

J. S. WILLIAMS.
CAR-COUPLING.

No. 182,878.

Patented Oct. 3, 1876.

Fig. 1.

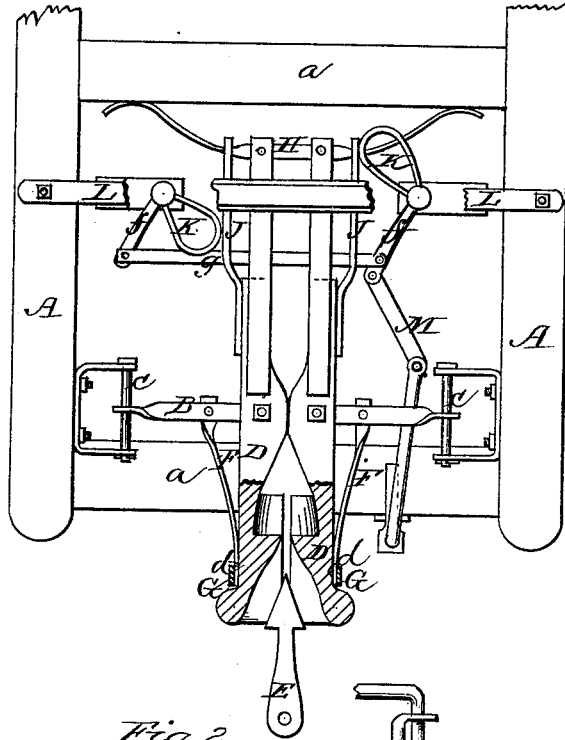
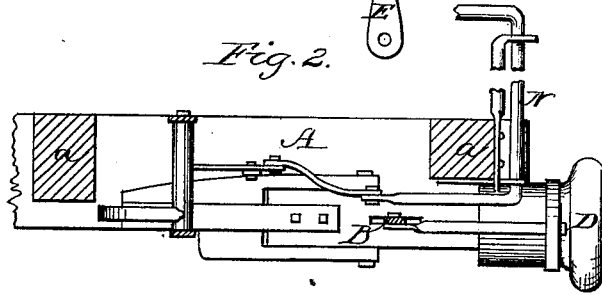


Fig. 2.



Witnesses
F. W. Howard
H. C. John

Inventor
J. S. Williams

UNITED STATES PATENT OFFICE.

JOHN S. WILLIAMS, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 182,878, dated October 3, 1876; application filed July 27, 1876.

To all whom it may concern:

Be it known that I, JOHN S. WILLIAMS, of Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 represents a general plan or top view of a railway-car coupling embodying my said invention, and Fig. 2 represents a side elevation of the same.

Like letters of reference indicate like parts.

In the drawing, A A represent the central or draft timbers of the car, and *a a* the cross-pieces, all of which are arranged in the usual manner. B is a metal cross-bar, which is secured at its ends upon guides or ways C C attached to the draft-timbers, and so arranged as to allow the cross-bar to move forward or backward in the direction of the length of the car. D D are the jaws forming the draw-bar, and respectively pivoted to the cross-bar B, centrally between the draft-timbers, and extend from a point near the rear cross-piece *a*, forward to a point in advance of the forward end of the draft-timbers, as shown in Fig. 1. The forward ends of said jaws are made bell-shaped, so as to receive the coupling-bar E, and to form the buffer-head.

F F are metal springs, which are permanently attached at one end to the cross-bar B, and on opposite sides of the jaws, and extend forward nearly to the forward end of said jaws, and so arranged as to bear against the outer sides of said jaws, as shown at *d d*. G is an india-rubber or other elastic band or ring, fitted around the jaws and the outer ends of the springs F F, as shown in Fig. 1.

The arrangement of said band and the springs is such as to yield and allow the coupling-bar to pass between the jaws, when the cars are moved together for the purpose of coupling them, and to hold the jaws together when the coupling-bar is inserted, so as to prevent it from being drawn out.

H is a concussion-spring, which is loosely secured to the rear end of the jaws, and so arranged as to bear against the rear cross-piece *a* of the car-frame, and yield and allow the jaws to move backward when the cars are brought together in the act of coupling, and thereby relieve the cars from concussion, and to force the jaws forward to their normal position when the cars are moved from each other.

J J are curved metal bars, which are attached to the outer sides of the jaws, near their centers, and extend backward to the rear ends thereof. K K are cams, which are journaled to a cross-bar, L, attached to the draft-timbers, and are so arranged as to bear against the bars J J. Permanently attached to said cams are levers *f f*, which are connected to each other by a connecting-rod, *g*, passing across under the jaws. M is a jointed lever, which is attached at one end to one of the levers *f*, and extends forward to or beyond the forward end of the car, and is there attached to a vertical crank-shaft, N, journaled to the end of the car.

The arrangement of said levers and crank-shaft is such that, as a rotary movement is imparted to the said shaft, the levers are drawn forward so as to force the cams against the bars J J, thereby forcing the rear ends of the jaws together, and opening the forward ends of the jaws, so as to allow the coupling-bar to be withdrawn when the cars are to be uncoupled.

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

1. The combination, with the jaws D D, of the cross-bar B, springs F F, and elastic band G, substantially as and for the purpose specified.

2. The combination with the jaws D D of the bars J J, cams K K, levers *f f*, connecting-rod *g*, jointed lever M, and crank-shaft N, substantially as and for the purpose specified.

JOHN S. WILLIAMS.

Witnesses:

F. W. HOWARD,
H. COHN.