

(No Model.)

2 Sheets—Sheet 1.

W. G. CREIGHTON.

TUBE MOTOR STREET RAILWAY.

No. 376,429.

Patented Jan. 17, 1888.

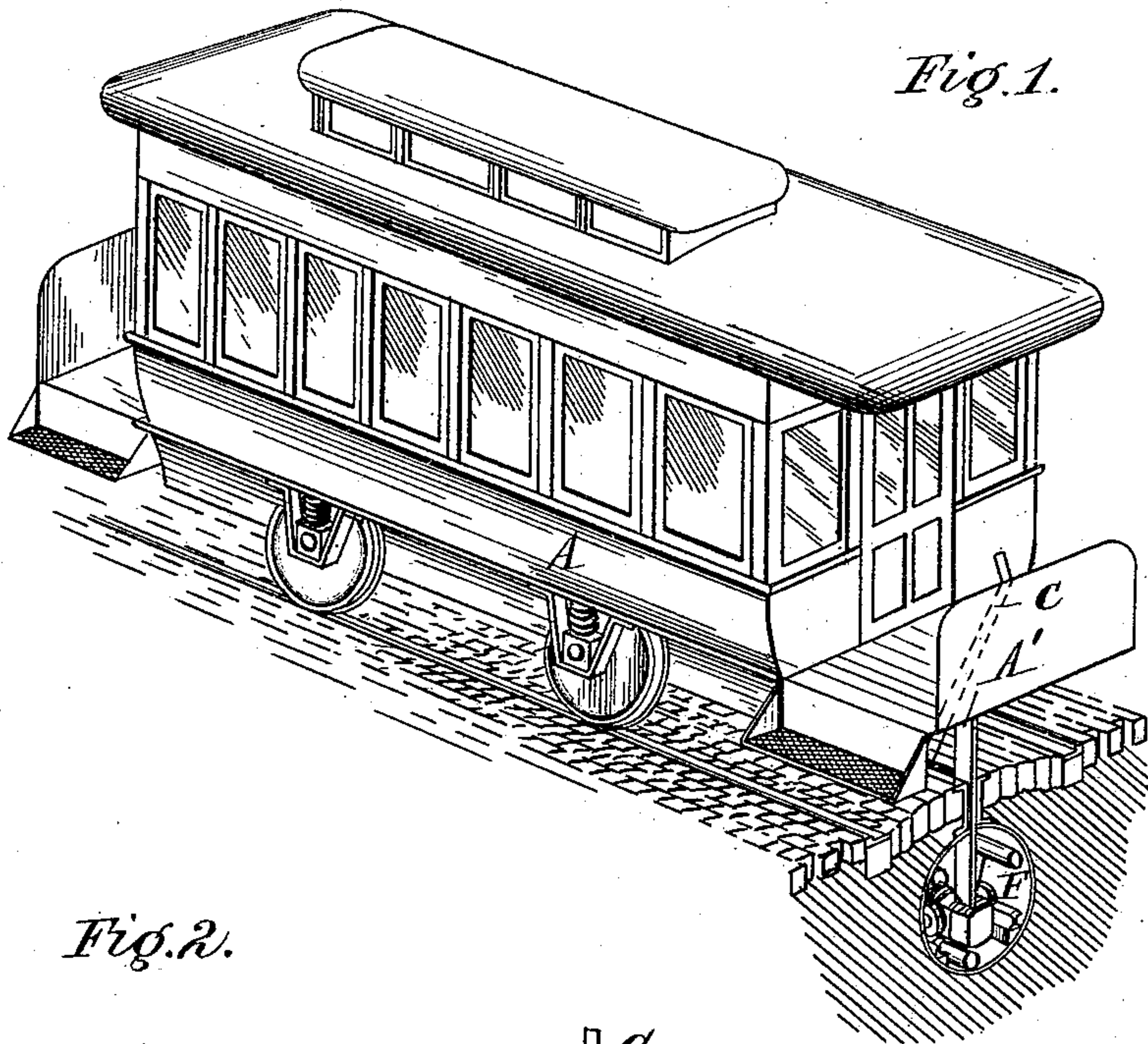
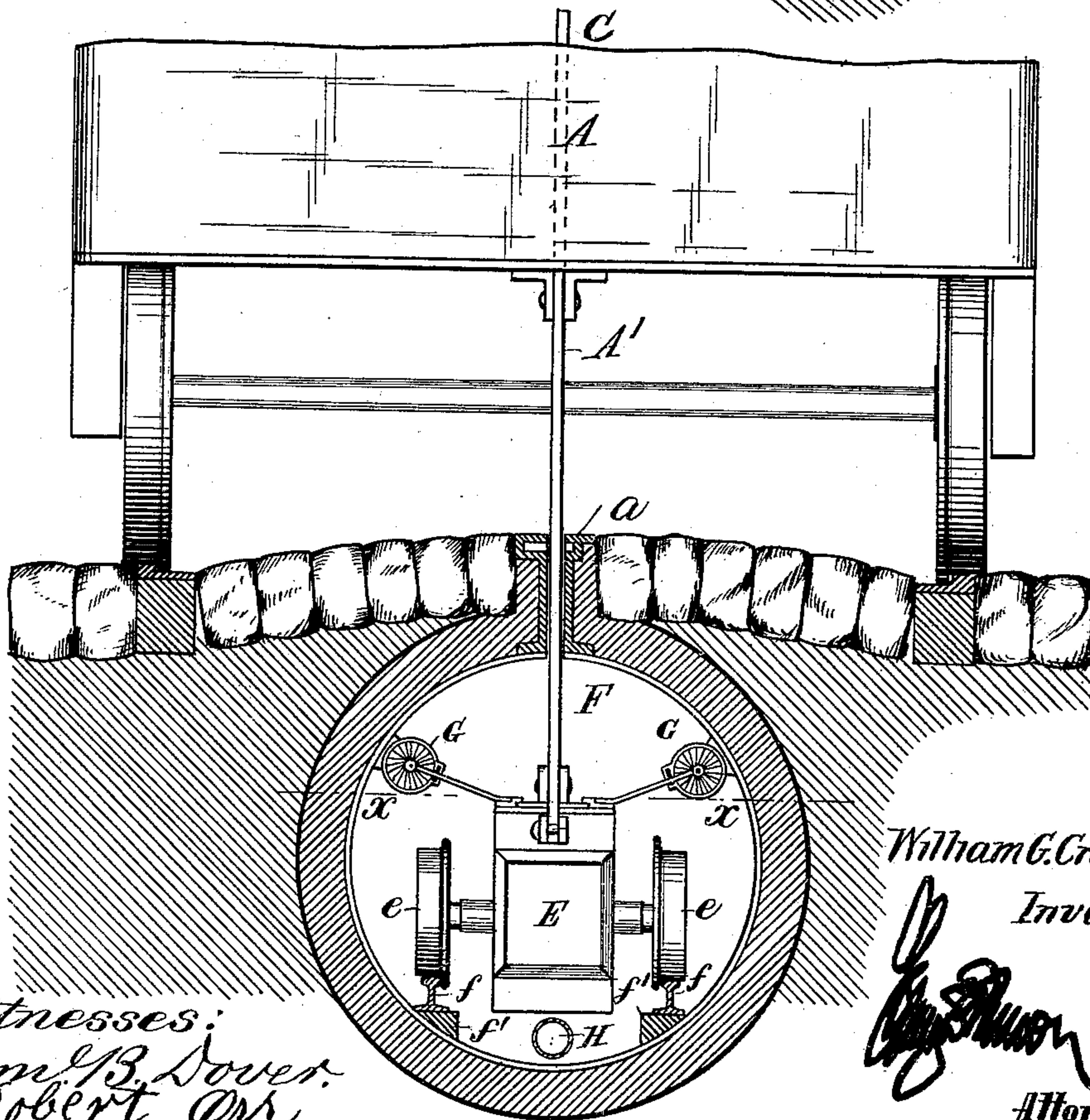


Fig. 2.



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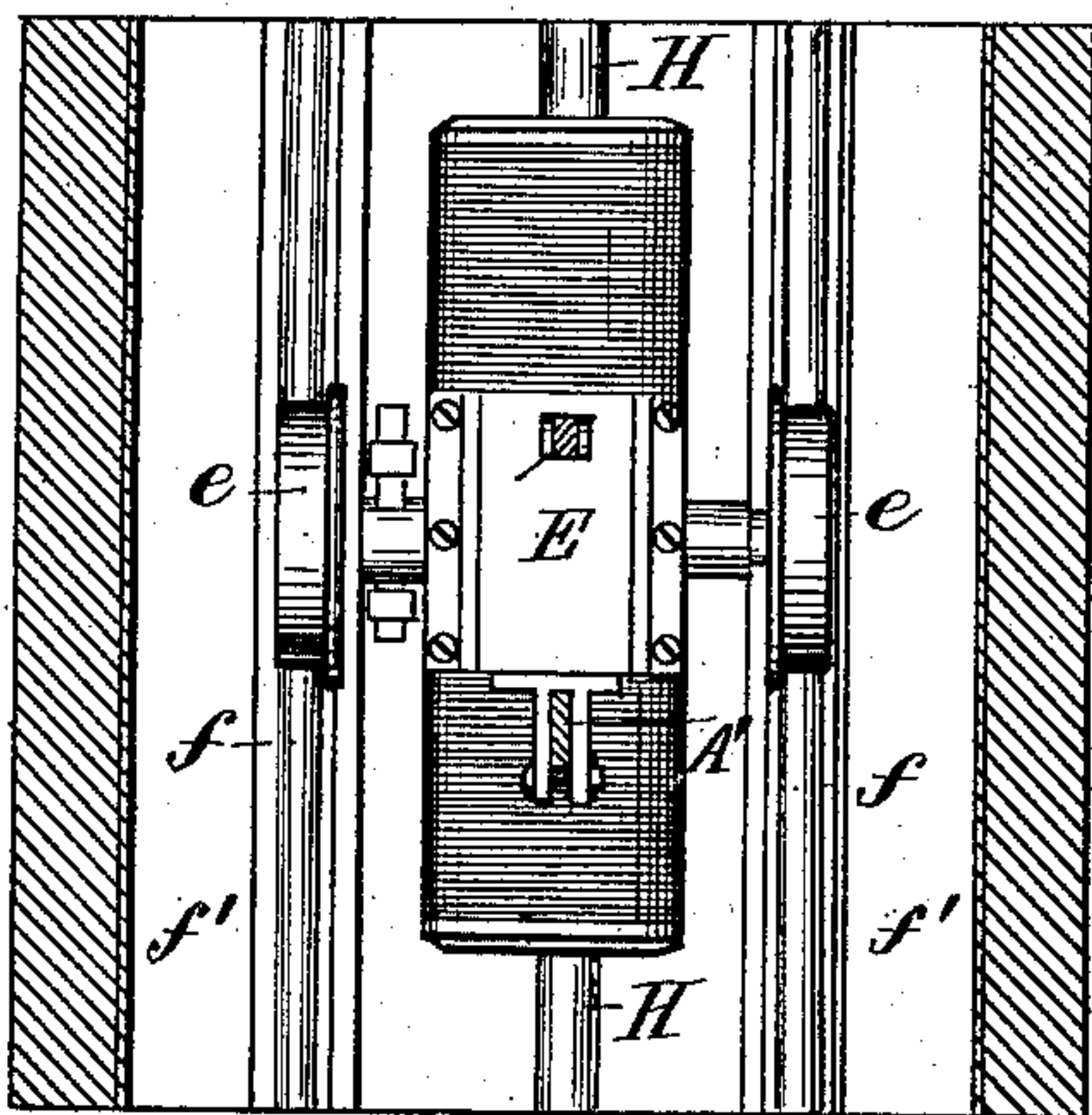


Fig. 3.

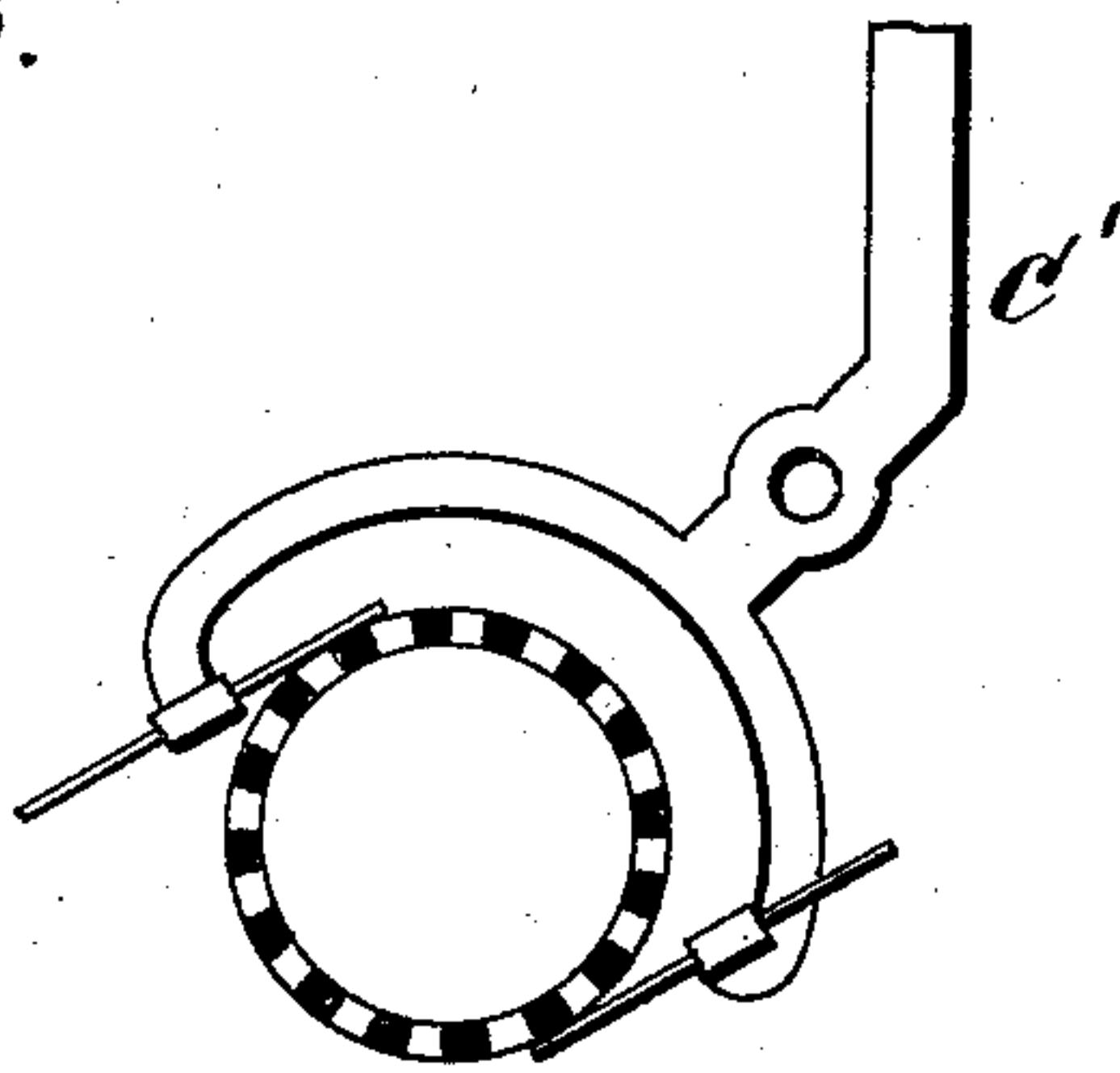


Fig. 4.

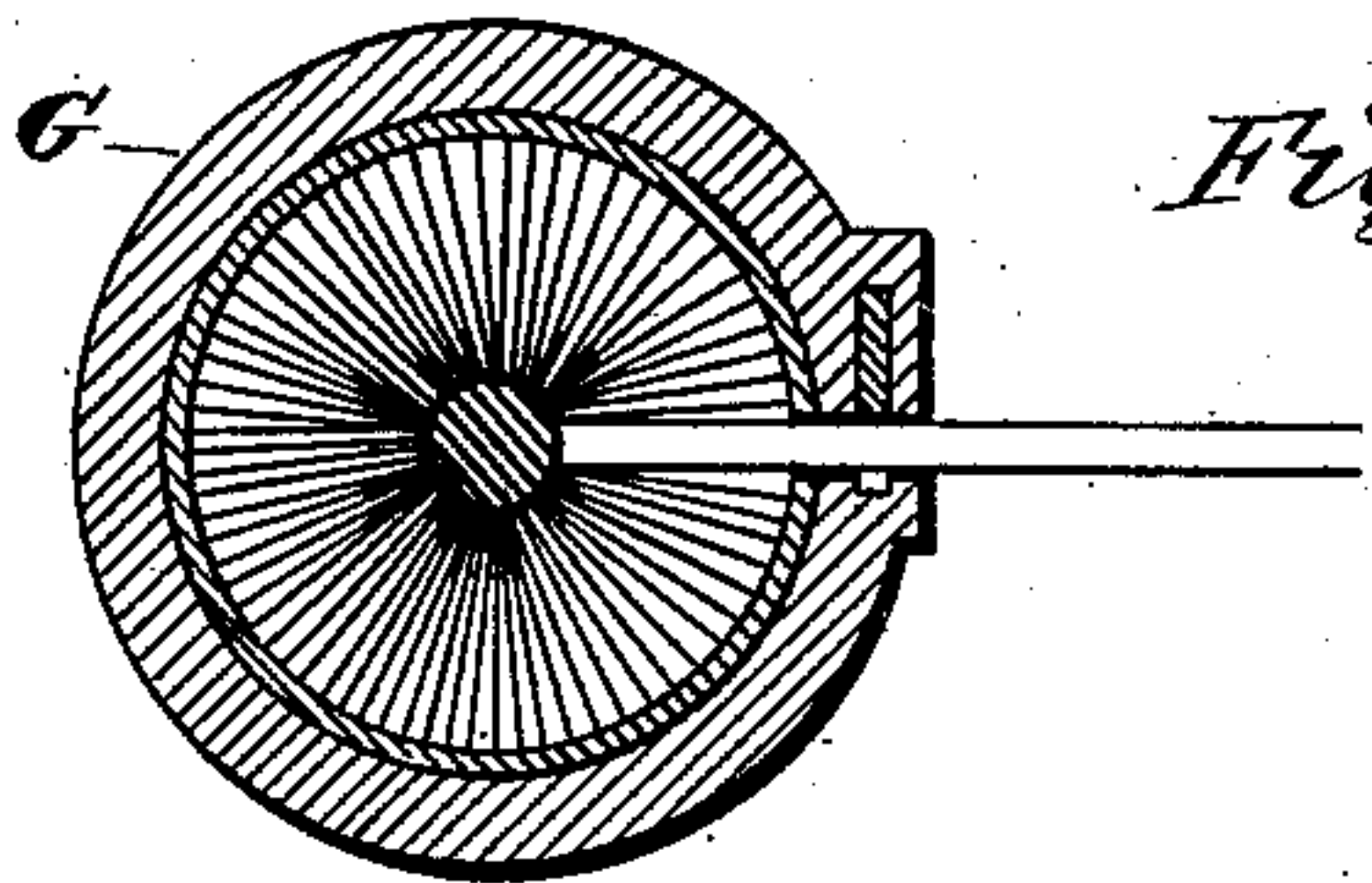


Fig. 5.

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UNITED STATES PATENT OFFICE.

WILLIAM G. CREIGHTON, OF NORWOOD PARK, ILLINOIS.

TUBE-MOTOR STREET-RAILWAY.

SPECIFICATION forming part of Letters Patent No. 376,429, dated January 17, 1888.

Application filed December 21, 1885. Serial No. 186,369. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM G. CREIGHTON, a citizen of the United States, residing at Norwood Park, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Tube-Motor Street-Railways, of which the following is a description.

My invention relates to certain new and useful improvements in that class of street-railways which employ a slotted tube located between the rails of the track, said tube being adapted to contain a motor which is connected to the car for propelling the same, the car being provided with suitable levers for stopping, starting, and reversing the motor, as may be desired; and my invention consists in the special construction and combination of the parts, as will be hereinafter fully set forth, and specifically pointed out in the claims.

In the accompanying drawings, which illustrate my invention, Figure 1 is a perspective view of a car, showing my improvements attached thereto, said view also showing the end of the tube in which is located the motor. Fig. 2 is an end view of a car and sectional view of the tube in which the motor is located. Fig. 3 is a sectional view taken through the line *x* of Fig. 2. Fig. 4 is a detail view of mechanism which is connected with the car and motor for stopping, starting, and reversing the motor; and Fig. 5 is a sectional view of one of the electric conducting-tubes which is located within the main tube.

A refers to the body of a car of ordinary construction, which is provided at a suitable point, preferably at the front platform, with a depending bar, *A'*, which is attached to the car and connected with the electric motor *E*, which is located within the main tube. Immediately in the rear of the bar *A'*, and suitably attached to the car, is a lever, *C*, which connects with the motor. This lever, when moved to certain points, actuates mechanism carried by the motor *E*, so that the current of electricity will be either cut off, let on, or reversed, so as to stop said motor or reverse the same, as may be desired.

C' indicates a commutator of any preferred form of construction, which will be readily understood by those skilled in the art, and which is conventionally illustrated in Fig. 4.

The motor *E* may be of ordinary construction, having the usual features of an electro-motor, and said motor is mounted on wheels *e e*, which are rigidly connected to the shaft thereof, said wheels, as well as other wheels for keeping the same in a horizontal position, running upon the rails *f f*, which are mounted on suitable supports, *f' f'*, attached to the main tube *F*. This motor, instead of having two pairs of wheels, may be supported within the main tube *F* by the bar *A'*, which is rigidly attached to the car and passes through the slot *a*. Within the tube *F*, preferably near the upper portion of the same, are rigidly secured slotted tubes *G*, which are insulated from the main tube *F*, these tubes serving as electrical conductors from the dynamos which are located at the stations. Within these tubes *G* are located brushes, which are connected by bars to the motor *E*, for conveying the electrical current from said tubes to the motor *E*. The slots in the tubes *G* may have means for automatically closing the same.

The main tube may be connected at suitable intervals with sewers for carrying off any water which may collect therein, and the main tube is provided at suitable intervals with man-holes, through which access can be had to the main tube.

The metallic tubes or conduits *G* are thoroughly insulated, and the slot-closing mechanism may be used in connection with these insulated tubes or not, as desired, and these tubes *G* are connected with the dynamos by insulated wires which are connected or fastened to the ends of the tubes, so that a current will be continuously passing through said tubes from the dynamos and the car-propelling motors.

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

1. In combination with a railway-car, the main slotted tube, an electric motor carried upon a wheeled frame and adapted to travel upon a track in the main tube, tubular conductors supported within the main tube, brushes connected with the motor and arranged to travel within said conductors, and a bar connecting the motor-carriage with the car, substantially as described.

2. In combination with a car provided with

a depending bar, the lower end of which is connected to a wheeled frame carrying an electric motor, a main slotted tube located between the rails upon which the car travels, a lever
5 for controlling the direction of the motor, slotted tubular conductors and a track within the main tube, and conductors connecting the motor with the tubular conductors, substantially as described.

10 3. In combination with a railway-car, the main tube, slotted tubular conductors supported therein, brushes arranged within the tubular conductors, bars connecting the brushes with the motor, a motor-carriage
15 mounted upon a track within the main tube, a bar connecting the car with the motor-carriage, and a lever carried by the motor and extending through the slot in the main tube to the car for controlling the motor, substantially
20 as described.

4. The combination, with a track and a car adapted thereto, of a slotted tube arranged between the rails of the track and provided interiorly with a track, insulated tubular con-

ductors supported within said tube, a carriage 25 adapted to traverse the interior track and carrying an electric motor, conductors connected at one end to the motor and at the other end to contacts arranged to traverse the interior
30 of the tubular conductors, and a bar connecting the motor-carriage with the car, substantially as described.

5. The combination, with a track and a car adapted thereto, of a slotted main tube arranged between the rails of the track and provided interiorly with a track and with slotted
35 tubular conductors insulated from the main tube, an electric motor mounted upon a carriage adapted to traverse the track within the tube, traveling contacts arranged within the
40 tubular conductors and connected with the motor, and a commutator or switch operated from the car to change the current passing through the motor.

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Witnesses:

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