

(No Model.)

I. DAVID.
CAR COUPLING.

No. 477,047.

Patented June 14, 1892.

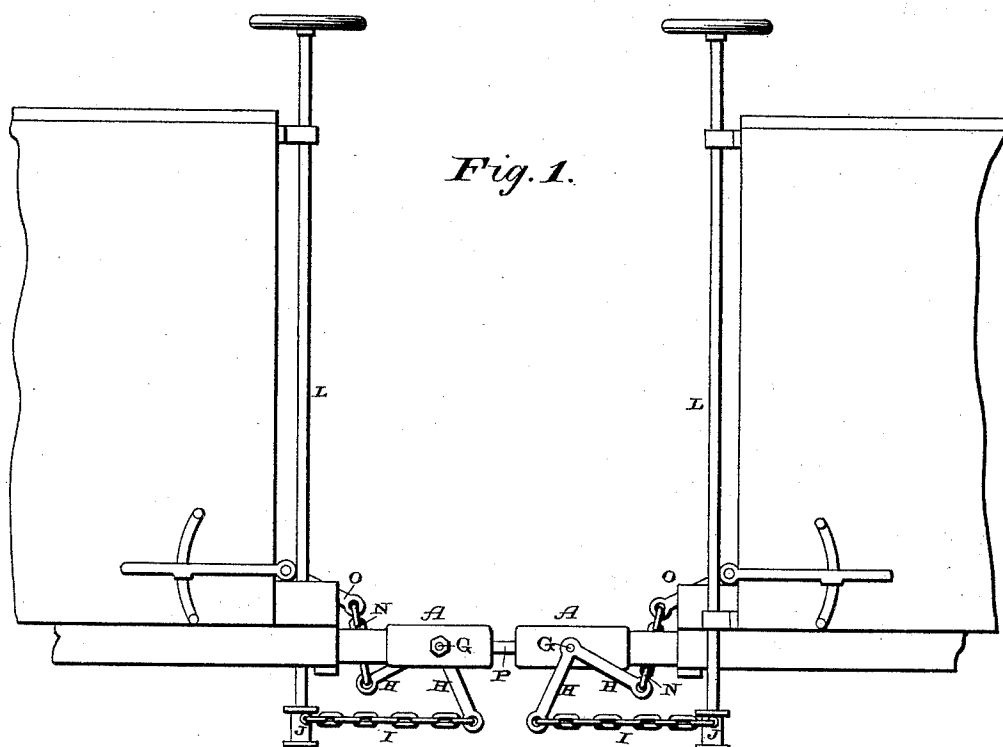


Fig. 1.

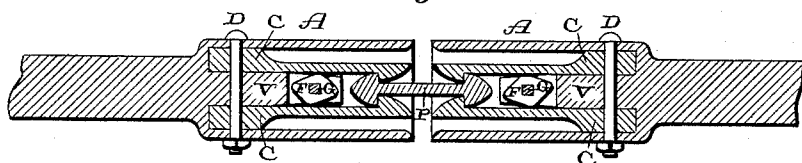
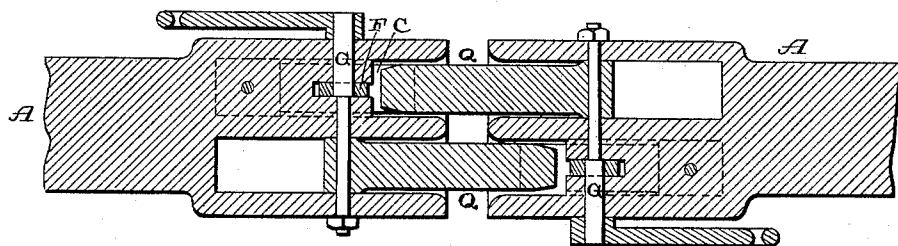


Fig. 2.



Witnesses:

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per
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UNITED STATES PATENT OFFICE.

ISAAC DAVID, OF BLADEN, NEBRASKA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 477,047, dated June 14, 1892.

Application filed June 26, 1890. Renewed May 3, 1892. Serial No. 431,732. (No model.)

To all whom it may concern:

Be it known that I, ISAAC DAVID, of Bladen, in the county of Webster and State of Nebraska, have invented certain new and useful
5 Improvements in Automatic Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in automatic car-couplings; and it consists in the combination and arrangement of parts,
15 which will be fully described hereinafter.

The object of my invention is to produce an automatic coupling in which two hooked springs are used and to so attach these springs to the draw-head that they can readily be removed and replaced at will; to provide an uncoupling mechanism which can be operated either from the top of the cars or from their sides, as may be desired, and to produce an automatic coupling which will do away with
25 all necessity of the brakeman having to venture between the cars for the purpose of coupling or uncoupling them.

Figure 1 is a side elevation of a coupling which embodies my invention. Fig. 2 is a
30 vertical section of the same. Fig. 3 is a horizontal section taken through a coupling which is designed more especially for freight-cars.

A represents the two draw-heads, which are entirely open at their outer ends and which
35 have the projections V formed in their inner ends, as shown in Fig. 2. The inner ends of the two hooked springs C are placed upon opposite sides of these projections, and the coupling-bolt D is passed down through them,
40 so as to secure them rigidly in place. It is only necessary to remove the nut on the lower end of the bolt D and then take out the bolt, when both of the springs can be removed and replaced at pleasure. This construction enables one of the springs to be readily replaced
45 in case it should become broken without having to remove the other. Placed between each pair of springs at any suitable distance back of the shoulders which are formed upon their
50 front ends is a cam F, which is placed upon

an angular shaft G, which extends horizontally through the draw-head, and by means of which cam the springs can be separated at their front ends sufficiently far to allow the cars to uncouple. When the shaft G is turned,
55 the springs C are forced apart at their outer ends; and when the cam is turned backward the springs snap together again.

Secured to one end of the shaft G is an angular lever H, which has a chain I secured to
60 its lower front end, and the rear end of this chain is secured to a drum J upon the lower end of the shaft L, which extends above the top of the car. By turning the shaft L by means of the hand-wheel secured to its upper
65 end the shaft G can be turned so as to open the spring C, and thus uncouple the cars from their tops. To the rear end of the lever H is attached a chain N, which has its upper end fastened to the front end of a hand-lever O,
70 pivoted upon the side of the car, and by means of which the shaft G can also be turned so as to cause the cam F to open the springs. The cam being shaped alike at both of its ends, it separates the springs at their front ends, no
75 matter in which direction it is turned.

Upon passenger-cars an ordinary spear-shaped coupling-bar P will be used and which is not attached to either one of the draw-heads. Where the coupling is made specially for
80 freight-cars each draw-head is made double, and in one side are pivoted two springs C, while in the other upon the bolt G is pivoted a coupling-bar Q, which is spear-shaped at one end only. When two of these couplings
85 (shown in Fig. 3) run together, the two coupling-bars Q have their outer ends to catch between the springs in the adjoining draw-head. When the cars run together, whether the coupling-bars Q or P are used, the springs C open
90 sufficiently far at their front ends to allow the shouldered head to enter, and then they snap together, as shown in Fig. 2. If it is desired that the cars should not couple, the cam F is turned so as to hold the front ends of the
95 springs apart, and then they do not engage with the coupling-bars. This coupling being automatic in its operation, there is no necessity of the brakeman having to venture between the cars for the purpose of coupling or
100

uncoupling them, and thus risking life and limb.

Having thus described my invention, I claim—

- 5 The combination of the draw-heads, the springs placed therein, the cam placed between the springs, the operating-shaft which extends through the cam, the lever H, chains

I N, shaft L, and lever O, substantially as set forth. 10

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

ISAAC DAVID.

Witnesses:

W. D. HALL,
P. H. SAILOR.