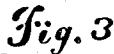
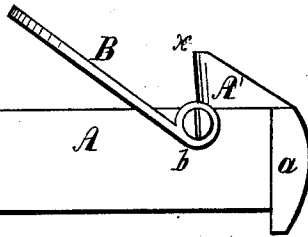


Car Coupling.

No. 81,985.

Patented Sept. 8, 1868.



Witnesses.

Edmund James

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JAMES M. COOK, OF WASHINGTON, DISTRICT OF COLUMBIA.

Letters Patent No. 81,985, dated September 8, 1868.

IMPROVED CAR-COUPLING.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JAMES M. COOK, of Washington city, and District of Columbia, have invented certain new and useful Improvements in Car-Coupling; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, and the letters of reference marked thereon, making part of this specification, in which—

Figure 1 is a side view of the draw-head and coupling-link.

Figure 2 is an end view of the draw-head.

Figure 3 is a top view of two draw-heads, united by the coupling-link.

Figure 4 is a side view of fig. 3, showing, in addition to the link, the elevating-mechanism.

The nature of my invention consists in constructing the ordinary draw-head with an inclined boss, the angle of whose incline commences a little below the upper edge of the face-plate of the draw-head, and terminates at a point sufficiently elevated above the surface of the same, as to furnish a broad bearing-surface for, and consequently insure the retention of the link when thrown in position, but at the same time allowing the latter sufficient play to enable it to readily accommodate itself to the swaying and bounding of the car while the train is in motion, and without the least danger of being detached. The link is open at its rear end, and provided with pivot eyes, by means of which it can be securely screwed or bolted to the draw-head.

My invention also consists in securing to the side of the draw-head frame a lever, so arranged that when thrown forward by the action of the spring which operates in its rear, its head is brought immediately under a shoulder which is attached to the link. By this means the link is retained in an elevated position until the opposite car is brought in contact with a rod which protrudes through an opening in the draw-head. So soon as this rod is forced back by means of a sliding block, to which it is attached, the lever is forced from its position, and the link consequently falls, the lever being carried to a position between the eye and shoulder of the link, its head resting against the latter, and thus aids in securing the link in a horizontal position, and preventing all rattling and jarring during the motion of the train.

One of the great advantages of my coupling is found in the readiness with which the same can be detached in case of accident. Any violent departure from a perpendicular position on the part of the car will, of necessity, so elevate the draw-head and link as to entirely free the latter from its bearing on the opposite boss.

To enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

A A are the draw-heads, which may be constructed in any ordinary manner. In the drawings they are represented as solid square blocks, and are intended to be fastened to the under side of the car, and projecting a suitable distance beyond the platform. *a* is the buffer-plate, and is secured to the end of the block. A' A' are inclined bosses, arranged on the forward end of the draw-head. B is an open link, of the form shown in the drawing. This link B is provided with eyes, *b b*, by means of which it is screwed or bolted to the block A. *b'* is a shoulder on the under side of the link B, by means of which the link is held in an elevated position, as shown in fig. 4. C is a lever, and is provided with an eye, *c*, in its lower end, by means of which it is secured to the draw-head. D is a spring, so arranged as to have its bearing against the lever, its power being constantly so brought to bear as to force the lever forward, or to drive the same against the check or brace-pin *d*. E is a sliding block, and works in a short-groove; *e*, arranged in the side of the draw-head. To this block E is firmly secured a rod, F. This rod F projects through an opening in the buffer-plate *a*. *d* is a check-pin.

The operation is as follows:

When it is desired to couple the car, the link B is elevated, as shown in red, fig. 4. So soon as it reaches this position, the lever C is forced forward by the action of the spring D, and is caused to rest against the stop-pin *d*. This pin is so arranged that when it checks the lever, the latter is in such a position as to bring its head immediately under the shoulder *b'*. By this means it will be perceived that the link is firmly held in an elevated position, and is so retained until the opposite car, by its pressure, or some other means, is brought to bear to force back the rod F. So soon as the cars come together, and the opposite buffer-plate is brought against the

rod F, it forces the same back, and causes the block E to force the lever C from under the shoulder *b'*, when the link will immediately drop, its end falling on the outer edge of the incline A'. As the cars continue to approach, the link will of course gradually ascend until it reaches the point *x*, when it will immediately fall, and the cars are then securely coupled.

It will be observed, by reference to fig. 4, that when the cars are coupled, the entire pressure of the lever and spring is brought to bear against the shoulder *b'*, thus securely locking the link, and causing it to maintain, as it were, a rigid bearing on the draw-head. When you desire to uncouple the car, you have simply to raise the link, when the lever is immediately thrown under the shoulder *b'*, and the coupling-link is retained in the position shown in red, fig. 4.

Having thus fully described my invention, what I claim therein as new, and desire to secure by Letters Patent of the United States, is--

The coupling-link B, provided with a shoulder, *b'*, the lever C, spring D, and rod F, when the whole are arranged and combined substantially as described, as and for the purposes specified.

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

Witnesses :

J. E. F. HOLMEAD,
EDM. JAMES.

J. M. COOK.