



# UNITED STATES PATENT OFFICE.

THORNTON A. BRANT AND CALVIN D. HARRIS, OF MATTOON, ILLINOIS.

## CAR-FRAME.

SPECIFICATION forming part of Letters Patent No. 258,703, dated May 30, 1882.

Application filed February 25, 1882. (No model.)

*To all whom it may concern:*

Be it known that we, THORNTON A. BRANT and CALVIN D. HARRIS, of Mattoon, in the county of Coles and State of Illinois, have invented a new and useful Improvement in Railroad-Car Frames, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of our improvement. Fig. 2 is a sectional side elevation of the same, taken through the broken line *xx*, Fig. 1. Fig. 3 is a sectional end elevation of the same, taken through the line *yy*, Fig. 1. Fig. 4 is a perspective view of one of the corner-irons.

The object of this invention is to facilitate the repairing of railroad-car frames.

The invention consists in a railroad-car frame constructed with end sills, side sills, and stringers, connected by angle-irons, so that the said side sills and stringers can be readily detached and replaced when required without disturbing the car-floor, as will be hereinafter fully described.

A represents the end sills, B the side sills, and C the stringers. The adjacent ends of the end sills, A, and side sills, B, are connected by angle-irons D, which fit into the angles between the said end and side sills, and are secured in place by bolts. The angle-irons D are made with flanges E upon their lower edges to underlap the end sills, A, and with flanges F upon their upper edges to overlap the side sills, B, so that the weight of the car will be

firmly supported. The ends of the stringers C are connected with the end sills, A, by angle-irons G, which are bolted to the said sills and stringers, as shown in Figs. 1 and 2.

With this construction the stringers C, when worn or broken, can be readily removed by detaching the angle-irons G from the end sills, A, and replaced by new stringers without disturbing the floor of the car. In the same way the side sills, B, can be removed by detaching the angle-irons D and loosening the side boards attached to the said side sills.

With this construction no mortises and tenons are required in making the frame, and consequently the full strength of the frame-timbers will be utilized, so that lighter timbers can be used than when the frames are constructed in the ordinary manner.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The angle-iron D, having the lower edge-flange, E, and at right angles thereto the upper edge-flange, F, whereby the iron may be used as described.

2. In a railroad-car frame, the combination, with the end sills, A, and the side sills, B, of the angle-irons D, having flanges E F, substantially as herein shown and described, whereby the end and side sills are connected firmly and detachably, as set forth.

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Witnesses:

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