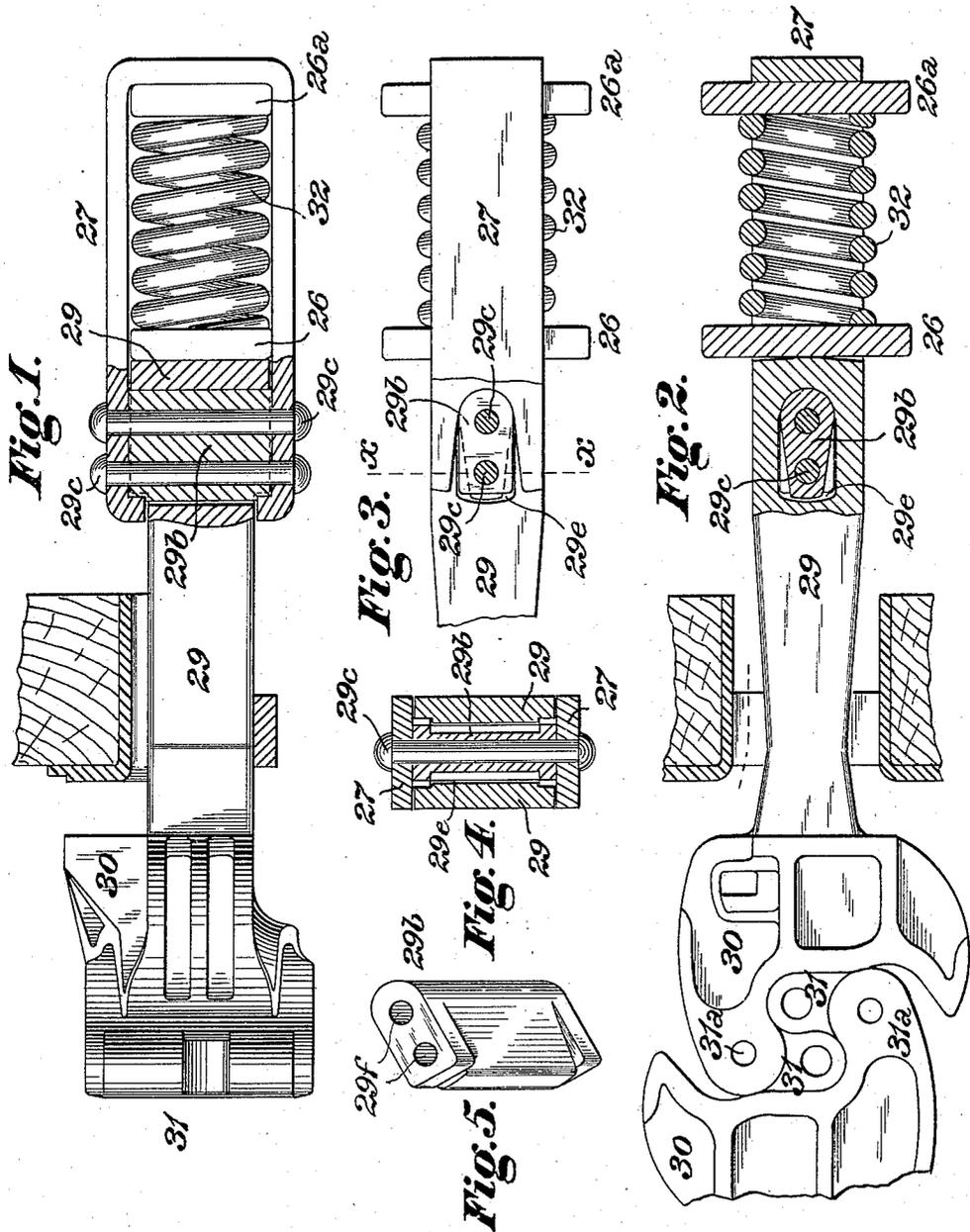


G. WESTINGHOUSE.

DRAFT APPLIANCE FOR RAILWAY CARS.

(Application filed Oct. 18, 1900. Renewed Sept. 25, 1901.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

GEORGE WESTINGHOUSE, OF PITTSBURG, PENNSYLVANIA.

## DRAFT APPLIANCE FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 687,467, dated November 26, 1901.

Application filed October 18, 1900. Renewed September 25, 1901. Serial No. 76,534. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE WESTINGHOUSE, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a certain new and useful Improvement in Draft Appliances for Railroad-Cars, of which improvement the following is a specification.

My invention more particularly relates to draft appliances which are employed in connection with automatic couplers; and its object is to provide simple, substantial, and inexpensive means by which strains of draft and buffing may be transmitted from a coupler to the spring or other resistance device by which they are taken up and which will in operation obviate liability to uncoupling in passing around short curves and relieve strains on the car-body which are encountered in passing curves with appliances of the constructions ordinarily heretofore employed.

In the accompanying drawings, Figure 1 is a side view, partly in vertical longitudinal central section, of a draft appliance, illustrating an application of my invention; Fig. 2, a plan or top view, partly in horizontal central section, of the same; Fig. 3, a similar view of the draft-strap and the adjacent portion of the draw-bar with the forward portion of the draft-strap broken away; Fig. 4, a transverse section at the line  $x-x$  of Fig. 3, and Fig. 5 an isometrical view of the pivot-block detached.

In the practice of my invention I provide a coupler-shank or draw-bar 29, the outer end of which carries a coupler-head 30, to which a knuckle 31 is pivoted by a vertical knuckle-pin 31<sup>a</sup>. The coupler-head, which does not in and of itself constitute part of my present invention, is provided with a suitable locking mechanism and may be of any suitable and preferred form of what is known as the "vertical-plane" or "Master Car-Builders'" type of automatic coupler. The coupler-shank is pivotally connected, as presently to be described, to a draft strap or yoke 27, which is adapted to surround and impart strains received by the coupler-head to a draft and buffing apparatus of any known and preferred construction, which in this instance is shown as a spring 32, interposed between front and back follower-plates 26 26<sup>a</sup>, fitted in the draft-

strap. A vertical recess 29<sup>e</sup> is formed centrally in the coupler-shank adjacent to its rear end to receive a pivot-block 29<sup>b</sup>, said recess 55 being segmental in horizontal cross-section at its rear end and, preferably, segmentally curved at its forward end. The face of the rear end of the coupler-shank, which fits against the front follower-plate 26, is at and 60 near its vertical central plane at right angles thereto and is forwardly tapered, inclined, or curved from its middle portion to each of its sides, as shown in Fig. 2. The rear end of the pivot-block is semicylindrical and serves 65 as a pivot, which is of such diameter as to fit neatly on the bearing-face formed by the rear end of the recess 29<sup>e</sup> of the coupler-shank, and it is inwardly tapered or inclined therefrom to its forward end to afford lateral clear- 70 ance in the recess. Openings 29<sup>f</sup> extend vertically through the pivot-block for the reception of rivets 29<sup>g</sup>, by which it is secured to the draft-strap. The draft-strap is of U form and open at its forward end, and its upper 75 and lower members are preferably turned inwardly to abut against the front end of the pivot-block 29<sup>b</sup>.

In assembling the parts of the appliance the pivot-block is inserted in the recess 29<sup>e</sup> of 80 the coupler-shank, and the draft-strap 27 is slipped laterally over the coupler-shank and pivot-block and secured to the pivot-block by rivets 29<sup>g</sup>. Under this construction it will be seen that the rear portion of the pivot- 85 block constitutes a vertical pivot, which is connected firmly but removably when desired to the draft-strap, and to which the coupler-shank 29 is coupled at its rear end, thus admitting of the employment of an open- 90 ended draft-strap and permitting the coupler-head 30 to traverse in a horizontal plane within a properly-limited range of movement when the car is passing around a curve, thereby obviating or substantially reducing the 95 tendency to uncouple on curves of short radius, which obtains where the coupler-shaft and draft-strap are rigidly connected, and relieving the incidental strains on the car-frame. As the rear end of the coupler-shank nor- 100 mally bears on the front follower-plate at its middle portion only and, as before described, is forwardly inclined therefrom to each of its sides, the coupler-shank may be moved lat-

erally by hand through a limited range of traverse, as indicated by the dotted line in Fig. 2, to facilitate coupling when standing on a curve. When the coupler-shank is swung farther laterally upon the pivot-block in passing around a curve, one or the other of its inclined end faces correspondingly moves the front follower-plate 26, against which it abuts, causing it to bear more strongly against the draft and buffing spring 32 on one side than on the other, and said spring as a resultant of such unequal lateral bearing of the follower-plate acts, when the car passes from a curve to a tangent, to return the coupler-head to and maintain it in normal position—that is to say, with the longitudinal central plane of the coupler-shank in line with that of the draft-strap and of the car.

I claim as my invention and desire to secure by Letters Patent—

1. The combination of a coupler-head, a coupler-shank fixed thereto and having a vertical central recess adjacent to its rear end, a segmental bearing-face formed at the rear end of said recess, a pivot-block fitting freely in said recess and having a segmental pivotal face fitting the bearing-face thereof, and a draft strap or yoke rigidly connected to the pivot-block.

2. The combination of a coupler-head, a coupler-shank fixed thereto and having a vertical central recess adjacent to its rear end, a segmental bearing-face formed at the rear end of said recess, a pivot-block fitting freely

in said recess and having a segmental pivotal face fitting the bearing-face thereof, a draft strap or yoke rigidly connected to the pivot-block, a follower-plate bearing against the rear end of the coupler-shank, and a spring bearing against the follower-plate.

3. The combination of a coupler-head, a coupler-shank fixed thereto and having the middle portion of its rear end face at right angles to its vertical center plane and the side portions of said face forwardly inclined, a segmental bearing-face formed at the rear end of a central recess adjacent to the rear of the coupler-shank, a pivot-block having a segmental pivotal face fitting said bearing-face, a draft strap or yoke rigidly connected to the pivot-block, a follower-plate bearing against the rear end face of the coupler-shank, and a spring bearing against the follower-plate.

4. The combination of a coupler-head, a coupler-shank fixed thereto and having a vertical central recess adjacent to its rear end, a segmental bearing-face formed at the rear end of said recess, a pivot-block fitting freely in said recess and having a segmental pivotal face fitting the bearing-face thereof, said pivot-block having its sides inwardly inclined from its pivotal face, a draft strap or yoke having an open front end, and rivets connecting said draft-strap to the pivot-block.

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Witnesses:

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