

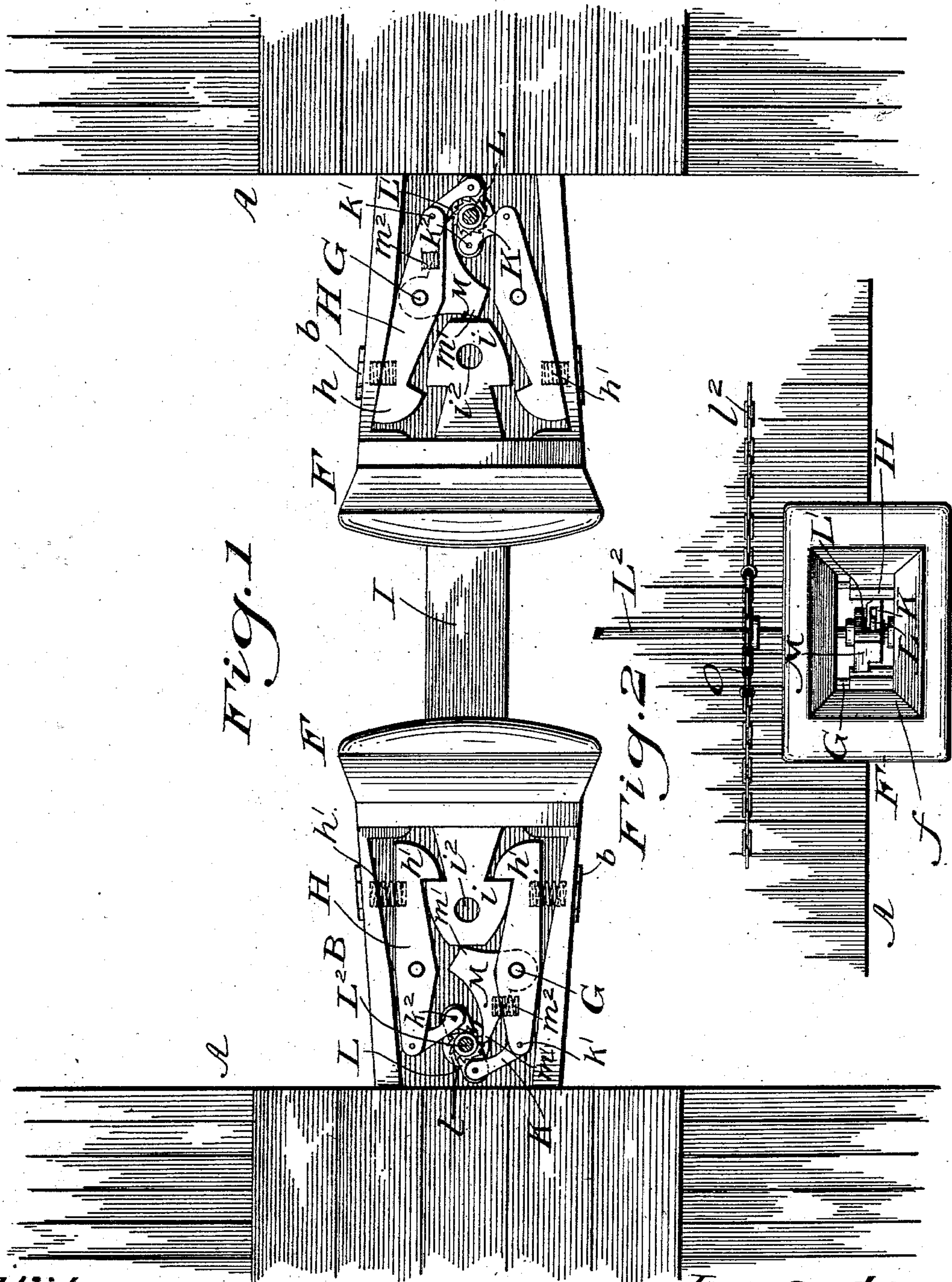
(No Model.)

2 Sheets—Sheet 1.

J. F. STRAHLE.
CAR COUPLING.

No. 597,792.

Patented Jan. 25, 1898.



Witnesses

B. Krueger

C. H. Zacher.

Inventor:

Jacob F. Strahle

J. V. Reichelt

By his ty.

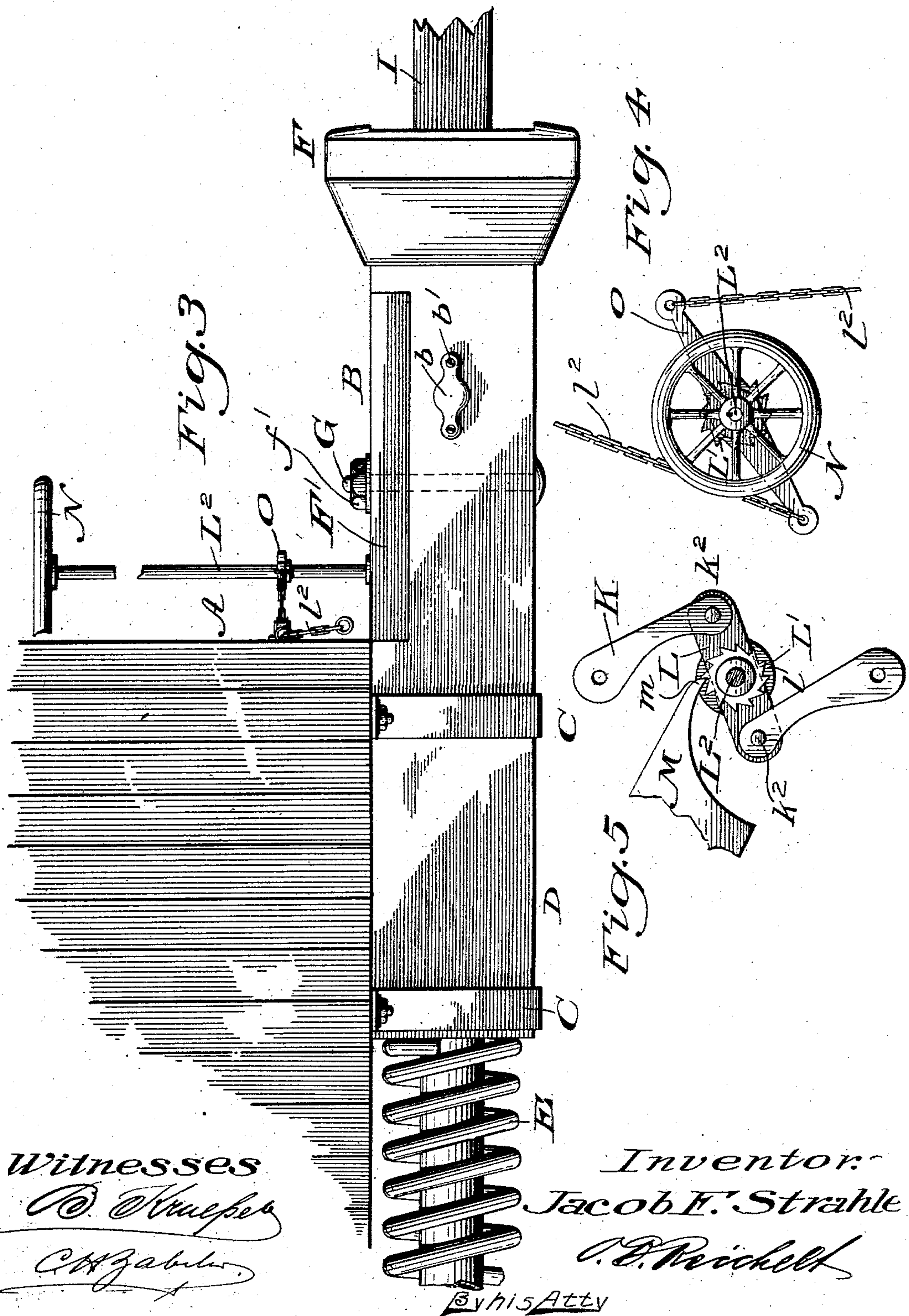
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UNITED STATES PATENT OFFICE.

JACOB FRIEDRICH STRAHLE, OF BURR, NEBRASKA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 597,792, dated January 25, 1898.

Application filed August 31, 1896. Serial No. 604,442. (No model.)

To all whom it may concern:

Be it known that I, JACOB FRIEDRICH STRAHLE, a citizen of the United States, residing at Burr, county of Otoe, and State of Nebraska, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

My invention relates to car-couplings which employ pivoted jaws arranged within the draw-head, which engage with a link having a wedge-shaped head at its ends; and the improvement consists in certain details of construction and combinations of parts for spreading the pivoted jaws to release the link and set the jaws to receive the link, in novel means for releasing the said jaws by the entrance of the link within the coupling-head, and in the novel arrangement of the pivoted jaws, the springs connected therewith, and in the plates for covering the parts forming the coupling mechanism within the coupling-head.

In the accompanying drawings, Figure 1 is a plan view of a pair of coupling-heads at the ends of adjacent cars connected and with the coupling-head covers removed; Fig. 2, a front elevation looking into the end of the coupling-heads; Fig. 3, a side elevation of a draw-head and coupling-head at one end of a car with parts broken away; Fig. 4, a plan of the operating-wheel and chain-levers connected with the coupling-jaws for uncoupling the link and setting the coupler; and Fig. 5, a plan view of the cross-bar, toggle-links, ratchet-wheel, and a fragment of the pawl-lever comprising the coupling-jaw-operating mechanism.

The ends of the frames of the cars A support the draw-heads B, secured thereto in the usual way by straps C, the draw-bar D, and torsion-spring E, being of well-known pattern. The coupling-head F at the outer end of the draw-head is cast with a box-like opening *f*, provided with a cover *F'*, held in place thereon by two bolts G, which pass vertically through the coupling-head box and cover and hold the latter thereon by screw-nuts *f* upon the upper ends of said bolts, which screw down upon the cover. The bolts G also pass each through the middle part of oppositely-disposed coupling-jaws H H, arranged upon each side of and within the coupling-head

box, the forward or outer ends of said jaws being provided with heads or shoulders *h*, which engage with corresponding reversed shoulders *i* upon a double-headed coupling-link I of a pattern generally used in couplings of this class, slots *i*² in the ends of said link and also in the coupling-head serving to receive the coupling-pin of an ordinary link-coupling.

The outer ends of the jaws H H are pressed inwardly to engage with the link I by spiral springs *h* *h*, which are held within recesses covered by caps *b*, secured by screws *b'* upon the sides of the coupling-head, and which may be removed to give access to the said spring whenever required. The pivoted coupling-jaws H are pressed inwardly by said springs at their outer ends and are connected at their inner ends by pins *k'* with toggle-links K, and the opposite or inner ends of said toggle-links are pivoted by pins *k*² with the opposite end of a cross-bar L, having a hub-bearing *l* and a ratchet-wheel L' fixed thereon upon a vertical shaft L², supported in bearings in the coupling-head, the said cross-bar lying longitudinally with the coupling-head when the coupling-jaws are open to receive the link and diagonally across said coupling-head when the said jaws are closed upon the heads of the link.

An abutment-block pawl M, pivoted to one of the side bolts G, which carries a coupling-jaw, is so shaped and disposed within the coupling box or head that the abutment end *m* thereof may be struck by the coupling-link when it has entered sufficiently and serves as a trigger, the pawl end *m'* of said block-pawl engaging with the ratchet-wheel L' to hold the coupling-jaws open against the side pressure of the spiral springs *h*, and the said pawl M is held by a spiral spring *m*², pressing between it and the adjacent coupling-jaw H to hold the said pawl engaged with the ratchet-wheel when the abutment-block at the forward end of said pawl is not pressed against by the coupling-link.

A hand-wheel N at the upper end of the shaft L², within reach of the brakeman upon the platform or upon the top of the car, may be used to turn the cross-bar L and open the jaws to set the coupling, and a chain-lever O is also secured to the said shaft L² and has

chains L^2 , extending to the sides of the car over suitable pulleys, and operated either with perfect safety by hand or by suitable connections (not shown) with the air-brake.

- 5 In operation the brakeman at the top of the car or on the platform thereof may by turning the shaft L^2 set the coupling-jaws H H by throwing the cross-bar L longitudinally with the coupling-head and drawing in the inner ends of the jaws H H to open the
10 the outer notched ends thereof against the action of the laterally-pressing spiral springs, the abutment-pawl by its spiral spring being held with sufficient pressure against the ratchet-
15 wheel of the shaft L^2 to hold the parts in the set position and allow the coupling-link to be withdrawn from the head and the cars uncoupled. When the cars come together again, the coupling-link strikes the abutment-block
20 of pawl M, causing it to release the ratchet-wheel and its connections and allow the jaws H H to again interlock with the end of the coupling-pin. The covers, caps, bolts, and several parts described are so put together
25 that they may be all readily taken apart when desired.

I claim as my invention and desire to secure by Letters Patent—

1. The combination in a car-coupling, of the coupling-head with the two pivoted oppositely-disposed coupling-jaws, the cross-bar, ratchet-wheel and vertical shaft, the toggle-links connecting the cross-bar and coupling-jaws and pivoted abutment-pawl adapted to engage with the ratchet-wheel, substantially as described.

2. In a car-coupling, the combination with the coupling-head, of the oppositely-disposed pivoted jaws, the cross-bar, ratchet-wheel and toggle-links, the abutment-pawl and spring, a vertical shaft supported in the coupling-head to which the ratchet-wheel is secured and a lever connected by chains at its ends and extending to the sides of the car, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name in the presence of two subscribing witnesses.

JACOB FRIEDRICH STRAHLE.

Witnesses:

W. B. WARD,

JOHN SINCLAIR.