

M. G. McCARTY.  
Car-Coupling.

No. 220,486.

Patented Oct. 14, 1879.

Fig. 1.

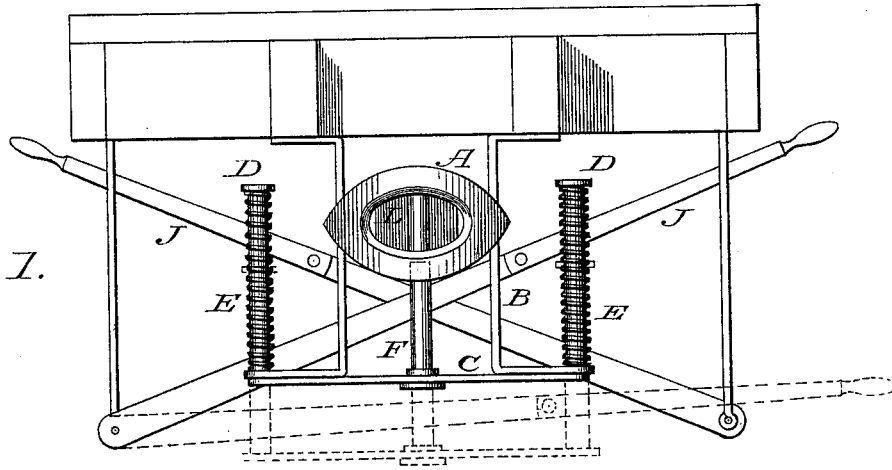


Fig. 2.

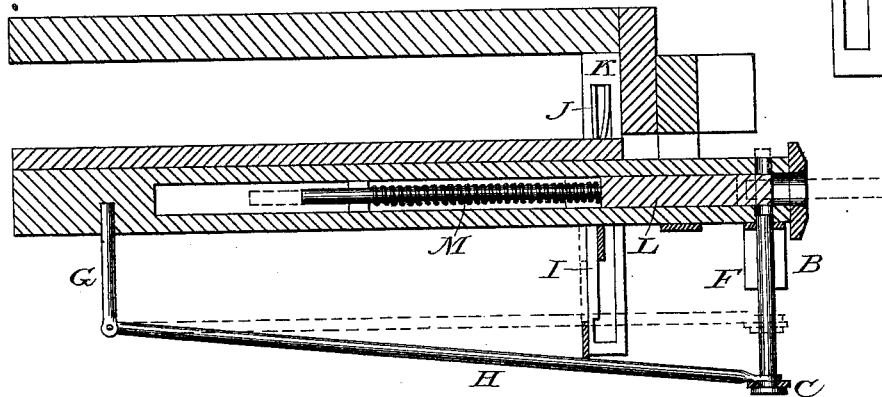
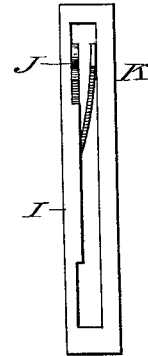


Fig. 3.



Witnesses:

Peter L. Burlingame  
Lewis L. Rogers.

Inventor:

Michael G. McCarty.

# UNITED STATES PATENT OFFICE.

MICHAEL G. McCARTY, OF GRAND RAPIDS, MICHIGAN.

## IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **220,486**, dated October 14, 1879; application filed August 15, 1878.

*To all whom it may concern:*

Be it known that I, MICHAEL G. McCARTY, of the city of Grand Rapids, county of Kent, and State of Michigan, have invented a new and useful Coupling Apparatus for Cars, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to produce a car-coupling which shall be self-acting, which may be uncoupled from either side of either car without going between or upon them, the action of which shall be certain, which shall be simple, easily-constructed, and cheap, which may be attached to and used with the ordinary draw-bar, which uses the ordinary link, which will couple to an ordinary link-and-pin coupler, as well as to another of the same kind, and which shall be under the car, out of the way of loading, &c.

To the under side of an ordinary draw-bar, A, at the point where the coupling-pin passes through, is attached, by means of bolts, by welding, or otherwise, a flat bar of iron, B, in a horizontal position, parallel to the end of the car. Upon either side of draw-bar A bar B is bent downward for a short distance, and thence outward again to any desired length.

Underneath bar B, of similar size, and of a length corresponding to the distance between the two ends of bar B, is a straight bar, C, from the ends of which ascend two rods, D, securely fastened at their lower ends to bar C, passing upward through holes in bar B, and having upon their upper ends heads, between which and bar B are wound spiral springs E E, which springs serve to hold bar C against bar B. From the center of bar C, and also firmly fastened thereto, ascends the coupling-pin F through bar B and draw-bar A far enough to have a strong bearing above the coupling-link when bar C is in its highest position. From the rear end of draw-bar A descends a fulcrum, G, to the lower end of which is pivoted rod H, whose other end rests upon bar C, and is pierced and held in place by coupling-pin F.

At a distance from the end of the car less than the length of rod H, upon either side of the car, is a guide, I, of the form shown in the

drawing, to the lower end of which is pivoted a lever, J, which extends across under the car and over rod H through the slot in the opposite corresponding guide I. Upon lever J is a spring, K, which serves to hold lever J in notches or catches in guide I, to prevent its accidental displacement. Guides I I extend a sufficient distance below the frame of the car, so that when lever J is depressed to a horizontal position coupling-pin F is drawn completely below the cavity in draw-bar A, thus uncoupling the cars.

In the cavity in draw-bar A is a sliding block of iron, L, of a proper shape to fill said cavity, behind which is a spring, M, which holds block L against coupling-pin F, and when coupling-pin F is drawn out of said cavity spring M pushes block L over coupling-pin F, thus preventing its return.

The operation of the above-described invention is as follows: Levers J J are always up, excepting when cars are being uncoupled. Suppose the cars coupled, if either lever I is depressed, it presses upon rod H, which in turn lowers coupling-pin F out of the cavity in draw-bar A, setting free the coupling-link, and also at the same time permitting block L to be thrown forward by spring M, thus preventing the return of coupling-pin F. Now raise lever J, and the car is ready for coupling. To couple, bring the two cars into contact, the link, being in one of the draw-bars, and held to place by the pressure of block L, pushes back the block L in the other draw-bar, releasing coupling-pin F, which, being thrown upward through the link by the elasticity of springs E E, couples the cars.

Should one of the draw-bars A be lower than the other, the apparatus may be so arranged that by lifting upon lever J the draw-bar may be lifted in its stirrup to the full extent of the play-room. If this is not sufficient, a bent link may be used, as with ordinary couplers.

If it is desirable to couple one of my couplers with an ordinary link-and-pin couple, this may be done by means of a link closed in the middle. Such link being placed in the old-style couple, the closed center, resting against

the pin, prevents the link slipping back, and the link, striking block L, performs the same office, as above described.

I claim—

1. The combination, in a car-coupler, of bars B, bar C, rods D D, springs E E, coupling-pin F, fulcrum G, rod H, guides I I, levers J J, springs K K, block L, and spring M with an ordinary draw-bar and link, substantially in the manner and for the purposes set forth.

2. The pin F, springs E, fulcrum G, rod H, levers J, block L, and springs M, in combination with ordinary link and draw-bar, substantially as and for the purposes set forth.

MICHAEL G. McCARTY.

Witnesses:

PETER L. BURLINGAME,

DENNIS L. ROGERS.