

(No Model.)

D. U. GRAVELINE.

CAR COUPLING.

No. 333,850.

Patented Jan. 5, 1886.

Fig. 1.

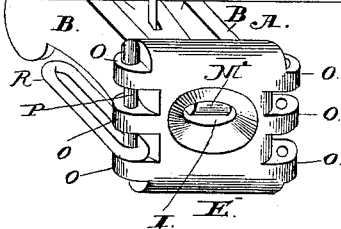
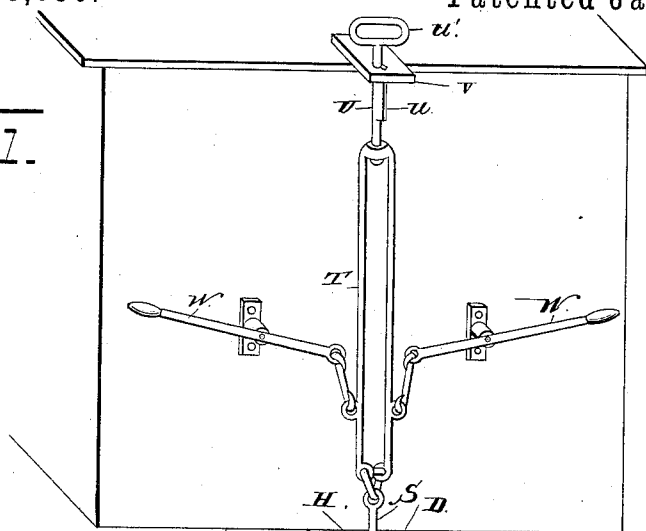
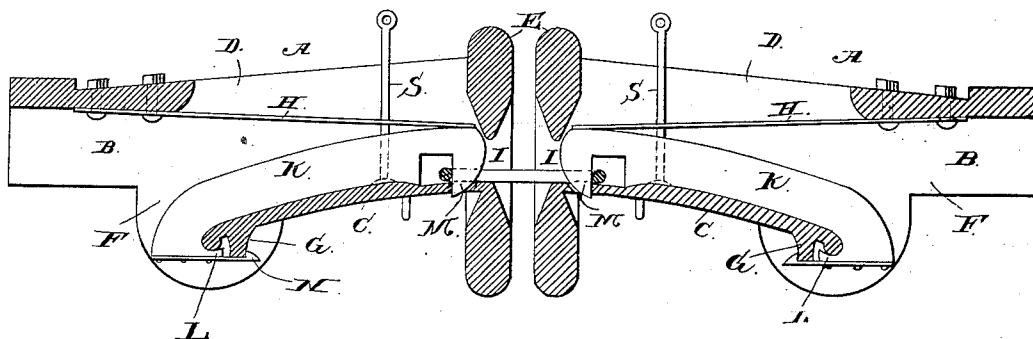


Fig. 2.



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DAVID U. GRAVELINE, OF BYRON, ILLINOIS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 333,850, dated January 5, 1886.

Application filed October 20, 1885. Serial No. 180,440½. (No model.)

To all whom it may concern:

Be it known that I, DAVID U. GRAVELINE, a citizen of the United States, residing at Byron, in the county of Ogle and State of Illinois, have invented a new and useful Improvement in Self Car-Couplings, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to an improvement in self car-couplings, and it is partly an improvement on a self-coupling for which Letters Patent of the United States No. 324,680 were granted to me August 18, 1885; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of my improved car-coupling applied to a car. Fig. 2 is a vertical longitudinal sectional view of the coupling.

A represents the draw-head, which has vertical side walls, B, the closed bottom C, and the open top D. The outer end of the draw-head is enlarged, as at E, forming a bumper. An opening, F, is made in the rear side of the bottom, and the latter has a depending stud, G. H represents a flat steel spring, that is secured at its rear end to the upper side of the draw-head, and extends horizontally throughout the draw-head, as shown. This draw-head has its outer end made in hollow pyramidal form, and is provided with a transverse elliptical opening, I, adapted to receive the end of the coupling-link, the hollow pyramidal form of the bumper being adapted to direct the link to the said opening.

K represents the draw-bar, made in the form represented in the drawings, and having a forwardly-extending hook, L, on its lower edge and rear end, adapted to catch under the rear edge of the bottom C. The draw-bar has also a draft-hook, M, at its front end. It will be seen that the draw-bar is curved longitudinally, its inner end being lower than its outer end. The inner lower end is attached to the draw-head, and when draft is applied to the draw-bar its outer upper end, having the draw-hook, is drawn downwardly, to counteract any tendency to rise and release the coupling-link. The outer end of the spring H bears down upon the outer end of the draw-bar, and

the latter has at its rear lower end a forwardly-extending spring-hook, N, that engages with the stud G, and thus secures the draw-bar firmly in place in the draw-head.

By depressing the outer end of the spring-hook N to release the stud G, the draw-bar may be readily removed from the draw-head and replaced by a new one should the draw-bar become broken.

The draw-head is provided with ears O, projecting laterally from the sides at proper intervals, forming openings or spaces to receive a coupling-link between the ends, and these ears are bored vertically to receive a coupling-pin, P, to pass through the opening in the coupling-link R, placed between the ears, as shown at Fig. 1, furnishing an additional or safety coupling or means for coupling cars varying in height to such an extent as to lessen the efficiency of the center self-coupling.

When two cars provided with my improved couplings come together, the link is caught in the hooked ends of the draw-bars, as shown in Fig. 2.

S represents a handle, secured to the draw-bar, by which the draw-bar may be raised to disconnect it from the coupling-link and uncouple the cars.

T represents a link that is connected to the upper end of the handle, and to the upper end of this link is swiveled a vertical rod, U, which has a feather or flange, *u*, on one side, and a handle, *u'*. The rod passes through a metallic plate, V, that is secured to the top of the car. When the rod is raised to raise the draw-bar, the latter may be secured in that position by turning the rod partly, which causes the feather to bear on the upper side of the plate V.

Hand-levers W are fulcrumed to the end of the car, and are connected at their inner ends to the link T. By this means the cars may be uncoupled either from the top or from either side.

Having thus described my invention, I claim—

1. The combination of the hollow draw-head having the opening F and the stud G, the draw-bar fitting in the draw-head and having the spring-hook to engage with the stud G and secure the draw-bar in place, and the spring H, bearing on the draw-bar, substantially as described.

2. The combination of the hollow draw-head, having the opening F and the stud G, and the draw-bar fitting in the draw-head, and having the spring-hook to engage with the stud G and
5 secure the draw-bar in place, substantially as described.

3. The combination of the draw-head, the draw-bar therein, the link secured to the draw-bar, the feathered rod secured to the link and
10 passed through a plate secured to the top of

the car, and the hand-levers fulcrumed to the end of the car and connected to the link, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in
15 presence of two witnesses.

DAVID U. GRAVELINE.

Witnesses:

RICHARD HART,

JAMES I. HOUSENORT.