(No Model.) 2 Sheets—Sheet 1.

P. M. REAGAN.

DRAFT RIGGING FOR CARS.

No. 491,785. Patented Feb. 14, 1893.

Fig. 1.

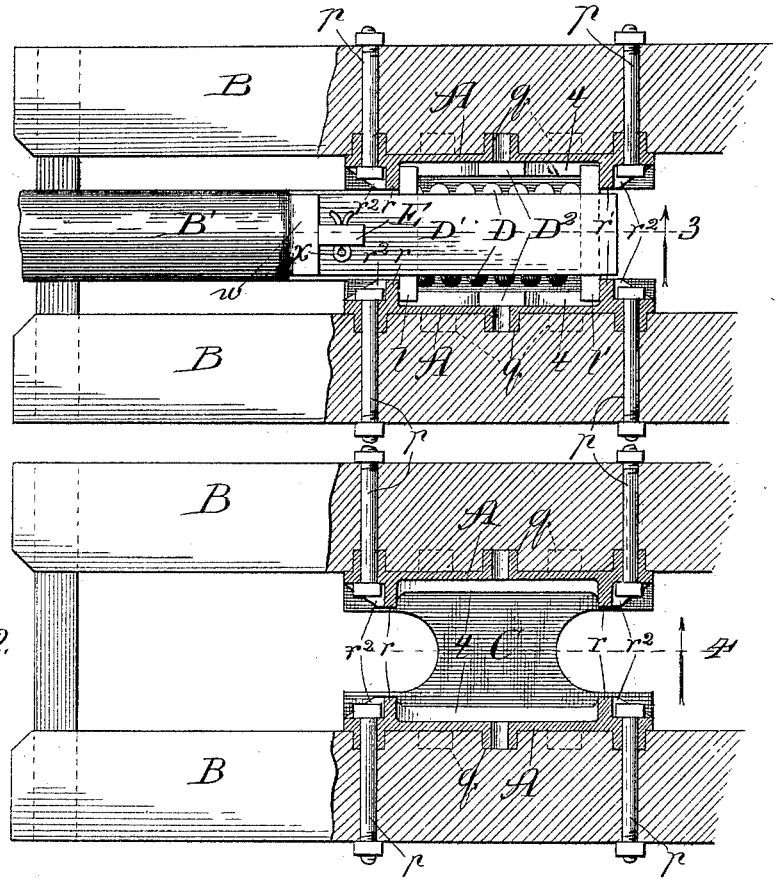
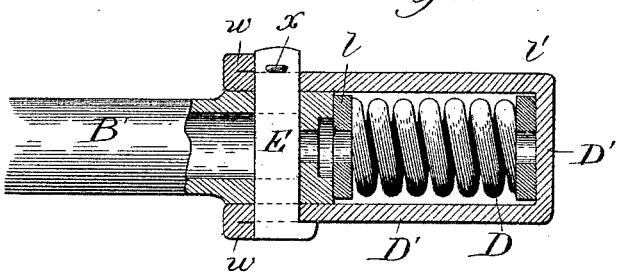


Fig. 2.

Fig. 3.



Witnesses:
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(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

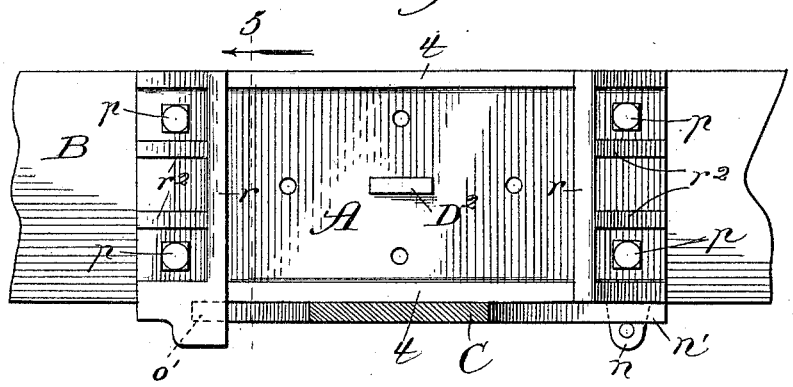


Fig. 5.

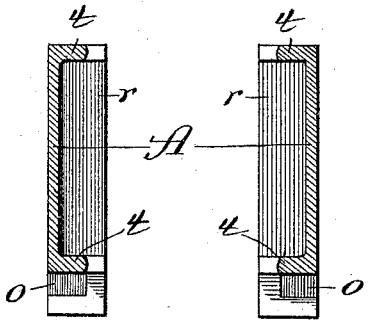


Fig. 6.

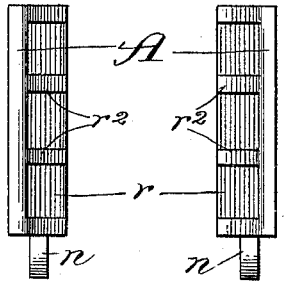
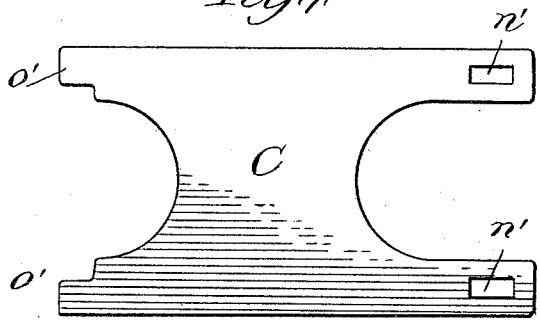


Fig. 7.



Witnesses:
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UNITED STATES PATENT OFFICE.

PAUL M. REAGAN, OF CHICAGO, ILLINOIS.

DRAFT-RIGGING FOR CARS.

SPECIFICATION forming part of Letters Patent No. 491,785, dated February 14, 1893.

Application filed May 7, 1892. Serial No. 432,155. (No model.)

To all whom it may concern:

Be it known that I, PAUL M. REAGAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Draft-Rigging for the Draw-Bars of Railway-Cars, of which the following is a specification.

The object of my invention is to provide a generally improved construction of draft-rigging, one of the principal advantages of which consists in the convenience it affords in separating the parts and in their adjustment, as for removing a broken draft-spring and inserting a perfect one in its place, another being the relative stability of the parts between which the draft-spring is confined, and still another being the simplicity of the construction.

My improvement is illustrated in the accompanying drawings, in which—

Figure 1 is a broken sectional plan view showing the rear portion of a draw-bar between the draft-timbers, between which is supported my improved rigging connected at its forward end with the rear end of the bar. Fig. 2 is a similar view with all but the cheek-plates and the tie-plate therefor of the details of my improvement, removed. Fig. 3 is a section taken at the line 3 on Fig. 1, viewed in the direction of the arrow, and showing the yoke detail of my improvement embracing the spring confined between follower-plates, and the connection between the yoke and draw-bar. Fig. 4 is a section taken on the line 4 of Fig. 2 and viewed as indicated by the arrow. Fig. 5 is a section taken at the line 5 on Fig. 4 and viewed in the direction of the arrow. Fig. 6 is a rear end view of the two cheek-plates. Fig. 7 is a plan view of the tie-plate.

A A are the cheek-plates, which should be formed, for strength, with the inward extending transverse flanges r and r', near their opposite ends, braced by ribs r^2 the better to withstand the impact of the follower-plates hereinafter described. I provide, as the means for securing the cheek-plates to the opposing sides of the draft-timbers B, studs q cast on the outer surfaces of the cheek-plates and let into sockets provided in the draft-timbers to receive them. These materially increase the desired rigidity of the cheek-plates in their operative positions and relieve of strain the bolts p, which fasten them in place. In the forward end of each cheek-plate, at its base, is a horizontal recess or pocket, o, opening backward, and in corresponding position at the rear end of each, is a depending perforated lug n, these serving to retain in place a tie-plate C for the two cheek-plates. I adapt the tie-plate, which may be a flat casting, to enter, at its forward end, the pockets o in the corresponding ends of the bases of the cheek-plates, by providing it with tongues o' and at opposite sides of the rear end of the plate C are eyes n' to fit over the depending lugs n, through which a pin or pins may be inserted to support the tie-plate at its rear end.

Before adjusting the tie-plate as described, the principal function of which is to unite the cheek-plates and prevent them from moving independently under unequal draft-strain that may be exerted against them, I insert the follower-plates l and l', which are confined between upper and lower flanges t on the cheek-plates, and in turn confine between them the draft-spring D, which, as will be observed, has and requires no guide-rod extending longitudinally through it, but is controlled against displacement by a yoke D′ covering it on top and below and forming at its rear closed end an abutment for the follower-plate l', and by stops or flanges D^2 projecting from the surfaces of the cheek-plates, near their centers, against opposite sides of the spring. These stops D^2 may be used to advantage even where the yoke is not provided; and they should be adequately strong to form stops for the follower-plates. When the spring and its yoke and follower-plates have been adjusted into place, the tie-plate C is placed and secured in position in the manner described, and may, obviously, be easily and quickly removed when desired, as for taking out the spring.

The foregoing construction enables me to connect the draft-rigging from its forward end with the rear end of the draw-bar B′, whereby the separation of the parts may be readily accomplished, without disturbing the draw-bar, by simply withdrawing them backward after removing the pins referred to as sustaining the tie-plate and the means for

connecting the draft-rigging with the draw-bar, which need be only a pin E inserted through the forward end of the yoke and rear end of the draw-bar over which the yoke fits, the pin affording also an abutment for the follower-plate *l* and being shown as secured by a cotter-pin *x*. To increase the wearing surface for the pin E, I thicken the yoke on its outer surfaces, as shown at *w* (Fig. 3) at the front side of the pin-opening.

By my improvement, as will thus be seen, a compact, strong, simple and convenient construction is afforded: independence of the cheek-plates is overcome without permanently uniting them; the countersunk studs which aid in supporting them in place, relieve the fastening-bolts of strain, and form an advantageous substitute for the means commonly provided for the purpose and involving a flange extending across the back of each cheek-plate, which requires the cutting of a groove, to admit it, across the face of the adjacent timber, whereby the latter is materially weakened; separation of the parts of the draft-rigging may be readily accomplished without requiring the draw-bar to be disturbed, and without, as in some constructions known to me, necessitating the preliminary withdrawal of numerous bolts and, in some instances, the taking down of the cheek-plates; and the usual rod or bolt, extending lengthwise through the spring to prevent its lateral movement, or displacement out of the line of draft, is dispensed with.

It should be mentioned that the tie-plate feature of my improvement may be used to advantage even if the yoke be permanently fastened at its forward end to the draw-bar, thus otherwise than by the removable pin. Then the tie-plate may be adjusted after the yoke and its contained spring and both follower-plates have been raised to place between the two cheek-plates, the tie-plate in that event supporting the rigging, since there would then be no lower supporting flanges for the follower-plates on the cheek-plates.

What I claim as new and desire to secure by Letters Patent is—

1. In a draft-rigging for the draw-bars of railway-cars, the combination with the draft-timbers of cheek-plates having pockets *o* in corresponding ends and provided at their opposite ends with lugs *n*, and a tie-plate removably inserted at one end into the said pockets and having at its opposite end eyes engaging the said lugs, substantially as described.

2. In a draft-rigging for the draw-bars of railway-cars, the combination with the draft-timbers of cheek-plates bolted to, and formed with studs *q* countersunk into, the draft-timbers, and a tie-plate connecting the cheek-plates at their bases, substantially as described.

3. In a draft-rigging for the draw-bars of railway-cars, the combination with the draft-timbers of cheek-plates having pockets *o* in corresponding ends and provided at their opposite ends with perforated lugs *n*, and a tie-plate C having at one end tongues *o'* at which to support it in the said pockets, and having at its opposite end eyes *n'* to embrace the said lugs, substantially as described.

4. In a draft-rigging for the draw-bars of railway-cars, the combination with the draft-timbers, draw-bar and draft-spring, of cheek-plates on the opposing sides of the draft-timbers, and stops D^2 projecting from the inner surfaces of the cheek-plates toward opposite sides of the draft-spring, substantially as and for the purpose set forth.

5. In a draft-rigging for the draw-bars of railway-cars, the combination with the draft-timbers and draw-bar of cheek-plates on the opposing sides of the draft-timbers and provided near their centers with abutting-lugs D^2 for the opposite sides of the draft-spring, a yoke D' connected with the draw-bar and embracing the draft-spring and follower-plates between which the spring is confined, and a tie-plate C removably supported on the cheek-plates and forming a separable base for the rigging, substantially as described.

6. In a draft-rigging for the draw-bars of railway-cars, the combination with the draft-timbers B and draw-bar B', of cheek-plates A having pockets *o* in their forward ends and provided at their rear ends with perforated lugs *n*, said cheek-plates being bolted to, and having formed on them studs *q* countersunk into, the timbers, a tie-plate C supported at its forward end in the said pockets and provided at its rear end with eyes *n'* engaging the said lugs, a yoke D' embracing the draft-spring D and follower-plates between which the spring is confined, a pin E inserted through the forward end of the yoke and rear end of the draw-bar and removably secured in place, and lugs D^2 on the cheek-plates to abut against the opposite sides of the spring, the whole being constructed and arranged to operate substantially as described.

PAUL M. REAGAN.

In presence of—
M. J. FROST,
J. M. HANSON.