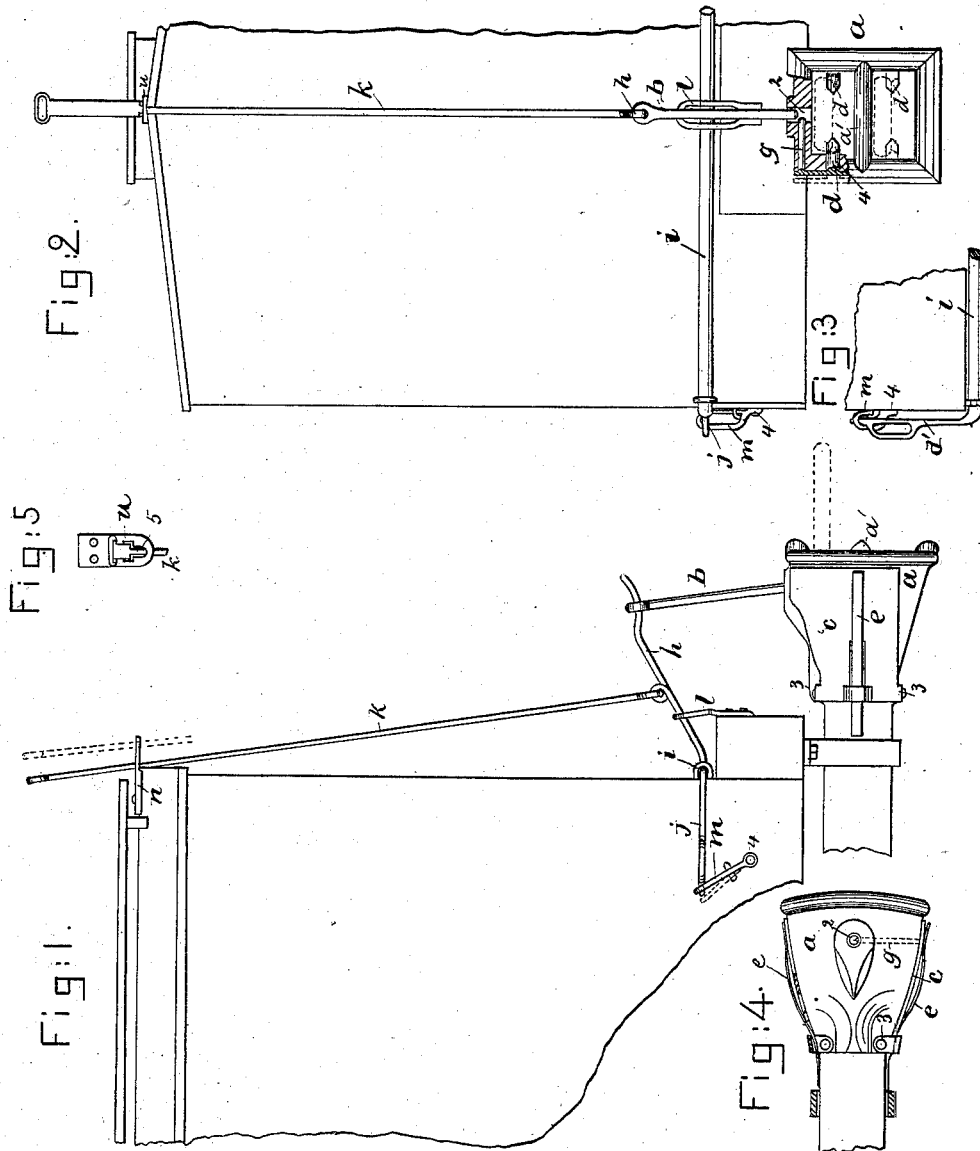


(No Model.)

J. W. OULTON.
CAR COUPLING.

No. 265,133.

Patented Sept. 26, 1882.



Witnesses.

L. F. Connor.

B. J. Hayes.

Inventor.

James W. Oulton
By Crosby & Gregory attys.

UNITED STATES PATENT OFFICE.

JAMES W. OULTON, OF CHARLESTOWN, MASSACHUSETTS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 265,133, dated September 26, 1882.

Application filed December 31, 1881. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. OULTON, of Charlestown, county of Suffolk, and State of Massachusetts, have invented an Improvement in Car-Couplings, of which the following description, in connection with the accompanying drawings, is a specification.

My invention relates to a car-coupling, and has for its object to produce a car-coupling by which the usual link will be automatically engaged by the usual pin when the cars come together, the said coupling being applicable to draw-heads of any height above the rail within the usual limits.

The invention consists essentially in the combination, with the usual draw-head provided with transverse bridges or webs, of spring-pressed link-holding devices provided with studs entering the sides of the said draw-head, and adapted to engage and hold the usual link and present it properly to the draw-head of the other car to be coupled. The said devices are provided with a pin-sustaining projection near the top of the draw-head, which, when the link is not inserted, is adapted to engage the lower end of the usual coupling-pin and hold it above the said draw-head, ready to drop when released by the movement of the link-holding devices, such release occurring when the link is introduced from the other car, it separating the said link-holding devices and releasing the pin, which falls through the link to shackle the cars in the usual manner.

The invention also consists in pin-operating mechanism by which the coupling can be operated from the top or sides of the car.

Figure 1 is a side elevation of a portion of a car having a draw-head provided with this invention; Fig. 2, a front elevation thereof; Fig. 3, a detail showing the pin-operating mechanism of Fig. 2 in plan view; Fig. 4, a plan view of the draw-head, partly in section; and Fig. 5, a detail of the pin-operating mechanism at the top of the car.

The draw-head *a*, preferably of sufficient size, measured from top to bottom, to have some portion come opposite a draw-head at any height above the rails within the usual limits in car construction, has the usual holes, 2, placed in line vertically to receive the coupling-pin *b*.

The link-holding devices are shown as plates

or levers *c*, pivoted at 3, and provided with studs *d*, depressed by springs *e* through holes 4 in the sides of the draw-head. The said studs *d* are beveled or V-shaped at their ends, as shown, and are located midway in the height of the link-openings of the draw-head, as shown in Fig. 2.

The draw-head is divided by one or more horizontal webs or bridges, *a'*, into a series of openings of such depth, measured vertically, that a link of ordinary dimensions in entering will force the studs *d* apart and be held wedged between their points and one of the horizontal walls of the inside of the draw-head, as shown by the dotted lines, Fig. 2. The link thus held by the pressure of the spring *e* upon the plates *c* will project horizontally from the draw-head, as shown in Fig. 1, so as to enter the mouth of a corresponding draw-head upon another car to be coupled.

The link-holding devices *c* are provided with a coupling-pin-holding projection, *g*, located beneath the point at which the coupling-pin *b* enters the draw-head, and adapted to support the said pin, as shown in Fig. 1, when no link is inserted in the draw-head. When, however, a link is inserted and forces the projections *d* and connected plates *c* outward the connected pin-holding projection is disengaged from the said pin and permits it to drop through the link thus inserted. The pin *b* may be withdrawn to uncouple the cars or to prepare for coupling them in any usual manner. As herein shown, a lifting-arm, *h*, passing through the eye of the link, is connected with a rock-shaft, *i*, mounted in suitable bearings and extending across the end of the car, the said shaft being preferably an iron rod bent at right angles at its ends and formed into handled levers *j* at the sides of the car. An operating-rod, *k*, connected with the arm *h*, is extended to the top of the car and provided with a suitable handle.

In operation the pin *b* is raised and a link inserted by hand in the draw-head of one of the cars to be coupled, the said link being held by the devices *c d* preferably at an intermediate point in the height of the draw-head opening at such height as the operator may judge is required for the proper engagement with the other draw-head. In the other car the pin is raised up and held by the projection *g*.

When the cars come together the link carried by the one enters the other draw-head, separating the projections *d* and plates *c* thereof, which remove the projection *g* from beneath the coupling-pin *b*, and thus automatically permit the said coupling-pin to drop through the said link and shackle the cars. The cars may be uncoupled by an operator at the top of the car lifting the pin by means of the rod *k*, or by an operator on the ground at either side of the car by means of the handle *j*. The upward movement of the arm *h* is limited by a stop, *l*, so as to prevent the complete removal of the pin *b* from its socket.

It is sometimes desirable to keep the coupling-pin raised while the link is still in the draw-head and the projection *g* consequently withdrawn. For this purpose holding devices or fasteners *m* are provided at the sides of the car, they being pivoted, as at 4, and adapted to engage the end of the handled levers *j*, as shown in the drawings, to keep the coupling-pin elevated. The upper end of the rod *k* passes through a guide, *n*, at the top of the car, the said guide having in its forward end a narrow slot, 5, (see Fig. 5,) that will engage the under side of an enlarged portion at the end of the said rod, or a notch therein, when the said rod is thrown forward, as shown in dotted lines, Fig. 1, thus keeping the coupling-pin elevated. When the rod *k* is thus thrown forward, or when the holding device *m* is caught over the end of the handled lever *j*, the weight of the pin *b* will retain them engaged; but the said rod *k* and fastener *m* are so inclined that they will drop by their own weight as soon as the pressure on them is relieved, so that an operator at the top of the car can disengage the fastener *m* at the side of the car by merely lifting up on the rod *k*; or the rod *k* may be disengaged from the slot 5 by pressing down on the handle *j* at the side of the car.

It will be seen that this coupling device can be applied to draw-heads of ordinary construction, and that the said draw-heads are not materially weakened by the holes provided for the reception of the link-holding studs.

I do not herein broadly claim the combination, with a draw-head provided with passages through its sides, of spring-pressed link-holding devices provided with studs entering said passages and adapted to hold the link in a horizontal position.

I claim—

1. The combination, with the draw-head provided with holes to receive the usual coupling-pins, of the spring-pressed link-holding devices provided with studs entering the sides of the said draw-head midway in the height of its opening, and the pin-holding projection connected with one of the said devices and automatically operated by the insertion of the link, as described, to release the pin and permit it to drop, substantially as set forth.

2. The combination, substantially as shown and described, of the coupling-pin-operating arm *h*, the rock-shaft *i*, supporting the same, the handled levers *j* of said rock-shaft, gravitating holders *m* for such levers, operating-rod *k*, and catch therefor, whereby the actuating of the arm *h* by the levers serves to unlock or release the rod also, and vice versa.

3. The coupling-pin-operating arm *h* and its rock-shaft *i*, provided with the levers *j*, having handles combined with gravitating inclined fastening devices *m*, substantially as shown and described.

4. The combination of the draw-head *a*, divided into a number of link-chambers by webs *a'*, the plates *c*, pivoted at 3 upon opposite sides of the draw-head, each having a number of studs, *d*, corresponding in number with the number of chambers, and entering each chamber from opposite sides, and the springs *e*, pressing upon plates *c*, substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES W. OULTON.

Witnesses:

JOS. P. LIVERMORE,
BERNICE J. NOYES.