

(No Model.)

J. W. KLINGLER.
CAR COUPLING.

No. 487,532.

Patented Dec. 6, 1892.

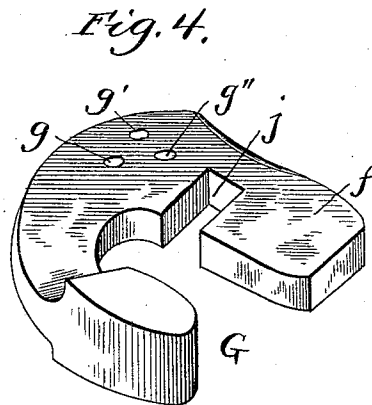
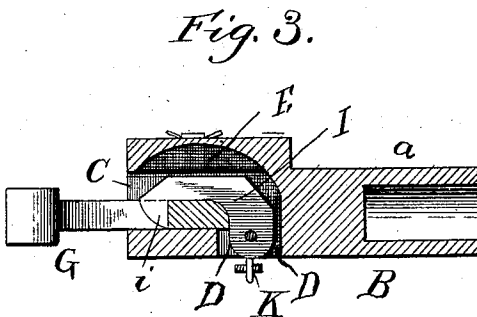
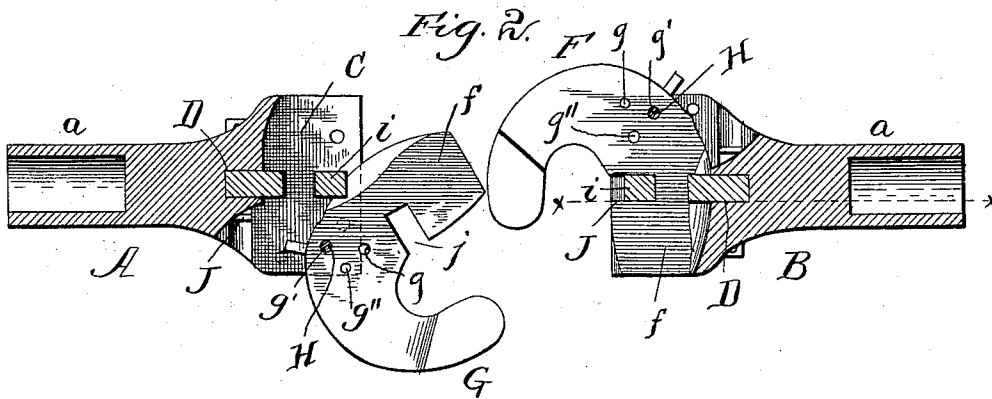
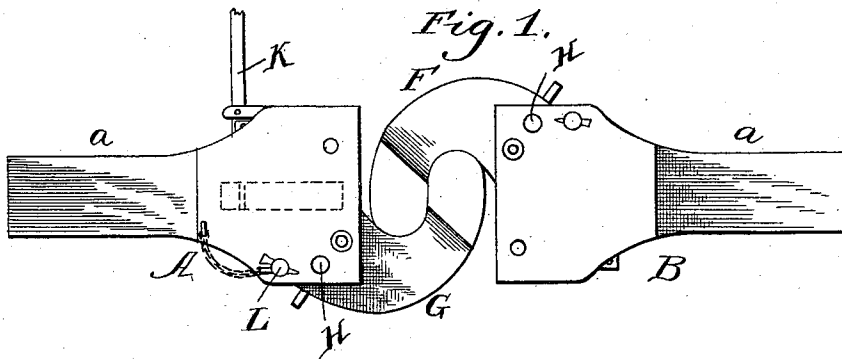
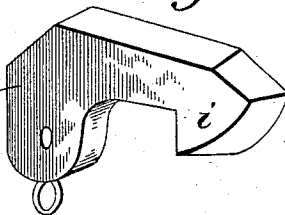


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 487,532, dated December 6, 1892.

Application filed September 12, 1892. Serial No. 445,664. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. KLINGLER, a citizen of the United States, residing at Beaver Springs, in the county of Snyder and State of Pennsylvania, 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.

My invention relates to improvements in automatic car-couplers; and the object in view is to provide a simple and reliable contrivance which when the cars come together will be automatically operated and form a rigidly-locked connection to obviate the liability of the parts becoming accidentally disconnected.

With these and such other ends in view as pertain to my invention it consists in a pair of draw-heads, each having a horizontal transverse slot about midway of its height and a vertical slot and recess at the inner end of the transverse slot, combined with a swinging jaw pivoted in each draw-head and provided with an arm which is adapted to work in the transverse slot in said draw-head, and a gravity-latch fitted in the vertical slot and recess in the rear part of the draw-head and arranged to engage with the arm or extension of the swinging jaw when the latter is interlocked with the corresponding jaw on the other draw-head, whereby both jaws are immovably locked when the coupling is completed.

The invention further consists in the peculiar construction and arrangement of parts, which will be hereinafter more fully described, and pointed out in the claim.

The invention is fully illustrated in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a plan view of my improved coupling. Fig. 2 is a horizontal sectional view thereof, showing the jaws in their open positions. Fig. 3 is a vertical longitudinal sectional view on the line *xx* of Fig. 2. Fig. 4 is a detail perspective view of one of the jaws, and Fig. 5 is a like view of the latch adapted to lock the swinging jaw.

Referring to the drawings, in which like

letters of reference denote corresponding parts in all the figures, A B designate the two draw-heads of a car-coupling embodying my invention. Each draw-head is provided with a horizontal slot C, which extends transversely through the same and from the front end thereof to a suitable line near the draw-bar *a*, provided on the rear part of the draw-head, said slot C opening through the front end and both sides of the head. At the rear part of the horizontal slot C each draw-head is further provided with a vertical slot D, which intersects with the horizontal slot, the lower part of said vertical slot extending through to the lower side of the draw-head and the upper end of said slot extending into but not through the upper part of the draw-head. Above the horizontal slot C the draw-heads are each further provided with a longitudinal recess or groove E, which communicates with the slot C and with the vertical slot D for a purpose to be explained hereinafter.

F G are the laterally-swinging jaws, one to each draw-head. The jaw is shown in Fig. 4 of the drawings, and it is made in a single piece or casting with an arm *f*, which extends nearly parallel with the jaw, but at one side of the same. At the juncture of the jaw and its arm is provided a series of transverse openings *g g' g''*, the latter opening located at the angle formed by the jaw and its arm, and said jaw is fitted in the horizontal slot C to work freely therein, a pivotal bolt H being passed vertically through the draw-head and through the opening *g'* in the jaw, thereby pivotally connecting the jaw to the draw-head, such pivot being located near one corner or angle of the draw-head and at the angle of the jaw. The jaws are thus free to swing laterally of the draw-heads in the act of coupling and uncoupling and the arms of the jaws normally are inclosed within the slots C; but when the jaws are moved in position to couple the cars the arm of one jaw is confined in the draw-head by its latch, while the other arm protrudes slightly from its draw-head, so as to lie in the path of the other jaw and to be struck thereby when the cars come together, whereby the protruding arm is forced into its draw-head and the jaw is forced into position to interlock with the

other jaw on the approaching draw-head, the arm and jaw which previously protruded being confined in position by means of a latch in the draw-head.

5 The latches for locking the jaws within the draw-heads are designated at I, and each latch is arranged in the longitudinal channel E in the upper part of the draw-head, above the horizontal slot C and the swinging jaw
10 therein. The latch is made in the form of a bell-crank lever and is pivoted within the draw-head at the juncture of its diverging arms on a fixed horizontal bolt or pin J, which is suitably secured in the draw-head. The
15 horizontal arm of the latch lies in the channel or groove E, while the depending or vertical arm of said latch occupies the vertical slot D at the rear part of the draw-head. This latch lies immediately in the path of the
20 arm of the swinging jaw, and to adapt the beak or hook *i* at the free end of the horizontal arm of the latch to properly engage with the arm of the swinging jaw when the jaws are forced into engagement with each other
25 the front edge of the arm of the jaw is provided with a vertical transverse notch *j*, over the edge of which the beak or hook is adapted to take, and thereby lock the arm and its jaw in position. The heel of the latch pro-
30 trudes below the lower side of the draw-head, and to said heel is connected the inner end of an operating-lever K, which is suitably fulcrumed on the car and arranged so that its outer end or handle is accessible from the
35 side or platform of a car to enable the lever to be easily operated in order to lift the latch and free it from engagement with the arm of the swinging jaw to effect the uncoupling of the cars.

40 In order to lock or confine the jaws in the draw-heads and prevent any accidental uncoupling of the cars, I have provided an auxiliary locking device, which is entirely independent of the latch, said auxiliary locking
45 device being designed for manual manipulation, while the latch is automatic in its operation. This auxiliary locking device consists of a gravity pin or bolt L, which is fitted in suitable aligned openings in the draw-head
50 adjacent to the vertical pivot-bolt of the swinging jaw. Said gravity locking-bolt is adapted to be passed through either of the openings *g* or *g''*, formed in the swinging jaw at its
55 angle. When the jaw is coupled to the fellow jaw of the coupling and the two jaws are locked by their respective latches, the locking-bolt K can be passed through the opening *g''*

nearest the notch in the arm, and thereby lock the jaws from movement and prevent their accidental separation; but in some instances 60 it might be found desirable to confine the swinging jaw outside of the draw-head in order to permit the use of ordinary links in connection with the latches, which is provided for by turning the jaws outside of the draw- 65 heads and fitting the locking-bolt K in the other opening *g* in the angle of the draw-head. I have thus provided a coupling which can be made automatic either by the use of the im- 70 proved form of jaw or with the ordinary coupling-link, which can be fitted and confined in the draw-head by the gravity-latch, which is quite important in view of the fact that the swinging jaw may become broken or damaged to such extent that it cannot be used. 75

The gravity locking-bolt is confined to the draw-head by means of a chain or other connection *k* to prevent the same from being lost.

The operation of my invention will be readily understood by those skilled in the art from 80 the foregoing description, taken in connection with the drawings.

It is evident that changes in the form and proportion of parts and details of construction of the mechanism herein shown and de- 85 scribed as an embodiment of my invention can be made by the skilled mechanic without departing from the spirit or sacrificing the advantages of my invention, and I therefore reserve the right to make such modifications 90 and alterations as fairly fall within the scope thereof.

What I claim as new is—

A car-coupling comprising the draw-head provided with the intersecting horizontal and 95 transverse slots, the angular swinging jaw G, pivoted in the horizontal slotted part of the draw-head and having the notched inner arm *f* and the transverse apertures *g g''* on opposite sides of its pivot, the right-angled latch 100 pivoted in the vertically-slotted part of the draw-head and having the beak *i*, adapted to take over the notched arm of the swinging jaw, and the auxiliary locking-bolt L, fitted in openings in the draw-head and adapted to fit 105 in either aperture *g* or *g''* of the swinging jaw, substantially as described.

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

JOSEPH W. KLINGLER.

Witnesses:

ARTHUR L. BRYANT,
H. I. BERNHARD.