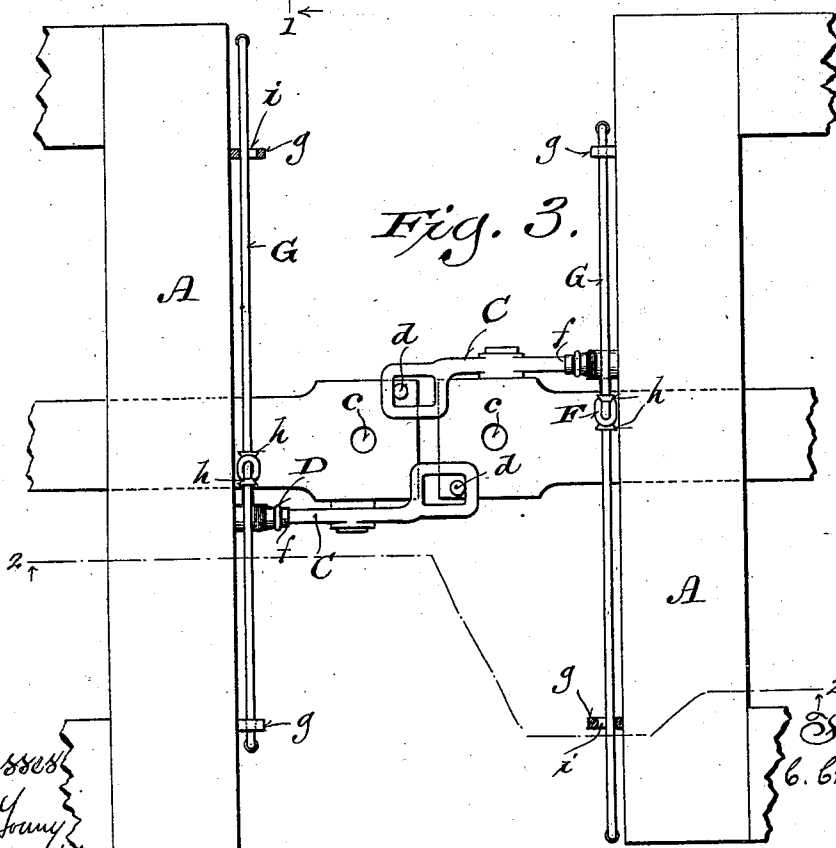
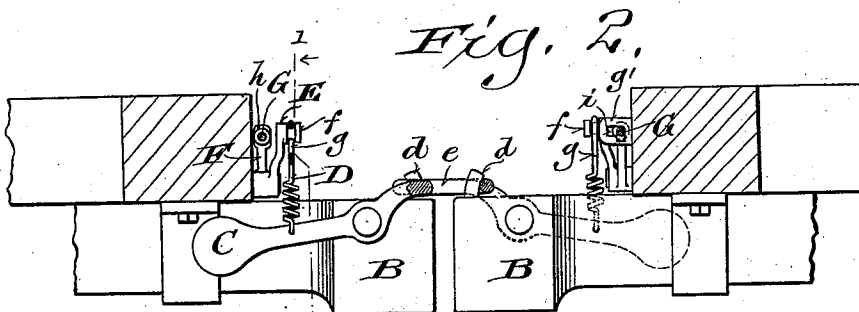
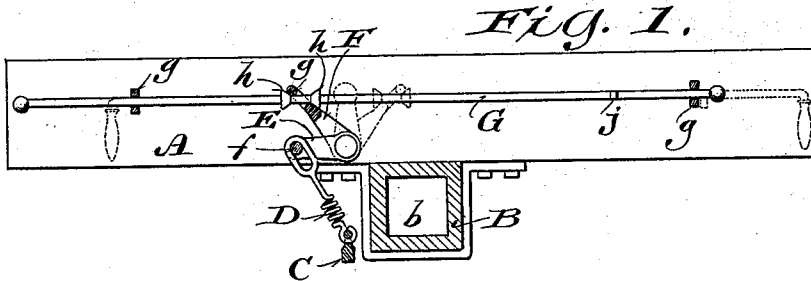


(No Model.)

C. CHRISTENSEN.
CAR COUPLING.

No. 510,160.

Patented Dec. 5, 1893.



Witnesses
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N. E. Oliphant

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UNITED STATES PATENT OFFICE.

CHRISTIAN CHRISTENSEN, OF RACINE, WISCONSIN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 510,160, dated December 5, 1893.

Application filed October 13, 1893. Serial No. 488,103. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN CHRISTENSEN, a citizen of the United States, and a resident of Racine, in the county of Racine, and in the State of Wisconsin, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to provide a simple, economical car-coupling that may be operated without danger to train-hands; and it consists in certain peculiarities of construction and combination of parts herein after described with reference to the accompanying drawings and subsequently claimed.

In the drawings: Figure 1 represents a front elevation of the parts involved in my invention partly in section on line 1—1 of the succeeding figure; Fig. 2, a side elevation partly in section on line 2—2 of the next figure, and Fig. 3, a plan view.

Referring by letter to the drawings A represents transverse frame timbers of opposing cars, and suspended beneath these timbers in the usual manner are draw-bars B, each of the latter being provided with a link receiving recess *b* and pin-openings *c*, whereby I provide for the ordinary link-and-pin coupling at such times as may be necessary or desirable. As a part of my invention, each draw-bar has its head provided with a preferably curved stud *d* rising from one of its upper corners to engage a loop *e* curved upward from a weighted shank C pivotally connected to a side of the opposing draw-bar, and by means of a spring-link D, this shank is joined to lug *f* projecting from one of the arms E of a bell-crank lever fulcrumed on the adjacent car-frame timber A, the other arm F of this lever being provided with an eye *g* through which passes a rod G that is loose in bearings *g* on said timber. In order to exert power on the bell-crank arm E the rod G is provided with conical stops *h* arranged on opposite sides of said arm and having such dimensions as not to pass the eye therein. Both ends of the rod are preferably cranked and within easy reach from the sides of the car on which it is hung, and one of the bearings *g* is pro-

vided with a slot *i* for the passage of a key-lug *j* on said rod.

To couple the cars, the rods G are operated to rock the bell-cranks in the direction necessary to bring the shank-loops *e* over against the studs *d* on the draw-heads, and as a result of this operation the key-lugs *j* on said rods pass through the slots *i* above specified. Now if the rods be rocked in their bearings to bring the cranked ends in a depending vertical position, the lugs *j* on said rods will stand at right angles to the adjacent bearings *g* and thus the coupling will be locked. The spring-links D compensate for the jar of a moving train by permitting a yielding movement of the weighted loop-shanks C against which their power is exerted, and these shanks facilitate the uncoupling of the cars when the bell-cranks are rocked in the proper direction.

The rods G are utilized on freight cars, but it is obvious that for passenger cars they may be omitted and the bell-crank levers operated from the platforms of the latter description of cars.

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

1. A car-coupling comprising opposing draw-bars having studs that rise therefrom, shanks pivotally connected to sides of the draw-bars and terminated at one end in loops for engagement with said studs, and bell-cranks having link connection with the shanks, substantially as set forth.

2. A car-coupling comprising opposing draw-bars having studs that rise therefrom, shanks pivotally connected to sides of the draw bars and terminated at one end in loops for engagement with said studs, suitably arranged bell-cranks and spring-links connecting these bell-cranks with the shanks, substantially as set forth.

3. A car-coupling comprising opposing draw-bars having studs that rise therefrom, shanks pivotally connected to sides of the draw-bars and terminated at one end in loops for engagement with said studs, bell-cranks having arms thereof linked to the shanks, loosely hung rods that pass through other arms of the bell-cranks, and stops on these

rods arranged to oppose both sides of the latter bell-crank arms, substantially as set forth.

4. A car-coupling comprising opposing draw-bars having studs that rise therefrom, 5 shanks pivotally connected to sides of the draw-bars and terminated at one end in loops for engagement with said studs, bell-cranks having arms thereof linked to the shanks, rods passed through other arms of the bell- 10 cranks and loosely hung in bearings certain of which are provided with slots, stops on the rods arranged to oppose both sides of the lat-

ter bell-crank arms, and key-lugs on said rods, these lugs being for passage through the slotted bearings, substantially as set forth. 15

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

CHRISTIAN CHRISTENSEN.

Witnesses:

H. G. UNDERWOOD,
N. E. OLIPHANT.