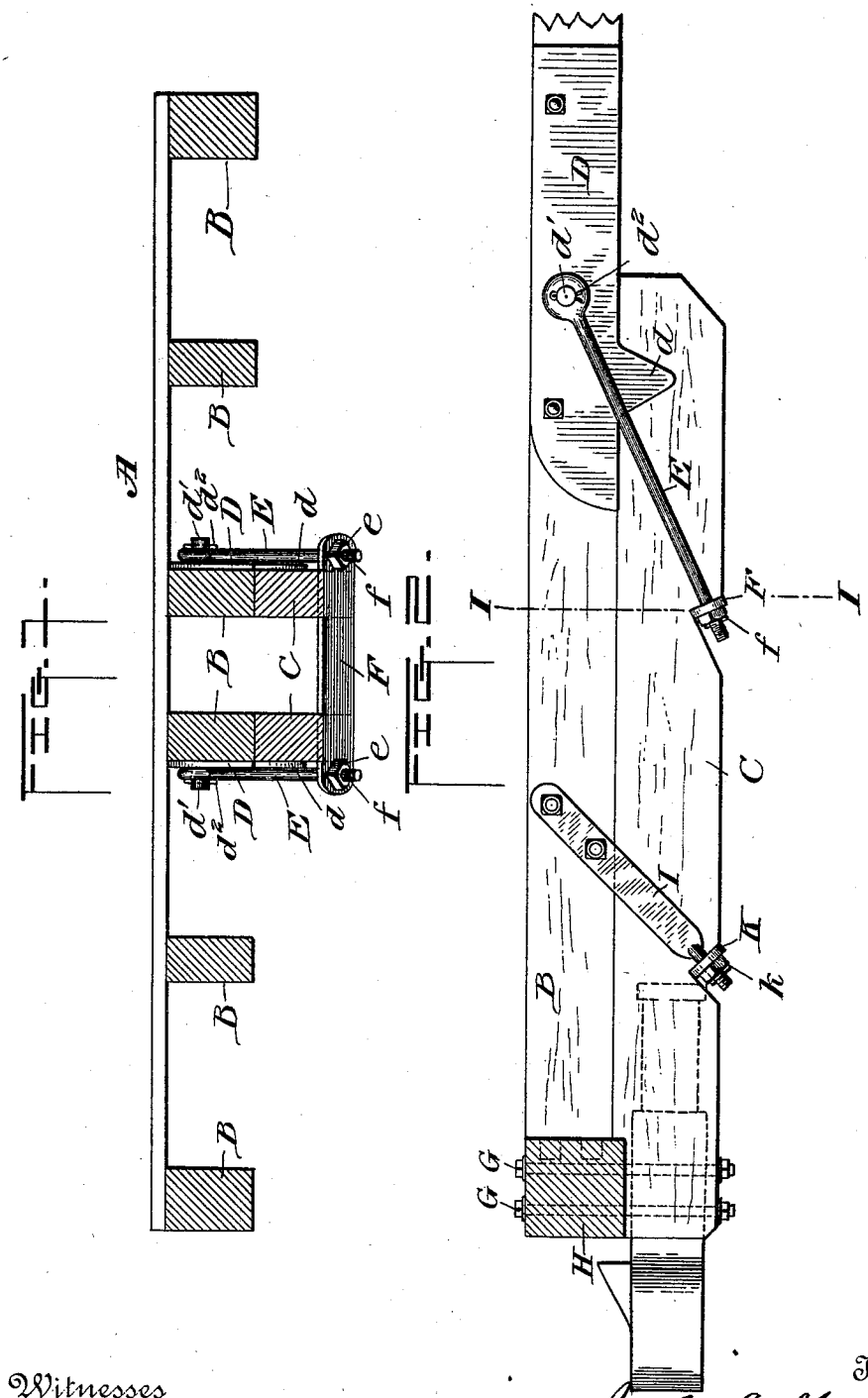
(No Model.)

J. A. MARKLEY.

FASTENING FOR DRAFT BEAMS.

No. 521,803. Patented June 26, 1894.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN A. MARKLEY, OF CLIFTON FORGE, VIRGINIA, ASSIGNOR OF THREE-FIFTHS TO JAMES CLIVIE CARPENTER, JOHN ARCHER ROBERTS, JOHN LESLIE DUNCAN, AND JAMES CARR KING, OF SAME PLACE.

FASTENING FOR DRAFT-BEAMS.

SPECIFICATION forming part of Letters Patent No. 521,803, dated June 26, 1894.

Application filed October 30, 1893. Serial No. 489,521. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. MARKLEY, a citizen of the United States, residing at Clifton Forge, in the county of Alleghany and State of Virginia, have invented certain new and useful Improvements in Fastenings for Draft-Beams; 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.

This invention relates to devices for securing the draft beams or timbers to railway and other cars, and the primary object is to overcome the objections incident to present methods of securing the draft beams or timbers, by means of bolts extending from the car bottom down through the stringers and draft timbers, and which methods, in case the fastening bolts break, cause vexatious delays and expense, owing to the necessity for unloading the car in order to replace the broken bolts.

A further object is to provide simple, inexpensive, and efficient fastenings, whereby the draft beams are rigidly secured in position for use, and may be easily removed for renewal or repairs.

The invention will first be described with reference to the accompanying drawings, which form a part of this specification, and then pointed out in the claims at the end of the description.

Referring to the drawings, Figure 1 represents a cross-section of a part of a car bottom with my invention applied thereto, so much of the bottom being shown as is necessary to illustrate the invention; and Fig. 2 is a side elevation of the invention.

A, denotes the floor or car bottom, B, B, the longitudinal beams or stringers, and C, C, the draft timbers or beams.

It has heretofore been the common practice to secure the draft beams or timbers to the stringers by means of a series of bolts passing through the beams and stringers from the bottom of the car, and in use such bolts frequently break and permit the draft timbers to drop down, thus endangering the moving train and necessitating vexatious delays and expense in unloading, which is necessary in order to get access to and replace the broken bolts. To overcome such objections, I dispense with such bolts, and provide the stringers at about the rear ends of the draft beams and on the outer sides thereof, with metallic plates D, D, one for each stringer, each plate having a pendent lug or projection *d*, and a stud *d'*, said stud being either screw-threaded or perforated, or both, as shown, to receive a nut or key to prevent the disconnection of the bolts or rods E, E, which are fitted thereon. The rods E, E, may be formed with eyes at one end to fit over said lugs and preferably extend forward and downward on a gentle incline, and their free ends are secured to a cross-bar F, which is seated in recesses or notches on the under sides of the draft beams. The forward ends of the beams C, C, may be secured by bolts G, G, passing therethrough into the front cross-beam H, in the usual manner; such bolts being required to sustain but a small part of the strain, so that they are seldom broken in use, and being also accessible may be easily replaced. The lugs *d*, upon the side plates D, prevent lateral movement of the rear ends of the draft beams, and in the event of breakage of any one or more of said parts, either or all may be easily and quickly removed and another part or parts substituted therefor without rendering it necessary to unload the car.

As an additional fastening and to afford greater security, I also preferably provide a pair of forwardly inclined braces I, I, the upper ends of which may be secured to the stringers B, B, by bolts or otherwise, while their lower ends are secured to a cross-bar K, which rests in notches or recesses on the under sides of the beams, the same as the cross-bar F, or in any other proper manner. I preferably secure the cross-bars to the braces and draft-rods by providing screw-threads on the ends of said rods and braces, on which nuts may be screwed so as to bear against the respective cross-bars, and also perforate the ends of the bars below said nuts to receive detachable keys *f*, *k*, respectively. The ad-

ditional braces are especially desirable upon cars designed to be heavily loaded, but may be dispensed with upon light cars. In some cases it may be desirable to duplicate the draft-rods and side plates D, D, by substituting an additional set for the braces I, I, and it may also be desirable in some cases to use simply a double set of braces and cross-bars I, K, dispensing with the side plates D, and draft-rods E, E, but I prefer the arrangement substantially as described and shown. By the described arrangement, the draft strain is placed mainly on the rods E, E, through the draft timbers, and the greater the strain the more firmly will the braces be pressed up against the stringers. Should any part break upon a loaded car it is not necessary to unload, but a new part may be easily substituted or the broken part may be readily removed for repairs and then replaced.

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

1. In combination with the draft-beams, the side plates having the pendent lugs, the inclined draft-rods, and the cross-bar secured to the free ends of said rods and engaging the under sides of said draft-beams, substantially as described.

2. In combination with the draft-beams, the side plates having the studs projecting therefrom, the draft-rods hinged at one end upon said studs and extending forwardly therefrom on a gentle incline, and the cross-bar connecting the lower ends of said rods and bearing upon the under sides of said beams, substantially as described.

3. In combination with the draft-beams and stringers, the side plates secured to said stringers and provided with pendent lugs, the draft-rods hinged to said side plates and the cross-bar connecting the lower free ends of said rods, substantially as described.

4. In combination with the draft-beams and stringers, the side plates having the pendent lugs adapted to prevent lateral movement of said draft-beams, substantially as described.

5. The combination with the draft-beams and stringers and the draft-rods hinged at one end to said stringers and inclined forwardly and downwardly therefrom to a detachable connecting bar underneath the draft-beams, of the forwardly inclined braces rigidly secured at their upper ends to said stringers and having their lower ends detachably secured to a connecting bar also engaging the under sides of said draft-beams, whereby the latter are firmly but removably supported beneath the stringers, substantially as described.

6. Mechanism for securing the draft-beams of railway or other cars, comprising the side plates provided with pendent lugs and laterally projecting studs, the draft-rods having eyes hinged to said studs and having a cross-bar detachably secured to their free ends so as to engage the under sides of the draft-beams, and the brace-rods having their free ends detachably secured to a cross-bar also adapted to engage the under sides of said beams, substantially as described.

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

JOHN A. MARKLEY.

Witnesses:
CHAS. E. RIORDON,
C. A. NEALE.