

(No Model.)

G. F. & C. D. ALLEN & R. W. MARTIN.
CAR COUPLING.

No. 580,357.

Patented Apr. 13, 1897.

FIG. 1.

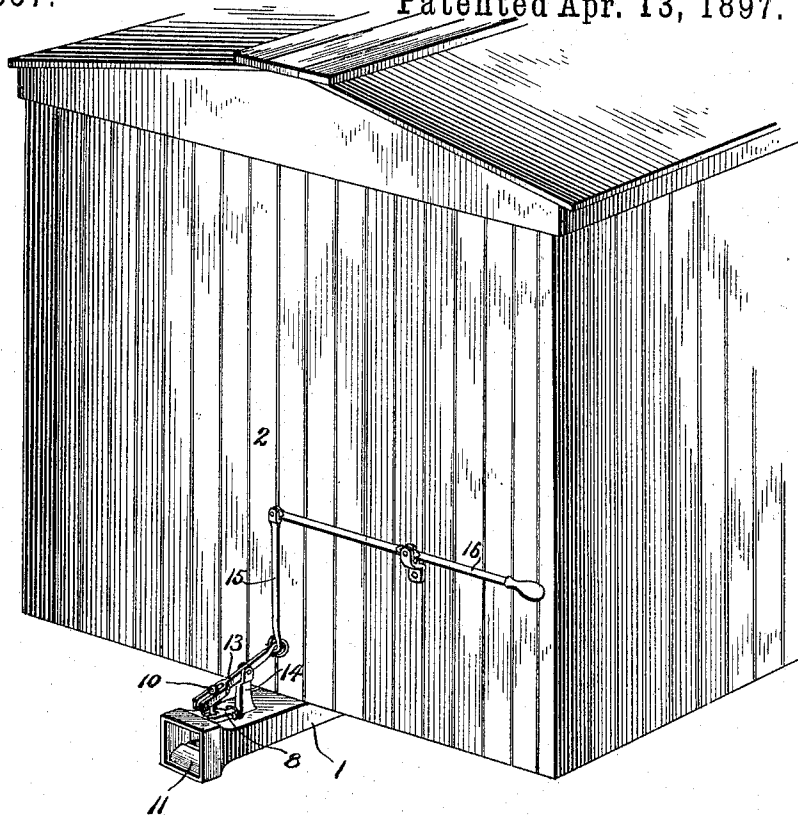


FIG. 2.

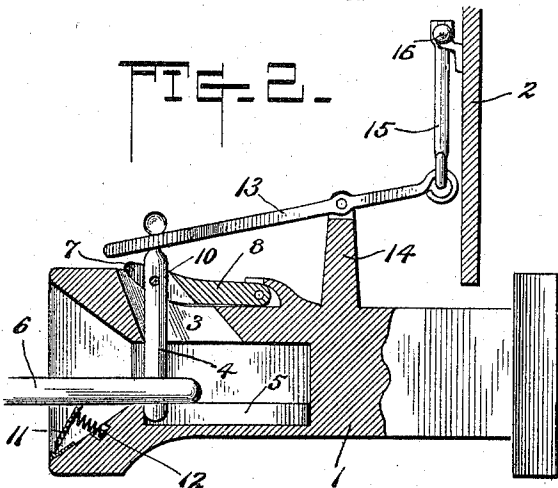
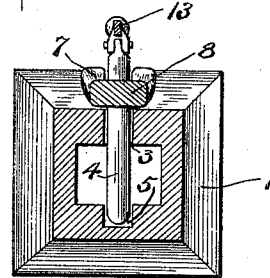


FIG. 3.



Witnesses

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By *their* Attorneys,

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George F. Allen,
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UNITED STATES PATENT OFFICE.

GEORGE F. ALLEN, CHARLES D. ALLEN, AND RICHARD W. MARTIN, OF
BRADY, TEXAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 580,357, dated April 13, 1897.

Application filed June 30, 1896. Serial No. 597,589. (No model.)

To all whom it may concern:

Be it known that we, GEORGE F. ALLEN, CHARLES D. ALLEN, and RICHARD W. MARTIN, citizens of the United States, residing at Brady, in the county of McCulloch and State of Texas, 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 improve the construction of pin-and-link car-couplings to enable the same to couple automatically and to be readily uncoupled without going between cars, and to provide means for holding the link in substantially a horizontal position for guiding it into the mouth of a draw-head to avoid going between cars and guiding the link by hand.

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 claim hereto appended.

In the drawings, Figure 1 is a perspective view of a car-coupling constructed in accordance with this invention and shown applied to a car. Fig. 2 is a central longitudinal sectional view of the same. Fig. 3 is a transverse

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

1 designates a draw-head mounted on a car 2 in the usual manner, provided with a flaring mouth and having at its top a slot 3, in which is arranged a swinging coupling-pin 4, and the draw-head is provided in its bottom with a longitudinal groove 5, forming a shoulder at its front end, against which the lower end of the coupling-pin 4 bears when it is in engagement with a link 6. The coupling-pin is pivoted in a fork or bifurcation 7 of an arm 8, located at the top of the draw-head and hinged at its rear or inner end to the same and adapted to swing upward to raise and lower the coupling-pin. The draw-head is provided with perforated ears, through which passes a transverse pin for hinging the arm 8, and a transverse pin 10 passes through the sides of the fork or bifurcation 7 and through

a perforation of the coupling-pin and is located at a point intermediate of the ends thereof.

When the link enters the draw-head, the coupling-pin is adapted to swing rearward to permit the link to pass it, and it falls back to its original vertical position and engages the link as soon as the adjacent end thereof passes it.

The longitudinal groove 5 is centrally arranged, and the bottom of the draw-head is provided with flat faces at opposite sides of the groove to receive and support the sides of the link.

The link is held in substantially a horizontal position for guiding it into the mouth of a draw-head and for obviating the necessity of going between cars and guiding it by hand by means of a yielding support 11, constructed of sheet metal or similar material, conforming to the general configuration of the bottom of the mouth of the draw-head. An inclined flange, which is located at the lower edge of the support 11 and which is formed integral with the same, extends rearward from the support and is rigidly secured to the beveled or flared lower portion of the mouth of the draw-head and conforms to the slant of the same. The support 11, which has the link resting upon its upper edge, tapers toward its top, and it is maintained in an upright position for supporting the link by a spring 12, which is interposed between it and the bottom of the draw-head. The spring, which is preferably of spiral form, is located in rear of the support 11 and is seated in a socket or opening of the bottom of the draw-head, but two or more springs may be employed if found necessary or desirable.

When the link enters the draw-head, it contacts with the support 11, and the latter is adapted to swing backward against the bottom of the draw-head and cannot be injured by the link, and as soon as the link enters the draw-head the support swings outward to its initial position. It is also adapted to yield to the movements of the draw-head to cushion itself against the link and avoid being bent or otherwise injured. The lower edge of the support 11 is bent inward at an angle to form an attachment-plate and is suitably

secured to the front of the draw-head at the lower portion of the flare or bevel of the bottom of the same, but it may be attached in any other suitable manner. The support inclines inward slightly and is located within the extreme outer edge of the draw-head to avoid any liability of it being caught between two draw-heads and being crushed or otherwise injured.

Any suitable means may be employed for enabling the coupling-pin to be lifted to effect the operation of uncoupling from the top and sides of a car or the platform of a coach, but the pin is preferably connected at its upper end with a forwardly-extending longitudinally-disposed lever 13, fulcrumed intermediate of its ends on a support 14 of the draw-head and having its inner or rear end connected by a link 15 with a transversely-disposed lever 16. The lever 16 is mounted on the car and is provided at its outer end with a suitable handle adapted to be grasped by the operator in manipulating the lever. The lever 16 is fulcrumed on the car intermediate of its ends, and the link is loosely connected at its lower end with the longitudinally-disposed lever 13 to permit the necessary play of the draw-head. The lever 16 may be connected with the top of the car by means of a sliding rod, if desired.

It will be seen that the car-coupling is exceedingly simple and inexpensive in construction, that it is positive and reliable in operation, and that it is capable of coupling automatically and of being readily uncoupled and of holding a link in a position for guiding it into the mouth of a draw-head to avoid going between cars and guiding the link by hand.

Changes in the form, proportion, and minor

details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention, such as the manner of securing the support to the draw-head and the arrangement of the spring or springs for supporting the same.

What we claim is—

In a car-coupling, the combination of a draw-head provided at its top with a slot and having a groove at its bottom terminating short of the mouth of the draw-head to form a shoulder or stop, the arm 8 located at the top of the draw-head and disposed longitudinally thereof and pivoted at its rear end, the front end of the arm 8 being bifurcated, a swinging coupling-pin pivoted to the arm in the bifurcation thereof and arranged in the slot and the groove of the draw-head, the support 14 mounted on the draw-head and rising therefrom, the longitudinal lever fulcrumed between its ends on the support and having its front end loosely connected with the coupling-pin, operating mechanism connected with the rear end of the longitudinal lever, and the resilient link-lifter disposed at an inclination at the mouth of the draw-head and provided at its lower edge with an inwardly-extending flange rigidly secured to the draw-head, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

GEORGE F. ALLEN.
CHARLES D. ALLEN.
RICHARD W. MARTIN.

Witnesses:

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O. A. MCSHAU.