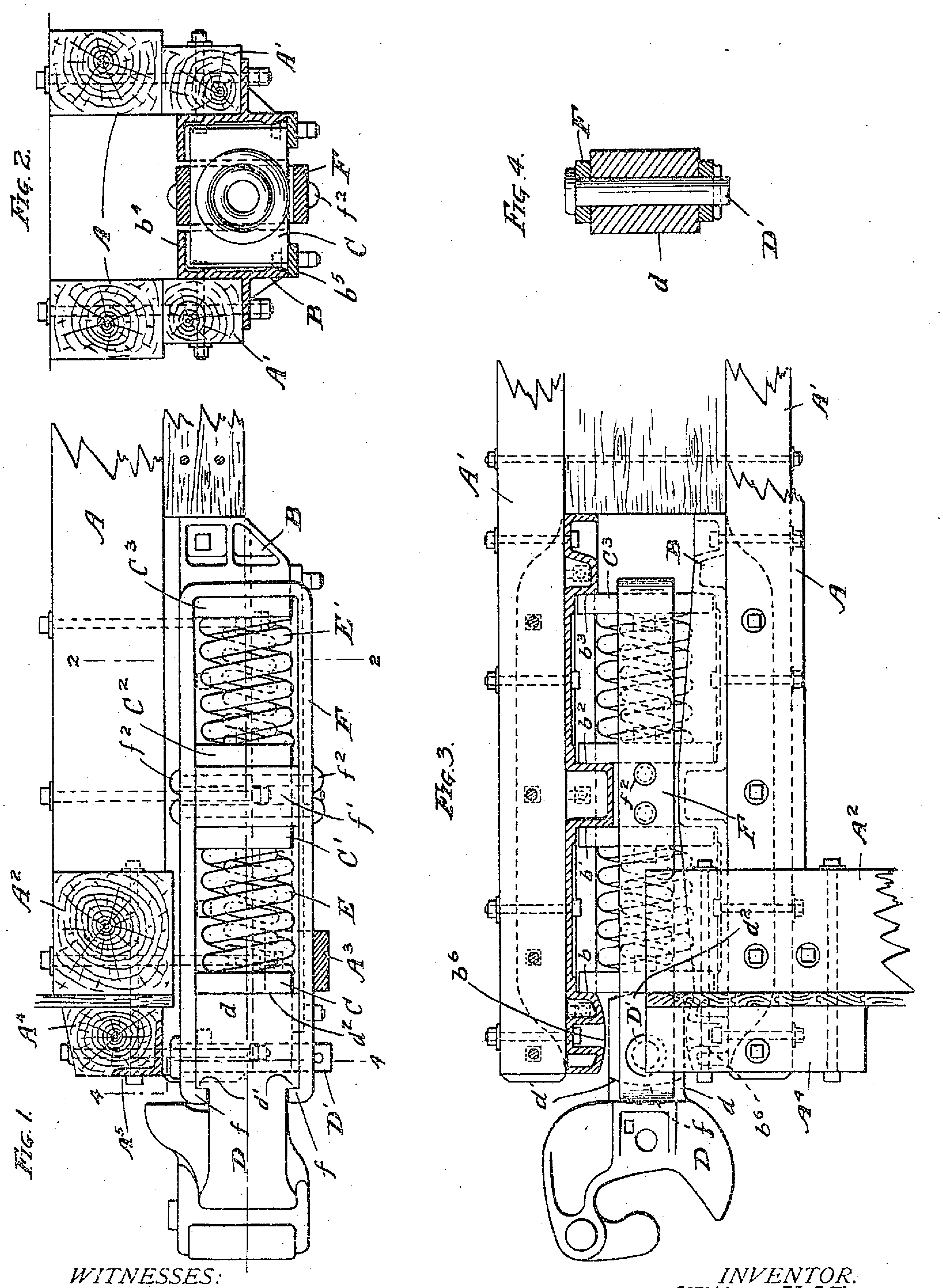
No. 787,933. PATENTED APR. 25, 1905.

W. H. MINER.

DRAFT RIGGING FOR RAILWAY CARS.

APPLICATION FILED JULY 21, 1904.



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UNITED STATES PATENT OFFICE.

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DRAFT-RIGGING FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 787,933, dated April 25, 1905.

Application filed July 21, 1904. Serial No. 217,438.

To all whom it may concern:

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

My invention relates to improvements in draft-rigging for railway-cars.

In draft-rigging for railway-cars heretofore in use the draw-head and coupler have generally been provided with a long draw-bar or shank, to the rear end of which is rigidly secured the draw-strap or yoke, which surrounds or embraces the springs and followers, and where the draft-rigging is of the tandem type or provided with two or more springs arranged one behind another the draft appliance as a whole is of great length, so much so that difficulty is frequently experienced in applying the same to cars for lack of room or space between the front or cross sill of the car and the transom or body-bolster and also in providing the coupler with the necessary lateral or horizontally-swinging movement to enable the cars to pass around curves without subjecting the couplers to lateral or binding strain, tending to disengage the couplers one from another or to break the coupler or draft-rigging or to wrench or disengage the same from the car.

The object of my invention is to provide a draft-rigging of a strong, simple, and durable construction by which the objections or difficulties heretofore experienced may be practically avoided or overcome and by which the length and cost of the draft appliance may be materially diminished and in which the couplers may have the necessary lateral or horizontally-swinging movement to enable the cars to pass around short curves without danger of the couplers becoming disengaged or uncoupling or of subjecting them to lateral or binding strains.

My invention consists in the means I employ to practically accomplish this object or result—that is to say, it consists, in connection with the car-frame or its center sills or draft sills or timbers and a cross-sill and carry-iron, of side plates or stop-castings secured to the center sills or draft-timbers and extending to the front end thereof or to the front end of the car and having the customary stops or shoulders for the followers to abut against and provided on their inner faces at their front ends with rounded guides or bearings adapted to engage a short pivot lug or stub projecting from the rear of the coupler draw-head and to guide the coupler in its longitudinal or back-and-forth movement and to limit the lateral or horizontally-swinging movement of the coupler on the vertical pivot-pin which connects said lug with the front end of the draw-strap or yoke the rear end of said pivot-lug being rounded and bearing directly against the front follower, and the upper and lower limbs of the draw-strap or yoke having curved shoulders or flanges engaging correspondingly-curved shoulders on the pivot-lug of the coupler draw-head, so that the pivot-pin connecting the draw-head and draw-strap will thus be relieved from a portion of the strain in both pulling and buffing, while permitting free lateral or horizontally-swinging movement of the draw-head within the limits prescribed by the rounded guides or bearings at the front ends of the side plates or stop-castings.

My invention also consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown or described.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation, partly in longitudinal vertical section, of a draft-rigging embodying my invention. Fig. 2 is a cross-section on line 2 2 of Fig. 1. Fig. 3 is a plan view, partly in horizontal section, with some of its parts removed; and Fig. 4 is a vertical section on line 4 4 of Fig. 1.

In the drawings, A A represent the center sills of a car; A′ A′, draft timbers or sills; A^2, the front or cross sill; A^3, the carry-iron; A^4,

the buffer-block, and A^5 the front or buffer plate.

B B are the side plates or stop-castings, having the customary stops or shoulders b b' b^2 b^3 for the followers C to abut against and upper and lower flanges or guides b^4 b^5 for the followers to reciprocate between. The side plates or stop-castings B extend to the front end of the car or center sills to which they are secured through the draft-timbers A′, to which they are directly attached, and are provided on their inner faces at their front ends with rounded guides or bearings b^6, adapted to engage and guide the pivot lug or stub d of the coupler draw-head D in its longitudinal movement and also to limit the lateral or horizontally-swinging movement of the coupler about the vertical pivot-pin D′, which pivotally connects it to the front end of the draw-strap or yoke F.

E E′ are tandem-arranged springs located between the followers C C′ C^2 C^3.

The draw-strap or yoke F extends between the carry-iron and the front or cross sill of the car and projects beyond the same, as illustrated in the drawings. The upper and lower limbs of the draw-strap F are each provided with curved or rounded flanges or shoulders f f, which engage corresponding curved or rounded shoulders d' d' on the pivot lug or stub d of the coupler draw-head D, so that these interengaging shoulders while permitting the draw-head to turn or swing laterally on its pivot will relieve the pivot-pin from a portion of the pulling strain. The pivot lug or stub d of the draw-head D is also provided with a rounded rear end d^2, which abuts against the front follower C, so that the pivot-pin D′ may also be relieved from a portion of the buffing strain, while permitting the coupler-head to turn or swing laterally on its pivot. The draw-strap is provided with an abutment f', secured thereto at its middle portion by rivets f^2, to bear against the two middle followers.

I claim—

1. In a draft-rigging for railway-cars, the combination with the car-frame of side plates or stop-castings secured thereto, having stops for the followers to abut against, and furnished with rounded guides or bearings on their inner faces at their front ends, tandem springs and followers, a draw-strap or yoke embracing the springs and followers and extending to the front end of the car, and provided with rounded flanges or shoulders on its upper and lower limbs at the front ends thereof, and a coupler draw-head having a pivot lug or stub pivotally connected to the front end of said draw-strap and having rounded shoulders engaging the rounded shoulders on the draw-strap substantially as specified.

2. In a draft-rigging for railway-cars, the combination with the car-frame of side plates or stop-castings secured thereto, having stops for the followers to abut against, and furnished with rounded guides or bearings on their inner faces at their front ends, tandem springs and followers, a draw-strap or yoke embracing the springs and followers and extending to the front end of the car, and provided with rounded flanges or shoulders on its upper and lower limbs at the front ends thereof, and a coupler draw-head having a pivot lug or stub pivotally connected to the front end of said draw-strap and having rounded shoulders engaging said rounded shoulders on the draw-strap, said pivot lug or stub having a rounded rear end bearing against the front follower, substantially as specified.

3. In a draft-rigging for railway-cars, the combination with a spring and followers, of a draw-strap or yoke extending to the front end of the car, side plates or stop-castings extending to the front end of the car and having stops for the followers to abut against and provided with curved guides or bearings on their inner faces at the front ends thereof, and a coupler draw-head having a pivot lug or stub, and a pivot-pin extending through said lug and through the front end of the draw-strap or yoke, the upper and lower limbs of said draw-strap or yoke being provided with curved shoulders, and the pivot-lug of the draw-head having curved shoulders engaging said curved shoulders on the draw-strap or yoke, substantially as specified.

4. In a draft-rigging for railway-cars, the combination with a spring and followers of a draw-strap or yoke extending to the front end of the car, side plates or stop-castings extending to the front end of the car and having stops for the followers to abut against and provided with curved guides or bearings on their inner faces at the front ends thereof, and a coupler draw-head having a pivot lug or stub, and a pivot-pin extending through said lug and through the front end of the draw-strap or yoke, the upper and lower limbs of said draw-strap or yoke being provided with curved shoulders, and the pivot-lug of the draw-head having curved shoulders engaging said curved shoulders on the draw-strap or yoke, said pivot-lug on the draw-head having also a rounded rear end engaging the front follower, substantially as specified.

5. In a draft-rigging, the combination with a draw-strap extending to the front end of the car, of a coupler draw-head having a pivot-lug, and a pivot-pin connecting said draw-head to the front end of the draw-strap, said pivot-lug and draw-strap having interengaging rounded shoulders, substantially as specified.

6. In a draft-rigging, the combination with a draw-strap extending to the front end of the

car, of a coupler draw-head having a pivot-lug, a pivot-pin connecting said draw-head to the front end of the draw-strap, said pivot-lug and draw-strap having interengaging rounded shoulders, and said pivot-lug having a rounded rear end to communicate thrust to the front follower while permitting the coupler-head to swing laterally on its pivot, substantially as specified.

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Witnesses:
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