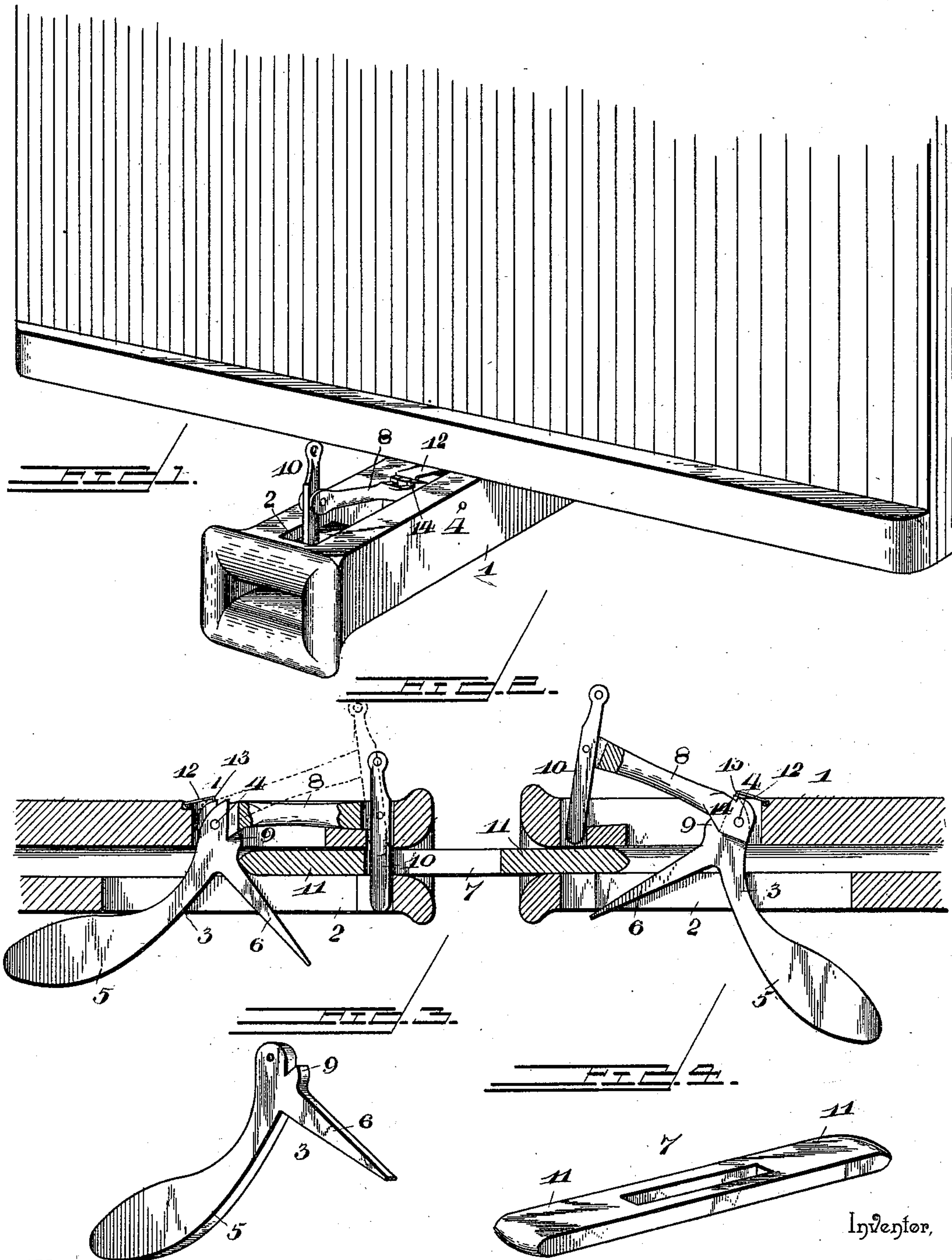


(No Model.)

L. E. REDDEN.  
CAR COUPLING.

No. 562,028.

Patented June 16, 1896.



Witnesses

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# UNITED STATES PATENT OFFICE.

LOWELL EDWARD REDDEN, OF TEMPE, ARIZONA TERRITORY.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 562,028, dated June 16, 1896.

Application filed November 22, 1895. Serial No. 569,846. (No model.)

*To all whom it may concern:*

Be it known that I, LOWELL EDWARD REDDEN, a citizen of the United States, residing at Tempe, in the county of Maricopa and Territory of Arizona, have invented a new and useful Car-Coupling, of which the following is a specification.

The invention relates to improvements in car-couplings.

10 The object of the present invention is to provide a simple, inexpensive, and efficient car-coupling capable of coupling automatically and adapted to be readily set for uncoupling to hold the coupling-pin elevated  
15 out of engagement with a link until the latter has been withdrawn from the draw-head by the separation of the cars.

A further object of the invention is to provide such a car-coupling which will permit  
20 the cars of a train to be successively started similar to the ordinary pin-and-link car-couplings.

The invention consists in the construction and novel combination and arrangement of  
25 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 central longitudinal sectional view. Fig. 3 is a detail perspective view of the bell-crank lever. Fig.  
30 4 is a detail view of the link.

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

1 designates a draw-head designed to be secured to a car in the usual manner and provided with a link-opening and having a longitudinal slot 2 extending through its top and bottom and receiving a bell-crank lever 3. The bell-crank lever is fulcrumed at its angle by a transverse pin or pivot 4, and it is composed of a substantially L-shaped rearwardly-extending weighted arm 5 and a forwardly and downwardly extending arm 6, disposed at an inclination and arranged to be engaged by a link 7, entering the draw-head. A forwardly-extending arm 8 is pivoted to the  
45 top or angle of the bell-crank lever by the transverse pin 4, and it is bifurcated to receive the lever 3, and it is adapted to rest

upon a lug or projection 9, formed integral with the bell-crank lever and extending forward from the same and located a short distance below the pivot-point. 55

The weight of the arm 5 is adapted to swing the inclined arm 6 upward in position to be engaged by the link and also to raise the forwardly-extending arm 8 above the draw-head  
60 to lift a coupling-pin 10, which is carried by the front end of the arm 8 to a position above the link to permit the latter to enter the draw-head preparatory to automatic coupling.

The coupling-pin is pivoted in the bifurcation of the front end of the arm 8 and may be of any desired construction, but is preferably flattened instead of round like the ordinary coupling-pin, and when the link enters the draw-head and engages the inclined arm  
70 6 the bell-crank lever is swung rearward, causing the coupling-pin to fall and engage the link. The link has extended terminals 11, and when the coupling-pin is in engagement with the link the latter maintains the  
75 inclined arm in a depressed position and prevents the weight from raising the pin out of engagement with it.

Any suitable means may be provided for enabling the operation of uncoupling to be  
80 performed from the top and sides of a car or from a coach, and as the upward-extending arm is capable of swinging independently of the bell-crank lever it is adapted to be raised to disengage the coupling-pin from the link  
85 to effect the operation of uncoupling.

The arm 8 is held in an elevated position until the link has been withdrawn from the draw-head by a pivoted catch 12, which is mounted on top of the draw-head at the rear  
90 end of the slot or opening 2. The catch is pivoted at its rear end, and it is provided at its front end with a depending lip 13, which engages opposite shoulders 14 of the rear end of the arm 8, and the shoulders are located at  
95 opposite sides of the bifurcation thereof. As soon as the link is withdrawn from the draw-head the angle of the bell-crank lever engages the catch and lifts the same out of engagement with the arm 8, and the parts are ready for  
100 automatic coupling.

It will be seen that the car-coupling is exceedingly simple and inexpensive in construction, that it is positive and reliable in opera-



tion and capable of automatic coupling, and that it possesses the advantages of the ordinary pin-and-link car-coupling in that it permits the draw-heads sufficient play to enable the cars of a train to be successively started.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any advantages of the invention.

What I claim is—

1. In a car-coupling, the combination of a draw-head, a bell-crank lever fulcrumed on the draw-head and comprising a rearwardly-extending weighted arm, and a downwardly-extending inclined arm arranged to be engaged by a link, a forwardly-extending arm pivotally connected with the draw-head and supported by the bell-crank lever, a coupling-pin connected with and carried by the forwardly-extending arm, substantially as described.

2. In a car-coupling, the combination of a draw-head, a bell-crank lever fulcrumed on the draw-head and composed of a rearwardly-extending weighted arm, and a forwardly-extending inclined arm, a coupling-pin, a forwardly-extending arm pivoted to the draw-head and carrying the coupling-pin, and arranged to be supported in an elevated position by the bell-crank lever, and a link adapted to engage the inclined arm to cause the coupling-pin to fall, said link having its end portion extended sufficiently to maintain the inclined arm in a depressed position, when in engagement with the coupling-pin, substantially as and for the purpose described.

3. In a car-coupling, the combination of a draw-head having a longitudinal slot, the bell-crank lever 3 fulcrumed in the slot of the draw-head by a transverse pin and composed of a rearwardly-extending weighted arm, and

an inclined arm extending downward and forward, said bell-crank lever being provided at its front below its pivot with a lug 9, the arm 8 pivoted to the draw-head by the said transverse pin, and supported by the lug 9, a coupling-pin secured by the arm 8, and a link having elongated ends and adapted to engage the inclined arm of the bell-crank lever, substantially as and for the purpose described.

4. In a car-coupling, the combination of a draw-head, a weighted lever fulcrumed on the draw-head, a forwardly-extending arm pivotally connected with the draw-head, capable of movement independently of the weighted lever and supported by the latter, a coupling-pin connected with the forwardly-extending arm and carried by the same, and a catch arranged to engage the arm automatically when the latter is swung upward from the lever, substantially as and for the purpose described.

5. In a car-coupling, the combination of a draw-head, a bell-crank lever fulcrumed on the draw-head, a forwardly-extending arm pivotally connected with the draw-head and supported by the bell-crank lever and provided with a shoulder and a pivoted catch mounted on the draw-head in rear of said arm and adapted to engage the same to hold the arm elevated, such catch being adapted to be engaged and released by the lever, after a link has been withdrawn from the draw-head, 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.

LOWELL EDWARD REDDEN.

Witnesses:

HOMER REDDEN,  
MONROE REDDEN.