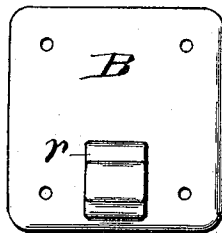
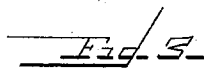
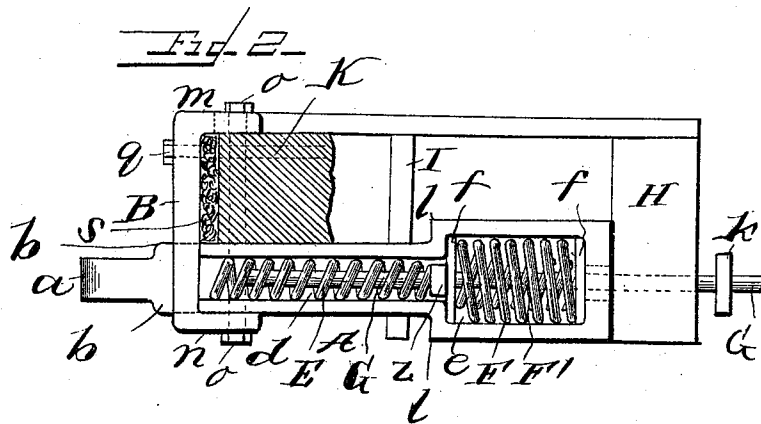
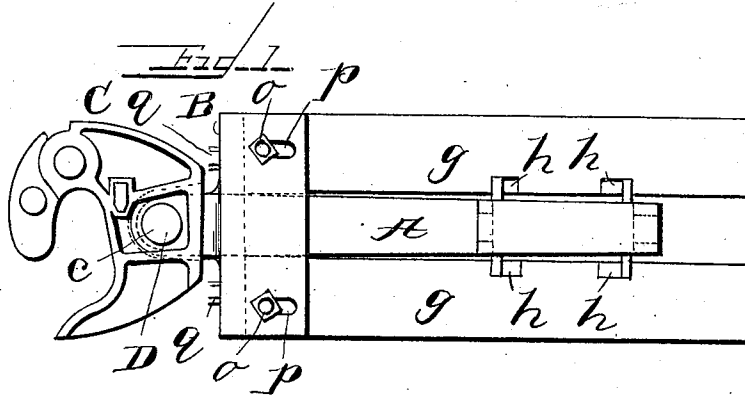


J. COUP.
CAR COUPLING.

No. 519,106.

Patented May 1, 1894.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN COUP, OF CLEVELAND, OHIO.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 519,106, dated May 1, 1894.

Application filed August 22, 1893. Serial No. 483,759. (No model.)

To all whom it may concern:

Be it known that I, JOHN COUP, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Draw-Bars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My present invention relates to draw-bars and has for its object certain improvements in construction whereby the draw-bar is greatly strengthened, the usual yoke dispensed with, the draft and buffer springs located within and supported by the draw-bar, and a head provided that will serve as a battering-ram for locomotive tender couplings, that will engage with the mouth of the ordinary "bull-nose" coupling and support a separate coupler-head.

The invention will be fully disclosed in the following specification and claims.

In the accompanying drawings which form part of this specification, Figure 1 represents a top plan view; Fig. 2 a vertical longitudinal section, and Fig. 3 a front end view of the buffer and supporting plate.

Reference being had to the drawings and the letters thereon A indicates the draw-bar, B the buffer and supporting-plate and C a coupler-head supported by a draw-bar. On the front end of the draw-bar and integral therewith is a solid head *a* five inches wide and three inches thick to support a coupler-head such as B, or any approved form of head and to extend into the mouth of the ordinary "bull-nose" coupler in common use, and in the rear of the head *a* are shoulders or seats *b b* on the upper and lower sides of the draw-bar, against which the rear end of the head B rests in shunting cars, in pushing a car or a train of cars provided with such heads, or to bear upon the metal face plate on the upper and lower sides of the mouth in the "bull-nose" coupler. The head *a* is provided with an aperture *c* to receive a coupling-pin D of ordinary construction. The interior of the draw-bar is separated into two pockets *d e*, the latter being of greater cross sectional area than the former. In the pocket *d* is supported a primary buffing-spring E and in the

pocket *e* is a spring F or a compound spring F and F' may be used which constitute a secondary buffing-spring to take up shock after the primary spring E has been compressed to its full extent, and so soon as pressure is applied to the secondary spring or springs the primary spring is correspondingly relieved and expands. In drawing no pressure is exerted upon the primary spring. All the springs encircle the tail-bolt G and are maintained in position in the draw-bar thereby, and on each end of the springs F, F', are followers-plates *f f* which pass transversely through the pocket *e* and engage with the timbers *g g* in which are recesses *h h* for the followers to move in as the spring or springs are compressed. The tail-bolt G is provided with a head *i* against which the inner end of the spring E rests, and with a key *k* which bears against the draft-timber H when a car or a train of cars is being drawn. The draw-bar is enlarged at its rear end to form the pocket *e* as shown, and provided with shoulders *l l*, on its upper and lower sides which engage with a draft timber I which crosses the bottom of a car transversely, and thereby dispenses with the yoke now being extensively brought into use for securing the spring-cage to the rear end of the draw-bar, and puts the springs directly into the draw-bar proper. The buffer-plate B, is provided with upper and lower horizontal inwardly projecting flanges *m n* by which the plate is secured to the sill K of a car through the medium of bolts *o o* which pass through elongated slots *p p* in the flanges and bolts *q* which pass through the face of plate, and through the face of the plate is an orifice *r* through which the draw-bar projects and is supported by the plate.

Between the buffer-plate and the sill K a rubber cushion or buffer *s* is interposed to receive part of the shock in coupling or pushing when the draw-bar is forced in against the dead-wood of the car, the movement of the plate is accommodated or provided for by the elongated slots in the horizontal flanges.

The buffer-plate as constructed supports the front end of the draw-bar and dispenses with the usual stirrup used for this purpose.

The draw-bar with the projecting head and the buffer-plate is especially designed for use

on locomotive tenders but may be applied to freight or passenger cars with like desirable and beneficial results, while the draw-bar alone is especially designed for use with my improved coupler head B which is fully described and claimed in my application, Serial No. 483,758, filed herewith.

Having thus fully described my invention, what I claim is—

- 10 1. A draw-bar provided with a solid projecting head constructed to enter and engage with the pin of a bull-nose coupling and shoulders on the upper and lower sides in rear of the head to engage the face of said coupling.
- 15 2. A draw-bar provided with a solid projecting head integral with the bar, in combination with a plate having an orifice through which the draw-bar passes, and upper and lower flanges.
- 20 3. A draw-bar provided with a projecting head integral with the bar, in combination with a plate through which said bar passes

and provided with upper and lower rearwardly extending flanges, and a cushion between said plate and the sill of a car. 25

4. A draw-bar provided with a primary buffing-spring in the front part thereof and a draft and secondary buffing-spring in the rear part.

5. A draw-bar provided with a primary buffing-spring, a draft and secondary buffing-spring and suitable followers within the draw-bar, in combination with a tail bolt. 30

6. A draw-bar having one or more buffing-springs within the bar, in combination with a buffer-plate through which the draw-bar passes and a cushion in rear of said plate. 35

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

JOHN COUP.

Witnesses:

D. C. REINOHLE,

W. PARKER REINOHLE.