

UNITED STATES PATENT OFFICE.

JOHN T. EVANS, OF OMAHA, NEBRASKA, ASSIGNOR OF THREE-FOURTHS TO
JAMES A. GRIFFITHS, OF PHILADELPHIA, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 548,248, dated October 22, 1895.

Application filed April 30, 1895. Serial No. 547,630. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. EVANS, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Car-Couplers, of which the following is a specification.

My invention has relation to car-couplings of the link-and-pawl class, and it relates particularly to the general construction and arrangement of such a car-coupling.

The principal objects of my invention are, first, to provide an efficient, simple, durable, and comparatively inexpensive mechanism adapted to meet all the requirements and perform all the functions of a first-class car-coupling; second, to provide in such a coupling mechanism for locking the pawl-arm of the same in an inoperative position; third, to provide in such a coupling mechanism for locking the pawl-arm in the link to prevent the withdrawal of the link from the coupling, and, fourth, to provide in such a coupling a draw-head adapted to carry on its upper or lower face the coupling mechanism and to be thereby rendered reversible.

My invention consists of a car-coupling constructed and arranged substantially in the manner hereinafter described and claimed.

The nature, characteristic features, and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1 is a view, partly in side elevation and partly in section, of a car-coupling embodying the main features of my invention, one of the locking-pawls being elevated into an inoperative position and locked therein. Fig. 2 is an end elevation of the car-coupling, illustrating the pawl in an elevated inoperative position and the pin for locking the pawl in such position; and Fig. 3 is a top or plan view of one of the draw-heads, showing the locking-pawls occupying an elevated position entirely out of the draw-head, and illustrating mechanism for locking the pawl to the draw-head when the pawl is in the link.

Referring to the drawings, *a* represents the draw-head arranged at one end of a car in the usual manner.

b is the locking pawl or catch, which may be pivoted by means of a bolt *b*², as at *c* or *c'*, in the draw-head *a*, and occupying a position in a longitudinal slot *d* or *d'*, extending through either the upper or lower surface of the draw-head *a* and communicating with the hollow interior *e* of the draw-head. A portion *b'* of the pawl or catch *b* projects above the upper surface of the draw-head and rests thereon when the pawl *b* is in its lowest position, and in this projecting portion is cut a slot *f*, through which the hand of the operator may be introduced to lift the pawl manually or by mechanism (not shown) applied so that the pawl *b* may be raised from the sides or top of the car.

The lower edge of the pawl *b* is beveled, as at *g*, and in the lowest position of the pawl it extends into the cavity *e* of the draw-head in the path of the link *h*, and the pawl *b* is adapted to be raised by the link *h* engaging this beveled edge *g* when said link traverses the cavity. The beveled edge *g* terminates in a shoulder *k*, behind which the link rests when guided in the cavity *e* of the draw-head.

The pawl *b* is provided with a hole *l*, located so that when the pawl is raised on its pivot to bring the shoulder *k* out of engagement with the link *h* the hole *l* will be above the top surface of the draw-head *a*, as indicated in Figs. 1 and 2. In this position a pin *m* is slipped through the perforation *l* in the pawl and sustains the pawl in an elevated inoperative position. Above the shoulder *k* and below the projecting portion *b'* a recess *n* is formed in the end of the pawl *b*. This recess is adapted to receive a catch *o*, placed in the draw-head *a*, when the pawl *b* is in its lowest position—that is to say, in the path of the link *h*. The engagement of this catch *o* with the recess *n* of the pawl serves to lock the pawl down in the draw-head *a*. A chain *p*, secured to the catch *o*, serves to release the same from the recess *o* to permit the withdrawal of the pawl *b* from the draw-head.

In operation the link *b* is first locked in one of the draw-heads *a* by the pawl *b*, and when the draw-heads approach each other the free end of the link enters the cavity *e* of the other draw-head, and pressing against the beveled edge of the shoulder *k* raises the

pawl *b* until the link slips back of the shoulder, when the pawl by gravity will drop and lock the link in the draw-head. The catch *o* will slip into the recess *n* in the pawl and
 5 lock the pawl in its lowest position to the draw-head. To release the link from the pawl, the chain *p* is operated, the catch *o* withdrawn from the recess *n*, and the pawl lifted out of the path of the link. Should it be nec-
 10 essary that the pawl *b* be kept in its raised position out of the path of the link *h*, the pin *m* is slipped into the hole *l* in the pawl, and the pawl thereby maintained in its elevated position. In this instance, the link *h* may
 15 enter and be withdrawn from the cavity in the draw-head without being locked therein by the pawl.

It is to be observed that both the upper and lower faces of the draw-head *a* are adapted
 20 to receive the pawl *b*, and hence by simply turning the draw-head *a* the pawl *b* may be pivoted by the bolt *b*² in either slot *d* or *d'*. The draw-head *a* is thus reversible, and should one surface thereof become worn or broken
 25 the draw-head may be turned to present the other surface upward and the pawl secured in the slot in the face thereof.

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

1. In a car-coupling, a draw-head and link,

a recessed pawl-arm pivoted in a longitudinal slot in said draw-head, a beveled shoulder projecting from said pawl-arm into the interior of the draw-head and adapted to engage 35 the link to lock the same in the draw-head, a slotted portion of the pawl-arm projecting above the draw-head, means for raising or lowering said pawl-arm through said slotted projecting portion, a catch carried by the 40 draw-head and adapted to engage the recess in the pawl-arm to lock said pawl-arm in its lowered position to said draw-head, and means for releasing said catch from said recess, substantially as and for the purposes described. 45

2. In a car coupling of the character described, a link, a reversible draw-head provided with longitudinal slots in its upper and lower surfaces and a pawl-arm adapted to be pivoted in either of said longitudinal slots to 50 constitute a device for locking the link to the draw-head, substantially as and for the purposes described.

In testimony whereof I have hereunto set my signature in the presence of two subscribing witnesses. 55

Omaha, Nebraska, April 26, 1895.

JOHN T. EVANS.

Witnesses:

J. W. FEAD,

E. J. WUTHRICH.