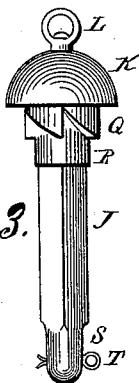
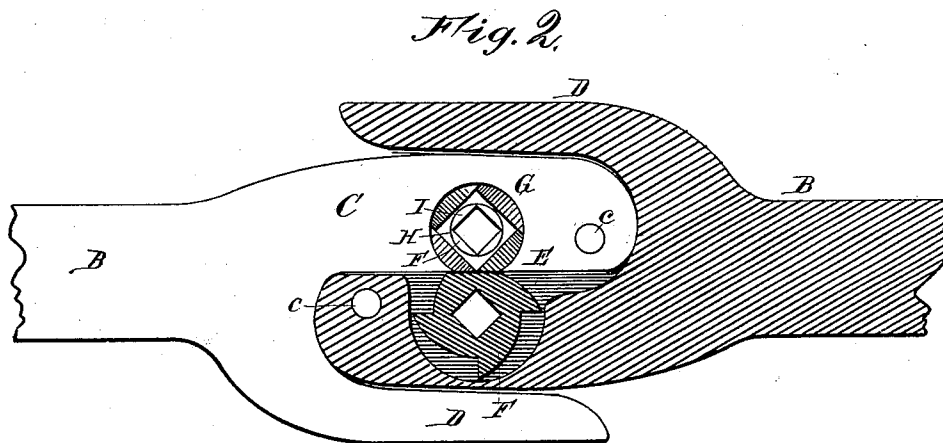
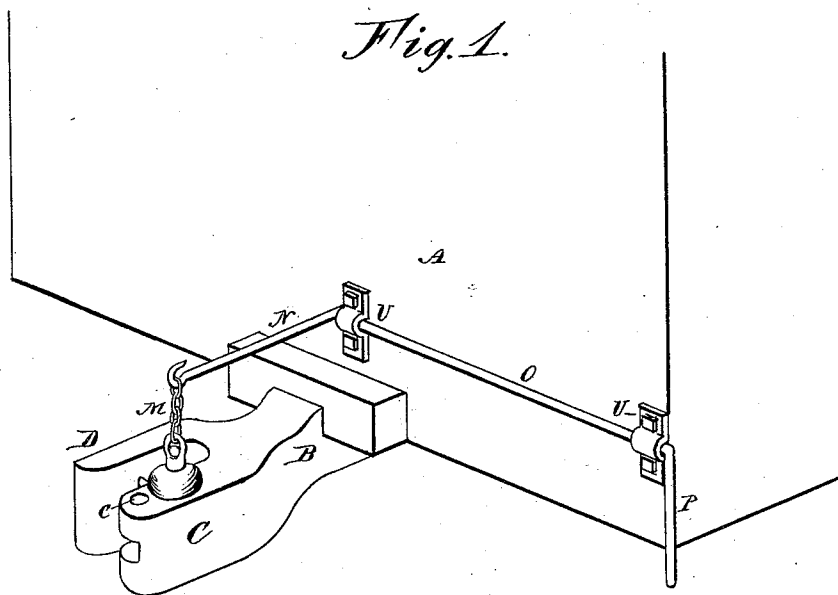


(No Model.)

G. GLADFELTER.
CAR COUPLING.

No. 529,029.

Patented Nov. 13, 1894.



Attest.
L. M. Martinell
B. M. Sundt

Fig. 3.

Inventor.
George Gladfelter
By J. M. S. Johns
Atty.

UNITED STATES PATENT OFFICE.

GEORGE GLADFELTER, OF CEDAR RAPIDS, IOWA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 529,029, dated November 13, 1894.

Application filed April 21, 1894. Serial No. 508,456. (No model.)

To all whom it may concern:

Be it known that I, GEORGE GLADFELTER, a citizen of the United States, residing at Cedar Rapids, in the county of Linn and State of Iowa, 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 the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to produce an automatic car-coupler of simple construction, which, when uncoupled, is always in a proper position for coupling with one of its own kind, and may be coupled by hand with any coupler now in use.

The invention consists in the construction, combination and arrangement of parts, as hereinafter fully set forth and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a view in perspective of a coupler embodying my invention, as applied to a car. Fig. 2 is a fragmentary plan view showing a pair of draw-heads in a coupled position, one of them being in section. Fig. 3 is a side elevation of the pin for the knuckle.

Similar letters of reference indicate corresponding parts.

The invention is an adaptation of the "vertical plane" type of coupler, the form of the draw-head being suitably modified to admit of the use of a knuckle of peculiar construction, as will be hereinafter explained.

Referring to the drawings, A designates the end of an ordinary freight car, to which is attached the draw-bar B, the outer portion of which will be designated as the draw-head. This is composed of two arms, one of which, C, receives the rotating knuckle F, and the other, D, serves as a guide for the knuckle-arm of the engaging draw-head. In the body of the arm C is formed a recess E of suitable form to receive the knuckle F. This is in the form of a vertically broad ratchet, with a square central hole to receive the square shank of the pin J. In the upper part of the drawhead is a circular recess I to receive the serrated portion Q of said pin. The bottom of this recess is provided with notches G adapted to engage with the corresponding teeth of the shoulder Q under the head of the

pin. A little below these notches is a round hole H to receive the cylindrical portion R of the pin below the serrated shoulder, and to form a suitable bearing for the same. In the lower part of the draw-head, directly below, is a hole I', which forms a bearing for the lower end of the pin S''. A cotter T prevents accidental displacement of the pin.

The head of the pin, K, is made quite large and heavy, as shown, for the double purpose of covering the recess above described and excluding snow and ice and the like, and also to give sufficient weight to the pin to enable it to drop of its own gravity into a holding position. The pin, which is illustrated in Fig. 3, consists essentially of a shank embracing a square portion J fitting in the square hole of the knuckle, cylindrical bearings R and S, respectively above and below this square portion, a radial ratchet Q just above the bearing R, and a heavy head K, as above mentioned. To the upper end of the pin is swiveled a ring L, which connects, as by a chain M, with the arm N of a rock-shaft O mounted in bearings U U at the end of the car, and having a terminal hand-lever P.

A notch C' admits of an ordinary link, and a hole c, of the ordinary pin, where it is necessary to use them in coupling to dissimilar draw-heads.

The operation of the device will now be readily understood. To uncouple, it is but necessary to lift the pin a little (it being free to slip endwise a limited distance in the knuckle and in its bearings), and on the disengagement of the teeth thereof the knuckle is free to turn, when the draw-heads may separate. The coupling is done automatically, simply by the connection of two draw-heads. As they come together the knuckles pass each other, one or both of them turning to do so, and the notched pin acting as simple ratchet, catches the knuckle of each after it has passed its fellow.

Having thus described my invention, I claim—

1. In a car-coupler, the combination of the draw-head having arms C and D, the knuckle F mounted revolubly in a recess of the arm C and having a square central hole therein, notches G formed in the upper portion of said arm C, and pin having a square stock J and

a notched shoulder Q adapted to engage with the notches in the draw-head, substantially as and for the purpose set forth.

2. In a car-coupler, the combination with a
5 draw-head substantially as described, of the
revoluble knuckle F having an angular central hole therein, the pin having an angular
stock J corresponding to said hole, a serrated
shoulder Q, a heavy head K and a swivel ring
10 L, a rock-shaft lever mounted on the end of

the car, and a connection of an arm of said rock-shaft with said swivel-ring, substantially as and for the purpose set forth.

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

GEO. GLADFELTER.

Witnesses:

B. M. SUNDE,

L. M. MARTINEK.