

(No Model.)

2 Sheets—Sheet 1.

H. L. PECK.

CAR COUPLING.

No. 346,559.

Patented Aug. 3, 1886.

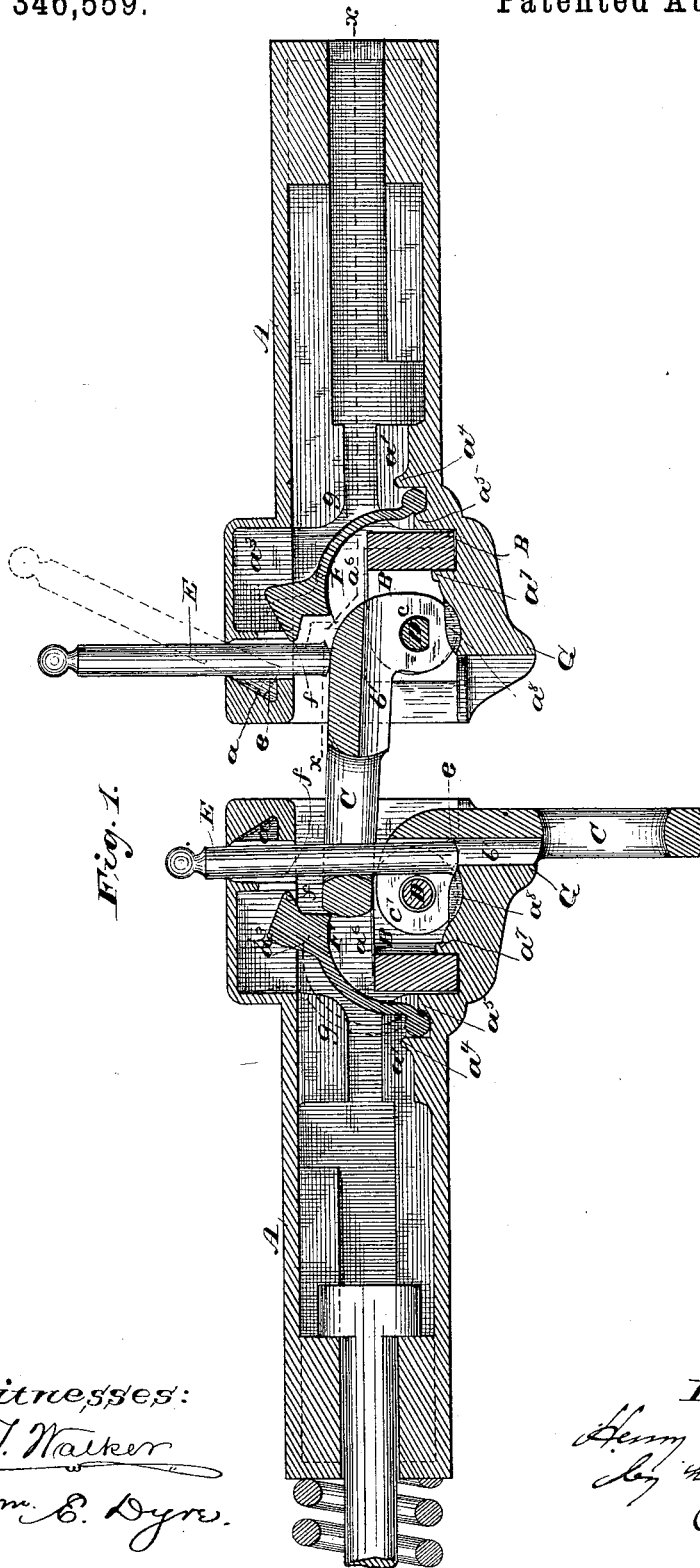


Fig. 1.

Witnesses:
E. J. Walker
Wm. E. Dyre.

Inventor.
Henry L. Peck
By his attorney
R. B. Gibb

(No Model.)

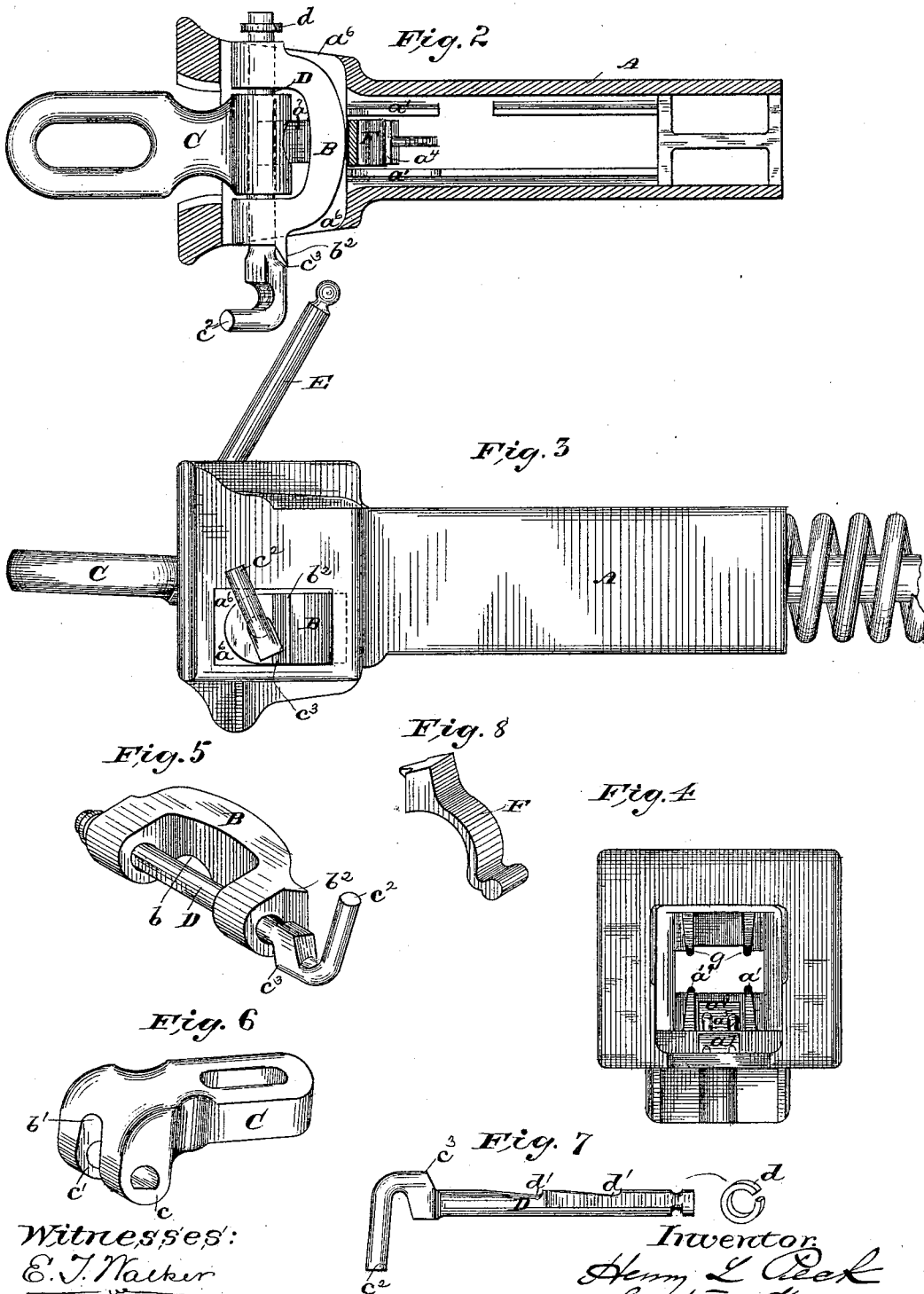
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Witnesses:

E. J. Walker

Wm. E. Dyer

Inventor

Henry L. Peck
By *[Signature]*

UNITED STATES PATENT OFFICE.

HENRY L. PECK, OF NEWARK, ASSIGNOR TO THE PECK CAR COUPLER
AND MANUFACTURING COMPANY, OF COLUMBUS, OHIO.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 346,559, dated August 3, 1886.

Application filed January 19, 1886. Serial No. 189,073. (No model.)

To all whom it may concern:

Be it known that I, HENRY L. PECK, a citizen of the United States, residing at Newark, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Car-Couplers; 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.

This invention relates to car-couplers of the type described in my United States Patent No. 301,750, barring the double-coupling feature thereof.

My improvement consists of certain features of construction and combinations of parts, having in view the simplification and enhanced effectiveness of the coupler described in my aforesaid patent.

The ensuing description, in connection with the annexed drawings, will make clear the improvement, and the claims at the close of this specification will distinctly point out the several parts thereof.

Figure 1 represents a vertical longitudinal section of two of my improved couplers coupled together. Fig. 2 represents a horizontal section of one of my improved couplers, taken in the plane indicated by dotted line X X of Fig. 1. Fig. 3 represents a side elevation of the couplers, the link being shown as turned up ready for coupling. Fig. 4 represents a front end view of the draw-bar, the coupling devices being omitted. Fig. 5 represents a perspective view of the swivel-tree and link-pin. Fig. 6 represents a perspective view of the link. Fig. 7 illustrates the link-pin and the locking-ring. Fig. 8 represents a perspective view of the trip-dog.

The same letters of reference indicate identical parts in all the figures.

My improved coupling consists of the draw-bar A, swivel-tree B, link C, link-pin D, coupling-pin E, and trip-dog F. The hollow neck of the draw-bar is cross-channeled in substantial accordance with the construction described in my United States Patent No. 328,969. The head of the draw-bar is suitably chambered for the accommodation of the various coupling devices. The coupling-pin,

having a shoulder, *e*, at its lower end, is inserted from below through the pin-hole in the crown-plate of the head, the shoulder *e* preventing its upward withdrawal from said pin-hole. A recess, *a*, is formed in the crown-plate, into which the lower end of the coupling-pin may be turned when not required for coupling, when it assumes the position shown in Fig. 3 and in dotted lines in Fig. 1; but ordinarily the coupling-pin is supported ready for coupling upon the toe *f* of the trip-dog F, which toe passes through a slot in the rear wall of the pin-hole of the crown-plate, as clearly shown in Fig. 1. The trip-dog, having substantially the form shown, rests with the round at its lower end in a seat formed in the lower wall of the neck at the throat, between the longitudinal ribs *a' a'*. A recess, *a''*, is formed in the crown-plate of the head, back of the rear wall of the pin-hole, to permit the upper end of the trip-dog to be turned back so as to draw its toe from under the coupling-pin. The trip-dog is put in place by first passing its upper end into recess *a''*, and then swinging the lower end back until it strikes the high back rail, *a'*, of its seat, which prevents its rearward displacement. Its forward displacement is prevented by the swivel-tree, which lies directly in front of the front rail, *a'*, of the seat, extending up considerably above such front rail, as shown in Fig. 1. The head of the draw-bar has an opening, *a''*, in each cheek on about a level with the bottom plate, and high enough to admit the swivel-tree. A stout draft-lug, *a'*, is formed on the bottom plate of the head, about midway between its cheeks, and at such distance forward of the throat of the neck of the draw-bar that the swivel-tree can lie behind the draft-lug, between it and the rail *a'* in the throat. The rear side of the draft-lug is rounded, so that the swivel-tree can turn on it to a limited extent. The metal of the stirrup-shaped swivel-tree is cut away at *b*, in order that it may pass with one end over the draft-lug *a'* in inserting it endwise into the head through the openings in the cheeks thereof and assume its proper position. (Shown best in Fig. 2.) After the insertion of the swivel-tree, the link C is pivoted to it by the link-pin D. The link is con-

5 constructed with ears *c* and *c'* at its inner end, which fit between the ears of the swivel-tree and loosely embrace low longitudinal rails *a*⁸, extending forward from the draft-lug *a'*, along the bottom plate of the head. After the link has been connected to the swivel-tree by the link-pin, none of the parts can be removed or displaced. The link-pin is secured against withdrawal by a locking-ring, *d*, contracted around it into a recess. Other known means may be used to secure the link-pin. One of the ears of the link has a segmental hole to receive a correspondingly-formed part of the link-pin, so that the link cannot turn independently of the link-pin. The bottom plate of the head has a recess in its front edge, which receives the link when it is turned down, as shown in the left-hand coupler of Fig. 1, which also illustrates the position of the parts when the link of an adjacent coupler is coupled to such coupler. The recess is so deep that the link when turned down into it hangs a little to the rear of the front face of the head, so that it cannot be struck. It will be observed that a longitudinal groove, *b'*, is formed in the web of the link on that side from which the ears project, deep enough to permit the coupling-pin to drop in between said ears behind the web and in front of the link-pin, but shallow enough to prevent the coupling-pin from passing down between the web of the link and the rear side of the recess in the front edge of the bottom plate of the head.

35 To turn the link up from the position shown in the left-hand coupler of Fig. 1 to the position shown in the right-hand coupler of Fig. 1, the link-pin is drawn out as far as the locking-ring will permit, and then turned by its handle *c*², after which the link-pin is pushed in as far as the angular shoulder *c'* on it will permit. The edge of the shoulder then locks onto an inclined surface of a locking-tooth, *b*², on the swivel-tree, so that the link-pin is now prevented from turning and holds up the link. The inclined surface on the locking-tooth of the swivel-tree admits of raising the link to and holding it at any desired elevation within the limited range required.

50 The dog *F*, when struck by a long ingoing link, recedes between the guard-ribs *g g* in the neck of the draw-bar, which stop the link and prevent injury to the dog.

55 The link-pin is automatically released from the locking-tooth of the swivel-tree after coupling has been effected, in order that the link may drop at once on uncoupling. This automatic release is effected by the draft of the link coming on slanting surfaces *d'* *d'* on the link-pin, whereby such link-pin is shifted endwise, so as to disengage its shoulder from the locking-tooth.

A strong-braced web, *G*, projects downward from the bottom plate of the head at the end of the link-recess therein, forming an abutment against which the link rests when dropped. This abutment not only holds the link in proper position for the coupling-pin to fall in behind it, but it also serves to support the link against shocks and prevents its bending in case it is struck by a low coupling of an approaching car, as may sometimes happen.

If required, any known means for lifting the coupling-pin and for turning up the link from the side of the car may be used in connection with my coupler.

The operation of my coupler is substantially like that described in my aforesaid Patent No. 301,750, except that the coupling-pin bears with its lower end against the web of the link when it is drawn upon by the link of the coupler of an adjacent car.

It will be readily understood that the car-couplers of ordinary construction may be coupled onto my improved coupler.

I claim as my invention—

1. The combination, substantially as before set forth, of the swivel-tree engaging the draft-lug on the bottom plate of the draw-head, the link, the link-pin for pivoting the link to the swivel-tree, and the coupling-pin designed to fall in coupling behind the solid web of the link in front of the link-pin.

2. The combination, substantially as before set forth, of the swivel-tree having a locking-tooth, the link, and the endwise-movable link-pin, which engages the link, so that the link cannot turn independently, and has a shoulder adapted to lock onto the locking-tooth of the swivel-tree to hold up the link.

3. The trip-dog loosely supported at its lower end in a seat in the throat of the draw-bar, guarded at the back by a back rail against rearward displacement, and at the front by the swivel-tree against forward displacement.

4. The combination, substantially as before set forth, of the link and the endwise-movable link-pin provided with a slanting surface.

5. The combination, substantially as before set forth, of the trip-dog and the guard-ribs in the neck of the draw-bar.

6. The head of the draw-bar having a recess in the front edge of its bottom plate, and a downwardly-projecting web at the end of such recess, substantially as before set forth.

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

HENRY L. PECK.

Witnesses:

JOEL M. DENNIS,
 EDSON B. DENNIS.