

CAR COUPLING.

Patented June 3, 1913.

3 SHEETS—SHEET 1.

Fig. 2.

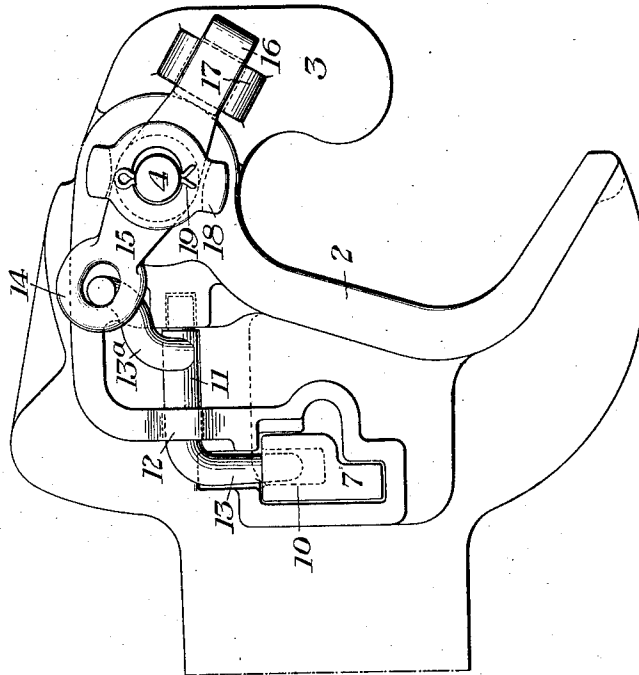
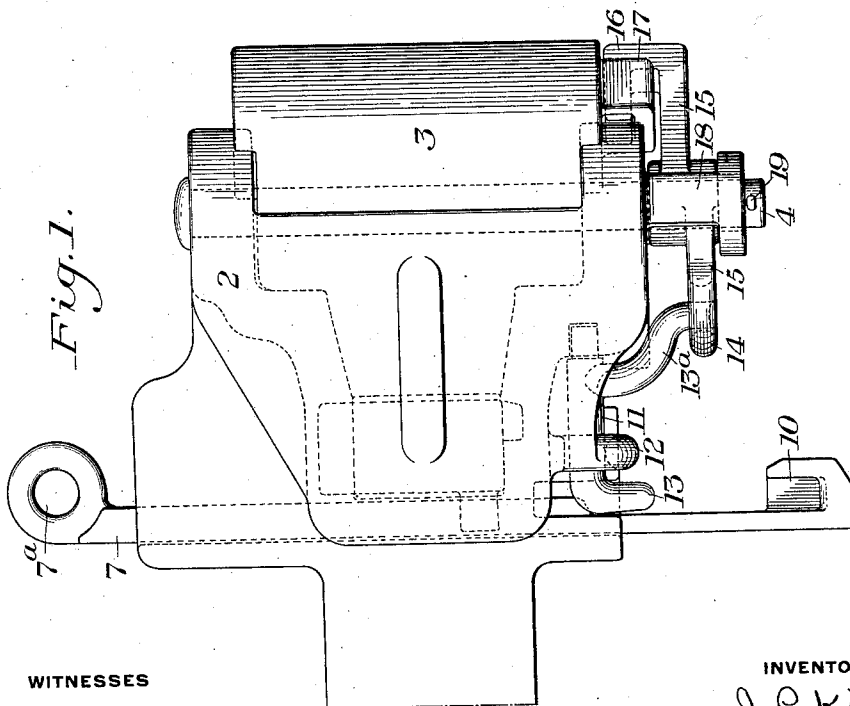


Fig. 1.



INVENTOR

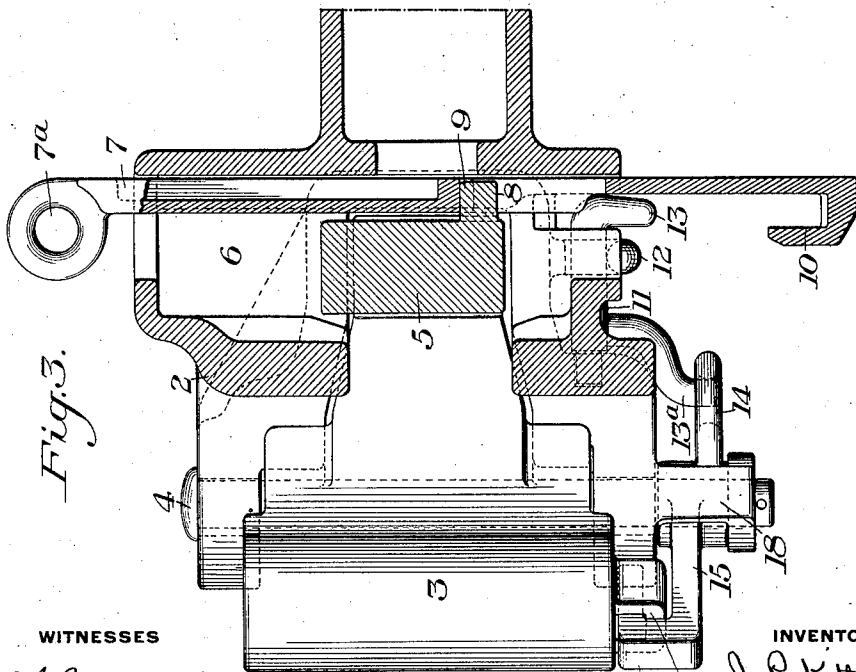
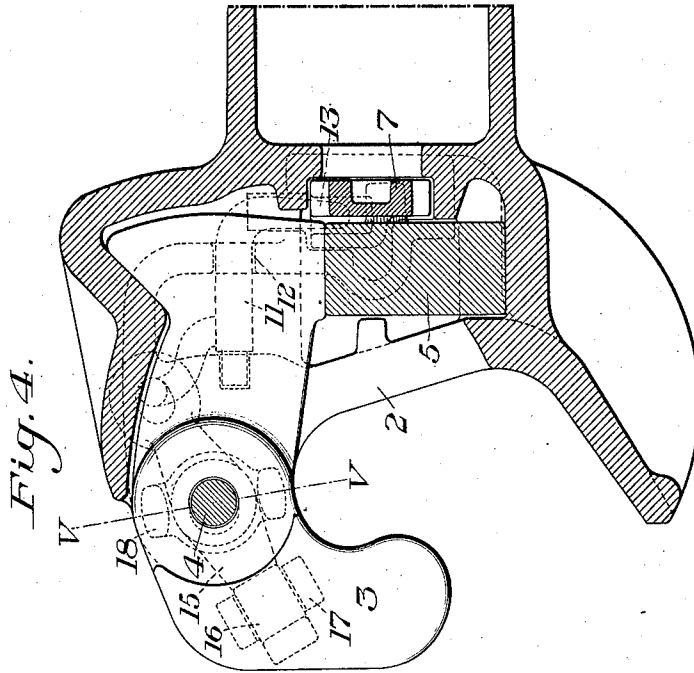
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1,063,544.

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3 SHEETS—SHEET 2.



WITNESSES

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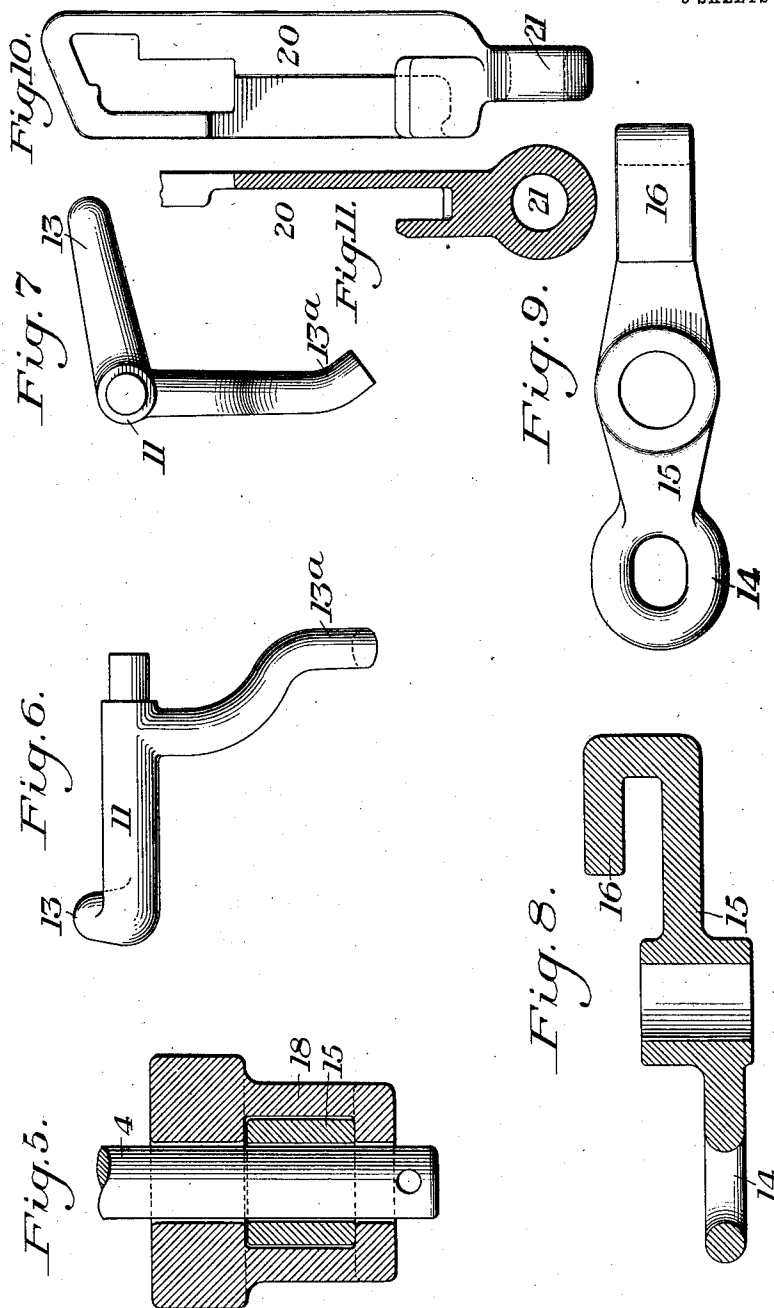
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Atys.

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CAR COUPLING.
APPLICATION FILED NOV. 22, 1911.

1,063,544.

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3 SHEETS—SHEET 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOSEPH P. KITTREDGE, OF SHARON, PENNSYLVANIA, ASSIGNOR TO THE NATIONAL MALLEABLE CASTINGS COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

CAR-COUPLING.

1,063,544.

Specification of Letters Patent.

Patented June 3, 1913.

Application filed November 22, 1911. Serial No. 661,737.

To all whom it may concern:

Be it known that I, JOSEPH P. KITTREDGE, a resident of Sharon, in the county of Mercer and State of Pennsylvania, have invented a new and useful Improvement in Car-Couplers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of a car coupler embodying my invention; Fig. 2 is a bottom plan view of the same; Fig. 3 is a view partly in vertical section and partly in side elevation; Fig. 4 is a sectional plan view; Figs. 5, 6, 7, 8 and 9 are detail views of parts hereinafter described; and Figs. 10 and 11 are detail views showing a modified form of the lock-lifting member.

My invention has relation to car couplers, and more particularly to a device of novel character for throwing the knuckle to its open position, the object of the invention being to provide a knuckle-throwing device of simple and positive character which will be actuated by the lock-releasing member of the coupler, after the lock has been released.

The nature of my invention will be best understood by reference to the accompanying drawings, in which I have shown the preferred embodiment thereof, it being premised, however, that various changes may be made in the details of construction and attachment of the parts by those skilled in the art, without departing from the spirit and scope of my invention as defined in the appended claims.

In these drawings, the numeral 2 designates the coupler head, 3 the pivoted knuckle and 4 the pivot pin on which the knuckle swings.

5 designates a locking member for holding the knuckle in its closed position, and which is arranged to release the knuckle when it is moved upwardly into the cavity or chamber 6 of the head.

7 designates a lifting member for the lock 5. The drawings show this member as consisting of a bar extending through the head with an eye 7^a at its upper end to which any suitable operating attachment may be connected and having a lifting engagement at 8 with a projection 9 on the lock 5. The lifting member extends downwardly through the head and terminates some distance below

the lower side of the head in a U-shaped portion 10.

The numeral 11 designates a bell crank lever which is journaled at the under side of the coupler head, preferably in a lug or eye 12 thereof and which has a bent end portion 13, which is adapted to be engaged by the U-shaped portion 10 of the lock-lifting member when the latter is raised. The other arm 13^a of this bell crank lever projects downwardly and engages the rearwardly extending eye portion 14 of a lever 15. The bell crank lever 11 is journaled to rotate in a vertical plane, while the lever 15 is journaled to rotate in a horizontal plane. The forwardly projecting arm of the lever 15 has a hook portion 16, which engages an opening of a lug 17, which is formed integral with the lower side of the nose of the knuckle. The arrangement of the parts is such that the rotation of the lever 15 upon its axis throws the nose of the knuckle outwardly and thereby opens it. In the preferred form of the invention, the lever 15 is rotatably supported on the face of a stirrup 18, which is preferably cast integral with the under side of the coupler head, although this is not essential, as it may be supported directly upon a pin 19, inserted through a hole in the lower end of the knuckle pin 4.

The bell crank lever 11 is clearly shown in detail in Figs. 6 and 7, and the lever 15 is shown in detail in Figs. 8 and 9. Fig. 5 shows the preferred mode of supporting the lever 15, as above described.

The operation of the device will be obvious. The lock-lifting member having first been raised through a portion of its entire travel, in order to lift the lock, the further upward movement of said member will cause its U-shaped end portion 10 to engage the end portion 13 of the bell crank 11 and actuate this bell crank to impart the knuckle-throwing movement to the lever 15.

In Figs. 10 and 11, I have shown a modification of the lock lifter adapted for use in a coupler of the bottom-operating type. The lifting member 20 is generally similar to the device first described, but its upper portion is cut off and its lower end portion is provided with an eye 21, for engagement with a suitable actuating device.

The locking mechanism of the coupler shown in the drawings of this case consti-

tutes no part of my invention, the same being the invention of Harry T. Krakau and being covered in a copending application, Serial No. 662,625 filed November 27, 5 1911.

The advantages of my invention result from the simplicity and positive character of the knuckle-throwing parts which are mounted on the under side of the coupler 10 head, so as to be engaged and actuated by the lock-releasing member of the coupler, after the lock has been released.

I claim:—

1. A car coupler having a pivoted knuckle, 15 a lock, a lock-lifting device, a bell crank lever journaled at the under side of the coupler head and arranged to be engaged by the lock-lifting member after the lock has been released, and a lever comprising an 20 actuating connection between the bell crank lever and the knuckle, substantially as described.

2. A car coupler having a pivoted knuckle, a lock and a lock-releasing member, the latter extending below the coupler head, a bell 25 crank lever journaled upon the under side of the coupler head and having an end portion to be engaged by the lock-lifting member, and a lever connecting the bell crank 30 lever with the nose of the knuckle, substantially as described.

3. In a car coupler, knuckle-throwing mechanism, comprising a lever journaled on 35 the under side of the coupler head to swing in a horizontal plane and having an en-

gagement with the nose portion of the knuckle, a bell crank lever journaled on the under side of the coupler head to move in a vertical plane and connected with the first 40 named lever, and means for actuating the last named lever, substantially as described.

4. In a car coupler, knuckle-throwing mechanism, comprising a lever journaled on the under side of the coupler head to swing 45 in a horizontal plane and having an engagement with the nose portion of the knuckle, a bell crank lever journaled on the under side of the coupler head to move in a vertical plane and connected with the first 50 named lever, and a lock-releasing member having a portion to engage and move the last named lever after the lock had been released, substantially as described.

5. In a car coupler, the combination with a pivoted knuckle and a lock therefor, of a 55 lock-releasing member extending vertically through the head and terminating in a U-shaped portion at its lower end, a vertically movable lever fulcrumed on the under 60 side of the coupler head and arranged to be engaged by said U-shaped portion, and an actuating connection between said lever and the nose of the knuckle, substantially as described.

In testimony whereof, I have hereunto set 65 my hand.

JOSEPH P. KITTEDGE.

Witnesses:

ROY NEVILLE,

J. H. SLAWSON.