(No Model.) 3 Sheets—Sheet 1.

J. C. HENRY.

ELECTRIC RAILWAY CAR.

No. 524,823. Patented Aug. 21, 1894.

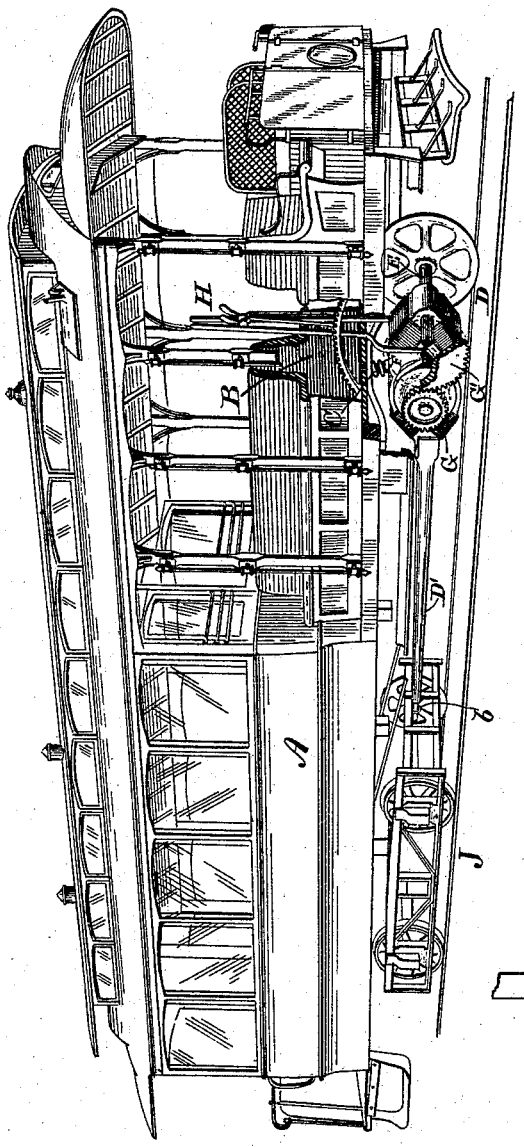

Fig. 1.

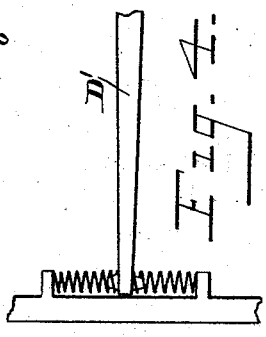

Fig. 4.

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ELECTRIC RAILWAY CAR.

No. 524,823. Patented Aug. 21, 1894.

Fig. 2.

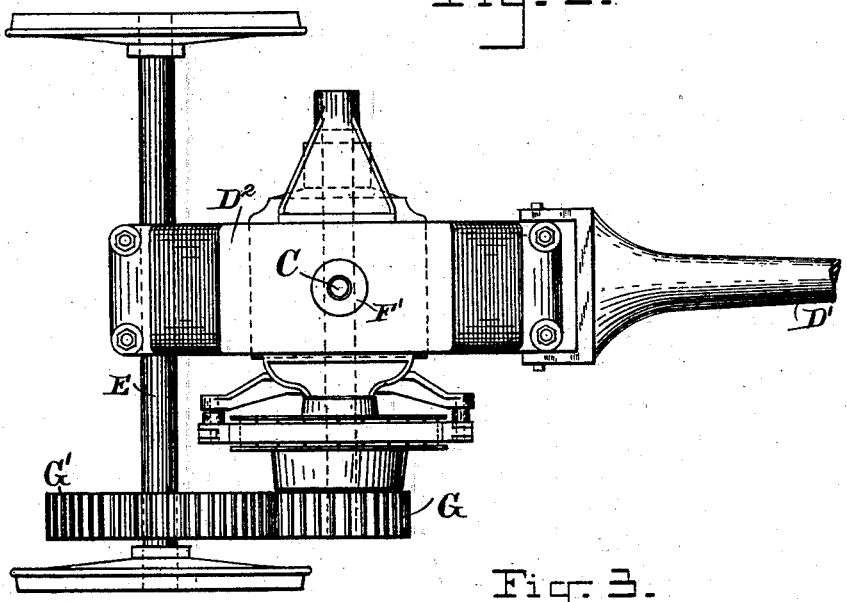
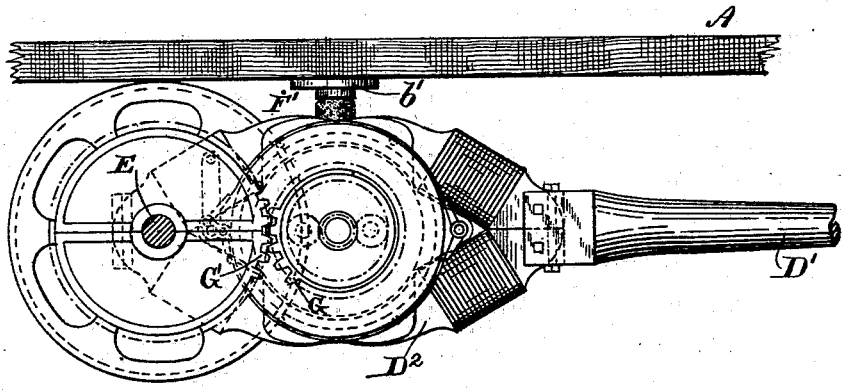


Fig. 3.



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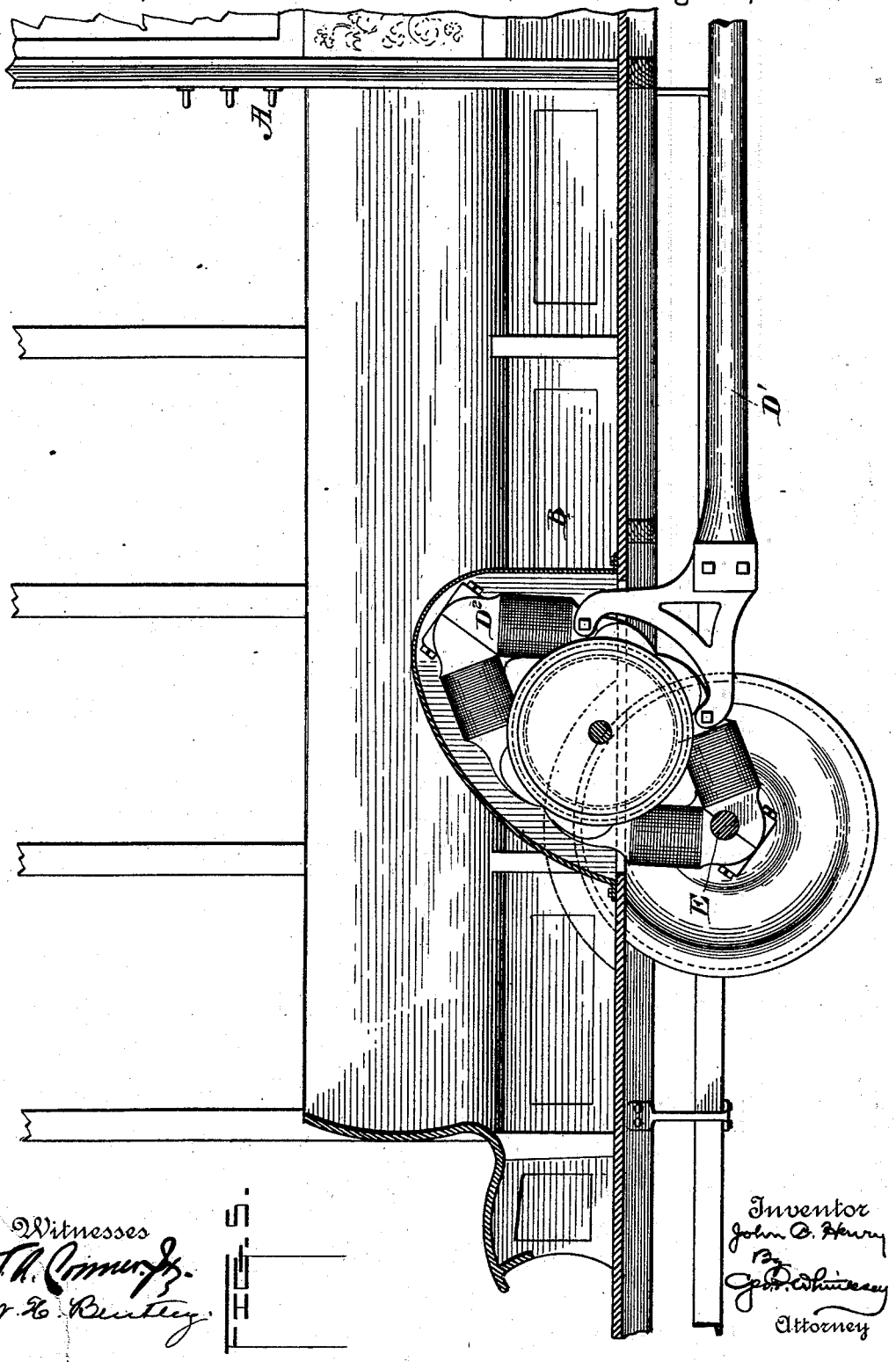
ELECTRIC RAILWAY CAR.

No. 524,823. Patented Aug. 21, 1894.



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UNITED STATES PATENT OFFICE.

JOHN C. HENRY, OF WESTFIELD, NEW JERSEY.

ELECTRIC-RAILWAY CAR.

SPECIFICATION forming part of Letters Patent No. 524,823, dated August 21, 1894.

Application filed August 27, 1892. Serial No. 444,308. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. HENRY, a citizen of the United States, residing at Westfield, county of Union, State of New Jersey, have invented certain new and useful Improvements in Electric-Railway Cars, of which the following is a specification.

My invention relates to electric railway cars, and its objects are to place the working parts of the motor within the sight and reach of the motorman, without interfering with the passengers' seats or occupying the room devoted to them; to secure a long wheel base, with no danger of cramping on curves; and to reduce the number of wheels and other parts, thereby simplifying and reducing the cost of the car. I accomplish the first object by arranging a portion or all of the seats to face outward, with a passageway between their backs for the conductor and motorman. The motor may project up through the car floor, and occupy some of the space in the passageway and under the car seats. The second and third objects are attained by mounting the car upon a double truck or bogie at one end and upon a single or pony truck at the other end. The frame of the motor is hung at one end on the axle of the pony truck. A tongue extends from the other end to the double truck, to which it is secured. The front end of the car body rests and swivels upon a center bearing on the motor frame. The rear end of the car swivels upon the center pin of the bogie. The two trucks are compelled to swivel simultaneously, owing to their connection by the tongue on the motor.

In the drawings, Figure 1 is a perspective view of a car, partly broken away, to show the relative positions of the parts. Figs. 2 and 3 are respectively plan and side views of the motor and the front truck. Fig. 4 is a modification. Fig. 5 shows a cross section of a car in which the motor projects up into the passageway.

The car body A. may be of any suitable length and arrangement.

In the drawings I have shown a car having the front half open and the rear half closed. In the open part the seats run lengthwise, facing outward, with a narrow passage B between their backs, for the conductor and the motorman. A tongue D′ projects from the pony truck and is pivotally connected with the bogie: as by a loop or staple *b* receiving the end of the tongue. It may be attached to two springs, one on each side as shown in Fig. 4, to keep it normally central and yet allow it to vibrate when the car rounds a curve. The tongue guides the pony truck and keeps it square with the track. On a curve, the connection of the trucks causes them to turn together and thus reduces friction, and makes the car ride easier.

I prefer to utilize the motor frame D^2 as the frame for the pony truck, journaling the axle E in a bearing or bearings at the front end of said motor frame, and bolting the tongue D′ to the rear end of said frame. The center-pin C projects up from the motor frame, into a bearing *b′* on the car body; and between the car body and the frame is a spring, such as the helical spring F or the rubber spring F′. The motor is geared to the axle E by the pinion G and spur gear G′, or in any other suitable manner for instance, as shown in my Patent No. 426,379, dated April 22, 1890.

The levers H for controlling the motor project up into the aisle in which the motorman stands. If desired, the motor may be arranged to occupy in part the space in the aisle and under the seats: thereby permitting the car body to hang nearer the ground as shown in Fig. 5.

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

1. An electric car, having at one end a swiveling bogie and at the other end a swiveling pony truck, a motor mounted on the pony truck, and a tongue projecting from said pony truck and connected with the bogie by an attachment allowing it to have lateral play, substantially as described.

2. An electric car, having at one end a swiveling bogie and at the other end a swiveling pony truck, a motor mounted on the pony truck, a tongue projecting from the pony truck and terminating near the bogie, and yielding connections between the end of the tongue and the bogie, resisting lateral displacement of the tongue from a normally central position, substantially as described.

3. An electric car, having at one end a swiveling bogie, and at the other end a swiveling pony truck, a motor mounted on the pony

truck, a tongue projecting from the pony truck and terminating near the bogie, and a spring on each side of the tongue for connecting it with the bogie and allowing it to have lateral play, substantially as described.

4. An electric car, comprising a swiveling truck at one end, and at the other a motor, a single pair of wheels having their axle journaled in one end of the motor frame, a rigid tongue fastened to the other end of the motor and flexibly attached to the swiveling truck, and a car body supported at one end on the swiveling truck and at the other end on the frame of the motor at a point in the rear of the single axle, substantially as described.

In witness whereof I have hereunto set my hand this 23d day of August, 1892.

JOHN C. HENRY.

Witnesses:
JOHN M. C. MARSH,
WM. W. GILBY.