(No Model.)

E. C. INDERLIED.

CAR COUPLING.

No. 532,275. Patented Jan. 8, 1895.

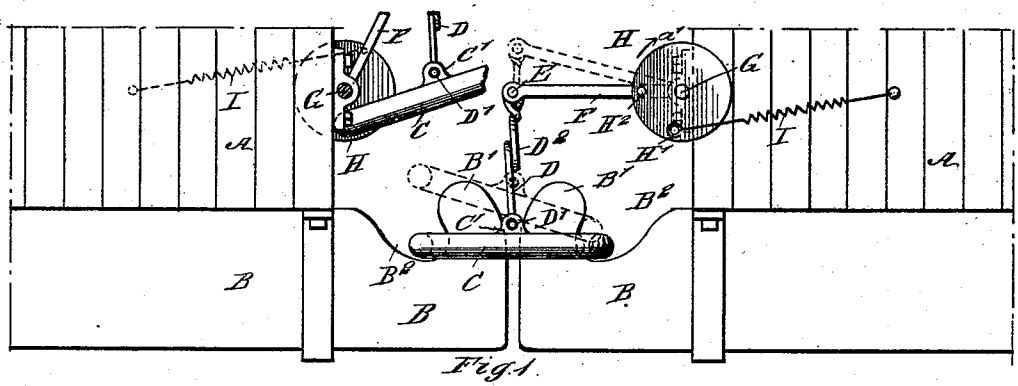

Fig. 1.

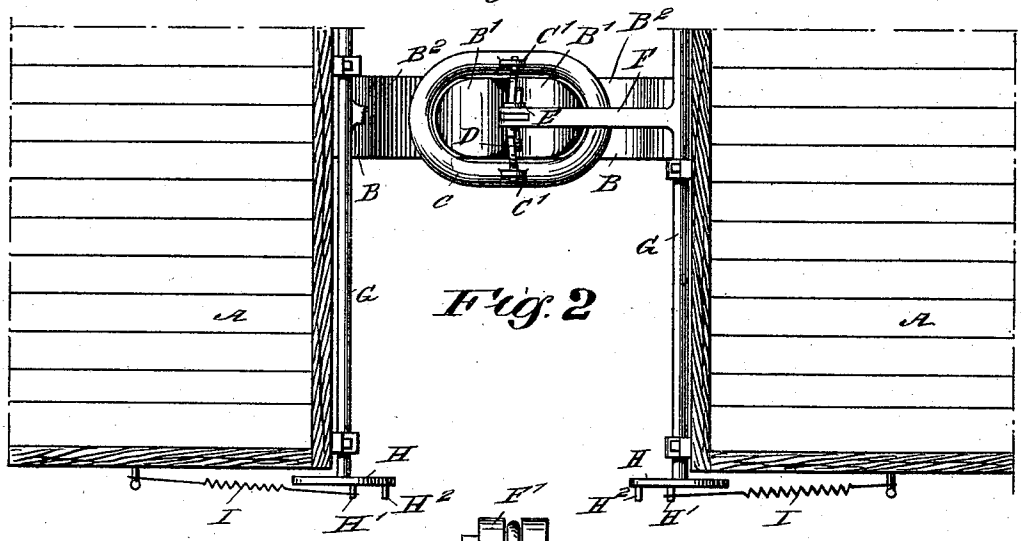

Fig. 2

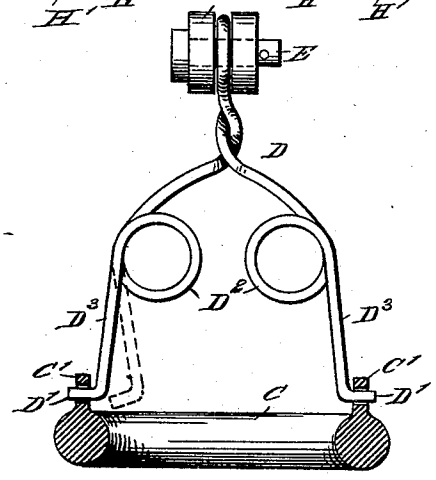

Fig. 3

WITNESSES:

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EDWARD C. INDERLIED, OF ROCK RIFT, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 532,275, dated January 8, 1895.

Application filed October 5, 1894. Serial No. 524,956. (No model.)

To all whom it may concern:

Be it known that I, EDWARD C. INDERLIED, of Rock Rift, in the county of Delaware and State of New York, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved car coupling, which is comparatively simple and durable in construction and arranged to permit of conveniently and securely coupling the cars, without the operator being compelled to step between the cars.

The invention consists principally of a link adapted to engage hooks on the opposing draw bars, and means for raising and lowering the link to engage or disengage the link with or from the draw bar hooks.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement as applied. Fig. 2 is a plan view of the same; and Fig. 3 is an enlarged transverse section of the link and connected parts.

The car A, on which the car coupling is applied is provided with a draw bar B, mounted in the usual manner on the under side of the car, and provided at its forward end with an upwardly and slightly rearwardly curved hook B′, forming a recess B^2 in the top of the front end of the said draw bar. A link C is adapted to be passed over the two hooks B′ of the opposing draw bars B, to couple the cars, as plainly illustrated in Figs. 1 and 2.

The link C is provided on top and at or near its middle with apertured lugs C′ adapted to be engaged by projecting pins D′ of a connecting link D hung at its upper end on a transversely extending pivot pin E, held in the forked end F′ of an arm F, secured to a transversely extending shaft G, mounted to turn in suitable bearings on the end of the car A, the said shaft extending to the sides of the car, as indicated in Fig. 2.

On each end of the shaft G is secured a wheel H under the control of the operator, for turning the said shaft G to cause the arm F to swing upward to lift the link C out of engagement with the hooks B′, or to swing the said arm F downward to engage the link C with the hooks of the two opposing draw bars, when the cars come together.

On the wheel H are secured the two pins H′ and H^2 adapted to be engaged by a hook on the forward end of a coil spring I, secured at its rear end to the side of the car A, so that when the said spring I is connected with the pin H′, then the arm F is held in a normally horizontal position to press, by the connecting link D, the coupling link C in contact with the bottoms of the recesses B^2, formed in the forward ends of the draw bars B. When the operator turns the wheel H in the direction of the arrow *a′* to swing the arm F upward to lift the link C out of engagement with the hooks B′, then the operator hooks the spring I onto the pin H^2 standing on top, so as to hold the said wheel H, the shaft G, arm F and link C in an uppermost position. As each car is provided at one end with a shaft G, arm F, connecting link D and coupling link C, only one such device is used for coupling purposes, while the other device is held in an uppermost position, and locked therein by the spring I engaging the pin H^2.

In order to establish a yielding connection between the arm F and link C, I provide a connecting link D preferably made of a single bar or rod of spring metal, bent to produce the members D^3, spread apart and carrying at their lower ends the pins D′, previously mentioned. The upper or middle portion of the bar or rod is formed with an eye for the passage of the pin E, and the middle parts of the members are formed into spring coils D^3 to permit a slight up and down jumping of the link C, caused by the action of the cars and draw bars, without disturbing the position of the arm F and shaft G. As the latter has a yielding connection at the wheel H with the spring I, the arm F is free to give slightly on an uneven motion of the two coupled cars. By pressing the members D^3 of the link D, the pins may be readily disengaged from the lugs C′ or connected therewith. It will also be seen that by supporting the link C from above, the latter will readily engage the hooks B′ when the link is lowered as above described, to couple the cars, and

when the wheel H is turned in the direction of the arrow a', then the link C is readily raised, usually by first swinging at one end as a fulcrum on the corresponding hook B′ to disengage the other hook, as indicated in dotted lines in Fig. 1, and on further turning of the wheel H, finally engages the other hook to swing clear of both hooks, so as to uncouple the cars. A car coupling of this construction permits of readily coupling or uncoupling the cars without the operator being required to step between the cars, as he can turn the wheel H, at the side of the car. It will further be seen that cars of different heights can readily be coupled, as the link C will positively engage the hooks B′ when standing at a different height. As the several parts of the coupler are positively connected with each other, none of the parts are liable to be lost.

It is understood that the bases of the hooks B′ fit snugly into the ends of the link C, and the said bases are sufficiently broad and wide to form a strong abutment for the link C to pull on.

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

1. A car coupling comprising a draw bar having a hook at its forward end, a coupling link adapted to engage said hook and provided with eyes at its opposite sides, a connecting link having spring arms connected to the respective eyes of the coupling link, a swinging arm mounted on the car and coupled to said connecting link, and means for operating said arm, substantially as set forth.

2. In a car coupling, the combination of a draw-bar having a hook at its forward end, a coupling link adapted to engage said hook, a shaft arranged transversely of the car, and having an arm connected to said coupling-link, a disk mounted on said transverse shaft, and provided with a handle a pin mounted eccentrically on the said disk on that side of the center thereof opposite to the handle, and a spring, connected at one end to the car body and at its other end to said eccentric pin, substantially as set forth.

3. A car coupling comprising a draw bar having a hook at its forward end, a coupling link adapted to engage the hook and provided with eyes at its opposite sides, a connecting link having spring arms outwardly bent and inserted in the eyes of the coupling links, and being provided with a central eye formed by twisting the said spring arms together at their upper portions, a swinging arm mounted on the car and pivoted in the eye of the connecting link, and means for operating said arm, substantially as set forth.

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Witnesses:
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