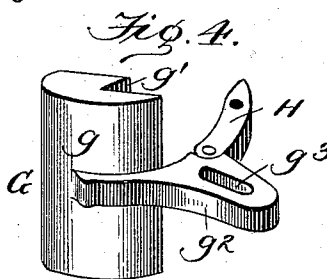
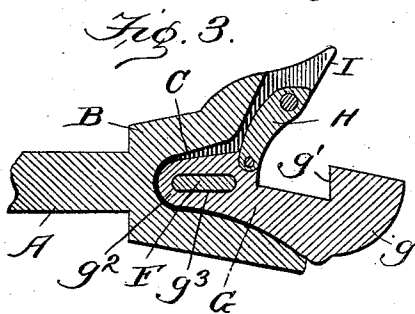
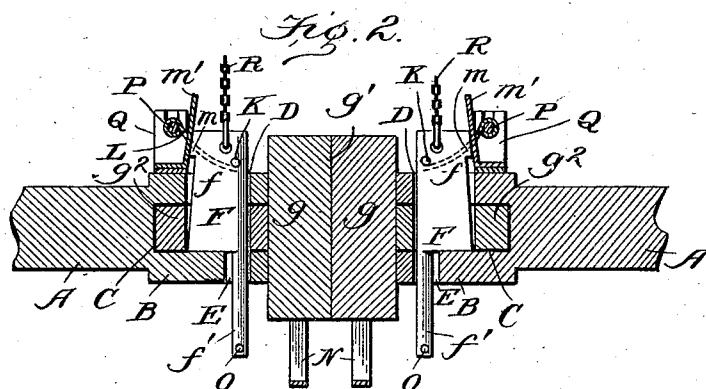
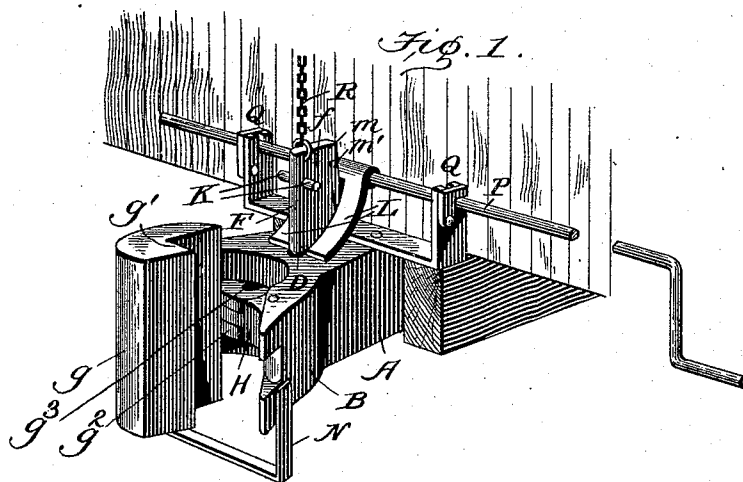


(No Model.)

W. H. HATFIELD.
CAR COUPLING.

No. 572,542.

Patented Dec. 8, 1896.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM H. HATFIELD, OF SULPHUR SPRINGS, ALABAMA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 572,542, dated December 8, 1896.

Application filed April 17, 1896. Serial No. 587,941. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. HATFIELD, of Sulphur Springs, in the county of De Kalb and State of Alabama, have invented an Improved Car-Coupler, of which the following is a specification.

This invention relates generally to car-couplers, and particularly to that class thereof known as "twin-jaw" couplers.

10 The object of the invention is to provide a coupler of this class which shall be simpler and stronger than the general run of couplers in this class, and also provide one which will be able to withstand the jamming and jolting
15 occasioned by rough travel or quick stoppage.

Another object is to provide a coupler which will always be in position for coupling, and another object is to provide a coupler which can be operated from either the side or top
20 of car and can also be used in connection with any of the pin-and-link couplers now in use.

With these various objects in view my invention consists in the peculiar construction
25 of the various parts and in their novel combination or arrangement, all of which will be fully described hereinafter, and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 shows the invention in use. Fig. 2 is a vertical longitudinal section. Fig. 3 is a horizontal section. Fig. 4 shows details
30 of construction.

In constructing a coupler in accordance with my invention I provide a draw-bar A, carrying a draw-head B, said bar and head being made integral. The mouth of the draw-head is curved substantially in the form of a semi-circle, and the body of the draw-head has a
35 recess C produced therein, said recess extending some distance inward, and the top of the draw-head is slotted longitudinally at D, while the bottom has an opening E, said slot and opening extending into the recess and are intended to receive the coupling-pin F, said
40 pin comprising the rectangular-sloped upper portion *f* and the spindle-sloped lower portion *f'*.

A coupling-knuckle G is arranged in the
50 mouth of the draw-head, said knuckle comprising a semicylindrical body portion *g*, hav-

ing a vertical shoulder *g'* upon its flat face, the said shoulders interlocking when two coupling-knuckles are brought together. An outwardly-extending arm *g*² is formed upon
55 the body *g* and projects into the recess in draw-head, said arm being slotted in longitudinally at *g*³ to permit the passage of the rectangular portion of pin. The knuckle is pivotally connected to the front of draw-head
60 by means of a swinging link member H, the inner end of said member being pivotally connected to the forward end of the arm *g*², while the outer end is pivotally attached to the draw-head of the front face of said link member, being curved to correspond with the curve
65 of the draw-head.

The draw-head is slightly extended opposite the knuckle, as shown at I, to act as a guide for the approaching draw-head.
70

The pin has a cross-pin K near the upper end, by means of which the forked lever L raises said coupling-pin, said lever being mounted upon a rock-shaft L', journaled in brackets
75 L², arranged upon the top of draw-head, the ends of said rock-shaft being cranked, as shown, so as to be easily rocked. A rod or chain L³ connects with the pin and extends to the top of the car.

The pin has a rearwardly-projecting shoulder *m*, near the top of which engages a supporting-rod M, arranged upon the top of draw-head and between the members of the lifting-lever, so that as said pin is raised it will be caught and held upon the supporting-bar.
85

When the pin is raised, the spindle portion rests in the slot of the knuckle, and said knuckle can then be drawn outward the length of said slot, and as it is drawn outward it also has a slight lateral movement.
90 The knuckle is now in position for coupling, and as the knuckles are brought together they strike the link and push the knuckles inward and the vertical shoulders unlock. The same operation tilts the pin, throws it from the support, and it drops, bringing the rectangular portion in the slot in knuckle and holding
95 said knuckle locked.

A bail N is arranged upon the bottom of draw-head to prevent the knuckles jumping
100 up or down, and the lower end of the coupling-pin also has a cross-pin O to prevent said

coupling-pin being drawn too far upward. When the knuckles are coupled, the semicylindrical bodies virtually form a solid cylinder, closely fit the mouths of the draw-head, and receive all the pressure or jamming between the cars.

It will thus be seen that I provide a cheap, simple, durable, strong, and efficient form of coupler, one which is quickly and easily worked, and one which is automatic in its coupling and can be uncoupled from either the top or side of the car. It will also be noticed that the form of pin provides for a stronger article than those now in use.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is--

1. In a car-coupler, the combination with a draw-head, a knuckle comprising a slotted arm and a semicylindrical body arranged in the mouth of the said draw-head, the swing-

ing member pivoting the said knuckle to the front of the draw-head, a coupling-pin and lifting device, substantially as set forth.

2. In a car-coupler, the combination with a draw-head, a knuckle comprising a slotted arm and a semicylindrical body arranged in the mouth of the said draw-head, the swinging member pivoting the said knuckle to the front of the draw-head, the coupling-pin passing down through the said draw-head, a cross-pin K passing through the upper end of the coupling-pin, a bifurcated lifting-lever keyed to the rock-shaft and engaging with the pin K, a rock-shaft for operating said lifting-lever, substantially as set forth.

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

WILLIAM H. HATFIELD.

Witnesses:

C. T. ELLIS,

R. W. FRAZIER.