

(No Model.)

J. T. ROBERTS, JOHN CUMMINS & JAMES CUMMINS.  
CAR COUPLING.

No. 553,426.

Patented Jan. 21, 1896.

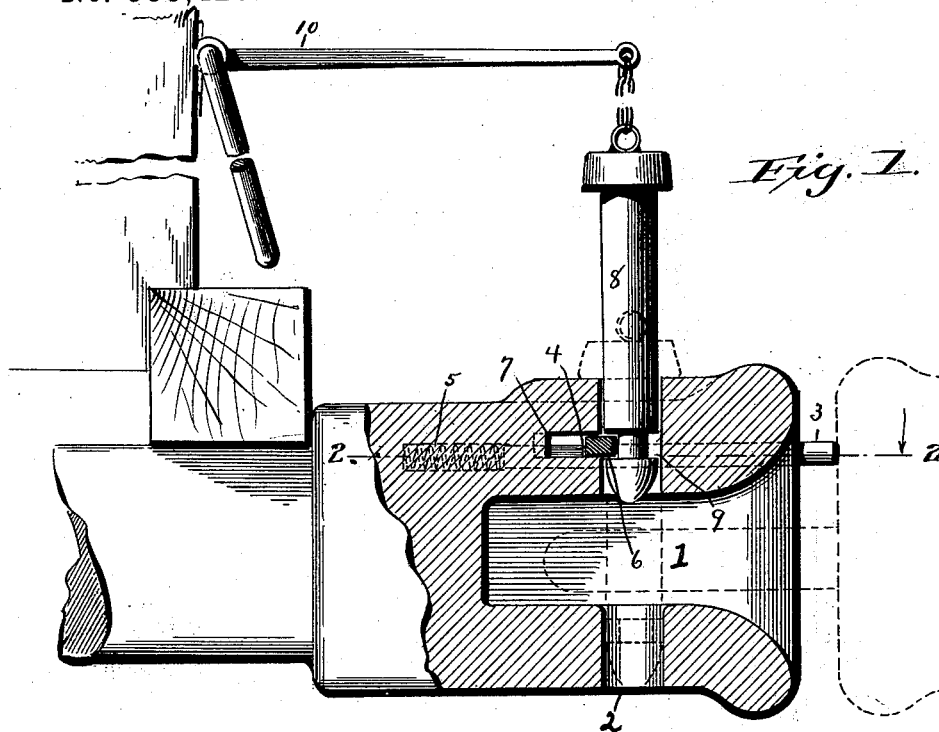
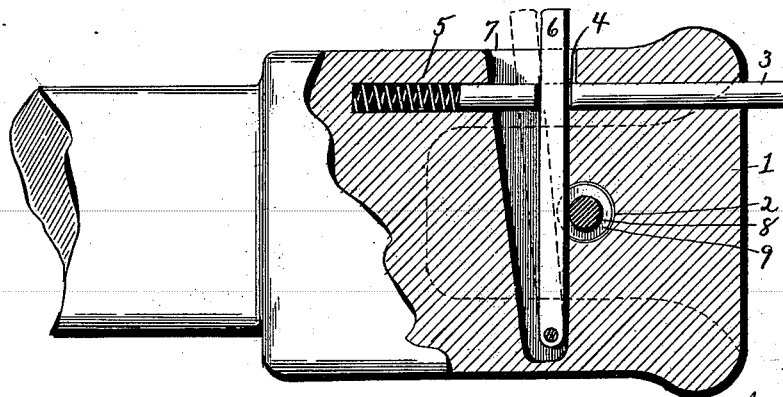
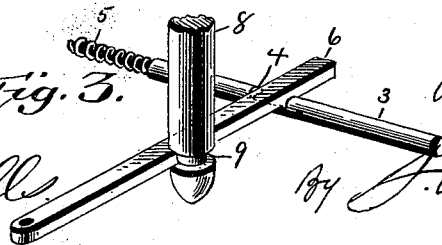


Fig. 2.



Witnessed Fig. 3.  
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# UNITED STATES PATENT OFFICE.

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## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 553,426, dated January 21, 1896.

Application filed June 15, 1894. Serial No. 514,675. (No model.)

*To all whom it may concern:*

Be it known that we, JOSEPH T. ROBERTS, JOHN CUMMINS, and JAMES CUMMINS, citizens of the United States, residing at Rose Hill, in the county of Jasper and State of Illinois, have invented a certain new, useful, and valuable Improvement in Car-Couplings, of which the following is a full, clear, and exact description.

Our invention has relation to link-and-pin car-couplings adapted to be operated without necessitating the operator to go between the cars; and it consists in the novel construction and arrangement of its parts, as hereinafter described.

The principal object of our invention is to provide a device that can be applied to the ordinary draw-head now in use in link-and-pin couplings without materially weakening the draw-head or otherwise injuring it.

In the accompanying drawings, Figure 1 is a side view of the coupling, partly in section. Fig. 2 is a top view of the coupling, partly in section, cut on the line 2 2 of Fig. 1. Fig. 3 is a detail perspective view of the simple device that is to be applied to the ordinary draw-head now generally in use in link-and-pin couplings.

The ordinary draw-head is provided with the throat 1 and the pin-perforation 2. A perforation of small bore is made in the draw-head. Said perforation extends parallel to the longitudinal axis of the draw-head, and the rod 3 is located in said perforation. The mean dimensions of said perforation are uniform throughout, and said rod 3 is of a uniform thickness throughout. The outer end of the rod 3 extends slightly beyond the end of the draw-head, as shown in Figs. 1 and 2. Said rod 3 is provided with a three-sided notch 4 cut in its side, the particular function of which will be explained hereinafter. A coil operating-spring 5 is located behind the inner end of the rod 3, one end of said spring bearing against the end of the rod and the other end of the said spring bearing against the bottom of the perforation. A lateral perforation 7 extends into said draw-head, said lateral perforation being as wide or wider at its mouth than at any other point, in order

that it may be cut with ease in the draw-head. A cross-rod 6 is pivoted at its inner end in the said perforation 7. The end of said rod 6 extends slightly beyond the side of the draw-head, as shown in Fig. 2. Said rod loosely rests in the three-sided notch 4 of the rod 3, and the edge of said rod 6 is adapted to enter the side of the pin-perforation 2, as shown in Fig. 2.

The relative positions of the parts 3, 5, and 6 and the pin 8 are shown in Fig. 3.

The pin 8 is provided near its end with the annular groove 9, in which the rod 6 is adapted to work.

By arranging the spring 5 behind the end of the rod 3 a very small perforation can be made in the side of the draw-head to accommodate the said rod and spring, and by having a three-sided notch 4 cut in the side of the rod 3 a good positive connection can be made between the said rod 3 and the cross-rod 6, said rod 6 having to be about as thick as the rod 3, for the reason that it has the pin to support.

In operation the coupling works as follows: The link is set in the coupling of the backing car, as shown in dotted lines in Fig. 1, and the pin is supported in the opposite coupling, as shown in heavy lines. The draw-head of the backing car strikes the end of rod 3 and pushes said rod back, which in turn pushes the cross-rod 6 (located in the notch of the rod 3) back out of the groove of the pin, and thus the said pin falls and enters the link, (see dotted lines, Fig. 1,) which in the meantime has entered the throat of the draw-head. Thus the cars are coupled. The only strain that comes on the rod 3 is to overcome the pressure of the spring 5, and therefore it is not necessary to have the rod 3 of any great thickness, while it is desirable to have said rod as small as possible, in order that the perforation in which it is located may be of as small bore as possible, thus retaining the strength and integrity of the draw-head.

To uncouple the cars the lever 10, connected by a chain with the head of the pin, is turned, and thus the pin is raised, and when the groove 9 comes opposite the rod 6 the spring 5 forces the rod 3 forward, which in turn brings

the edge of the rod 6 into the groove 9 of the pin, and thus it is supported and the cars uncoupled.

In order to remove the pin from the drawhead an operator can either push back the rod 3 or push back the end of the rod 6 and the pin can be removed.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

A link and pin car coupling consisting of a drawhead having a pin perforation and a perforation parallel to its longitudinal axis, the mean dimensions of last said perforation being uniform throughout, a rod of uniform dimensions located in last said perforation and having an end extending beyond the end of the drawhead and a three sided notch cut in its side; an operating spring located in the said perforation behind the inner end of the

rod one end of said spring bearing against the end of the rod and the other end of the spring bearing against the bottom of the perforation; a perforation extending laterally into said drawhead, said lateral perforation being as wide at its mouth as at any other point; a cross rod pivoted at one end in said lateral perforation and extending at the other end beyond the side of the drawhead and loosely resting in said three sided notch in the spring operated rod; a pin adapted to be supported by the cross rod, as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

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Witnesses:

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