(No Model.)

D. W. GLIDDEN.

CAR COUPLING.

No. 265,058. Patented Sept. 26, 1882.

Fig. 1.

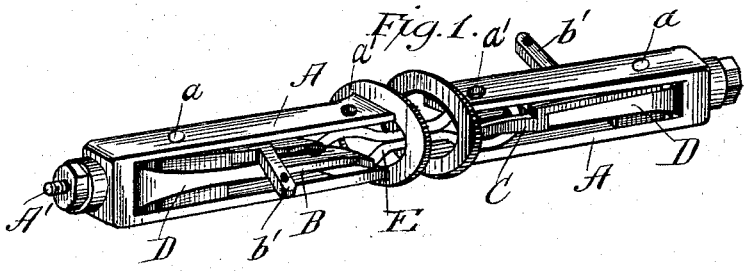


Fig. 2.

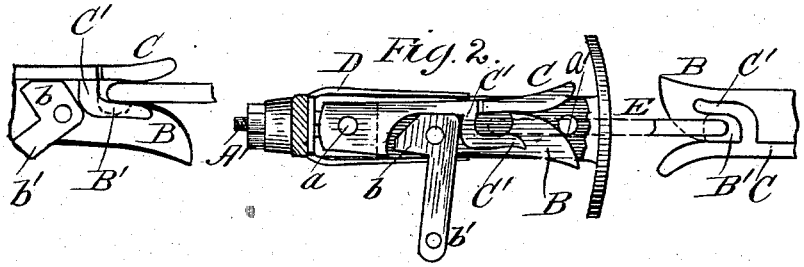


Fig. 3.

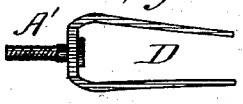


Fig. 4.

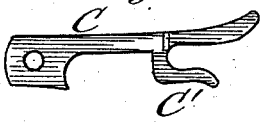


Fig. 5.

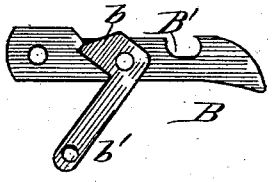


Fig. 6.

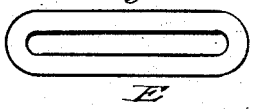
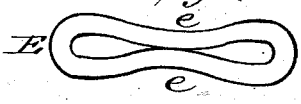


Fig. 7.



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UNITED STATES PATENT OFFICE.

DAVID W. GLIDDEN, OF MONTROSE, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 265,058, dated September 26, 1882.

Application filed January 14, 1882. (No model.)

To all whom it may concern:

Be it known that I, DAVID W. GLIDDEN, a citizen of the United States, residing at Montrose, in the county of Susquehanna and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplers; and I do hereby declare the following to be a full, clear, and exact description of my invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to that class of car-couplers having a movable hook or jaw within the draw-bar to engage a coupling link or bar.

Heretofore car-couplers of this class have chiefly been designed for use with a specially-constructed link, usually the "spear-head" link, and have been usually composed of either a pair of spring-actuated hooked jaws, which grasped the head of the link between them, or a single bar the hook of which was normally held in contact with a solid abutment. The change in the forms of links presents disadvantages, owing to the fact that the specially-constructed links cannot be used in coupling with cars the draw-bars of which have not been converted, and the links of the old form are not always at hand when needed.

The object of this invention is a coupling device so constructed as to be readily applied to the usual freight-car draw-bar, said coupling device being adapted to be used with coupling-links of ordinary construction.

To this end the invention consists in pivoting within the ordinary draw-bar a pair of spring-actuated jaws, one of which is provided with a hook.

It further consists in a device carried by one of the jaws, by which the coupling-link is thrown off the hook of the other jaw in coupling.

It further consists in the combination of these and minor co-operating parts, which will be fully described in the ensuing specification.

In order that my invention may be so clearly understood by those skilled in the art to which it appertains as to enable them to practice the same, I will now proceed to describe the construction and operation of my automatic coupling, reference being had to the representation thereof exhibited in the accompanying drawings, wherein—

Figure 1 is a perspective view, showing two draw-bars provided with my improved automatic coupling device. Fig. 2 is a plan of one of the draw-bars, the top plate being removed to show the jaws forming a draw-hook and guard, also exhibiting in detached view the position of these parts when holding and releasing a link. Figs. 3, 4, and 5 are details, respectively, of the spring, the guard, and the draw-hook. Figs. 6 and 7 represent coupling-links.

The same letters of reference indicate like parts in all the figures.

Between the top and bottom plates, and near the inner end of the ordinary draw-bar, A, are pivoted by means of a bolt, *a*, two jaws, B and C. The outer ends of these jaws are reversely beveled to form a V-shaped notch between them, and the jaw B is provided at its inner face with a C-shaped recess or hook, B′, as shown, of sufficient depth to receive and hold any ordinary coupling-link.

Pivoted to the draw-hook B is an elbow-lever, the short arm *b* of which, upon moving the long arm *b′* rearwardly, bears against the inner face of the guard C and moves the outer ends of the guard and draw-hook asunder, so that a link, E, may be placed in or withdrawn from the hook. The short arm *b* may be so formed that upon moving the jaws apart a sufficient distance to receive a link between them the parts will be locked in that position until released by again moving the long arm of the lever forward.

To prevent the link E from hanging in the hook B′ when the guard C and draw-hook B are moved asunder in uncoupling, a curved clearing-finger, C′, is secured to or formed on the inner face of the guard, which finger sweeps across the hook or recess B′, thus clearing the link from said hook. The adjacent faces of the jaws forming the draw-hook and guard are held normally in close contact with each other by means of a stout U-shaped spring, D, the respective legs of which bear upon the outer faces of said jaws. This spring D is firmly secured within the draw-bar A by means of the draw-bar bolt A′, as shown. The draw-hook and guard are of equal length, their free outer ends terminating a little to the rear of the draw-bar face-plate, so as to move freely behind the same in coupling and uncoupling, and the V-shaped notch formed by beveling

the ends of the jaws is of such depth as to permit a coupling-pin to pass through the pin-holes a' in the top and bottom plates of the draw-bar, so as to permit of the use of the ordinary coupling links and pins.

The long arm b' of the elbow-lever may be operated by means of a lever or chain leading to any convenient point; or said arm might be of sufficient length to be operated by hand at the side of the car.

Though the coupling-links in ordinary use may be used with my automatic couplers, I prefer to modify their form by bending their longitudinal bars e inward, so that they will be close together at the middle of the link and leave a loop at each end thereof, as fully shown in Fig. 7. By using links of this form considerable vertical and horizontal play is given the respective draw-bars with relation to each other.

Many changes might be made in the minor details of construction heretofore stated to suit the views of manufacturers or users—as, for instance, instead of employing a U-shaped spring, any other suitable spring might be used to keep the guard in contact with the draw-hook; also, instead of using the elbow-lever for moving the jaws asunder, a double cam fixed to a suitable spindle might be seated between said jaws. But these or similar changes I would deem but mere modifications of my invention.

Having thus described my invention, what I claim is—

1. The combination, substantially as before set forth, of the draw-bar, the movable jaws pivoted therein by a single bolt, (the inner face of one of said jaws—the draw-hook—being provided with a hooked projection, and the inner face of the other—the guard—being plain-surfaced,) and the spring for holding the free ends of said jaws in contact.

2. The combination of the draw-head, the draw-hook, the guard provided with a clearing-finger, and the spring, all constructed and arranged substantially as hereinbefore set forth.

3. The combination of the draw-bar, the draw-hook and guard pivoted therein, the spring for holding the free ends of the draw-hook and guard in contact, and means, substantially as before set forth, for moving the draw-hook and guard asunder.

4. The combination, substantially as before set forth, of the draw-bar, draw-hook, the guard, the spring for holding the guard in contact with the hook, and the elbow-lever pivoted to the draw-hook.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID W. GLIDDEN.

Witnesses:

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F. D. SUMMERS.