

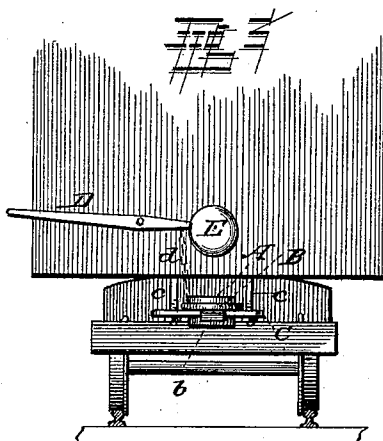
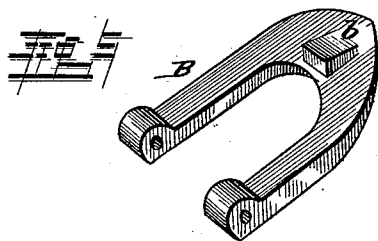
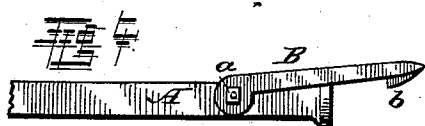
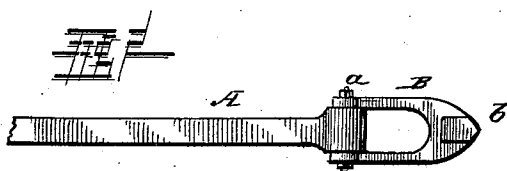
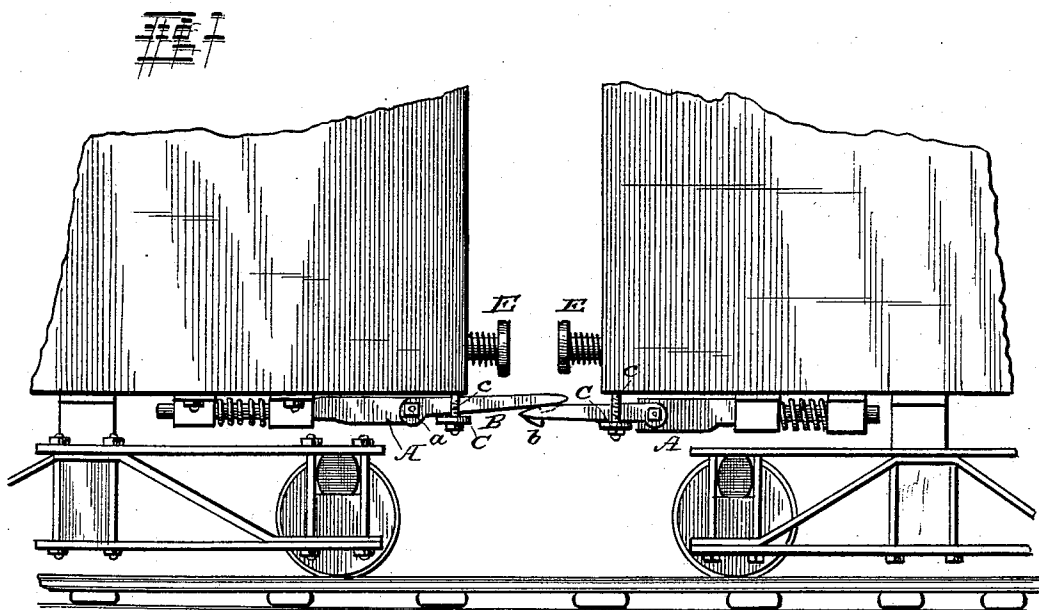
(No Model.)

J. C. CLAY & M. SAFFORD.

CAR COUPLING.

No. 306,720.

Patented Oct. 21, 1884.



WITNESSES:

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J. COLBY CLAY AND MATTHIAS SAFFORD, OF OTEGO, NEVADA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 306,720, dated October 21, 1884.

Application filed June 21 1884. (No model.)

To all whom it may concern:

Be it known that we, J. C. CLAY and MATTHIAS SAFFORD, citizens of the United States, residing at Otego, in the county of Elko and State of Nevada, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to an improvement in car-couplings of that class commonly called "self-acting" or "automatic" couplings, as they engage with each other and connect two cars whenever they are brought together without any manipulation of links or pins by the train-men, the object being to not only furnish a strong and cheap coupling that may be readily applied to the cars now in use, but one that by its automatic action relieves the men employed in making up trains from the danger they now incur in the use of the common link and pin, which compels them to stand upon the track between the cars at the time of making the connection.

The invention consists, essentially, in the combination, with the draw-head, of a link open at one end to embrace the draw-head, and connected therewith by a bolt passing through both and allowing the link to swing freely, the free end of the link being brought to a sharp edge horizontally, and provided with a downwardly-projecting catch which engages with the link of an adjacent car when the two cars are brought together, and certain appliances for disconnecting the links when it is desired to uncouple the cars, and devices for preventing the links from dropping when disengaged, all as will be hereinafter set forth.

In the accompanying drawings, Figure 1 is a side elevation of one end of two cars, each of which is provided with our improved coupling. Fig. 2 is a plan of the draw-head with its connecting-link attached thereto. Fig. 3 is an end elevation of a car provided with our improved coupling devices. Fig. 4 shows the link as applied to the ordinary draw-head. Fig. 5 is a perspective view of one of the links, clearly showing its sharp end and the downwardly-projecting catch.

A represents the draw-head of a car, pro-

vided with the attachments common to all, and B is the coupling-link of V shape, its open end embracing the draw-bar, and connected therewith by the bolt *a*, which passes horizontally through both the draw-head and link. The closed end of the link B is brought to a sharp horizontally wedge-shaped edge, which causes it to either mount upon or pass below the link of the next car to be coupled. This link is also provided with a downwardly-projecting catch, *b*, the forward part of which is inclined, so that it will readily ride over the end of the link upon the next car should the link to which it is attached be ever so little the highest at the moment the cars are brought together.

It will be apparent that the construction of the links prevents the possibility of two cars coming together without coupling when the links are left free, as the slightest difference in the height of their forward ends would cause the highest to pass over the other, when the catch *b*, falling inside the closed end of the link upon the adjacent car, as shown in Fig. 1 of the drawings, engages therewith, thus connecting the two cars by a strong and serviceable coupling. A supporting-bar, C, is attached to the car and prevents the links from dropping too low. The bolts *c c*, which connect this supporting-bar with the car, are preferably provided with adjusting-nuts, by which its position with relation to the car may be varied to suit the level upon which it is desired to hold the link. Attached to the upper side of the link is a rod or chain, *d*, the upper end of which is secured to the short end of a lever, D, pivoted upon the car, and having its long arm extending outward to a position where it may be readily reached by a man standing beside the track. By depressing the outer end of this lever the link to which it is connected is raised, thus releasing its catch from the link of the next car. The construction of these releasing devices may be greatly varied to suit the various kinds of cars in use and the different conditions under which it is to be operated. For instance, when applied to box-cars, the rod *d* may be carried to the top of the car and its operating-lever placed there, so that it might be operated by a train-man from the top of the car; or this arrangement

and the lever D at the side of the car may be applied to a single vertical rod, so as to allow the link to be operated by a lever from either position. Other devices may also be used instead of a lever for operating the link—as a chain winding upon a suitably-placed shaft, like a brake-chain and its operating-shaft.

E represents a spring-buffer, which may be placed, as represented, above the draw-bar; or, if two are used, one may be placed upon each side of the draw-bar, both ways of applying them being in use, as well as forming a buffer of the draw-bar by connecting it with suitable springs. We therefore make no claim to the buffer construction, as shown, or its combination with the coupling appliances.

Having thus described our invention, we claim as new, and desire to secure by Letters Patent of the United States, the following:

As an improvement in car-couplings, the combination, with the draw-bar, of the swinging open-ended link having its closed end sharpened, as described, and provided with a downwardly-projecting catch, the said draw-bar being adjustable vertically, as described, and the link provided with a chain and lever for uncoupling from the side or top of the car, all as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

J. COLBY CLAY.
MATTHIAS SAFFORD.

Witnesses:

WILLIAM CONGER,
W. M. PATTERSON.