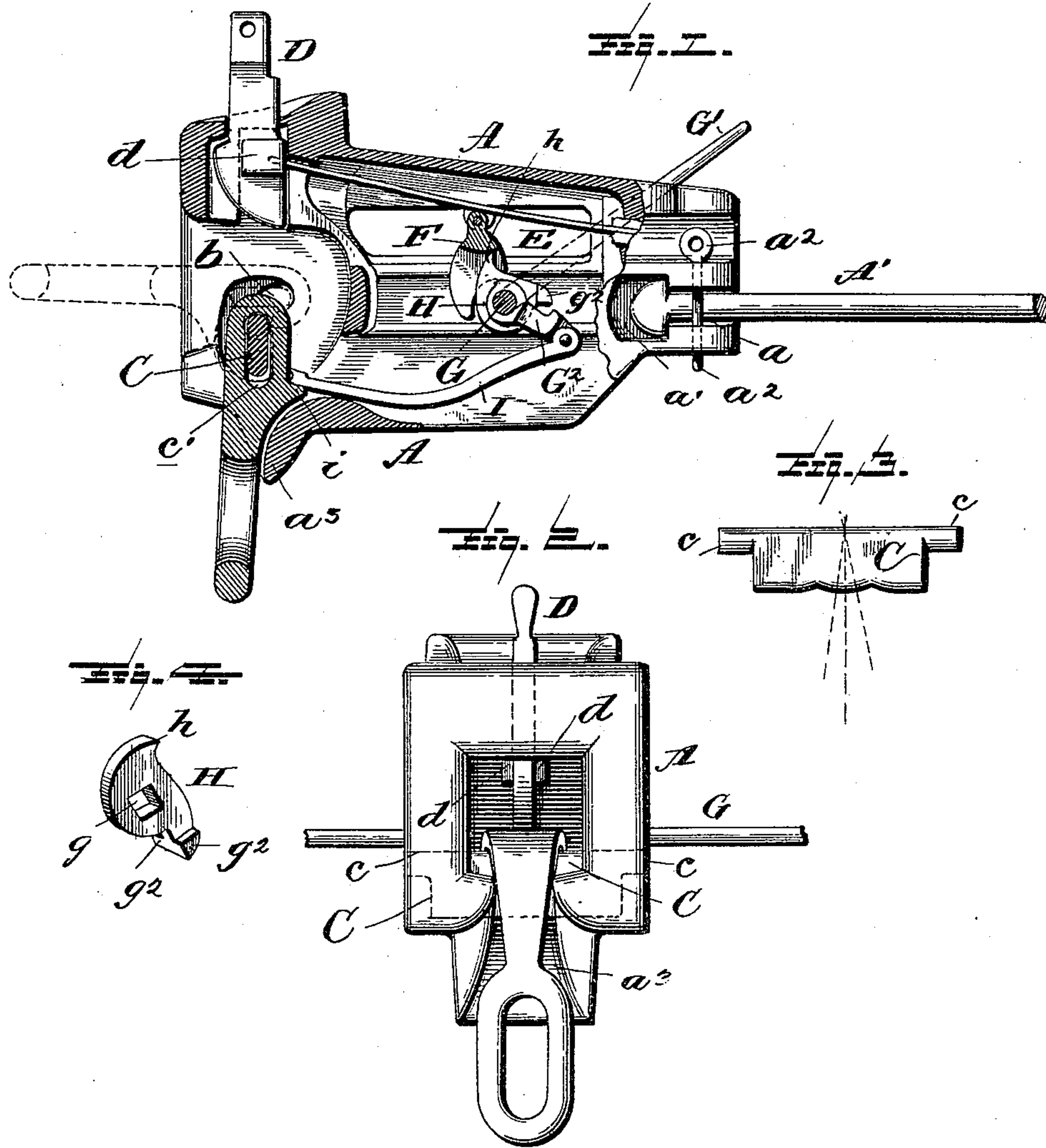


(No Model.)

H. L. PECK.
CAR COUPLING.

No. 460,707.

Patented Oct. 6, 1891.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY L. PECK, OF BLUE ISLAND, ILLINOIS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 460,707, dated October 6, 1891.

Application filed February 25, 1891. Serial No. 382,699. (No model.)

To all whom it may concern:

Be it known that I, HENRY L. PECK, a citizen of the United States, residing at Blue Island, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in car-couplings; and it has for its objects, among others, to provide an improved coupler wherein the loose link and pin are dispensed with and all the parts are fixed—that is, permanently connected with the draw-head—safe, durable, cheap in first cost and repairs, not liable to get out of order, and arranged to be coupled or uncoupled from either side of the car, and in a measure acting automatically. When the link falls, the pin also falls automatically, so as to be ready for immediate coupling. It cannot couple by accident. When coupled, it locks the pin down by tension being applied. The link cannot be jammed or bent under. The draft on the pin is equally divided on both sides, coming onto both shoulders provided for that purpose, and which bearings give great strength to the pin. The link employed is of peculiar construction, embodying great strength, and is acted upon by the lifting-arm or plunger, which lifts and guides it to its position for coupling. The device as a whole is novel, efficient, and in practice has proved most satisfactory.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a vertical longitudinal section through a coupler embodying my invention. Fig. 2 is an end view of the same with the link down. Fig. 3 is a front view of the pivot of the link removed. Fig. 4 is a perspective view of the operating-dog removed.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates the draw-head,

which is formed upon its sides with a longitudinal groove or recess *a*, at the forward end of which is a cavity or depression *a'*, in which is seated the T or arrow head of the bar or rod *A'*, which extends from one coupler to the other, being provided with a like head at the other end and seated in a like cavity in the other draw-bar. This adds great strength to the draft-rigging, the full strain always being from the back end of the car. This rod or bar is detachably held in place by a removable pin *a²*, which passes through openings in the ribs formed on the side of the draw-bar, as seen in Fig. 1. The rear end of the draw-bar may be provided with a hole (not shown) to permit of its use with the ordinary draft-rigging, spring-followers, and other devices in common use.

The mouth of the draw-head is provided at the lower portion with a vertical recess set back, as seen in Figs. 1 and 2, and a lip *a³* extends downward, as seen in Figs. 1 and 2, against which the link falls when in its vertical position, as shown in the said views, the set-back recess receiving the link so that it will be flush with or back of the forward end of the draw-head, as seen in Fig. 1. This avoids injury to the link by collision with cars.

The draw-head is formed with openings *b* in its side walls, as seen in Fig. 1, and having a substantially horizontal portion and a practically vertical portion communicating therewith. In these openings the link-pivot *C* (seen detached in Fig. 3) is placed. The journals *c* rest in these openings, and the central portion works in the elongated slot *c'* of the thickened portion of the link, as seen in Fig. 1. When the link is vertical, this central portion stands vertically and the journals rest in the bottom of the vertical portion of the slots or openings in the draw-head; but when the link is in its horizontal position the said central portion stands horizontally and the journals are in the horizontal portion of the slots.

D is the pin, arranged vertically in a vertical opening in the draw-head near its forward end and having shoulders *d d*, which are designed to engage front and rear bearing-walls and against which walls tension strain comes, as seen in Fig. 1. *E* is a spring

plate or arm, the forward end of which is connected with this pin near its vertical center, as seen in Fig. 1, and its rear end suitably held in the rear part of the draw-head. Between its ends it carries a loosely-swinging slotted link or hanger F, which has lugs, and between the slotted portions of which the actuating-dog is designed to work.

G is a shaft journaled transversely of the coupler, and it may be provided with a lever upon each side of the ear, if desired, although only one G' is shown. On this shaft is loosely sleeved a slotted arm G², between the bifurcations of which is arranged a dog H, which is fast upon the said shaft, being provided with a square hole g, as seen in Fig. 4, which is fitted to a squared portion of the shaft. The arm G² extends rearward and has pivotally connected to its free end the lifting-arm or plunger I, which extends toward the front end of the draw-head, as seen in Fig. 1. The operating-dog H has a toe h' at one end and at the other two shoulders g², upon which the arms of the slotted arm G² are designed to rest. The forward end of the plunger or lifting-arm I rests against a ledge or shoulder i on the rear face of the link, as seen in Fig. 1.

The operation will be readily understood from the above description when taken in connection with the appended drawings, and a description thereof is not deemed necessary.

Where in this description and claims I refer to the pin and link as permanently affixed I do not mean that they are so affixed that they cannot be removed for repairs and the like, but that they are so arranged that they cannot be lost during ordinary use, as can the pin and link of the usual construction.

What I claim as new is—

1. The combination, with the draw-head and the link permanently affixed thereto, of the longitudinally-movable plunger acting upon the rear face of the link, as set forth.

2. The combination, with the draw-head and the link permanently affixed thereto, of the vertically-movable pin independent of the link and permanently connected within the draw-head, as set forth.

3. The combination, with the draw-head and the link permanently affixed thereto, of the vertically-movable pin and the spring-arm connected therewith, as set forth.

4. The combination, with the draw-head and the permanently-connected link, of the vertically-movable pin, the spring-arm connected

therewith, and the loosely-swinging hanger carried by the spring-arm, as set forth.

5. The combination, with the draw-head and the link permanently connected thereto, of the vertically-movable pin, the spring-arm connected therewith, the hanger loosely swinging from the said arm, and the operating-dog acting on said hanger, as set forth.

6. The combination, with the draw-head and the permanently-connected link, of the operating-dog, the slotted arm operated thereby, and the plunger-arm connected with the slotted arm, as set forth.

7. The combination, with the permanently-connected link and vertically-movable pin, of the operating-dog and the connections, substantially as described, between the said dog, link, and pin, whereby said pin and link are operated from said dog, as set forth.

8. The combination, with the pivoted link having a ledge at its rear under face, of the longitudinally-movable plunger-arm adapted to engage the said ledge, as shown and described.

9. The combination, with the draw-head and the permanently-connected link and vertically-movable pin, of the operating-dog having toe and side shoulders, the spring-arm connected with the pin, the hanger loosely suspended from the spring-arm, the slotted arm loosely sleeved on the shaft of the operating-dog, and the plunger-arm connected with the slotted arm, substantially as specified.

10. In a car-coupler, the combination, with a vertically-movable pin and a swinging link, of a shaft and provisions, substantially as described, whereby the pin and link are actuated from the one shaft, as set forth.

11. The combination, with the draw-head having vertical opening and flange or lip at the upper end of said opening, of a vertically-movable pin in said opening and provided with shoulders, substantially as described.

12. The combination, with a vertically-movable pin and a swinging link, of a transverse shaft and independent connections between said shaft and the pin and link, whereby the said pin and link are actuated from the said shaft independently, as set forth.

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

HENRY L. PECK.

Witnesses:

H. SUTHERLAND,
L. C. HILLS.