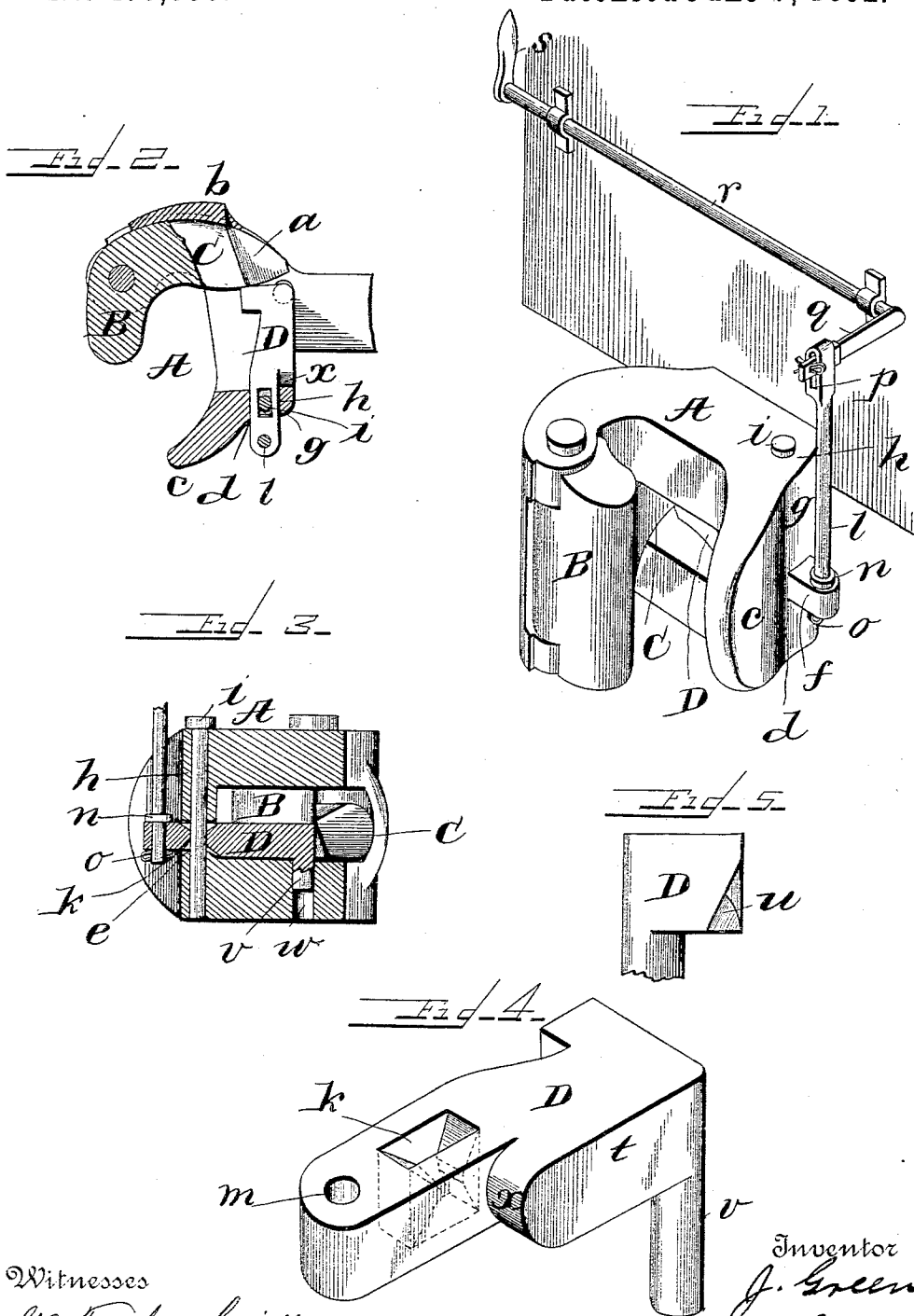


(No Model.)

J. GREEN.  
CAR COUPLING.

No. 476,630.

Patented June 7, 1892.



Witnesses

L. A. Taubenschmidt,  
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# UNITED STATES PATENT OFFICE.

JOHN GREEN, OF RENOV, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO  
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## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 476,630, dated June 7, 1892.

Application filed September 28, 1891. Serial No. 407,016. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN GREEN, a citizen of the United States, residing at Renovo, in the county of Clinton and State of Pennsylvania, 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 car-couplers of the master car-builders' type, and has especial reference to an automatic trip-latch to receive the thrust of the tongue of the swinging hook and take the place of the ordinary trip-pin in common use, and has for its object certain improvements in construction to enable the coupling to be released without requiring employes to expose themselves to danger by going between cars to raise the trip-latch.

The invention will be fully disclosed in the following specification and claims.

In the accompanying drawings, which form part of this specification, Figure 1 is a perspective of one end of a car provided with my improved coupler; Fig. 2, a horizontal section; Fig. 3, a transverse section; Fig. 4, a perspective of the trip-latch detached, and Fig. 5 an end view of the same.

Reference being had to the drawings and the letters thereon, A indicates the head of the draw-bar; B, the swinging coupling-hook, which is provided with a tongue C, having an inclined surface *a* at its end to automatically raise the trip-latch D in the act of coupling with another car. The head A is provided with a swell or bulge *b*, and the tongue C is constructed to push any foreign matter—such as dirt, snow, or ice—out of the cavity in the head, as in Patent No. 448,613, bearing date of March 17, 1891. Through one side of the head, in the rear of the horn *c*, is formed a slot *d*, having a rounded lower side *e* to form a fulcrum for the arm *f* of the trip-latch and upon which the latch vibrates vertically. The head is reinforced at *g* to compensate for the metal removed in forming the slot *d* and the vertical pin-hole *h* to receive the pin *i*,

which passes through a slot *k* in the arm *f* of the trip-latch to secure it in position. To the end of the arm *f* is attached link *l*, which passes through a hole *m*, and is provided with a collar *n* and a cotter-pin *o* at one end and at its opposite end with a slot *p*, with which an arm *q* of a rock-shaft *r* engages. The outer end of the rock-shaft is provided with a lever *s* to raise the trip-latch when it is desired to disengage the couplings. The rock-shaft *r* is secured to the end of the car by suitable brackets and is operated from the side of car without exposing the brakeman or other employé to danger of being crushed between the end sills of the cars. The trip-latch D is provided with a horizontal body *t*, having an inclined surface *u* to engage the corresponding surface *a* on the end of the tongue C of the swinging hook B, a vertical pin *v*, which projects into a hole *w* in the lower side of the draw-bar and bears against the wall of the hole on the inner side of the pin, and a shoulder *x*, which bears against the inside of the draw-head and takes the thrust and strain of the load in drawing a train of cars. The arm *f* of the latch forms a lever to raise the pin *v* out of the hole *w*. The trip-latch may be forged of wrought-iron or it may be made of cast-steel in the usual manner of making castings.

Having thus fully described my invention, what I claim is—

1. In an automatic car-coupling, the combination of a swinging hook and a latch fulcrumed in and extending through one side of the head and part way across the draw-bar and provided with a shoulder bearing against the inside of the head and the inner end of the hook bearing against the free end of the latch when the hook is coupled.

2. In an automatic car-coupling, the combination of a swinging hook and a latch fulcrumed in one side of the head, extending through said side of the head and part way across the draw-bar and provided with a vertical pin at its inner end.

3. In an automatic car-coupling, the combination of a swinging hook and a latch fulcrumed in one side of the head to move ver-

5 tically, extending through said side of the head, bearing against the inside thereof, and extending part way across the draw-bar and provided with a vertical pin which engages the lower side of the draw-bar.

4. A latch for automatic car-couplings, consisting of a horizontal body having an inclined surface and a vertical pin at one end,

a shoulder, and an arm at the opposite end to engage an operating-lever. 10

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

JOHN GREEN.

Witnesses:

D. C. REINOHL,

H. B. REINOHL.