(No Model.) 4 Sheets—Sheet 1.

J. C. LOVE & J. F. SNEDIKER.

RAILWAY CAR.

No. 381,396. Patented Apr. 17, 1888.

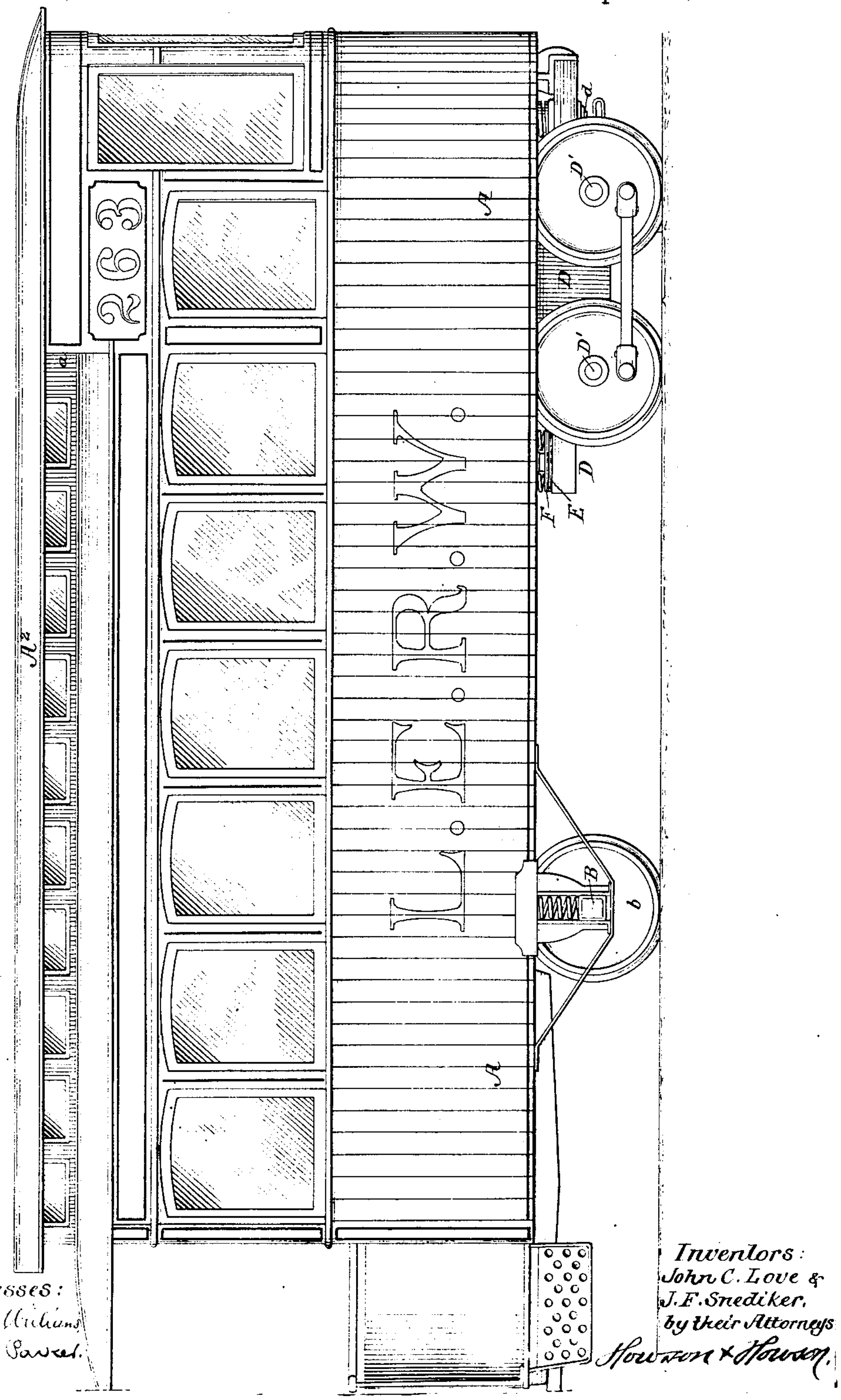

FIG. 1.

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Inventors:
John C. Love &
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by their Attorneys
Howson & Howson.

(No Model.) 4 Sheets—Sheet 2.

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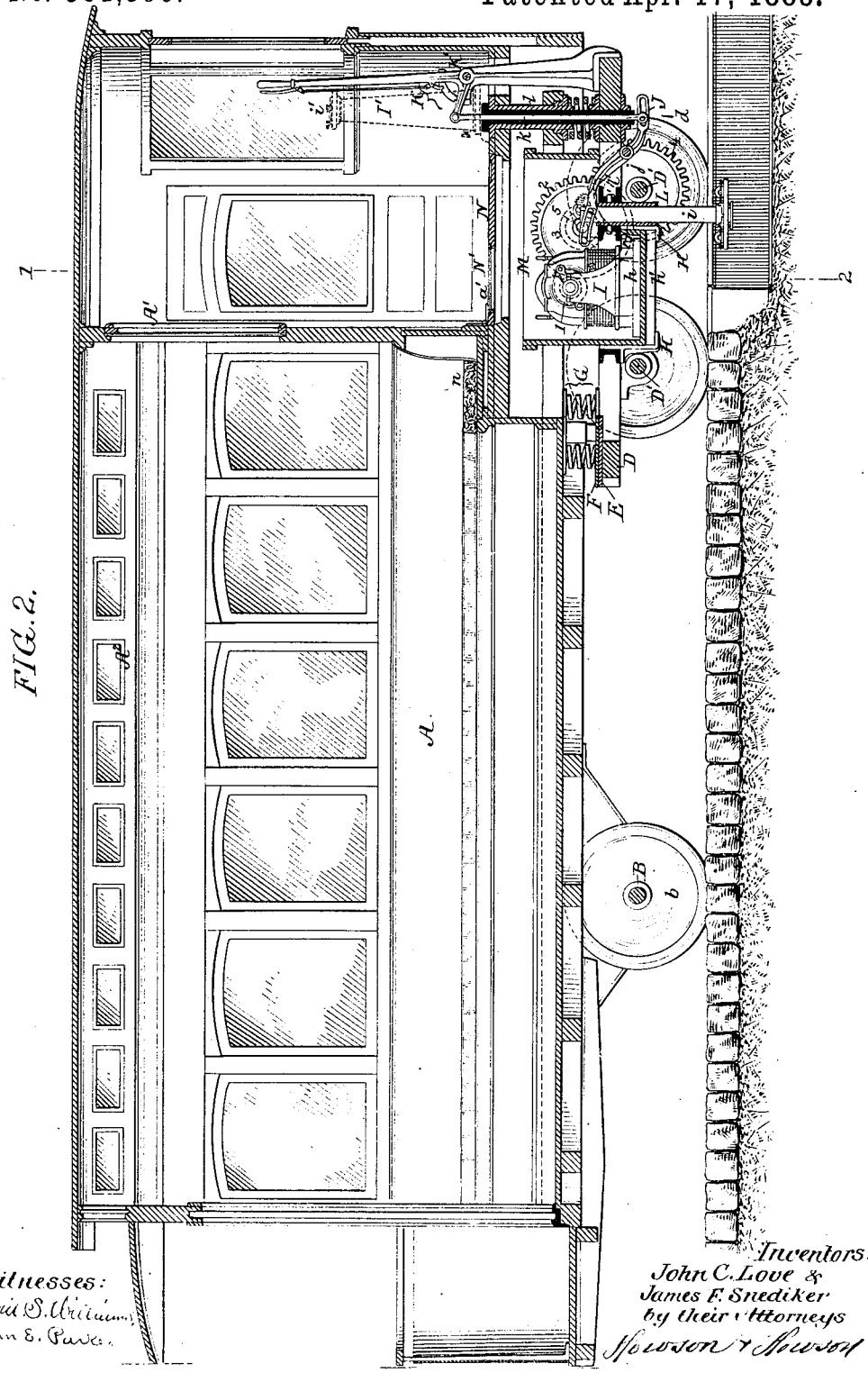

FIG. 2.

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RAILWAY CAR.

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FIG. 3.

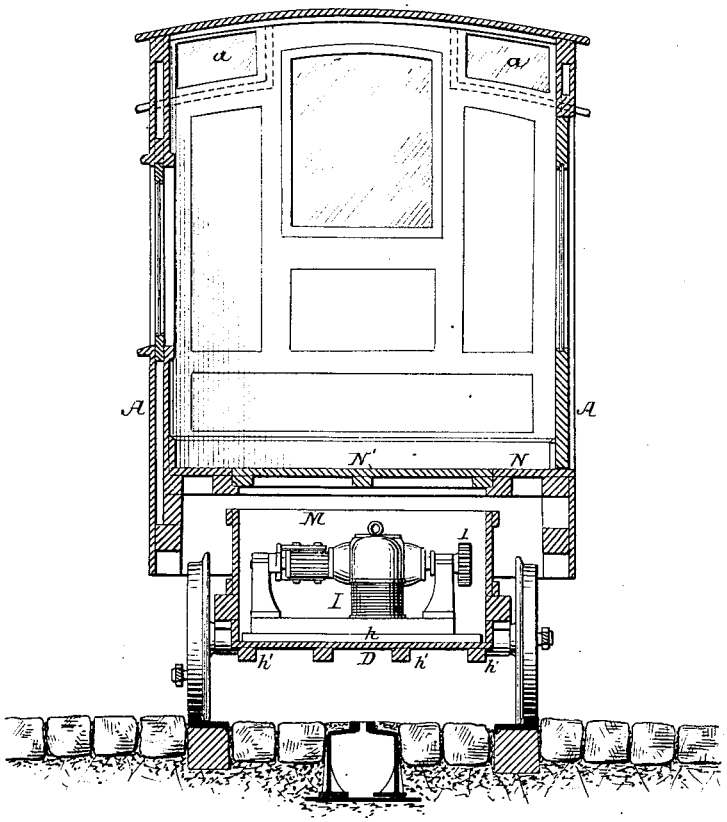
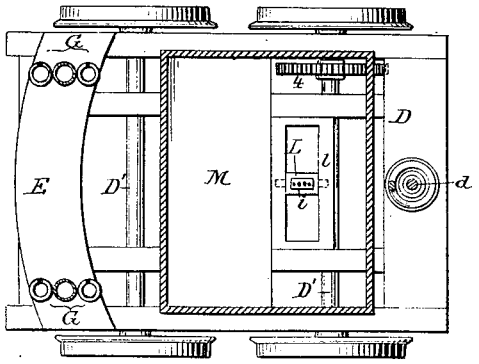


FIG. 5.



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(No Model.) 4 Sheets—Sheet 4.

J. C. LOVE & J. F. SNEDIKER.

RAILWAY CAR.

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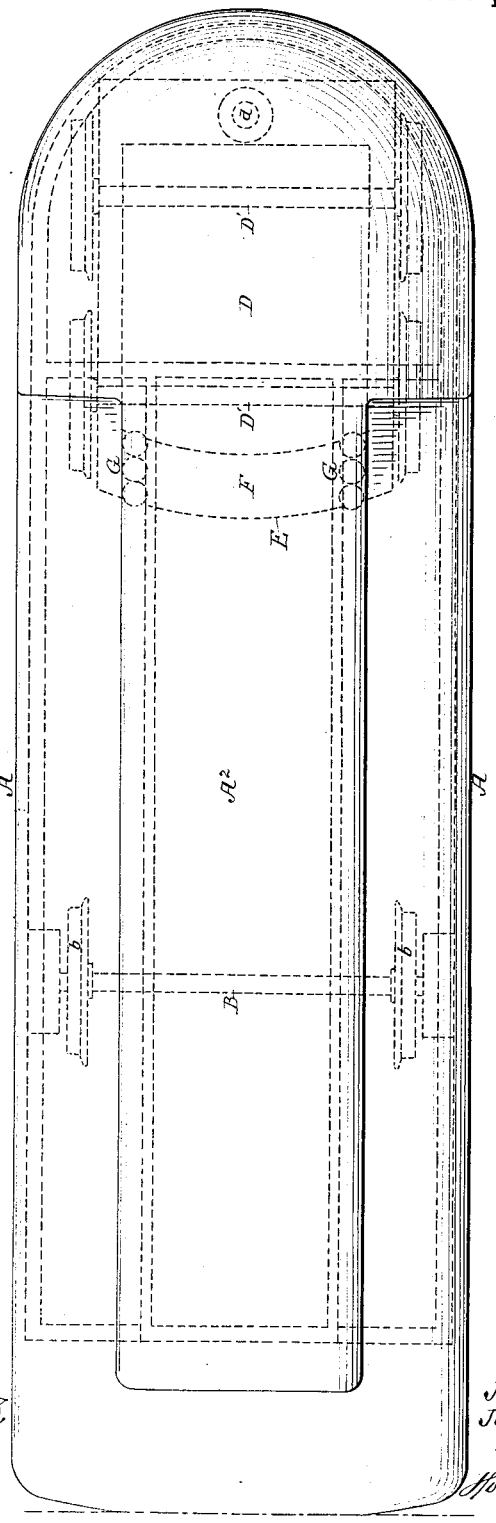

FIG. 4.

Witnesses:
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John E. Parker

Inventors:
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UNITED STATES PATENT OFFICE.

JOHN C. LOVE AND JAMES F. SNEDIKER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO SAID JOHN C. LOVE.

RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 381,396, dated April 17, 1888.

Application filed October 31, 1887. Serial No. 253,864. (No model.)

To all whom it may concern:

Be it known that we, JOHN C. LOVE and JAMES F. SNEDIKER, both citizens of the United States and residents of Philadelphia, Pennsylvania, have invented certain Improvements in Railway-Cars, of which the following is a specification.

The object of our invention is to construct a car and truck in such a manner and to so pivot the truck to the car that the truck will be capable of carrying the motor to propel the car, as fully described hereinafter, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of our improved car. Fig. 2 is a longitudinal sectional view. Fig. 3 is a transverse sectional view on the line 1 2, Fig. 2. Fig. 4 is a plan view, and Fig. 5 is a detached plan view of the truck.

Our invention is especially adapted to cars propelled by electricity, in which the motor is on the car and connected to underground wires, the connections being made through a conductor passing through a slot in a conduit; but it will be understood at the outset that other generators may be used, as well as other motors than electric motors.

Referring to the drawings, A is the body of the car, in the general form of the ordinary street-car, having in the rear a single axle, B, with its wheels *b*, and pivoted to the front of the car at *d* is a truck, D, having in the present instance four wheels, and consequently two axles, D′.

The truck, as will be noticed in Fig. 5, is pivoted somewhat in front of the front axle, and has a segment, E, at the rear, which is adapted to bear against a segment, F, on the body of the car; but between the segment F and the body of the car we place two or more spring-boxes, G, and between the front of the truck and the car we prefer to place a heavy spring, *e*, surrounding the king-bolt *l*, on which the truck turns, the springs absorbing the shock occurring from unevenness of the track. Friction-pulleys may be placed between the plates E and F, if found necessary, for the easy turning of the truck. The floor N of the car directly above the truck is raised to about the level of the seats, as shown in Fig. 2, and in fact we have formed a transverse seat, *n*, on this elevated floor. A partition, A′, divides by preference the main portion of the car from the portion occupied by the operator or attendant. It will thus be seen that the floor of the operator's quarters is elevated considerably above the floor of the car. The object of elevating the floor at this point is to allow the truck to carry the motor.

In the present instance we have shown a box or casing, M, between the front and rear axles of the truck and between the side frames, the bottom of the casing being considerably below the top of the truck, and the bottom boards, *h*, being supported on suitable stringers, *h′*, which in turn are supported by brackets H, secured to the cross-frames on the truck. On this bottom frame, as shown in Fig. 2, the motor I rests.

We have shown in the drawings an electric motor, and will therefore describe the connections.

The conductor *i* carries the wires from the trolley in the conduit to the motor, and to the operating-keys *i′* in the present instance, shown on a pedestal, I′, in the operator's room on the car. Pivoted to bearings on the truck at *j* is a two-armed lever, J, having preferably two yoked ends, one of which is adapted to fit over the conductor *i*, which has a pin adapted to a slot in the yoked portion of the lever, while the opposite yoked end of the lever spans the end of a shaft or rod, *k*, also having a pin adapted to a slot in the lever. The vertical rod *k* passes by preference through the center of the king-bolt *l*, and is connected at its upper end to the short arm of the bell-crank lever K, pivoted to a bearing, K′, secured to the truck or floor of the car. The long arm of this lever is in the form of a handle, and is provided with the usual locking-bolt, and by operating this lever the trolley in the conduit can be raised or lowered in the conduit to bear against the wires therein; or, when circumstances require, the trolley can be lifted out of the conduit by moving the lever to such a position that the bolt will engage with the second notch of the segment, as shown in Fig. 2. The conductor

i is adapted to bearings in a box, L, pivoted at *l'* to the cross-beams of the truck, in order to allow for irregularities in the conduit.

We prefer that the sides of the car-body at the front of the car shall be at the same distance from the ground as the sides of the main portion of the body, so that the car will have the appearance of an ordinary car with double front truck. We also prefer to make the front of the car in the form of the segment of a circle or rounded in any manner, and the height of the compartment occupied by the operator we prefer to extend to the level of the roof of the ventilator A^2, as shown in Figs. 1 and 2, and to place windows *a* at the rear of the compartment and above the roof of the car proper, as shown in Figs. 1, 2, 3, and 4, in order that the operator can see in the rear of the car as well as in front.

The motor I is geared to the front axle, D', through a train of gears, 1 2 3 4, the pinion 1 being secured to the shaft of the motor and the gear 4 secured to the axle, while the gear 2 and pinion 3 are by preference secured together and loose on a stud, 5, on the truck D; but it will be understood that any suitable gearing may be used, this depending on the style and speed of motor used.

We provide the floor N with a trap-door, N', by which the operator can gain access to the motor, and in some cases we may set glass in a portion of the floor, as shown at *a'*, through which the operator can watch the working of the motor.

We have omitted the braking mechanism on the drawings, but would say that braking mechanism of any ordinary construction may be used and operated from a wheel or lever in the operator's quarters.

We claim as our invention—

1. A car having a front truck pivoted thereto and carrying a motor, the floor of the car above the truck being higher than the main floor to accommodate the motor, and the sides of the car-body being at a uniform distance from the ground throughout, all substantially as specified.

2. The combination of a four-wheeled truck, a motor carried thereby, and a pivot located away from the center of the truck, whereby the space for the motor is increased, all substantially as specified.

3. A car having a floor on different levels, a partition dividing the car into two compartments, and a seat in one compartment formed by an extension of the floor of the other compartment, substantially as specified.

4. The combination of a four-wheeled truck, pivoted in front of the center and carrying axles D' D', with a box, M, for containing a motor, situated between the axles, substantially as specified.

5. The car having an elevated floor, a truck below said floor, a pivot-pin or king-bolt, a conductor, an operating-lever, and a rod connecting the two together, said rod passing through the king-bolt, substantially as specified.

6. A car having the floor of the operator's quarters elevated above the main floor of the car, with windows *a* in the rear of the operator's quarters, but above the roof of the main body of the car, substantially as set forth.

7. The combination of a car with a pivoted truck, the permanent floor of the car extending over the truck, with a motor on the truck, and below the said floor, an operating-lever carried by the truck, and extending up above the floor of the car, all substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOHN C. LOVE.
JAMES F. SNEDIKER.

Witnesses:
HENRY HOWSON,
HARRY SMITH.