

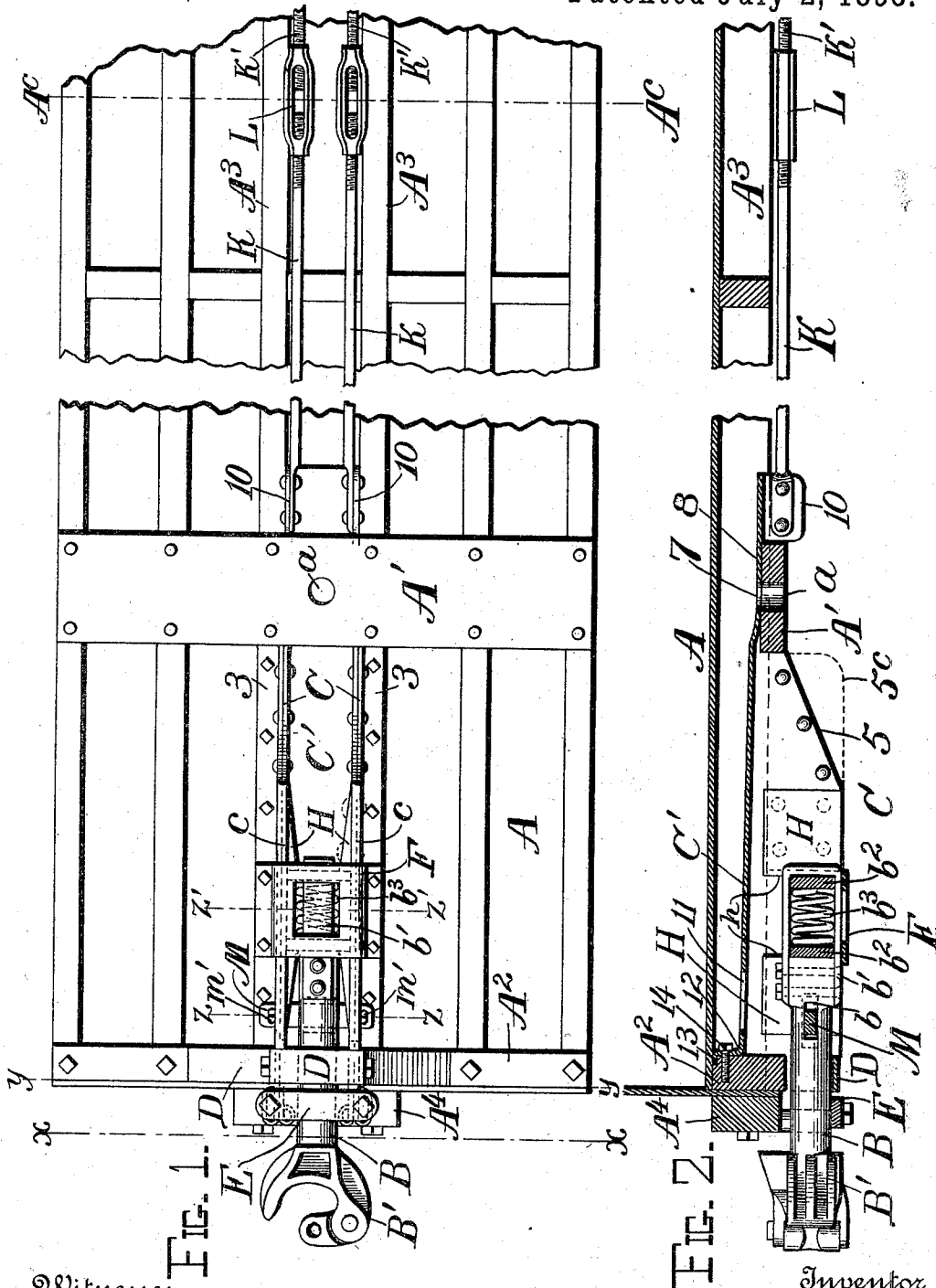
(No Model.)

2 Sheets—Sheet 1.

J. A. ROOSEVELT.
DRAFT RIGGING FOR RAILWAY CARS.

No. 542,110.

Patented July 2, 1895.



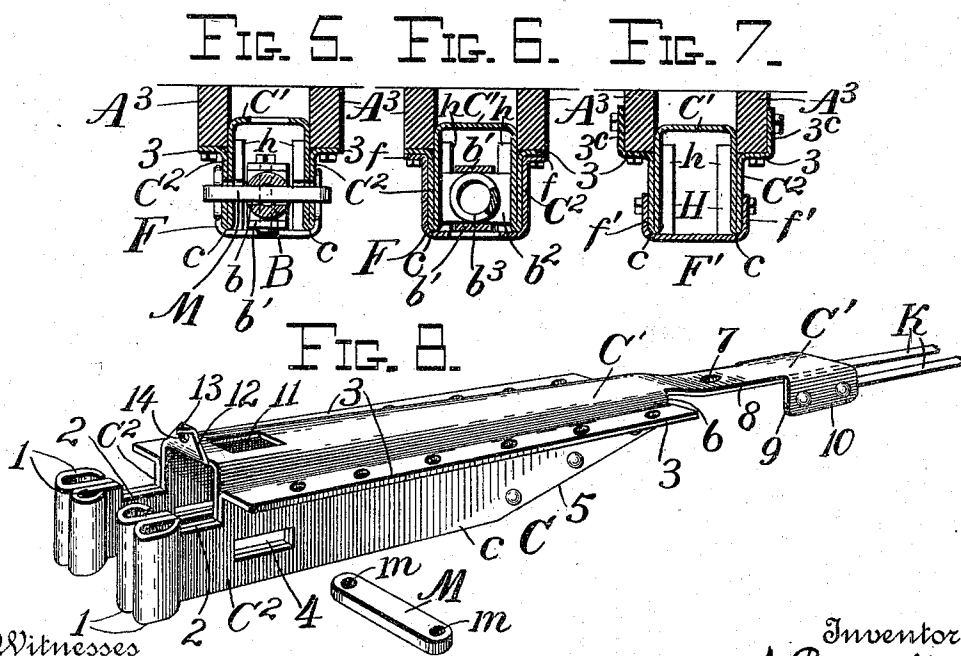
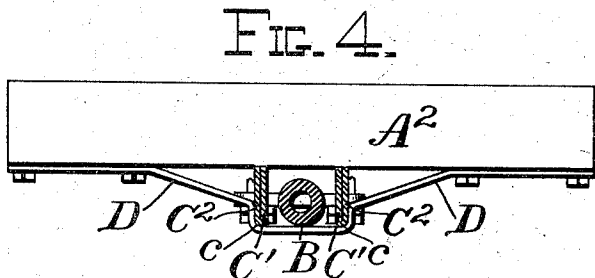
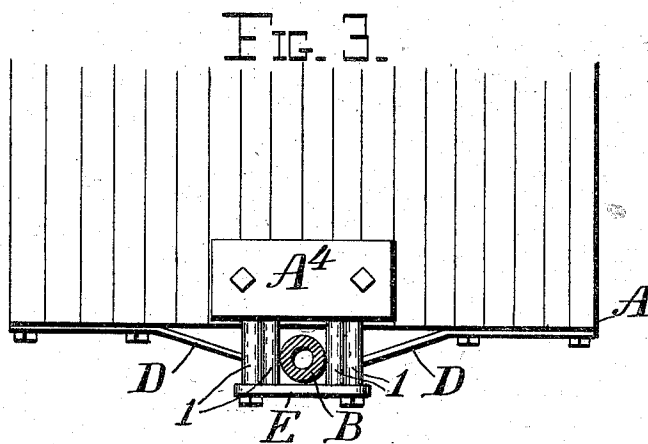
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Witnesses

By C. Bowen.
J. Wilson

FIG. 9.

Inventor
James A. Roosevelt,
by Whitman & Wilkinson,
Attorneys.

UNITED STATES PATENT OFFICE.

JAMES A. ROOSEVELT, OF AUSTIN, TEXAS, ASSIGNOR OF ONE-HALF TO
THOMAS H. WHELESS, OF SAME PLACE.

DRAFT-RIGGING FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 542,110, dated July 2, 1895.

Application filed February 28, 1894. Renewed December 28, 1894. Serial No. 533,233. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. ROOSEVELT, a citizen of the United States, residing at Austin, in the county of Travis and State of Texas, have invented certain new and useful Improvements in Draft-Rigging for Railway-Cars; 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.

My invention relates to improvements in draft-rigging for railway-cars; and it consists in the certain novel features hereinafter described and claimed.

Reference is had to the accompanying drawings, in which the same parts are indicated by the same letters and numerals throughout the several views.

Figure 1 represents an inverted plan view of the bottom of the car as removed from the truck and illustrates my invention. Fig. 2 represents a central longitudinal section through the bottom of the car shown in Fig. 1, the car-coupler being shown in elevation. Fig. 3 represents a section of the device shown in Fig. 1 along the line $x x$ of said figure and looking to the right. Fig. 4 represents a section of the device shown in Fig. 1 along the line $y y$ of the said figure and looking to the right. Fig. 5 represents a section along the line $z z$ of Fig. 1 and looking to the right. Fig. 6 represents a section along the line $z' z'$ of Fig. 1 and looking to the right. Fig. 7 represents a modification of the device shown in Fig. 6. Fig. 8 represents a perspective view of the metallic piece forming the front end of the draft-rigging, hereinafter to be described. Fig. 9 represents a perspective view of a bar spanning the draft-rigging and passing through the draw-bar, for the purposes hereinafter to be described.

A represents the floor of the car provided with transoms A' , perforated, as at a , for the king-bolt of the truck, with end sills A^2 and middle sills A^3 , such as are commonly found in cars of ordinary construction. The line $A^o A^o$ in Fig. 1 represents the center line across the car, and the two ends of the car are in every way symmetrical. Hence it will only be necessary to describe one end.

The dead-wood A^4 is secured to the end of the car in the usual way.

The draw-bar B, which I have shown provided with a draw-head of the Master Car-Builders' type, but which may be provided with a draw-head of any desired description, extends back beneath the car, is slotted, as at b , to receive the bar M, and is secured at its inner end to the tail-strap b' , between which the follower-plates b^2 and spring b^3 are secured in the usual way.

C represents a plate of cast or malleable metal, which is first bent into the form of an inverted U, as at C' , and the legs of the U are folded back on themselves, as at c , and then turned upward, as at C^2 , and flanged outward, as at 3, or it may be cast in this shape. The front ends of this plate as folded are bent back to form eyes for the bolts securing the strap E to the dead-wood. The folded portions are cut away, as at 2, to receive the end sill of the car, are flanged, as at 3, and punched with bolt-holes, so that they may be bolted to the middle sills of the car. The double legs of the U-shaped metal plate are perforated, as at 4, the said perforations or slots being long enough to allow the cross-bar M to have a lateral play therein, and are cut away, as at 5, or, if preferred, as at 5^o in Fig. 2, forming a shoulder 6, connected by a center piece 8, to the shoulder 9 on the lug 10. This center piece 8 is flat and is perforated, as at 7, for the king-bolt of the truck. To the rear end of the metal piece C the rods K are bolted or riveted, and these are connected by the turn-buckles L to similar rods K' leading to the draft-rigging at the other end of the car.

D represents a strap or plate forming the carrier-iron which is secured to the end sill of the car and supports the draw-bar, and it also strengthens the double legs of the draft-rigging.

The plate E is secured by means of bolts passing through the eyes 1 to the dead-wood, and assists in supporting the front end of the plate C and also as an auxiliary carrier-iron for the coupler.

F represents the plate for holding up the follower-plate and tail-fastenings. This plate may be turned up and flanged outward, as at f , or it may be secured to the legs of the in-

verted-U-shaped plate C, as shown in Fig. 7. It will be seen that this plate F serves both as a brace for the two sides of the plate C and also as a support for the follower-plates and spring.

H represents one of the plates for holding the follower-plates in position, which plates H are made in the shape of inclined planes vertically arranged, as shown in Fig. 1, and are provided with faces *h*, adapted to engage the ends of the follower-plate *b*², or these plates may be supplanted by projections stamped out of the sides of the plate C. The cross-bar M passes through the sides of the plate C, having a longitudinal play in the slot 4, and is provided with hole *m* to receive the large cotter-pin *m'*, by which the said bar is held in position. It will be evident that the bar M will serve as a safety-catch, will support the coupler should the carrying-iron be carried away, and will hold it in place should the tail-bolts break loose. The opening 11 is made in top of plate C for convenience in manipulating the bolt which goes through the bolt-hole 14.

The draft-plate C is supported in position by the flanges 3, secured to the bottom of the middle sills, and as an additional precaution I provide at the forward upper portion of the said plate a flap 12, turned upward, as shown in Fig. 8, and terminating in a bent point 13, beneath which a bolt-hole 14 is provided. A bolt through this hole 14 presses this point 13 into the end sill of the car, and this point thus materially assists in supporting the plate C and its attachments.

It will thus be seen that I provide a draft-rigging which is made of metal throughout and is continuous from one end of the car to the other, and thus the strain of starting suddenly is transmitted from one end of the car to the other and from car to car throughout the train, the effect being similar to that arising from the use of a continuous chain throughout the train to which each car is attached by suitable fastening devices.

It will be seen that this draft-rigging is eminently durable and secure against accidents, such as coming loose and dropping on the track, that it strengthens the end of the car to which it is attached, there being no pulling strain whatever on the middle or end sills of the car, and the buffing strains coming more on the draft-rigging than on the cars themselves.

It will be seen that the transom is strengthened by the superimposition of the perforated plate 8, which forms a portion of the plate C, and that the strain on the draft-rigging is distributed in such a way throughout the car as to cause little if any injury to the car-body. In this way lighter timbers may be used in the construction of the cars.

The plate C being made of one piece of metal, there is no liability of the various parts coming apart and less likelihood of the shear-

ing of the bolts connecting said parts together and to the car.

In short, the herein-described device presents a strong, light, and secure construction for the purposes for which it was devised. These and the various other advantages of the herein-described device would readily suggest themselves to any practical car-builder.

It is obvious that many modifications might be made, which could be used without departing from the spirit of my invention.

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

1. In draft rigging for railway cars, a metal plate bent downward in the form of an inverted U, and then having the legs of said U doubled upward and secured between and to the middle sills of the car, with means for attaching the coupler to said plate, substantially as described.

2. In a draft rigging for railway cars, a metal plate bent downward in the form of an inverted U and then having the legs of said U doubled upward and flanged outward, and secured to the middle sills of the car, the said inverted U extending upward between the said sills, and being cut away on either side of the king bolt transom to receive said transom, and perforated to receive said king bolt, with means for attaching the coupler to said plate, substantially as described.

3. In draft rigging for railway cars, a metal plate bent downward in the form of an inverted U, and then having the legs of said U doubled upward and secured between and to the middle sills of the car, and having a hook formed near the forward end of the said plate on the upper side of said inverted U adapted to enter into the front sill of the car, with a bolt hole beneath said hook for a bolt for securing said plate to said front sill, with means for attaching the coupler to said plate, substantially as described.

4. In a draft rigging for railway cars, a metal plate bent downward in the form of an inverted U and then having the legs of said U doubled upward and flanged outward, and secured to the middle sills of the car, the said inverted U extending upward between the said sills, and being cut away on either side of the king bolt transom to receive said transom, and perforated to receive the king bolt, and having a hook formed near the forward end of the said plate on the upper side of said inverted U adapted to enter into the front sill of the car, with a bolt hole beneath said hook for a bolt for securing said plate to said front sill, with means for attaching the coupler to said plate, substantially as described.

5. In a railway car, the combination with a car body provided with middle sills on either side of the median line, of an inverted U-shaped metallic plate fitting between these sills and secured thereto with shoulders near the rear end thereof and a bolt hole in the

center of the space between said shoulders, of a transom for the king bolt secured transversely on the car and fitting snugly between the said shoulders, with a bolt hole in said transom corresponding to the bolt hole in said king bolt in said plate, with means for securing the car coupler to said plate, substantially as and for the purposes described.

6. In a railway car, the combination with a car body provided with middle sills on either side of the median line, of two inverted U-shaped metallic plates, one at each end of the car, each fitting between these sills and secured thereto with shoulders near the rear end thereof, and a bolt hole in the center of the space between said shoulders, of a transom for the king bolt secured transversely on the car near each end thereof, and fitting snugly in said shoulders, with a bolt hole in said transom corresponding to the bolt hole for the king bolt in said plate, rods running beneath the car from the tail of one of said plates to that of the next, turn buckles for tautening said rods, and means for securing the car couplers to said plates, substantially as and for the purposes described.

7. In a draft rigging of the character described, the combination with the plate C secured to the bottom of the car, the sides of said plate being bent to form eyes in the forward end thereof; of bolts passing through said eyes, and the strap E suspended from said bolts and serving as an auxiliary support for the drawbar, substantially as described.

8. In a draft rigging of the character described, the combination with the plate C

secured to the bottom of the car, the sides of said plate being bent to form eyes in the forward end thereof; of bolts passing through said eyes, and the strap E suspended from said bolts and serving as an auxiliary support for the drawbar; the drawbar B provided with the tail strap b' , the follower plates b^2 and the spring b^3 held within said tail strap, and the ends of said follower plates projecting therefrom, of the plates H attached to the inner sides of said plate C and provided with holding shoulders h , and a plate spanning the sides of said plate C and supporting the said follower plates and the said spring, substantially as and for the purposes described.

9. In a draft rigging of the character described, the combination with the plate C secured to the bottom of the car, of the drawbar B slotted as at b , the safety catch M adapted to engage in said slot, the tail strap b' ; the follower plates b^2 and the spring b^3 held within said tail strap, and the ends of said follower plates projecting therefrom, of the plates H attached to the inner sides of said plate C and provided with holding shoulders h , and a plate spanning the sides of said plate C and supporting the said follower plates and the said spring, substantially as and for the purposes described.

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

JAMES A. ROOSEVELT.

Witnesses:

JNO. K. DORMAN,
THAD. A. THOMSON.