

H. STRAUB.
DRAFT RIGGING FOR ROLLING STOCK.
APPLICATION FILED NOV. 23, 1910.

1,016,858.

Patented Feb. 6, 1912.

2 SHEETS—SHEET 1.

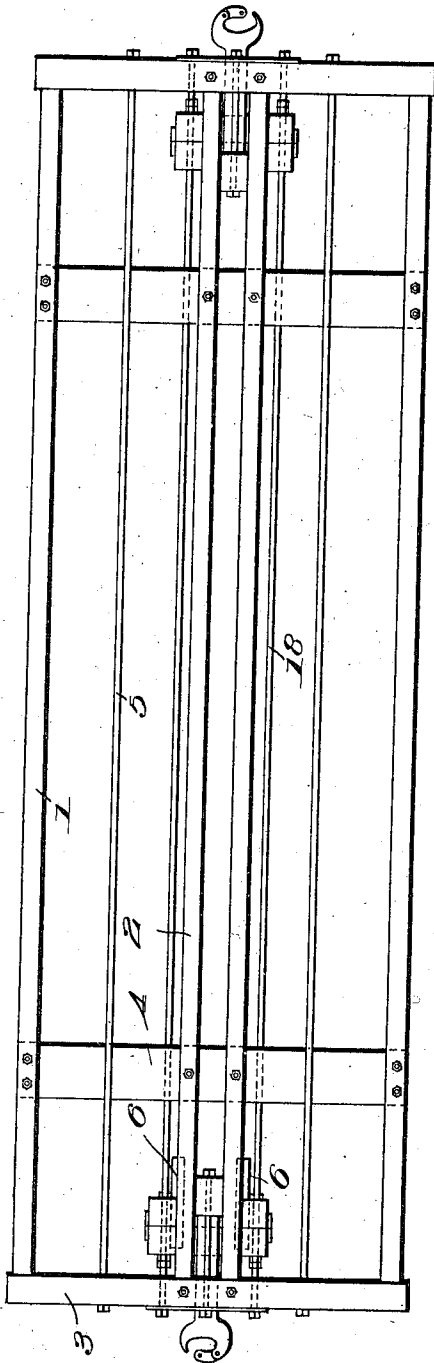
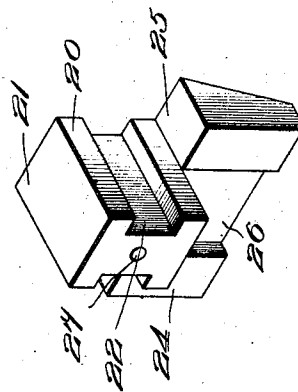
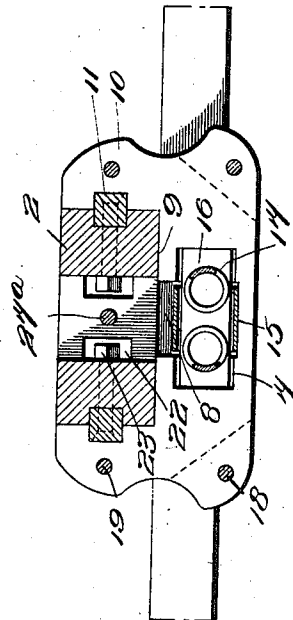


Fig. 1.

Fig. 4.

Fig. 6.



Witnesses
Byron B. Hollings.
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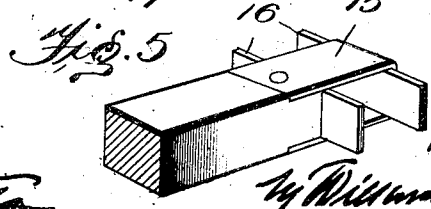
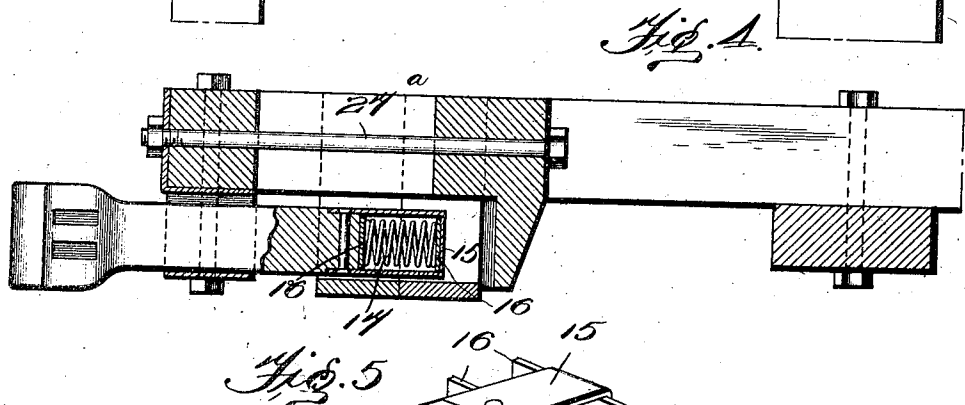
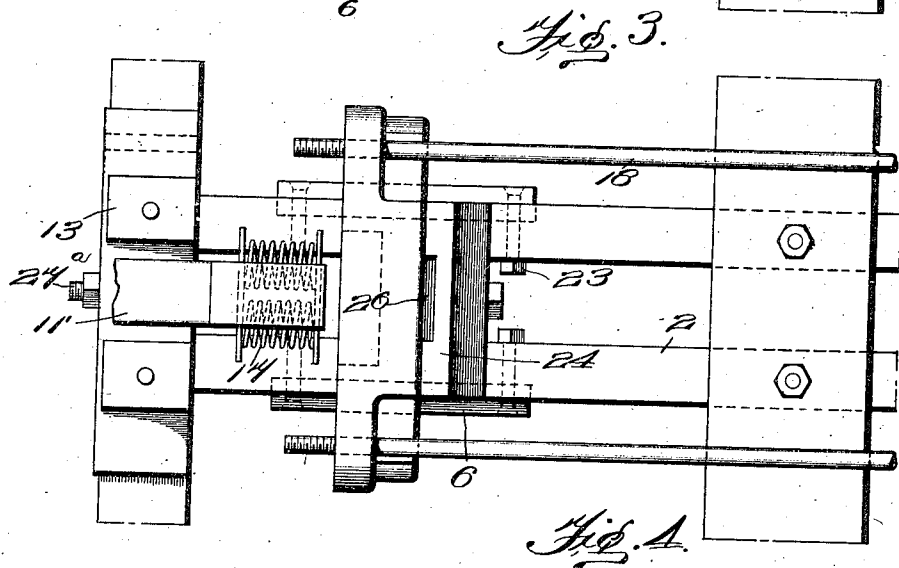
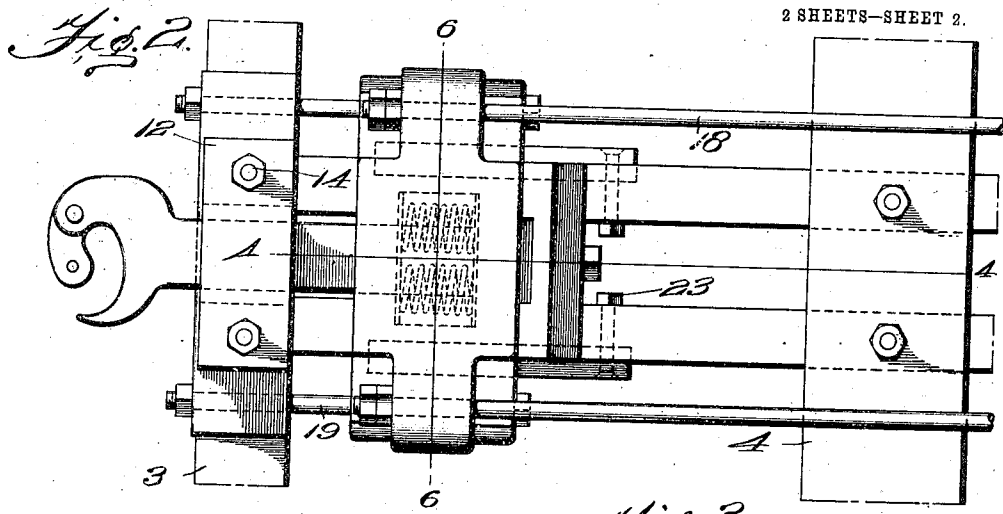
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2 SHEETS—SHEET 2.



Witnesses
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UNITED STATES PATENT OFFICE.

HARMAN STRAUB, OF ENSLEY, ALABAMA.

DRAFT-RIGGING FOR ROLLING-STOCK.

1,016,858.

Specification of Letters Patent.

Patented Feb. 6, 1912.

Application filed November 23, 1910. Serial No. 593,910.

To all whom it may concern:

Be it known that I, HARMAN STRAUB, a citizen of the United States, residing at Ensley, county of Jefferson, State of Alabama, have invented certain new and useful Improvements in Draft-Rigging for Rolling-Stock; 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 improvements in draft gear for rolling stock.

In freight and other cars, whether the frame is wooden or steel, there is a great pulling and compression strain on the draft timbers and the whole car frame, frequently causing the breaking of the sills and resulting in other accidents.

The object of the present invention is to eliminate these objectionable features and thereby prolonging the life of the car frame, by providing a means to compensate for normal and abnormal strains.

While the invention is not restricted to the exact details illustrated and described, still for the purpose of disclosure, reference is had to the accompanying drawings, forming a part of this application, in which drawings like characters designate the same parts in the several views and in which:

Figure 1 is a plan view of a car frame equipped with my invention; Fig. 2 is an inverted plan view of a portion of a car frame with my invention applied and the parts locked in their assembled position; Fig. 3 is a similar view to Fig. 2 with one portion of the draw bar casing removed and with the draw bar retaining plate removed and showing the rear yoke of the draw bar with its follower plates and springs; Fig. 4 is a central longitudinal section on the line 4-4 of Fig. 2; Fig. 5 is a fragmentary perspective view of the rear or yoke end of the draw bar. Fig. 6 is a view in cross section on the line 6-6 of Fig. 2, looking toward the face of the inner half of the draw bar casing, and Fig. 7 is a perspective view of an abutment member looking toward its inside face.

1 designates the side sills, 2 the center sills, 3 the end sills, and 4 the cross sills comprising the frame work of a car.

5 are longitudinal tie or truss rods connecting the end sills.

In carrying out my invention, I provide the outside faces of the center sills with a short track 6, near each end of the car frame and associated with a detachably mounted support for the rear end of each of the draw bars, which detachably mounted supports are hereinafter referred to as the draw bar casings. Each draw bar casing may consist of a two part casting as shown, the parts being of the same construction and on their inner lower face being recessed as at 7, the recess terminating in a slot 8 extending transversely of the casing. The upper edge of these castings are also recessed forming flat shoulders or bearing faces 9 adapted to seat on the underneath faces of the center sills and also providing upwardly disposed projections 10, having bearing faces adapted to rest against the side walls of said center sills. The bearing faces of the projections 10 are provided with opposed grooves 11, adapted to receive the track members 6, this arrangement preventing the vertical displacement of the casing.

11' designates the draw bar supported at its forward end by the retaining plate 12 (Fig. 2) spaced from the end sill by the spacing blocks 13, the spacing blocks and retaining plate being secured to the end sill by bolts 14. The inner end of the draw bar is provided with a yoke 15, adapted to project through one of the slots 8 formed in the draw bar casing and lie within the pocket formed by the recesses 7. Within the yoke 15 are a pair of follower plates 16, and these follower plates are normally held against the end of the draw bar and the end of the yoke by coiled or spacing springs 17 interposed between said follower plates. It will be observed that the follower plates 16 are of a dimension to fit within the pocket formed by the recesses or chambers 7, with sufficient clearance to allow slight play and the projecting ends of the forward follower block will rest against the forward wall of the recess 7, while the projecting ends of the rear follower block will rest against the rear walls of the recess 7 formed in the rear casting, when the two parts thereof are secured face to face together. By this construction, it will be seen that the draw bar is securely coupled within the draw bar casing but free to swing laterally a limited distance and also free to move longitudinally against the action of said springs, the arrangement com-

compensating for pulling and compression strains or stresses. When in their assembled position, these castings are held together by the tie rods 18, extending substantially the length of the car and connecting the castings at the forward and rear ends of the car frame. The castings are also secured to the forward and rear end sills of the frame by tie bolts 19. I also provide an abutment member for holding the castings squarely in position when resisting compression stresses due to impact of car bumping and also to hold the castings squarely in position when resisting pulling stresses. This abutment member consists of a head block 20, having its upper face 21 flush with the upper face of the center sills, being disposed therebetween at the rear of the draw bar castings. The side faces of the head block are recessed as at 22 to permit the head block to be moved longitudinally between the sills, the recesses 22 allowing the heads of the bolts 23 to ride there-through. The bolts 23 secure the track 6 in position.

From the headblock 20 there depends an integral portion 24 which is of a width sufficient to straddle the center sills and forming with the head block shoulders 25 adapted to rest underneath the center sills. This depending portion is recessed as at 26 to provide a clearance space for the back wall of the yoke 15 when the coupler is forced backwardly against the compression of the springs. The head block of the abutment member is also provided with an aperture 27, through which is passed a tie bolt 27^a connecting the abutment member with the end sill.

From the foregoing, the operation of the invention will be readily seen and it will be obvious that the connection between the draw head and its casting compensates for pulling and compression strains while allowing the draw head to swing freely for turning curves and it will be observed that the tying of the two draw bar casings together provides a construction insuring rigidity, the whole saving the frame work of the car from the great strains that they are ordinarily subjected to. It will further be observed that by the construction illustrated and described, the castings to which the draw bar is connected, are not bolted or otherwise directly secured to the center sills, as in other forms of devices where the draft rigging is bolted to the center sills by vertically disposed bolts causing the center sills to split, a disadvantageous feature entirely eliminated by my construction and which differentiates same from any prior construction that I am aware of.

Having thus described a practical and preferred embodiment of the invention, the particular features of novelty will now be

pointed out more succinctly in the following claims.

1. The combination of a car frame, a draw bar at each end of said car frame, a detachably mounted support for the rear end of each of said draw bars, connections between the rear end of each of said draw bars and its detachably mounted support, tie bolts connecting said detachably mounted supports with their adjacent end sills of the car frame, and tie rods connecting said detachably mounted supports together, substantially as described.

2. The combination of a car frame, a draw bar at each end thereof, a detachably mounted support for each of said draw bars, connections between the rear end of each of said draw bars and its adjacent detachably mounted support, including as an element cushioning means, an abutment for each of said detachably mounted supports, slidably mounted on the center sills of said frame, intermediate of said detachably mounted supports and adapted to engage the inside faces thereof, tie bolts forcing said abutments in engagement with said detachably mounted supports, and tie rods connecting said detachably mounted supports together for holding same snugly against said abutments, substantially as described.

3. The combination of a car frame, a casing for each end of said frame formed by a pair of castings adjustably mounted longitudinally of said frame and divided laterally relatively to said frame, said castings having recessed inner faces providing a pocket when assembled, slots being cut in said castings and leading from said recesses, a draw bar, means connecting the inner ends of said draw bar within said pocket, permitting said draw bar to swing laterally and to reciprocate longitudinally under limited restraint, tie bolts connecting the inner castings of said casings with their adjacent end sills of the car frame, and tie rods connecting the outer castings of said casings together and holding said castings snugly assembled and secured together, substantially as described.

4. The combination of a car frame, a short track mounted on the outside faces of the center sills, adjacent the end sills of the car frame, a pair of castings recessed on their upper edge to form upwardly disposed projections having a horizontal and a vertical flat surface engaging the bottom and sides of said center sills, the vertical walls of said recess being provided with opposed longitudinal grooves adapted to receive said tracks, said recess terminating centrally in a slot opening into a lower recess providing a pocket when said castings are assembled and secured, a draw bar, and means resiliently connecting the inner end of said draw bar within said pocket permitting said draw

bar to reciprocate longitudinally and to swing laterally under tension of said resilient connection, substantially as described.

5 5. The combination of a car frame, a draw bar casing at each end of said car frame, said casing comprising a two part casting having recesses cut in their inner faces for forming a pocket when the parts are assembled, the outer of said castings having a slot leading from said pocket, a 10 draw bar disposed in each of said slots and extending within said pocket, means resiliently connecting said draw bar with said casing within said pocket, tie bolts adjustably connecting said casing with the said 15 end sills of the frame and tie rods connecting said casings together, substantially as described.

6. The combination of a car frame, a casing comprising a two part casting having 20 recesses formed on their inside faces forming a pocket, and one of said casings being adjustably mounted at each end of the car frame, a draw bar resiliently connected to said casing within said pocket, an abutment 25 plate for each of said casings slidably mounted on the center sills of said frame, a tie bolt connecting said abutment with the end sill of said frame, tie bolts connecting 30 said casings with said end sills and tie rods

connecting said casings together and holding same snugly against said abutment members, substantially as described.

7. The combination of a car frame having a pair of center sills, a pair of castings adjustably mounted on said center sills having recesses cut in their adjacent faces and slots leading from said recesses, forming a transverse opening through said castings and an internal pocket, a draw bar having 40 its inner end projecting in said pocket and resiliently connected to said casing within said pocket and free to reciprocate through said pocket and slots, an abutment comprising a head block fitting between said center 45 sills and a bottom extension forming with said head block shoulders fitting beneath said center sills and having a recess on its inner face registering with the slots in said castings, tie-bolts connecting said abutments 50 with the end sills of the frame, and tie rods connecting said casings for holding same firmly against said abutments, substantially as described.

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

HARMAN STRAUB.

Witnesses:

FOSTER HAMILTON,
ROBERT RUSSELL.