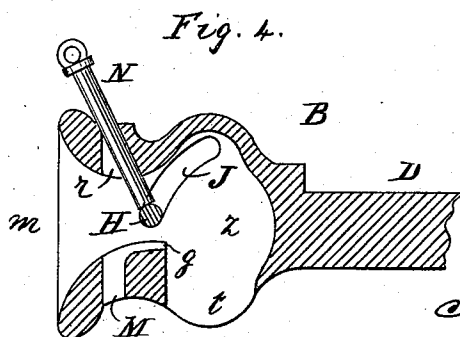
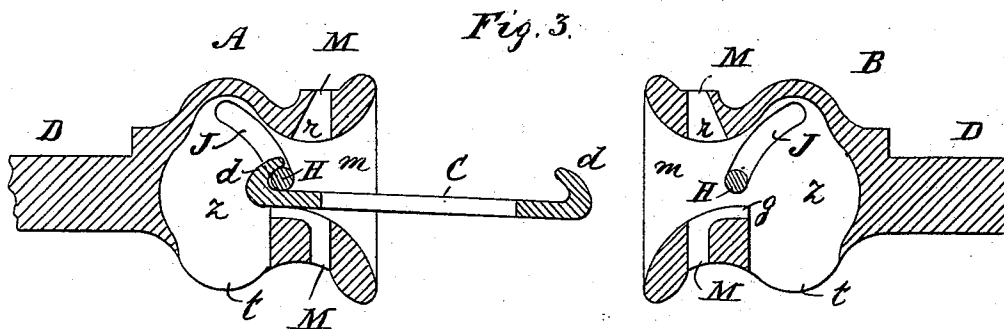
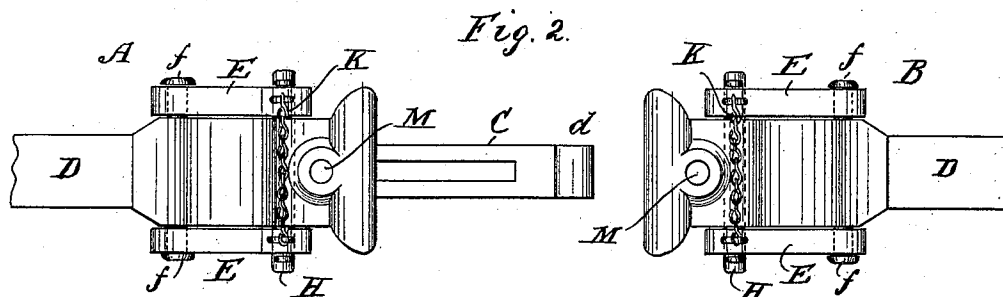
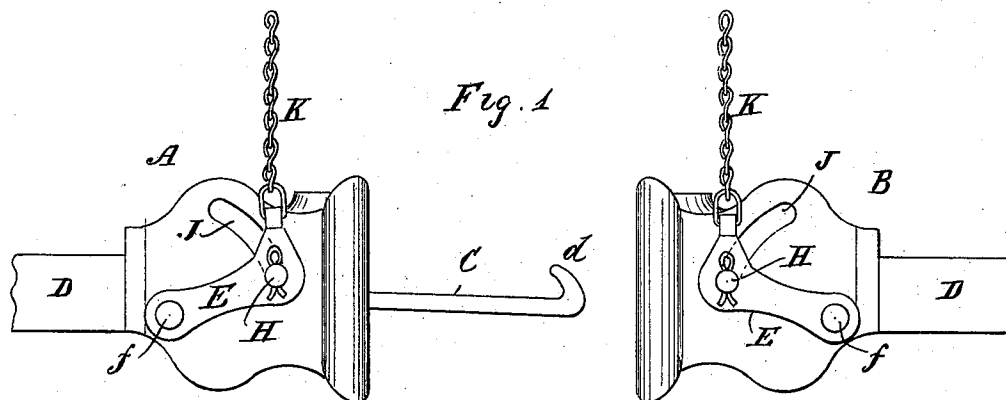


(No Model.)

J. H. WARD.
CAR COUPLING.

No. 323,242.

Patented July 28, 1885.



Witnesses.

W. B. Blanka.
L. J. White

Inventor.

John H. Ward.
Per C. A. Shaw,
Attorney.

UNITED STATES PATENT OFFICE.

JOHN H. WARD, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO HIMSELF
AND JAMES H. McDERMOTT, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 323,242, dated July 28, 1885.

Application filed June 6, 1885. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. WARD, of Lowell, in the county of Middlesex and State of Massachusetts, have invented a certain new and useful Improvement in Car-Couplers, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation representing my improved car-coupler; Fig. 2, a top or plan view of the same; Fig. 3, a vertical longitudinal section taken on line *xx* in Fig. 2, and Fig. 4 a longitudinal section of one of the draw-bar heads provided with the ordinary coupling-pin.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to that class of car-couplers which are automatic in their action, or self-coupling; and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation:

In the drawings, A B represent the draw-bar head; C, the coupling-link, and D the draw-bars. The heads A B, link C, draw-bars D, and their immediately connected appliances or attachments constitute the coupler proper, and it is therefore not deemed essential to show the cars with which they are designed to be used.

Each of the heads is provided with an open mouth, *m*, and chamber or cavity *z*, the chamber opening outward through the bottom of the head at *t*.

Pivoted at *f* to either side of each head, near the draw-bar D, there is a lever, E, and mounted in the free ends of these levers there is a transversely-arranged coupling-pin, H, adapted to

work in upwardly and backwardly curved slots J, formed respectively in the sides of the head.

The link C is provided with an upwardly-turned hook, *d*, at either end, adapted to engage the pin H.

A chain, K, is attached to the levers E for raising the pin H out of engagement with the link C in uncoupling the cars. The chain may be extended to the top of the car, or it may be attached to a crank-lever on the end of the car, thereby enabling the pin to be raised and the cars uncoupled without the necessity of going between them.

A vertically-arranged hole, M, is formed in the forward end of the head for receiving the ordinary coupling-pin, N. The upper section of this hole is flared where it opens into the mouth *m*, as shown at *r*, to enable the pin N to be inclined, and thereby permit it to rest on the pin H, as shown in Fig. 4.

To couple the cars with my improved coupler, the link being in the head A, as shown in Figs. 1, 2, and 3, if, now, the heads A B are brought together, the link C will enter the head B, strike the pin H, and force it upwardly in the slots J, the hook *d* passing under said pin into the chamber *z* as the link enters the head, and the pin falling and engaging the hook after the hook has passed it, thereby coupling the cars in a manner which will be readily obvious without a more explicit description.

To uncouple the cars, the heads A B are pushed together until the hooks *d* are disengaged from the pins H, when the chain K of the head B or A, as the case may be, is drawn up, thereby raising the levers E and pin H, attached to said chain, and permitting the link to be withdrawn from the head in which the pin is raised by the chain, as described. The levers act to keep the pin H in a horizontal position and also to "weight" said pin, and constantly tend to force it down onto the bottom of the grooves J.

When the ordinary or old-fashioned link is used to couple the cars, the pin N is employed, the pin being inclined and permitted to rest on the pin H, as shown in Fig. 4, so that when the heads of the coupler are brought together and the link enters the head B the link will strike the pin H and force it upwardly in

the slots J from under the pin H, thereby permitting the pin N to drop and enter the link and couple the cars. A downwardly-curved groove, *g*, is formed in the bottom of each of the heads to receive the lower end of the pin N and guide it into the lower part of the hole M when it falls from the pin H through the link.

I do not confine myself to using the hole M, pin N, and groove *g*, as either or all of these features may be omitted, if desired. Neither do I confine myself to the use of the chain K, as any other suitable means may be employed for raising the levers E and pin H.

Having thus explained my invention, what I claim is—

1. In a car-coupler, the combination of the following instrumentalities, to wit: two draw-bar heads, each of said heads being provided with an open mouth and chamber for receiving the coupling-link, upwardly and backwardly curved slots opening through either of its sides into said chamber, a transverse coupling-pin adapted to work in said slots, two gravitating pivoted levers for said pin, and a lifting-chain for raising the levers and

pin in uncoupling the cars, and a coupling-link provided with hooks adapted to engage said pins, substantially as described.

2. The improved car-coupler herein described, the same consisting of the bars D and heads A B, each of said heads being provided with a mouth, *m*, chamber *z*, slots J, pin H, levers E, and chain K, in combination with the link C, having the hooks *d*, constructed, combined, and arranged to operate substantially as set forth.

3. The head A, provided with the groove *g*, slots J, and hole M, flared as shown at *r*, in combination with the pins H N and levers E, substantially as described.

4. In a car-coupler, the head A, provided with the mouth *m*, chamber *z*, slots J, and groove *g*, for receiving and guiding the pin N into the lower portion of the hole M, in combination with the pin H, levers E, and chain K, constructed, combined, and arranged to operate substantially as described.

JOHN H. WARD.

Witnesses:

SAMUEL B. WYMAN,
GEO. H. STEVENS.