

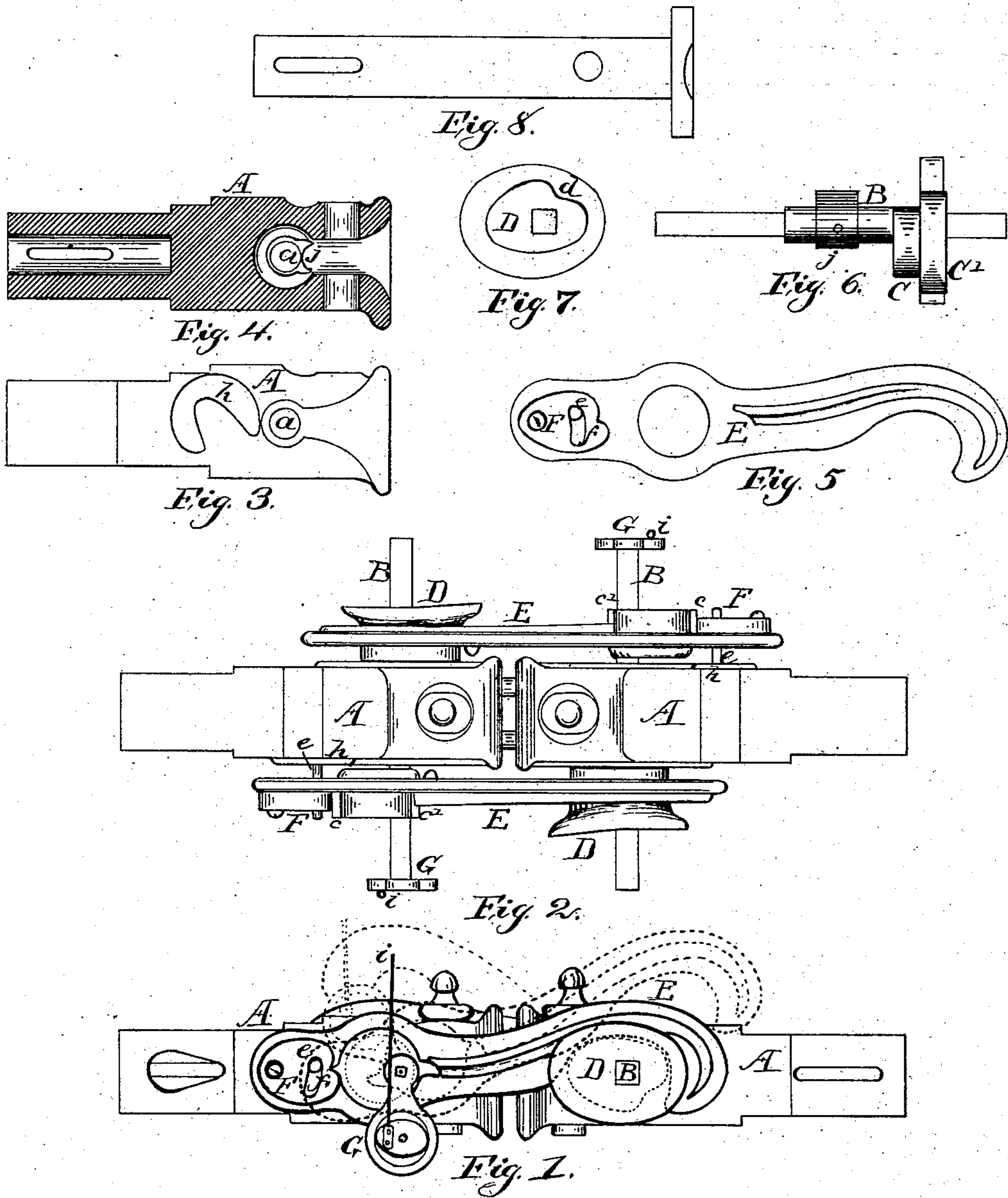
(Model.)

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CAR COUPLING.

No. 292,538.

Patented Jan. 29, 1884.



Witness.

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UNITED STATES PATENT OFFICE.

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 292,538, dated January 29, 1884.

Application filed October 1, 1883. (Model.)

To all whom it may concern:

Be it known that we, JOHN COUP and DAVID McCURDY, of Cleveland, in the county of Cuyahoga and State of Ohio, and WILLIAM B. RICE, of the city of New York, in the State of New York, have jointly invented new and useful Improvements in Car-Couplings, of which the following is a specification.

The object of our invention is to provide an automatic or self coupler, and one which may also be coupled with the ordinary draw-head having the link and pin, the coupling and uncoupling being done from the sides or top of a car, thereby obviating the necessity of going between cars for that purpose, and thereby preventing the dangers to life and limb of those engaged in that business.

Our invention consists in the construction and application of new and novel devices with a draw-head having the ordinary mouth-piece to receive a link and pin, said new devices being a rotating shaft placed horizontally through the draw-head, said shaft provided with eccentrics and a coupling-hook on one side of the draw-head, and a hook-receiving pallet on the opposite side of the draw-head, said rotating shaft being operated by a crank having rods and lever attached for manipulating the coupler from either side or top of a car, substantially as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation. Fig. 2 is a top view. Fig. 3 is a side view of a draw-head. Fig. 4 is a longitudinal section of same. Fig. 5 is a detached view of the coupling-hook. Fig. 6 is a detached view of the rotating shaft and its eccentrics and manipulating-ring. Fig. 7 is a detached view of the hook-receiving pallet. Fig. 8 is a view of a plain wrought-iron draw-head.

This coupling is designed for both passenger and freight cars.

A is a draw-head, which may be of the usual form, and provided with the ordinary coupling link and pin. Through said draw-head is made a horizontal hole, *a*, either in rear or in front of the pin-hole, into which is fitted a shaft, B, on one end of which are placed two eccentrics, C C', and which are located on one side of the draw-head; and on the other end is placed a pallet, D, on the opposite side of the draw-head.

It is a coupling-hook having an eye which fits on the smaller eccentric C, the forward end of which engages with a pallet on the opposite draw-head. The rear end of said hook projects a short distance back of the shaft, and is provided with a cross-pin, *e*, the inner end of which plays in a horseshoe-shaped guide, *h*, on the side of the draw-head, the purpose of which will be hereinafter shown. The rear end of said hook is also provided with a heart-shaped latch or pawl, F, having a curved slot, *f*, which sets over the outer end of aforesaid pin *e*. The large eccentric C' serves as a covering-wheel for holding the hook on the other wheel, and is provided with two projections, *c* and *c'*. The projection *c*, falling into the recess in the end of the pawl, holds the hook securely locked and prevents uncoupling. By giving the shaft a half-turn the hooks are released on both cars. The one attached to the rotated shaft, being raised and carried forward by the eccentric, is pushed upward by the swell on its underside as it slides on the top of the pallet on the opposite draw-head. The pin *e* slides down the incline of the guide *h*, and holds the hook in the elevated position shown by dotted lines in Fig. 1. The rotating of this shaft also rotates the pallet on the other side of the draw-head. This lifts the point of the hook of the opposite draw-head also by the point engaging with the depression *d* in said pallet. The draw-heads may now be separated and the cars uncoupled. The hook on the opposite draw-head, as soon as the draw-heads are separated, drops back into a horizontal position, and is ready to make another coupling automatically. The other hook, which has been operated by the rotating of the shaft, is again returned to its horizontal position by rotating the shaft back again, when both couplers are free to operate automatically for recoupling.

In using our coupler with the ordinary link-and-pin draw-head, the hook may be thrown over back out of the way of stubbing-block, and by placing both hooks in that position cars may be run together without coupling. By the use of the same mechanism the hooks can be placed at any desired angle to accommodate loaded or unloaded cars. On one end of said shaft B is placed pear-shaped crank G, 100

recessed to receive a revolving wheel or ellipse, *g*, which is pivoted at the center to the back of the recess. A vertical rod, *i*, is secured to the said ellipse at one side of the center, and reaches
 5 to top of car, for the purpose of operating the coupling from above, and there may be side lever on end of car, attached to said vertical rod, for operating the coupler from either side of car.

10 Upon the shaft *B*, inside of the draw-head, is fixed a ring, *j*, having lips on one side, forming a socket to receive the end of the link, when a link is used for coupling. Said ring is designed for elevating or depressing the outer
 15 end of the link in making a coupling with cars which may have a draw-head at a higher or lower elevation.

In Fig. 8 is seen a plain wrought-iron draw-bar having a **T**-head, and provided with a cushion. Our devices may be attached to this in
 20 similar manner to the hollow draw-head, thus adapting the coupling to be coupled with passenger-cars having Miller coupler, the Miller hook catching onto the lower arm of **T**, while
 25 the upper arm of **T** may hold a link, if necessary, in coupling with a link-and-pin coupler.

Having described our invention, we claim—

1. In a car-coupling, the combination, with a draw-head adapted to be coupled with the ordinary link and pin, of a rotating shaft pro-
 30 vided with eccentrics *C C'*, and a pallet, *D*, for operating a coupling-hook, substantially in the manner and for the purposes specified.

2. In a car-coupling having a draw-head
 35 adapted to be coupled with the ordinary link

and pin, and provided with a rotating shaft having the eccentrics and pallet placed in the manner shown, of a coupling-hook arranged to be operated by said shaft and eccentrics, and to engage with a pallet on an opposite draw-
 40 head, substantially as and for the purpose specified.

3. In car-couplings, a coupling-hook having rear projection provided with cross-pin *e* and latch or pawl *F*, said pin engaging with in-
 45 clined guide *h* inside of draw-head, for holding or retaining the hook in an elevated or depressed position, as and for the purpose specified.

4. The guide *h* in the side of the draw-head, 50 for adapting same for operating in conjunction with coupling-hooks in making coupling in cars varying in height, as specified.

5. In car-couplings, the combination, with the rotating shaft, of a pear-shaped crank hav-
 55 ing pivoted wheel or ellipse carrying a vertical rod for operating the coupler from top of car, as described.

6. The combination, with the rotating shaft, of the ring *j*, having lips or socket for adapt-
 60 ing the said shaft to manipulate a link in making a coupling with an ordinary link-and-pin coupling, or car not having car-coupler attached.

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