

(No Model.)

A. B. PULLMAN.
RAILWAY CAR.

No. 419,355.

Patented Jan. 14, 1890.

Fig. 1.

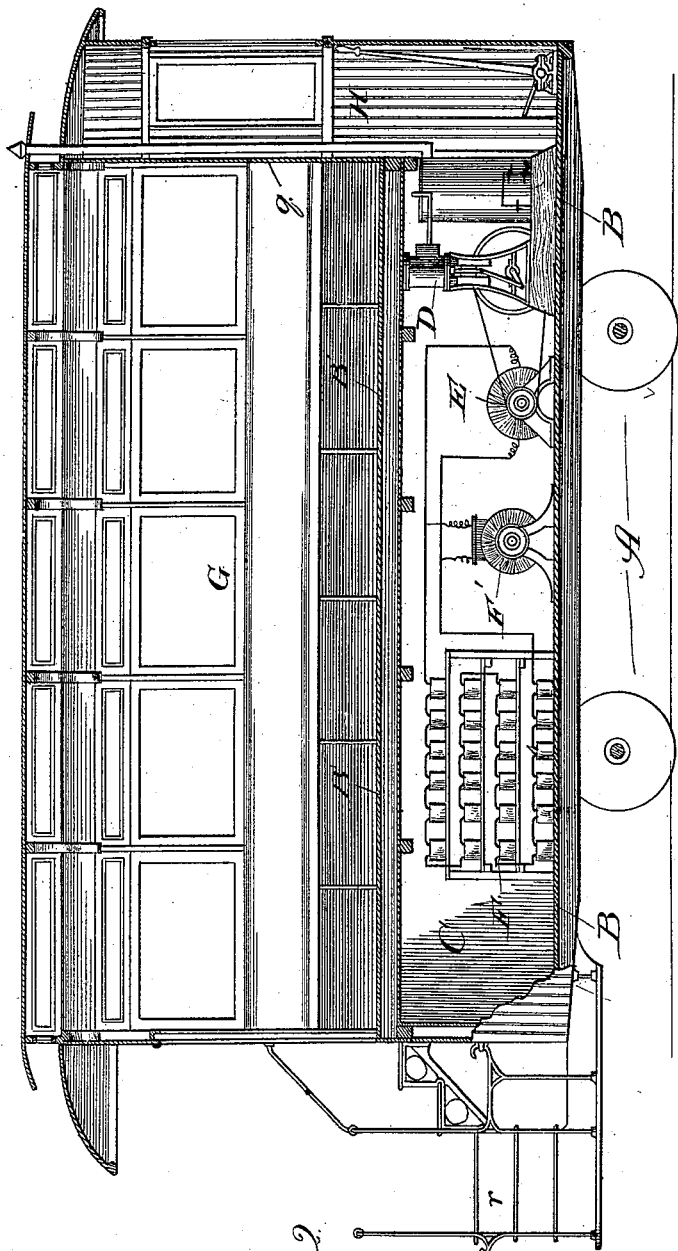
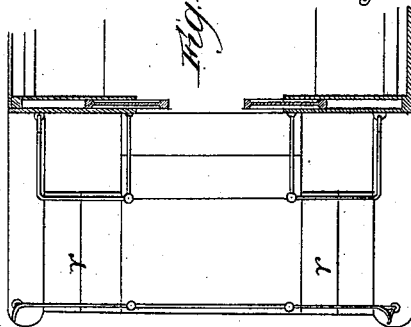


Fig. 2.



Witnesses:
Chas. E. Gaylord,
J. H. Dyreusford

Inventor,
Albert B. Pullman,
By Dyreusford & Dyreusford,
ATTORNEYS

UNITED STATES PATENT OFFICE.

ALBERT B. PULLMAN, OF CHICAGO, ILLINOIS.

RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 419,355, dated January 14, 1890.

Application filed June 25, 1889. Serial No. 315,477. (No model.)

To all whom it may concern:

Be it known that I, ALBERT B. PULLMAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Railway-Cars, of which the following is a specification.

My invention relates to an improvement on that form of railway-car which is designed both for carrying passengers and the machinery for propelling it, the kind of car referred to being employed most commonly as a street-car, for which particular purpose I also design my improvement, though it is not my intention to be understood as limiting it to such use, since the construction constituting it will also afford the same advantages when applied to other than street-railway purposes.

In a car of the class to which my improvement relates (and which, besides serving to carry passengers, constitutes the motor-car, inasmuch as it takes the place of the so-called "locomotive" in the sense of being used to haul one or more trail-cars) the arrangement is commonly such as to cause the propelling mechanism to take up considerable of the space which might otherwise be allotted to passengers, or it is exposed to view, thereby rendering the construction and appearance of the vehicle ungainly, or both.

The object of my invention is to provide a "motor-car" of a construction whereby the propelling mechanism shall be accommodated upon it without thereby reducing or materially reducing its passenger-carrying capacity, and whereby such propelling mechanism shall be entirely or substantially concealed from view, and this without disfiguring or detracting from the appearance of the car; and a further object is to elevate the floor of the passenger-compartment above the level with reference to the trucks on which it is commonly constructed, and thereby provide a passenger-coach the more agreeable for occupancy by reason of its elevation, which especially adapts it for observatory purposes and for a summer and a smoking car.

To these ends my invention consists in a motor-car having a double floor, affording between the two a sub-compartment contain-

ing the propelling mechanism, comprising, essentially, a motor to drive the running-gear of the car by transmitting thereto force exerted upon the motor and electric mechanism for running the motor, and an elevated compartment extending from the upper of the two floors and adapted to accommodate passengers.

My invention also consists in more specific details of construction and combination of parts.

In the accompanying drawings a car constructed in accordance with my invention is illustrated in sectional side elevation in Figure 1, and Fig. 2 is a broken plan view showing the steps.

A denotes the running-gear, which may involve any ordinary or suitable construction.

B is the lower floor adjacent to the running-gear, and B' is the upper floor, the two floors being sufficiently far apart—say between three and four feet—to afford a compartment C between them, preferably inclosed on all sides, but accessible through one or more sides, as through doors, (though the latter are not shown, being readily understood without illustration,) and the compartment C, which may be opened or closed, or, if desired, even of mere skeleton construction, is adapted to receive and support the propelling mechanism in the form of a suitable motor F', to be properly connected with the running-gear for transmitting to the latter force exerted upon it, and electrical mechanism for furnishing the power transmitted to the motor to actuate it, and which I prefer to provide in the form of a storage-battery system F, charged from a dynamo-electric machine E, driven by an engine D, which is preferably a gas-engine. Any other suitable form of electric mechanism, however, which will serve to drive the motor is included as within the spirit of my invention.

The upper of the two floors B and B' affords the floor of the elevated or passenger compartment G, which may involve the general construction of a passenger-car, and may be provided with an open or canopy top and open sides for summer use, or a sealed top and closed sides for other seasons; and the

compartment G is accessible by steps *r*, leading to it, preferably, at one end, as indicated, and from opposite sides of the car.

I provide a cab H at the forward end to accommodate the lever mechanism, through the medium of which to control the propelling mechanism and the motion of the car and the driver, and the upper part of the cab coincident with the compartment G should be separated from the latter by a partition *q*, to shield the passengers, in the direction of the movement of the car, from wind and inclement weather.

A car of my improved construction thus set forth need not be materially, if any, higher or longer than an ordinary car for the same purpose, and it presents a neat and attractive appearance and affords a comfortable and pleasant conveyance.

The compartment G may be readily heated from the lower compartment either by the heat generated to drive the machinery or by especial heating apparatus provided for the purpose.

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

1. In a motor-car, the combination, with the running-gear, of a double floor affording between the two a compartment C, containing the propelling mechanism, comprising,

essentially, a motor to drive the running-gear and electric mechanism for running the motor, and a passenger-compartment G, extending from the upper of the two floors, substantially as described.

2. In a motor-car, the combination, with the running-gear, of a double floor having between the two a compartment C, containing the propelling mechanism, comprising a motor F' to drive the running-gear, and electric generating mechanism, comprising a storage-battery F, a dynamo-electric machine E, for charging the storage-battery, and an engine D, for driving the dynamo-electric machine, substantially as described.

3. In a motor-car, the combination, with the running-gear, of a double floor having between the two a compartment C of dimensions adapting it to accommodate the propelling mechanism, an elevated passenger-compartment G, extending from the upper of the two floors and accessible from without the car, and a cab H at one end of the car and divided off from the compartment G, substantially as described.

ALBERT B. PULLMAN.

In presence of—

J. W. DYRENFORTH,
M. J. SMALL.