(No Model.)

J. STEPHENSON.

TRAM CAR.

No. 491,608. Patented Feb. 14, 1893.

Fig. 1.

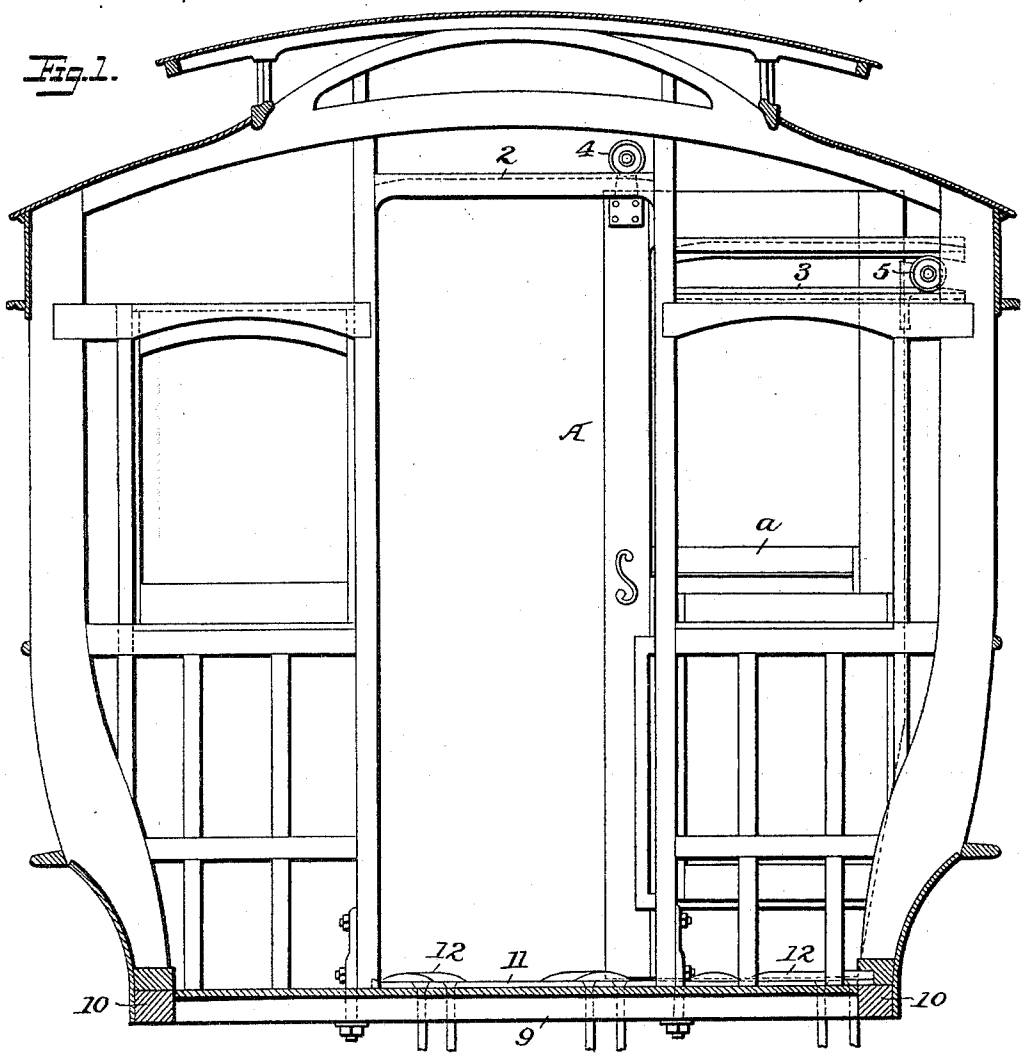


Fig. 2.

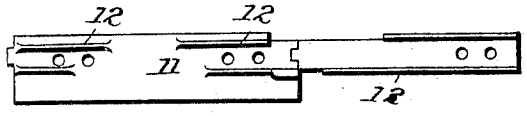
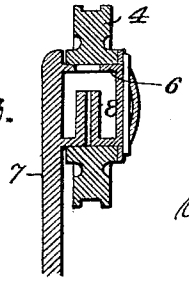


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN STEPHENSON, OF NEW YORK, N. Y.

TRAM-CAR.

SPECIFICATION forming part of Letters Patent No. 491,603, dated February 14, 1893.

Application filed September 5, 1892. Serial No. 445,119. (No model.)

To all whom it may concern:

Be it known that I, JOHN STEPHENSON, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Tram-Cars, of which the following is a specification.

My invention relates to tram cars and consists in certain improvements hereinafter set forth and illustrated in the accompanying drawings, in which:—

Figure 1, is a transverse section of a tram car illustrating my improvements. Fig. 2, is a plan view of the door sill plate. Fig. 3, is a vertical section through one of the door hangers and sheaves upon which the door is supported.

In tram cars employing sliding doors suspended from above an objection is often found resulting from the end sill being forced down by the platform and the weight of the passengers thereon, thereby disarranging the relationship of the door sill plate and causing the door to become stuck or operate badly.

My invention is adapted to be used in connection with tram car doors of the character described and claimed in my application Serial No. 370,776, filed November 8, 1890, although it is adapted to be used in connection with doors of other kinds. Such doors as are shown in the application are of more than usual weight and when open to their farthest extent their rear edges are at or near the joint of the end sill with the side sill of the car. It therefore follows that if the door sill plate be supported and carried by the end sill alone and if the latter sill be forced downward away from the side sill, by reason of the load upon the platform, the door will not be supported at its lower edge by the flanges of the door sill plate and that it is therefore liable to work unsatisfactorily.

My invention consists in improvements in the construction of the car whereby the door sill plate is supported at its outer end upon the side sill so that it is always held in proper relationship to the door, even when the platform is heavily loaded and caused to sag thereby.

In the drawings A, designates the car door which is supported upon the rails 2 and 3, by the sheaves 4 and 5. The door shown is represented as having a vertically sliding sash *a*, which when lowered moves between the outer and inner faces of the door. As the door A, may be of more than ordinary weight, particularly when constructed as above described, the carrying sheaves are made strong and provided with improved means for lubricating their axles 6, which are made of large diameter and are carried by the brackets 7. The axle 6, is hollow, as shown in Fig. 3, and is provided with a tube 8, communicating with the interior of the axle and discharging at the exterior lower side thereof.

9, represents the end sill of the car and 10, 10, the side sills thereof.

11, represents the door sill plate provided with flanges 12, between which the lower edge of the door runs and by which it is guided. The door sill plate 11, may be of one or more parts, with the outer end of the plate resting on the side sill 10, and the plate 11, otherwise supported by the end sill to which it is secured and through which plate bolts pass down through the plate and sill to carry the platform. This combination secures the end sill and its plate from being depressed by the loaded platform, and preserves the proper relationship of those parts with the door.

What I claim is

1. A tram car with its door bottom sliding between rising flanges on the door sill plate with its end resting on the side sill of the car body, substantially as described.

2. A tram car with its door hung on sheaves, the axle of the sheave being hollow and provided with a tube communicating with the interior of the axle and discharging to the exterior of the lower side thereof, substantially as described.

3. A tram car with its door hung at or near its top by sheaves having enlarged axles provided with oil chambers within the journals and tubes for dripping the oil on the sheave axle journals, and the door bottom sliding between rising flanges of the door sill plate with its end resting on the side sill of the car body, the plate carrying the platform bearer bolts which hold up the car platform with its load, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN STEPHENSON.

Witnesses:
S. A. STEPHENSON,
WM. J. WALKER.