

W. EMBERGER.
DRAW BAR AND DRAFT ATTACHMENT.
APPLICATION FILED NOV. 5, 1908.

938,133.

Patented Oct. 26, 1909.
2 SHEETS—SHEET 1.

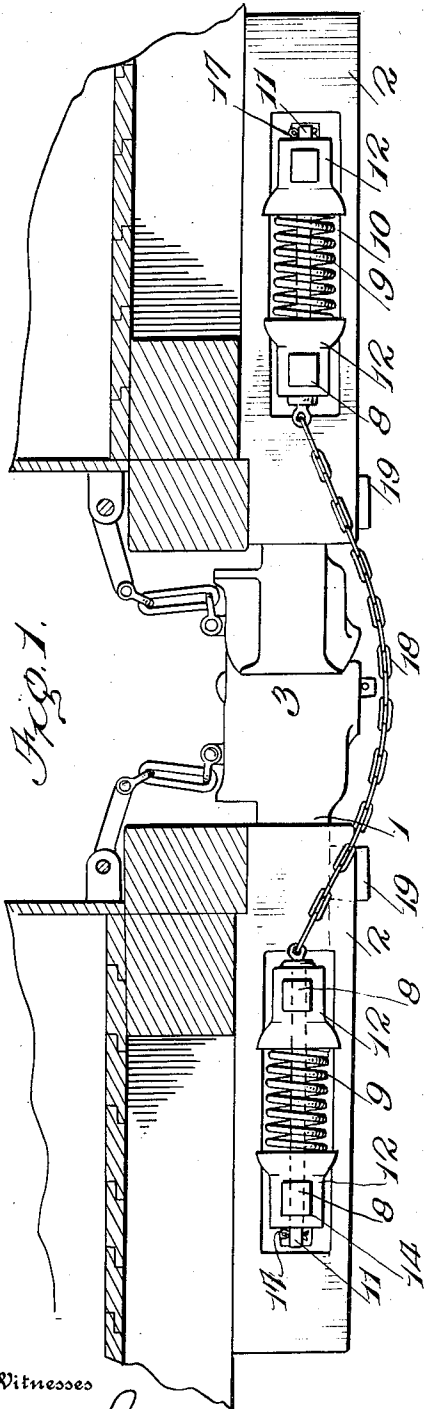


Fig. 1.

Witnesses

John H. ...
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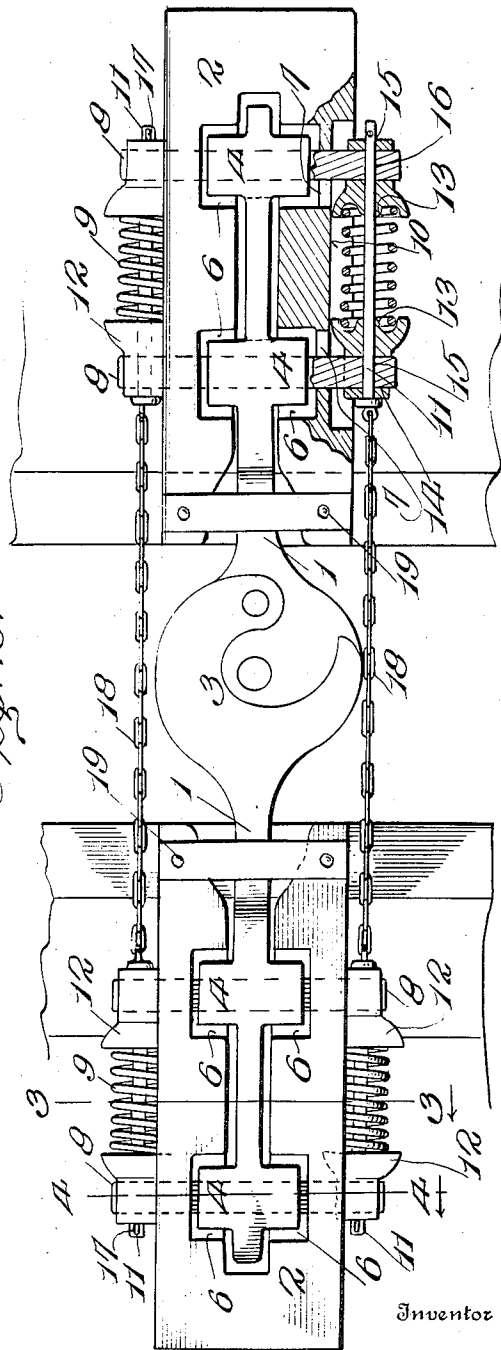


Fig. 2.

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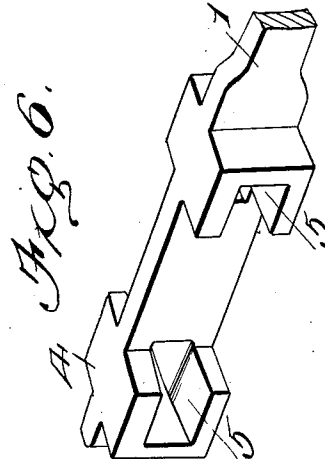
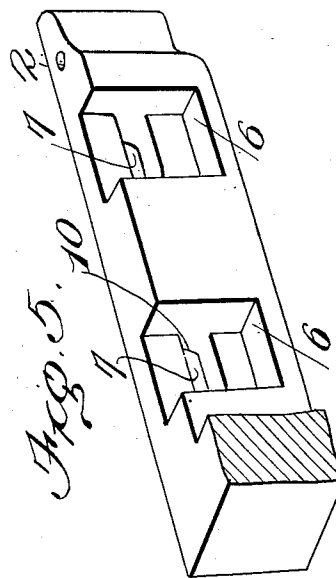
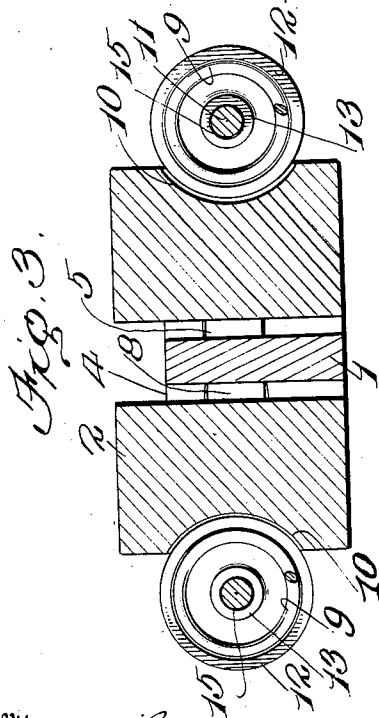
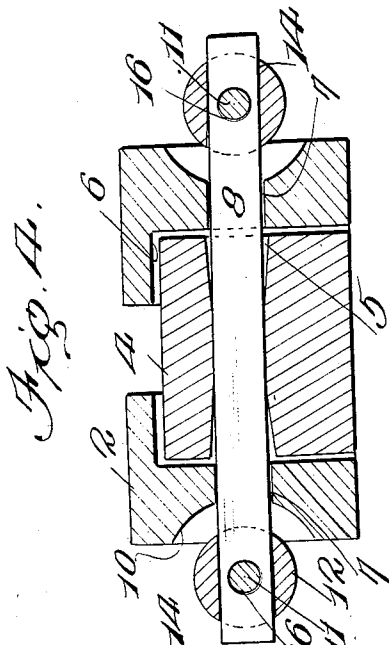
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Attorneys

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Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM EMBERGER, OF NILES, MICHIGAN, ASSIGNOR OF ONE-FIFTH TO WILLIAM BINDER, ONE-FIFTH TO JOHN NAGLE, AND ONE-FIFTH TO R. B. ZANE, OF NILES, MICHIGAN.

DRAW-BAR AND DRAFT ATTACHMENT.

938,133.

Specification of Letters Patent.

Patented Oct. 26, 1909.

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To all whom it may concern:

Be it known that I, WILLIAM EMBERGER, subject of the Emperor of Germany, residing at Niles, in the county of Berrien and State of Michigan, have invented certain new and useful Improvements in Draw-Bar and Draft Attachments, of which the following is a specification.

This invention relates to draft gear for railway cars and is designed to prevent the pulling out of the draw bar and the casualties attributable to this cause.

The invention also aims to simplify the attaching means employed for connecting the draw bar to the car body and to obviate the use of the ordinary yoke and rivets.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment of the invention is shown in the accompanying drawings.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a side view of a draft attachment embodying the invention, showing end portions of adjacent cars in section. Fig. 2 is a top plan view of the parts illustrated in Fig. 1. Fig. 3 is a transverse section on the line 3—3 of Fig. 2, looking in the direction of the arrow. Fig. 4 is a transverse section on the line 4—4 of Fig. 2 looking in the direction of the arrow. Fig. 5 is a perspective view of one of the draft timbers. Fig. 6 is a perspective view of the draw bar, the coupling head being broken away.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The draft gear comprises a draw bar 1 and draft timbers 2 the latter having a parallel arrangement and being secured to the bottom or platform of the car body in any substantial way. The draw bar 1 may be provided at its outer end with a coupling head 3 of any type or variety. Lugs 4 project from opposite sides of the draw bar and are provided in front and rear pairs. Slots 5 are formed in the draw bar and their end

portions extend through the sides of the lugs 4 which face inward or toward each other. The slots 5 are elongated lengthwise of the draw bar to provide for a limited longitudinal movement of the latter. Recesses 6 are formed in the inner walls of the draft timbers 2 to receive the lugs 4, said recesses being of a length to admit of the draw bar having a limited longitudinal movement. The upper ends of the recesses 6 are closed, whereas their lower ends are open. By having the upper ends of the recesses 6 closed the draw bar is prevented from upward movement and crowding against the lower side of the bottom or platform of the car. Slots 7 are formed in the draft timbers and communicate with the recesses 6 and extend lengthwise of the draft timbers to admit of the draw bar moving longitudinally.

Cross bars 8 pass transversely through the slots 5 and 7 and are of a length to admit of their end portions projecting beyond the outer sides of the draft timbers 2. The cross bars 8 are prevented from having any appreciable vertical play in the slots 5 and 7 but have a limited play in the direction of the length of said slots or longitudinally of the draw bar and draft timbers. Stout springs 9 are interposed between the projecting ends of the cross bars 8 and sustain the load both in pulling and pushing.

In order that the cross bars 8 may be of a minimum length and better adapted to sustain the strain, the outer sides of the draft timbers 2 are recessed, as indicated at 10, said recesses forming seats to receive approximately one-half of the springs 9. Rods or bars 11 support the springs 9 and are mounted at their ends in the projecting end portions of the cross bars 8. Cap-pieces 12 are mounted upon opposite end portions of the rods or bars 11 and receive the ends of the springs 9. The inner ends of the cap-pieces 12 are recessed to receive the ends of the springs 9 which are seated therein and projections 13 extend from the inner ends of the cap-pieces and pass into the ends of the springs 9 a short distance and serve to centralize said springs and retain them in proper position. The outer ends of the cap-pieces 12 are reduced and openings 14 are formed therein to receive the projecting end portions of the cross bars 8. Longitudinal openings 15 are formed in the cap pieces 12 and receive the rods or bars 11, the latter

passing through openings 16 in the end portions of the cross bars 8. Pins or keys 17 pass through slots formed in the ends of the rods or bars 11 and serve in conjunction with the heads of said parts 11 to hold the latter in place. Draft chains 18 are connected with the rods or bars 11 and may extend between the ends of adjacent cars to assist materially in sustaining the draft in the event of the usual coupling means becoming disarranged or incapacitated for the purpose designed.

A bar 19 is supported in the forward ends of the draft timbers 2 and extends beneath the front portion of the draw bar 1 to support the latter. This bar 19 is sufficiently stout to resist the usage to which it is subjected when in service. The cross bars 8 support the rear portion of the draw bar and under normal conditions sustain the load both in pulling and pushing. When pushing inward upon the outer end of the draw bar the rear cross bar 8 engages with the rear ends of the slots 7 through which it passes; and the front cross bar 8 engages with the front end of the slot 5 through which it passes; hence the front cross bar moves rearwardly with the draw bar thereby compressing the springs 9. When pulling upon the draw bar the front cross bar 8 engages with the front ends of the slots 7 through which it passes and the rear cross bar 8 engages with the rear end of the slot 5 through which it extends. As the draw bar 1 moves forward the rear cross bar 8 likewise moves forward with it and compresses the spring 9, which sustains the pulling force. Should one or the other of the cross bars 8 become broken or disabled or should the springs 9 become crippled, the lugs 4 of the draw bar will sustain both the pulling and pushing force, as will be readily understood.

Having thus described the invention, what is claimed as new is:

1. In draft gear for railway cars the combination of a draw bar having oppositely disposed lugs, and draft timbers having corresponding recesses to receive said lugs, the lugs and recesses being of such relative

size as to admit of the draw bar having a limited longitudinal play.

2. In draft gear for railways the combination of draft timbers having recesses, a draw bar arranged between the draft timbers and having lugs extending into the recesses of the draft timbers and having limited play therein to admit of a longitudinal movement of the draw bar, cross bars extending transversely through the draw bar, and draft timbers, and having their opposite ends projected beyond the adjacent sides of the draft timbers and springs interposed between the cross bars to normally sustain both the pulling and pushing force.

3. The combination with a draw bar and draft timbers having cross bars extending transversely through the same, cap pieces having their inner ends recessed and formed with centrally disposed projections and having their outer ends reduced and formed with openings to receive the ends of the cross bars, said cap pieces and cross bars having openings, rods mounted in the openings of the cap pieces and cross bars and springs coiled around said rods and nested within the cap pieces.

4. In combination, draft timbers formed upon their inner sides with recesses and having their outer sides recessed to form seats said draft timbers having longitudinal slots in communication with the recesses, a draw bar mounted between the draft timbers and having pairs of lugs extended into the recesses of the draft timbers, said draw bar having longitudinal slots extended through the inner sides of said lugs, cross bars passed through the slots of the draw bar and draft timbers and having their ends extended beyond the outer sides of the draft timbers, cap-pieces secured to the projecting ends of the cross bars, and springs interposed between the cap-pieces.

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

WILLIAM EMBERGER. [L. s.]

Witnesses:

Mrs. CHAS. WHETSTONE,
MAGDALEN W. DONNELLY.