(No Model.)

J. & W. A. ROVER.

DRAW TIMBER FOR CARS.

No. 482,653. Patented Sept. 13, 1892.

Fig. 1.

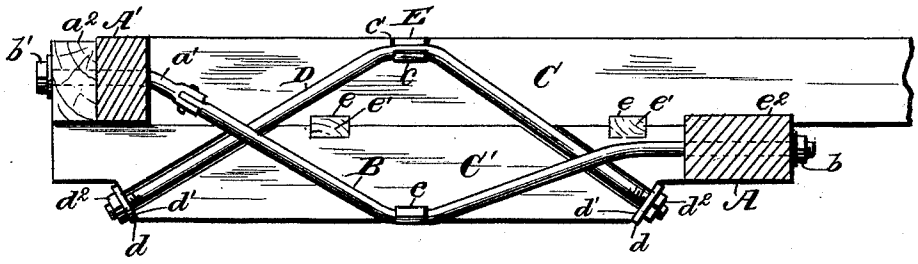


Fig. 2.

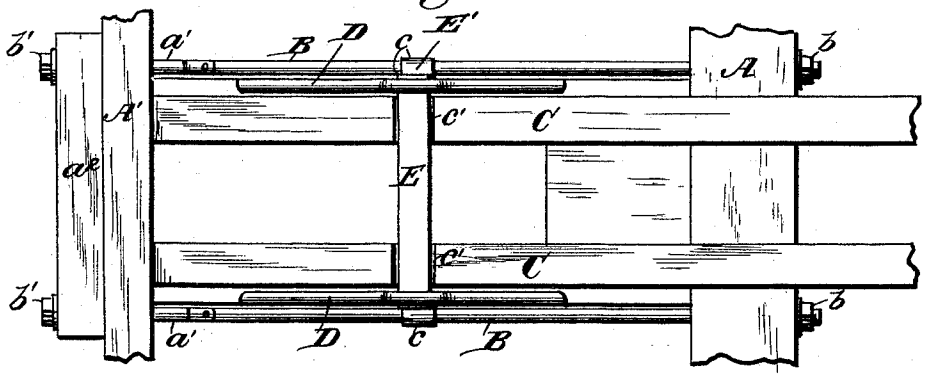
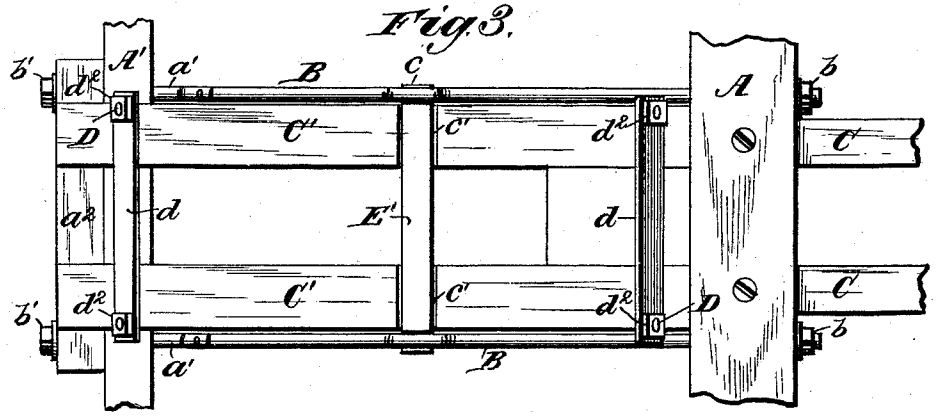


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN ROVER AND WILLIAM A. ROVER, OF LIMA, OHIO.

DRAW-TIMBER FOR CARS.

SPECIFICATION forming part of Letters Patent No. 482,653, dated September 13, 1892.

Application filed May 24, 1892. Serial No. 434,134. (No model.)

To all whom it may concern:

Be it known that we, JOHN ROVER and WILLIAM A. ROVER, citizens of the United States, residing at Lima, in the county of Allen and State of Ohio, have invented new and useful Improvements in Cars, of which the following is a specification.

Our invention relates to an improvement in cars; and it has for its object to provide for the ready repairing of the end draft-bars in case of the breakage thereof, therefore, according to my invention, involving the connecting together and bracing of the draft-bars by means of a truss-like arrangement of brace-rods suitably held to the sills, all substantially as hereinafter more fully disclosed, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side view of the middle or main sills and the end draft-bars of a car embodying our invention. Fig. 2 is a plan view thereof. Fig. 3 is an inverted view of the same.

In carrying out our invention we connect the end draft-bars A A′ together by means of bent or angular brace-rods B and brace firmly in place the upper middle sills C, against one end of each of which is held the draft-bar A by means of similar bent or angular truss-rods D. The brace-rods B have one of their horizontal end portions *a* passed through the lower end draft-bar A and held thereto by suitably furnishing said end portions with screw-threads and nuts *b*. The opposite ends of the brace-rods B have jointed or fitted thereto horizontal end portions *a′*, passed through the upper end draft-bar A′ and a reinforcing piece or backing a^2, and held thereto by suitably furnishing said end portions with screw-threads and nuts *b′*. This arrangement provides, as is plain, for the ready removal of the end draft-bars, in event of the breakage thereof, without first having to remove other fastenings or bolts connecting them with the car-body, as heretofore practiced, and the renewal or replacement of said end bars by others. The brace-rods B and the truss-rods D are caught at their angles upon the projecting curved end portions *c* of the cross-bars E E′, respectively, placed across and in recesses *c′* in the upper and lower edges of the upper and lower sills or beams C C′, respectively, and the truss-rods are passed through cross plates or bars *d*, resting upon abutments or offsets *d′* of the lower sills C′, and held to said sills by providing said truss-rods with screw-threads and nuts d^2. Thus the several upper and lower sills or beams and the upper and lower end draft-bars A A′, bearing against said upper and lower sills, respectively, are all firmly bound or braced together, and yet adapted, as aforementioned, to permit the expeditious detachment or removal of said end draft-bars for the purpose already explained. The sills or beams C C′ have their facing portions mortised, as at *e*, with blocks or keys *e′*, fitting said mortises, while the sills or beams C are mortised or reduced, as at e^2, where they abut the lower end draft-bar A, thus preventing, with the brace and truss rods, possible longitudinal or endwise displacement.

Having thus described our invention, what we claim is—

1. In a car, the combination, with the upper and lower sills C C′, the end draft-bars A A′, and the upper and lower cross-bars E E′, engaging, respectively, the upper and lower sills, of the bent brace and truss rod B, engaging the lower cross-bar and having its ends detachably secured to the upper and lower draft-bars, the cross-plates *d*, bearing against the lower sill, and the bent brace and truss rod D, engaging the upper cross-bar and having its ends detachably secured to the cross-plates, substantially as described.

2. In a car, the combination of the upper and lower sills C C′, the front draft-bar A, abutting the front end of the lower sill, the rear draft-bar A′, abutting the rear end of the upper sill, the upper and lower cross-bars E E′, mortised into the upper and lower sills and having curved end portions *c*, the bent brace and truss rod B, engaging the curved end portions of the lower cross-bar and having its ends extending through the upper and lower draft-bars and detachably secured in place, the cross-plates *d*, bearing against the lower sill, and the bent brace and truss rod D, engaging the curved end portions of the upper cross-bar and having its ends detachably secured to the cross-plates, substantially as described.

3. In a car, the combination, with the end draft-bars and upper and lower sills or beams

and lower sills or beams, of the angular brace and truss rods and the cross-bars supported upon said sills or beams and having curved projecting ends to receive said brace and truss rods at their angles, said brace-rods connecting said draft-bars together and said truss-bars having their ends secured to cross-bars resting upon abutments or off-sets of said lower sills or beams, substantially as set forth.

In testimony whereof we have hereunto set our hands and affixed our seals in presence of two subscribing witnesses.

JOHN ROVER. [L. S.]
WILLIAM A. ROVER. [L. S.]

Witnesses:
THOS. H. JONES,
JEREMIAH FINN.