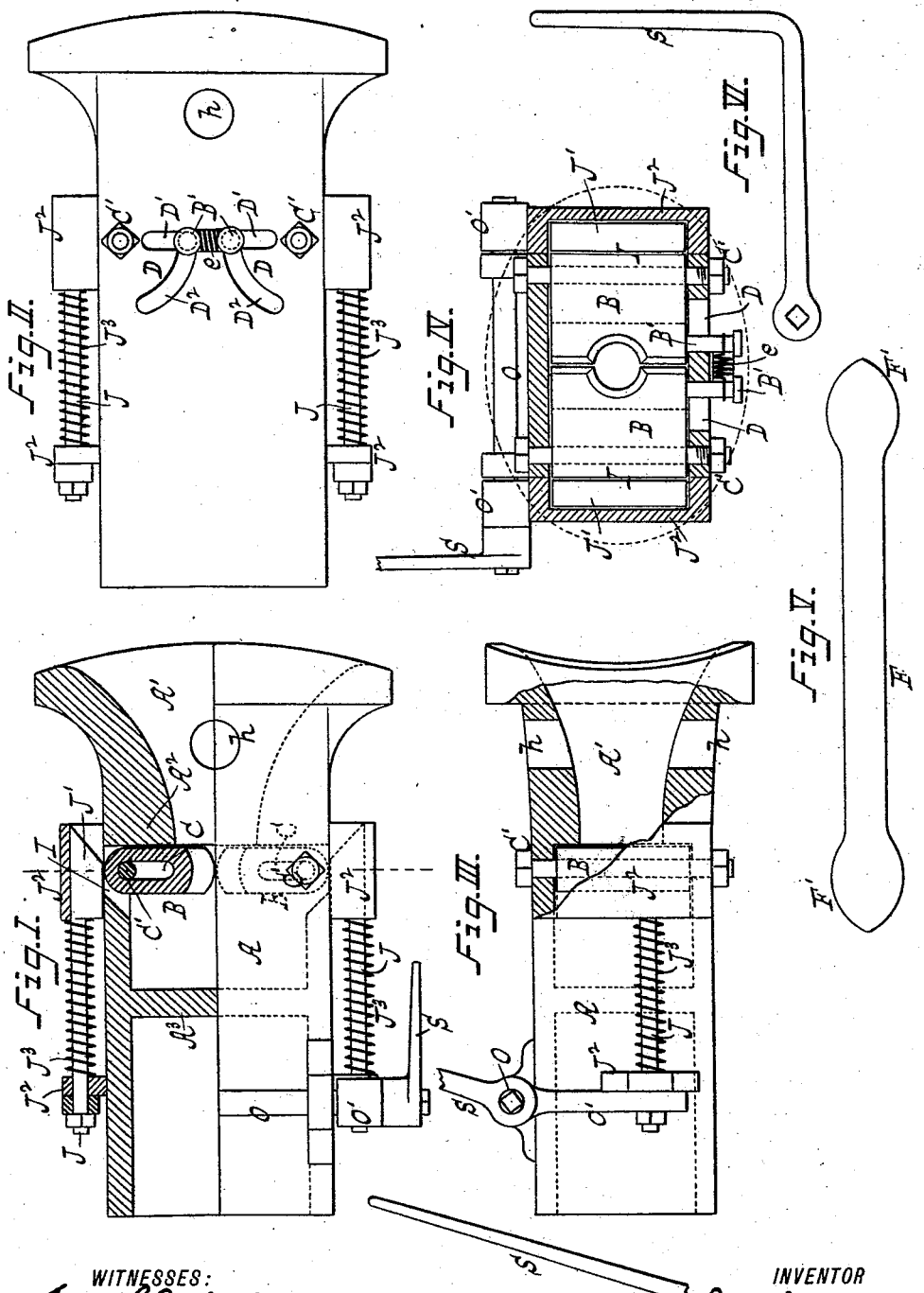
(No Model.)

# L. GUILLAUDEN.

## CAR COUPLING.

No. 455,713. Patented July 7, 1891.




WITNESSES:
Jas. L. Ewbank
F. C. Bowen

INVENTOR
Louis Guillaudeu
BY
Chas. Wahlers
ATTORNEY.

# UNITED STATES PATENT OFFICE.

LOUIS GUILLAUDEN, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO HIMSELF, AND JOHN L. MASON AND JOSEPH R. NAYLOR, OF BROOKLYN, NEW YORK.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 455,713, dated July 7, 1891.

Application filed December 26, 1890. Serial No. 375,775. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS GUILLAUDEN, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Automatic Car-Couplings, of which the following is a specification.

My invention is an automatic car-coupling having vertical jaws adapted to swing inwardly to the draw-head for receiving and engaging one end of a draw-bar and to slide laterally to the head when set free for releasing the draw-bar, in combination with certain novel devices for guiding the jaws in either motion thereof, preserving a normal position of the jaws and locking the same, as hereinafter more fully set forth.

In the accompanying drawings, Figure I represents a partial top or plan view and partial horizontal section of a coupling embodying my invention. Fig. II represents an inverted plan view thereof. Fig. III represents a partial side view and partial vertical longitudinal section thereof. Fig. IV represents a vertical cross-section thereof. Fig. V represents a side view of the draw-bar. Fig. VI represents a side view of a foot-lever.

Similar letters of reference indicate similar parts.

The letter A indicates the draw-head, which may be of any usual or suitable shape, and has the usual flaring mouth A′ at one end for the reception of the draw-bar.

B indicates the vertical jaws, two in number, which are located at the inner edge of the mouth A′ within the draw-head, and the normal position of which is transverse to the head, each coincident with the other. In each of said jaws B is a vertical slot or mortise C, extending in the plane of the jaws, into which slot is fitted a vertical bolt C′ of the draw-head, forming a pivot on which either jaw may swing inwardly by the thrust of the draw-bar, as hereinafter explained, the slot serving to permit the jaws to slide on the bolts.

In the bottom of the draw-head A are two slots D, each of which is partly straight and partly curved, as clearly shown in Fig. II, the straight part D′ extending in the plane of the jaws B, while the curved part $D^2$ thereof is concentric to the pivot-bolt C′. The purpose of these slots D is to guide the jaws B, and for engaging the slots, each of the jaws has a guide-pin B′ secured to its lower edge, these pins traversing the curved part of the slots in the swinging motion of the jaws and the straight part thereof in the sliding motion of the jaws. The guide-pins B′ are connected together by means of a spiral spring *e*, which thus acts on the jaws B with a tendency to draw the same into alignment with each other, preserving a normal position of the jaws.

At a point opposite to the jaws B in each side of the draw-head A is an opening I for the passage of either jaw, and at the front edge of these openings (which is also the inner edge of the mouth A′ of the head) the sides of the head are increased in thickness, as at $A^2$, in order to form at such edge stops or abutments for the jaws, preventing an outwardly-swinging motion thereof, the sides of the head being comparatively thin at the rear edge of said openings in order to permit the desired inwardly-swinging motion of the jaws.

On the opposite sides of the draw-head A are bolts J, each of which is formed with a head J′ of a suitable shape to cover and close either side opening I, thereby locking the jaws. Each of the bolts J is fitted in guides $J^2$ on the proper side of the draw-head, and each is provided with a spring $J^3$, acting thereon with a tendency to force and retain it in locking position. In order to reduce the movement of the bolts J necessary for releasing the jaws B, the bolt-heads may be beveled inwardly, as shown in Fig. I.

On the top of the draw-head A is mounted a rocking bar or spindle O, which carries two radial arms O′, one at each end, engaging the bolts J, respectively. The purpose of this rocking bar O is to retract the bolts J against the action of their springs $J^3$, and for operating said bar, I make use of a lever S, which may be permanently or separably connected to the bar, and may be straight, as in Fig. III, or bent, as in Fig. VI, for its adjustment either by the hand or foot. By this construction of the coupling I am enabled to use a draw-bar F, Fig. V, formed with a head F′, of oval or other similar shape, at each end, the operation being as follows: When either end of the

draw-bars F is thrust in the mouth of the draw-head, it is brought between the jaws B and displaces the jaws, causing them to swing inwardly on the pivot-bolts C′ until the end head of the bar has cleared the jaws, when the latter resumes a normal position under the impulse of the spring *e*. The draw-bar F is now firmly held against withdrawal by the engagement of the jaws B with said end head of the bar, and when it is desired to release the bar the lever S is adjusted to retract the bolts J, thereby unlocking the jaws, so that if a suitable force is exerted outward on the draw-bar it redisplaces the jaws, causing them to slide laterally a sufficient distance to permit the end head of the bar to pass between them. In order to facilitate the entrance and withdrawal of the draw-bar, the edges of the hole B′, forming the mouth of the jaws, may be beveled, as shown, and to limit the thrust of the draw-bar the head A may be formed with a web or partition $A^3$ at a suitable point. A hole *h* in the top and bottom of the draw-head may be used for adapting it to an ordinary link-coupling.

What I claim as new, and desire to secure by Letters Patent, is—

In a car-coupling, the combination of the vertical jaws having vertical slots, the draw-head having pivot-bolts fitted in the slots of the jaws, side openings for the passage of the jaws, with stops or abutments at the front edge of said openings and guide-slots in the bottom thereof, partly straight and partly curved, the guide-pins on the jaws fitted in said guide-slots, the spring connecting said guide-pins, the spring-bolts each having a head adapted to close either of the side openings of the draw-head, and the rocking bar having radial arms engaging the spring-bolts, the whole adapted to operate substantially as described, for the purpose set forth.

LOUIS GUILLAUDEN.

Witnesses:
CHAS. WAHLERS,
JAS. S. EWBANK.

Correction in Letters Patent No. 455,713.

It is hereby certified that the name of the patentee in Letters Patent No. 455,713, granted July 7, 1891, for an improvement in "Car-Couplings," was erroneously written and printed "Louis Guillauden," whereas said name should have been written and printed *Louis Guillaudeu;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 14th day of July, A. D. 1891.

[SEAL.]

GEO. CHANDLER,
*Assistant Secretary of the Interior.*

Countersigned:
NATH'L L. FROTHINGHAM,
*Acting Commissioner of Patents.*