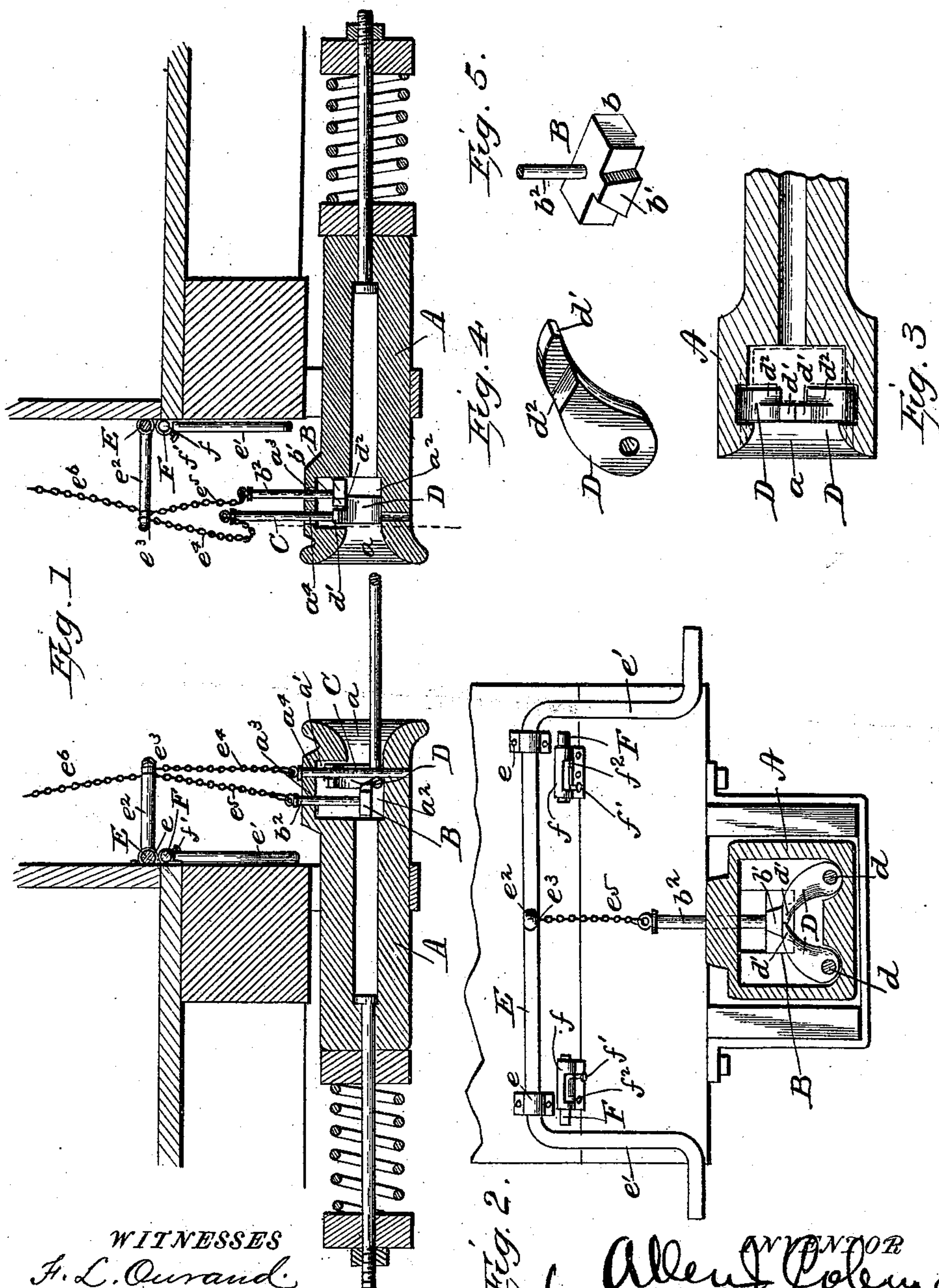


(No Model.)

A. J. COLEMAN.
CAR COUPLING.

No. 547,876.

Patented Oct. 15, 1895.



WITNESSES
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Fig. 2.

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 547,876, dated October 15, 1895.

Application filed February 13, 1895. Serial No. 538,258. (No model.)

To all whom it may concern:

Be it known that I, ALLEN J. COLEMAN, a citizen of the United States, residing at Hunts City, in the county of Jasper and State of Illinois, have invented certain new and useful Improvements in Car-Couplers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as it appertains to make and use the same.

My invention relates to improvements in car-couplers, and has for its object to produce a simple, efficient, and easily-operated mechanism for coupling cars.

The invention will first be described in connection with the accompanying drawings and then particularly pointed out in the claims.

In the drawings, Figure 1 is a longitudinal vertical section through two draw-bars, showing a coupling device embodying my invention. Fig. 2 is a transverse sectional view of one draw-bar. Fig. 3 is a longitudinal horizontal section of the same. Fig. 4 is a detached rear view of one of the trip-fingers, and Fig. 5 is a perspective view of the stop B detached.

Referring to the drawings, A is a draw-bar, which has a link-opening a , back of which is a transverse recess a' , which will be termed the "pin-recess," back of which and communicating therewith is a second recess a^2 , which may be termed the "stop-recess," in which is located a vertically-moving stop B, having a squared body b and a projecting lug b' , a stop-pin b^2 being attached to the body b and projecting upward through a hole a^3 in the top of the draw-bar, which is considerably thickened, as shown, in order that the stop-pin may be properly guided and that the draw-bar may not be weakened by the stop-pin hole. In front of the stop-pin hole a^3 is a link-pin hole a^4 , which also passes through the thickened portion. In the pin-hole a^4 is inserted an ordinary link-pin C. At the bottom of the pin-recess a' and at each side are two small recesses, which may be called the "finger-recesses," in which are located the lower ends of two trip-fingers D, which are pivoted in their recesses by means of pivot-pins d in such a manner that the fingers can swing transversely. The trip-fingers are arched toward

each other, as shown, and have inward-projecting teeth d' at their upper ends, which teeth meet and rest against each other when the trip-fingers are in their closed position. At the back of the teeth the trip-fingers are flattened off, as at d^2 , to form a shelf portion, on which rests the projecting lug b' of the stop B when the latter is in its raised position. Between these shelf portions d^2 is an opening, which when the fingers are in their normal position is smaller in width than the width of the lug on its under side. The inner faces of the trip-fingers are beveled toward the front for a purpose hereinafter described. The lug b' of the stop B is of a truncated wedge shape, being wide at the bottom and narrow at the top, the object of which will be pointed out in the description of the operation.

To the end of the car is attached a pin-operating device consisting of a shaft E, journaled at e in boxes fixed to the car and provided with cranked ends e' at each end, the handle portions of which project beyond the sides of the car. In the center of the shaft E is formed an arm e^2 , to which are secured the ends e^3 of a pair of chains, one of which e^4 is secured to the link-pin, while the other e^5 is attached to the stop-pin. To the outward-projecting arm e^2 is attached a chain or lifting-rod e^6 , which leads to the top of the car. Just below the shaft E, near each end, is placed a bolt F, longitudinally movable in a casing f and provided with a handle f' , which may be swung into one or the other of a pair of notches f^2 either when the bolt is outward or inward. The end of each bolt when in its outward position is arranged to pass between the downward-extending cranked ends e' and the end of the car, whereby the link-raising rod is held in its raised position.

The operation of my device, briefly stated, is as follows: When the arm e^2 of the shaft E is raised, either by swinging the cranked ends e' or by pulling up the chain e^6 the stop-pin b^2 and the link-pin C are raised together, the upward movement of the arm e^2 is limited by the stop B striking the top end of its recess a^2 , which is so arranged that at that time the end of the link-pin C is withdrawn from opposite the link-opening a in the draw-bar, but

is not entirely withdrawn from its pin-hole. As soon as the stop reaches its raised position the trip-fingers D are free to fall toward each other, their inward-projecting teeth coming in contact with each other. If, now, the arm e^2 be permitted to drop to its normal position, the link-pin will be held up by its lower end resting upon the top of the teeth d' , while the stop B will be held up by its lug resting on top of the shelf portions d^2 on account of the bottom of the lug b' being wider than the space between the ends of the shelf portions. If, now, the link G of an opposite car be inserted into the link-opening a , its rounded end will enter the space between the arched portions of the trip-fingers D, pressing against the beveled faces and crowding the fingers apart, thereby permitting the link-pin to drop and couple the cars, the stop also dropping and resting on the link. If it is desired to uncouple the cars, the arm e^2 is raised, whereupon the wedge-surfaces of the stop B crowd the trip-fingers apart until it passes above them, whereupon they drop into their contacting position and hold the stop B in its raised position, as before described, the link-pin C being also raised with the raising of the stop.

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

1. In a car-coupling device, the combination, with a draw-bar having a link opening, a pin recess, a stop recess behind the pin recess, and a link-pin passing through the top of the draw-bar and opening into the pin-re-

cess, of a pair of trip-fingers pivoted at the bottom of the pin-recess, a link-pin inserted in the pin hole and resting on top of the fingers, a stop in the stop recess, resting on the fingers and provided with a stop-pin, a chain attached to the link-pin and to the stop-pin, and means for raising both pins simultaneously, substantially as described and for the purpose specified.

2. In a car-coupling, the combination, with a draw-bar having a link-opening, a pin recess behind the link opening, a stop recess behind the pin recess, and a link-pin hole passing through the top of the draw-bar and opening into the pin recess, of a link-pin inserted in the pin opening, a stop in the stop recess, and provided with a stop pin projecting through the top of the draw-bar, a pair of trip-fingers pivoted in the bottom of the pin recess and arranged to hold up both the link pin and the stop, a pair of chains, one attached to the stop-pin and the other to the link-pin, a link-raising shaft provided with an arm to which the chains are attached and having cranked ends, and a bolt device secured to the end of the car and arranged to hold the arm in its raised position, substantially as described and for the purpose set forth.

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

ALLEN J. COLEMAN.

Witnesses:

J. N. CLEMAS,
E. S. MOORE.