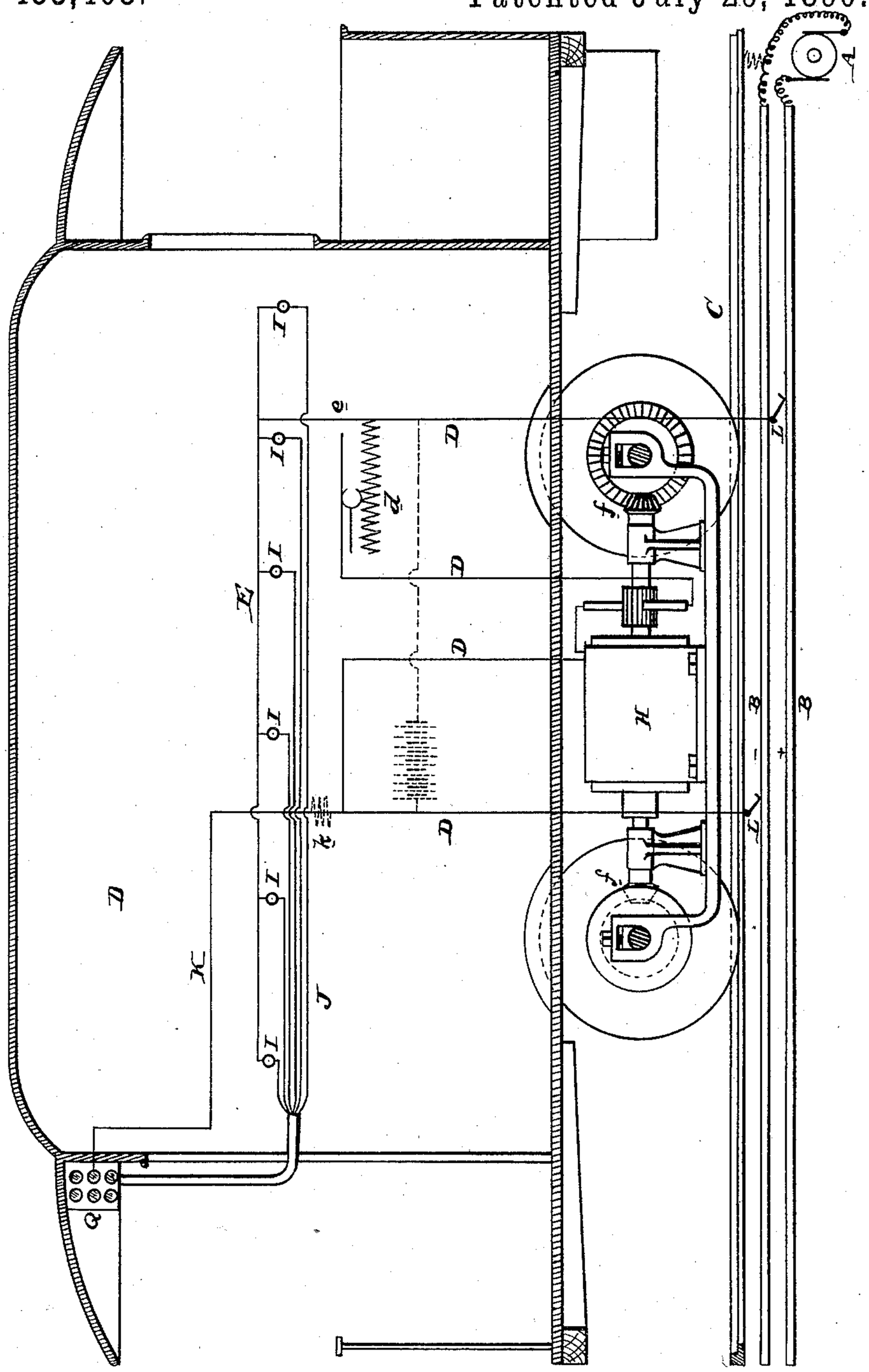
(No Model.)

R. M. HUNTER.

ELECTRIC RAILWAY.

No. 433,408. Patented July 29, 1890.



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ELECTRIC RAILWAY.

SPECIFICATION forming part of Letters Patent No. 433,408, dated July 29, 1890.

Original application filed June 9, 1886, Serial No. 204,583. Divided and application filed March 26, 1890, Serial No. 345,318. Again divided and this application filed June 20, 1890. Serial No. 356,047. (No model.)

To all whom it may concern:

Be it known that I, RUDOLPH M. HUNTER, of the city and county of Philadelphia and State of Pennsylvania, have invented an Improvement in Electric Railways, of which the following is a specification.

My invention has reference to electric railways; and it consists of certain improvements, all of which are fully set forth in the following specification, and shown in the accompanying drawing, which forms a part thereof.

This application (Case 148) is a division of my application (Case 131) No. 345,318, filed March 26, 1890, which in turn is a division of my application No. 204,583, filed June 9, 1886.

The particular invention forming the subject-matter of this division is a provision in an electrically-propelled vehicle of suitable signaling apparatus whereby any of the passengers in different parts of the car may signal the conductor when it is desired to stop the car or when it is desired that the conductor go to the passenger for any purpose whatever, and in which said signaling apparatus is supplied from the same source of electric power which operates the electric motor used to propel the car.

Preferably the signaling apparatus is arranged in multiple with respect to the motor when considering the source of power. The current is supplied to the traveling car by line-conductors extending along the railway, from which the current is taken by a movable collecting device in electrical connection with the signaling apparatus and the motor on the car. It is evident that the conductor for supplying electricity may be suspended or arranged on the surface or in a conduit, and the return-conductor may be likewise arranged or may be the rails and earth. The particular construction of line-conductors is immaterial.

In the drawing is shown a sectional elevation illustrating an electrically-propelled vehicle embodying my invention.

A represents a source of power, such as a dynamo-electric machine.

B B are conductors extending along the railway, and, if desired, may be arranged above the car or on the surface or in a conduit, the particular location being immaterial.

C are the rails, and it is evident that they might be used as part of the conductors, if so desired.

D′ is the electric car, and is propelled by an electric motor H, of any suitable construction, which is shown as arranged upon a frame G, carried upon the axles of the car, and having its shaft F arranged longitudinally and gearing at *f* with said axles.

D is the motor-circuit, and receives current from the conductors B through sliding connections or collectors L of any suitable construction.

d is a current controller or regulator for controlling the speed of the motor.

Q is an indicator arranged in view or hearing of the conductor (man) on the platform, and is operated by any of the push-buttons or switches I, arranged at different places within the car. Each one of the push-buttons I may have its own indicator-tablet in the indicator Q, so that any passenger may signal the conductor and he will know who wishes him or who it is that wishes to get out of the car.

E is a circuit including one of the terminals of each of the push-buttons I, and is connected by a branch *e* with the motor-circuit D on one side of the motor.

J are a series of circuits leading from the several push-buttons to the indicator Q.

K is a return-circuit from the indicator Q, and connects with the motor-circuit D upon the other side of the motor to where the connection was made by the circuit *e*. If desired, a resistance *k* may be located in the circuit K or the circuit which includes the indicator. If desired, the indicator may be an electric bell.

It is immaterial to my invention what the particular details of construction are, as they may be greatly modified without in the least departing from the spirit of the invention.

In this application I do not claim the construction or arrangement of the motor on the car, as that forms subject-matter of my application of which this is a division.

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

1. The combination of a railway, line-conductors extending along the railway for supplying current to the car, a traveling car, an electric motor to propel the car, a motor-circuit including the said motor and making a traveling connection with the conductors, an indicator in view or hearing of the operator or conductor, a circuit including the indicator and receiving current from the same source as the electric motor, and a switch in the indicator-circuit located within the car-body and adapted to be operated by the passengers.

2. The combination of a railway, line-conductors extending along the railway for supplying current to the car, a traveling car, an electric motor to propel the car, a motor-circuit including the said motor and making a traveling connection with the conductors, an indicator in view or hearing of the operator or conductor, a circuit including the indicator and receiving current from the same source as the electric motor, and a series of switches or circuit-breakers located in the indicator-circuit and arranged in different parts of the interior of the car-body whereby the various passengers may signal the conductor or operator without materially shifting their position.

3. The combination of a railway, line-conductors extending along the railway for supplying current to a traveling motor, a traveling car, an electric motor carried thereby, a motor-circuit for supplying electricity to the motor, a derived circuit in multiple with said motor-circuit, one or more circuit-breakers or switches in said derived circuit and arranged at different places on the car, and a position-indicator in and operated by the current in said derived circuit to indicate which circuit-breaker or switch is operated.

4. The combination of a railway, line-conductors extending along the railway for supplying current to a traveling motor, a traveling car, a motor-circuit making a traveling connection with the line-conductors, a derived circuit in multiple with said motor circuit and provided with circuit-breakers or switches for the passengers within the car or vehicle, and an indicator upon the platform in the derived circuit and operated by the current therein to indicate which circuit-breaker or switch is operated.

5. The combination of a railway, line-conductors extending along the railway for supplying current to a traveling motor, an electrically-propelled vehicle, an electric motor to propel said vehicle, a motor-circuit for supplying current to the motor making a traveling connection with the line-conductors, an indicator upon the vehicle in view of the conductor or operator, two or more circuit-breakers or switches within the vehicle to be operated by the passengers, and a circuit including the indicator and circuit-breakers or switches in multiple with respect to the motor.

6. The combination of a railway, line-conductors extending along the railway for supplying current to a traveling motor-circuit, an electrically-propelled vehicle, an electric motor to propel the vehicle, a motor-circuit for supplying current to the motor making a traveling connection with the line-conductors, a motor-regulator in the motor-circuit for controlling the speed of the motor, an indicator arranged upon the vehicle in view or hearing of the conductor or operator, two or more circuit-breakers or switches within the vehicle to be operated by the passengers, and a circuit including the indicator and circuit-breakers or switches in multiple with respect to the motor and the motor-regulator.

In testimony of which invention I have hereunto set my hand.

R. M. HUNTER.

Witnesses:
ERNEST HOWARD HUNTER,
S. T. YERKES.