

(No Model.)

2 Sheets—Sheet 1.

D. BOYER.
CAR COUPLING.

No. 533,580.

Patented Feb. 5, 1895.

Fig. 1.

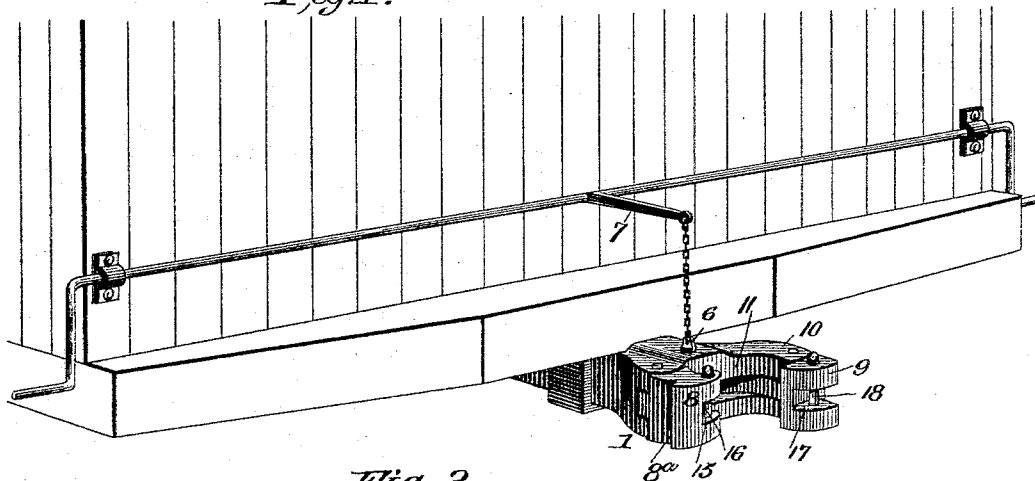


Fig. 2.

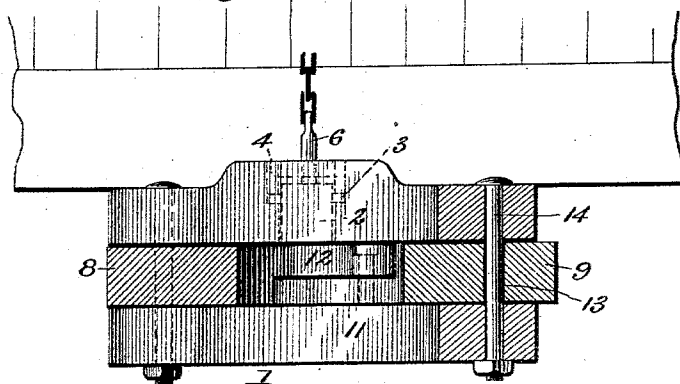
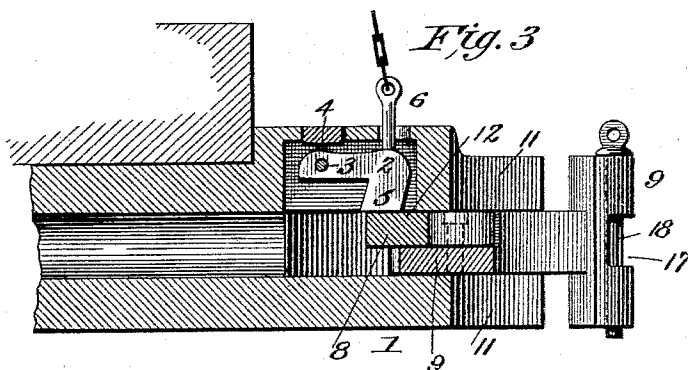


Fig. 3.



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Fig. 4.

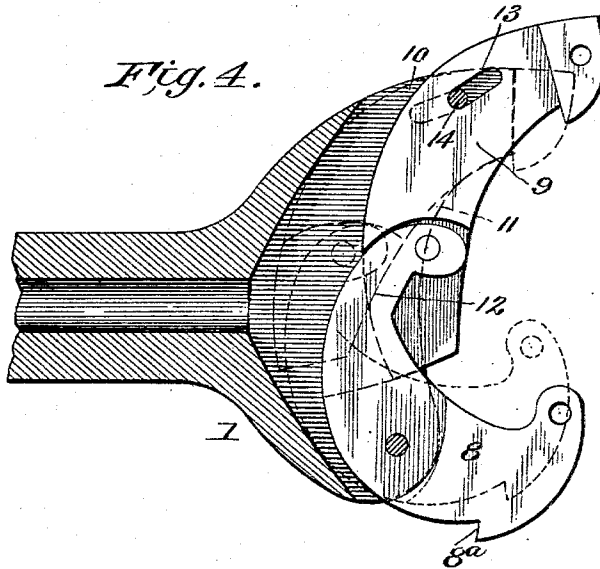


Fig. 5.

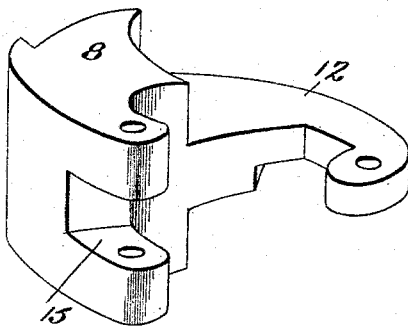
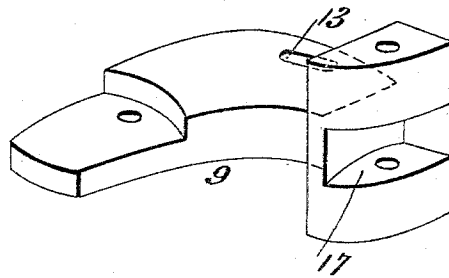


Fig. 6.



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UNITED STATES PATENT OFFICE.

DANIEL BOYER, OF CRESSONA, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 533,580, dated February 5, 1895.

Application filed August 14, 1894. Serial No. 520,269. (No model.)

To all whom it may concern:

Be it known that I, DANIEL BOYER, a citizen of the United States, residing at Cressona, in the county of Schuylkill and State of Pennsylvania, have invented a certain new and useful Improvement in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to

which it appertains to make and use the same. My invention relates to car couplings of the hook and jaw type, and it consists in the improved construction and arrangement of parts, substantially as hereinafter more fully described and particularly pointed out in the claims.

In the accompanying drawings:—Figure 1 is a perspective view of my invention. Fig. 2 is a vertical transverse sectional view. Fig. 3 is a vertical longitudinal sectional view. Fig. 4 is a horizontal sectional view. Figs. 5 and 6 are detail perspective views showing the jaw and hook, respectively.

Corresponding parts in all the figures are denoted by the same numerals of reference.

The draw-head, 1, in its general outline, is of the usual pattern used in this type of car couplings, having however, arranged horizontally in its upper part, a weighted locking block or drop, 2, with axial-like arms or pivots, 3, at one end, resting in corresponding cavities or grooves, 4, in the draw-head, and having its opposite end provided with a downward extension or toe, 5.

To an eye-ended pin-like projection or stud, 6, of the locking block or drop 2, projecting up through an opening in the draw-head, is connected or looped a right-angled bent armed lever, 7, arranged to permit the ready actuation thereof in uncoupling the cars.

The hook or knuckle, 8, and the jaw, 9, are pivoted together and pivoted in the draw-head, at approximately opposite points thereon, in its sides, with their outer or engaging ends standing in front of the draw-head. The hook or knuckle 8 has also on its back, just at the base of its outward curved or rounded surface, a notched or hooked portion, 8^a, to engage a corresponding portion on the jaw of the opposite draw-head. From a horn, 10, on the forward end of the draw-head, at one side, and upon which rests the jaw 9, said

end or face is curved or inclined inward toward the opposite side having the hook or knuckle, as shown at 11, to direct the respective hooks or knuckles of meeting draw-heads toward each other to cause them to effectually interlock.

The inner portion or shank of the jaw 9 is caused, when the parts are uncoupled, to stand beyond the face of the draw-head, to provide for the engagement, with said inner portion or shank of the jaw, of the opposite or approaching hook and thereby bring the parts laterally together, to effect the final step of the coupling operation.

At a point adjacent to where it is pivoted to the jaw 9, the shank of the hook 8 is reduced to provide a shoulder, as at 12, with which engages the downward extension or toe of the locking block or drop 2, when the parts are in locked position, as when coupled.

The jaw 9 is pivoted in its shank, with a slot, 13, through which a pivot, 14, secured in the draw-head 1, passes to allow the jaw to have a limited forward movement to cause it to stand a short distance beyond or in front of the face of the draw-head as above stated and for the purpose described.

In the face of the hook 8 is provided a slot, 15, and a coupling pin, 16, co-acts therewith to adapt the same for use with the ordinary coupling link, should such become necessary. The jaw 9 is similarly adapted, having a slot, 17, in its face and a coupling pin, 18, passing therethrough.

It is obvious, from what has been previously stated, that the coupling operation is effected automatically and the uncoupling of the car is readily performed, thus obviating necessity for the train-man passing in between the cars.

It will be understood that in my invention the two engaging drawheads are respectively of a "right" and "left" pattern. When the locking block or drop 2 is raised to the position shown in Fig. 3, the pivoted hook or knuckle 8 and the jaw 9 are extended or separated and ready for engagement with the opposite drawhead. Thus, when the corresponding parts of the two drawheads come into engagement, the hook or knuckle 8 of the approaching drawhead comes against the projecting inner portion or shank of the jaw

9 of the other drawhead, forcing said jaw inwardly and causing it to lock with the projection 8^a of said hook, when the block or drop 2 drops down and retains the parts in locked position. When the drawheads are coupled, they are thus retained in locked position, the hook or knuckle of one drawhead engaging with the jaw of the other drawhead and vice versa. To uncouple, it is necessary to unlock both drawheads, by raising their respective blocks or drops 2, before the engaging parts can be separated.

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

1. In a car coupling, the combination, with a draw-head, of a hook pivoted therein, and a jaw connected to said hook and movable on its pivot beyond the forward end or face of the draw-head for engagement therewith of a projecting portion of the hook of the opposite draw-head, to effect the coupling operation, substantially as set forth.

2. In a car coupling, the combination with a draw-head, of a hook pivoted therein and having a hooked or notched portion also on its back, and a jaw connected to said hook

and having its pivot movable in a slot in the draw-head, substantially as and for the purpose set forth.

3. In a car coupling, the combination, with a draw-head, of the jaw and hook pivoted therein and connected or pivoted together at their inner ends, and the drop pivoted in the draw-head and having a toe to engage a shoulder on said hook, substantially as set forth.

4. In a car coupling, the combination, with a draw-head having a horn upon its forward end, at one side, and curved or inclined upon its face or front end from said horn inward to the opposite side thereof, of the hook and jaw pivoted in said draw-head and connected together at their inner ends, the pivot of said jaw being movable in a slot in the draw-head, and a drop pivoted in the draw-head and having a toe to engage a shoulder on said hook, substantially as set forth.

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

DANIEL BOYER.

Witnesses:

JOHN B. GINTHER,
OSCAR FIDLER.