(No Model.)

# G. MOCK.

## CAR COUPLING.

No. 397,018. Patented Jan. 29, 1889.

*Fig 1*

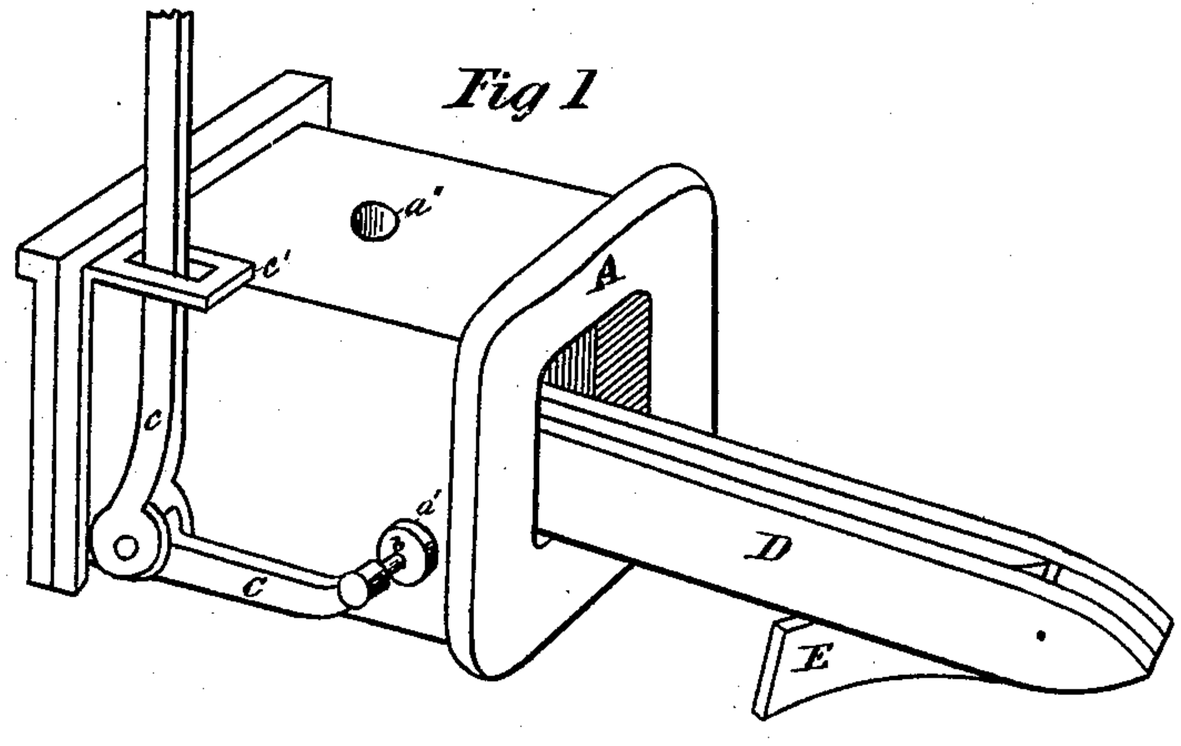



*Fig 7*

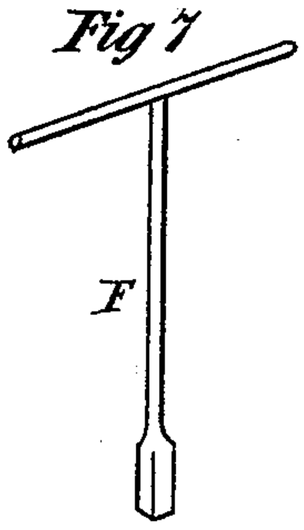



*Fig. 2.*

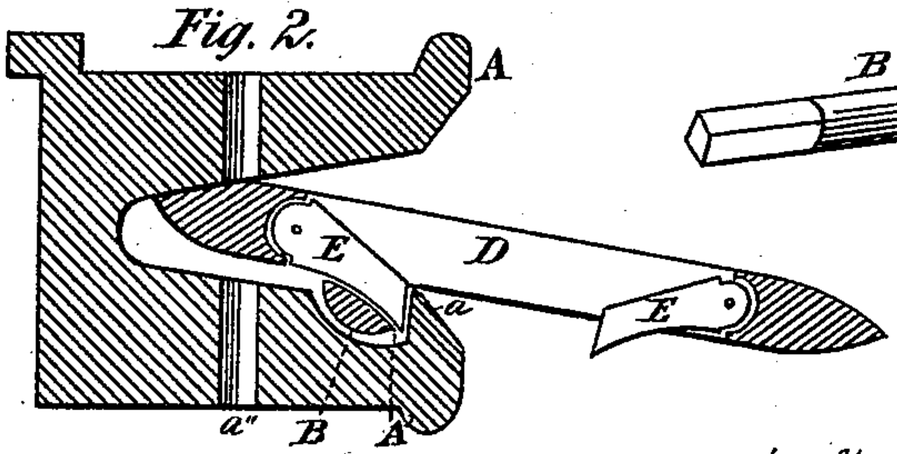



*Fig. 3.*




*Fig. 4.*

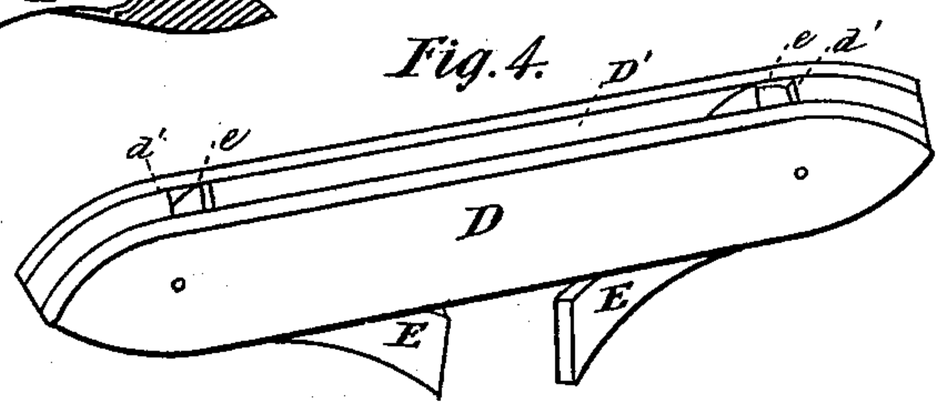



*Fig. 6.*

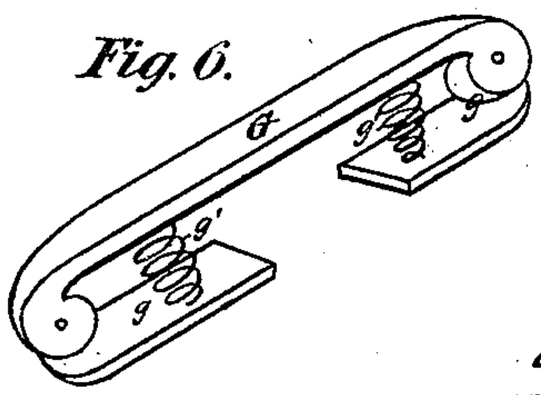
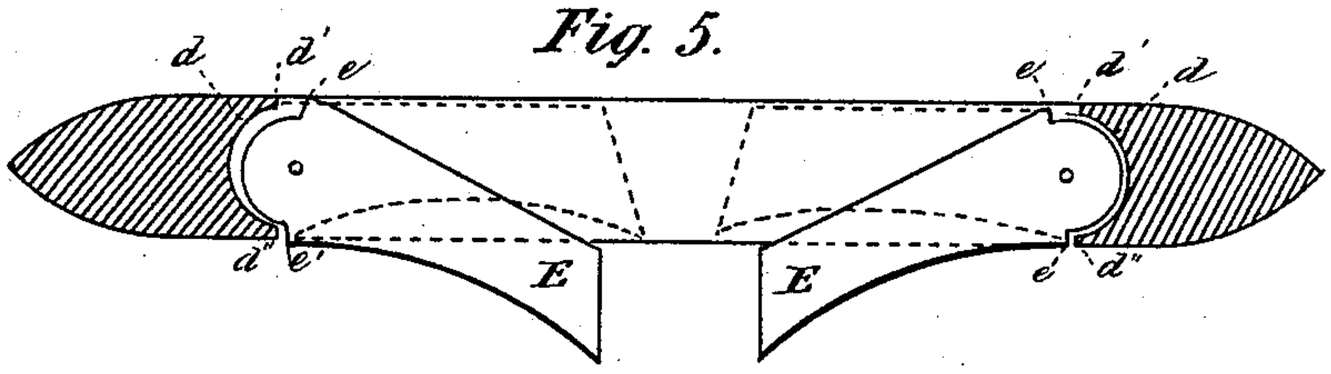



*Fig. 5.*




WITNESSES.

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# UNITED STATES PATENT OFFICE.

GEORGE MOCK, OF SPRINGFIELD, KENTUCKY.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 397,018, dated January 29, 1889.

Application filed June 25, 1888. Serial No. 278,202. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE MOCK, a citizen of the United States, residing at Springfield, in the county of Washington and State of Kentucky, 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 an improvement in car-couplings, and the object of my invention is to provide a simple, cheap, and durable coupling whereby railroad-cars may be coupled or uncoupled conveniently from the top or from the ground on either side without the necessity of the brakemen going between them, and which is so constructed as to allow the convenient use of the ordinary link-and-pin coupling in case of need. I accomplish these results by the construction and combination of parts, substantially as hereinafter set forth.

In the accompanying drawings, which illustrate my invention, similar letters refer to similar parts throughout.

Figure 1 is a perspective view showing my coupling device in position to couple automatically. Fig. 2 is a sectional view of the same. Fig. 3 is a detail view of the uncoupling-bar with cam. Fig. 4 is a perspective view of the link-bar. Fig. 5 is a sectional view of the same. Fig. 6 is a perspective view of the alternate form of link-bar. Fig. 7 is a perspective view of the uncoupling-wrench.

A is a draw-head.

B is an uncoupling-bar passing through the draw-head, furnished with a cam, B′, flat on the upper side and circular below, which fits in a recess, A′, in the lower wall of the draw-head just inside of the buffer-flanges and projects inwardly from the mouth of the draw-head. This recess is circular except on the side next to the mouth of the draw-head, where it is at right angles to the opening, so as to leave the lip *a*. The uncoupling cam-bar B is so constructed as to project beyond the outside of the draw-head on both sides. On the left side is a screw-thread to receive a nut, and outside of that it projects, so as to be operated on by the head of a wrench. On the right side it projects so as to receive, first, a collar, *b*′, which fits into the hole *a*′ in the side of the draw-head through which the uncoupling-bar is passed, and then the crank C, outside of which it projects, so as to be operated on by a wrench. Jointed to the crank C is the lever-arm *c*, which extends to the top of the car and is held in place by the guard *c*′.

D is the link-bar, sloping at both ends to a rounded point and having a slot, D′, through it from top to bottom, in which tongues E are pivoted. The slot D′ has a curved recess, *d*, at each end, so as to leave shoulders *d*′ above and *d*″ below. The tongues E are rounded at their pivoted ends, so as to fit in the curved recesses *d* in the ends of the slot, and furnished with shoulders *e* above and *e*′ below. The shoulders *d*″ of the recess in the slot engage the shoulders *e*′ of the tongues and prevent them from further movement downward, and the shoulders *d*′ in the same way operate on the shoulders *e* and prevent their further movement upward when they are well within the slot. The tongues E move freely on their pivots, so that they will drop downward when unsupported till the two shoulders *d*″ and *e*′ meet. This link-bar can be best constructed of four pieces of metal, two long pieces for the outside and two shorter pieces, laying them together so as to leave the slot, and then welding them together.

The operation of my coupling is as follows: The link-bar D, with the tongues E hanging down, is inserted in the mouth of the draw-head, the tongue being pressed up into the slot as it goes in until its end passes transversely beyond the lip *a*, when it drops down and is prevented from withdrawing by the lip *a*. The link-bar projects from the draw-head with the tongue at the outer end hanging down, and when it is brought in contact with a similar draw-head its curved end slides into the sloping mouth and the tongue becomes engaged in the same way as described above. In order to uncouple from the top, the brakeman grasps the handle of the lever-arm *c* and lifts it, when the cam B′ is raised and lifts up the tongue E, so that it will pass over the lip *a*.

To uncouple from the side, the cam B′ is raised by using the wrench F on the end of the uncoupling-bar B. A link-bar to be operated on by my plan may be made also by taking a bar of iron and attaching below it to each end a tongue by a joint so constructed that the jointed ends of the link-bar will be rounded, and then placing between each tongue and the bar above a strong coiled spring, as shown in Fig. 6. I claim a link-bar constructed with springs in this manner as part of my invention. A draw-head to be used with my car-coupling has a hole, $a''$, in its upper wall and a corresponding hole in its lower wall for a common coupling-pin, and the common link and pin can be used with it when a car furnished with my device needs to be coupled with one using the common link and pin.

The essential feature of my link-bar is the pivoted tongue which engages the lip of the draw-head in coupling; and I do not limit myself to the mode of constructing such bars described herein. The draw-head in my coupling is the same kind as ordinarily used with the link and pin, only modified by the recess in the bottom, forming the lip or catch $a$ and a place for the cam to lie in and the holes in the side for the uncoupling-bar, as described, and there must be such relation between the length of the tongues of the link-bar and the dimensions of the mouth of the draw-head that the tongue cannot be disengaged by lifting the bar or in any way but by lifting the tongue itself. The fact that uncoupling can be done by lifting the tongue alone is a great advantage for my couplers over other couplers in which the whole weight of the link or coupling-hook has to be lifted. In construction my link-bar can be bent, just as the common link is, for use in cases where a car is to be coupled to one much higher.

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

1. The link-bar D, having a slot, D′, recesses $d$, with shoulders $d'$ and $d''$, and tongues E, with shoulders $e$ and $e'$, pivoted within the slot, substantially as set forth, and for the purpose specified.

2. In a car-coupling, a draw-head, A, having a lip or catch, $a$, in combination with a link-bar provided with tongues pivoted within the ends of the bar to engage with the lip of the draw-head.

3. In a car-coupling, the combination, with a draw-head having a lip or catch, $a$, a recess, A, in its lower wall, holes in its side walls connecting with the recess, and a transverse uncoupling-bar, B, provided with a cam, B′, of a link-bar provided with pivoted tongues to engage with the lip of the draw-head and mechanism for operating the uncoupling-bar B to lift the tongue and release the link-bar, substantially as set forth, and for the purpose specified.

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

GEORGE MOCK.

Witnesses:

JAMES L. WHARTON,

ANDREW THOMPSON.