

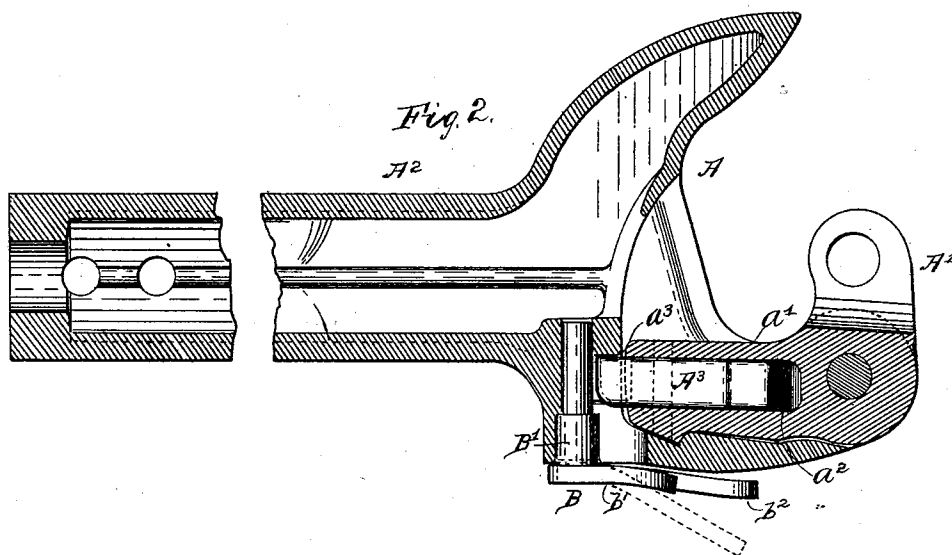
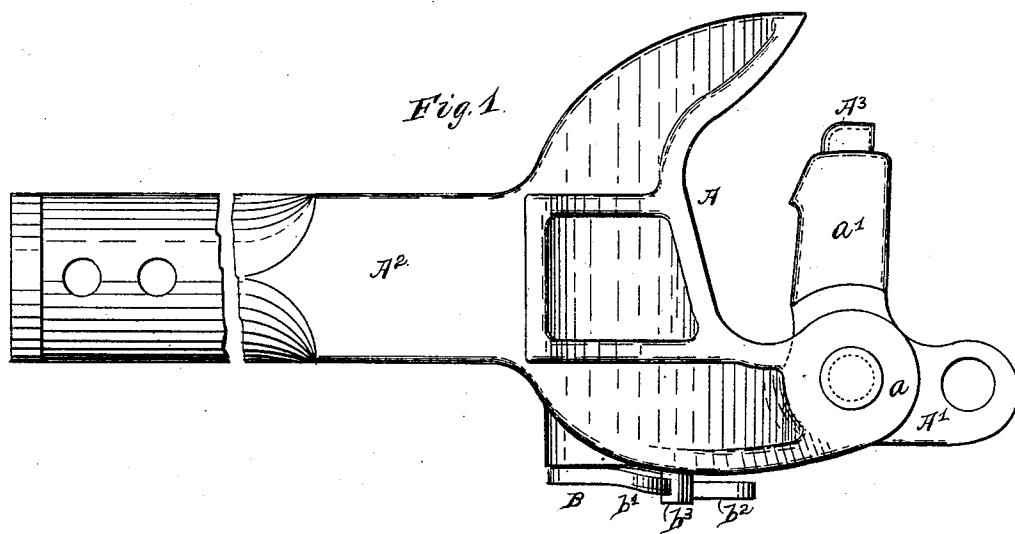
(No Model.)

2 Sheets—Sheet 1.

C. A. TOWER.
CAR COUPLING.

No. 482,105.

Patented Sept. 6, 1892.



WITNESSES:

C. R. Ferguson
Jan. C. Chapin.

INVENTOR

Clinton A. Tower

BY

Edwin H. Rogers

HIS ATTORNEY

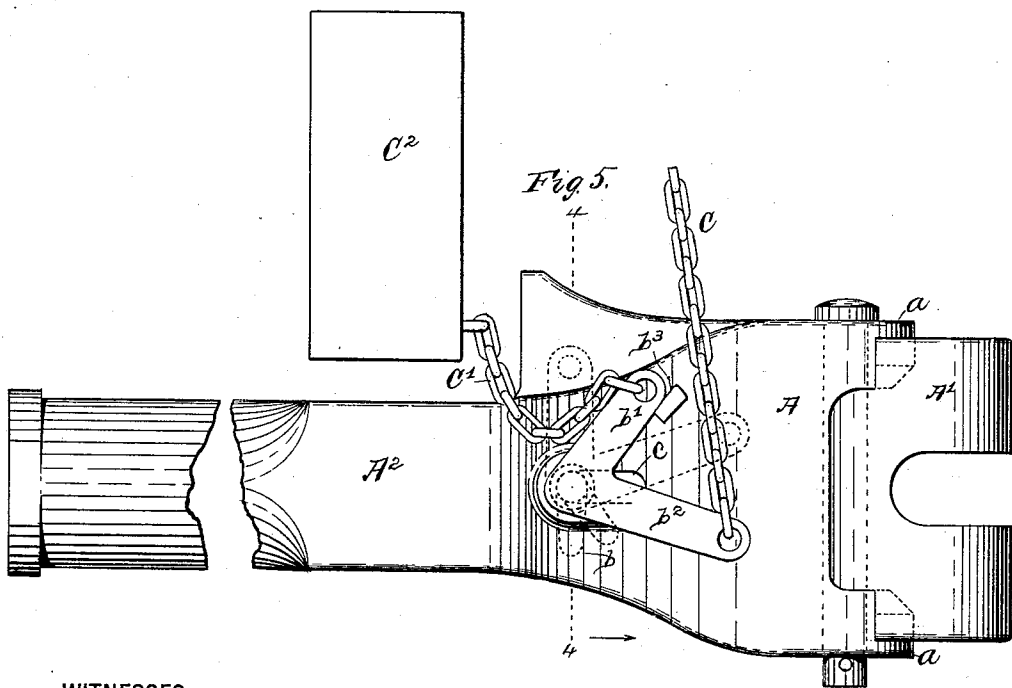
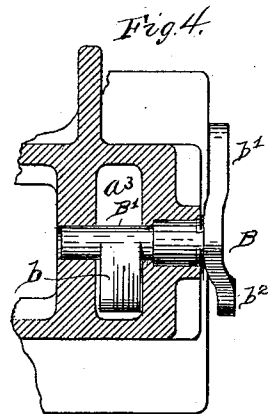
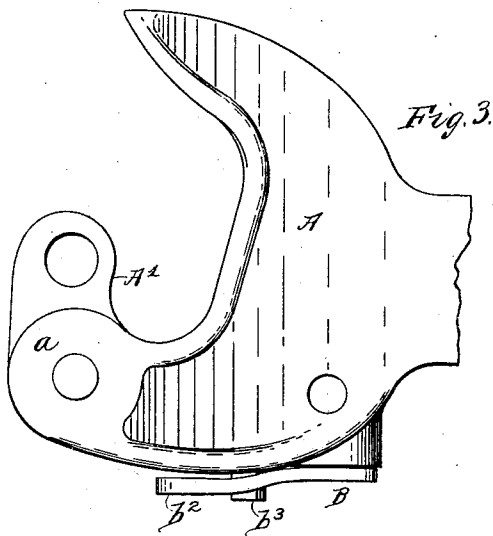
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2 Sheets—Sheet 2.

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CAR COUPLING.

No. 482,105.

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WITNESSES:

S. R. Ferguson
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INVENTOR

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UNITED STATES PATENT OFFICE.

CLINTON A. TOWER, OF CLEVELAND, OHIO, ASSIGNOR TO THE EMPIRE CAR
COUPLER COMPANY, OF WEEHAWKEN, NEW JERSEY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 482,105, dated September 6, 1892.

Application filed January 20, 1892. Serial No. 418,647. (No model.)

To all whom it may concern:

Be it known that I, CLINTON A. TOWER, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Car-Couplers, of which the following is a specification.

This invention relates to car-couplers; and it consists in means for automatically unlocking or releasing the coupling from another coupling should the coupler be accidentally broken or detached in the rear of the locking device, and thus prevent the coupler from falling upon the track.

I will describe a coupler embodying my improvement, and then point out the novel features in the claims.

In the accompanying drawings, Figure 1 is a top view of a coupler embodying my improvement. Fig. 2 is a transverse horizontal section thereof. Fig. 3 is a bottom view. Fig. 4 is a section through the line 4 4 of Fig. 5. Fig. 5 is a side view.

Referring by letter to the drawings, A designates the coupler-head having the movable or swinging coupling-section A' and the shank portion A². The section A' is pivoted between the forwardly-extending lugs a of the head A, and its rearward extension a' is provided with a longitudinal recess a², having a downwardly and outwardly inclined lower wall and within which the gravity locking-bolt A³ operates. The head A has a recess a³, into which the end of the locking-bolt A³ extends to hold the swinging section A' in the locked position, as shown in Fig. 2.

B designates an unlocking device consisting of a rock-shaft B', having bearings in the head A and extending across the recess a³. Within the recess a³ the shaft B' is provided with a lug b, which may be integral with the shaft or otherwise secured thereon and extended at right angles to the length of the shaft.

At the outer end the shaft B' is provided with arms b' b², extended at an angle one from the other. These arms are preferably of malleable iron.

A lug b³, extending outward from the side

of the head A, serves as a stop to prevent the arms b' b² from swinging too far downward and also to prevent the accidental detachment of the unlocking device from the head.

As a means for placing the unlocking device in position, the head A is provided with an opening or slot c, extending outward from the recess a³, and through which the lug b is pushed when the shaft is inserted. As the arm b² will be above the lug b³ when the lug b is inserted, the said arm is first bent outward, as shown in dotted line in Fig. 2, so as to clear the lug b³, when the arms are moved downward into their normal position. Then the arm b² is bent inward by means of a hammer or other suitable tool. When in this condition, the arm b' will normally rest upon the lug b³, with the arm b² below said lug. The lug b being at nearly right angles to the arm b² and the opening c being on a horizontal plane with the shaft B', it is obvious that the lug b³ will limit an upward movement of the arm b² and prevent the lug b from coming in line with the opening c.

A chain C extends upward from the arm b² to any convenient point within reach of an operator, and an upward pull on this chain will rock the shaft B', so that its lug b will contact with and force the bolt A³ into the recess a², allowing the section A' to be swung open, as in Fig. 1.

I provide means for automatically operating the unlocking device should the coupler be accidentally broken off in the rear of the locking device. The automatic means here shown consists of a flexible connection—such, for instance, as a chain C'—between the arm b' and a fixed portion C² of a car. Obviously, should the coupler be broken off its head portion would be pulled forward by the car to which it is coupled, but the chain C' would operate the unlocking device to release the section A' and also prevent the coupler-head from falling to the track.

Having described my invention, what I claim is—

1. In a car-coupler, the combination, with the head and the swinging section carrying a

locking-bolt, of the rock-shaft having a lug to engage the locking-bolt and an arm on the outer end of said shaft, substantially as specified.

5 2. The combination of the coupler-head, the swinging section, the locking mechanism, means comprising a rock-shaft for operating the locking mechanism, and an arm or arms on the outer end of said shaft of malleable
10 iron, substantially as specified.

3. In a car-coupler, the combination, with the head and the swinging section carrying a locking-bolt, of a rock-shaft having a lug to engage the locking-bolt, an arm on the outer
15 end of said shaft, and a connection between said arm and a fixed portion of a car, where-

by the unlocking device will be operated should the coupler be detached in the rear thereof, substantially as specified.

4. The combination of the coupler-head hav- 20 ing the recess and an outward opening, the rock-shaft having the lug, the arms b' b^2 , and the stop b^3 on the head, substantially as specified.

In testimony whereof I have signed my 25 name to this specification in the presence of two subscribing witnesses.

CLINTON A. TOWER.

Witnesses:

E. A. ANGELL,
S. O. EDMONDS.