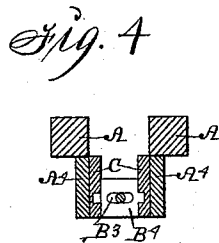
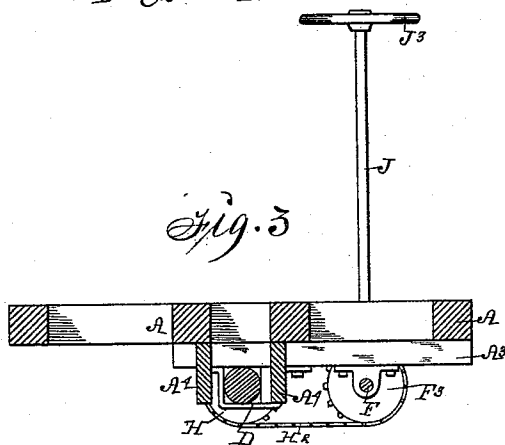
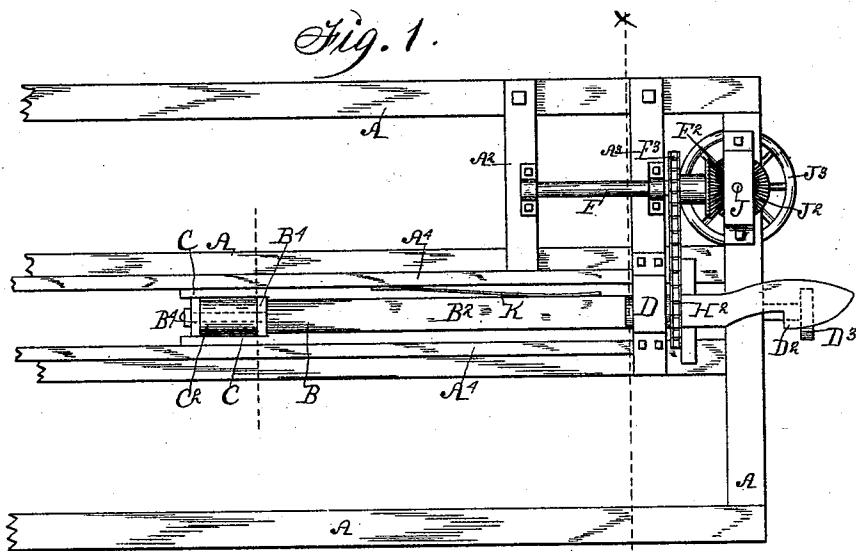


(No Model.)

J. H. SNYDER.
CAR COUPLING.

No. 486,905.

Patented Nov. 29, 1892.



Witnesses:
W. J. Saukey.
J. Ralph Orwig.

Inventor: John H. Snyder,
By Thomas G. Orwig, Atty.

UNITED STATES PATENT OFFICE.

JOHN H. SNYDER, OF DES MOINES, IOWA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 486,905, dated November 29, 1892.

Application filed May 16, 1892. Serial No. 433,075. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. SNYDER, a citizen of the United States of America, residing at Des Moines, in the county of Polk and State of Iowa, have invented a new and useful Automatic Car-Coupler, of which the following is a specification.

My invention consists, first, in mounting a draw-bar having an integral vertical jaw formed on its outer end beneath a car in such a manner as to allow a limited lateral movement.

My invention consists, primarily, in providing one angular formation on a draw-bar having a vertical jaw formed on its forward end and which is also mounted beneath a car in such a manner as to be capable of a rotary and also a slight lateral movement, and in mounting a leaf-spring in proximity to said angular formation to engage the same and normally hold the draw-bar to the limit of its lateral movement, and also to prevent it from assuming other than a vertical or horizontal position and prevent it from being turned by slight jars and shocks relative to a car, as hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a bottom view of a portion of a car and my improved car-coupling in position thereon. Fig. 2 is a vertical longitudinal sectional view of the draw-bar and connecting parts. Fig. 3 is a transverse sectional view through the line *x x* of Fig. 1, and Fig. 4 is a transverse sectional view through the line *y y* of Fig. 1.

Referring to the accompanying drawings, the reference-letter A is used to designate the car-frame.

A² and A³ are cross-pieces to support parts of the coupling mechanism, and parallel pieces A⁴ form a support for the draw-bar.

B is the draw-bar, which is of common construction and has an angular formation in its approximate central portion at B². Its rear end is of smaller diameter and is extended through the elongated slots B³, formed in the cross-pieces B⁴, which latter have a limited sliding connection with the blocks C, as required, to allow the requisite lateral and longitudinal motion.

C² is a yielding pressure device, preferably

made of rubber and encircling the end portion of the draw-bar to form a buffer therefor by being interposed between the sliding cross-pieces B.

D is a bearer for the forward end of the draw-bar, and of a size adapted to allow sufficient lateral movement of the draw-bar therein and also permit of its rotation.

D² is the fixed vertical jaw on the forward end of the draw-bar, and of a similar conformation to the vertical jaws now in common use.

D³ is a buffer of the usual form, located above the draw-head.

F is a rotatable shaft mounted in bearings fixed to the cross-pieces A² and A³.

F² is a bevel gear-wheel fixed to forward end, and F³ is a sprocket-wheel fixed to the said shaft immediately in the rear of the said gear-wheel.

H designates a sprocket-wheel secured to the draw-bar in alignment with the sprocket-wheel F³, with which it is connected by means of a sprocket-chain H².

J is a rotatable shaft having its bearings in the end of the car and extended vertically. To its lower end is secured a bevel gear-wheel J², adapted to mesh with the gear-wheel F², and at its top is a hand-wheel J³, by which it may be manually rotated from the top of the car.

K designates a leaf-spring secured to one of the supports A⁴, and extended forwardly and outwardly therefrom to impinge the angular formation of the draw-bar. This spring is located on the side of the draw-bar opposite to the side of its draw-head which has the vertical jaws formed therein, as required, to hold the jaw when coupled into close engagement with its mating jaw, and the said leaf-spring by engaging the said angular formation on the draw-bar will prevent the draw-head from occupying other than a horizontal or vertical position and hold the draw-bar in either of the said positions when placed therein.

In its practical operation it will be seen that the device will automatically engage a mating draw-head when brought into contact therewith in a common way, and when it is desirable to uncouple a rotation of the hand-wheel J³ will rotate the draw-head a quarter

of a revolution or until in a horizontal position, when it will be retained by the leaf-spring, as set forth.

I do not desire to be understood as limiting myself to the construction of the means used for rotating the draw-bar, as it will be obvious that various mechanical equivalents might be substituted therefor; but

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A car-coupling comprising the following elements, in combination, to wit: a draw-bar having a vertical jaw formed on or fixed to the forward end and mounted beneath a car in such a manner as to be capable of a rotary and also a slight lateral movement, means for rotating the draw-bar to uncouple, and means for normally holding the draw-bar to the limit of its lateral movement toward a mating jaw and at the same time prevent the draw-head from assuming other than a vertical or horizontal position, comprising an angular formation on the draw-bar, and a leaf-spring secured to the car and having its free end normally impinging the said angular formation.

2. The combination, in an automatic car-coupling, of a draw-bar, draw-head, and fixed vertical jaw formed complete in one piece and rotatably mounted beneath a car in such a manner as to be capable of a limited lateral movement, yielding pressure devices attached to the rear end of the draw-bar to serve as a buffer, an angular formation on the said draw-bar, a leaf-spring secured to the car and engaging the said angular formation for the purposes stated, a sprocket-wheel fixed to the said draw-bar, a rotatable shaft extended parallel with the draw-bar and secured to the car, a sprocket-wheel fixed thereto in alignment with the aforesaid sprocket-wheel, a sprocket-chain connecting them, a bevel gear-wheel secured to the said shaft, a shaft having a bevel gear-wheel therein in mesh with the aforesaid gear-wheel, and a hand-wheel fixed to the top of the said shaft, all constructed and combined to operate in the manner set forth.

JOHN H. SNYDER.

Witnesses:

J. RALPH ORWIG,
THOMAS G. ORWIG.