

965,126.

Patented July 19, 1910.

2 SHEETS—SHEET 1.

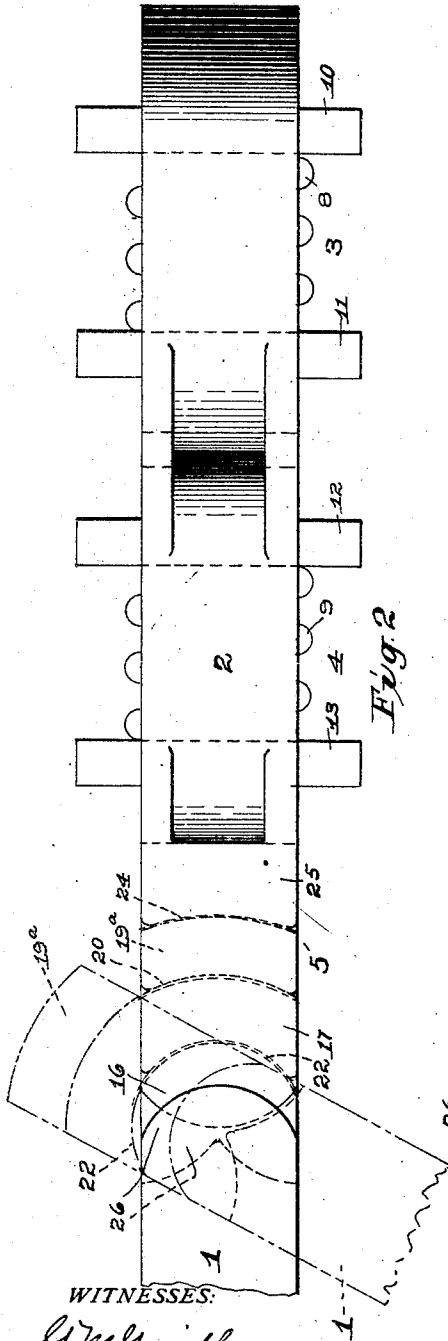


Fig. 2

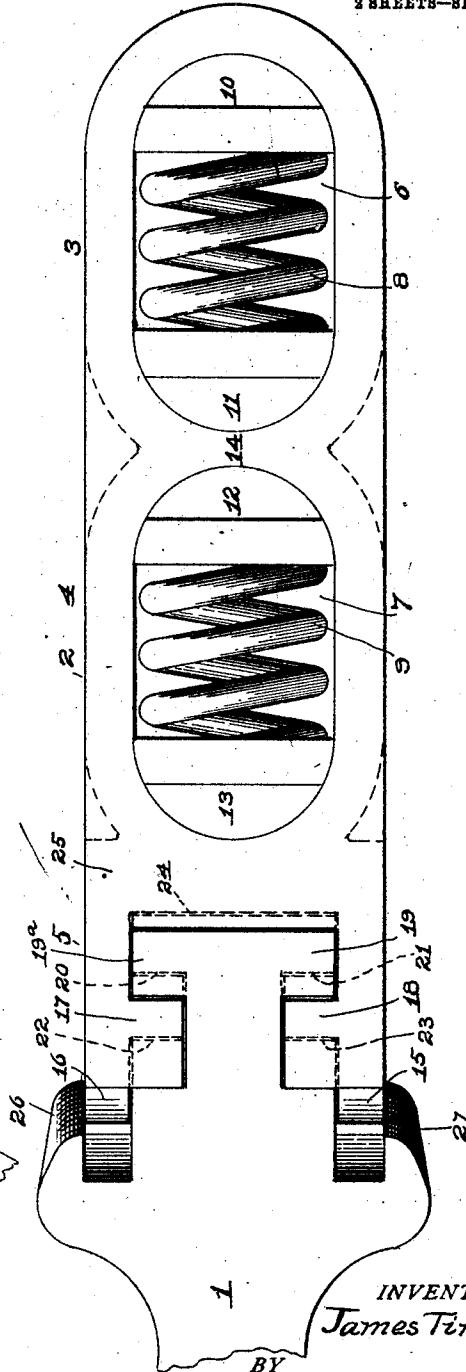


Fig. 1

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DRAFT RIGGING.
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2 SHEETS—SHEET 2.

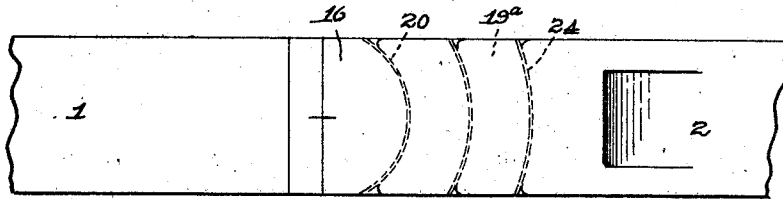


Fig. 4

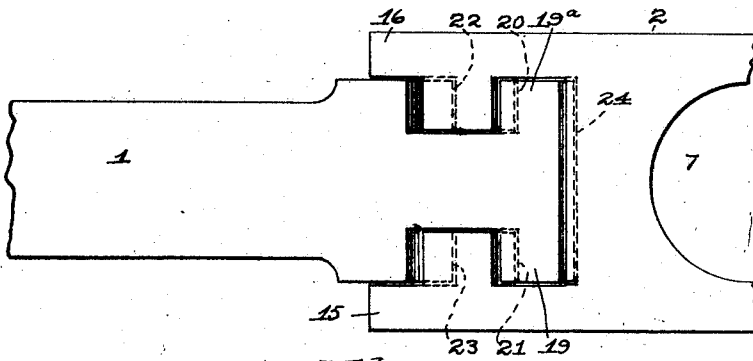


Fig. 3.

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UNITED STATES PATENT OFFICE.

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DRAFT-RIGGING.

965,126.

Specification of Letters Patent.

Patented July 19, 1910.

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To all whom it may concern:

Be it known that I, JAMES TIMMS, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Draft-Rigging, of which the following is a specification.

My invention relates to improvements in draft rigging for cars, one object of the invention being to provide improved connection between the draw-bar and the rigging whereby the draw-bar may be allowed a pivotal movement and the jaws of the yoke may be effectually prevented from separating.

Another object of the invention is to construct the yoke in such a manner as to offer strong resistance to end thrusts to which such constructions are peculiarly liable.

In the drawings which accompany this specification and which constitute a part of the application, Figure 1 is a side view of a yoke and draw-bar broken away; Fig. 2 is a top plan view of the parts shown in Fig. 1 with the draw-bar rotated to its unlocked position; Fig. 3 is a view of the locking connection between the draw-bar and the yoke in which the jaws on the draw-bar are omitted; Fig. 4 is a top view of the construction shown in Fig. 3.

It is desirable in constructions of the kind herein mentioned to give the draw-bar a pivotal movement to provide for the travel of the cars on a curve or in switching the same, and also to connect the draw-bar and yoke so that when either of the parts is broken or injured they may be readily separated and the replacing be accomplished with less expense and trouble than if they constituted a solid member. It is also desirable to form the yoke to receive shocks and absorb stresses which are set up by the normal operation of cars, and to this end transverse connecting walls in the yoke are provided. Further, I dispense with the use of a pin to connect the draw-bar and yoke and form the connection in such manner that the jaws of the yoke are prevented from spreading. The objects my invention accomplishes are consequently, great compactness of parts, dispensing with a pin or bolt, preventing spreading of the jaws of the yoke, and furnishing great capacity in the yoke for absorbing shocks and stresses thereon, in addition to providing a transverse pivotal movement for the draw-bar.

In the drawings, 1 is the end of a draw-

bar broken away, it not being deemed necessary to show the entire draw-bar for this purpose; 2 is the yoke formed as here shown preferably in three sections, 3, 4, and 5, cast integral; sections 3 and 4 contain elongated openings 6 and 7 to receive the spring members 8 and 9 which are under compression respectively between the follower plates, 10, 11, and 12, 13, which are adapted to engage the draft sills in a well understood manner to furnish a resilient connection between the draw-bar and the draft sills.

Sections 3 and 4 are separated by the concave transverse wall 14, which adds strength to the construction. Section 5 includes the jaw members 16 and 15 which are formed with the curved lugs 17, 18 oppositely disposed on the inner faces of the jaws; these shoulders are arc-shaped and not only lock the coupling to the yoke, but permit the draw-bar to have a swinging movement thereon in the following manner: The end of the draw-bar is formed with the arc-shaped lugs 19^a, 19 thereon which are adapted to engage the convex faces of the shoulders 17 and 18. The draw-bar is also provided with the arc-shaped grooves 20, 21 arranged on the opposite faces thereof adjacent to the lugs 19, 19^a to receive the lugs 17, 18 formed on the yoke. The curved shoulders 22, 23 formed on the draw-bar are adapted to fit into the concave walls of the lugs 17, 18. Thus there is formed a locking connection between the draw-bar and the yoke which resists separation longitudinally but which permits lateral swinging movement of the draw-bar as appears in Fig. 2. The draw-bar is positioned in the jaws of the yoke by turning it to the position shown in dotted lines in Fig. 2 so that the edges of the lugs 17 and 18 may enter the grooves 20 and 21, whereupon if the draw-bar be rotated about the center of curvature of the lugs, it will be brought into proper position for operation as appears in Fig. 1. When thus positioned, the convex end of the draw-bar abuts against the concave face 24 of the transverse wall 25 in the yoke, and when during the operation of the car the draw-bar is subjected to buffing, the wall 25 receives the shock and distributes it throughout the yoke and to the associated parts of the draft rigging and the car, thereby relieving the lugs 17 and 18 from all buffing stresses. This formation tends to prevent the spreading of the jaws

15 and 16, but yet under the hardships of service it sometimes happens that a great spreading or twisting stress may be exerted upon these jaws, and to guard completely
 5 against the spreading thereof which would tend to destroy their usefulness, I provide the jaws 26 and 27 on the end of the draw-bar which overlie the ends of the jaws 15 and 16, and hold the same against a spreading movement thereof. In this manner I
 10 dispense entirely with the usual pin passing through the interlocking parts of the yoke and draw-bar and thereby obviate the necessity of making a hole through these associated parts. Clearly, also, the construction
 15 without the hole therethrough is stronger.

The construction and combination of the parts herein above described are simple and easily effected; it is seen that the construction disclosed and described provides unusual strength of parts, obviates the spreading tendency in the open yoke, and provides
 20 the yoke with concave transverse walls which absorb the buffing stresses, and assist in absorbing the pulling and twisting stresses incident to the normal operation of cars.

Modifications of the construction herein shown may be made and I do not limit myself except in accordance with the scope
 30 of the appended claims.

What I claim is:

1. The combination with a draw-bar having its rear end transversely curved and having transversely curved grooves on its

upper and lower faces, of a yoke having a 35 cross wall transversely concaved to receive the said rear end of said draw-bar, and curved shoulders on said yoke for fitting in said grooves on the draw-bar, said cross wall being adapted to receive buffing stresses 40 and to prevent spreading of the yoke.

2. An attachment for couplings comprising a one piece yoke, transverse concave connecting walls therein; jaws formed at one 45 end thereof, and curved transverse lugs oppositely disposed on the inner faces of said jaws, in combination with a draw-bar having grooves formed therein for the reception of said lugs, one end of said draw-bar being convex and abutting against one of 50 said walls to transmit buffing stresses.

3. The combination with a draw-bar having its rear end transversely curved and also having transversely curved grooves on its upper and lower faces and upper and lower 55 overhanging members, of a yoke provided with a cross wall transversely concaved to receive the said inner end of said draw-bar, said yoke having jaws provided with curved shoulders fitting in said grooves of the 60 draw-bar, said overhanging members of said draw-bar preventing spreading of said jaws.

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

JAMES TIMMS.

Witnesses:

GEO. W. RIGHTMIRE,
 HORACE S. KERR.