J. W. BATES.

Car-Couplings.

No. 134,629. Patented Jan. 7, 1873.

Fig. 1.

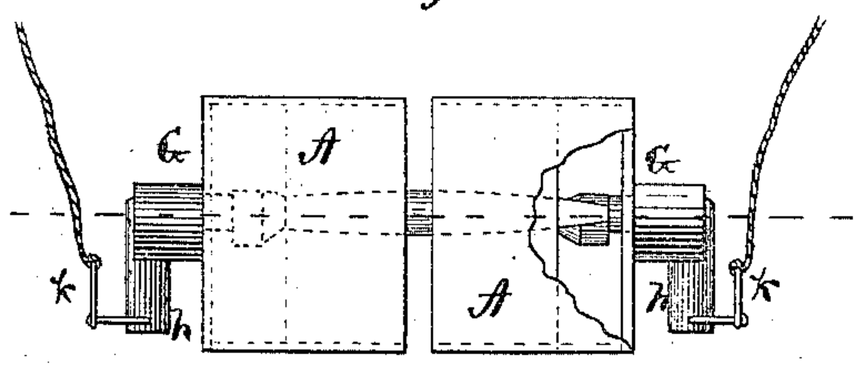


Fig. 2.

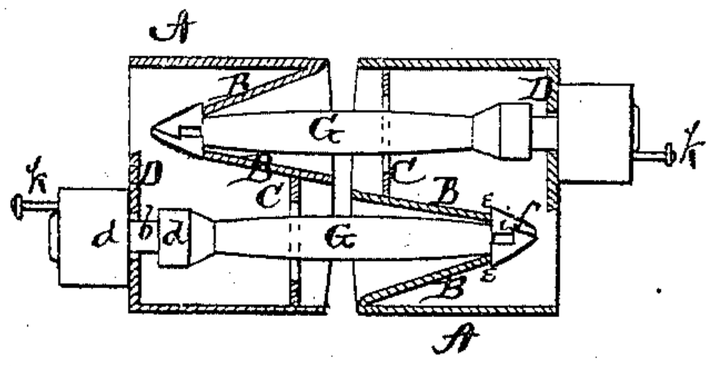
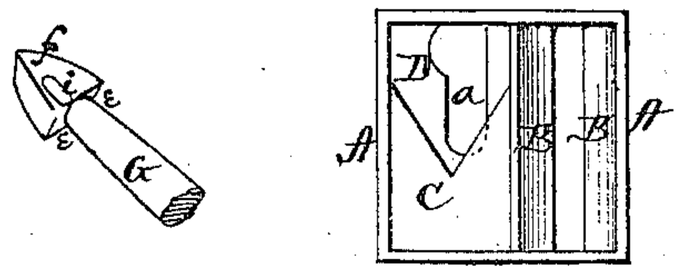


Fig. 3.



Witnesses:

Henry N. Miller
C. L. Everit.

Inventor.

Joseph W. Bates.
per Alexander Mason
Attorneys.

UNITED STATES PATENT OFFICE.

JOSEPH W. BATES, OF MINNEAPOLIS, MINNESOTA.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **134,629**, dated January 7, 1873.

To all whom it may concern:

Be it known that I, JOSEPH W. BATES, of Minneapolis, in the county of Hennepin and in the State of Minnesota, have invented certain new and useful Improvements in Car-Coupling; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a car-coupling, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation, and Fig. 2 a horizontal section, of my car-coupling. Fig. 3 shows detached parts of the same.

A A represent the bumpers of two adjoining cars, made of any suitable form, and provided with a coupler on the right side and a panel on the left side, or vice versa, so as to bring the coupler of one bumper opposite the panel of the other, allowing the panel to receive the head of the coupler in every case. The panel is formed of two plates or walls, B B, set inclined, as shown in Fig. 2, so as to make the front or mouth of the same wider than the rear. In the part of the bumper for the coupler are two vertical plates, C and D, the plate C being at the front, extending from the bottom upward for a suitable distance, and its upper end having a V-shaped notch, as seen in Fig. 3. The other plate D is at the rear of the bumper, extending all the way from the top to the bottom, and provided with a vertical slot, *a*, which has an enlargement on one side at the upper end. The coupling G, which I call the "slotted-anchor coupling," consists of a bar of iron of suitable length, with one round bearing, *b*, near the back end, and a shoulder, *d*, in front and back of this bearing, leaving suitable play between said shoulders, these shoulders being of suitable size and strength to draw or back by the plate or casting D, in which the bearing *b* rests. The neck of the coupling rests in the notched plate C, which thus gives direction to the head of the coupling. The head *f* of this coupling is provided with two shoulders, *e e*, on the back part of it, and it comes to a point in front, the edges being beveled partially on the screw principle, so that when it strikes a slat of less width than itself it raises or turns edgewise, passes through the same, and falls to its flat position, making itself fast by the action of the weight *h* formed upon or attached to the rear end of the coupling. This is the operation of coupling when the bar enters the panel of the opposite bumper. In the head *f* is a slot, *i*, which may extend up into the neck for a suitable distance, which slot is intended to receive the usual coupling-pin when meeting a car not provided with my coupling, thus making it a universal coupling. A lever, *k*, is attached to the coupling G, from which a chain may lead to any desired point for turning the coupling to uncouple the cars. The coupling G is passed to its bearing in the casting D through the enlarged part of the slot *a* and dropped into its place. A pin may be dropped at the side of this slot to keep the coupling in position, and also to draw by.

The coupling thus constructed obviates the danger to life and limb in coupling cars, as it is entirely a self-coupler when the cars are brought together. It can easily be uncoupled, either when the cars are under motion or standing still, from the ground or the platform of the passenger-car, from the top or end of the box-car, or from the top or end of a flat-car.

It is a double or single coupling, as it can be used and acts jointly or independently. When used for switching purposes in making up trains the engineer can uncouple the car next to the tender himself from the engine.

In case of danger ahead, the engineer can uncouple the train from the locomotive the same time he whistles down brakes; and the conductor or brakesman can uncouple any car and divide the train in any place necessaryin case of danger while the train is under full headway. In case a car should jump the track on trestle-work or embankment, it will uncouple itself when it reaches an angle of thirty degrees—or, in other words, the instant the trucks on the lower side leave the ends of the ties.

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

The bumper A provided with the forward notched plate C, inclined walls B B, and slotted plate D, in combination with the coupling G having beveled spear-head *f*, bearing *b*, shoulders *d d*, and weight *h*, all constructed to operate substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of May, 1872.

J. W. BATES.

Witnesses:
J. L. M. DASHIELL,
GEO. L. SHAW.