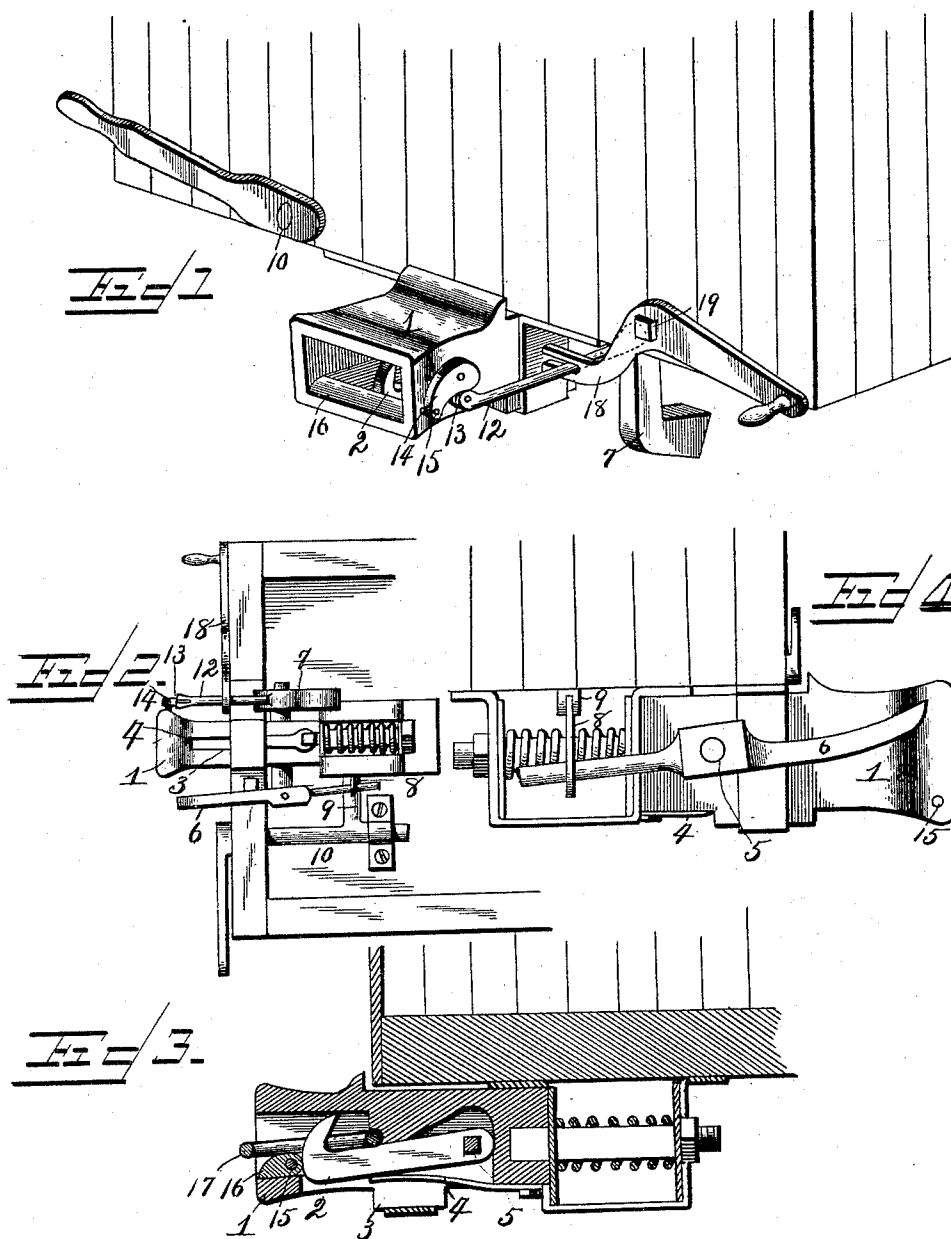


(No Model.)

C. CISSNER.  
CAR COUPLING.

No. 485,172.

Patented Nov. 1, 1892.



Witnesses

W.E. Schneider  
N.F. Riley

By his Attorneys,

C. C. Knowlton & Co.

Inventor  
C. Cissner.

# UNITED STATES PATENT OFFICE.

CHARLES CISSNER, OF RED RIVER, OHIO, ASSIGNOR OF ONE-HALF TO LEVI BILLHIMER, OF SAME PLACE.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 485,172, dated November 1, 1892.

Application filed July 15, 1892. Serial No. 440,153. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES CISSNER, a citizen of the United States, residing at Red River, in the county of Darke and State of Ohio, have invented a new and useful Car-Coupling, of which the following is a specification.

The invention relates to improvements in car-couplings.

The object of the present invention is to provide a simple and inexpensive car-coupling in which the operation of coupling will be performed automatically and in which cars may be uncoupled and a coupling-link guided into the mouth of a draw-head for coupling without necessitating a person going between cars.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a car-coupling constructed in accordance with this invention. Fig. 2 is a reverse plan view. Fig. 3 is a longitudinal sectional view. Fig. 4 is a side elevation.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a draw-head having a longitudinal opening in which is pivotally mounted a coupling-hook 2, and it is provided in its bottom with a longitudinal slot 3, through which the coupling-hook descends when depressed for uncoupling. The coupling-hook 2, which is normally held elevated by a spring 4, is pivoted by a transverse pin 5, passing through the draw-head and projecting from opposite sides thereof, and having secured to one of its ends a longitudinally-disposed lever 6, and having its other end forming a fulcrum for a bell-crank-lever 7. The spring is secured to the lower face of the draw-head near the rear end of the same and has its front end arranged in the longitudinal slot 3 and engaging the coupling-hook. The longitudinally-disposed lever 6 is fixed on the adjacent end of the transverse pin 5 at a point intermediate of its ends. The rear arm of the lever 6 is con-

nected by a link 8 with an arm 9 of a rock-shaft 10, which is longitudinally disposed on the bottom of the car and is provided at its front end with a handle-arm adapted to be depressed to raise the rear arm of the longitudinally-disposed lever to depress the coupling-hook for uncoupling. The forward arm of the longitudinally-disposed lever is weighted to counterbalance the parts and thereby enable the coupling-hook to be easily operated and readily actuated by the spring 4. The bell-crank lever 7, which swings freely on the transverse pin 5, has a forwardly-extending arm 12, which is connected by a link 13 with an arm 14 of a pintle 15 of a link-lifting plate 16, which is arranged in the mouth of the draw-head and is adapted to lift the link 17 to the desired height, so that the link may be readily guided into the mouth of another draw-head to enable cars to be coupled with draw-heads arranged at different heights. The weighted arm of the bell-crank lever 7 holds the link-lifting plate in a horizontal position, so that the link-lifting plate, which has its upper face beveled, is raised by an operating-lever 18 against the action of the weighted arm, whereby the link-lifting plate will readily drop to its normal position as soon as the operating-lever is released. The operating-lever 18 is a bell-crank one and is fulcrumed at the elbow or angle on the end of the car 19, and has its inner arm depending and provided with a slot or bifurcation to receive the forwardly-extending arm of the bell-crank lever 7.

It will be seen that the car-coupling is simple and comparatively inexpensive in construction, that a link will automatically couple with the coupling-hook, which has its front end beveled, and that without necessitating a person going between the cars a link may be guided into the mouth of the draw-head, and that cars may be uncoupled.

When the link is being adjusted to the proper elevation for coupling by the link-lifter, its inner end is arranged in a notch in the rear wall of the longitudinal opening of the draw-head, whereby the link may be adjusted without liability of slipping.

What I claim is—

1. In a car-coupling, the combination of a draw-head, a coupling-hook pivotally mounted therein, a transverse pin carrying the coupling-hook and projecting from the draw-head, a longitudinal lever fixed thereon, and a longitudinally-disposed rock-shaft having an arm connected with the rear end of the longitudinal lever and provided at its front end with an arm, substantially as described.
2. In a car-coupling, the combination of a draw-head provided in its bottom with a longitudinal slot, a transverse pin passing through the draw-head, a coupling-hook arranged within the draw-head and mounted on the transverse pin and arranged in the slot, a spring secured to the bottom of the draw-head and engaging the coupling-hook, a longitudinally-disposed lever fixed on the pin and having a forwardly-extending weighted arm, a rock-shaft disposed longitudinally and provided with an arm, a link pivoted to the arm of the rock-shaft and receiving the rear end of the longitudinally-disposed lever, and a handle-arm secured to the front end of the rock-shaft, substantially as described.
3. In a car-coupling, the combination of a

draw-head, a link-lifting plate mounted in the mouth thereof and having an extended pintle provided with an arm, a weighted lever fulcrumed on the draw-head and connected with the said arm, and an operating-lever connected with and adapted to actuate the weighted lever to raise and lower the link-lifting plate, substantially as described.

4. In a car-coupling, the combination of a draw-head, a link-lifting plate arranged in the mouth of the same, a pintle mounted in the draw-head and carrying the link-lifting plate and provided with an arm, a bell-crank lever fulcrumed on the draw-head and having one arm weighted and its other arm connected with the pintle-arm, and a bell-crank-operating lever connected with the weighted lever, substantially as described.

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

CHARLES CISSNER.

Witnesses:

ALBERT RICHARDSON,  
W. H. BIRELEY.