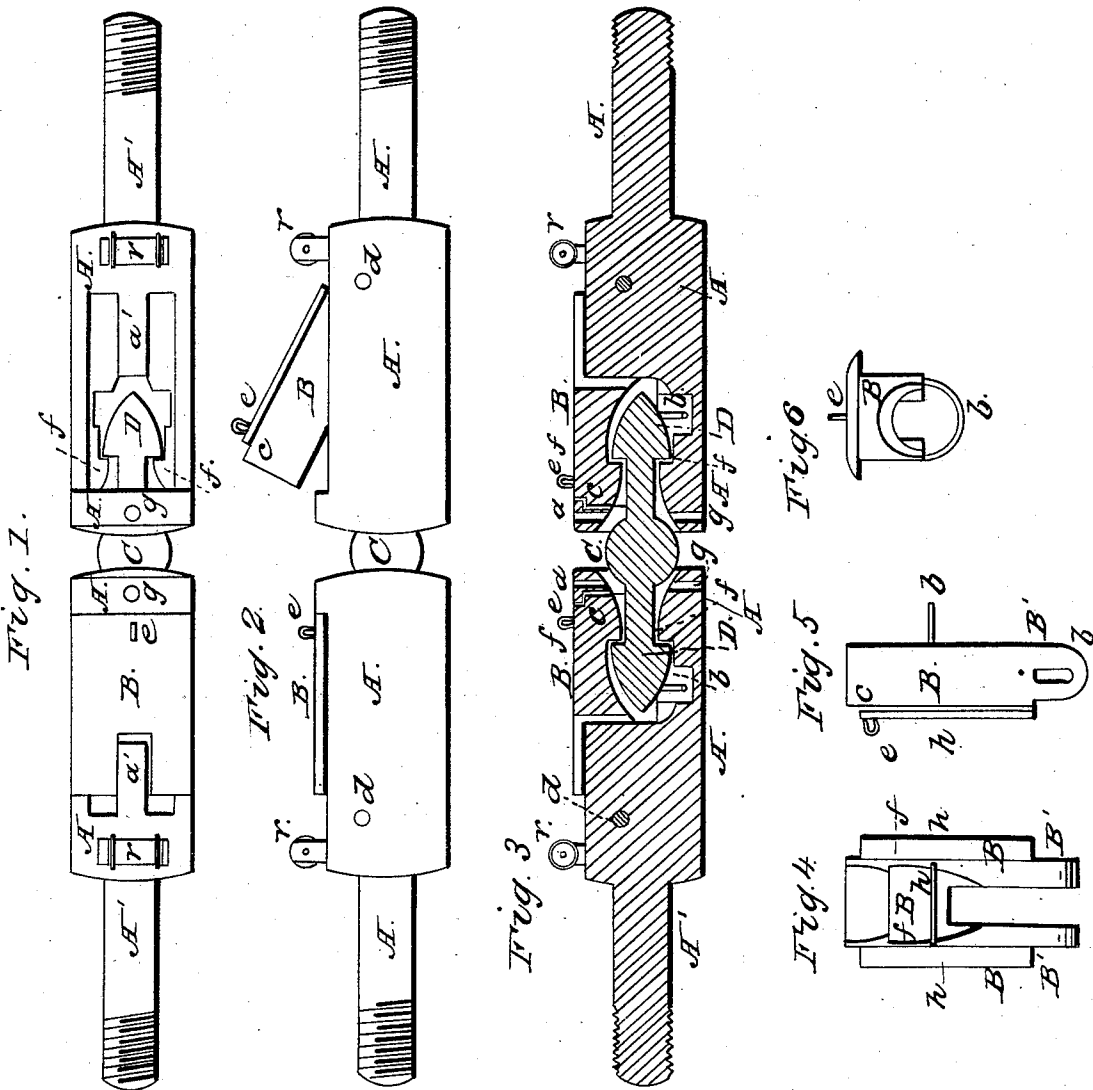


A. C. TICHENOR.
Car Coupling.

No. 81,961.

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Witnesses
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ANSON C. TICHENOR, OF COUNCIL BLUFFS, IOWA.

Letters Patent No. 81,961, 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, ANSON C. TICHENOR, of Council Bluffs, in the county of Pottawattomie, and State of Iowa, have invented a new and useful Improvement in Car-Coupling; and I do hereby declare and make known that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and the letters and figures marked thereon, which form part of this specification.

My said invention consists in a car-coupling device of novel construction, whereby the cars are coupled automatically upon being run together, and whereby the coupling is automatically locked by the draught, so as to prevent any accidental uncoupling of the cars when in motion, while at the same time the coupling may be operated to disconnect the cars, when desired, without going between the cars, as hereinafter fully set forth and described.

To enable those skilled in the art to understand how to construct and use my said invention, I will proceed to describe the same with particularity, making reference, in so doing, to the aforesaid drawings, in which—

Figure 1 is a plan or top view of my invention, the hinged lid or catch of one of the draw-heads being removed.

Figure 2 is a side elevation of the same, one of the hinged catches being raised up as in disconnecting the coupling.

Figure 3 is a vertical longitudinal central section thereof.

Figure 4 is a view of the lower side of the hinged catch.

Figure 5 is a side view of said hinged catch, and

Figure 6 is an end view of the same.

Similar letters of reference in the several figures denote the same parts of my said invention.

A represents the draw-heads or bumpers of the coupling, which are provided with the shanks A', whereby they may be attached to the cars, or their attachment may be effected in any other suitable manner.

The ends of said draw-heads are solid, having a circular funnel-shaped entrance through the same into the recess within the draw-head, hereinafter described, as clearly shown in fig. 3.

At a sufficient distance back from the ends of the draw-head, a recess or cavity is formed in the top of the iron, as shown in one of the devices represented in fig. 1, the rear part of said recess being provided with a centrally-arranged vertical tongue, cast with the main part, A, which tongue is indicated in the drawings by a'.

The bottom is grooved out, so as to form a concave bed for the head of the coupling-pin, to be hereinafter described, and is provided, just back of the funnel-shaped orifice of the draw-head, with a shoulder, f, for the purpose hereinafter set forth.

B represents a block, which fits into the said recess in the top of the draw-head, having lugs B' B' lying upon each side of the aforesaid tongue a', as shown, which lugs are provided with longitudinal slots, marked b b, through which pins d, passing laterally through the draw-heads, pass, and so secure the block B within the recess as, by a hinge, to permit the front end of the block to be raised and lowered, as hereinafter described.

It will be observed that the block B is made a little shorter than the recess in the draw-head, so as to allow a slight longitudinal movement of the block in the recess, the slot b', in the block, or its lugs, permitting said movement.

The object of this construction is to permit the shoulder c, upon the front end of the block, to be drawn under the ledge a, upon the edge of the recess in the draw-head, when said block is closed, so as to lock the block down in the draw-head when the cars are in motion, and also to provide for the drawing back of the block, to allow it to be raised up, as shown in fig. 2, when it is desired to uncouple the cars.

It will be seen that the front end of the said block B is cut out so as to make it form a part of the funnel-shaped orifice in the draw-head, when said block is lying in its recess, and also has its lower face cut out, so as to conform with the bottom of the recess, and together form a conical cavity, to receive the head of the coupling-pin D, it also having a shoulder, f, so that the shoulders on the draw-head and the block encircle the neck of the coupling-pin, as shown.

The draw-head has also in the bottom a recess, extending down below the bottom of the aforesaid conical cavity for the pin-head, to receive the loop or semi-ring *b*, upon the block *B*, as is clearly shown in fig. 3.

The object of said loop or stirrup, *b*, is to raise the head *D* of the coupling-pin above the shoulder *f*, in the draw-head, when the block is raised up to permit the head *D* to be withdrawn from the orifice in the end of the draw-head, to uncouple the cars.

The coupling-pin is provided with an enlargement or ball, or its equivalent, marked *C*, which lies within the funnels in the draw-heads, and serves to keep the pin centrally arranged in the draw-head orifices, as desired, and preventing the end from tipping down.

It will be observed that there are holes, *g g*, in the draw-heads, to enable a link and pin to be used in the usual way, so that cars with my improved coupling can readily be coupled with cars having the old form of coupling-devices, when desired.

The coupling is effected automatically when the cars are run together, as the enlargement *C*, on the pin, keeps the end of the pin pointed in the proper direction to enter the orifice in the bumper, and the head of the pin, as it enters, gradually raises up the block *B*, and thus allows the head to enter the shouldered cavity in the draw-head, when the block drops back, thus closing the shoulders *f* around the neck of the pin, and preventing the head from being withdrawn.

When the cars commence to move, the head *D* bears against the shoulder upon the block, and moves the shoulder *c* under the ledge *a*, and secures the coupling from any accidental detachment.

The rear ends of the lugs *B' B* are rounded off, and fit into a corresponding cavity in the rear of the recess in the draw-head, so as to permit the block to move freely in opening or closing.

If preferred, the flange around the top of the block may be formed so as to cover the entire top of the coupling or draw-head, extending back to the rear end thereof, and moving upon a rounded bearing formed at the rear of the draw-head, the flange being indicated by the letter *h* in fig. 4.

To uncouple the cars, a cord may be attached to the eye *e*, and extend back under the roller *r*, and thence pass to the desired point, when it can be grasped and drawn, the effect being to slide the block *B* back, to unlock the same, and then to raise it up, thus enlarging the opening sufficiently to permit the head *D* to be withdrawn upon being raised up by the stirrup *b* for that purpose.

Having described the nature, construction, and operation of my invention, I will now specify what I claim, and desire to secure by Letters Patent.

I claim the combination of a draw-head, *A*, constructed substantially as described, and provided with a transverse locking-ledge, *a*, with a hinged block, *B*, constructed with a shoulder, *c*, when said block is so connected to the draw-head that the forward motion of the cars will automatically lock the shoulder *c* beneath the ledge *a*, in the manner and for the purposes specified.

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Witnesses:

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