(No Model.)

J. F. MOORMAN.

CAR COUPLING.

No. 335,611. Patented Feb. 9, 1886.

Fig. 1.

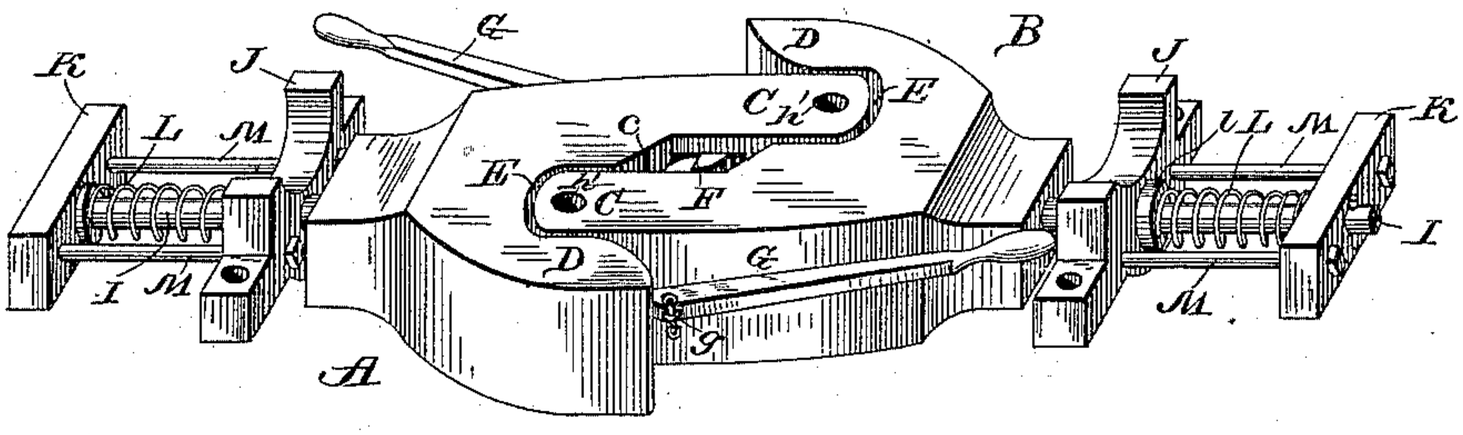


Fig. 2.

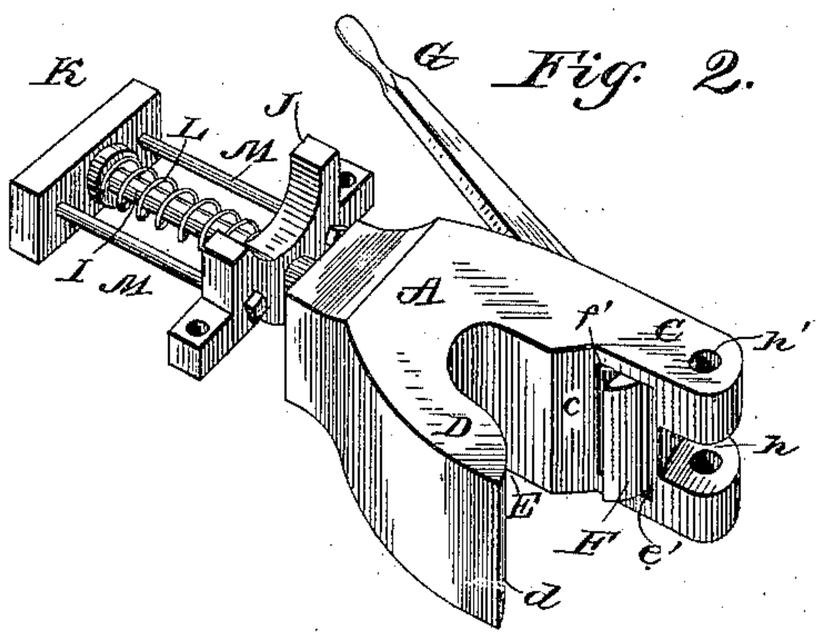
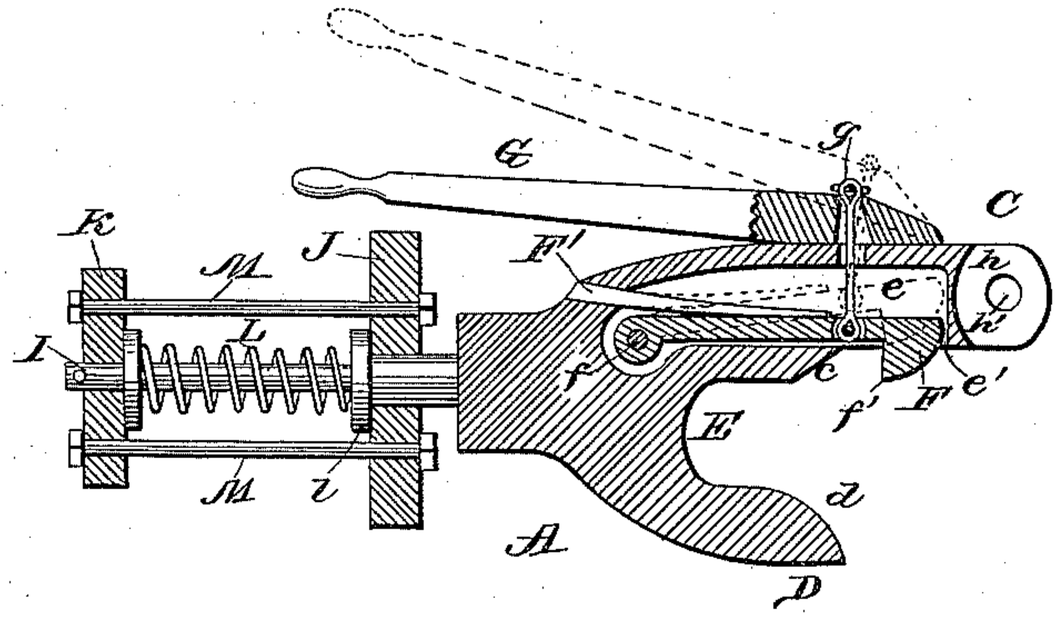


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES FRANKLIN MOORMAN, OF OHIO, IOWA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 335,611, dated February 9, 1886.

Application filed November 14, 1885. Serial No. 182,841. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. MOORMAN, a citizen of the United States, residing at Ohio, in the county of Madison and State of Iowa, have invented new and useful Improvements in Car-Couplings, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in car couplings; and the novelty consists of the peculiar construction and combination of parts, substantially as hereinafter fully set forth, and specifically pointed out in the claim.

The object of my invention is to provide a car-coupling which shall automatically couple when the draw-heads thereof abut together, and which shall be easy and thoroughly effective in operation; to provide means whereby the shock and jar occasioned by the cars coming together shall be in a great measure taken up by the draw-heads and prevented from being communicated to the car-body; to provide means whereby the draw-heads may be readily uncoupled and disconnected, and to combine simplicity with strength and durability of construction.

In the accompanying drawings, Figure 1 is a perspective view of a car-coupling embodying my invention, showing the draw-heads thereof coupled together. Fig. 2 is a detail perspective view of one of the draw-heads, and Fig. 3 is a horizontal longitudinal section of one of the draw-heads on the line *x x* of Fig. 2.

Referring to the drawings, in which like letters of reference indicate like parts in all the figures, A B designate the draw-heads to be secured to the meeting ends of two railway-cars beneath and at the middle of the same and projecting beyond one end thereof. These draw-heads have the same essential features of construction, and I will describe the construction of only one of said draw-heads. Each draw-head is cut away at its front end so as to provide a socket, E, and two forwardly-projecting arms, C D, which arms are arranged a distance apart at their rear ends equal to the width, or a little more so, of the extreme outer end of the arm C, and thus forms the socket E, and the arm C of one draw-head fits in the socket of the fellow draw-head. The arms C D of each draw-head are arranged at opposite sides thereof, and the arm C is of a greater length than the arm D, for the purpose above described. The inner vertical face of the arm C has an inclined abutment, *c*, and the similar face of the arm D is rounded or curved, as shown at *d*, the inclined and rounded faces of the arms serving to guide the arms C of the adjacent or fellow draw-head into the socket E to connect said draw-heads together. The coupling-arms C of each draw-head are chambered out, as at *e* in Fig. 3, and the inner vertical faces of the arms are slotted, as at *e'*, which opens into the chamber *e*.

F designates the coupling-hooks, arranged in the chamber *e* and pivoted therein at its rear end, as at *f*, and having its hook-shaped end *f'* normally pressed or forced outwardly through the slot *e'* by means of a spring, F', also arranged in the chamber *e*, as shown in Fig. 3. The front vertical faces of the hook-shaped ends of the coupling-hooks *f'* are rounded or beveled, and when the draw-heads come or abut together for coupling the beveled or rounded faces of the coupling-hooks thereof impinge against each other, to force said hooks rearwardly against the tension of the pressure-springs to effect the engagement of the coupling-hooks, and consequently coupling the cars together. The inclined and rounded faces of the arms of each draw-head serve as guides to the arm C in entering the socket E thereof, and the arms D prevent lateral play of the draw-heads when the cars are in motion, so as to prevent them from becoming uncoupled. The cars are automatically coupled and the necessary play of the draw-heads permitted in rounding curves or other portions of the track which are out of a straight line.

G designates levers for uncoupling the cars, the said levers being secured to a pin or bolt, *g*, which passes through the draw-head and is secured to the coupling-hook F. The front vertical face of the arm C may be recessed, as at *h*, for the reception of a coupling-link when it is desired or becomes necessary to use a pin-and-link coupling, said arm C being further provided with vertical perforations or passages *h'* for the reception of the coupling-pin to engage the link fitted in the recess *h*. The rear end of each draw-head is provided with a guide bar or rod, I, which is rigidly secured thereto and passes through an opening in a bracket or supporting-casting, J, which is se-

curely bolted or otherwise rigidly fastened to the car body or platform.

K designates a sliding plate arranged to move on the bar or rod I longitudinally thereof at its rear end, and this plate is normally pressed or forced rearwardly against a stop lug, pin, or plate on the rear end of said guide-bar by means of a coiled or other suitable spring, L, arranged and supported on the guide-bar. The front end of the spring is secured to the bar I, and bears against a plate or washer, *l*, and the sliding plate K is perforated at its side edges, and through these perforations headed guide pins or rods M pass, which guides are secured in the supporting casting or bracket J. It will be seen that when the draw-heads come together they will be forced rearwardly, and consequently carry with them the bars I and the springs L, which movement serves to compress the springs and cause the plate K to move or slide upon the bar and the headed guide-pins. The force or shock occasioned by the draw-heads abutting together is thus taken up by the same and prevented from being communicated to the car body and platform in a great measure.

The operation of the invention will be readily understood from the foregoing description, taken in connection with the drawings.

Any preferred means may be employed to secure the draw-heads to the cars, so that they can slide or move to break the force or concussion occasioned by the cars meeting, and the draw-heads can be arranged to couple at different elevations and be operated from the tops of the cars.

I am aware that it is not broadly new to provide the draw-head of a car-coupling with a retaining and coupling arm and to arrange a spring-pressed coupling-hook in the coupling-arm, and hence I disclaim this broad feature.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a car-coupling, the combination of a draw-head having a socket, E, a curved retaining-arm, D, at one side thereof, and a coupling-arm located on the opposite side of the draw-head and having a chamber, *e*, and a slot, *e'*, an inclined abutment, *c*, formed on the inner face of the coupling-arm in rear of the slot *e'*, a coupling-hook located and pivoted in the chamber *e*, and having its hook projected through the said slot *e'*, a spring for normally holding the hook extended through the slot, and a lever, G, connected with the coupling-hook by a link, *g*, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JAMES FRANKLIN MOORMAN.

Witnesses:

ANNA L. COBBS,

MARY F. MOORMAN.