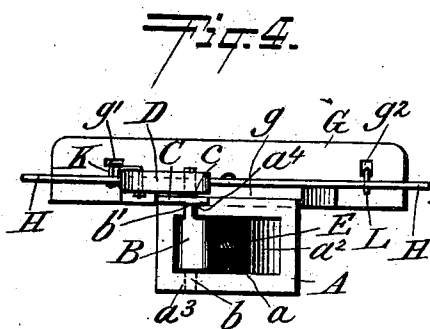
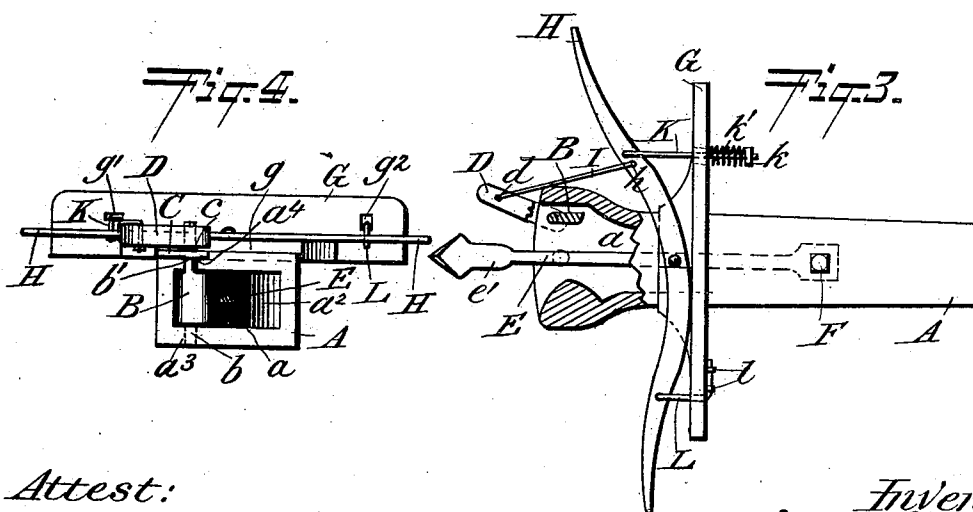
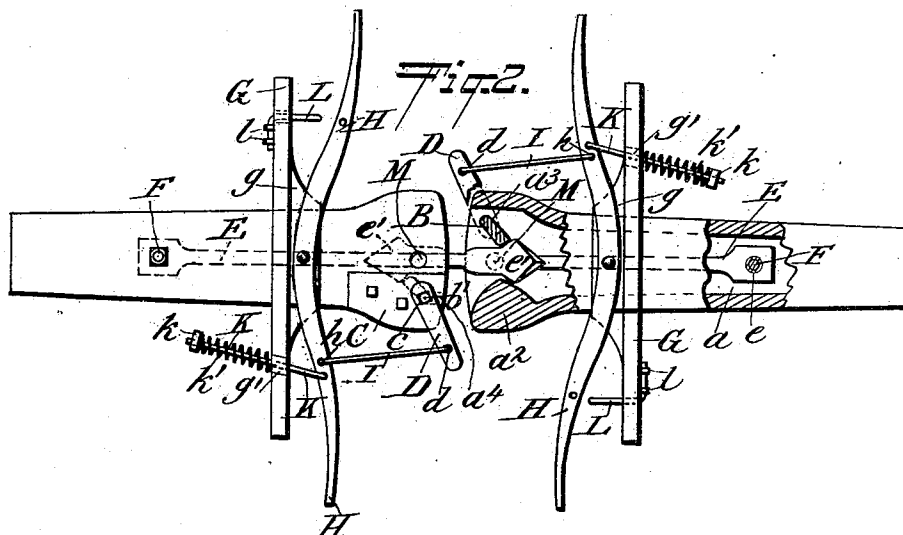
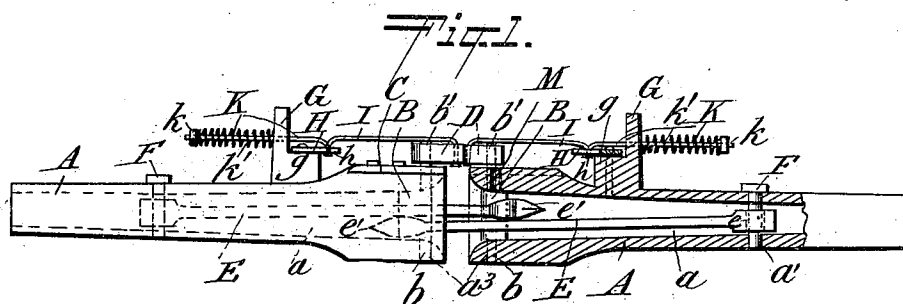


(No Model.)

T. FORSTNER
CAR COUPLING.

No. 512,286.

Patented Jan. 9, 1894.



Attest:

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UNITED STATES PATENT OFFICE.

THOMAS FORSTNER, OF NEW ULM, MINNESOTA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 512,286, dated January 9, 1894.

Application filed May 9, 1893. Serial No. 473,565. (No model.)

To all whom it may concern:

Be it known that I, THOMAS FORSTNER, a citizen of the United States, residing at New Ulm, Brown county, Minnesota, have invented certain new and useful Improvements in Car-Couplers; 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 improvements in car-couplers.

The object of my invention is to produce a coupler which will couple cars automatically and permit them to be uncoupled by hand without entering between the cars, and which will avoid the disadvantages inherent in those forms of couplers with which I am acquainted.

My invention consists of such features and details of construction as will first be described in connection with the accompanying drawings, and then particularly pointed out in the claims.

In the drawings—Figure 1 is a side elevation partly in section of a pair of couplers embodying my invention. Fig. 2 is a plan view partly in section of a pair of the couplers. Fig. 3 is a plan of one of the couplers, partly in section. Fig. 4 is a front view.

Referring to the drawings, A is a draw-head having a longitudinal recess, *a*, and a pin or bolt-hole, *a'*, near the rear end of the recess. At the front end of the draw-head is an inward-extending jaw, *a*², preferably integral with the draw-head, *a*, its front face being beveled rearward toward the central axial line of the draw-head, while its rear face is beveled forward toward such axial line. The lower side of the draw-head is provided with a pivot-socket, *a*³, into which is inserted the lower pivot, *b*, of a swinging jaw, B, whose upper end has a pivot, *b'*, turning in a pivot-socket, *c*, in a plate, C, let into the top of the draw-head flush with its upper face. The draw-head is also slotted at *a*⁴, to permit the introduction of the swinging jaw. The top end of the pivot, *b'*, projects above the plate, C, and is squared for the reception of a yoke, D, which has a hole, *d*, at its outer end.

In the recess, *a*, is located a longitudinal coupling hook or bar, E, whose rear end is provided with a pin-hole, *e*, and whose front

end projects some distance beyond the draw-head, being provided with a spear-head, *e'*. The bar, E, is held in the draw-head by a pin or bolt, F, passing through the pin-holes, *a'*, and *e*, the pin being loose enough to allow the bar, E, to move freely in a lateral direction in the recess, *a*.

On the top of the draw-head and extending transversely is preferably fixed a cross-bracket, G, having a horizontal ledge, *g*, to which is pivoted a curved operating lever, H, this lever being connected to the outer end of the yoke, D, by means of a rod, I, whose ends are bent downward, as shown at *i*, one being inserted in the hole, *d*, in the yoke and the other in a hole, *h*, in the lever, H. To the lever is attached a spring bar, K, which passes through a slot, *g'*, in the cross-bracket and has a head, *k*, at its rear end, a spring, *k'*, preferably helical, being inserted between the head, *k*, and the rear face of the cross-bracket, thus tending to pull the yoke, D, toward the rear and thereby keep the swinging jaw in its locking position.

It is apparent that when the operating lever, H, is moved so as to compress the spring, *k'*, the swinging jaw will be moved into its open position. To hold it in this position, a catch-device, preferably a latch, L, is arranged to engage the lever. The latch, L, passes through a vertical slot, *g'*, in the cross-bracket, G, and is journaled in boxes, *l*, at the back of the cross bracket.

When two cars supplied with couplers embodying my invention are brought together, the locking bars would strike each other were it not for the fact that each is spear-headed, thus causing the ends of the bars to pass each other. The spear head of each coupler strikes the inclined outer faces of both the fixed and swinging jaw of the other coupler, forcing the swinging jaw backward, thereby allowing each spear-head to enter the recess of the opposite coupler, each swinging jaw being swung back to its locking position by its spring, *k'*, so that when the cars are moved ahead, the swinging jaws hold the spear-heads from being withdrawn, thus coupling the cars together.

It will be seen that in my coupling, both coupling bars are locked by the opposite coupler, so if that by accident one bar should break the other bar would still hold the cars together.

For the purpose of allowing a car having the ordinary link and pin coupler to be united to a car with my improved coupler, I provide my coupler with a pin-hole, M, in which a
5 common link-pin may be inserted.

To uncouple the cars, the operating levers, which extend to each side of the cars, are thrown so as to move the swinging jaws into their open position. If it is desired to hold
10 the swinging jaws open, the catch-devices may be used to hold the levers back.

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

15 1. In a coupler, the combination, with a draw-head having a longitudinal recess and a fixed jaw on one side of the recess, of a coupling bar pivoted in the recess and provided with a spear-head, and a swinging jaw attached to the draw-head opposite the fixed
20 jaw, arranged to move in a horizontal plane substantially as set forth.

2. In a coupler, the combination, with a draw-head having a longitudinal recess, and a
25 fixed jaw whose front face is beveled, of a coupling bar pivoted in the recess, and a swinging jaw located in the draw-head opposite the fixed jaw.

3. In a coupler, the combination, with a
30 draw-head having a longitudinal recess, and a fixed jaw whose front face is beveled, of a coupling bar pivoted in the recess and provided with a spear-head, a swinging jaw located in the draw-head opposite the fixed jaw,
35 and means for holding the swinging jaw in contact with the coupling bar, substantially as set forth.

4. In a coupler, the combination, with a draw-head having a longitudinal recess and a
40 fixed jaw, of a coupling bar pivoted in the recess, a swinging jaw located in the front of the draw-head opposite the fixed jaw, a yoke attached to the top of the swinging jaw, and a spring device connected to the yoke, where-
45 by the swinging jaw is movably held against the coupling bar, substantially as set forth.

5. In a coupler, a draw-head having a longitudinal recess and a fixed jaw, of a coupling bar pivoted in the recess, a swinging jaw located in the draw-head opposite the fixed jaw,
50 a yoke attached to the swinging jaw, a pivoted operating lever, and a rod connecting the op-

erating lever to the yoke, substantially as set forth.

6. In a coupler, the combination, with a
55 draw-head having a longitudinal recess and a fixed jaw, of a coupling bar pivoted in the recess, a swinging jaw located in the draw-head opposite the fixed jaw, a yoke attached to the swinging jaw, a pivoted operating lever, a
60 rod connecting the lever to the yoke, and a spring device attached to the lever, and arranged to normally hold the swinging jaw against the coupling bar, substantially as set forth.

7. In a coupler, the combination, with a
65 draw-head having a longitudinal recess and a fixed jaw, of a coupling bar pivoted in the recess, a swinging jaw located in the draw-head opposite the fixed jaw, a yoke attached to the swinging jaw, a cross-bracket attached to the
70 draw-head, an operating lever pivoted to the cross-bracket, and a rod connecting the lever to the yoke, substantially as set forth.

8. In a coupler, the combination, with a
75 draw-head having a longitudinal recess, a fixed jaw and a pivot-socket, of a coupling bar pivoted in the recess, a swinging jaw provided with an upper and lower pivot, the latter entering the pivot-socket in the draw-head, a
80 plate provided with a pivot-socket through which the upper pivot of the swinging jaw passes, a yoke attached to the top of the upper pivot, a cross-bracket attached to the top of the draw-head and provided with a ledge
85 and a slot near each end, an operating lever pivoted to the ledge of the cross-bracket, a rod connecting the lever to the yoke, a spring bar attached to the lever, passing through one of the slots in the cross-bracket, and provided
90 with a head at its rear end, a spring between the head and the cross-bracket, and a latch passing through the other slot in the cross-bracket and journaled in the rear face of the cross-bracket, said latch being arranged to en-
95 gage the operating lever when the spring is compressed, substantially as set forth.

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

THOMAS FORSTNER.

Witnesses:

JOHN LIND,
I. M. OLSEN.