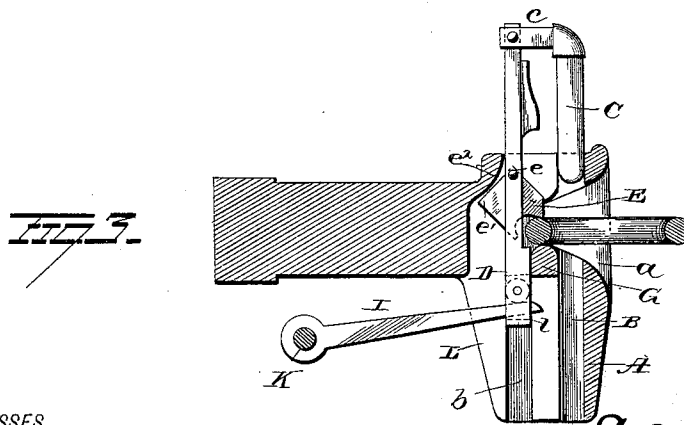
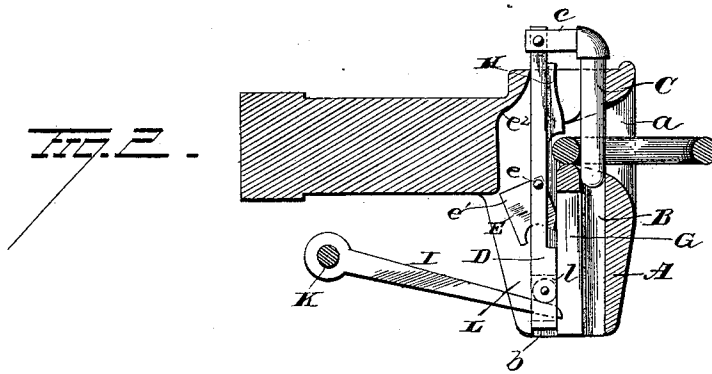
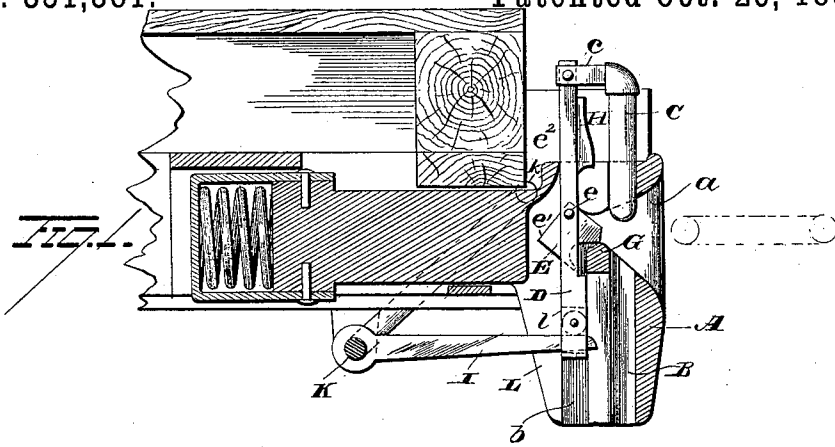


(No Model.)

S. D. KING.
CAR COUPLING.

No. 351,381.

Patented Oct. 26, 1886.



WITNESSES
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UNITED STATES PATENT OFFICE.

SIDNEY DODGE KING, OF PITTSBURGH, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 351,381, dated October 26, 1886.

Application filed August 28, 1886. Serial No. 212,104. (No model.)

To all whom it may concern:

Be it known that I, SIDNEY DODGE KING, of Pittston, in the county of Luzerne and State of Pennsylvania, 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.

The object is to provide a coupling in which the movement of the parts in releasing the link will positively lock the parts in a position to automatically couple. A further object is to provide a link-controller which shall form a part of and be operated by the same lever as the pin-operating bar. A further object is to provide a coupling in which the operating lever and rod may be located either below or above the draw-head, and in which the withdrawal of the draw-head by accident or otherwise will leave the working parts intact. A further object is to provide a coupling which will withstand the punishment to which they are often subjected in practice, and in which the number of parts shall be reduced to a minimum, and capable of being supplied at a low initial cost.

With these ends in view my invention consists in certain features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical section through one of the draw-heads, showing the parts in position to receive the link. Fig. 2 is a similar view showing the parts in coupled adjustment, and Fig. 3 shows the position of the parts to retain the links although in released adjustment.

A represents the draw-head provided with a hopper or bell-shaped mouth, *a*, as is customary. The draw-head extends downwardly quite a distance below the mouth, and is provided with two vertical perforations, B and *b*, extending through the longitudinal axis of the draw-head, a short distance apart, the former serving as a guide and bearing for the coupling-pin C and the latter as a guide and bearing for the pin-operating bar D.

The coupling-pin C is suspended from the

end of a forwardly-extending arm, *c*, attached to the upper end of the bar D. The arm *c* may be attached rigidly to the head of the coupling-pin and removably secured to the upper end of the bar D; or it might be removably or securely attached to both, or rigidly attached to the bar and removably attached to the pin. The first-named construction is, however, preferable, because of the convenience it affords in removing the bar and pin from the draw-head.

A gravity pawl or dog, E, is loosely suspended from a pivotal bolt, *e*, set in the pin-operating bar D, and is so located that when the bar D is elevated sufficiently to release the pin C from the link F the pawl or dog E will be free to swing forwardly far enough to admit of its forward end engaging the top of the wall G between the perforations B and *b*, and thereby preventing the drop of the bar D. Furthermore, the forward swing of the pawl or dog E, which would ordinarily be effected by gravity alone, is insured against any possible failure through sticking or becoming clogged by foreign substances by the engagement of its rear upper corner, *e'*, with a beveled shoulder, *e''*, which positively swings it forwardly when the bar D is elevated.

The approaching link effects a coupling by striking against the forwardly-extending portion of the pawl, knocking or pushing the pawl off from its seat and allowing the coupling-pin and pin-operating bar to fall into the position shown in Fig. 2.

The link-controller H consists of a bracket-like piece formed integral with or rigidly secured to the front side of the operating-bar D, its lower end being slightly concave to cause it to conform to the ordinarily rounded shape of the link in cross-section. When the pin and pin-operating bar are in depressed adjustment, as shown in Fig. 2, the controller rests on the end of the link, and when drawn down on the link serves to elevate the outer end of the link, and when elevated allows the outer end of the link to drop, thereby enabling the operator to hold it at such a height as to cause it to enter the mouth of the opposite draw-head.

The operating-lever I is secured at one end to a rock-shaft, K, journaled under the end of the car and provided with cranked ends ter-

minating in handles *k*. The operating-lever I extends forwardly from the shaft K toward the draw-head, and extends through an elongated vertical slot, L, formed therein and through or into a socket, *l*, formed in the lower portion of the pin-operating bar D. Thus, whenever from any cause the draw-head is pulled from the car, the end of the lever I will be withdrawn from its socket *l*, and the parts connected with the draw-head will be removed with it intact.

The top of the draw-head may be extended upwardly as far as the pin and pin-operating bar rise to uncouple, and a cap be fitted over the movable parts to protect them from the weather. When the cars are close together, and the pin-operating bar is elevated to uncouple, the pawl E will fall onto the end of the link, as shown in Fig. 3, and will hold it in a position to be withdrawn at any moment without further attention to the operating shaft and lever, and when withdrawn the parts will assume the position shown in Fig. 2, ready to effect a coupling.

The operating shaft and lever might be located above the draw-bar, if found desirable, and many slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention; hence I do not wish to limit myself strictly to the construction herein set forth; but

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

1. In a car-coupling, the combination, with a pin and a pin-operating bar located behind the pin, of a link-controller attached to the front face of the bar, and a device for moving the bar downwardly for the purpose of bringing the controller down into contact with the link, substantially as set forth.

2. In a car-coupling, the combination, with a coupling-pin and a pin-operating bar, and devices located below the draw-head for operating said bar, of a gravity pawl or dog pivot-

ally secured to the pin-operating bar, adapted to lock the pin in released adjustment, substantially as set forth.

3. In a car-coupling, the combination, with a pin-operating bar and devices located below the draw-head for operating said bar, of a gravity-dog and link-controller attached to the bar and adapted to be operated by the movement of the bar, substantially as set forth.

4. In a car-coupling, the combination, with a draw-head provided with vertical openings, of a coupling-pin and pin-operating bar adapted to be reciprocated in said openings—one in each—and a gravity-dog pivoted to the pin-operating bar and located wholly within the draw-head, substantially as set forth.

5. In a car-coupling, the combination, with a pin-operating bar adapted to be reciprocated in the draw-head, of a gravity-pawl pivoted to the bar and adapted to engage the draw-head, whereby it is positively swung forward when the bar is raised, substantially as set forth.

6. In a car-coupling, the combination, with a pin-operating bar seated in the draw-head, of a bar-operating lever located below the draw-bar, substantially as set forth.

7. The combination, with the draw-head and the coupling-pin and pin-operating bar locked together, of a lever entering the draw-head from below the draw-bar and removably attached to the pin-operating bar, substantially as set forth.

8. The combination, with the pin-operating bar, of a gravity-dog pivoted thereto, adapted to pass the link when the bar is raised and engage the link in its fall, thereby holding the pin in released adjustment with link in the draw-head, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

SIDNEY DODGE KING.

Witnesses:

C. C. KING,

WILLIAM SAIREMAN.