(No Model.)

S. YOUNG & M. MOSKOWITZ.

CAR COUPLING.

No. 471,739. Patented Mar. 29, 1892.

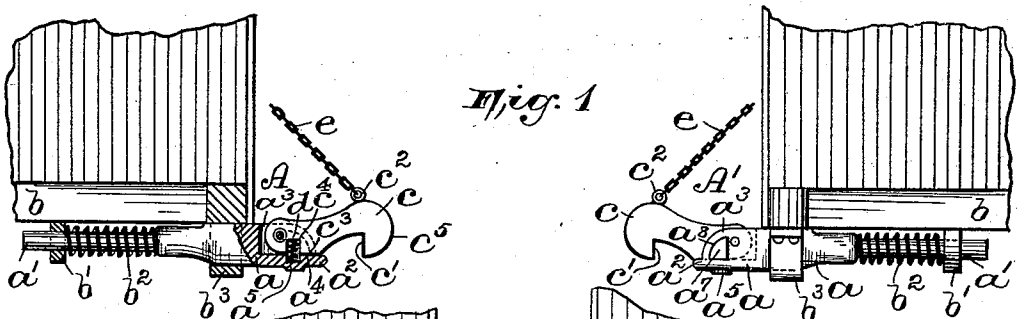

Fig. 1

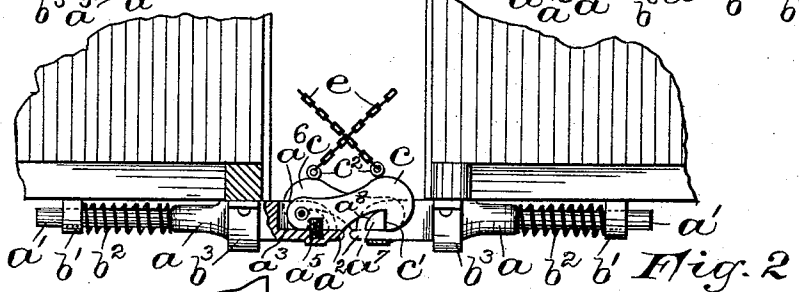

Fig. 2

Fig. 3

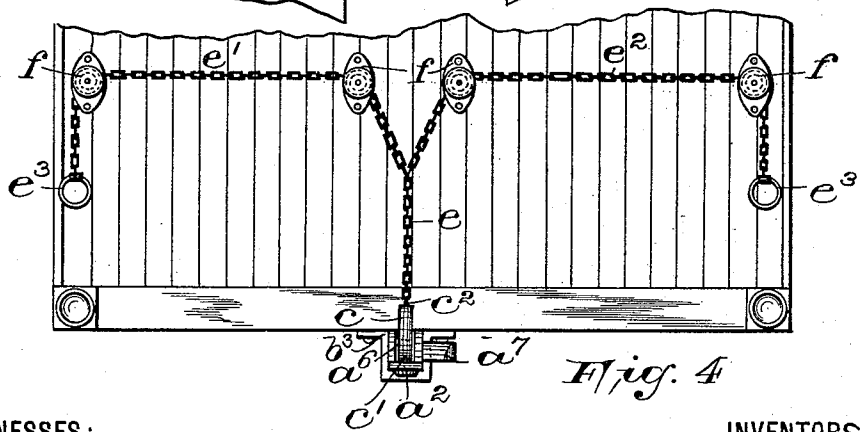

Fig. 4

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 471,739, dated March 29, 1892.

Application filed December 3, 1891. Serial No. 413,925. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL YOUNG and MORRIS MOSKOWITZ, citizens of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Car-Couplings; and we 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The primary object of the present invention is to provide a car-coupling which can be attached to either end of a car, the construction and arrangement of parts of the couplers at both ends of a car being precisely similar, whereby any two end portions of cars can be brought together and cause the couplers to connect automatically and hold them in such locked or holding engagement; and a further object of the invention is to provide these couplers with a means for disconnecting both holding-jaws without necessitating the stepping of the train-hand between two cars.

The invention therefore consists of certain novel arrangements and combinations of parts, such as will be hereinafter more fully described, and finally embodied in the clauses of the claim.

Referring to the accompanying sheet of drawings, in which similar letters of reference are employed to indicate corresponding parts in each of the several views, Figure 1 represents a side view of part of the end portions of two cars about to be coupled, the draw-heads of which are provided with our improved coupler, one of the draw-heads being partly represented in section to illustrate the manner of pivoting the holding-jaw in the slotted head. Fig. 2 is a similar view of the holding-jaws in their holding or locked engagement. Fig. 3 is a plan view of the coupled holding-jaws, clearly illustrating them in holding engagement with holding portions or pins projecting from the one side of each draw-head. Fig. 4 is an end view of the mouth of a draw-head provided with a spring-actuated jaw having a hook end to which is attached a chain or other like means arranged over pulleys secured on the end of a car and passing to both sides of the car for easy access to the train-hand.

In the above-described views, A and A′ indicate two couplings adapted to be attached one to each end of a car, the construction of both couplers being identical in all details. Each coupler consists of a draw-head a, which is secured at the end of the car in the frame-work thereof between the longitudinal sills and cross-pieces, as will be evident from Figs. 1 and 2. Each draw-head terminates in a draw-bar a', extending back underneath the car and between the longitudinal sills b, being secured to the cross-pieces b' and provided with springs b^2, by means of which the pushing and pulling force exerted on the draw-head is communicated to the car. Each draw-head slides in a yoke b^3 secured to one of the cross-pieces. This manner of arranging the draw-bars underneath the car does not form any part of our invention, and it will be evident that the bars can be attached in any other well-known manner.

Each draw-head is provided with a head or mouth portion a^2, forming a chamber in the body of the draw-head. Within said chamber and pivoted between the side walls a^3 thereof is a holding-jaw c, provided with a hook end c' and an eye or ring c^2 for attaching the end of a chain thereto. As will be noticed from Figs. 1 and 2, said jaw c is provided on its under side with a straight and forwardly-projecting side or portion c^3, which normally rests upon the inner flat portion a^4 of the chambered draw-head. Said surface a^4 has a socketed portion a^5, and in the jaw c is a correspondingly and oppositely placed socketed portion c^4, a spiral spring d having its opposite ends secured in said socketed portions, whereby when coupling or disconnecting two cars each of said holding-jaws, which passes up into an open slot a^6 in the top of the draw-head, is normally forced down and securely held in that position, as clearly shown in said Figs. 1 and 2.

As will be seen more especially from Fig. 3, the head portion of each draw-bar is arranged to one side of the longitudinal central axis of a car, so that when the ends of two cars come together each holding-jaw c will pass along the outside of the draw-head and the hook ends c' of the two jaws will come in contact with the respective projections or pins a^7, formed on the side of each draw-head, causing the curved portions c^5 to ride upon the curves a^8 on each projection until the hook on each jaw passes behind the projection or pin a^7, and the jaw by its own weight and the action of the spring d will assume its normal position, and the locked or holding engagement of the jaws of the couplers will thereby be maintained.

In order to cause the uncoupling of the two coupling-jaws, each jaw is provided with an eye or ring c^2, to which has been fastened a chain e. Said chain is preferably divided into two branches e' and e^2, passing over pulleys f to both sides of the car, and are provided on their free ends with rings e^3 or other similar means for exerting a pull on either chain from the side of the car, and thereby lifting the jaws c within the chambered jaw-head and allowing the two cars to be drawn apart.

In order to enable the coupled cars to pass easily around a curve, said hook ends c' of the holding-jaws c may be curved, as illustrated in Fig. 3. This also facilitates the coupling of two draw-heads and prevents the hook ends from striking against the head of the draw-bar, as will be evident from said figure.

One great advantage obtained in our present form of construction of coupler is that both couplers at each end of the car can be identical in construction, and when once secured in position on the cars two cars can be readily coupled, no matter which ends of the cars are brought together.

Another great advantage is the use of only one form of coupling device, and hence a simple and effective and a much cheaper construction has been devised, which is not liable to break or to become accidentally disconnected.

Having thus described our invention, what we claim is—

1. In a car-coupler, the draw-bar provided with a chambered draw-head having an open slot in the top thereof and a projection or pin formed on the one outer side thereof, and a holding-jaw pivoted in said chambered draw-head, provided with a straight and flat portion c^3, whereby the holding-jaw of a similarly-constructed coupler can be connected with said projection or pin, substantially as and for the purposes set forth.

2. In a car-coupler, the draw-bar provided with a chambered draw-head having an open slot in the top thereof and a projection or pin formed on the one outer side thereof, a holding-jaw having a curved end c', pivoted in said chambered draw-head, provided with a straight and flat portion c^3, whereby the holding-jaw of a similarly-constructed coupler can be connected with said projection or pin, and means connected with said jaw for raising the same, substantially as and for the purposes set forth.

3. In a car-coupler, the draw-bar provided with a chambered draw-head having an open slot in the top thereof, a projection or pin formed on the one outer side thereof, a spring-actuated holding-jaw pivoted in said chambered draw-head, provided with a straight and flat portion c^3, whereby the holding-jaw of a similarly-constructed coupler can be connected with said projection or pin, and means connected with said spring-actuated jaw for raising the same, consisting, essentially, of a divided chain passing over pulleys to both sides of the car and having rings on the ends of the chains, substantially as and for the purposes set forth.

4. In a car-coupler, the draw-bar provided with a chambered draw-head having an open slot in the top thereof, a projection or pin on the one outer side thereof, and a holding-jaw pivoted in said chambered head, said jaw being provided with an outwardly-curved hook end c', whereby the holding-jaw of a similarly-constructed coupler can be connected with said projection or pin, substantially as and for the purposes set forth.

5. In a car-coupler, the draw-bar provided with a chambered draw-head having an open slot in the top thereof, a projection or pin formed on the one outer side thereof, and a spring-actuated holding-jaw pivoted in said chambered head, said jaw being provided with an outwardly-curved hook end c' and with a straight and flat portion c^3, whereby the holding-jaw of a similarly-constructed coupler can be connected with said projection or pin, substantially as and for the purposes set forth.

In testimony that we claim the invention set forth above we have hereunto set our hands this 27th day of November, 1891.

SAMUEL YOUNG.
MORRIS MOSKOWITZ.

Witnesses:
FREDK. C. FRAENTZEL,
WM. H. CANFIELD, Jr.