R. D. GALLAGHER, Jr.

CENTERING MECHANISM FOR RADIALLY MOVABLE CAR COUPLINGS.

APPLICATION FILED JUNE 29, 1908.

916,946. Patented Mar. 30, 1909.

2 SHEETS—SHEET 1.

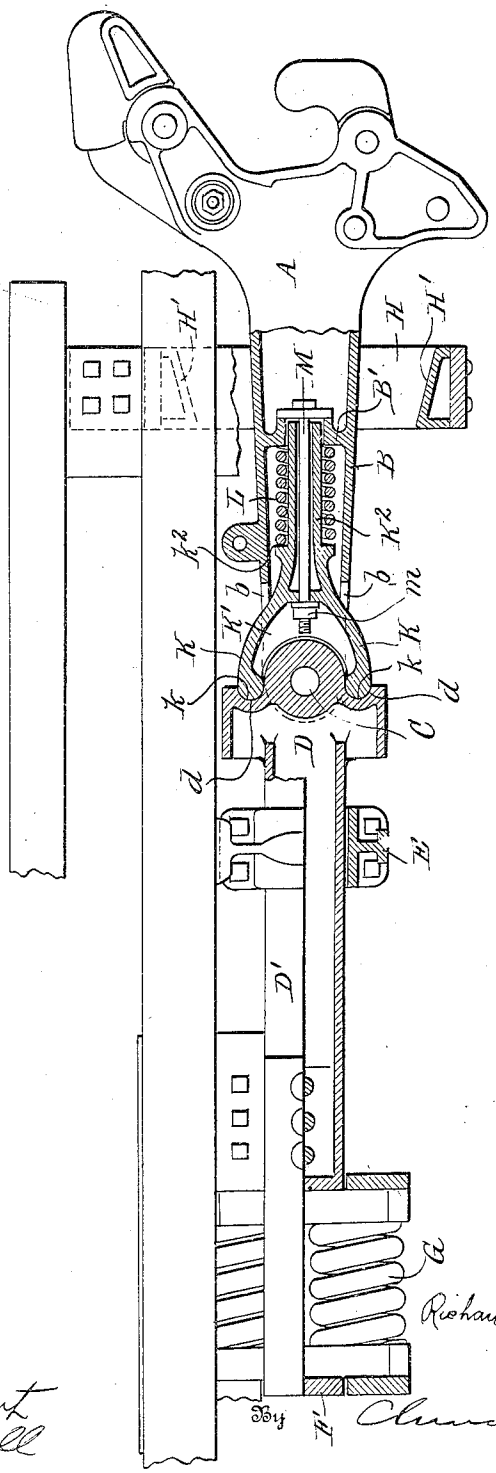


Fig. 1.

Witnesses

Elizabeth Gifford

Paul Bushnell

Inventor

Richard D. Gallagher Jr.

By Church & Church

his Attorneys

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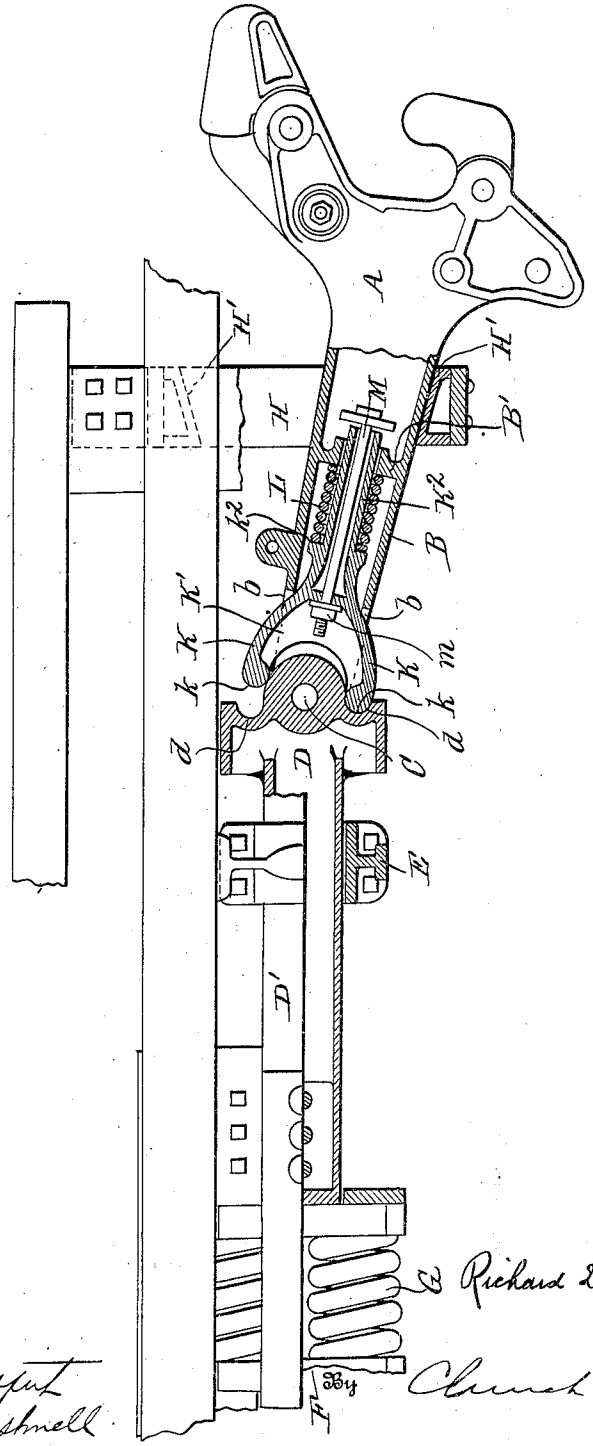


Fig. 2.

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UNITED STATES PATENT OFFICE.

RICHARD D. GALLAGHER, JR., OF NEW YORK, N. Y.

CENTERING MECHANISM FOR RADIALLY-MOVABLE CAR-COUPLINGS.

No. 916,946. Specification of Letters Patent. Patented March 30, 1909.

Application filed June 29, 1908. Serial No. 440,916.

To all whom it may concern:

Be it known that I, RICHARD D. GALLAGHER, Jr., a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Centering Mechanism for Radially-Movable Car-Couplers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

This invention relates to mechanism for returning a pivotally mounted or radially movable car coupler to its central or axial line, the objects of the invention being to provide an exceedingly simple but highly efficient mechanism not liable to be deranged or rendered inoperative through rough usage and which may be applied to various types of couplings and their connections without material alteration.

The invention consists in certain novel details of construction and combinations and arrangements of parts all of which will be hereinafter described and pointed out particularly in the appended claims.

In the accompanying drawings: Figure 1 is a top plan view partly in section of a coupler and coupler extension with a centering mechanism embodying the present improvements. Fig. 2 is a similar view with the coupler swung to one side.

In said drawings, the coupler head is indicated by the letter A and its shank by the letter B. The shank is pivotally mounted at its rear end on a center pin C, preferably carried in a centering casting D, mounted on or formed as the forward end of a coupler extension D′, mounted to slide longitudinally in bearings E on the car frame and adapted to carry at its rear end the usual yoke F, which passes around the draft and buffing springs G.

The centering casting, it is obvious, may be supported or mounted in any preferred manner, inasmuch as its function is primarily to afford a base or support for the coöperation of the centering yoke to be presently described, but in the preferred construction and as illustrated, it forms not only the base or support for coöperation with the centering yoke, but also is the connection through which draft and buffing strains are transmitted from the coupler head to the draft and buffing springs. In this construction, openings *b* are formed in the shank B of the coupler at each side and the arms K of a centering yoke K′ project through the openings. At their ends the yoke arms are formed with rounded faces at *k* to coöperate with concaved bearings *d* in the front of the centering casting at each side of the pivot C.

The stem K^2 of the centering yoke extends forwardly within the coupler shank and passes through an abutment or bearing B′ therein, a coiled spring L being located on said shank and between the abutment B′ and a shoulder k^2 for normally pressing the yoke toward the rear. A retaining bolt M preferably passes through the stem K^2 and bearing B′ and is made adjustable in length by a lock nut *m* at the rear end, whereby the expansion of the spring may be limited or overthrow prevented, although in operation the spring is confined between the bearing B′ and centering casting through the intermediary of the yoke K′. In other words, the pressure of the spring constantly tends to force the coupler and its shank forwardly and the centering casting rearwardly, and as a result of the bearings *k* being located on opposite sides of the pivot pin C any movement of the coupler to one side or the other advances the yoke with respect to the shank, putting the spring under increased tension, as indicated in Fig. 2 of the accompanying drawings. The tension of the spring being exerted against a bearing at one side of the center pin tends to return the coupler head to its central position or to a point where the yoke bears with equal pressure at both sides of the said pin.

Conveniently, the coupling head and draw-bar are supported on a carry-iron H, and the latter is provided with inclined faced stops H′ at each end for limiting the transverse or radial movement of the coupler head.

The construction described, it will be noted, is practically selfcontained, in that no additional connections between the draw bar or coupler shank, and the under framing of the car are required. When removed from the car the draw-bar and centering

yoke come away together and do not require any separate attaching means when replaced.

Having thus described the invention, what I claim as new and desire to secure by Letters-Patent, is:

1. In a centering mechanism for radial couplers, the combination with the pivotally mounted head and draw-bar, of a spring pressed yoke movable longitudinally of the draw bar and bearings for the ends of said yoke located on opposite sides of the axis on which the head and draw-bar are pivotally mounted.

2. In a centering mechanism for car couplers, the combination with the head and draw bar pivotally mounted at their inner ends on a vertical axis, of a spring pressed yoke mounted to move longitudinally of the draw-bar and having its arms extending on opposite sides of the axis and bearings located on opposite sides of said axis with which the arms of the yoke coöperate to increase the tension of the spring when the coupler head is moved transversely.

3. In a centering mechanism for car couplers, the combination with the coupler head and draw-bar pivotally mounted to move transversely, of a centering yoke mounted to move longitudinally of the draw bar, a spring for moving said yoke rearwardly, and a centering casting having bearings on opposite sides of the pivotal axis of the draw-bar with which the ends of the yoke coöperate to return the coupler to central position.

4. In a centering mechanism for car couplers, the combination with the coupler head and draw bar pivotally mounted at their rear ends to swing transversely, of a centering casting in which said draw bar is pivotally mounted, a yoke longitudinally movable within the draw bar and having its ends projected to coöperate with the centering casting at opposite sides of the axis, and a spring for moving said yoke rearwardly, substantially as described.

5. In a centering mechanism for car couplers, the combination with the coupler head and hollow draw bar having transverse openings at its rear end, of a yoke having arms projecting rearwardly through said transverse openings, a bearing within the draw bar for the shank of the yoke, a spring mounted on the yoke for moving the same rearwardly, and a centering casting with which the draw bar is pivotally connected having bearings on opposite sides of said pivot for coöperation with the arms of the yoke.

6. In a centering mechanism for car couplers, the combination with the coupler head and a shank, a longitudinally movable rearward extension with which the draw-bar is pivotally connected, a longitudinally movable spring pressed yoke having its arms embracing the pivotal connection, and bearings with which said arms coöperate for returning the draw-bar and head to central position.

7. In a centering mechanism for car couplers, the combination with the coupler head and hollow draw-bar, of a centering casting with which the said draw bar is pivotally connected, a longitudinally movable yoke mounted in the draw bar, bearings on the centering casting with which the rear end of the yoke coöperates, a spring for forcing said yoke rearwardly to return the coupling head to its central position, and a bolt extending longitudinally through the yoke for limiting the expansion of the spring, substantially as described.

RICHARD D. GALLAGHER, JR.

Witnesses.
A. HAMILTON COOKE,
ELIZABETH M. URQUHART.