

(No Model.)

W. B. PATTERSON.
CAR COUPLING.

No. 501,576.

Patented July 18, 1893.

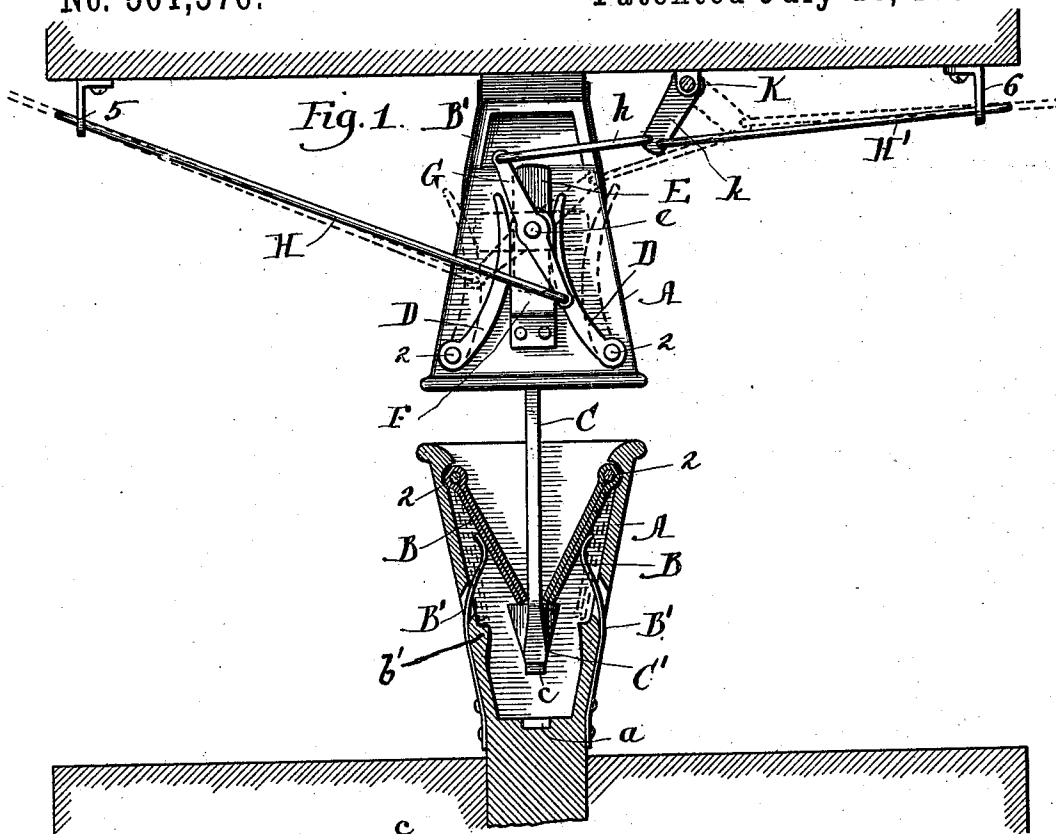


Fig. 2.

Fig. 6.

Fig. 3.

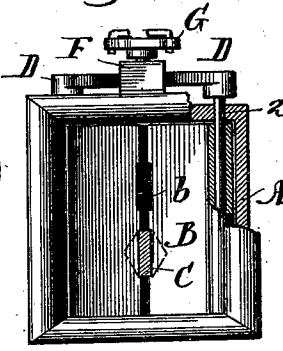
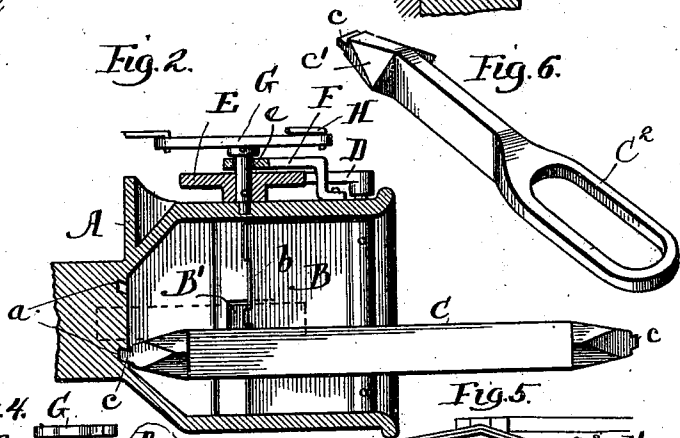
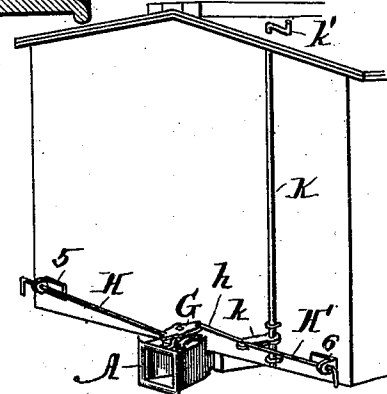
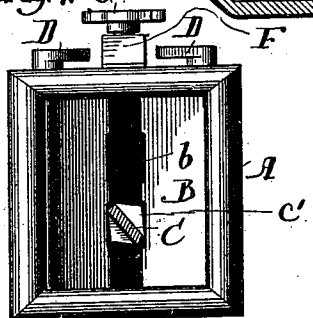


Fig. 4.

Fig. 5.



Witnesses:
Friederlach
& Adamick.

Inventor:
Wm B. Patterson
By R. A. Fisher
Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM B. PATTERSON, OF SECOR, ILLINOIS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 501,576, dated July 18, 1893.

Application filed October 12, 1892. Serial No. 448,654. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. PATTERSON, residing at Secor, in the State of Illinois, have invented new and useful Improvements in Car-Couplers, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My present invention has for its object to provide an improved construction of car coupler, whereby the coupling of the draw heads of cars may be automatically effected and whereby the uncoupling of the cars can be done without the necessity of the brakeman passing between the cars for such purpose.

My invention consists in various novel features of construction which are hereinafter described, illustrated in the accompanying drawings and particularly pointed out in the claims at the end of this specification.

Figure 1 is a view partly in plan and partly in horizontal section, showing two draw heads coupled together and embodying my invention. Fig. 2 is a view in vertical longitudinal section through one of the draw heads shown in Fig. 1, the coupling link being illustrated in side elevation. Fig. 3 is a front view of one of the draw heads and adjacent parts. Fig. 4 is a view similar to Fig. 3 but showing the position of the parts in case of the upsetting of a car. Fig. 5 is a perspective view upon a reduced scale of one end of the car having my invention applied thereto. Fig. 6 is a detail perspective view of one form of coupling link.

A, designates the draw heads of the car, and these draw heads may be of any suitable shape adapted to the embodiment of my invention.

Within the draw head A and fixed upon the vertical pins or studs 2 are the jaws B, these jaws being adapted to engage the coupling link C and prevent its withdrawal from the draw head. The jaws B are pivoted near the front end of the draw head A and the free ends of the jaws are forced normally toward each other by suitable springs B'. Preferably the jaws B are furnished at their free ends with the seats b adapted to receive the body of the coupling link C, and at the back

of the draw head A are formed one or more steps a to engage the end c of the coupling link C, so that when the body of the link C rests within the seats b of the jaws B and has its end in engagement with one of the steps a corresponding thereto, the link C will be held in horizontal position and in readiness to enter the draw head of the car to be coupled thereto. Manifestly the seats b may be formed entirely in one of the jaws although I regard the construction shown as the preferable one.

From the construction of parts as thus far defined it will be seen that the springs B' serve to normally hold the jaws B in closed position and inasmuch as these jaws swing inwardly they can be readily forced open by the coupling link when the cars are shunted together, thereby causing the head of the coupling link C to pass back of and be engaged by the pivoted jaws B.

In order to enable the jaws B to be opened without the necessity of the attendant passing between the cars I have provided the means for opening the jaws to be next described. To the pivot pins 2 of each of the jaws B is connected a releasing arm D, preferably arranged on top of the draw head A, as more particularly shown in Figs. 1 and 2 of the drawings. Between the releasing arms D is set a releasing block E, one pivot pin e of which has one end pivoted on top of the draw head A, while its opposite end passes through the bracket F fixed to the top of the draw head A. The upper end of this pivot pin e has fixed thereto a lever G to which is connected the rod H extending to one side of the car and there supported by the bracket 5 through which the end of this rod passes (see Fig. 4). To the opposite end of the lever G is attached a link h, this link uniting to an arm k, that projects from the turning rod K that leads to the top of the car and is there furnished with a crank handle k'. To this arm k is connected one end of the link H', the opposite end of which link passes through a bracket 6 which is adjacent to the side of the car. The rods H and H' have their outer ends preferably cranked as shown, to permit these rods to be more readily operated. From the above description it will be seen that when it is desired to uncouple the cars, this

can be readily effected either by drawing outward the rods H or H' or by turning the rod K from the top of the car. When the rods H and H' are thus drawn outward, or the rod K turned, so as to bring the parts into the position shown by dotted lines in Fig. 1 the lever G will be shifted in such manner as to bring the releasing block E at substantially right angles to the releasing arms D, thereby spreading these arms and causing them in turn to force open the pivoted jaws B. It will also be seen that when the parts are brought to position shown by dotted lines in Fig. 1 the releasing block will serve to retain the jaws in open position if so desired. When the coupling link C is to be set in one draw head in position for it to enter the next draw head the reduced end *c* of the link will be placed within one of the steps *a* of the draw head while the body of the link will rest within and be sustained by the seats *b* in the edges of the jaws B, and preferably the steps *a* and the reduced ends *c* of the link are of the angular shape shown so as to better guard the link against accidental displacement. My purpose in providing the series of steps *a* and a series of small seats *b* is to enable the links to be set at different positions for coupling draw heads of different heights.

As it is desirable that an automatic uncoupling of the cars should occur in case of the upsetting of any car I have provided the improved construction of coupling link shown. That is to say the link C has its head C' formed with its corners reduced or cut away as at *c'*, so that in case a car becomes derailed and upset, it will turn the link C, causing the body of the link as it is thus turned to open the jaws B, and by reason of the cut away corners *c* to permit the head C' of the link to be withdrawn from the jaws, as more particularly shown by reference to Fig. 4, of the drawings.

By preference the interior of the draw head A is formed with the shoulders *b'* which will prevent any tendency of the coupling link C to remain in engagement with either of the jaws B when these jaws have been opened to release the link; that is to say the shoulders *b'* will insure the disengagement of the link from the jaws.

In Fig. 6 of the drawings is shown a modified form of link one end of which is provided with a head adapted to be used with my improved coupler and the opposite end of which is formed with an eye C² adapted to be coupled to a draw head of the old style in which the well known coupling pin and link are used.

It is manifest that the details of construction above set out may be varied within wide limits without departing from the spirit of my invention.

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

1. A car coupler comprising a draw head provided with inwardly swinging spring actuated jaws pivoted at its front said jaws having one or more seats to receive the coupling link substantially as described.

2. A car coupler comprising a draw head having at its back one or more stops to engage the end of the coupling link and provided with pivoted jaws having one or more seats to receive the coupling link, substantially as described.

3. A car coupler comprising the combination with the draw head of inwardly swinging jaws adapted to engage the coupling link, releasing arms connected to said jaws for opening the same, a pivoted releasing block for operating said arms, a lever connected to said pivoted releasing block and rods connected to said lever and extending to the sides of the car, whereby said lever may be shifted to operate said releasing block, substantially as described.

4. A car coupler comprising the combination with the draw head of pivoted jaws to engage the coupling link, a releasing block whereby said jaws may be opened, rods connected with said releasing block and extending to the sides of the car, and a rod extending to the top of the car and having a crank arm also connected with the releasing block, whereby the jaws may be released from the top or sides of the car, substantially as described.

5. A car coupler comprising the combination with the draw head of the pivoted jaws, releasing arms connected to said jaws, a pivoted releasing block for operating said arms and rods connected with said releasing block and adapted to turn said releasing block into position to open and hold open said jaws, substantially as described.

6. A coupling link having a head provided with the reduced corners *c'*, substantially as described.

7. A coupling link having a head provided with reduced corners and having a body formed oblong in transverse section adjacent said head, substantially as described.

8. The combination with the draw head having movable jaws to engage the head of the coupling link of a link having a head provided with reduced corners, whereby when said link is partially turned, it can be withdrawn from said jaws, substantially as described.

WILLIAM B. PATTERSON.

Witnesses:

GEO. P. FISHER, Jr.,
JAMES H. PEIRCE.