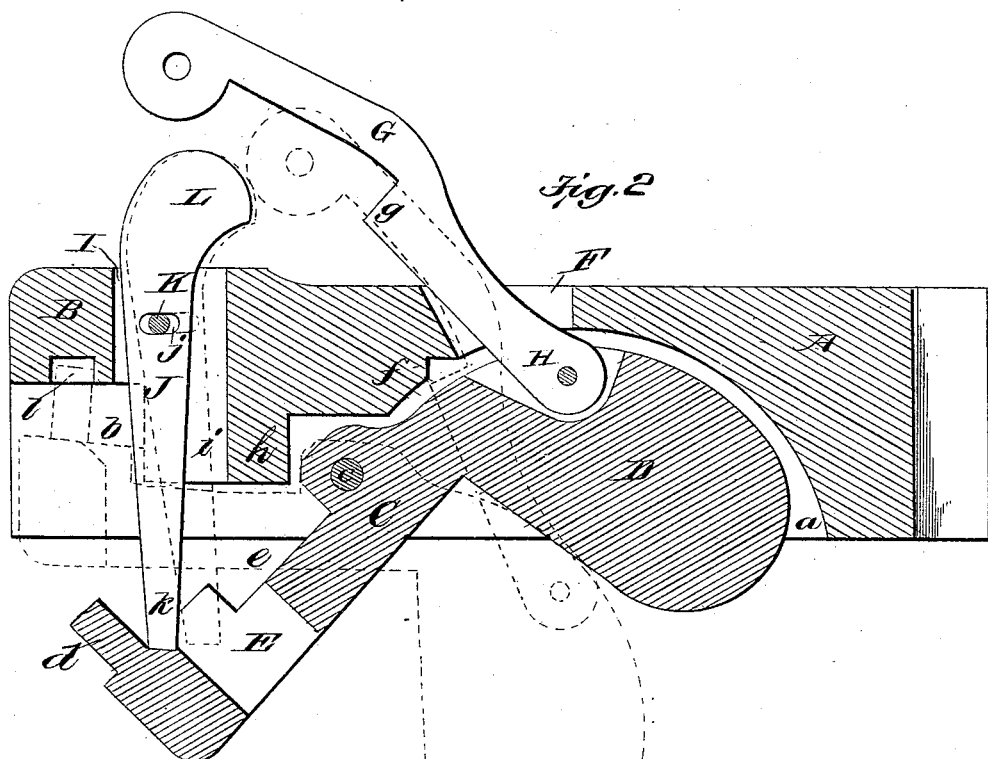
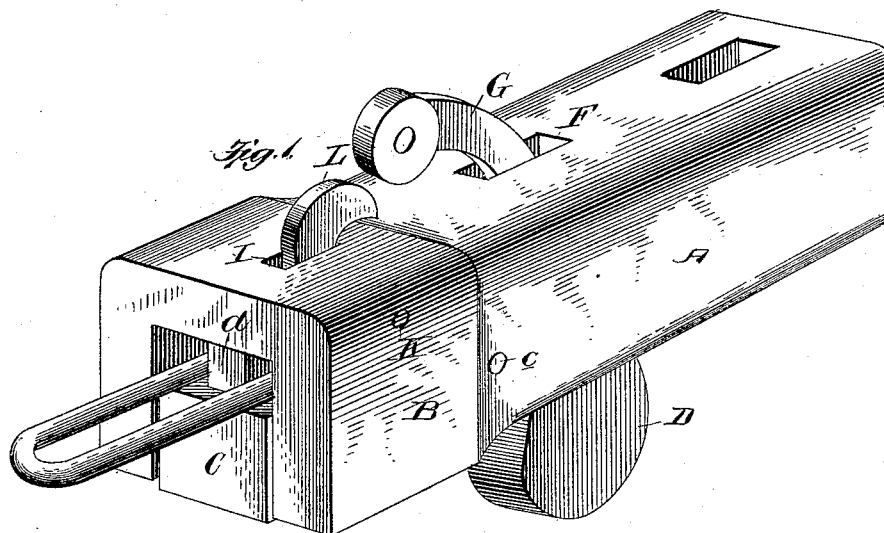


(No Model.)

A. J. EDWARDS.  
CAR COUPLING.

No. 489,376.

Patented Jan. 3, 1893.



Witnesses:  
F. R. Cornwall  
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Inventor,  
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By M. E. Dyne  
Att'y

# UNITED STATES PATENT OFFICE.

ALBERT JACKSON EDWARDS, OF ATHENS, GEORGIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 489,376, dated January 3, 1893.

Application filed April 5, 1892. Serial No. 427,879. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT JACKSON EDWARDS, a citizen of the United States, residing at Athens, in the county of Clarke and State of Georgia, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to automatic car-couplers, and in the construction thereof has for its object the production of a coupler possessing among its advantages certainty of action, durability, simplicity, and cheapness.

Being of the "Ames" type, my improved coupler has its draw-bar and draw-head formed integral, preferably of wrought metal drop-forged, both head and bar being properly recessed on under side for the reception of coupling and uncoupling mechanism which will be hereinafter described and particularly pointed out in the claims.

In the accompanying drawings which form part of this specification: Figure 1 represents a perspective view of my improved coupler, having a link therein ready for coupling with another, and Fig. 2, a longitudinal vertical central section in position for coupling; showing also in dotted lines, the same closed or coupled.

Reference being had to the drawings and letters thereon, A indicates a draw-bar, and B a draw-head integral therewith; having communicating recesses *a*, *b*, respectively, in their under sides, the combined length of which nearly equals that of the coupler.

C represents an over-weighted lever fulcrumed on a pivoting-bolt *c* in the walls of recess *a*, the preponderancy of weight being back of the bolt *c* and due to the enlargement D of the lever. At its opposite or front end lever C is provided with an upward extending tooth or coupling-pin *d*, which may be forged or otherwise formed integral with the lever, or separate and detachable for the purpose of renewing if necessary. Immediately back of pin *d* lever C is perforated by a longitudinal slot E, adjacent to the rear of which is a transverse depression *e* the objects of which will hereinafter appear.

Through the upper surface of draw-bar A is an elongated slot F having at its lower front end an angular pocket *f* constituting one member of a latch; the corresponding member *g* being formed upon an operating bar G, journaled in any suitable manner, as at H, upon lever C and projecting upward through slot F.

Draw-head B has a downward extending boss *h* serving to receive the impact of a coupling-link when in use; and forward of this point the head is pierced by a vertical opening I, which, extending rearwardly also slits or channels the front of boss *h* as shown at *i*. Within slot I is located a tapering latch J having an elongated bearing *j* through which it is journaled upon a pin K in the draw-head. Said latch being over-balanced by its enlarged upper end L having the bulk of its weight disposed back of its vertical center, thus giving its lower tapering end *k* a constant outward tendency. The roof of the mouth of head B is provided with a recess or cavity *l* which receives the upper end of coupling-pin *d*, and shares with it the strain imposed by the coupling link when in use.

This being substantially the construction of my invention its use and operation are as follows: The rear end of lever C having been elevated by an upward lift of bar G, its forward end descends accordingly; by which movement the end *k* of latch J is withdrawn from its normal position in slot E, and acting under influence of its over-weighted upper end swings upon pin K until its lower end comes in contact with the coupling-pin *d* where it stops and rests upon a shoulder formed by the edge of slot E. Thus the device is latched in an open position ready for coupling. A coupling-link now being presented by a neighboring car enters the mouth of the coupler and is directed thereby to strike with its end, the forward edge of latch J, which owing to the elongation of its bearing *j* is allowed to embed itself between the walls of channel *i* by which it is protected from jamming, the boss *h* sustaining the shock caused by impact of the link. Latch J being thus tripped allows the forward end of lever C to rise as its rear end D gravitates, and coupling-pin *d* entering the link retains it in a coupled position, wherein it is positively locked by the automatic engagement of latch

g on bar G, with its corresponding member f in the draw-bar. The end k of latch J in the meanwhile having been provided for by elongated slot E, through which it projects when  
5 coupler is closed as shown by dotted lines in Fig. 2.

It is obvious that the operating bar G may be manipulated from the sides of a car by a crank-shaft attachment; or from top by a con-  
10 necting rod, chain, or cord; and that many minor changes in construction may be made and substituted for those herein shown and described without departing from the principle of my invention, which having been thus  
15 fully described.

What I claim is:—

1. In a car-coupler the combination with a shell draw-bar and head, of an over-balanced coupling lever journaled therein carrying a  
20 coupling-pin, a gravity latch for holding said lever in position for coupling, and a similar latch for locking it when closed, substantially as described.

2. In a car-coupler, the combination with a

draw-bar and head open on the under side, 25 of an over-balanced coupling-lever journaled therein carrying a coupling-pin, a swinging gravity-latch having an elongated bearing on a pivot-pin for holding the lever in a coupling position, and a latch for automatically  
30 locking it in a closed position, substantially as described.

3. In a car-coupler, the combination with a draw-bar and head open on the under side, of an overbalanced coupling-lever journaled 35 therein carrying a coupling pin, a gravity-latch having a swinging and rearward movement, and a boss for sustaining the impact of a coupling-link, having a vertical channel therein for receiving said latch when not in  
40 use, substantially as described.

In testimony whereof I subscribe my signature in presence of two witnesses.

ALBERT JACKSON EDWARDS.

Witnesses:

J. J. YOUNG,  
H. H. CARLTON.