T. J. WEST.

CAR-COUPLINGS.

No. 186,048. Patented Jan. 9, 1877.

Fig. 1.

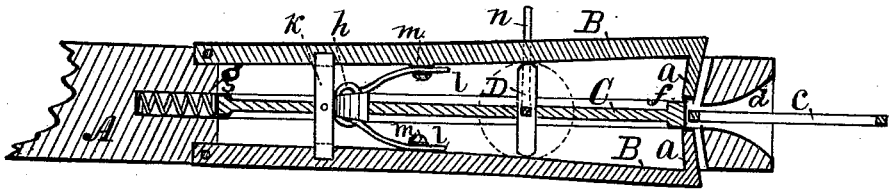
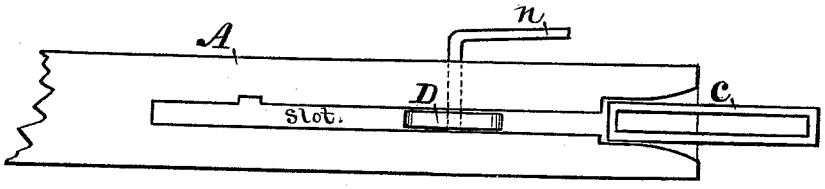


Fig. 2.



Witnesses.

Wm. H. Glading

Henry S. Parmalee.

Inventor.

Thomas J. West,

By Thomas G. Orrig, Atty.

UNITED STATES PATENT OFFICE.

THOMAS J. WEST, OF PLEASANTVILLE, IOWA, ASSIGNOR OF ONE-HALF HIS RIGHT TO CRUSAN BANE, OF SAME PLACE.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **186,048**, dated January 9, 1877; application filed June 12, 1876.

To all whom it may concern:

Be it known that I, THOMAS J. WEST, of Pleasantville, in the county of Marion and State of Iowa, have invented an Improved Car-Coupling, of which the following is a specification:

The object of my invention is to prevent railway accidents by furnishing an improved automatic car-coupling. It consists in forming, arranging, and combining, in a draw-head, horizontal coupling-pins, a pin-latch, a buffer, and a square-ended link, all as hereinafter fully set forth.

Figure 1 of my drawing is a top-plan view, illustrating the construction and operation of my invention. Fig. 2 is a side elevation of the same.

A represents a draw-head, which may vary in size, as desired. It extends rearward, and terminates in a draw-bar.

B B are bars, pivoted at their rear ends in a horizontal slot formed in the body of the draw-head. At their front ends they have coupling-pins *a a*, formed integral with the bars, and standing inward at right angles to the bars, and horizontally, to engage the link *c*, that passes rearward through the mouth and throat *d* of the draw-head.

C is a buffer-rod, that slides longitudinally back and forth in a corresponding groove formed in the lower half of the draw-head. It has a square-faced head, *f*, on its front end, against which the square-faced end of the link *c* impinges. *g* is a buffer-spring, fitted in a suitable cavity formed in the draw-head at the rear end of the buffer-rod C. *h* is a cam on the rear portion of the buffer-rod, designed to operate the pin-latch.

k is a pin-latch in the form of a transverse bar, that has shoulders on its under side to engage the bars B, carrying the pins *a*. This latch is fitted in a transverse groove formed in the under side of the upper half of the centrally-slotted draw-head, and in its normal position it rests upon the buffer-rod C. It will retain its normal position by force of gravity; or it may be pressed down by a suitable spring.

l l are the two ends of a spring fixed in the slotted draw-head in such a manner that it will engage the arms B, and retain them in their normal position in the slot of the draw-head, as required, to hold the coupling-link *c*. *m m* are eyes or perforated ears, formed on the inside edges of the bars B. The ends of the spring, *l l*, enter these eyes, to engage and operate the bars B and the pins *a*, carried by the bars. D is a turn-button or eccentric, pivoted centrally in the slot of the draw-head, to simultaneously engage both the bars B and press them apart, and thereby disengage their pins *a* from the link *c*, as required, to uncouple the cars.

n represents a crank-arm, connected with the eccentric D. By means of suitable chains, pulleys, and levers connected with this arm *n*, the cars may be readily uncoupled without going between them, and without endangering the life and limbs of the operator.

In the practical operation of my invention one of my draw-heads is required on each end of every car.

When two cars are to be coupled one of them must carry a link, *c*, in its draw-head. The pins *a* retain that link in the throat *d* of the draw-head, and the buffer-spring *g* will press the square-faced head *f* of the rod C forward against the square end of the link *c*, and cause the link to stand forward in line with the buffer-rod, as required, to approach and couple with the other car, which has bars B, and their pins *a* spread apart and held open by the latch *k*. The free end of the link carried by the one draw-head will enter the unoccupied throat *d* of the other draw-head, and impinge upon the square head *f* of its buffer-rod C, and force the rod rearward, and cause the cam *h* on the rear portion of the rod to ft the latch *k*, and thereby release the arms B, which will close by the force of the spring *l l*, and pass their pins *a* laterally through the open link *c*. A complete automatic coupling is thus effected with a movable link, and without exposing any one to danger of accidental maiming or killing.

To uncouple, simply spread the bars B in one of the draw-heads by means of the eccentric D and its crank-lever arm *n*. The latch

k will retain the arms and pins in position, as required, to meet and couple again with a car carrying a link.

I claim as my invention—

In a car-coupling, the slotted draw-head A, the pivoted arms B B, carrying pins *a a*, the buffer-rod C, having square head *f* and cam *h*, the buffer-spring *g*, the pin-latch *k*, the spring *l l*, and the eccentric D, all arranged and combined substantially as and for the purposes shown and described.

THOMAS J. WEST.

Witnesses:
MILES JORDAN,
M. K. DEWITT.