(No Model.)

H. F. SHAW.

TRUCK FOR STREET CARS.

No. 455,265. Patented June 30, 1891.

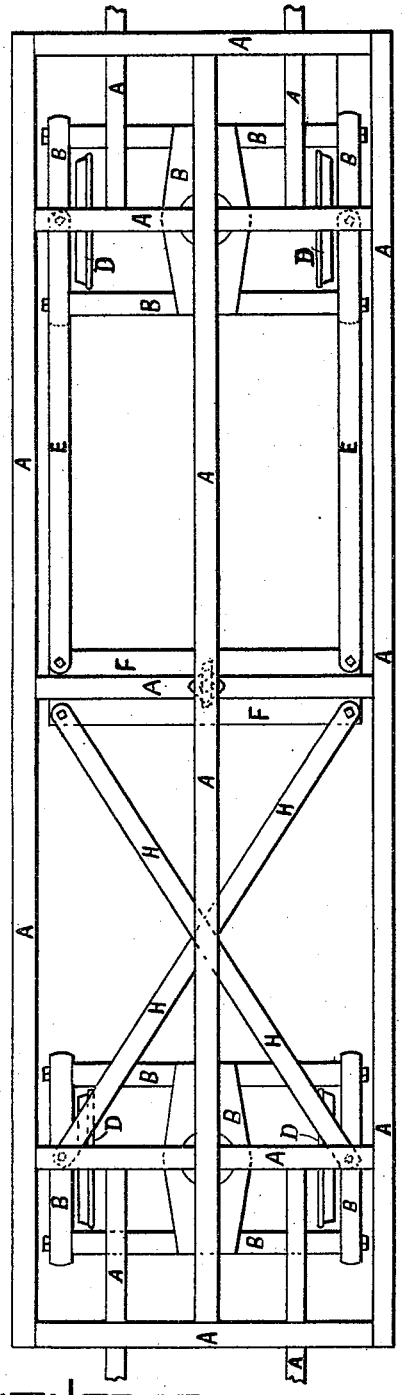

Fig. 1.

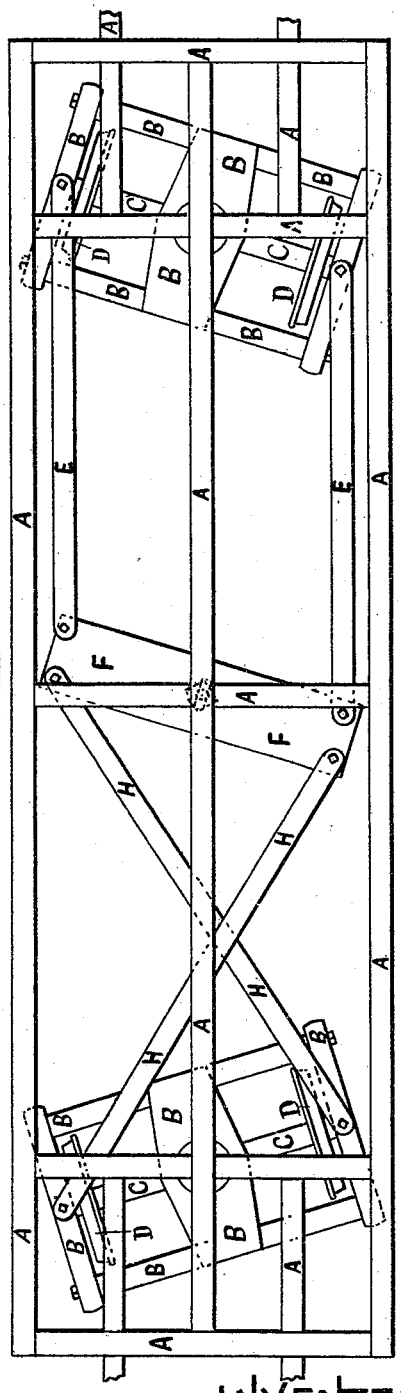

Fig. 2.

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HENRY F. SHAW, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-THIRD TO SAMUEL A. RANDALL, OF SAME PLACE.

TRUCK FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 455,265, dated June 30, 1891.

Application filed March 7, 1891. Serial No. 384,154. (No model.)

To all whom it may concern:

Be it known that I, HENRY F. SHAW, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Trucks for Street-Railway Cars, of which the following is a specification.

The object of my invention is to provide trucks for street-railway cars, which are adapted especially to those wherein electricity is employed as the motive power, and of such construction that the car may be driven around the shortest curves in the tracks of the street-railway with the same power required to run the car on a straight portion of track on same grade. The front and rear trucks are connected together by a series of pivoted levers, which cause the trucks to run and turn on a radius corresponding to the shortest curve to be passed over in the line of track, or nearly so, either more or less, as may be desired.

My invention consists in the construction, combination, and arrangement of the several parts of the truck-frames and pivoted lever connections hereinafter more fully described, and specifically set forth in the claim.

In the drawings hereto annexed, which form a part of this specification, Figure 1 represents a plan showing the trucks with their frames pivoted to the sills of the car-body, at or near each end, and connected together by two pivoted oblique or diagonal cross-bars and two parallel pivoted connecting-bars with a central pivoted cross-bar constructed according to my invention, showing the positions of the same when the trucks are passing over a straight track. Fig. 2 represents a similar view of the same when the trucks are passing around a curve in the track.

A represents the bottom or sill portion of a common street-car, near each end of which is suitably pivoted the truck-frames B, provided with common box-bearings for the axles C, provided with the wheels D, as usual. These parts, being old and well known, are not shown with precision, or illustrated and described in detail, as they form no special feature of my present invention. Now in order to effect the objects of my invention I connect the said truck-frames with each other so as to cause each truck-frame to actuate the opposite one in the opposite direction from the one deflected by the action of the flanges of the wheels bearing against the inner or inward faces of the rails when passing over any curve in the tracks. As soon as the first truck or pair of wheels enter upon the commencement of the curve the truck-frame is correspondingly turned on its pivot, and the opposite truck-frame is correspondingly acted upon and turned on its pivot in an opposite direction. To one of the said truck-frames B, above the axles C, is suitably pivoted at opposite ends of the frame one end of the parallel, longitudinal, and horizontal connecting-bars E, their opposite ends being pivoted to the ends of the cross-bar F, which is centrally pivoted to the underside of the bottom frame portion A of the said car-body, the said cross-bar or lever F standing when in a normal position at right angles to the said connecting-bars E, as shown in Fig. 1. To the other or opposite truck-frame B is pivoted at the same points and in similar manner the ends of the oblique connecting-bars H, their opposite ends being likewise pivoted to the said cross-bar or lever F, each of the said connecting-bars H extending obliquely or diagonally from the said truck-frame B to the said pivoted cross-bar F, as shown. The points at which the said pivotal connections are to be made may be varied from the positions shown without departing from the essential features of my invention, whenever circumstances may require the same or it may be found more desirable—as, for instance, the ends of the oblique or diagonal connecting-bars H may be pivoted to the said cross-bar F, nearer the center thereof, or so that it shall serve as a lever, and, if desirable, their opposite ends may be pivoted to the truck-frame at any other desired points. It will be seen and understood that the same result would be produced if the opposite ends of the said oblique or diagonal pivoted connecting-bars H were pivoted directly to each truck-frame B and the pivoted cross-bar F be wholly omitted from the mechanism; but I prefer to employ the said cross-bar, as by its use when applied to very long cars, the truck-frames being a

greater distance apart, the two parallel connecting-bars E extending somewhere about one-half the distance, would serve a better purpose, as the diagonal connections H would in such construction be comparatively shorter, and, if desired, the pivoted cross-bar F may be provided with an elongated hole or oblong central opening, so as to move a short distance in a longitudinal direction as to its pivotal connection with the frame of the car-body, as shown in Fig. 2, in order to allow a slight variation as to the radial position of the opposite truck-frames when the nature of the curve is such as to require more ease or freedom.

Having thus described my invention, I claim—

The combination, with the pivoted truck-frames B, of the pivoted diagonal connecting-bars H, pivoted parallel connecting-bars E, and pivoted cross-bar F, substantially as described.

HENRY F. SHAW.

Witnesses:
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