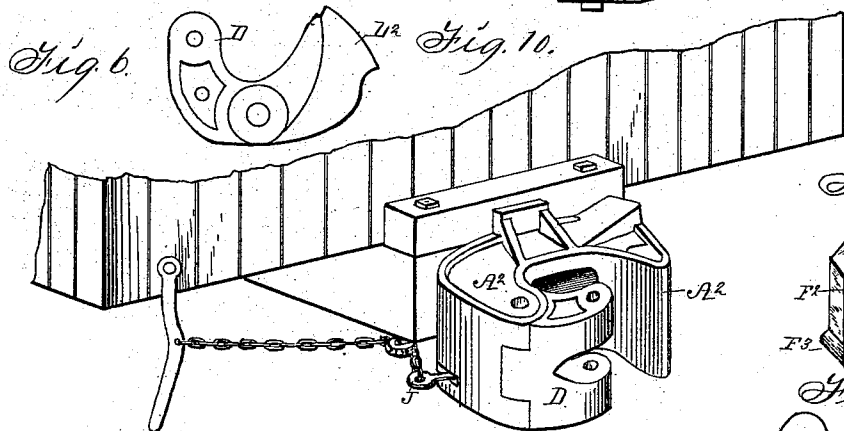
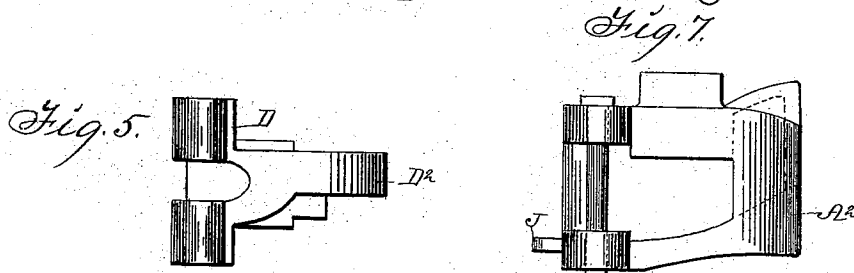
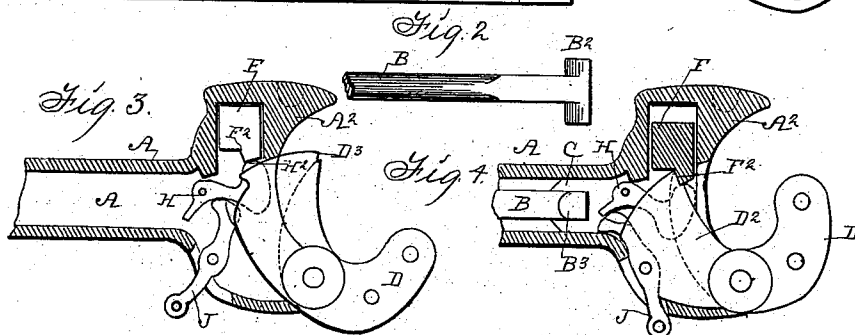
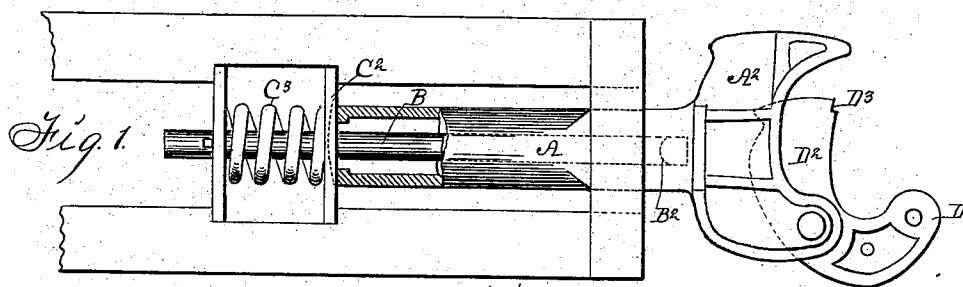


(No Model.)

C. E. C. EDEY.
CAR COUPLING.

No. 512,507.

Patented Jan. 9, 1894.



Witnesses:
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Inventor:
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UNITED STATES PATENT OFFICE.

CHARLES E. C. EDEY, OF DES MOINES, IOWA, ASSIGNOR TO THE EDEY
AUTOMATIC CAR COUPLER COMPANY, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 512,507, dated January 9, 1894.

Application filed April 7, 1893. Serial No. 469,386. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. C. EDEY, a subject of the Queen of Great Britain, and a resident of Des Moines, in the county of Polk and State of Iowa, have invented an Improved Car-Coupling, of which the following is a specification.

My invention relates to the class of couplers known as the vertical jaw type, and consists in certain details of construction, arrangement and combination of parts, whereby a cheap, simple, and easily operated coupler is produced, and in the manner of attachment of the draw bar, to allow it to readily conform to curves in the track and prevent the draw heads from binding when on a curved track, as hereinafter set forth, pointed out in my claims and illustrated in the accompanying drawings, in which—

Figure 1 is a top view of one of the couplers applied to a portion of a car. Fig. 2 is a side view of the bolt for securing the draw bar to the car. Figs. 3 and 4 are horizontal sectional views of the draw head, showing the vertical jaw in different positions. Figs. 5 and 6 are views of the vertical jaws showing face and top views thereof. Fig. 7 is a front, face view of the same, with the vertical jaw removed. Fig. 8 is a perspective view of the gravity latch. Fig. 9 is a perspective view of the lever for operating the gravity latch. Fig. 10 is a perspective view of the complete coupler applied to a car.

Referring to the accompanying drawings, the reference letter A is used to designate the draw bar, and A² the draw head the outside conformation of which is of the ordinary shape. This draw bar is connected with the car by means of a bolt B extended through the draw head to a point in the rear of the rear end of the draw bar, through a longitudinally elongated slot. The head of this bolt has a vertical convex face B³ to engage a partition C formed on the interior of the draw bar in proximity to the draw head to serve as a pivotal point in which the draw bar may turn. A plate C² at the rear end of the draw bar has a concave face to receive the rear end of the draw bar and allow it to move horizontally relative thereto.

C³ is a coil spring of the usual kind encir-

cling the rear end of the bolt B and normally exerting its pressure forwardly upon the plate C² which plate is also provided with a horizontal slot to admit said bolt.

D designates a vertical jaw pivoted in one side of the draw head and having a rear extension D² adapted to enter the cavity in the draw head. A straight vertical shoulder D³ formed upon said rear extension comes in proximity to the opposite side of the cavity from the pivotal point of the vertical jaw and is adapted to pass some distance in the rear of the forward face of the draw head.

F designates a gravity latch placed in a cavity formed in the draw head, which cavity is extended outwardly and slightly rearward from the inner face of the cavity in the draw head and its bottom is inclined downwardly toward the bottom of the draw head cavity. Said latch is provided with a vertical shoulder F² on its front face and an inclined surface F³ on its bottom to engage the inclined bottom of its cavity. An inclined surface on the lower end portion of the gravity latch provides means whereby the rear extension of the draw bar will raise said latch and pass behind it and the latch automatically drop in front of the shoulder of the rear extension to lock the vertical jaw. The top of the latch or block is also inclined as required to correspond with the inclined roof of the cavity in which it operates.

Means are provided for elevating the latch to release the vertical jaw as follows: H designates a lever pivotally mounted upon the bottom of the draw head cavity with one of its ends in proximity to the gravity latch. This end has an inclined face H² adapted to be forced between the gravity latch and the bottom of the draw head cavity to elevate the former and force it upwardly and outwardly in its cavity to allow the rear extension of the vertical jaw to pass beyond it. This lever is actuated by a second lever J which is passed through the sides of the draw head, pivoted to the bottom of the drawhead cavity with its inner end in engagement with the lever H so that a rearward movement of the lever J will bring the inclined face of the lever H into engagement with the gravity latch to elevate it and release the vertical jaw. As before

stated the latch will automatically lock the vertical jaw when the jaw is in a closed position and at the same time force the levers H and J into position for elevating the gravity latch.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent of the United States therefor, is—

1. An improved car coupling comprising the following elements, to wit: a suitable draw bar, a draw head formed thereon, a vertical jaw pivotally mounted in said draw head and having a rear extension adapted to enter the draw head cavity, a gravity latch having an inclined bottom in a cavity in the draw head opposite from the pivotal point of the vertical jaw, adapted to be automatically moved by the rear extension of the vertical jaw to allow said extension to pass behind it and then automatically drop into position in advance of the rear extension to lock the vertical jaw and means for engaging the inclined bottom of the latch to elevate the latch and free the jaw, as required in uncoupling.

2. An improved car coupling comprising the following elements, to wit: a suitable draw bar, a draw head formed thereon, a vertical jaw D pivotally mounted in said draw head and provided with a rear extension D² having a vertical shoulder D³ as set forth, a gravity latch F having a shoulder F² and an inclined bottom F³ placed in a cavity in the side of the draw head as set forth, a lever H pivoted to the bottom of the draw head cavity and pro-

vided with the inclined face H², a lever J extended through the side of the draw head pivoted to the bottom of the draw head cavity to engage the lever H, substantially as set forth, for the purposes stated.

3. In a car coupling, the combination of the following elements, a suitable draw head, a hollow draw bar extended rearwardly therefrom, a bolt pivotally mounted in the approximate, transverse center of the draw bar, extended through the rear end thereof and attached to the car, substantially in the manner set forth for the purposes stated.

4. An improved car coupling comprising the following elements in combination, to wit: a suitable draw bar A having a draw head A² thereon, a bolt B extended through said draw bar and provided with a head B² to engage a shoulder C formed on the interior of the draw bar as set forth, a vertical jaw D pivotally mounted in said draw head and provided with a rear extension D² having a vertical shoulder D³ as set forth, a gravity latch F having a shoulder F² and an inclined bottom F³ placed in a cavity in the side of the draw head as set forth, a lever H pivoted to the bottom of the draw head cavity and provided with the inclined face H², a lever J extended through the side of the draw head cavity to engage the lever H substantially in the manner set forth for the purposes stated.

CHARLES E. C. EDEY.

Witnesses:

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THOMAS G. ORWIG.