(No Model.)

M. G. McCARTY.

CAR COUPLING.

No. 319,002. Patented June 2, 1885.

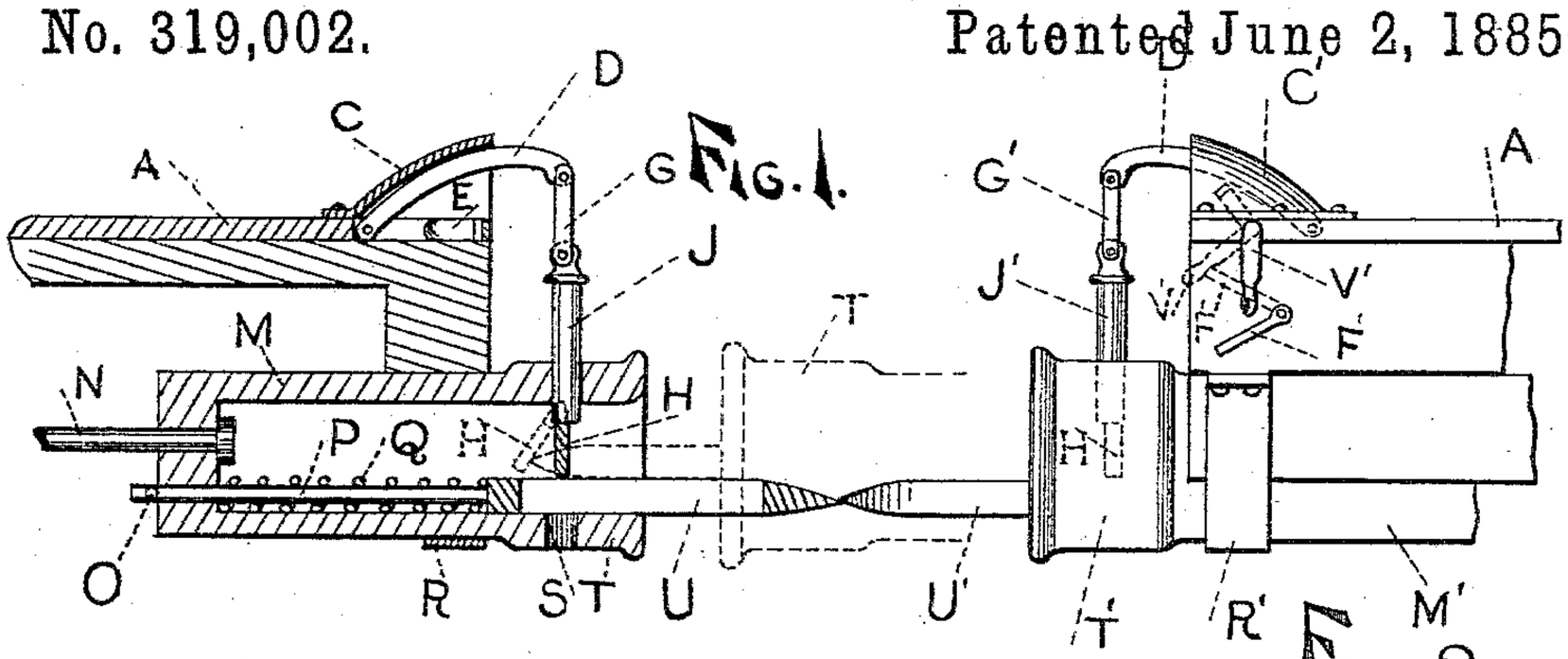

FIG. 1.

FIG. 2.

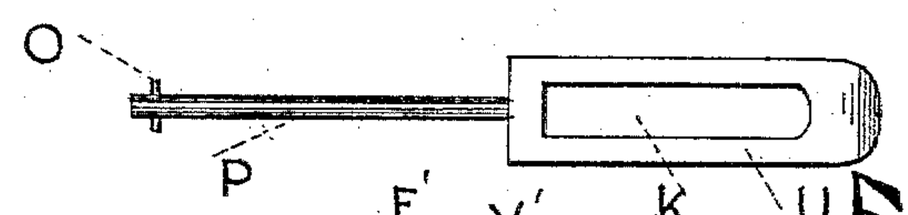

FIG. 3.

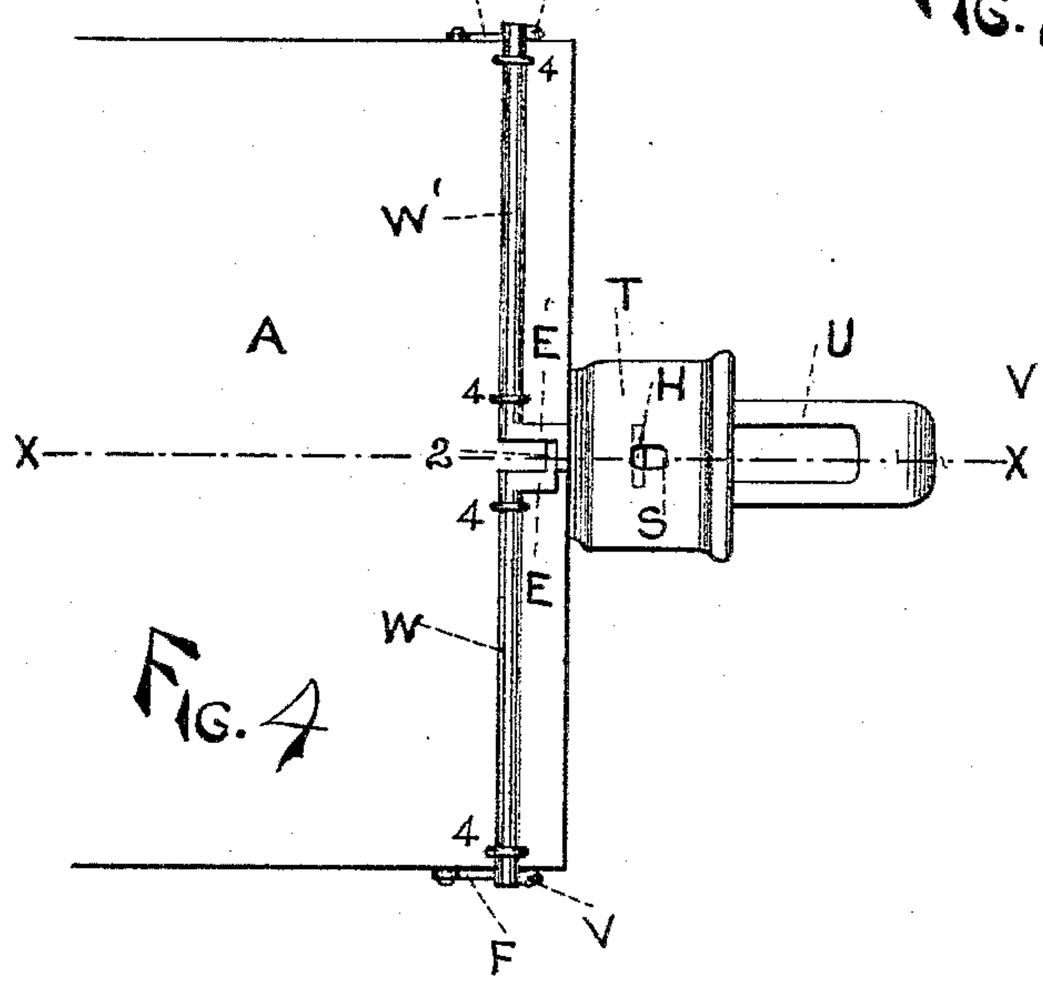

FIG. 4.

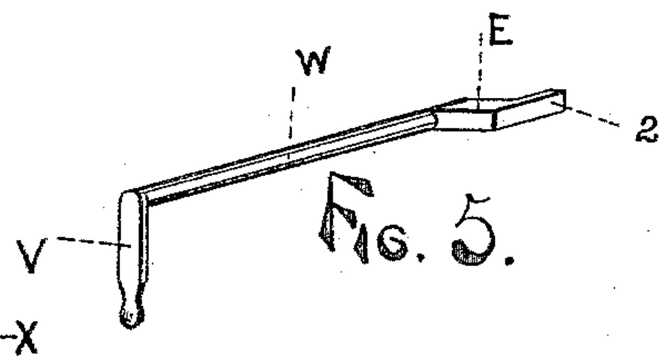

FIG. 5.

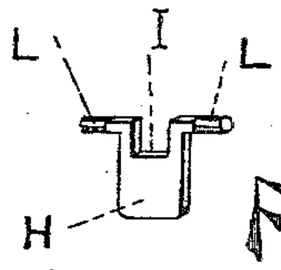

FIG. 6.

WITNESSES:

Alvah W Brown

Edw. Dandridge

INVENTOR

Michael G. McCarty

BY Francis L. Rogers

ATTORNEY

UNITED STATES PATENT OFFICE.

MICHAEL G. McCARTY, OF GRAND RAPIDS, MICHIGAN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 319,002, dated June 2, 1885.

Application filed January 19, 1885. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL G. McCARTY, of the city of Grand Rapids, in the county of Kent and State of Michigan, have invented a new and useful Improvement in Car-Couplers, of which the following is a specification, reference being had to the accompanying drawings.

My invention consists of devices by which cars can be coupled automatically and uncoupled from either side or from the top of the car without passing between them, thus avoiding danger to the attendant. They may be attached and used upon the cars now in common use without change of structure, are adapted to cars of different heights, connectible with other cars using the ordinary link-and-pin coupling in common use, and are also adapted to box, flat, or stock cars, and protected from injury by suitable devices.

Referring to the drawings, Figure 1 is a vertical sectional view on the line *x x* of Fig. 4, showing the pin drawn. Fig. 2 is a side elevation. Fig. 3 is a plan view of my link. Fig. 4 is a plan view of the end of a car having my rock-shafts with their end levers arranged across the end, showing also the end of the buffer and link. Fig. 5 is a perspective view of one of my shafts. Fig. 6 is a perspective view of my pin-supporter.

Similar letters of reference indicate corresponding parts in all the figures.

I arrange two shafts, W W′, across the end of the car, in suitable bearings, 4 4, to allow them to turn easily. The outer end is turned downward, forming the handles V V′. The inner ends lap by each other and have the crook E², Fig. 5. When not in use, they lie flat, as shown in Fig. 4. Their office is to raise the arm D, the inner end of which being shackled to the car secures it at that point, and admits of the outer end being raised and lowered by turning the shaft W, as shown Fig. 2 by dotted line. The pin J is suspended from the end of lever D by the rod G, passing downward through the hole S in the head T, Fig. 4. The hood C is placed over arm D, to protect it from being jammed by long timbers or other means when in use on flat cars, and is secured to the floor of the car A. The draw-bar M is secured to the bottom of the car by the collar R R′ in the usual manner, and is of the form in common use for link-and-pin couplings.

N is the end of the draw-rod, to which it is attached in the usual manner. The link U, Fig. 3, has the stem P, and the key O is arranged in the chamber and actuated by the spring Q, the end of the stem P passing through the chamber and being secured by the key O, as shown in Fig. 1. The pin-supporter H is suspended near the front of the chamber by the arms L L, Fig. 6, which rest upon the bottom of the grooves in the head T upon either side of the hole S. (See Fig. 4.) The pin J is preferably oval, as this form best endures the strains to which it is subjected. The ends of the links U are flattened, as shown in Figs. 1 and 2, to enable them to slide upon each other without coming into collision. The dogs F F′ are secured to the sides of the car, and when raised prevent the shafts W from turning and the cars from coupling.

Having thus described my invention, its operation is as follows: Turning either crank from either side of the car actuates the arm D and raises the pin J. The pin-supporter H swings by its own weight underneath the pin, the end of which then rests in the bottom of the recess I, Fig. 6. When the end of the link in the opposite car is introduced, as shown at Fig. 1 in dotted line, the end of the link U presses against the pin-supporter H, pushing it backward, and the pin drops into the link, thus making the coupling. The spring Q keeps the link always projecting, but enables it to pass backward into the chamber when brought forcibly against another car or other obstacle.

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

1. In a car-coupling, the combination, with a draw-bar head, T, provided with a pin-receiving opening, S, having intersecting transverse grooves upon either side thereof, of the pendulous pin-support H, having the notch I, and the laterally-projecting arms L L, adapted to said grooves, and resting upon shoulders at the bottom of said grooves, suspending said pin-support in said draw-head at right angles to and in a line with the axis of said pin-receiving openings in a position to swing later-

ally underneath said pin-opening when the pin is raised, and the pin J, the connecting-rod G, and the arm D, hinged to the floor of the car, as shown, arranged substantially as described, and for the purposes set forth.

2. In a car-coupling, the combination of the pin-supporter H, the draw-bar M, and the link U, having stem P and actuating-spring Q, arranged substantially as described.

3. In a car-coupling, the combination of the shaft W, having end crank, E^2, and handles V, provided with dogs F F′, with the arm D, having the rod G, and the pin J, suspended from arm D, arranged substantially as described.

4. In a car-coupling, the combination of the shaft W, having end crank, E^2, and handles V, arranged across the end of a car, and hood C, secured to the bottom of the car, for covering the arm D, the arm D, the brace G, and the pin J, arranged substantially as described, and for the purposes set forth.

5. In a car-coupler, the combination of the links U, having stem P, adapted to override each other, and their actuating-springs Q, and the pin-supporter H, arranged in the draw-head T, and the shafts W W′, having handles V, and cranks E^2, arranged across the end of a car, and the arm D, rod G, and pin J, arranged substantially as described, and operating substantially in the manner specified.

6. The combination, in a car-coupler, of the links U, having stem P, and actuating-springs Q, adapted to override each other, the pin-supporter H, adapted to support the pin J, the crank-shaft W, arranged across the end of a car and adapted to lift the arm D, the arm D, secured to the floor of the car, and the pin J and rod G, the hood C, secured to the floor of a car and covering the arm D, and the dogs F F′, secured to the side of the car and adapted to the handles V, arranged substantially as described, and operating as specified.

MICHAEL G. McCARTY.

Witnesses:

DENNIS L. ROGERS,

ALVAH U. BROWN.