

(No Model.)

O. S. HOLT.
CAR TRUCK.

No. 287,936.

Patented Nov. 6, 1883.

Fig. 1.

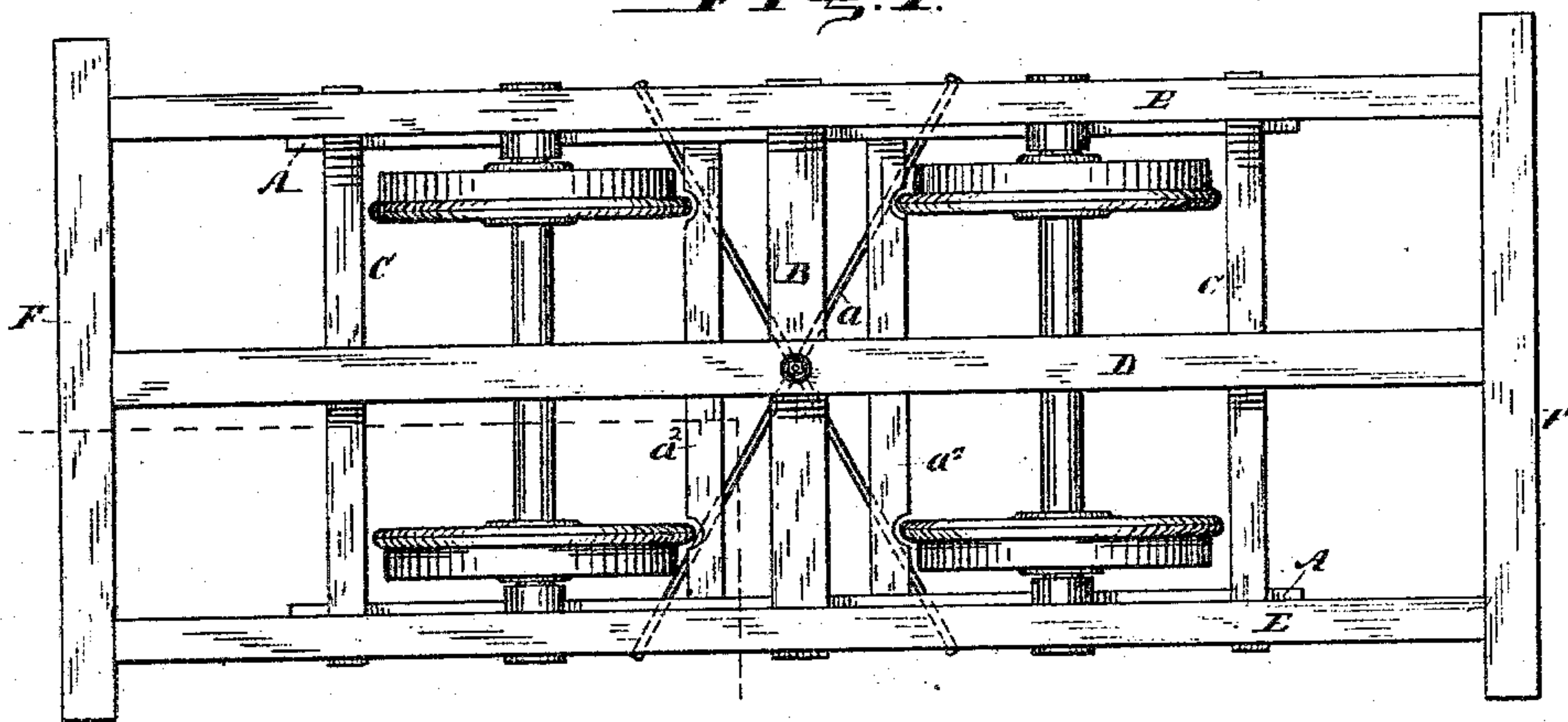


Fig. 2.

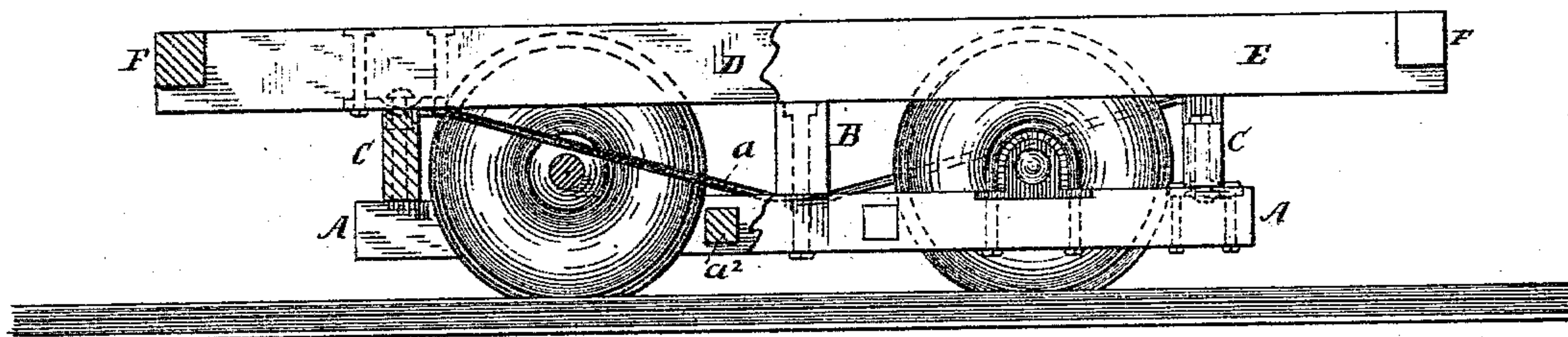


Fig. 3.

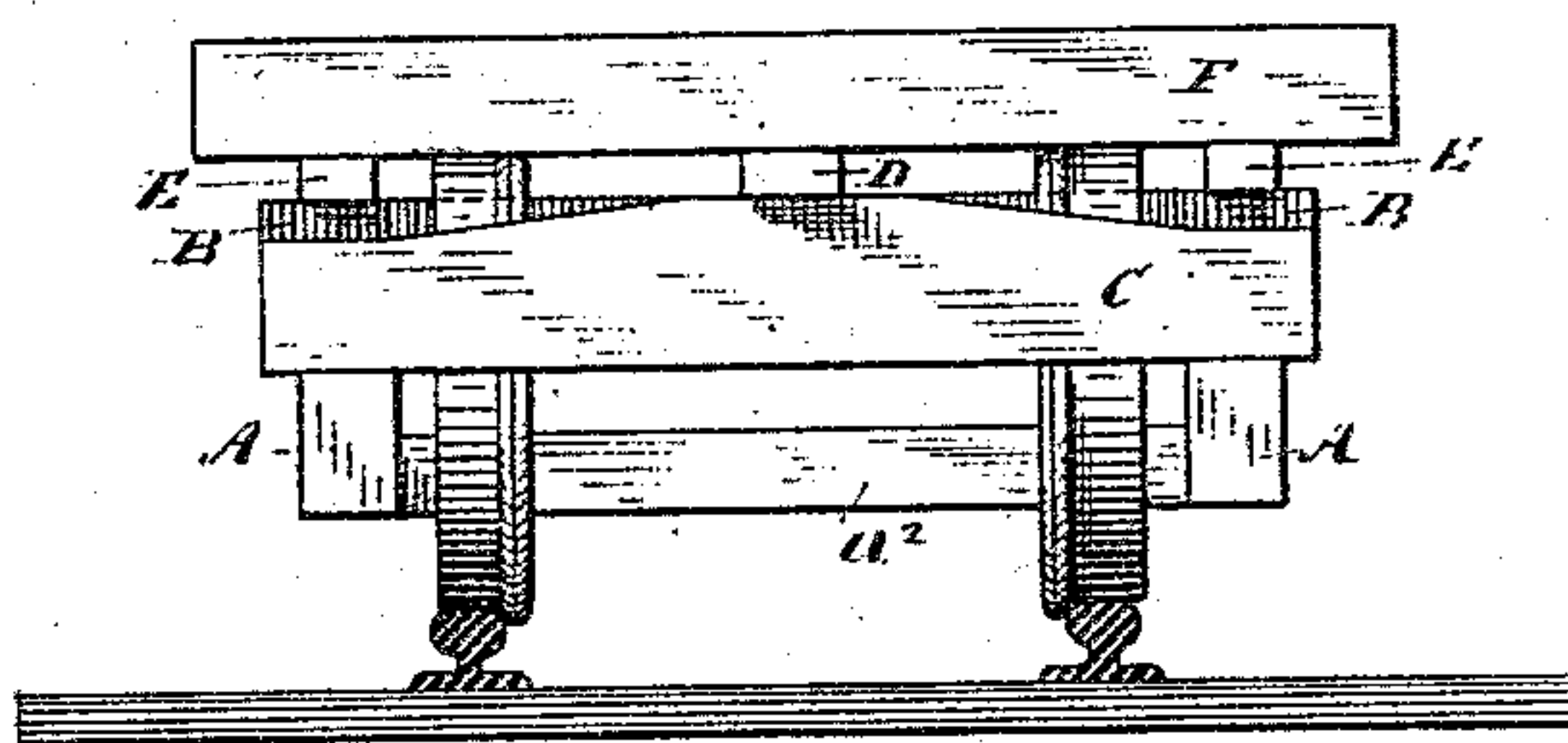
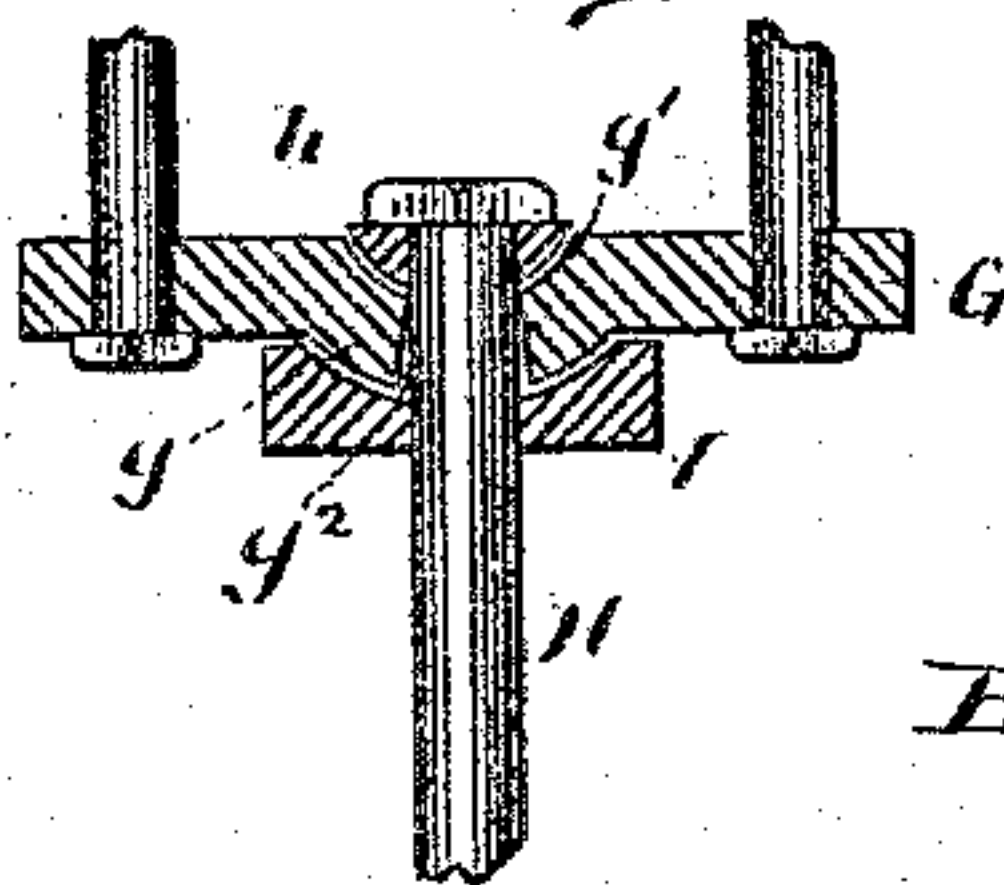


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

ORRIN S. HOLT, OF CHIPPEWA FALLS, WISCONSIN.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 287,936, dated November 6, 1883.

Application filed April 10, 1883. (No model.)

To all whom it may concern:

Be it known that I, ORRIN S. HOLT, a citizen of the United States, residing at Chippewa Falls, in the county of Chippewa and State of Wisconsin, have invented certain new and useful Improvements in Railway-Car Trucks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

The object of the present invention is to furnish a truck for railroad-cars in which effectual provision is made for distributing the weight of the car over the entire truck-frame, so that, no matter how much the truck-frame may twist or swerve to accommodate the wheels to inequalities or curves of the track, there will always be a firm and even support between the car frame or body and truck-frame, so that a nearly equal amount of the load is borne by each of the wheels.

To these ends the invention consists in the construction and combination of parts which will hereinafter be more fully described, and then set forth in the claims.

In the drawings, Figure 1 is a plan or top view of a car-truck embodying my improvements. Fig. 2 is a side elevation, partly in section. Fig. 3 is an end elevation. Fig. 4 is a detail view of the universal bearing or joint.

The truck-frame consists of two longitudinal sills, A, having suitable brace-rods, a , and struts a^2 , or other appropriate devices for maintaining the parallelism of said sills. A centrally-located cross-sill, B, rests on the longitudinal sills A, and is secured thereto by bolts or other fastening devices. Two end sills, C, are also resorted to for forming a body-supporting bed in connection with the central sill, said end sills resting on the longitudinal sills and being bolted or otherwise secured thereto.

On the top of the bed formed by the cross-sills B C rests the upper frame or body of the car, which may consist of a longitudinal central beam, D, two or more longitudinal side

beams, E, and two or more cross beams or timbers, F, secured to the ends of the longitudinal beams. Said upper frame or body of the car is supported upon the middle portions of the end sills, C, and the center and ends of the central sill, B, and is held in position by bolts or other devices located at the points of support mentioned.

It will be apparent that four points of support for the car-body are provided, and that lines drawn from said points of support intersect each other at the point where the central longitudinal beam, D, rests upon the cross-sill B of the truck-frame. These points of support, being located on intersecting straight lines, are necessarily always in the same plane and always maintained therein, and it follows that no matter how much the truck-frame may twist to accommodate the wheels to inequalities of the track the upper frame or body of the car will always lie firmly on the truck-frame at the points of support, which, it may be stated, are located midway between the center of the wheels or axle-boxes at both sides and ends. For the reason stated, the load or weight of the car is so distributed that each wheel receives practically an equal share thereof under all circumstances, this result being accomplished without twisting or rocking the upper frame or body of the car.

Instead of securing the end sills of the truck-frame to the longitudinal sills by means of bolts or other rigid fastening means, there may be employed a universal joint of the construction shown in Fig. 4. It consists of a plate-washer, G, having a hemispherical projection or convex surface, g , on one side, and a corresponding concavity, g' , on the other, a hole, g^2 , being made through the convex and concave surfaces for the passage of a bolt, H. This hole is made larger than the diameter of the bolt. The latter has a convex washer, h ; or the head thereof may have this shape, so as to fit into the concave seat in the plate G. The convex projection of the latter fits into a concave seat made in a plate or washer, I, which is also apertured for the passage of the bolt H.

As shown in Fig. 2, the plate G is secured to the end portion of the longitudinal sill A

by means of bolts, and the plate I and the bolt with its convex washer are carried by the cross-sill C. It will be understood that a universal joint of the construction specified is designed to be used at the junction of the cross-sills C with the sills A, and for this reason, and others above named, the car-wheels can raise or lower independently to correspond to irregularities in level of the track, and the truck-frame possesses a certain freedom of motion independent of the body of the car. The connection between the centers of the end sills of the truck-frame and the central beam of the car-frame is also effected by a universal or ball-and-socket joint, as is indicated in Fig. 2.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a car-truck, the combination of the truck-frame A, having transverse central sill,

B, and transverse front and rear sills, C, the latter being provided with top surfaces made higher at the center than at the ends, with the car-frame having longitudinal center beam, D, and longitudinal side beams, and supported upon the middle portions of the end sills, C, and upon the center and ends of the central sill, as herein set forth.

2. In a car-truck, the combination of the plates G, having bottom convex projection, g , tapering hole g^2 , and upper concavity, g' , and the concave bearing-plate I, and bolt H, having convex head h , with the cross-sills C, and the truck-frame A, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ORRIN S. HOLT.

Witnesses:

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