

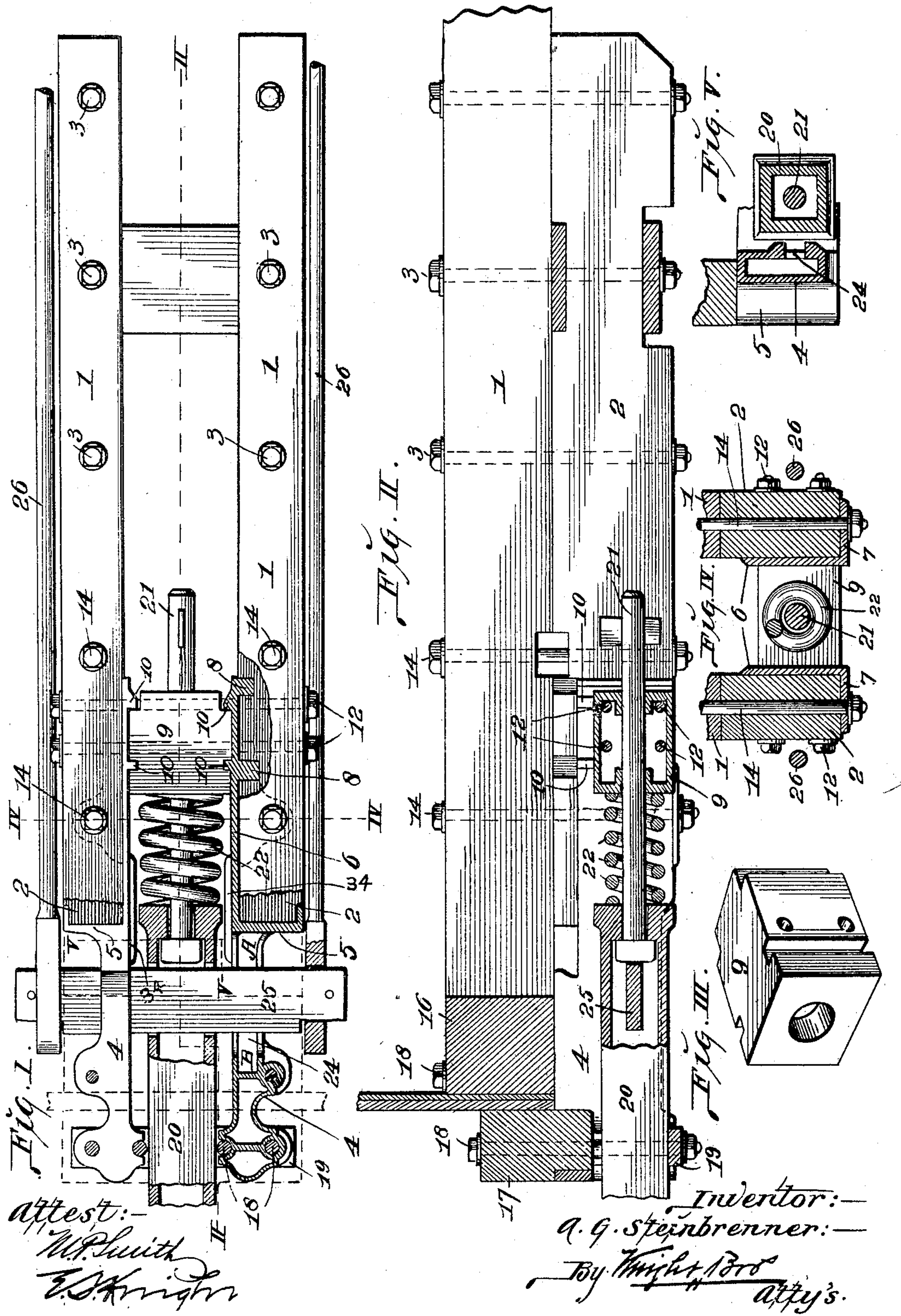
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Patented Sept. 3, 1901.

A. G. STEINBRENNER.
DRAFT RIGGING FOR RAILWAY CARS.

(Application filed Mar. 1, 1901.)

(No Model.)



UNITED STATES PATENT OFFICE.

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DRAFT-RIGGING FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 681,819, dated September 3, 1901.

Application filed March 1, 1901. Serial No. 49,435. (No model.)

To all whom it may concern:

Be it known that I, ANDREW G. STEINBRENNER, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Draft-Rigging for Railway-Cars, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

It is well known that the front ends of the buffer-timbers of a railway-car, especially those of freight-cars, become splintered and mashed by the repeated jars and shocks incident to the stopping and starting of trains and the switching of the cars; and the object of my invention is to provide a means for quickly and substantially repairing the damage to such buffer-timbers, while at the same time the device may be applied when the cars are first built and the serviceability of the timbers in the first instance thereby increased.

My invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I illustrates my invention, part in plan view and part in horizontal section. Fig. II is a vertical longitudinal section taken on line II II, Fig. I. Fig. III is a perspective view of the buffer-block. Fig. IV is a vertical transverse section taken on line IV IV, Fig. I. Fig. V is a detail vertical transverse section taken on line V V, Fig. I.

Referring to the drawings, 1 represents the center sills of a car-body.

2 are the buffer-timbers, arranged beneath the sills 1 and secured thereto by bolts 3. It is the ends of these timbers that become splintered and mashed, as stated, the main portions of the timbers remaining good and serviceable. When the ends become thus splintered and mashed, it is necessary to substitute new ones, which incurs a considerable loss, for, as stated, the main portions of the timbers are in good order, or to provide some means of repairing the mashed ends. This latter I do in a substantial and permanent way, as follows:

4 represents a pair of metallic arms made of malleable iron or steel, and which are fitted,

respectively, to the ends of the timbers 2, after the damaged portions of the timbers have been cut off, each arm having a cap 5, that fits over the end of its timber 2, and each arm having an inner vertical extension 6, that fits against the inner face of the timber 2, and a horizontal flange 7, that fits beneath the timber 2. The extension 6 of each arm has one or more vertical ribs 8, that fit in grooves formed in the inner faces of the timbers 2, as seen in the lower part of Fig. I.

9 is a block that fits between the inner ends of the extensions 6 of the arms and which is provided with vertical grooves to receive ribs 10 on the inner faces of the extensions. The arms are held to the timbers 2 by means of horizontal bolts 12, that pass through the timbers and through the extensions 6 of the arms and likewise through the block 9, the bolts thus binding the parts together horizontally in a solid mass. The arms are further held to the timbers and to the sills 1 by means of vertical bolts 14, that pass through the sills and timbers and through the flanges 7 on the bottom of the extensions 6, as seen in Fig. IV. The forward ends of the arms are connected to the front cross-sills 16 of the car-body and to the dead-wood 17 by means of bolts 18, the bolts 18 that pass through the dead-wood passing also through a bar 19, located beneath the arms 4. The arms 4 are thus supported in a very strong and permanent manner and form a substantial part of the rigging. They can be quickly and easily applied, and by the use of them the main parts of the draft-timbers are retained in place.

20 represents the draw-bar, which is located between the arms 4 and rests upon the bar 19. The inner end of the draw-bar carries a bolt 21, that passes through the block 9 and surrounding which, between the block and the inner end of the draw-bar, is a coil-spring 22, that receives the jar caused by the inward movement of the draw-bar when two cars come together. Each arm 4 has a horizontal slot 24, that extends from A to B, and in which fits a cross-head 25, that passes also through the draw-bar. This cross-head is connected by rods 26 to a like cross-head (not

shown) at the other end of the car, so that the outward pull or draft on the draw-bar is transmitted to the other end of the car, a feature common in railway-car construction, the strain of a pull on one draw-bar being taken up or received by the spring 22 and block 9 at the other end of the car, the cross-head 25 moving in the slots 24, and should either the pulling or bumping strain be greater than the tension of the spring 22 the cross-heads will come against the caps 5 of the arms 4 and arrest the inward movement of the draw-bar, the cross-heads and arms thus providing a substantial and permanent stop in cases of excessive strains. The elongated slots in the metallic extensions or arms permit of the play of the cross-head with the movement of the draw-bar and the caps at the inner end of the slots that cover the ends of the timbers to receive the impact of the cross-head when the draw-bar is jammed inwardly by the coupling of the cars.

The inner faces of the metallic arms 4 are provided with ribs 34, (see Fig. 1,) that serve as guides for the inner end of the draw-bar 20.

I claim as my invention—

1. In a draft-rigging the combination with buffer-timbers, of the metallic arms, fitted to the ends of the draft-timbers and forming elongations or extensions of said timbers, and having elongated slots formed through their forward ends, and a cap at the inner end of the arms, of a draw-bar mounted between the arms, and a cross-head firmly secured to the same and extending through the elongated slots in the arms whereby the said caps receive the impact of the cross-head in its backward movement, thus protecting the draft or buffer timbers from being split.

2. In a draft-rigging, the combination of buffer-timbers, arms fitted to the timbers and projecting forwardly thereof, and having slots formed through their forward ends, a block fitting between and secured to inner extensions of the arms, a draw-bar located between the outer ends of the arms, a bolt-and-spring connection between the draw-bar and said block, a cross-head passing through said draw-bar and fitting in said slots formed in the outer or forward ends of the arms, whereby the cross-head may move with the draw-bar, and rods for connecting said cross-head to a like cross-head at the other end of the car, substantially as set forth.

3. In a draft-rigging, the combination of buffer-timbers, arms having caps fitting over the ends of said timbers, and inward extensions fitting against the inner faces of the timbers, and having also flanges fitting against the bottom of the timbers, said arms having slots formed through their forward ends, a block fitting between the inner extensions of the timbers, vertical and horizontal bolts connecting the timbers, block and arms together, a draw-bar fitting between said arms, a spring-and-bolt connection between the draw-bar

and said block, a cross-head passing through the draw-bar and fitting in the slots in said arms that extend forwardly from said caps, whereby the cross-head may move with the draw-bar, and rods connecting said cross-head to a like cross-head at the other end of the car, substantially as set forth.

4. In a draft-rigging, the combination of buffer-timbers, arms fitted to the timbers and having inner extensions provided with ribs fitting in grooves in the timbers, said arms having slots formed through their forward ends, a block fitting between said arms and having rib-and-groove connection therewith, bolts connecting the timbers, block and arms together, a draw-bar fitting between said arms and having bolt-and-spring connection with said block, and a cross-head passing through said draw-bar and fitting in the slots formed in said arms whereby the cross-head may move in unison with the draw-bar, substantially as set forth.

5. In a draft-rigging, the combination of buffer-timbers, arms having caps fitting over the ends of said timbers and having inward extensions bolted to said timbers, said arms being also provided with elongated slots formed through their forward ends, a draw-bar fitting between the arms, and a cross-head passing through said draw-bar and having a sliding fit in the slots formed in the arms and which extend forwardly from said caps, whereby the cross-head moves in unison with the draw-bar, substantially as set forth.

6. In a draft-rigging, the combination of buffer-timbers, metallic arms having a longitudinal elongated slot 24, comprising caps to fit over the ends of the timbers, an inner vertical extension and a horizontal flange, the vertical ribs 8 and ribs 10, the blocks 9 secured between the vertical extensions and provided with grooves adapted to receive the ribs 10, bolts to secure the whole together horizontally, of a draw-bar mounted between said arms and extending through the block 9, a coiled spring secured around the draw-bar and seated on said block, a horizontal slot through said draw-bar and a cross-head slidably mounted in the slots of the said arms and secured in the draw-bar, and rods connecting the cross-head to a like cross-head at the other end of the car.

7. In a draft-rigging, the combination with the draft-timbers, of metallic arms, having elongated slots formed through their forward ends, and caps at the inner ends of the slots to cover the ends of the timbers, of a draw-bar between the arms, and a cross-head extending from the draw-bar through the said elongated slots, whereby the said caps receive the impact of the cross-head when the draw-bar is jammed inwardly by the coupling of cars.

8. In a draft-rigging, the combination with the draft-timbers of metallic arms having elongated slots formed through their forward

ends, and caps at the inner ends of the slots
to cover the ends of the timbers, and guid-
ing-rib 34 formed on the inner face of the
respective arms, of a draw-bar between the
5 arms, the inner end of which is guided in
its movement by the ribs 34 and a cross-head
extending from the other bar through said

elongated slots, whereby the caps receive the
impact of the cross-head in the draw-bar as
jammed inwardly by the coupling of cars. 10

ANDREW G. STEINBRENNER.

In presence of—

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